SESSION II.

1906.

NEW ZEALAND.

THE GOLDFIELDS OF NEW ZEALAND:

REPORT ON ROADS, WATER-RACES, MINING MACHINERY, AND OTHER WORKS IN CONNECTION WITH MINING.

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

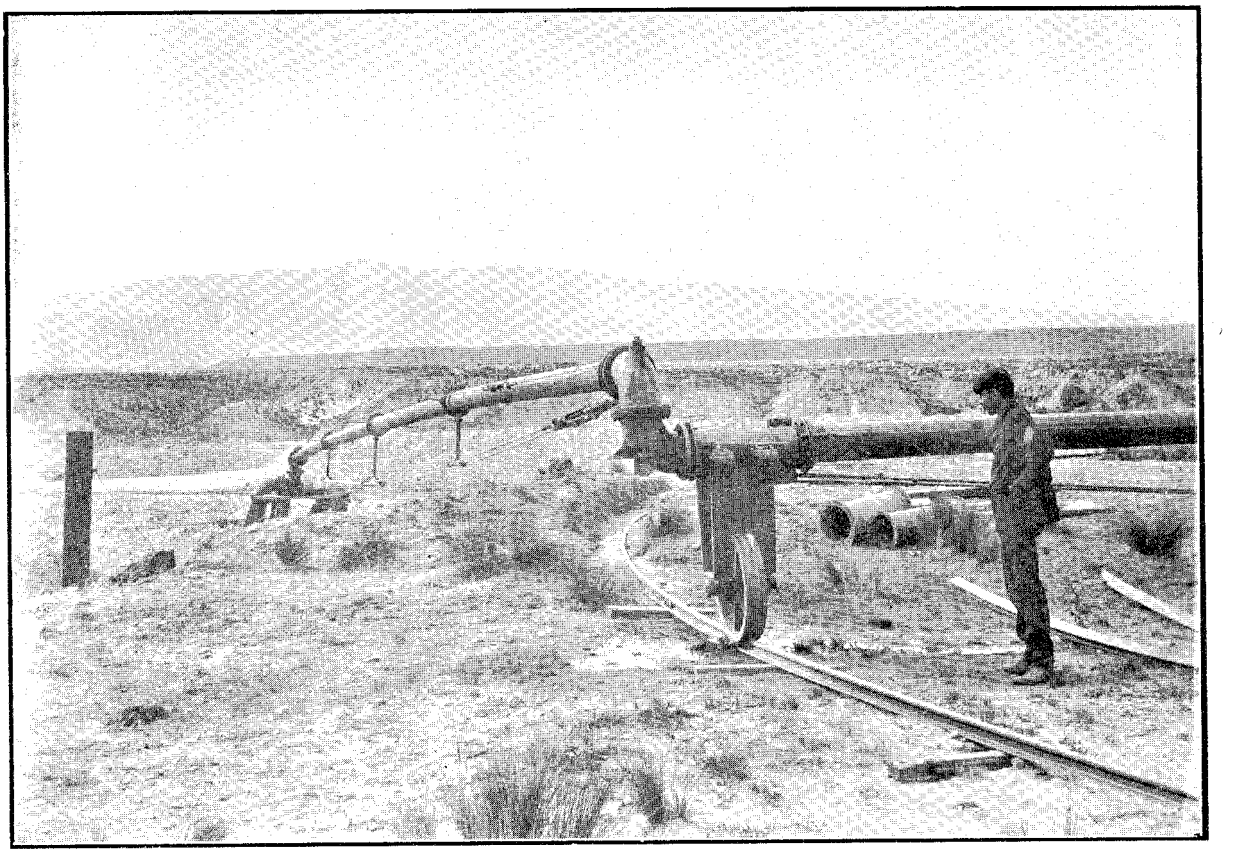
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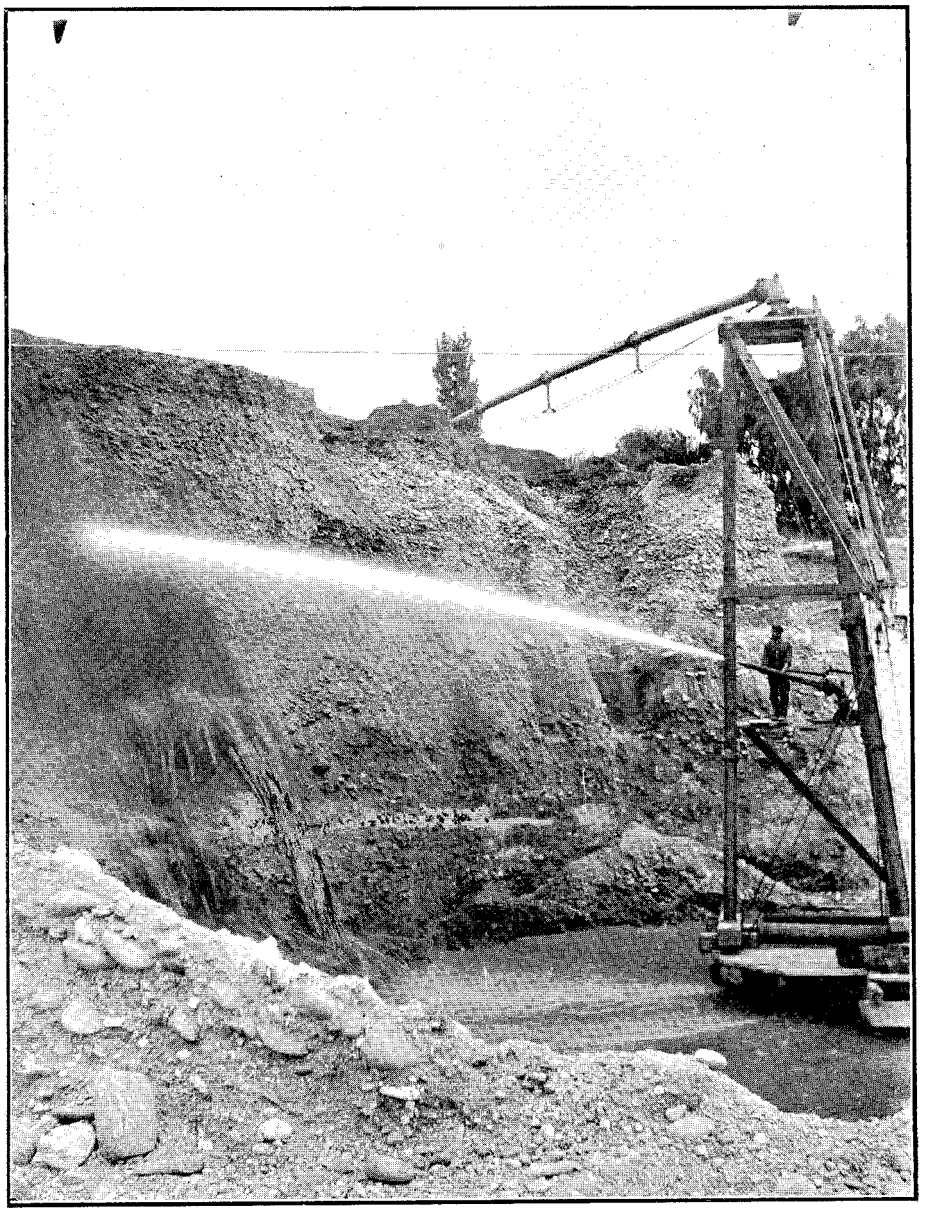
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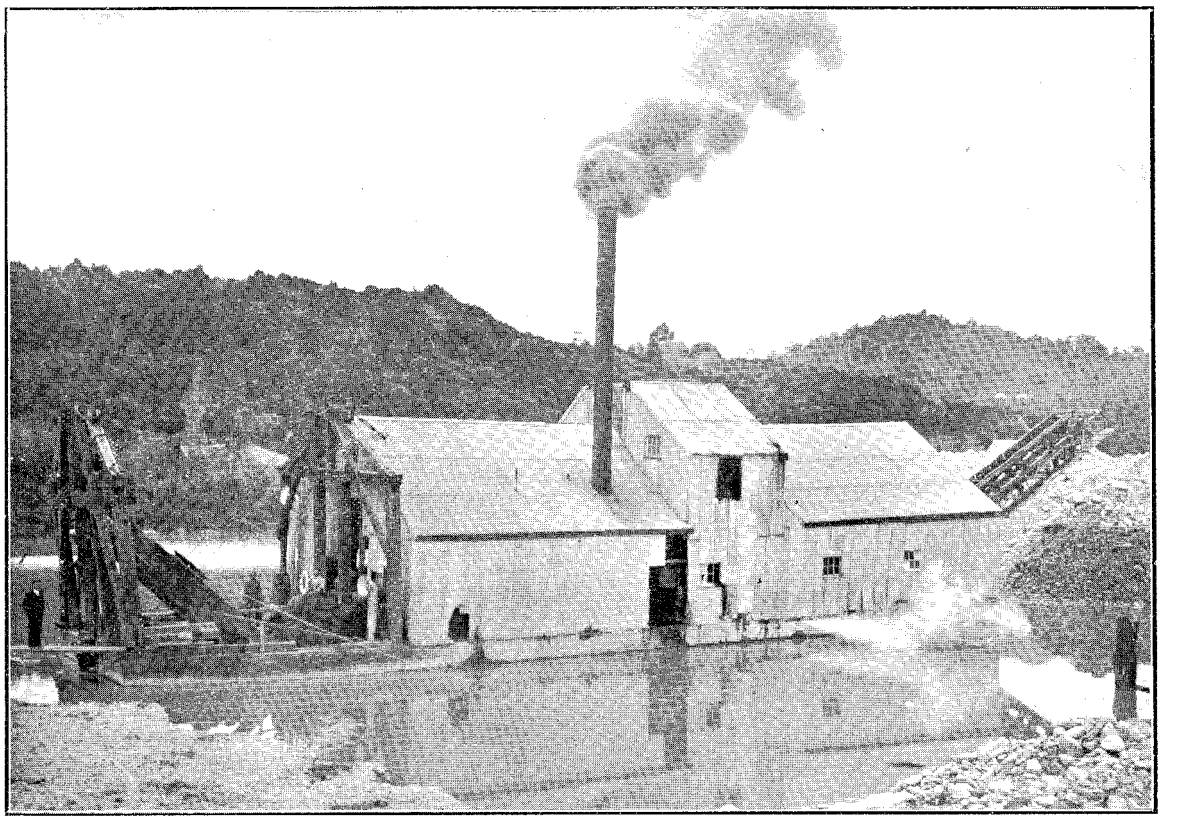
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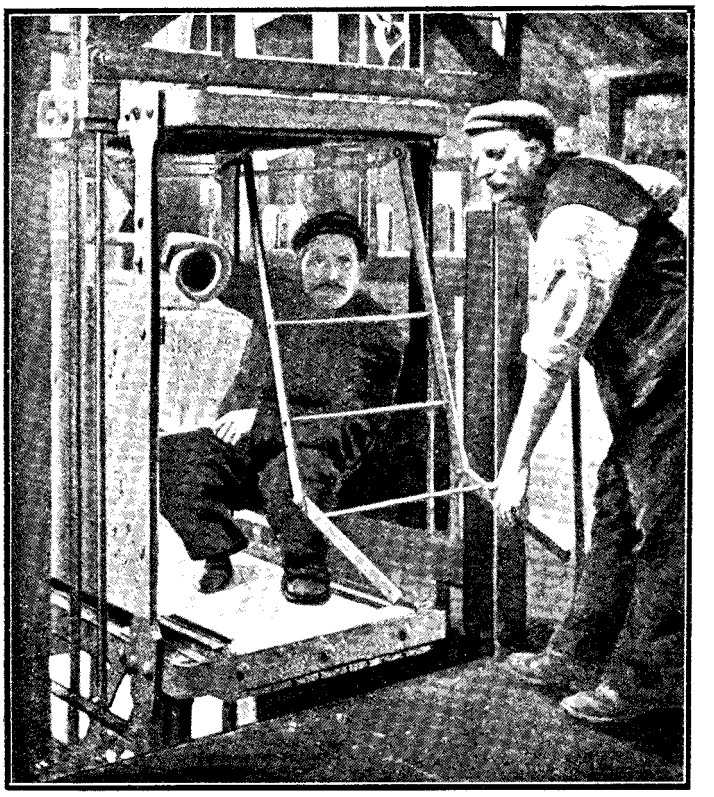
Swivelling Arrangement for supplying Water to work Golden Beach Dredge, Alexandra.



Golden Beach Dredge, Alexandra. Sluicing and Dredging combined. [Page 2]



Stafford–Waimea Dredge (Kumara District).



Protective Gate for Cages.

REPORT.

Mr. JOHN HAYES, F.S.Sc., Inspecting Engineer, to the Hon. JAMES MCGOWAN, Minister of Mines.

SIR,— Mines Department, Wellington, 21st May, 1906.

I have the honour to submit my annual report, together with those of other departmental officers, Inspectors of Mines, Wardens, Managers of Water-races, &c., for the year ending the 31st December, 1905.

In accordance with the usual practice, the tables showing expenditure through the Mines Department on roads, bridges, tracks, prospecting operations, &c., are for the period covered by the financial year—viz., from the 1st April, 1905, to the 31st March, 1906.

SUBSIDISED ROADS AND TRACKS.

The expenditure (as subsidies) and the liabilities on outstanding authorities for the year ending the 31st March, 1906, are as follows:—

Name of Local Body.	Expenditure for the Year ending 31st March, 1906.	Liabilities on Authorities on 31st March, 1906.
	£ s. d.	£ s. d.
Great Barrier Island	...	150 0 0
Coromandel County...	160 0 0	15 0 0
Ohinemuri County	15 5 6	...
Thames County	...	25 0 0
Moturoa Petroleum Company	229 0 0	...
Buller County	200 0 0	100 0 0
Inangahua County	18 10 2	...
Ross Borough	...	100 0 0
Lake County	25 0 0	25 0 0
Westland County	65 0 0	25 0 0
Grey County	275 0 0	...
Roads Department	3,512 0 4	529 11 0
Contingencies	52 5 10	...
Compensation for accidents	73 12 6	...
Totals	4,625 14 4	969 11 0

ROADS CONSTRUCTED BY DIRECT GRANTS.

The following statement shows the expenditure and liabilities on authorities issued on roads from direct grants to the several local bodies during the year ending the 31st March, 1906:—

Name of Local Body.	Expenditure for the Year ending 31st March, 1906.	Liabilities on Authorities on 31st March, 1906.
	£ s. d.	£ s. d.
Coromandel County	3,873 14 11	2,737 5 0
Thames County	2,940 17 2	2,400 15 7
Thames Borough...	340 0 0	210 0 0
Ohinemuri County	1,654 10 6	1,892 9 3
Pelorus Road Board	95 3 9	717 16 3
Takaka County	376 12 3	1,243 7 9
Collingwood County	587 17 2	1,477 10 4
Waimea County	1,261 7 6	998 18 2
Buller County	5,382 0 0	5,218 0 0
Inangahua County	2,453 0 10	3,281 17 2
Grey County	3,295 4 7	1,100 0 0
Brunner Borough	...	300 0 0
Westland County	4,269 17 0	844 18 6
Tuapeka County	627 3 7	557 16 9
Vincent County	1,520 0 0	604 12 6
Lake County	480 0 0	295 0 0
Southland County	600 0 0	1,150 0 0
Makarewa-Hedghope River Board	400 0 0	...
Wallace County	...	300 0 0
Stewart Island County	70 0 0	380 0 0
Roads Department	5,421 14 5	6,797 1 10
Public Works Department...	4,863 12 10	45 0 0
Totals	40,512 16 6	32,552 9 1

PROSPECTING FOR GOLD.

The following statement shows the expenditure and liabilities on authorities issued in subsidies to prospecting associations and parties of miners in the different counties for the year ending the 31st March, 1906 :—

Name of County.	Expenditure for Year ending 31st March, 1906.	Liabilities on Authorities on 31st March, 1906.
	£ s. d.	£ s. d.
Coromandel	563 2 0	422 8 0
Thames	...	15 0 0
Ohinemuri...	411 13 6	45 0 0
Tauranga	21 18 0	8 2 0
Takaka	12 0 0	24 0 0
Buller	266 13 3	195 12 9
Inangahua	128 16 0	164 19 0
Westland	241 6 11	336 8 3
Ross Borough	114 13 0	...
Tuapeka	61 19 7	63 0 5
Totals	1,822 2 3	1,274 10 5

THE GOLD-MINING INDUSTRY.

In comparison with the returns of the previous year those for the year ending the 31st December, 1905, show an increase in the value of gold exported of £106,435, the figures being £2,093,936 for the year 1905 as against £1,987,501 for the year 1904. This is the highest record for many years and exceeds the high return of the year 1903 by £56,105.

Contrary to the remarks called forth in last year's report by the comparison of the production of the several districts, it is now found that the greatest increase during the year 1905 is from the northern goldfields, and may be largely accounted for by the increased developments at the Waihi Mine, Waihi; the Talisman Mine, Karangahake; and the Waiotahi Mine, Thames.

No exports of gold are reported from the Marlborough District for 1905. An increase is reported from the Nelson District, whilst a decrease is shown in the export returns from the West Coast. This latter feature may be principally due to the cessation of work at some of the dredges. The Southern District (Otago and Southland) again shows an increase, and it may be remarked that this might have been greater but for the condition of the larger rivers affecting the working of some of the dredges.

The total value of gold exported from the year 1857 to the end of the year 1905 was £67,230,584.

The several branches of the industry in the various districts are referred to under their respective headings.

PRODUCTION OF GOLD.

The following comparative statements show the quantity and value of gold entered for exportation for the last two calendar and financial years :—

Name of District.	Year ended 31st December, 1905.		Year ended 31st December, 1904.		Increase for 1905.	Decrease for 1905.
	Quantity.	Value.	Quantity.	Value.		
	Oz.	£	Oz.	£	Oz.	Oz.
Auckland ...	232,215	935,602	223,010	791,529	9,205	...
Marlborough ...	...	...	473	1,890	...	...
Nelson	6,469	25,862	5,049	20,141	1,420	473
West Coast ...	109,704	438,258	122,310	489,177	...	12,606
Otago	172,098	694,214	169,478	684,764	2,620	...
Totals ...	520,486	2,093,936	520,320	1,987,501	166*	...

Name of District.	Year ended 31st March, 1906.		Year ended 31st March, 1905.		Increase for 1906.	Decrease for 1906.
	Quantity.	Value.	Quantity.	Value.		
	Oz.	£	Oz.	£	Oz.	Oz.
Auckland ...	248,031	1,000,954	222,652	815,499	25,379	...
Marlborough ...	...	...	166	662	...	166
Nelson	4,421	17,650	6,461	25,814	...	2,040
West Coast ...	110,996	443,089	119,545	478,050	...	8,549
Otago	162,752	655,913	170,388	688,551	...	7,636
Totals ...	526,200	2,117,606	519,212	2,008,576	6,988†	...

* Total net increase, value £106,435. † Total net increase, value £109,030.

QUARTZ-MINING.

North Island.

This branch of the gold-mining industry continues to be conducted on a much larger scale in the Northern District than in any other part of New Zealand, the most active centres being the localities of Waihi and Karangahake. Unlike the West Coast and southern goldfields, where alluvial gold-mining in varied forms is carried on in addition to that of quartz-mining, the operations of the northern goldfields are confined to the working of quartz reefs and the subsequent treatment of the ore for the extraction of gold and silver.

The Waihi Mine retains the premier position among the mines of the colony, and also takes rank among the larger gold-mining properties of the world. During last year the ore raised from the mine and treated at the Waihi Gold-mining Company's Mills at Waihi and Waikino (the Waihi, Union, and Victoria Mills) amounted to 298,531 short tons (2,000 lb. to the ton), for a yield of bullion of the value of £693,671 14s., or equal to an average of £2 6s. 5·7d. per ton. Dividends to the amount of £322,339 11s. were paid during the year, the total amount of dividends paid since the mine was opened being £1,924,617 16s. 6d.

The number of stamps at the several mills (amounting to 330 in the aggregate) has not been increased, but their capacity has been augmented by the introduction of tube mills and other appliances for the efficient treatment of ore.

At the mine there are now six shafts, the raising of quartz being carried on at three of them, whilst a fourth is to be equipped for winding purposes. A large pair of direct-acting modern winding-engines is shortly to be erected at one of the shafts. Among the plant which has been erected at the mine during the past year may be mentioned a very fine two-stage air-compressor, with mechanically controlled valves, actuated by cross-compound engines. The latter, which are fitted with a jet condenser, have cylinders of 14 in. and 30 in. diameter and a stroke of 3 ft. The initial steam-pressure is 150 lb. per square inch, and at a working-speed of seventy revolutions per minute the engines are rated at 260-horse power. The air-cylinders are 16 in. and 28 in. diameter and set in line with the steam-cylinders, the connection being made by through piston-rods. The pressure to which the air is compressed is 100 lb. per square inch, and the capacity 1,780 cubic feet of free air per minute. Altogether this plant is a very fine example of modern air-compressing machinery.

Underground somewhat extensive development-work was carried out during the year, and at the lowest or No. 7 level the Martha Lode was proved to be of enormous width, five crosscuts driven through it proving the reef to vary from 77 ft. to 110 ft. in width, or equal to an average of 92·2 ft. The other lodes also continue to show good promise, and it is evident from present appearances that the ore-deposits yet to be worked are such as will give life to the mine for years to come.

During the year the average number of persons employed by the Waihi Gold-mining Company at the mine, mills, and other works was 1,396. With such a number of persons it is only natural to expect that among them are to be found many who are careful as to their own safety and that of their fellows, whilst on the other hand it is equally to be inferred that careless and indifferent men will be included among the employees. That such is really the case was very clearly demonstrated to me whilst making an exhaustive inspection of the mine in September last, subsequent to the occurrence of a number of accidents. I found, with much satisfaction, a keen interest on the part of the management for the safety of the men employed, that there was no desire or attempt to economize at the expense of safety, and also that no expense was spared in the provision of material necessary to maintain the mine in a safe condition. It must, however, be remembered that underground work is always a more or less risky undertaking, that the greatest care cannot altogether prove an effective safeguard against accident where unseen dangers have to be encountered, and that it is incumbent on the men employed to satisfy themselves, so far as is reasonably practicable, of the safety of their own working-places.

The Waihi Grand Junction Gold Company (Limited)—who own the Waihi Grand Junction Mine, adjoining that of the Waihi Mine—have carried out a large amount of new work during the year. Operations underground have apparently satisfied the company as to the existence of good ore-bodies of an extent sufficient to warrant the erection of a fairly large milling plant and other machinery of an up-to-date character. The battery, a practically new plant of forty stamps and all requisites for the extraction of gold by the cyanide process, was, as intimated in last year's report, purchased from the Kauri Freehold Gold Estates Company (Limited), who formerly carried on operations at Opitonui. The re-erection of this has been put in hand, and a quantity of new machinery, including rock-breakers, tube mills, &c., added. It is intended to increase the number of stamps to 100, sixty more being on order. For steam-raising purposes three Babcock and Wilcox water-tube boilers are installed, their working-pressure being 200 lb. per square inch. These supply steam to three steam turbine engines of the Richardson-Westgarth-Parsons type, each engine being capable of developing 580 actual horse-power or 1,740-horse power in the aggregate. Each engine or turbine is coupled direct to a dynamo, the electric current generated being used for driving, by means of motors, the several sections of mining and milling plant as required. It is intended to wind the ore up the shaft by means of an electric winding-motor. In this latter respect, and the use of steam turbine engines for work in connection with mining, the Waihi Grand Junction Gold Company (Limited) may be regarded as pioneers so far as New Zealand is concerned. From the nature and magnitude of the works undertaken it is naturally to be expected that this company's mine will shortly be included among those properties which are regarded as steady producers of bullion, and add its quota to the output of precious metals.

At the Waihi Extended Mine, which so far may be regarded as a prospecting venture, the work during the year consisted in the deepening of the shaft from a depth of 518 ft. to 652 ft. and in driving crosscuts to prove the country at that depth. A body of quartz, which it is thought may possibly correspond with the No. 1 reef of the Waihi Grand Junction Mine, was met with somewhat unexpectedly.

Further driving has been carried on for the purpose of more fully proving the resources of the area. It is to be hoped that a continuation of the reef-system which has made Waihi so famous may be discovered in this claim. Should a result of this kind be attained, the information so gained would be of material assistance in locating the probable extension of the Waihi Goldfield.

Operations of a prospecting character have been conducted during the year on some of the other mining claims in the neighbourhood of Waihi, but so far no discovery of any importance has been reported in connection therewith.

In the latter part of the year a start was made by the Waihi Syndicate (Limited), in conjunction with the Waihi Grand Junction Gold Company (Limited), to sink a shaft for drainage and exploration to a depth of 900 ft., or thereabouts. This venture, if carried out as completely as proposed, may probably be of considerable service in further proving the resources of this portion of the goldfield.

At Waihi Beach, the Waihi Beach United Mine has been the scene of active operations. A shaft has been sunk to a depth of 356 ft. without much inflow of water, a crosscut driven, and a reef met with at 150 ft. from the shaft. No definite information as to the width and extent of reef or value per ton of quartz is as yet to hand.

Mining operations at Karangahake are carried on by the New Zealand Crown Mines (Limited) and the Talisman Consolidated Company (Limited), the latter company's mine having been the principal producer for the year. The output of the Talisman Mine was 44,725 tons of quartz, which gave a return of £129,088 8s. 10d., or equal to an average of £2 17s. 8·4d. per ton. The sum of £30,000 was paid in dividends for the year, this being the first distribution of profits which shareholders have received. The increased value of the ore per ton is worthy of note: the average value of the ore mined during 1904 was only £1 17s. 9·5d. per ton, whilst that won and treated during 1905 is 19s. 10·9d. per ton in excess of that of the previous year. A considerable amount of development-work was carried out during the past year; this places a large body of stone available for stoping out, and it appears to be the policy of the management to keep the mine opened up well in advance of present requirements. The prospects for the future are reported to be of an encouraging character. At the Crown Mine work has been carried on under difficulties, but the ore mined shows a slightly better average value than that won during the previous year. 17,541 tons of quartz yielded a bullion-value of £36,516 8s., this being an average of £2 1s. 7·6d. per ton (as against the average value for 1904 of £1 19s. 8·75d.) or an increase of 1s. 10·85d. per ton in comparison with the year preceding. The two companies named provided employment for an average of 359 men during the year.

The Komata Reefs Mine (Komata Reefs *via* Paeroa) produced 16,820 tons of ore during the year, having a bullion-value of £42,432 10s. 7d., or an average value of £2 10s. 5·4d. per ton. This gives an average value of 9s. 2·9d. per ton in excess of the values obtained for 1904, and is practically the same as that obtained in 1903. Dividends to the amount of £13,333 6s. 8d. were paid. The plant at the battery has been augmented by the addition of a tube mill, filter-press, and another steam-boiler. The introduction of machine drills in the mine-workings is likely to be carried out in the near future. This will necessitate the erection of an air-compressing plant. To all appearances continued prosperity may be anticipated for some time to come. The company gave employment to 140 men during the year.

In my last report mining at Waitekauri was described as being practically at a standstill. It is a matter for regret that nothing substantially better can yet be reported. A little desultory mining-work was done at various claims in the locality during the year, but the general results cannot be said to be particularly encouraging.

The attempt—referred to in my last report—to treat the accumulations of tailings in the Ohinemuri River for the extraction of bullion has not so far been commercially successful, but hopes are entertained that the venture may yet be made remunerative.

Mining at Waiorongomai, near Te Aroha, is represented by Hardy's Mines (Limited), a company which took over the mine and battery formerly worked by Mr. Hardy. The average number of persons employed during the year was twenty, and bullion to the value of £6,343 16s. 9d. was obtained from 1,727 tons of ore, or an average of £3 13s. 5·6d. per ton. Notwithstanding the value per ton obtained, which is considerably higher than that of the mines at other places already mentioned, the general results are reported as not being profitable when spread over the whole of the company's operations.

Tairua – Broken Hills Mine has materially decreased its output, only 2,151 tons of quartz being returned for the year. This gave a bullion-extraction valued at £4,669 3s. 9d., or an average of £2 2s. 0·5d. per ton. Apart from the smaller quantity of ore raised, the returns show a decreased value of 13s. 6·75d. per ton as compared with those of the previous year. The mining operations are now conducted from a shaft sunk inside the mine from the adit level, which materially adds to the cost of working as compared with the conditions which obtained when all mining-work was level-free. The recent discovery of a new reef, which is reported of good value, will probably prove of material benefit to this property in the future. On an average fifty men were employed throughout the year in connection with the mine and battery.

In my last report mention was made of a body of stone at the Coronation Mine, adjoining the Tairua–Broken Hills Mine, from which some fair dish prospects had been obtained. For the purpose of testing this commercially a small battery was erected, but the value of bullion obtained was only equal to about 10s. 6d. per ton of stone. The company therefore decided to prospect for better ore in the vicinity.

The Auckland (Mananua) Mine has been taken over by a company, who obtained 879 tons of quartz which gave a value of £4,387 14s., equal to an average of £4 19s. 10d. per ton. The results have naturally given the company an incentive to prove the deeper levels.

Operations at the Chelmsford Mine have not resulted in such success as the proprietary was led to expect when they decided to reopen the mine. The company's affairs have been put into liquidation.

Very little work was done at the Waimangu Mine during the year. The reef is considered highly payable, and I understand it will be opened up and a battery erected at an early date.

At the Golden Belt Mine, Neavesville, development-work has been continued, but was not sufficiently advanced to maintain a sufficient supply of quartz to keep the battery-works going during the year. The battery is equipped with forty heads of stamps, concentrators, and cyanide plant. The property is generally considered to be one which gives promise of success.

Prospecting-work has been carried out at the Champion Claim and the Kerikeri Mine prior to incurring the expense of erecting plants for the treatment of the ore. In both instances prospects of a satisfactory character are reported to have been obtained, and the erection of batterie is proposed.

The construction of a battery plant (ten heads) has occupied the attention of the proprietors of the Omahu (Sheet Anchor) Mines.

The discovery of some rich quartz at the Waiotahi Mine, Thames, near the end of the year 1904, has caused increased interest being taken in and attention given to the possibilities of the Thames again coming to the front as a gold-producing centre. The ore treated from the Waiotahi Mine during the year was 4,986 tons of general quartz and 2 tons 14 cwt. 1 qr. 12 lb. of picked stone, which yielded a value of £73,884 9s. 7d., equal to an average of upwards of £14 per ton over the entire production. The sum of £51,300 was paid in dividends. This mine has been a dividend-paying property for many years, even when only working on narrow leaders or stringers of quartz, and now that good bodies of ore—so far proved to be of a very remunerative character—have been met with, there appears every possibility of the mine being a profitable undertaking for some years to come. The shaft has been sunk deeper and lower levels are being opened up; new mining plant has been erected, the old battery of twenty stamps overhauled and repaired, a new battery of forty stamps purchased, and a plant for the treatment of tailings installed in connection with the mill. Employment was given during the year to fifty-two persons on the average.

Encouraged by the success which has attended the operations at the Waiotahi Mine, the owners of neighbouring properties have given some attention to prospecting their ground more energetically. A new lode has been discovered at the Moanataiari Mine, where there is still a large area of undeveloped ground. The ore won in the ordinary working of the mine during the year had an average value of £2 13s. 10d. per ton.

By a mutual arrangement, an underground connection has been made between the Waiotahi and the Kuranui–Caledonian Mines for the purposes of drainage and ventilation. The Cambria Reef at the latter mine is proving to be of considerable width, and somewhat extensive works of a prospecting character have been put in hand which give the management hopes of a successful issue.

The Old Alburnia Mine, which has employed forty persons, yielded gold to a value of £1,828 15s. 8d., or at the rate of £4 4s. 1d. per ton of quartz milled. A considerable amount of dead-work was done during the year.

Prospecting, development-work, and overhauls of plant have characterized the operations at the Kuranui Mine and also the Victoria Mine during the year. At the former the work has all been in the direction of future efficiency, but at the latter some quartz was also raised and treated, 153 tons yielding gold to the value of £691 4s. 9d., or equivalent to £4 10s. 4·3d. per ton.

The Thames Gold-mining Company (a new proprietary) have taken over the Fame and Fortune and the Nonpareil Mines, and propose to develop the properties from the Moanatairi main tunnel. During the year gold to the value of £292 10s. 2d. was obtained from 175 tons of ore (average value £1 13s. 5·1d. per ton) from the Fame and Fortune Mine, and £560 7s. 6d. from 60 tons (average value £9 6s. 9·1d. per ton) obtained from leaders in the Nonpareil Mine.

Operations in the New Saxon Mine have been confined to the working of ground previously opened out, and the question of prospecting at deeper levels is a matter for the future. The gold won (valued at £845 from 213 tons of ore) shows an average value of nearly £5 per ton of stone.

The New May Queen Mine, which was closed down for some considerable time, has been reopened and put into repair; a connection by borehole has also been made with the Queen of Beauty Mine for the purposes of drainage. The works mentioned took some time to carry out, and therefore the actual mining of quartz was only conducted during a small part of the year. From 214½ tons of ore gold to the value of £901 4s 9d. was obtained, or equivalent to £4 3s. 9·5d. per ton. These workings are said to be the deepest from which payable results have so far been obtained at the Thames, and if values like the foregoing can be maintained this part of the field will doubtless receive increased attention from investors.

The New May Queen Extended and New Una Mines are both worked from the main tunnel of the former, and employ six men each. At both mines a similar state of things exists, and the quartz—although of good average value where the reef is reasonably large—being got in narrow veins, necessitates a considerable amount of dead-work for its extraction, consequently mining-costs are naturally heavy. The average values of the ore won at each mine were £2 12s. 1·2d. and £2 5s. 10·4d. per ton respectively.

At Tararu Creek Mine some development-work has been in progress during the year, and further developments are under consideration. The ore treated during the year only gave an average value of £1 2s. 3·3d. per ton.

Development-work and improvements to and rearrangement of plant have been made at the Eclipse Mine. The ore treated was 1,388 tons, yielding a gold-value of £3,193 5s. 4d., or an average of £2 6s. 0·1d. per ton.

A few small mines, each employing a few men only, have been worked during the year in the locality of Thames with varying degrees of success.

The pumping plant at the Queen of Beauty shaft, which is now Government property, has been at work during the greater part of the year under the control of the Thames Drainage Board, and maintained the drainage of the goldfield, which was for so many years effected by the old Big Pump, now pretty well worn out. The cessation of pumping at the old Big Pump shaft places this latter free for other purposes. Its position is such as fits it for sinking deeper for the purpose of winning a very much lower level than anything yet attempted at Thames, and, in my opinion, the question of the existence or otherwise of payable reefs below the "barren zone" at Thames will never be satisfactorily settled until this is done and a long crosscut driven from the shaft-bottom at right angles to the general strike of the reefs. As is well known, boring operations have, owing to the nature of the ground to be drilled through, failed to give satisfaction. Had the money so spent been devoted to materially deepening the shaft in question and crosscutting therefrom, it is more than likely that some indication of the possibilities of the Thames Goldfield (at, say, 1,000 ft. deep) would have been obtained, and in any case so much would have been done in the desired direction, even allowing for the necessity of further expenditure for exploration purposes. The matter is one which is worth the consideration of those interested in the development of the goldfield.

The Monowai Mine, at Waiomo (referred to in my last report as having been taken over by a local syndicate, who propose to specially treat the refractory ore met with in the mine), has not yet resumed milling operations, but the development-work in the mine itself is being vigorously proceeded with.

At Tapu, work has been carried on at the Mahara Royal and Sheridan Mines. The results have been of a somewhat disappointing character, as the ore-values have been only about sufficient to meet expenses. Further prospecting for the purpose of proving the presence and value of lodes in parts of the property hitherto unexplored is proposed.

The drainage difficulty at Coromandel, fully referred to in my last report, has had a somewhat serious effect upon the working operations of the three mines affected — viz., the Old Hauraki, the Bunker's Hill, and the Hauraki Freeholds, at all of which operations below the level of free drainage have had to be suspended. Mining consequently has been confined to the upper levels, and, so far as the Bunker's Hill and the Hauraki Freeholds Mines are concerned, work was stopped as a result of the difficulty, and protection obtained pending other arrangements being made. There is no question whatever in my mind as to the desirability of an amalgamation of these three properties. It has been conclusively demonstrated that one drainage plant properly placed will unwater all three mines, and, owing to their close proximity, the mines could be worked more economically as one concern than it was possible to do under the conditions which have hitherto existed. Gold to the value of £887 13s. 6d. is reported as having been won during the year from the mines affected.

Prospecting, including operations on the Tokatea Big Reef, has had considerable attention during the year, but so far nothing of a particularly encouraging character has resulted. With respect to the Tokatea Big Reef and any prospecting operations which may have been undertaken or may be attempted in the future, the opinion of the late Mr. F. Hodge, M.E., on this point may be quoted. Mr. Hodge wrote, "It is a well-known fact that the Big Tokatea Reef is not payable down to the datum-line of sea-level. In width it varies from 20 ft. to 60 ft. It is assumed by many that it would, in depth, be proved to contain highly payable gold-ore, and the most economical way of testing the accuracy or otherwise of this theory would be by diamond bores." In my report of last year the foregoing quotation was given and the matter referred to at some length. If, as the late Mr. Hodge said, the reef is *known* to be valueless down to sea-level, it appears to be a waste of money and energy to prospect it for gold-values near the outcrop. As diamond bores have not, owing to the nature of the country, hitherto been a success on the northern goldfields, it might be more satisfactory to prove this reef (which is known to be of very large extent) by means of an incline shaft sunk on the reef itself. As remarked in last year's report, the matter is one which requires to be treated in a thorough and systematic manner.

The output of gold from the Royal Oak Mine, Tokatea, for 1905 had a value of £2,040 18s. 3d. During the early part of the year the company worked the mine in the usual manner, but later on the work was conducted on the tribute system. The results of mining have been getting poorer, and the gold won during 1905 was less than one-fourth of the production of the preceding year. From present evidences the outlook for the future is anything but promising.

At the Four-in-Hand Mine, near Kennedy Bay, the low-level tunnel from Waikoromiko Creek valley has been continued, but at the end of the year was estimated at some 230 ft. from the Four-in-Hand Reef. From the upper workings 112 tons of ore gave a return of £456 10s., or equivalent to an average value of £4 1s. 6d. per ton, or 3s. 4d. per ton in advance of the average for the previous year. Should the reefs maintain their size and value down to the level of the new tunnel, a very valuable property will be proved, and give encouragement towards developing the mine at a lower level still, there being ample height for this between the level of the tunnel now being driven and the bed of the Waikoromiko Creek to allow of a fairly extensive mine being opened out level-free.

In the locality of Kuaotunu mining-work has been carried on much on the usual lines; there are no fresh developments of importance to report. The principal mine is the Waitaia, which employs twenty men and produced gold during the year having a value of £2,484 2s. 3d. from 635 tons of ore, giving an average value of £3 18s. 2·9d. per ton, or £1 10s. 0·5d. per ton less than the average of the preceding year. Nothing has yet been done in the direction of opening up the mine at a lower level. The Handsworth, Great Mercury, and Otama Mines have been worked on a small scale during the year.

At Gumtown, four men have been employed at the Kapowai Mine, and a return of £2,469 12s. 3d. was obtained from 1,240 tons of ore, the average value being £1 19s. 9·9d. per ton. The Big Beetle Mine was also worked on tribute for a short time, 73 tons of stone yielding gold to the value of £133 13s., or equal to £1 16s. 7·4d. per ton. This property, together with two others, is being prospected

on behalf of a syndicate, who propose working the claims should the results of prospecting offer sufficient inducement to do so.

On the Great Barrier Island, the operations of the Barrier Reefs Gold-mining Company have principally been in the treatment of tailings, which contain a considerable percentage of silver in addition to a little gold, and have yielded an average value of 16s. per ton. This has demonstrated the fact that during the time the mine was being worked bullion was being carried off in the tailings, and the knowledge so gained may possibly lead to the mine being again worked. At the Sunbeam Mine prospecting work has been carried out and a five-stamp battery and cyanide plant erected during the year. Hopes are entertained that the mine will be a payable concern.

The reports of Mr. Coutts, Inspector of Mines, and Mr. Warden Bush deal very fully with the gold-mining industry of the Hauraki Goldfields.

Middle Island.

Quartz-mining in the Marlborough Province is practically at a standstill; the only property on which any work of a practical nature is being done is that of the Wairau Gold-mining Company, at the Jubilee Mine, Top Valley, near Blenheim. A small reef which carries scheelite is being worked on tribute. The company propose to test this mineral on a commercial scale, and also to extend the main crosscut for the purpose of more fully developing the mine.

Prospecting in the Anatoki Ranges, behind Takaka, Nelson Province, is to be carried out at an early date, arrangements for this work having been recently made.

The deeper ground at Johnston's United old mine, Bedstead Gully, Collingwood, is being prospected by the Golden Blocks Gold-mining Company, and should the results be favourable there is little doubt that the mine will be again worked.

The operations of the Golden Blocks Gold-mining Company at their mine at Taitapu appear to have been satisfactory, 2,387 tons of quartz yielding gold to the value of £11,108 3s. 6d., or an average of £4 1s. 3·1d. per ton. An extended area has been obtained, and prospecting operations over this put in hand.

No gold was won at the Golden Ridge Mine (Taitapu Gold Estates) during the year, operations having been practically confined to prospecting-work, the results so far not being of an encouraging character.

In the Westport district a little mining has been done at the Red Queen Mine, Mokihinui (where three men working on tribute have been employed), and also at the Britannia Mine, Waimangaroa. At the former property, 118 tons of ore yielded an average value of £4 9s. 6·5d. per ton, and at the latter, 889 tons of ore gave a return of £3,348 13s. 5d., or equal to an average of £3 15s. 4d. per ton. A new tunnel has been commenced at the Britannia Mine and operations put in hand for the erection of additional stamps and a cyanide plant.

Work at the Alpine Extended Mine, Lyell, has been largely of a prospecting character without any ore-bodies of commercial value having been met with. The stone obtained in the various prospecting drives was treated at the battery for an average value of 9s. 4·1d. per ton.

Prospecting operations beyond Lyell are being carried on by the New Creek Syndicate, but the party known as the Italy Syndicate, who got very good returns for a year or two, have surrendered their mining privileges. The inference to be drawn from this is that the ground opened up has been exhausted.

At the Welcome Mine, Capleston (Boatman's), prospecting was carried on during the early part of the year, but the results obtained were not considered particularly good. Subsequently the mine was let on tribute and worked during the last three months of the year, 45 tons of ore yielding gold to the value of £212, or an average of £4 14s. 2·6d. per ton.

Knight and party have opened out an old mine (referred to in last year's report) at Italian Gully, and erected a five-stamp battery. It is intended, should circumstances warrant the expenditure, to increase the crushing-power to ten heads of stamps and erect a small cyanide plant.

Prospecting is being conducted by Mr. McKenzie at the Lady of the Lake Claim, and by Dunn and party at the Fiery Cross, Hopeful, and Alexander Claims.

Kirwan's Reward Mine, Victoria Ranges, has been vigorously worked during the year, and operations commenced for improving the conditions of work. The mine is worked as an open quarry, stone and mullock being sent in bulk to the mill by means of a self-acting aerial tram-line. The expenses of mining are thus very small, and consequently ore of an average low grade is made to pay well. 7,584 tons gave a return of £6,699 13s. 11d., or equivalent to an average of 17s. 8d. per ton. Mr. Kirwan spent some time in the early part of the year in prospecting-work on the northern side of the Waitahu River (Mr. B. Sutherland taking charge of the mine in the meantime), and discovered a reef known as Kirwan's New Find. This reef is 2 ft. 6 in. wide at the surface, and its appearance is very promising. It was briefly referred to in my last report as having just been discovered.

In the neighbourhood of Reefton, the Progress Mine, at Progress Hill, is the principal mine, and is connected with the battery-works near Crushington by a self-acting aerial tramway. The mine-developments have, in accordance with the company's practice, been kept well ahead of battery requirements. These include the sinking of the main shaft and the opening of lower levels. For the purpose of locating ore-bodies, the diamond-drill is largely used at this mine in drilling horizontally, and has been found of very material service in accomplishing the desired object. The battery-works include sixty-five heads of stamps, concentrating, cyanide, and chlorination plants; in fact, the method of chlorination is not practised elsewhere in New Zealand. During the year 60,000 tons of quartz was crushed for a value of £75,408 9s. 4d. (recovered by amalgamation), 37,000 tons of the sands treated

by cyanide yielded £10,204 14s. 7d., and 1,105 tons of pyritic slimes and concentrates chlorinated gave a return of £11,238 4s. 7d., making a total value of £96,851 8s. 6d., which gives an average of £1 12s. 3·4d. per ton of stone milled. The total working-cost is given as 18s. per ton. Ore-values have shown a slight falling-off during the year, owing to the lower grade of quartz mined as compared with that of previous years, and, judging from the general appearances of the ore in sight, it is anticipated that the results of this year's working will not prove so profitable even as those of last year.

The Wealth of Nations Mine, at Crushington, near Reefton, has been worked during the year with a view to concentrating operations underground, so that the inconvenience attending the haulage up an inside incline shaft might be dispensed with, and the Energetic shaft (which has been equipped with a modern winding plant) used for the purposes of the mine. The output of quartz for the year was 11,970 tons, the recovery of precious metal by the several processes being as follows :—Amalgamation, £13,662 19s. 6d. ; cyanide, £5,420 16s. 1d. ; concentrates and slimes, £764 14s. 10d. : making a total of £19,848 10s. 5d., or equivalent to an average value of £1 13s. 1·2d. per ton of stone milled.

At the Golden Fleece Mine, at Black's Point, near Reefton, the output of quartz was suspended for a portion of the year in order to admit of the old Golden Fleece shaft being deepened so as to provide a more rapid and efficient means of ingress to and egress from the working-faces. At the battery 13,985 tons of stone was crushed for a return of £28,463 1s. 5d., made up as follows : By amalgamation, £23,165 11s. 8d. ; by concentration, £1,955 8s. 8d. ; by cyanide treatment, £3,342 1s. 1d. The value per ton of stone milled averaged £2 0s. 8·4d.

The Wealth of Nations and the Golden Fleece Mines are owned by the Consolidated Goldfields of New Zealand (Limited).

The Keep-it-Dark Mine maintains its reputation as a paying concern, and recent developments go to show that the outlook is of a promising nature, the reef at the lowest working-level and the winze below being well defined and of good width and quality. 12,730 tons of ore was treated at the battery, and yielded by amalgamation and cyanide treatment £19,351 15s. 11d., or an average of £1 10s. 4·8d. per ton. In addition to this, a quantity of concentrates was shipped and sold.

Operations at the New Inkerman Mines have ceased, and the property has been purchased by the Consolidated Goldfields of New Zealand (Limited). The late owners worked the mine during the early part of the year, but the results obtained were too poor to warrant the continuation of operations. A large amount of capital has been spent in exploration and development-work, and the existence of ore-bodies is known, but evidently the value of the stone is poor. 3,330 tons of ore treated gave a return of £2,811 8s., or equal to 16s. 10·6d. per ton.

Mining operations at Merrijigs have not during the last few years been of a profitable or encouraging character generally, and at the present time the industry is, practically speaking, a dead-letter.

Mr. P. N. Kingswell, the owner of the Victoria and Inglewood Mine, has carried on operations during the year, 1,730 tons of stone treated at the battery gave a gold-yield, by amalgamation, to the value of £3,648 17s. 7d., and by subsequent cyanide treatment 1,505 tons of sands yielded a gold-value of £2,032 10s. 11d., making a total of £5,681 8s. 6d., which sum, divided by the number of tons of ore sent to the battery, gives an average value of £3 5s. 8·1d. per ton.

A good average value is maintained at the Big River Mine, 920 tons of ore won during the year yielding gold to the value of £3,514 8s. 3d., equivalent to £3 16s. 7·4d. per ton, or some 2s. 7d. per ton better average than the returns for the previous year. The ground at this mine is patchy, the stone occurring in blocks, which, as a general rule, are of good average value. The shaft is now 1,200 ft. deep.

Some work on a small scale has been done at various claims in the vicinity of Reefton, from some of which a little gold has been obtained, whilst at others the operations have been generally more of a prospecting character.

The Garden Gully Mine, situated in the Paparoa Ranges, above Blackball Township, has been opened up to some extent, and the battery from the Crœsus Mine removed and re-erected for the purposes of the Garden Gully Mine, at which the general arrangements of plant were nearly completed at the end of the year. The proprietary hope to commence operations on a commercial scale early in the new year.

Towards the close of 1905 and during the early part of the present year a considerable amount of attention was, and still is, being given to the locality of Blackwater as a likely field for auriferous quartz reefs. Some very promising reefs have been found, and prospecting is being vigorously prosecuted. It is too soon to make any estimate of the possibilities of the district ; but doubtless a considerable amount of reliable information will be available by the end of the year, and will naturally be embodied in the next Mines Report.

The Westland (or Wilberforce) reefs, which are found near the summit of the dividing-range between Westland and Canterbury, have been the object of attention during the year, thirteen prospecting areas of 100 acres each having been already taken up. Wilson's Reward Claim is on the eastern side of the range, and it is reported that a reef 21 ft. in width has been cut, giving an assay value of about £2 14s. per ton. It is proposed to open out the claim from the Westland side, towards which the underlie of the reef appears to dip. For the purpose of enabling samples of quartz from this hitherto unworked and somewhat inaccessible field to be tested, it has been decided by the Government to erect a small battery of two stamps.

Detailed reports of the working of the mines in the Marlborough, Nelson, and West Coast districts are made by Mr. Tennent, Inspector of Mines, and Wardens Smith, Kenny, and Kenrick.

In the Southern Mining District (comprising Canterbury, Otago, and Southland) there are not at the present time any quartz-mines which compare with the principal mines of either the Northern or West Coasts districts; but it is pleasing to note that an increased amount of attention is being paid

to the possibilities of quartz-reefing. For some years past the extensive alluvial fields have had a much greater attraction for the investor and speculator than the quartz-reefs of the district; but, as has been suggested in previous reports, the gradual exhaustion of alluvial ground will naturally cause attention to be directed to the quartz-reefs, and especially so since of late years considerable advances have been made in the treatment of ores which do not freely yield their gold by amalgamation. This latter feature is characteristic of the quartz of the Carrick Range; and, with a view to the determination of a practical method for its treatment, a sample of good quality ore for assay was obtained, the value of which was found to be upwards of £6 per ton. Following this up, a bulk sample of stone—taken from various workings and mixed together, so as to get a fair average sample—was treated by the Government Analyst (Dr. Maclaurin), who reports as follows :—

"*Quartz from Carrick Range, near Bannockburn, Otago.*

"The sample consisted of hard and somewhat glassy quartz, with dabs and veinlets of a greyish mineral with silvery white fracture. This mineral had approximately the following composition :—

	Per Cent.
Iron	56·6
Arsenic	24·4
Antimony	1·3
Sulphur	17·7
	100·0

"No gold was visible in the stone, but panning-off showed a little free gold.

"The whole of the sample forwarded (about 2 cwt.) was roughly crushed and mixed, quartered, &c., in order to get a fair average, and a large sample was finally crushed dry to pass a 30 mesh. This sample, which was used in all the subsequent experiments on the ore, had the following fineness :—

	Per Cent.
Passed 30, but rejected 60 mesh	39·5
„ 60, „ 90 „	31·5
„ 90, „ 120 „	12·0
„ 120, „	17·0
	100·0

"Its assay value was as follows :—

	Dwt. gr.	Value. £ s. d.
Gold	17 8 per ton	3 9 4
Silver	3 3 „	0 0 4
		£3 9 8

"*Concentration.*—The first point to be considered was the suitability of the ore for concentration. This investigation was carried out in the following manner : 48,000 grains were panned off in a dish, and yielded 640 grains of concentrates, or 1·33 per cent. of the sample taken. These concentrates contained 73·7 per cent. of the total gold in the sample, and were worth £191 11s. 3d. per ton. In other words, 75 tons of ore would yield 1 ton of concentrates, worth £191 11s. 3d.; moreover, these concentrates were by no means "clean," as they contained 44·8 per cent. of sand. When working on the large scale, and with a good form of mechanical concentrator, it should be possible not only to increase the percentage of gold recovered, but also to decrease the bulk of the concentrates.

"*Amalgamation.*—This was carried out by making the ore into a pasty condition with water and rubbing up in a mortar with mercury. The mercury, however, soon became dull ('sickened'), and potassium-cyanide solution had to be added to keep it bright. The extraction by this method was 55 per cent.

"*Chlorination.*—7,000 gr. (1 lb.) were treated with chlorine water for forty hours, but the extraction was only 33 per cent.

"*Cyanide Treatment.*—Three samples of 1 lb. each were taken. A was treated with 600 c.c. of a 0·5-per-cent. solution of potassium-cyanide; B was treated with 500 c.c. of a 0·35-per-cent. solution of potassium-cyanide; C was treated with 500 c.c. of a 0·26-per-cent. solution of potassium-cyanide. These solutions remained in contact with the ore for 116 hours, after which they were run off, and succeeded by the following washes :—

	Per Cent.
400 c.c.	0·10
200 c.c.	0·05
200 c.c.	Water.

"The solutions were evaporated and the gold recovered, with the following results :—

The gold recovered from A showed an extraction of 72·3 per cent.
„ B „ 66·4 „
„ C „ 62·7 „

"At the same time there was a consumption of 6·4 lb. of KCN in A, 4·5 lb. in B, and 3·6 lb. in C per ton of ore treated.

"The tailings from A and B were next treated by amalgamation in a mortar, when further extractions of 24·1 per cent. and 24·9 per cent. respectively were obtained. These results may be restated as follows:—

	Extraction of Cyanide.	By Amalgamation after Cyanide.	Total Extraction.
	Per Cent.	Per Cent.	Per Cent.
A	72·3	24·1	96·4
B	66·4	24·9	91·3

"In considering the above methods of treatment, it will be seen that chlorination can be at once eliminated as useless. Plate amalgamation must also share the same fate.

"Of the remaining processes, the last—cyanide treatment, followed by amalgamation—gives excellent results. The gold left undissolved by the cyanide is fairly coarse, and should therefore be readily saved by simply running the tailings from the cyanide-vats over amalgamated plates. The consumption of cyanide is somewhat heavy, but this might be decreased by reducing the period of treatment; and even if the loss of cyanide should be as great as shown, the ore would still yield a very handsome profit.

"If it should be thought undesirable to go to the expense of erecting a cyanide plant, the alternative method of concentrating and shipping the concentrates to Dapto, New South Wales, could be employed. This would require but little outlay, and should pay very well indeed.

"The sample forwarded is said to be fairly representative of the reefs in the locality; but, if there be any doubt on this point, further samples should be sent for assay."

In connection with the actual working of quartz-mines in the Southern District, there has been a somewhat increased activity shown in the Macrae's and surrounding localities. This may be largely accounted for by the fact that in this portion of the Otago goldfields scheelite is associated with the quartz; and as scheelite, which carries a good percentage of tungstic acid, is largely in demand, and commands good prices, it is found advantageous to work quartz-reefs even where the gold-value is not high. None of the mines in the district are on a large scale.

Between Milton and Waipori there is a reef-formation known as the Canada Reefs, upon which operations have been conducted in a more or less intermittent and desultory fashion for some years. Of late renewed interest has been evinced and ten men have been employed at the Last Chance Claim, where there is a reef of some 7 ft. in width running east and west, with a southerly dip. The quartz, so far as won, is friable and oxidized, and yields an average value of nearly £2 per ton by amalgamation only, the sands being saved for cyanide treatment in the future. Prospecting operations are also being undertaken at other claims in the vicinity. The line of strike is practically parallel to the reef-system referred to in my last report, which runs from above the head of Lake Wakatipu to near Oamaru. The reefs running through the Lammerlaw Ranges are also on a similar course, while those worked at Waipori and near Skipper's Point strike approximately at right angles.

At Barewood, work has been continuous throughout the year, and the stone worked, although not so rich as that won some two or three years ago, can now be more effectively treated in consequence of the battery-power having been increased and concentrating and cyanide plant erected.

A new mine is being opened out on Mount Ross Station, Matarae, prospecting operations having evidently been of an encouraging nature.

Work on the Old Man Range has been conducted on a small scale at White's Reef by Mr. R. T. Symes, and at the Excelsior Mine by Messrs. Gray and Holden. Their operations have not been so profitable as in past years.

Mining operations on the quartz reefs of the Carrick Range have not been characterized by much activity, Messrs. Lawrence Bros. being the only people who treated any ore during the year, and this was only a small lot of 50 tons. As some indication of the possible results which may be obtained from the quartz reefs in this district, the report of Dr. Maclaurin (Government Analyst), already quoted, may be studied to advantage.

At Macetown, the operations at the Premier Mine have been of anything but a satisfactory nature from a shareholder's point of view, owing to the payable ore having run out. During the latter portion of the year prospecting-work disclosed a block of stone which gave some encouragement to the owners, but as this was worked upon it was found to be of very limited extent, and at my visit early in the present year was practically exhausted. The company have since decided to close the mine and dispose of the plant. Two small parties of men have been engaged during the year in mining in Caledonian Gully, their operations being the working of stone near the surface, from which good returns have been obtained, the average value of the ore being approximately £3 17s. per ton.

Mr. Farrell, who holds the rights to several claims in the locality, is endeavouring to float a company in London.

In the locality of Skipper's there is a degree of renewed activity, the property formerly known as the old Phœnix Mine, at Bullendale, and lately owned by the Achilles Gold-mining Company (Limited), having been reopened by the Mount Aurum Gold-mining Company. The new proprietary have opened out the mine on the British-American Reef at a much higher level than that worked by the Achilles Company. This being some distance from the battery, and in a different valley from where the latter is situated, the ore is transported from the tunnel-mouth and across a saddle to the battery by means of an aerial tramway. The rise from the tunnel to the crossing of the saddle is 270 ft. vertical, and the fall from there to the battery is 790 ft., the total distance being approximately 3,000 ft. Ample fall is thus obtained to allow of the tramway being worked by gravitation. The erection of this haulage plant and other necessary works for the more effective working of the property were completed towards the end of the year. It may now be reasonably expected that this property will resume its position among the gold-producing and dividend-paying mines of the colony.

The Shotover Quartz Mine, near Skipper's Point, was worked during a good portion of the year; but operations were subsequently suspended to allow of arrangements being entered into for the acquisition of additional capital in order to provide means for the further development of the mine.

Prospecting in the locality has come in for a fair share of attention, and a Reefton company (known as the Eureka Gold-mining Company) have commenced active operations on a small scale at their claim in Jennings's Gully.

Quartz-mining at Preservation Inlet is now for practical purposes at a standstill.

Very full particulars of the year's operations in respect to this branch of the industry in the southern part of the colony will be found in the report of Mr. E. R. Green, Inspector of Mines, and also references to it are made by Wardens Burgess and McEnnis in their reports.

HYDRAULIC AND ALLUVIAL MINING.

This branch of the gold-mining industry is, with the exception of the small amount of work done on Stewart Island, confined to the goldfields of the Middle Island, the principal centres being in the Nelson, Westland, and Otago provinces. Taken as a whole, there is very little change to report as compared with the operations of the preceding year; the principal hydraulic mines maintain a very steady output of gold and find employment for a numerous body of workmen. The characteristics of many claims in the several districts, together with particulars of the working plant, have been described in previous reports, and do not need to be recapitulated. In a few instances ground which was attempted to be worked by dredges is being satisfactorily worked by hydraulic sluicing and elevating.

So far as alluvial mining in the Marlborough Province is concerned, it may be almost placed on a parallel with quartz-mining in the same district. Very little work has been done during the year. A few men find employment in the localities of Mahakipawa, Wakamarina, Top Valley, Arm-chair Creek, and Onamalutu. A party of five men, who have what they consider a good claim in the last-named locality, have been engaged in improving their water-supply arrangements. Attempts to drain the King Solomon Mine, at Mahakipawa, have been made; but it appears that increased pumping-power is required.

At Takaka (Nelson), the Bubu Hydraulic Sluicing Company have had a fairly good year; their claim constitutes the only one of any working extent in the immediate locality. Some attention is being given to prospecting in the Upper Anatoki portion of the district; but prospectors experience considerable difficulty in getting supplies owing to the absence of tracks. This is a matter which is receiving attention from the local authorities.

The Parapara Hydraulic Sluicing Company, whose claim is at Parapara, near Collingwood, are now engaged on a scheme which is estimated to very materially assist the working operations and enable the deeper ground of the company's freehold flat to be worked. The project comprises the driving of a drainage-tunnel upwards of 600 ft. in length, which is calculated to drain the ground to a depth of 25 ft. and enable it to be worked level-free. The tunnel will act generally as a tail-race. Below this it is proposed to work to a depth of 60 ft. by means of hydraulic elevators. The new arrangements are expected to be in working-order about the middle of the present year. Gold to the value of £2,985 was won during the year 1905.

The Slate River Sluicing Company obtained gold to the value of £1,179 10s. 3d. as the result of their work during the year. Their operations were considerably restricted by reason of an insufficient supply of water; but work has been put in hand to minimise this difficulty as regards the future, increased storage-capacity being provided.

Work in the Quartz Ranges Claim, now the property of Mr. C. Y. Fell, of Nelson, has been carried on by a party of tributers, and fairly good results obtained. The water-supply is abundant and constant, Boulder Lake being the source from which the water is obtained.

Alluvial mining in the immediate vicinity of Westport cannot be regarded as being in a particularly flourishing condition. A few small parties and fossickers are scattered about in the gullies and on the terrace lands in localities where work was conducted on a more extensive scale some years ago. These men may be said to be gleaning the remains of previous mining operations rather than making any fresh discoveries.

Work at Addison's is fairly steady, and the locality appears to offer a field of operations for a few parties for a few years to come. The gold-yield is generally regarded as satisfactory. Two parties who worked the cement deposits have ceased operations. These deposits consist of a closely cemented sand carrying gold. The cement was crushed in stamp-batteries and the gold recovered by the amalgamation process.

At Charleston Beach, Messrs. Powell continue to work the black sands by hydraulic sluicing and elevating. The sand and water on leaving the elevator is led through sluice-boxes on to a wide spread of tables fitted with silvered plates on which the gold is saved by amalgamation. It is understood that the results of working are of a very profitable and satisfactory character.

The Charleston Beach Sluicing Company have disposed of their beach property to Messrs. Powell and turned their attention to the prospecting of the Croninville plateau. The results appear to have warranted further expenditure, as operations for bringing a water-supply for sluicing purposes have been put in hand.

"Beachcombing," a form of alluvial mining carried on along the beaches at a few places in the colony, is more extensively carried on in this locality than elsewhere. The *modus operandi* is very simple and the plant inexpensive. Quite a number of families make a very fair living in the vicinity of Charleston by this method of work. The plant principally consists of a silvered plate carried on a two-wheeled barrow over which the auriferous black sand is run by means of a small flow of water,

the free gold amalgamating with the silver on the plate. In this connection it may be mentioned that Mr. Thomas Samuel, of Westport, has introduced a simple plant, consisting of an Edson pump worked by a small oil-engine, which can be easily moved about on the beaches. The pump may be used in conjunction with either a short run of sluice-boxes and silvered plates, or both.

Alluvial mining on and in the locality of the Buller River above Lyell may be said to be of a promising character. A new company, known as Walker's Maruia Gold-mining Company, has been formed, and intend working an extensive alluvial deposit. The water-supply is estimated to cost £6,000. The operations of the Six-mile Hydraulic Sluicing Company are of a satisfactory character. The Horse Terrace Sluicing Company have completed the installation of a fairly extensive plant and commenced sluicing operations. Several other claims are at work, some of which are reported as being highly profitable. During the year most of the claims suffered more or less damage to their water-races or pipe-lines as a result of the heavy floods which occurred. This feature is one of the risks attendant on alluvial mining, in the West Coast district especially.

During the year some attention has been paid to alluvial mining near Capleston and elsewhere in Inangahua County, and a few claims opened out, none of the workings being as yet on an extensive scale. Prospecting is also being undertaken, the prospectors being assisted in most cases by Government aid.

In the Grey Valley, alluvial mining, much on the lines of the practice of previous years, is being carried on adjacent to the Grey River and its tributaries, and, apart from dredging, provides employment for considerably over a hundred diggers, among whom the Chinese element is fairly well represented. The localities of Upper Blackball, Healey's Gully, Bell Hill, &c., also provide employment for a number of alluvial miners, and the season's gold-returns were generally profitable. At Maori Gully, Saunders and party have acquired a 20-acre claim, with rights to ten heads of water from New Creek. Race-construction has been commenced. The race, including tunnels and a siphon, will be six miles and a quarter in length. The venture is considered to be one of considerable promise.

The principal claims at Barrytown are owned by Mr. A. McKay, of Greymouth, who recently purchased that formerly held and worked by the Waiwhero Sluicing and Dredging Company. Mr. McKay's holdings and operations are of an extensive character; and for the more efficient working of his Barrytown Claim a scheme for the improvement of the water-supply is commanding attention. One of the characteristic features of the working plant at the principal claims in the locality is the large area of the tables over which the gold-bearing material is passed. A description of that designed by the late Mr. H. W. Young, C.E., and erected for the Waiwhero Sluicing and Dredging Company, at Barrytown, was given and illustrated by drawings and photographs in my report presented during the parliamentary session of 1902.

Mining-work at Kumara, Stafford, Goldsborough, Callaghan's, and the adjacent localities, is referred to in the report of Mr. James Rochfort, manager of the Waimea–Kumara water-races. From this it will be seen that during the financial year—1st April, 1905, to 31st March, 1906—the value of gold won at the several claims supplied by water from these races was £17,117 2s., on an average fifty-nine men being engaged at the several claims. In addition to these, a few men are employed at claims commanded by private water-races.

Shortly after Mr. Alexander Aitken retired from the management of these races I made a general inspection in company with Mr. Rochfort, the present manager, and found the races, pipe-lines, and dams generally in very good order; but the trestle-flumes on the Waimea and Stafford race—which were erected some thirty years ago—are all, in consequence of their age, in very indifferent condition. They have been repaired from time to time, but are now getting almost beyond the possibility of further patching-up; and it is evident that their reconstruction, at a probable cost of some £2,000, will have to be considered in the near future.

Around Hokitika alluvial mining is, with one or two exceptions, conducted on a small scale. Operations have been carried on at Humphrey's Gully on a larger scale than at any of the other claims, but the gold-returns have not as yet equalled expectations, and for the past two or three years the claim has been worked on tribute. Craig's Freehold is also worked by a party of tributers, whose earnings have not been very great. The Minerals Gold-mining Company have done fairly well, the gold obtained enabling all liabilities to be paid off and leaving a substantial credit balance for the year. Some of the miners at Back Creek are reported to be making a good living, and others have been engaged in preliminary works which are expected to open up payable ground.

At Ross, the Mont d'Or Claim continues to pay regular dividends; but the somewhat deficient water-supply of last year was responsible for a reduced output of gold. Prospecting-holes below the present working-bottom have shown that payable returns may be obtained; and in order to work this lower ground to advantage the construction of a low-level tail-race has been commenced. The constructive works in connection with McLeod's Terrace Company's claim are now completed, and sluicing was commenced towards the end of the year. The water-supply was somewhat deficient, and the face will have to be more fully opened out before a fair estimate of the claim's possibilities can be well made. A few small parties who are sluicing in the locality are reported to have obtained good returns of gold when water has been plentiful. Mr. Warden Acheson in his reports offers some comments on the potentialities of mining at Ross.

Further south, alluvial mining in the Waiho district has provided employment for between thirty and forty men, of whom about a dozen are treating the beach-sands near the outlet of the Big Waitaha River and five others the deposits left by floods on the north beach of the Wataroa River. The Waiho Sluicing and Elevating Company employ eight men at their claim.

The reports of Mr. Tennent, Inspector of Mines, and of the Wardens for the Marlborough, Nelson, and West Coast Districts, deal with the industry in greater detail.

Alluvial and hydraulic mining continues to be actively carried on in the Southern Mining District, and is very fully noticed in the reports of Mr. E. R. Green, Inspector of Mines, and the Wardens of the several Court districts of Otago and Southland.

There is nothing of fresh moment to record as regards the localities of Maerewhenua and Livingstone. The water-supply conveyed in the Mountain Hut Race (which was completed some two or three years ago by the installation of the necessary siphons at the Government expense) has enabled some thirty or more miners to prosecute their labours. In my last report mention was made as to the necessity which is likely to exist in the near future for the endowed lands at Maerewhenua being thrown open for mining purposes; and, so far as present appearances go, this course will be necessary if the mining industry of the locality is to continue for any length of time and the full benefit derived from the expense incurred by Government in providing the siphons for the water-race already referred to.

In the localities of Manuka Creek, Waitahuna, Wetherstone's, and Waipori, alluvial mining has been conducted during the year much on the usual lines, and provided employment for about 130 persons (including Chinese), but exclusive of men employed on dredges. At Waipori the construction of a large dam has been undertaken by Messrs. Knight Bros. for the conservation of water for mining purposes in the locality generally; and in connection with Bakery Flat Claim, it is intended to attempt to bottom the deep lead which runs through the claim and continues for several miles. In the early days of mining at Waipori, the deep lead was attempted to be worked from shafts, but the drainage-water was beyond the pumping-power installed. Given a good supply of water under sufficient pressure, there should not be any great difficulty in dealing with the drainage; but should the "head" of water be insufficient for the purpose and it is proved that the auriferous value of the ground is such as will justify a little additional expenditure, there is no doubt that the difficulty can be overcome in a practical manner.

At Gabriel's Gully, Lawrence, the Blue Spur and Gabriel's Gully Consolidated Gold-mining Company (Limited) continue operations on a very high face of cement-wash on their customary lines. During last year the value of gold recovered showed a slight advance as compared with the results of the previous year in proportion to the cubic measurement of ground broken out, the average value being 7·435d. per cubic yard. The cement broken and sluiced was 222,329·7 cubic yards, estimated at 333,500 tons, the gold obtained being 1,721·89 oz., having a value of £6,836 5s. 5d. Mr. J. Howard Jackson, C.E., the general manager, has supplied an interesting account of the year's work, which is included in the report of Mr. Green, Inspector of Mines.

Three parties continue their operations at Munro's Gully on the opposite side of Blue Spur from the Consolidated Company's claim.

A water-race has been constructed to convey water from Gabriel's Gully to sluice the terraces above Tuapeka Flat, and a further proposition is to construct a race from the Little Beaumont River for the same purpose. The ground is known to be payably auriferous, but want of water has hitherto precluded the working of these terraces other than by hand-labour. Further down the Tuapeka River the Tamaiti Gold-mining Company have been engaged in the construction of a weir for the purpose of obtaining a sufficient head of water to work a turbine. From this turbine power will be transmitted to a high-lift centrifugal pump capable of raising five Government heads of water to a race 150 ft. higher (vertically) than the river at the low side of the weir. The water will then be conveyed by the race to the sluicing claim and utilised for hydraulic sluicing. A similar method of operations is also contemplated by another party having a claim near Tuapeka Mouth.

At Beaumont, the operations of the Champion Company have not been successful. The plant, claim, races, and water-rights have been sold to a party known as the Plunket Gold-mining Company. There is a good water-right, and a considerable pressure is available.

The Island Block Claim has been steadily worked throughout the year with satisfactory results, and a similar condition of affairs is reported as regards the operations of the Tallaburn Hydraulic Sluicing Company. Two or three other small claims are worked in the district by parties of working shareholders.

At Roxburgh, the Roxburgh Amalgamated Mining and Sluicing Company (Limited) have conducted the year's work with profitable results, a considerable extent of good auriferous wash having been met with in the claim. The overburden is thick, but not of a heavy nature; and in working, this is stripped off by sluicing in advance of the sluicing of the washdirt, which latter is also elevated by hydraulic elevators. This company own the largest claim in the neighbourhood. Other claims in the locality are those of the Ladysmith Gold-mining Company (Limited), Coulter and party (Commissioner's Flat), McPherson Bros. (Pleasant Valley), Manuel Bros. (Coal Creek Flat), and Weatherall Bros. In the aggregate forty-one persons are employed at the claims mentioned.

Three claims have been at work at Bald Hill Flat; but as that held by Messrs. Ewing and Dowdall has been worked out, the only hydraulic claims now at work are those of Messrs. Carroll and Lynch and the Last Chance Company, from which good returns are reported to have been obtained.

In the vicinity of Alexandra, hydraulic mining has been conducted by Mr. Gartley, at Springvale; Mr. James Rivers, at Richmond Hill; the Alexandra Bonanza Company, at Galloway Flat; and the Golden Bend Gold-mining Company. Prospecting has also been carried on by the Manorburn Syndicate. In the early part of the year I made a preliminary inspection of and furnished a report on the Alexandra Bonanza Company's races, &c., and the ground which can be commanded by extensions of the race in the direction of Alexandra on the one hand and as far as Ophir on the other. Other reports were also obtained, and, early in the present year, the company's property, including mining claim, races, dams, plant, &c., was purchased by the Government for the sum of £13,000. Branch races from near Low's Saddle can be constructed, and will command large areas of auriferous ground which are at present lying unworked owing to the scarcity of water for sluicing purposes. There is little doubt that the demand for water from the Bonanza race for mining and irrigation will in a short

time exceed the supply and necessitate the raising of the dam at Greenland Swamp, the construction of another dam between the present dam and the head of the race, and probably the tapping of another source of supply. Apart altogether from mining, the area of land which can be irrigated from this race is very considerable; and during the past year the great value of irrigation has been practically demonstrated by a small flow of water which was supplied by the Alexandra Bonanza Company to one of the farmers in Ida Valley.

The fact that no water-supply for sluicing purposes is available at Ophir accounts for the stagnation of mining in this locality. There is a considerable area of auriferous ground, extending for some miles, about which there is little or no doubt as to its being of a highly profitable character for sluicing.

At Matakanui the alluvial claims find employment for some thirty men, and the results of working during the year are of a satisfactory character. A little work is also being done at Drybread Diggings; but neither these nor the Devonshire Diggings can be worked vigorously until better water-supplies are available.

At Cambrian's there is little change to note. The Vinegar Hill Claim is the principal undertaking, and there are a few other small claims in the locality.

Hydraulic mining at St. Bathan's has during the year been confined (so far as actual working operations are concerned) to the claims of the Scandinavian Company at Surface Hill and the United M. and E. Company. At the former claim material is being elevated by water-jet to a height of 100 ft. vertical. The working of other claims is to some extent dependent on the deepening of the St. Bathan's main sludge-channel.

A few men find employment (for the most part fossicking) in the localities of Blackstone Hill, Ida Valley, Hamilton's, and elsewhere in the watershed of the Taieri River, and manage to make a living.

At Patearoa, the operations conducted at Messrs. Stewarts' hydraulic claim have been generally satisfactory, and from recent reports it is understood that the ground is rich. A small party work a claim in the vicinity by tunnelling, the washdirt being treated in sluice-boxes outside.

The operations of the Deep Stream Amalgamated Hydraulic Sluicing Company (Limited) were not very successful during the year; but the ground now being opened out is expected to yield better returns.

In the locality of Naseby—including Kyeburn—about a hundred men are engaged, the majority of the claims being worked by ground-sluicing, although quite a number of hydraulic elevators are used. In most cases the men work single-handed or in small parties. The reduction in the price of water from the Government water-races has given an impetus to the industry, and caused attention to be directed to ground that could not be made to pay without water at a cheaper rate than that which met the requirements of the field for several years previously.

At and in the localities of Clyde, Cromwell, and Bannockburn alluvial mining is, apart from dredging, of very small extent, only a few men now finding employment in the branch of the industry under review.

A sluicing claim, at which three men are employed, is being worked at Luggate; similar operations are carried out near Cardrona Township, and work on a fairly large scale is to be conducted by the Criffel Lead Sluicing Company (Limited) at Criffel Face. The company has acquired the rights and titles of a number of small claims, and will thus be able by a consolidation of interests to carry out with every prospect of success operations which could not be satisfactorily conducted on a small scale.

The Arrow Falls Company continue to work the bed of the Arrow River and adjoining terraces in the gorge between Arrowtown and Macetown, and a few men also find employment in the gullies leading into the Arrow River.

At Glenorchy, a small amount of alluvial mining is carried on by Messrs. Valpy Bros. and a few isolated men, but nothing of importance in connection with the industry is to be noted.

Two claims have been at work at the Twelve-mile, Lake Wakatipu, but operations were retarded to some extent owing to the scarcity of water during part of the year.

Hydraulic mining is also being conducted at Big Beach, Arthur's Point, near Queenstown (formerly the scene of operations by the late Mr. Sew Hoy's dredges), and at Moke Creek.

The Shotover River and adjoining terraces continue to yield gold and so provide employment for a considerable number of men, the claims worked on the largest scale being those of Messrs. Davis and the Skipper's Sluicing Company. Apart from the terrace claims there are several situated in the river-bed, which are successfully worked by the adoption of a simple hydraulic jet-pump which was adapted to local requirements by Messrs. Alfred Smith and Sons, who work a claim in the vicinity of Skipper's Point. This arrangement has been of immense benefit to the miners in the locality and admirably meets requirements.

At Nevis and Upper Nevis, some thirty men have been ordinarily employed in alluvial-mining work at the claims; a water-race has also been under construction in connection with another claim about to be opened out, and dredging is carried on in the neighbourhood. In all, the gold-mining industry of the locality will provide employment, directly and indirectly, for about a hundred persons.

In the Nokomai Valley, the Nokomai Hydraulic Sluicing Claims—formerly owned by the late Mr. Sew Hoy, and now worked by a limited company with headquarters in Dunedin—have been worked during the year with successful results. Two claims are worked, and in the early part of the present year the company purchased the claim and plant lower down the valley formerly held and worked by the Lion Gold-mining Company. The method of working is by hydraulic sluicing and elevating, and thirty-six men, a good proportion of whom are Chinese, are ordinarily employed.

There are also some small claims in the locality of Nokomai, Athol, and Parawa, which provide employment for a few men.

At Waikaia, the Argyle Hydraulic Sluicing Company have adopted a water-power dredge for working their claim; particulars of this appear under the heading of "Gold-dredging." The Winding Creek Claim has been purchased by the Round Hill Gold-mining Company (Limited), who have effected considerable improvements in the water-races and will work the deep ground by elevators, sluicing off the overburden down to drainage level in advance. Nearer the township a comprehensive scheme for the working of Muddy Terraces is also under way. This will necessitate the construction of a large water-race from Dome Creek at an estimated cost of some £12,000. A few miners working on a small scale are scattered throughout the district. Gold-dredging has commanded more attention of late, and the Waikaia district has now become an important centre of dredging operations.

At Round Hill, the claims of the Round Hill Gold-mining Company, the Ourawera Gold-mining Company, and the Smith Gold-mining Company have been worked. Generally speaking, results have been good, the ground of the Round Hill Company and that of the Ourawera Company having yielded gold to the approximate value of £1,000 and £3,000 per acre respectively. The gold on this field and also at Orepuki is very fine and of excellent quality, the value being some £4 per ounce. Operations are carried on by means of hydraulic sluicing and elevating. Obstructions in the form of buried timber and beds of inferior lignite impede the work to some extent. From seventy to eighty persons find employment on this field.

Operations in connection with alluvial mining at and around Orepuki give employment to about a hundred and thirty men, are very varied in their character, and comprise sluicing, underground mining, and beachcombing. There is nothing fresh to report in connection with this part of the southern goldfields; the industry is generally a lucrative one, but, as pointed out in my last report, as the claims become exhausted prospecting further afield will become imperative.

There is a large extent of country between the Waiau River and Preservation Inlet which is practically unknown in regard to its mineral resources, and is well worth attention and systematic prospecting.

DREDGE MINING.

The number of dredges at work shows a small decrease as compared with the preceding year, which is accounted for by claims being worked out or proved to be unprofitable, by dredges being unsuitable for the conditions under which they had to work, and by wreckage.

The principal centres at which the dredging industry is being carried on are Waipori, Miller's Flat, Roxburgh, Alexandra, Cromwell, Waikaka, and Waikaia in the Southern District; and, in the West Coast District, on the Buller and Grey Rivers and their tributaries. These places do not comprise the whole of but only the most extensive dredging-fields in the colony.

In my last report the general conditions under which dredges were working in the several centres were commented upon. Since then there have not been any developments of note nor any alterations in working-conditions which call for special comment with the exception of a new method of conveying power to dredges worked by water-pressure, a description of which appears below.

As regards improvements in the construction, &c., of dredges, it may be remarked that the use of bulkheads in the pontoons for the purpose of dividing them into watertight compartments is becoming more general, and will tend to reduce the liability to sink in the event of accident to the hull. Of late, experiments and additions have been made on some dredges with the object of increasing the efficiency of the gold-saving arrangements.

The steady manner in which dredging is carried on in the Waikaka Valley, and the increase in the number of working-dredges at Waikaia, go to prove the value of the Southland flats as payable dredging-areas. It is also worthy of note that the planting of forest trees on the dredged ground in the Waikaka Valley gives every appearance of proving a successful experiment, and also that so far as one is able to judge at present the dredging of these flats will not be nearly so detrimental from an agricultural or pastoral standpoint as many people imagined, but rather the reverse will hold good in some cases.

It may be interesting to note that as a result of the successful application of dredges for alluvial gold-mining in New Zealand in the first instance, and more recently in several other countries, the method is to be adopted in Tasmania for the recovery of stream-tin from alluvial deposits. The work of designing a number of large and powerful dredges for the purpose has been intrusted to a Dunedin firm.

Improvements in Dredges.

Dredging by Water-power.

During the past few years dredging for gold has been satisfactorily carried on in Otago with dredges run by water instead of steam. Where water is available at a sufficient elevation to provide motive power for a dredge, ground that would not pay expenses if the dredge were driven by steam can be made to pay well. Increased attention is now being given to water-power dredges, owing to the fact that a new and simple method of conveying the water on to the dredge has been adopted within the past six months, which method has given every satisfaction. A number of proprietaries whose properties are so situated as to enable water to be brought on to the ground to be worked are now moving in the direction of adapting their dredges to work by water-power and towards discarding the steam plants which necessitate such a large expenditure for coal and upkeep. The new method of conveying

the power to the dredge was designed and adopted on the Argyle Dredge, Waikaia, Otago, by Messrs. R. T. Stewart, consulting engineer, and J. W. Stewart, dredgemaster and mine-manager, members of the proprietary. In this instance the surface of the ground being worked is not above the level of the deck of the dredge. The water from which the motive power is derived is conveyed in an open race for a distance of eleven miles to a point 70 chains distant from the scene of operations and 170 ft. higher than the dredge. From this point the water is conveyed through 13 in. steel piping to within about 2 chains of the dredge, where the pipe is reduced in diameter to 9 in. and a swivel-joint connected to end of pipe line. To the other end of the swivel-joint a length of 66 ft. of 9 in. piping is attached, the end of this length of piping being supported on a double-flanged trolly-wheel 2½ ft. in diameter, which runs on a single rail curved to a radius of 66 ft. A second swivel-joint is joined to the end of the pipe supported by the wheel, and to this is connected a length of 75 ft. of 7½ in. piping, the end of which is connected with a ball-and-swivel joint which is bolted to a beam on the bow of the dredge. From this point a distributing-pipe 9 in. in diameter is carried along the deck to the stern of the dredge, branch pipes being taken therefrom to supply the water to the Pelton wheel, which is 4 ft. in diameter, running at 220 revolutions per minute under full load and supplying power for driving all the machinery. The water is directed on to the wheel through a deflecting nozzle having a tip of 1½ in. diameter, a hydraulic jet-pump having a 2 in. jet and a 5 in. throat being used to lift water for the shoot. Its capacity is 2,600 gallons per minute to a height of 18 ft. The dynamo used for lighting the dredge is also driven by water-power, a ½ in. jet being used to drive a small Pelton wheel for this purpose.

The method of supporting the two long spans of piping is by a wire-rope understay, as shown in the illustration. The ground being worked is 30 ft. in depth and of a hard cementy nature containing many large stones which, however, owing to the strength of the machinery and abundance of power, proves no bar to its expeditious and satisfactory treatment. The cost of running the dredge is less than £30 per week.

The application has also been made to the Golden Beach Dredge, Alexandra, which has hitherto been driven by a steam plant. The use of the engine and boiler has been discarded and water installed as the motive power, with a result in its efficiency exceeding the most sanguine expectations of the proprietary. The water is brought to the claim by a 13 in. steel-pipe line a distance of over 4,000 ft., the fall being 240 ft. The depth of the ground being worked is 56 ft., the face standing 36 ft. above water-level. On account of the height of the face above the deck of the dredge a tower was built of four 7-in. pipes, 33 ft. in height, stayed to the gantry by wire-rope stays to prevent swaying, and bolted to the deck at foot. The water is conveyed from the main through two 80-ft. spans of 14 B.W.G. pipe, the one being 9 in. and the other 7½ in. in diameter, the latter being connected to a ball-and-swivel joint bolted to platform on top of tower. The water is conveyed from this point through a 9 in. distributing-pipe down to gantry-level, where it is tapped by a 3 in. branch supplying water to the breaking-down nozzle shown at work in the illustration, this nozzle being used only when necessary to bring a fall down and to obviate the necessity of the dredge working dangerously near the face.

The Pelton wheel which drives main buckets, screen, tailings-elevator 80 ft. in length, and silt-elevator, is 4 ft. in diameter working under a 1½ in. jet. The winches are driven by a reversible Pelton wheel 30 in. in diameter, and the dynamo by a 15 in. Pelton wheel with a ½ in. jet.

The whole of the plant was designed by Mr. R. T. Stewart and erected by him personally.

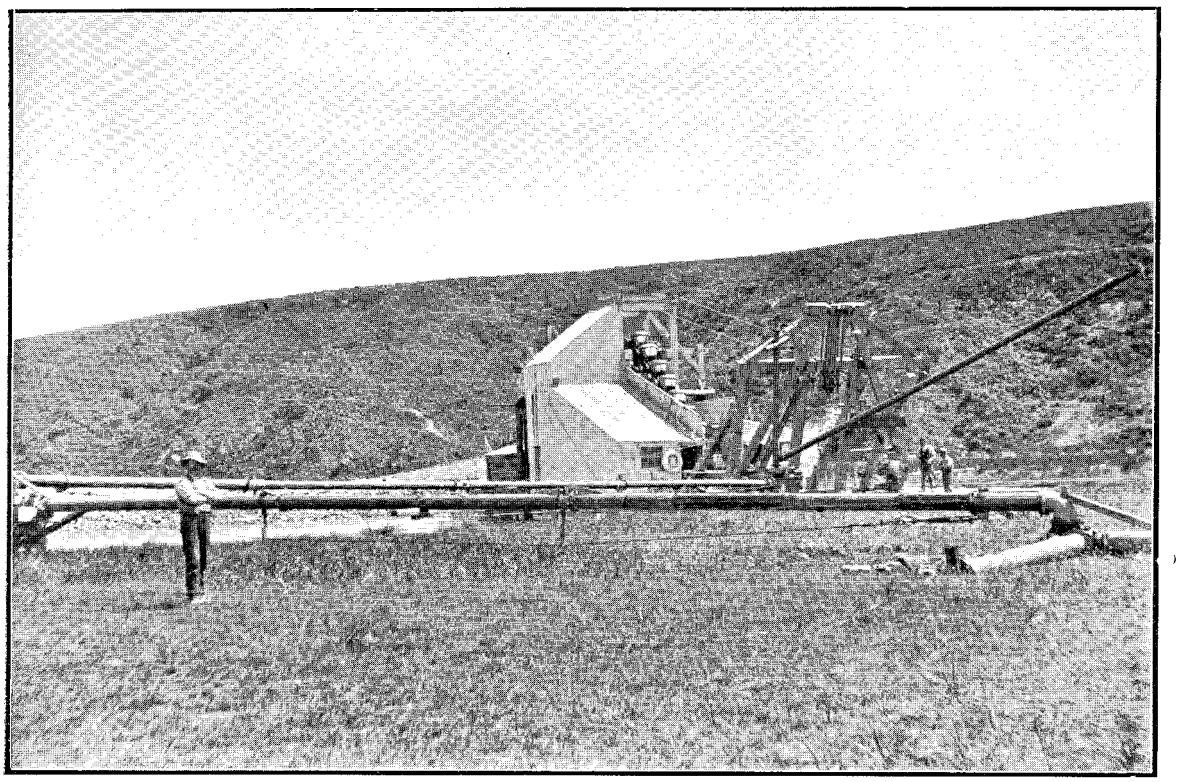
The illustrations show the dredge and plant from different points of view, and serve to make the description plain to even those unacquainted with dredging machinery.

ACCIDENTS AND FATALITIES.

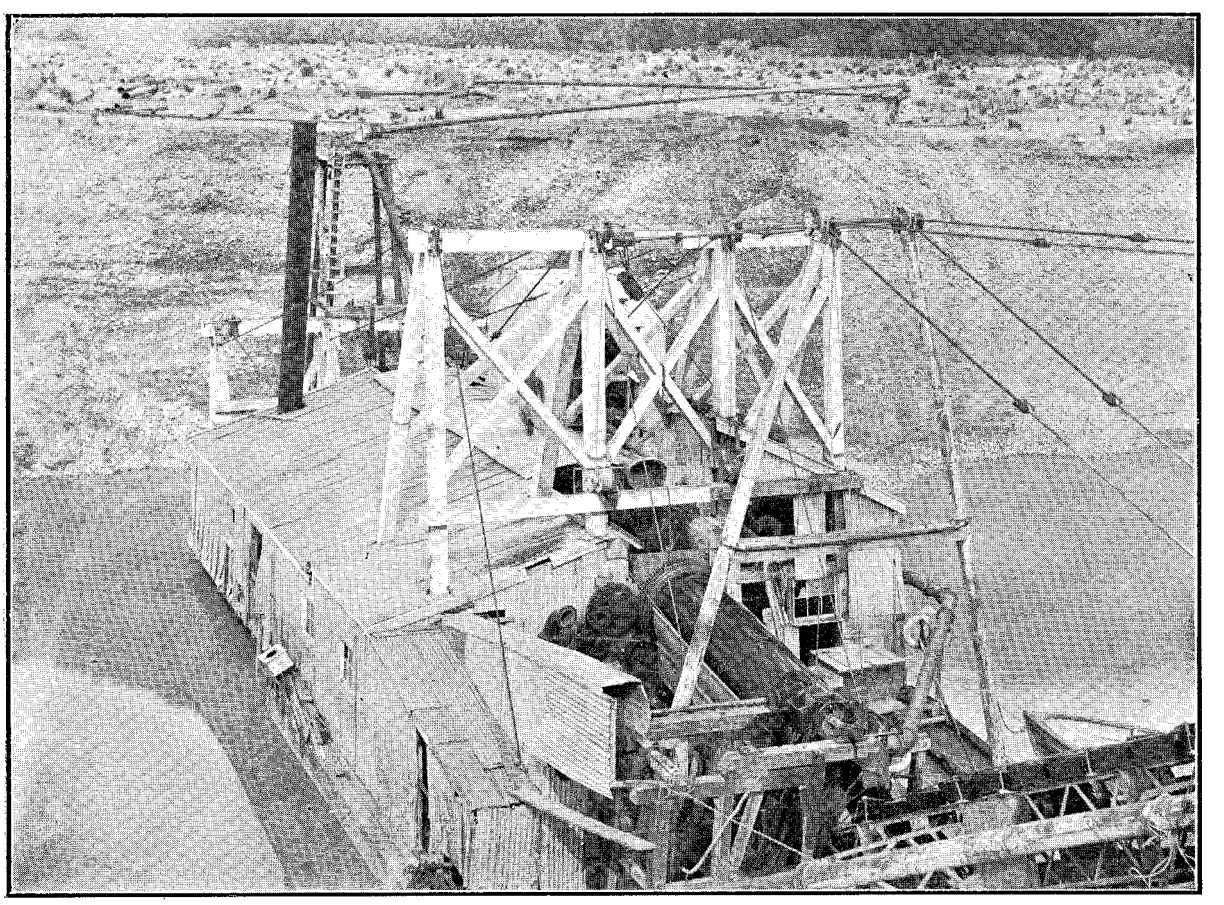
During the year 1905, accidents occurred by which twenty-one persons employed in connection with the various branches of the mining industry lost their lives. The whole of these accidents, as well as others of a serious but not fatal character, were duly investigated on behalf of the Department.

The following tabulated statement shows the fatalities in connection with each branch of the gold-mining industry in the several inspection districts :—

Class of Mining.	Northern District.		West Coast District.		Southern District.		Totals.	
	Surface.	Underground.	Surface.	Underground.	Surface.	Underground.	Surface.	Underground.
Quartz (including batteries) ...	1	5	1	...	...	...	2	5
Hydraulic and alluvial ...	...	...	4	...	1	1	5	1
Dredging	...	...	2	...	6	...	8	...
Totals ...	1	5	7	...	7	1	15	6
	6		7		8		21	



Argyle Dredge, Waikaia. (Driven by Water Power.)



Golden Beach Dredge, Alexandra. (Worked by Water Power.)

[*Page 16*

This shows an increase of six fatalities as compared with the year 1904, and of two in comparison with the year 1903. The greatest number of fatal accidents have occurred in connection with gold-dredging; and in this connection it may be remarked that two lives were lost in an attempt to swim ashore from a dredge which broke away from its moorings during an exceptionally heavy flood in the Buller River. In the other cases of fatalities in connection with dredging, four were by drowning from dredges working in paddocks; and in no case was there any evidence to show how the men got into the water, the cause of the accidents remaining quite inexplicable. It is rather to be feared that carelessness as regards their own safety characterizes many men engaged in dredging-work. In alluvial mining the fatalities were chiefly caused by falls of ground; whilst those in connection with quartz-mining were of a miscellaneous character. In two instances men met with their deaths by falling down passes, whilst another, from among a number of men riding, fell out of a cage travelling in the shaft. This is a most unusual occurrence, and it is very probable that the man was seized with a faint or giddiness. Accidents of a fatal character also occurred—one in each leading branch of gold-mining—by men's clothing becoming entangled and the men being drawn in among machinery.

Protective Gate for Cages.

The following description is taken from the pages of the *Science and Art of Mining*:—

"The protective gate for cages patented by Mr. Henry Houghton, M.E., Skelmersdale, Lancashire, England, is a simple and useful arrangement, adapted to prevent persons falling out of the cage during the process of winding.

"Colliery-managers who make it a duty to study and apply means of safety will be interested in the patent gates. Many lives are annually lost through persons falling out of the cage while ascending and descending shafts. The open end of the cages constitutes a great danger; a moment's sickness causing a sensation of giddiness may result in the collier so afflicted falling out and meeting a violent death. The cage-gates referred to are intended to remove this element of danger.

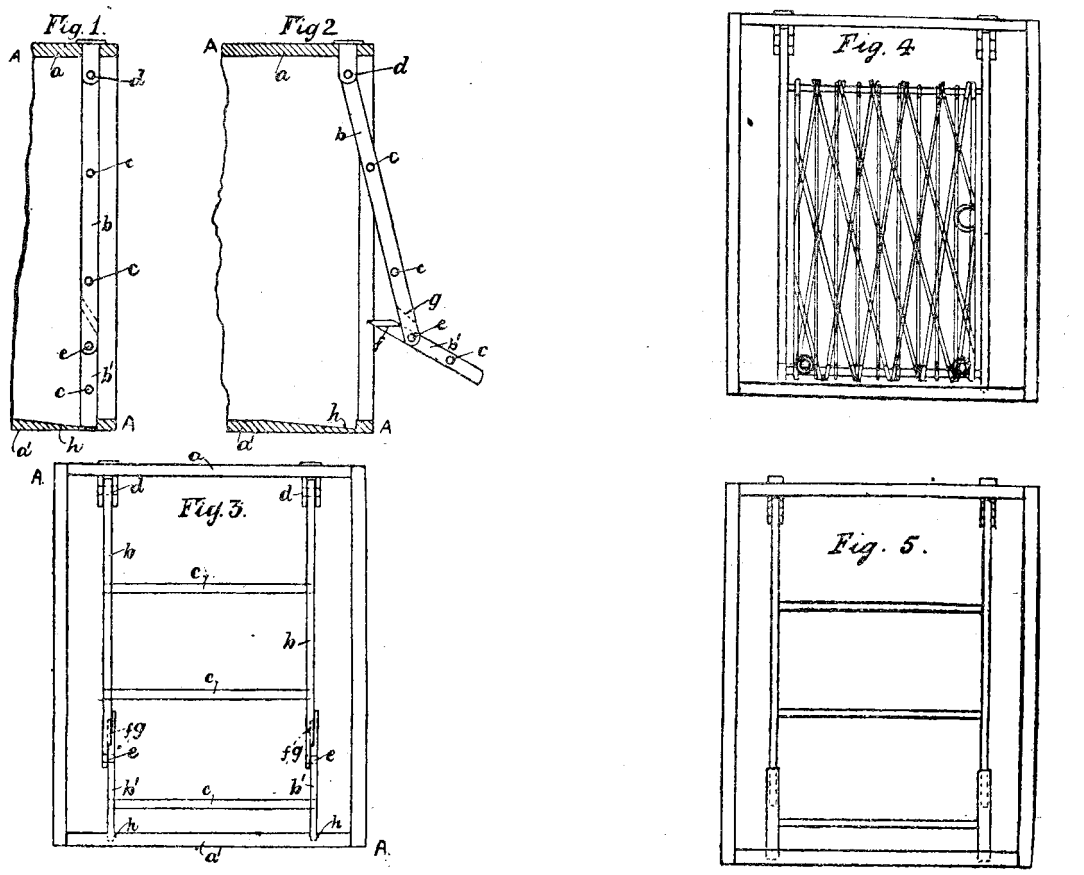


Fig. 1 is a side view of a cage showing gate in position. Fig. 2 shows the gate when being lifted out or opened. Fig. 3 is a front view. Fig. 4 is a front view of the lattice or collapsible gate. Fig. 5 is a front view of the telescopic gate.

"These gates are in use at the Earl of Lathom's collieries, and are giving great satisfaction both to men and masters.

"The gate will not open by pressure from the inside. To open the gate it is pushed inwards a little, the lower part raised about its hinges, so as to clear the recess, and then swung outwards. The gate generally falls into its locked position by gravity when released.

"In lieu of hinging the lower part, the same can be made telescopic—that is, to remove the gate from its holding recess it is simply raised, the lower part sliding on the upper.

"The gate may be rigid, being simply hinged or pivoted from the under-side of the roof of the cage only.

"In some cases the gate may be of lattice, collapsible, or similar construction, sliding sideways or perpendicularly. The operations of opening and closing the gates are generally effected by the 'banksman' or 'hooker-on' when the cage is at rest at the bottom of the shaft or on the catches.

"Normally, the men using the cages fitted with gates according to the invention will not attempt to leave same before being released. But, of course, the gates may be readily opened from the inside if desired.

"Out of use, the gates are slung under the roof of the cage.

"The advantages claimed for the gate are as follows:—

"1. Will prevent persons falling out through fainting.

"2. Will prevent persons falling out through overcrowding or crushing.

"3. Will prevent persons being thrown out through jerking or being tilted in catching the sides of the shaft or other obstruction.

"4. Will prevent persons catching their clothing, shoulders, or knees when passing by the wooden frame-work at the top and bottom of the shaft or at mouthings.

"5. Will prevent any attempt from entering until the cage is at rest at the bottom of the shaft or on the catches.

"6. Will prevent persons stepping out until the cage is at rest at the bottom, or on the catches, or until at the proper landing-places.

"7. Will prevent any sudden attempt to leave or enter the cage after the signal has been given.

"8. Will lessen the danger of persons getting out at the wrong end of the cage at a mouthing in a wide shaft.

"9. In many cases, where the cages are small, men cramped together, and the winding-speed terrific, a protective gate is essential.

"10. All concerned are under better control of the 'banksman' and 'hooker-on.'

"11. The cost of the patent gate is slight.

"12. Avoids serious loss of life and compensation."

MINERALS OTHER THAN GOLD.

Scheelite.

This mineral, which is found associated to some extent with quartz in Otago and to a lesser extent in Marlborough, has of late come in for an increased share of attention. So far, Messrs. Donaldson Bros., of Macrae's, Otago, have been the only people to regularly make a marketable product, but there are strong evidences that in the near future other parties will also become producers.

When at Glenorchy towards the end of the year, I obtained three samples of scheelite in the locality: No. 1 was from a reef at Bucklerburn, Nos. 2 and 3 being obtained from alluvial deposits of quartz, &c., at Precipice Creek and the Twelve-mile, Oxburn, respectively. These were submitted to Dr. Maclaurin, Government Analyst, who gave the following analyses:—

	Tungsten.	Tungstic Acid.	Calcium-tungstate (Scheelite).
No. 1.	30·52,	equal to 38·44,	equal to 47·66 per cent.
No. 2.	48·04,	equal to 60·50,	equal to 75·02 per cent.
No. 3.	42·24,	equal to 53·30,	equal to 65·97 per cent.

The old scheelite-mine at Glenorchy is being reopened by Messrs. Reid and Lee, and the battery will be equipped with modern concentrating-plant for the separation of scheelite from the quartz sands.

Platinum.

This is obtained in small quantities at Round Hill, near Riverton. It also occurs in the alluvial wash at Takaka, Nelson, but has not hitherto been systematically saved.

Hæmatite Paint.

The manufacture of hæmatite paint is still carried on at Parapara (Nelson) and Thames, but there are no fresh developments to note. At Mataura (Southland) a quantity of crude hæmatite is obtained locally at a lignite-mine and used for dyeing-purposes at the Mataura Paper-mills.

Rock Phosphate.

A deposit of this mineral is reported to exist in connection with the limestones in the vicinity of the Waiau River, Southland. In the neighbourhood of Milton (Otago) it is being quarried and calcined, then railed to the chemical works at Burnside for further treatment. Its value as a fertiliser is becoming better known and appreciated.

Cinnabar.

There is nothing fresh to report as regards the development of the mine near Waitahuna (Otago). Further capital is required before this can be effected. Specimens of the mineral are occasionally found in other parts of the colony.

Copper.

A considerable amount of inquiry has been made respecting lodes of copper-ore. Deposits are known to exist in both Islands, and a considerable amount of prospecting-work has been done in the locality of Nelson. I understand that the Mineral Belt Company's property has recently been sold, and that it is proposed to work the mine and smelt the ore at an early date.

Petroleum.

Since my last report, petroleum has been struck in the borehole at Moturoa, near New Plymouth breakwater, at a depth of over 2,300 ft. Considerable difficulty was experienced in shutting off the water from the borehole, and since the oil-bearing ground was pierced much time has been taken up and expense incurred in tubing the hole afresh to accomplish the desired object. The crude oil is considered of excellent quality. Natural gas in large quantities is also given off at the borehole.

As probably indicative of the existence of petroleum elsewhere in the New Plymouth district, it may be remarked that natural gas is frequently met with at several places between Inglewood and Moturoa, and the result of oil being obtained at the last-named place has naturally caused speculators to turn their attention to other likely parts of the district. Some further interest is also being taken in the question at Kotuku, near Greymouth, a locality in which crude petroleum in small quantities has been seen for several years past. Some three years ago attempts were made by boring to ascertain the existence of petroleum in commercial quantity, but were given up without any very great depth having been attained.

SCHOOLS OF MINES.

The several schools of mines throughout the colony have been carried on throughout the year at the various centres of metalliferous mining, and the instruction given has enabled several students to qualify for certificates as mine-managers and battery-superintendents. These institutions serve a very good purpose in the colony by assisting young men to qualify for responsible positions connected with the mining industry.

Two scholarships were won at the recent examinations of schools-of-mines students, the successful students being Mr. L. Andrew, of the Thames School, and Mr. J. Williams, of the Reefton School.

The annual reports of the several schools for the year ending the 31st December, 1905, follow :—

THAMES SCHOOL OF MINES.

The Director, Mr. O. G. Adams, A.O.S.M., reports as follows :—

I have the honour to report as follows on the work of the Thames School of Mines during 1905.

It is with pleasure I state that the attendance at the school has greatly improved. This is mainly due to the increased prosperity of Thames. A pleasing feature is that the attendance shows every prospect of still further increasing, the numbers for the beginning of 1906 being considerably in advance of the maximum reached in 1905.

The following is a summary of the attendances for 1905 :—

	First Term.	Second Term.	Third Term.
Registered students	49	51	40
Saturday science students	28	33	36
Total students	77	84	76
Class attendance registered students	108	117	88
Total class attendance	136	150	124

The results of the annual examinations are very satisfactory, but they do not measure the work done during the year owing to the rooted objection many students have to sitting for examination. This is to be regretted, for an examination is a valuable experience for a student : it shows him how much he really knows ; prepares him for the examination for mine-managers' and battery-superintendents' certificates ; and should he pass, the school-of-mines certificate in that subject is awarded to him, and this is a valuable testimonial in the mining world. The results of the examinations follow :—

Theoretical chemistry, elementary : First class—J. Paul 76 per cent. ; second class—N. Wylie 68 per cent., S. Grigg 66 per cent., J. Richard 64 per cent., H. Baker 64 per cent., M. Grigg 62 per cent. ; third class—L. May 54 per cent., A. Wylie 44 per cent. Theoretical chemistry, senior : First class—L. Andrew 76 per cent. ; third class—L. Kitching 45 per cent. Practical chemistry, junior : Second class—A. G. Menzies 62 per cent. Practical chemistry, senior : First class—L. Andrew 77 per cent. ; third class—L. Kitching 48 per cent. Practical assaying, junior : Third class—E. L. Trower 53 per cent., R. W. Adams 41 per cent. Practical assaying, senior : First class—L. Adams 77 per cent., A. N. Baker 74 per cent., L. Kitching 70 per cent. Practical assaying, wet, senior : Third class—L. Kitching 53 per cent. General and mining geology : First class—Y. Booker 85 per cent., L. Andrew 76 per cent., L. Kitching 76 per cent. Mineralogy : First class—Y. Booker 70 per cent. Metallurgy : First class—L. Kitching 84 per cent., L. Andrew 83 per cent. Mining : First class—L. Andrew 86 per cent., S. G. Baker 74 per cent. ; second class—L. Kitching 66 per cent., L. Antridge 63 per cent. Ventilation : First class—L. Andrew 76 per cent., L. Kitching 71 per cent. Explosives : First class—L. Kitching 88 per cent., J. Crawford, 72 per cent., S. G. Baker 72 per cent. ; second class—L. Antridge 64 per cent.

Land and mine surveying: First class—L. Andrew 82 per cent., J. Crawford 71 per cent.; third class—L. Kitching 44 per cent. Mathematics, junior: Third class—O. Wright 54 per cent. Mathematics, senior: First class—L. Andrew 78 per cent.; third class—Y. Booker 49 per cent. Mechanical drawing: First class—L. Andrew 75 per cent.; third class—O. Wright 52 per cent. Electricity, junior: Second class—O. Wright 62 per cent.; third class—J. C. Sherley 54 per cent. Electricity, senior: Second class—T. N. Henry 58 per cent. Seventy per cent. and over constitutes a first-class pass; 55 to 70, a second-class; and 40 to 55, a third-class.

In all, forty-six passes were obtained by the students and of these twenty-three are first-class passes.

L. Andrew gained the University Scholarship, open for competition throughout the North Island. Although last year an alteration was made in the scholarship regulations, requiring a minimum of 65 per cent. in certain subjects instead of 75 per cent., L. Andrew did not need this concession to enable him to win his scholarship, for he obtained 75 per cent. or over in each of the nine subjects. He scored the highly creditable total of 709 marks out of a possible 900, being an average of 79 per cent. L. Kitching was second in total marks, securing 645 in ten subjects, or 64·5 per cent. He thus wins the President's medal for the maximum number of marks gained in senior subjects, because L. Andrew, having previously won this medal, is ineligible.

In surveying, the prize donated by Mr. E. F. Adams was gained by Mr. J. Crawford with 71 per cent. L. Andrew scored 82 per cent. in surveying, but the conditions attached to the prize debar him from taking it.

T. N. Henry won the electricity prize donated by Mr. H. D. M. Haszard.

In the Saturday science class, J. Paul secured top marks with 76 per cent., and thus wins the prize for that class. He also holds the Corinthian Lodge Masonic Scholarship.

The syllabus has been amended and is here given in detail. It comes into force at the beginning of 1906.

Syllabus of Classes.

Mining Engineering.

Mining.—Characteristics, mode of occurrence, and distribution of the usual minerals; classes of ore-deposits; faults; recovery of lost lodes; shaft-sinking and driving levels; dry and wet ground; timbering shafts, levels, and inclines; underground workings.

Mine-drainage.—Surface water; dams; force-pumps; lift-pumps; steam-pumps; pumping-engines; capacity of pumps; thickness of pipes.

Explosives.—Composition and strength; mode of charging boreholes and firing; products of combustion; calculation of quantities.

Ventilation.—The atmosphere; natural ventilation; artificial ventilation; furnaces; fans, &c.; division of air-currents; composition and detection of noxious gases.

Hauling and Winding.—Strength of ropes; aerial haulage; underground haulage; roads, rails, and guides; safety appliances; turbine, Pelton wheel; steam-engine; winding-engine and signalling.

Text-book.—Mining, Lufton.

Land and Mine Surveying.

Land-surveying.—Chains and tapes; ranging-lines; use of theodolite, level, prismatic compass, surveyor's compass, and Abney level; chaining; offsets; reduction of slope-measurements; inaccessible points and obstacles to alignment; triangulation; measuring base-line; tie-lines.

Mine-surveying.—Underground traversing; connecting the underground with the surface meridian.

Levelling.—Recording levels; grading roads, tramways, and water-races.

Office-work.—Computation of co-ordinates, areas, and triangles, including closing lines; use of logarithmic tables; scales; methods of plotting survey; construction of survey plans; principle and use of slide rule.

Text-book.—Land-surveying, Baker and Dixon, or similar book.

Metallurgy of Gold and Silver.

Ore Crushing and Pulverising Machinery.—Rock-breakers; stamps; rolls; commonly used ball and roller mills; arrangement of battery; sampling; dry and wet crushing.

Furnaces.—Drying and roasting furnaces.

Concentration.—Classifiers and concentrators.

Amalgamation.—On copper plates and in pans; "cyanide," "chlorination," and "hyposulphite" processes.

Treatment of Slimes.—Agitation; filter-presses.

Smelting of Bullion, Zinc, Slime, &c.—Fluxes; slags; cupellation; refining bullion; retorting and smelting of bullion.

Calculation of results obtained in battery.

Text-books.—Handbook of Gold-milling, Louis; Cyanide Process, Park.

Practical Assaying (Dry).

Dry Assaying.—The furnaces and assay appliances; the fuels and fluxes; methods of sampling; preparation of the ore-sample; fusion and cupellation; parting; weighing and valuation of the bullion; sources of error in fire assaying; assay of litharge and red-lead; assay of gold and silver ores; assay of bullion; assay of lead-ores; assay of tin-ore; retorting and melting of bullion; preparation of

pure silver and gold; calculation of results obtained in batteries from treatment of ore; keeping note-books and forms of assay reports; the valuation of specimens.

Text-book.—Assaying and Practical Chemistry, Park.

Practical Assaying (Wet).

Preparation and use of reagents; tests for purity; use of apparatus and balances; assay of ores of iron, copper, lead, zinc, antimony, bismuth, mercury, manganese, nickel, cobalt, arsenic, chromium, silver, barium, calcium, and magnesium; assay of fuels, with determination of sulphur; assay of slags and other metallurgical products; assay of cyanide-solutions.

Text-book.—Manual of Practical Assaying, Furman.

Practical Chemistry, Junior.

Preparation and use of reagents; tests for purity; use of apparatus and balances; separation of the metals into groups; qualitative tests for the different metals; qualitative separation of the common metals; qualitative tests for the acids H_2S, HCl, HBr, HI, HF, HCN, HNO_3, $HClO_3$, H_3BO_3, H_2CO_3, H_2CrO_4, H_3PO_4, H_4SiO_4, H_2SO_4, H_3AsO_4.

Text-book.—Analysis Tables for Chemistry Students, Taylor.

Practical Chemistry, Senior.

Estimation of Al, Cr, Fe, Ca, Mg, Cu, Ag, Pb, Zn, Mn, Ni, Co, K, NH_4, Sn, As, Sb, Hg, and H_2SO_4, HCl, HBr, CO_2, HNO_3, H_3PO_4, SiO_2, HCN, HI, SO_2, in simple salts, and in mixtures containing not more than two bases and two acids.

Volumetric analysis.

Acidimetry and Alkalimetry.

Elementary analysis of rocks.

Text-book.—Newth, Manual of Chemical Analysis; or Clowes and Coleman.

Theoretical Chemistry, Elementary.

States of matter—solid, liquid, gas.

Elements and compounds.

Elementary knowledge of the following: H_2O, water; Cl; HCl; N; the atmosphere; NH_3; HNO_3; C; CO_2; combustion; S; P; SO_2.

Theoretical Chemistry, Junior.

Rudiments only of chemical theory as applied to mining and metallurgy.

Occurrence, preparation, properties, and uses of the following elements, and their more important compounds only: H, O, N, Cl, Br, I, F (HF only), S, P, As, Sb, C, B (borax only), Si.

Easy problems.

Text-book.—Jago, Inorganic Chemistry.

Theoretical Chemistry, Senior.

The same as for Junior, with the addition of the following: Na, K, NH_4, Au, Ag, Hg, Cu, Fe, Sn, Pb, Zn, and their more important compounds. The subject to be treated from a mining and metallurgical standpoint.

Text-book.—Newth, Inorganic Chemistry.

General and Mining Geology.

Physical Geology.—The earth as a planet, its form and motions; geological climate; the atmosphere; ocean; solid crust; the interior of the earth.

Dynamical Geology.—Metamorphism; agencies modifying the crust of the earth—atmospheric, aqueous, chemical; weathering; sedimentation; classification of deposits—mechanical, aqueous, organic, and chemical; denudation and erosion; volcanic action; earthquakes.

Structural Geology.—Stratification; jointage; contortion; faults; conformity; unconformity; dip and strike; cleavage; metamorphic rocks; intrusive sheets, bosses, dykes, fissures; formation of quartz veins, lodes, and metallic deposits; dynamics of lodes; recovery of lost lodes.

Geological Surveying.—The practice of running natural sections; noting dip, strike, and inclination of strata and lodes; mapping geological formations; collection of mineral and rock specimens.

Stratigraphical Geology.—Classification of plants and animals; fossils; blending of species; geological record; the study of characteristic life, and distribution of formations from archæan to recent times, with special reference to the geology of New Zealand.

Text-books.—Elementary Geology, Boulger; Class-book of Geology, A. Geikie.

Mineralogy and Blowpipe Determination.

Crystallography.—The six systems, their axes, typical and modified forms; holohedral and hemihedral forms; twin crystals; use of goniometer.

Systematic Mineralogy.—Physical properties—hardness, specific gravity, cleavage; optical properties—reflection, refraction, polarisation, phosphorescence, lustre; chemical properties and composition; isomorphism and pseudomorphism; distribution and paragenesis of minerals; classification.

Descriptive Mineralogy.—Description of the chief varieties; mode of occurrence; distribution in New Zealand; value.

Blowpipe Determination.—Use of the blowpipe; oxidizing and reducing flames; examination of mineral samples.

Text-book.—Text-book of Mineralogy, Dana.

Mathematics.

Arithmetic.—The simple rules; weights and measures; vulgar fractions; decimals; proportion; problems; logarithms; mensuration.

Algebra.—The signs and symbols; simple rules; factors; symmetry; problems; quadratic equations; simultaneous equations; binomial theorem; use of mining formulæ.

Trigonometry.—Definition of an angle; trigonometrical ratios; easy problems; solution of triangles.

Geometry.—Junior—Part I of Hall and Stevens's Geometry. Senior—Parts I, II, and III of Hall and Stevens's Geometry, or their equivalents in Workman's Tutorial Geometry.

Text-books.—Arithmetic, Brook Smith; Elementary Algebra, Hall and Knight; Trigonometry, Lock; Geometry, Hall and Stevens, or Workman.

Drawing.

Geometrical Drawing.—Use of scales and instruments; plane geometrical figures; projection; isometric drawing.

Mechanical Drawing.—Machine drawing to scale from copies, from rough sketches with dimensions, and from the machines, showing plan, elevation, and sections; shading; inking-in; figuring and lettering; preparation of working-drawings and tracings on paper and on cloth.

Practical Astronomy.

The ecliptic; equinoxes; meridians; longitude; latitude; altitude; declination; right ascension; azimuth; use of Nautical Almanac; polar distance; zenith distance; hour-angle; sidereal-time; mean time; solar time; parallax; refraction; retardation; acceleration; convergency of meridian; determination of meridian by star-and-sun observations, by single altitudes and greatest elongation of circumpolar stars; use of star-charts; calculation of hour-angle, azimuth, and altitude of celestial bodies for any time and place; determination of latitude by meridian altitudes; determination of time by star-transits and sun observations.

Text-books.—Navigation and Nautical Astronomy, Young; Practical Astronomy, Loomis.

Reference-books.—Nautical Almanac; The Southern Skies, Proctor.

Petrology.

Preparations of thin rock-sections; use of the polariscope; identification of minerals in thin sections; drawing and photographing of sections. Theory of light; ordinary and extraordinary ray; polarised light; positive and negative crystals; uniaxial and biaxial crystals; interference figures, &c.

A grinding-plate and polarising microscope are provided by the school.

Text-books.—Petrology for Students, Harker; Text-book of Mineralogy, Dana.

Reference-books.—Tables for the Determination of the Rock-forming Minerals, Lœwinson-Lessing; Microscopical Physiography of Rock-forming Minerals, Rosenbusch-Iddings.

Physics.

Heat.—Change of volume, measures of temperature; change of state, latent heat, hygrometry, specific heat, calorimetry; sources of heat, the conservation and dissipation of energy; convection, conduction; reflection, refraction, transmission, and absorption of radiant energy. Use of thermometer, barometer, hygrometer; determination of the density of solids and liquids; calculation of the density of gases from observations of their temperature and pressure; calorimetry.

Sound.—The production and propagation of sound; the vibration of sounding bodies; the elements of the physical theory of music.

Light.—Nature, production, and propagation of light; the laws of reflection and refraction at plane and spherical surfaces; prismatic dispersion and spectra; interference, double refraction, and plane polarisation; the principal optical instruments and vision. Use of goniometer, photometer, spectroscope, telescope, and microscope; determination of the curvature, focal length, and magnifying power of lenses; determination of the refractive index of solids and liquids.

Static Electricity.—Fundamental phenomena of attraction and repulsion, conduction, induction, and distribution, electrostatic units; electrical machines; condensers.

Magnetism.—Fundamental phenomena of magnetic attraction, repulsion, and induction; magnetic units; terrestrial magnetism.

Current Electricity.—Voltaic batteries; galvanometers; electrolysis; Ohm's law; thermal effects of the electric current; electro-magnetic units; the interaction of magnets and currents, and the mutual action of currents upon one another; thermo electricity; induction of currents; magneto-electric and dynamo-electric machines. Use of electrometer, galvanometer, voltameter, Wheatstone's bridge, and resistance coils; determination of the resistance of conductors and batteries; determination of the electro-motive force of batteries, and of the strength of currents; measurement of magnetic forces.

Text-book.—The Tutorial Physics, Stewart and Catchpool.

Reference-book.—Natural Philosophy, Deschanel.

Mechanics and Hydrostatics.

Composition and resolution of forces acting on a point, and on a rigid body on one plane; the mechanical powers; the centre of gravity; the fundamental laws of motion; the laws of uniform and uniformly accelerated motion and of falling bodies; the pressure of liquids and gases; the equilibrium of floating bodies; specific gravities, and the principal instruments and machines the action of which depends on the properties of fluids.

Text-books.—Elements of Statics and Dynamics, Loney; Elements of Hydrostatics, Loney.

Syllabus for Electrical Class.

The syllabus comprises a complete course for the City and Guilds Examination in electrical engineering, and includes the following subjects:—

General notions about electro-motive force, current, resistance, and the principles of electric circuits, simple and branching; the electro-motive force required to produce a given current in a wire of given resistance; electric batteries, their construction and adaptation for commercial uses; simple principle and use of electric measuring instruments; ammeters, voltmeters, delicate mirror galvanometers, resistance-coils; the induction of currents by the motion of magnets; notions about magnetic lines of force; the induction of currents by action of currents in neighbouring circuits; the effect of iron; induction-coils and transformers for alternate currents; simple principle of motors and of electro-magnetic mechanism; the magnetic drag on wires carrying currents; glow-lamps and arc lamps, their arrangement in parallel and in series; the necessary parts of arc lamps and their action; the relation between mass, weight, and force; relations between heat and work; relation between the watt, the kilowatt, and the horse-power; watt meters; systems of wiring houses; methods of jointing; general knowledge about conducting and insulating materials and their mechanical and electrical properties; meaning and calculations of drop; methods of testing installations.

If any student wishes to sit for examination in telephony or telegraphy he may do so by making arrangements with the lecturer.

Text-book.—Electrical Engineering, Slingo and Brooker.

Reference-books.—Magnetism and Electricity, Poyser; Magnetism and Electricity, Thompson; Vol. iii, N.Z. Mining Journal, containing "Electricity for Artisans," by E. G. Wright.

Through the courtesy of the Hon. James McGowan, Minister of Mines, a special grant was obtained for the purchase of additional apparatus, including a chemical balance, crystal models, planimeter, slide-rule, &c. The chemical balance is Oertling's best standard make, and is a very satisfactory instrument. The planimeter is Coradi's patent compensation polar planimeter, which is a more satisfactory instrument than the ordinary Amster's. Major-General Hannyngton's slide-rule is a most useful instrument and a great labour-saver, enabling computations to be performed mechanically.

The school is equipped for teaching all the subjects in the syllabus. There is a complete assay laboratory for the students and another entirely separate laboratory restricted to the use of the staff, where assays and analyses are made for the public. A metallurgical plant is attached to the school, where ore is treated in bulk for the public and reports furnished on the best method of treatment. The students gain valuable experience from this battery.

The school is lit throughout with electricity generated by a dynamo driven by a Pelton water-wheel in the electricity laboratory. This laboratory is equipped for practical instruction in electrical engineering to supplement the lectures on that subject.

The museum is well stocked with minerals, rocks, and fossils, and is open to the students at all times. The public are admitted every Thursday afternoon.

GOVERNMENT CERTIFICATES.

No less than sixty-five first-class mine-managers' certificates have been issued, after examination, to Thames School of Mines students, and fifty-three battery-superintendents' certificates.

ASSAYING AND ORE-TREATMENT DEPARTMENT.

During the year 136 assays were made for the public besides a large number made in connection with the experimental battery. All assays are done in duplicate, and extreme care taken that all reports are accurate.

In the experimental metallurgical plant eight parcels of ore were received for treatment.

The scale of fees has been altered and simplified, and now stands as below:—

Bullion assay	5s.
Assay of gold and silver ores, with parting assay	5s.
Assays and analyses of ores, &c., for ordinary metals	5s. per constituent.
Assay of nickel, cobalt, and chromium ores	10s. ,,
Assays and analyses of rare metals, &c	By arrangement.
Assay of coals and fuels	5s.
Ditto, with sulphur-determination	10s.
Analysis of water for metallurgical purposes	5s. per constituent.
Cyanide and chlorination tests	By arrangement, (minimum, 15s.).

The fee of £5 per ton for treatment of ore in the battery has been retained, but is reduced under certain circumstances to bare cost of labour and material. To obtain this concession the sender of the ore must obtain from the Inspector of Mines a certificate stating that the sender is a *bona fide* prospector.

Governing Body.

At the annual general meeting held at the School of Mines in February the following officers were elected for 1906: President, Mr. G. S. Clark; Vice-president, Mr. R. W. Powell; Treasurer, Mr. E. F. Adams; Members of the Council—Messrs. W. Baker, G. Comer, H. G. Gillespie, H. D. M. Haszard, H. Lowe, M. Paul, J. Rickard, G. Warne; Mr. Albert Bruce is permanent Hon. Secretary.

Staff.

The staff at present consists of O. Gore Adams, A.O.S.M., F.C.S., &c., Director; W. A. Given, M.A., B.E., Assistant Lecturer; J. G. Lancaster, M.Sc., Lecturer on Electricity; T. J. Mountain, L.S., drawing master.

For the first half of the year Mr. A. H. V. Morgan, M.A., was assistant lecturer, but resigned when he was appointed Director of the Waihi School of Mines. Mr. Morgan had been assistant at the Thames School of Mines since 1902.

Mr. E. G. Wright, who was appointed Lecturer on Electricity in 1902, was, owing to injuries received whilst experimenting with Rontgen rays, granted six months' leave of absence from June 1905. At the end of the year an extension of six months' further leave was granted him. It is with extreme regret that I have to record that he died in England from appendicitis in March, 1906. By his death the school has lost an extremely energetic and enthusiastic worker, and one who always did his best for the school and the students.

It is my pleasant duty to thank the staff—past and present—for the efficient manner in which they have carried out their duties and for their interest in the welfare of the school.

I also wish to thank the Council for their support and assistance in all matters tending towards the furtherance of the school's interests.

COROMANDEL SCHOOL OF MINES.

Report of the Council.

Your Council have pleasure in reporting that the School has been maintained in a state of efficiency during the past year, notwithstanding that the district has generally been depressed, necessitating the departure of many who no doubt would have made satisfactory students. It is a matter for regret that more of the young men permanently residing in the district do not grasp the opportunities for gaining scientific knowledge that would prove of advantage to them in many walks of life in the years to come. However, it is satisfactory to note that a number of new students have enrolled already this year; we would urge them to pursue their studies with diligence, as it is alone by attention and persistency that success can be expected. We trust that better results will be achieved by the students at next examination than was the case at the last. In Mr. Allen we have a careful, attentive, and capable Director, and students should remember that it is hardly fair to him that they should be irregular in attendance and display a lack of earnestness in their studies. During the past year the electrical apparatus has been augmented out of a special grant made by the Minister of Mines, and the institution is now well equipped in every department. Some months ago the books ordered from England for the School Reference Library arrived, and these have been augmented by a number of interesting and instructive works published by the Government and donated to the School; the thanks of the Council and students are due to the Hon. Minister of Mines (Hon. James McGowan) for securing this valuable addition to our library absolutely free. We have now a very fair library, comprising at least one standard work on every subject taught in the institution, and it is hoped the books will materially aid students in their studies. The Public Battery has been overhauled and put in an efficient state during the past few months, and latterly has given every satisfaction. We sometimes hear remarks about our charges being somewhat high, but we would point out that it has never shown a profit, hence it is obvious that mine-owners and tributers are not unfairly treated. Any improvements or repairs from time to time have been executed out of Government grants. For details of work done at the battery, we would direct attention to the battery manager's report.

Report of the Director, Mr. D. V. Allen, B.Sc., Etc.

The past year has proved an uneventful one in the history of the School. We commenced the first term with 23 students, and an average class attendance of 40; the numbers for the second term were respectively 20 and 33, and for the third 17 and 30. Considering the decidedly languishing state of local mining operations, these figures may be taken as satisfactory. Regular classes were conducted in the following subjects, viz.—Mathematics, mining, &c., theoretical and practical chemistry, senior and junior assaying, surveying, metallurgy, and electricity, while a good deal of useful field work was done with the theodolite. A considerable amount of experimental work was carried on in the chemical laboratory. The stock of the assay and chemical departments has been replenished and additional electrical apparatus obtained. The results of the annual Government examinations held last December can scarcely be considered satisfactory. One first, five second, and three third class certificates were obtained. One student from our school was successful in passing the first-class mine-managers' examination. During the year twenty-eight samples of ore were assayed for the public. Several standard works on the various subjects taught in the school have been purchased. These, together with a number of useful publications donated by the Mines Department, have proved a welcome addition to the School library. Some nineteen students have already joined the School, several for their first time; and altogether the prospects for the coming year are fairly good.

Battery.

The battery still continues to be patronised by the general public for the treating of small test parcels, which was the object for which the battery was primarily erected. During the year twenty-five parcels were crushed and treated, consisting of 37½ tons general ore, 7 cwt. tailings, 3½ cwt. slag, and 125 lb. of picked stone. The result was a yield of 200 oz. retorted bullion, valued approximately at £570. As the outcome of a special grant from the Mines Department, the oil engine and specimen-stamper have been overhauled and the battery generally put into a state of repair. Towards the end of the year our amalgamator, Mr. Hugh Macdonald, tendered his resignation, after a period of four years' service. During the whole of this time he has carried out his duties in a satisfactory and conscientious manner. Mr. A. S. Ford, who has had many years' experience in battery-work, has been appointed as his successor.

WAIHI SCHOOL OF MINES.

Report of the Council.

The Council has pleasure in reporting that the progress of the school during the year has been satisfactory. The attendance has been practically the same as in the previous year. A fewer number of students sat for examination, but the results have been higher.

The teaching efficiency of the school has improved since the installation of the electric plant and the reorganization of the electrical classes under a permanent teacher.

In 1904 the average attendance was fifty-eight and the candidates for examination thirty-two. In the year under review the average attendance was fifty-six and the candidates for examination twenty-two. The highest marks in the colony were obtained by students in seven subjects at the recent examination.

During the visit of the Hon. the Minister of Mines to this locality in June a strong endeavour was made to induce him to consent to the certificates being indorsed by the examiners or that the Department should issue them for the whole colony signed by a Chief Examiner or other authorised agent or body. The Minister, however, would not agree to either proposal, and matters in this respect stand unchanged.

During the year there have been many changes and much confusion in the arrangements of the electrical classes owing to the unfortunate disablement of Mr. Wright and his temporary retirement from the position of instructor. At the opening of the school Mr. Wright was almost incapacitated, and for a time carried on the classes with much difficulty, finally having to obtain leave of absence; and it was not till August that a substitute, Mr. Lancaster, was appointed to carry on the work. Since the advent of that gentleman much more interest has been taken in this branch, the attendance at these classes being now sixteen; and it is becoming imperative that Mr. Lancaster should have more time to devote to his work in this centre. It will also soon be necessary to provide a workshop for practical instruction in this important subject. With this end in view, the Council has been collecting information and making inquiries as to the possibility of obtaining a grant for the purpose of erecting and equipping a workshop from the technical education vote; but this vote is so hedged with conditions that it is doubtful if a school of this class can come within its scope without a radical change in its constitution and management.

In May Mr. P. G. Morgan, M.A., who had occupied the position of Director of the school since its inception, accepted an appointment on the Geological Survey staff and resigned his post at the school. The Council feels that the greatest credit is due to Mr. P. G. Morgan for his devoted attention to the work and welfare of the school during his term of office as its head, and that the present successful position of the institution is owing largely to Mr. Morgan's capacity for work and the great interest he threw into it from the start of the school. Mr. A. H. V. Morgan, M.A., was appointed to the position of Director on the resignation of Mr. P. G. Morgan.

During the year the expenditure of the school has not been unusually high. The total cost of the institution has been £717, of which £46 has been spent in completing the electric-light plant and in small additions and improvements to the buildings, and £29 in new instruments. The Government during the year has paid in subsidies and grants a sum of £462, and the Waihi Borough Council again gave £100. There has been a slight improvement in membership fees, but the revenue from this source is still meagre, and shows a regrettable lack of practical interest on the part of the community in general. A united effort should be made to improve this condition and cultivate a healthier interest on the part of our townspeople.

The electric-light plant, which was in hand at the beginning of the year, was completed and started running in March, and has given satisfaction on the whole. As anticipated, the maintenance of this light has added somewhat to the general expenditure; but its installation was necessary for practical demonstration in the electrical classes, and will be more and more useful as these classes advance.

Financially, the Council has just been able to make both ends meet, the year closing with an overdraft of £15. Subsidies on salaries and donations already due by the Mines Department will, however, wipe this off and leave a balance in hand for the ensuing year.

The thanks of the Council are due to the Rev. J. L. Pattullo, Messrs. R. E. Williams, R. Morgan, and M. F. Haszard for prizes presented for competition at the annual examination, and to Mr. P. G. Morgan for his presentation of a dumpy level to the school.

Report of the Director, Mr. A. H. V. Morgan, M.A.

The attendance at the school during the past year was very satisfactory, the average number of students being fifty-six, with a class attendance of 117. The following table shows the attendance for each term in the various classes:—

Table of Attendances for the Year 1905.

Name of Subject.	First Term.	Second Term.	Third Term.	Average.
Junior mining	2	3	4	3
Senior mining	...	4	4	4
Mathematics	19	17	19	18
Theoretical surveying	3	5	6	5
Practical surveying	3	5	6	5
Geology and mineralogy	6	6	6	6
Theoretical chemistry	11	8	7	9
Practical chemistry	13	12	9	11
Wet and dry assaying	18	19	23	20
Metallurgy	7	6	7	7
Drawing	17	11	12	13
Electricity	16	14	19	16
Totals	115	110	122	117
Individual students	55	51	62	56

Examinations.

At the annual examinations held in December twenty-two students presented themselves, sending in altogether forty-two papers. The results are highly satisfactory, and show that sixteen first-class, seventeen second-class, and six third-class certificates were obtained. Mr. Robert Morgan's gold medal for the highest aggregate in any four subjects was won by R. J. Morgan, who obtained 82 per cent. in mathematics, 79 per cent. in metallurgy, 74 per cent. in assaying, and 78 per cent. in practical chemistry. Mr. F. M. Haszard's gold medal for the highest marks in mining subjects was won by G. Mackie, with first-class certificates in surveying and explosives, and second-class in mining, and pumping and winding.

Government Certificates.

During 1905 one student obtained a first-class mine-manager's certificate, one obtained a partial pass, and four students obtained battery-superintendents' certificates. The results for 1906, which are just to hand, show that two students have obtained first-class mine-managers' certificates and seven gained battery-superintendents' certificates. Since Waihi became a centre for examination—eight years ago—twenty-one students have passed as first-class mine-managers and thirty as battery-superintendents. In addition to these, two students have gained coal-mine-managers' certificates, and a number have gained second-class mine-managers' certificates and engine-drivers' certificates.

Laboratory.

During the year sixty-eight assays and analyses were made for the public, mostly determinations of gold and silver.

Mineral Collection.

The geological collections in the school have been supplemented by donations of specimens from several gentlemen. Mr. G. T. Jackson sent a representative collection of rocks from Upper Egypt; Captain Newdick presented some additional copper and lead minerals from north-east Rhodesia; Mr. C. Bull—a sample of the rather rare mineral tantalite from Western Australia; while among other donors may be mentioned Messrs. M. J. Stewart, R. B. McDuff, J. L. Gilmour, P. G. Morgan M.A., and W. Morrison.

Apparatus, &c.

A new bullion-balance for the use of senior students in assaying has been purchased, the Government making a special grant of £23 for that purpose. Several new books have been added to the reference library connected with the school, which is much used and appreciated by students. The library contains a fairly representative collection of standard works on subjects related to mining, but in order to keep it up to date further expenditure is necessary.

Conclusion.

In conclusion, I have to express my appreciation of the zeal and ability displayed by Mr. F. T. Seelye, A.O.S.M., assistant lecturer; Mr. R. H. Mitchell, drawing-master; and Mr. J. G. Lancaster, M.Sc., electrical instructor. I wish also to thank the Council and Secretary for their support and assistance during the year.

KARANGAHAKE SCHOOL OF MINES.

The Director, Mr. R. B. McDuff, reports as follows:—

I have the honour of submitting the following report on the Karangahake School for the year ending the 31st March, 1906.

Attendance.

During the year a marked increase took place in the number of students, the average number being thirty-eight registered students. But in the last term, 1905, forty-eight students were on the roll. This attendance is being maintained.

Examinations.

At the annual examinations held in December last sixteen first-class, fourteen second-class, and three third-class certificates were obtained by students of this school. In all, thirty-four papers were handed in, and the average marks per paper were 67·76 per cent., or only 2·25 per cent. below first-class. This average is the highest on record.

Laboratory.

A fair amount of public assays and analyses were carried out during the year, they being chiefly for gold and silver; but some were for iron, phosphorus, and zinc. Some coal and oil-shale were also analysed.

Extension Classes.

In July last year I commenced giving a lecture on metallurgy and on mathematics once a week at Waikino. These classes were so well patronised that the Council asked the Hon. the Minister of Mines to grant a subsidy for the erection of a school at Waikino. The Hon. the Minister, ever ready to assist an educational movement, at once granted the request, and I am pleased to state that the school will be ready to commence operations at the beginning of our third term—9th September, 1906.

It is intended to depart from the ordinary course at Waikino and offer a two-years' course in mathematics, assaying, chemistry, mechanical drawing, metallurgy of gold, silver, copper, lead and zinc (including electro-metallurgy), and electricity. It is believed that such a course, assisted by the excellent environment, will enable the school to turn out students capable of upholding the good record of New Zealand metallurgists and the fame of the renowned Waihi Gold-mining Company, whose reduction-works are situated at Waikino.

Syllabus.

The syllabus has been somewhat extended to meet the needs of advanced students, and comprises instruction in mining, mathematics, surveying, assaying, chemistry, mechanical drawing, survey map-drawing, geology, mineralogy, metallurgy, metallurgical chemistry, and electricity. A synopsis of the courses is given below.

Mining.—Minerals of common occurrence, with New Zealand localities; kinds of rock in which different minerals are found; dynamics of lodes; faults in lodes and coal-seams; recovery of lost lodes and seams; Zimmerman's law; location of shafts, slopes, and adits, and calculations pertaining thereto; exploitation, driving, sinking, rising; working ore by overhand and underhand stopes; precautions for safety of men; timbering drives, rises, stopes, shafts, slopes; special methods of sinking, driving, and timbering in running and watery strata; tubbing; coffering.

Poetah's method, Triger's method, Goebert system, Kind Chaudron system, Bullock system.

Drainage of mines by pumps, pulsometers, buckets, siphons, drifts, &c.

Pumping-engines, with necessary calculations. Fixing pumps, and pitwork generally. Plunger pumps, draw-lift pumps, steam and compressed-air pumps. Calculation of power required to drive pumps.

Steam and the steam-engine, condensing and non-condensing engines. Expansion of steam. Calculations of required size for given work. Horse-power of engines.

Haulage, engine plane, gravity plane, tail-rope system, endless-rope and chain haulage.

Hoisting is treated in detail, so as to bring out the important practical points so commonly overlooked by writers of text-books.

Ventilation of mines by blasts, jets, fans, and furnaces. Gases met with in mines—CO_2, CO, H_2S, CH_4, C_2H_4—their properties and effect on human beings. Calculations pertaining to practical mine-ventilation.

Text-books: Pamely, Lupton, and Foster.

Mathematics.—This includes:—Arithmetic: The whole subject; text-book, Workman's School Arithmetic. Geometry: The substance of Euclid's books I, II, and III; text-book, Hall and Stevens's Geometry. Algebra: To binomial theorem; text-book, Hall and Knight. Trigonometry: To solution of triangles; text-book, Loney's Plane Trigonometry.

Surveying.—Pacing practice, ranging-lines, offsets, chain surveying, surveying with prismatic compass and miners' dial, adjustments of prismatic compass, miner's dial, and Abney level.

Adjustment of and surveying with theodolite and transit theodolite. Levelling. Computations. Mine-surveying, taking meridian underground, holing.

Text-books: Baker and Dixon, J. B. Johnson.

Assaying.—This subject is divided into (*a*) dry assaying, (*b*) wet assaying.

(*a.*) Fluxes, oxidizers, and reducers. Chemistry of the smelt. Assay for gold, silver, mercury, lead, antimony, and tin. Cupellation of lead buttons for gold and silver; chemistry of cupellation. Parting gold and silver. Parting gold, silver, and platinum. Calculations of values. A thorough practical course of sampling ores and bullion is given before the assay is carried out.

(*b.*) This course includes the determinations by standard wet methods of lead, copper, arsenic, antimony, iron, chromium, nickel, cobalt, zinc, aluminium, &c., in their ores.

Chemistry.—Lectures are given in theoretical chemistry, mainly as an introduction to practical chemistry. They treat of the use of formulæ and symbols, equations, naming of elements, and compounds such as binary compounds, salts, acids, &c. The laws of chemical combination. The preparation and properties of the metallic elements and their important compounds; also of the more important non-metallic elements.

Text-book: Newth.

Practical Chemistry includes qualitative and quantitative analyses for the common metals and non-metals; acidimetry and alkalimetry; volumetric analysis of iron, copper, zinc, calcium, silver, and lead.

Text-book: Clowes and Coleman.

Mechanical Drawing.—Plane geometry, construction of scales, lettering, projection, drawing to scale of machinery and details, colouring and shading.

Text-book: Jones, Machine-drawing.

Survey-map Drawing.—Lettering, titles, and borders, plotting survey to scale by rectangular co-ordinates and by protractor sheet and parallel rule. Making sectional plans from levelling operations. Scales, &c. Use of slide-rule.

Geology.—Cosmical geology, dynamical geology, structural geology, historical geology, and elements of palæontology, economic geology.

Mineralogy.—Elements of crystallography, descriptive and determinative mineralogy.

Metallurgy.—Location of mill, ore-bins, crushers, feeders, stamps, rolls, roller-mills, amalgamation in pans and on plates, classification and concentration. The cyanide process, chlorination process. Metallurgy of silver is described in detail as well as the refining of all products obtained by the different processes.

Metallurgical Chemistry.—This course is offered to advanced students, and includes the qualitative and quantitative analyses of amalgam, concentrates, sands, slimes, slags, &c., besides the assay of key solutions for contained metals and acids, laboratory tests on ores for treatment by amalgamation, and lixiviation processes.

Electricity.—The classes in electricity are under the charge of Mr. Lancaster, instructor in electricity for North Island schools of mines. The syllabus of instruction is uniform for all schools.

The annual meeting of subscribers was held on the 12th March, 1906, when the following committee was elected for the ensuing year: Patron, Hugh Poland, M.H.R.; President, H. E. Phillips, Esq.; Vice-presidents, C. H. Tresize, Esq., G. N. McGruer, Esq., H. Croucher, Esq. Council—Messrs. H. W. Guthrie, R. Inglis, J. Nodwell, G. A. Chappell, H. Rochfort, J. Rawlinson, H. Macdonald, and R. R. Lloyd (Secretary).

In conclusion, I must heartily thank all gentlemen who were so kind as to donate books, papers, and specimens to the school; and to the Council for their hearty co-operation in all movements for the welfare of the school.

NELSON SCHOOL OF MINES.

The following report is submitted by the instructor, Mr. W. F. Worley:—

I have the honour to submit the following report of school-of-mines work done here during the year 1905. The course of work taken up was much the same as in previous years, and comprised the teaching of blowpipe analysis to lads of from twelve to fourteen years of age, the assaying of ores for the public, lecturing on scientific subjects, and the carrying-on of geological exploration.

Blowpipe Analysis Classes.

Two classes for teaching this subject were in session from the 7th February to the 15th December. Seven boys who had had previous experience were put into an upper class, while thirteen beginners constituted a lower class. Of the twenty boys who received instruction during the year fourteen remained in the classes till the end of the year, the remaining six having for various reasons dropped out.

The work undertaken was almost identical with that of past years, and consisted chiefly in the qualitative analysis of ores of commercial importance.

At an examination held at the close of the year's work, five boys succeeded in passing with credit, and were awarded certificates of merit.

Assaying.

Twenty-two assays were made for the public, not one of which gave more than traces of precious metal. The poorness of the assay-results in this district for the past few years is, I regret to say, very disappointing, as it seems to indicate that either the prospecting for ores is not sufficiently vigorous or that the district is deficient in ores of payable quality. Scientific prospecting would, I think, probably lead to the discovery of payable ores in some of our back country, but at present there is a lack of public enthusiasm for this kind of enterprise.

Lectures.

At the Nelson Institute, on the 31st July, a lecture on the geology of the Nelson Port Hills was given by me. The subject was treated in a popular manner, and consisted chiefly of a detailed description of the observations that had been made and the deductions which had been drawn therefrom.

A lesson in geological method was the chief object aimed at in the lecture, and this way of treating the subject proved more interesting to the audience than a mere description of the geological conditions would have done. The interesting geological features of this part of the district were, of course, dwelt upon, but, as the information supplied was similar to that which has been given several times in the reports of the Mines Department, there is no need to recapitulate it here.

On the 30th October, at Wakefield, under the auspices of the Wakefield Branch of the Farmers' Union, a lecture on nitrogen was delivered. The subject was treated from an agricultural rather than a chemical standpoint. After proving, by reference to well-authenticated analyses of plant-substances, the importance of nitrogen to the farmer in the production of farm-crops, an attempt was made to show (1) how the nitrogen gets into a naturally fertile soil; (2) how the nitrogen gets out of the soil by incessant cropping; (3) how the nitrogen may be restored to an exhausted soil—(*a*) by growing leguminous crops, (*b*) by adding to the soil natural or artificial manures rich in nitrogen. The chief artificial nitrogenous manures were described; their points of difference and suitability or unsuitability for special crops explained. The cost per hundredweight and the quantities to be used for the various crops were also given. Mention was made of the other important elements of plant-food, but they were not dwelt upon in particular.

Geological Exploration.

During the year several excursions were made to Flaxmoor Hill, Kaka Hill, and the smaller hills lying round about them. Several specimens of rock were selected from these places, and from these rock-specimens about a dozen micro-rock-sections were prepared. These are now being studied, and it is hoped that during the year some conclusions will be arrived at concerning the character and the history of these rocks.

Conclusion.

In a former report mention was made that the typical ore-specimens prepared by Dr. Kranze and presented to the Nelson School of Mines by the Mines Department, had been loaned to the Nelson Institute for exhibition in their museum on condition that myself and students could have free access to them for purposes of study. I regret to say that since writing the foregoing part of this report the museum has been burned down, and that the specimens referred to have been much damaged by fire and water. They will require well cleaning and relabelling, after which they will, I believe, be again serviceable. Until the museum is rebuilt I shall have to find another room in which to teach mineralogy.

WESTPORT SCHOOL OF MINES.

The Secretary, Mr. Edward Young, writes as follows:—

I beg to forward you herewith copies of balance-sheet and Council's and Director's reports of our school to the 31st March last, as adopted at the annual meeting held on the 14th instant. The names of officers and other members of the Council elected for the ensuing year are as follows: President, Mr. James Bradley; Vice-president, Mr. A. D. Bayfeild; Secretary and Treasurer, Mr. E. Young; Director, Mr. S. Fry; other members, Messrs. A. Stitt, C. D. Harney, R. Connell, for Westport; J. Dixon, for Denniston; T. Young and W. Young, for Millerton; and James Fletcher and K. Ross, for Granity. Mr. C. N. Greenland was reappointed auditor.

Council's Report.

Your Council have much satisfaction in reporting that the school has made great progress during the past year. The scope of its practical work has been much extended and its financial position has steadily improved. The balance-sheet to the 31st March, now laid before you, shows a credit balance, including building-fund, of £166 2s. The local revenue for last year, £80 3s., is the largest yet received for a similar period.

In addition to the classes at Westport and Denniston, a branch school has been established during the past year at Millerton, which has been largely attended. It is at present carried on in rented premises, but arrangements have been made with the Millerton Library Committee for the permanent use of a room in their building. Another branch of the school has also been lately opened at Granity, and a large class enrolled. The total number of students in all branches of the school, as shown in the Director's report laid before you, is forty-three. The present number of subscribing members is forty-eight. The Council is happy to report that the question of a site for the Westport School has now been settled. A part of the old Court section, measuring 50 ft. by 81 ft., has been gazetted to the school.

Negotiations have been going on during the past year with a view to the erection of a common building for the School of Mines and the Technical School, but no definite arrangement has yet been made.

At the recent annual examinations the candidates from this school were again very successful, some of the results being among the highest in the colony, a fact highly creditable both to students and Director, and demonstrating the thorough efficiency of the school as a teaching-institution.

A large amount of assay-work has also been done during the past year.

The Director, Mr. Sidney Fry, reports as follows under date of the 19th March, 1906:—

I have the honour to report that the Westport School of Mines has made decided progress during the past year. In addition to the branch at Denniston, two others have been started—one at Millerton (formed last June), and another at Granity (formed in the present month).

The total number of students on the roll is forty-three, with an average attendance at the classes as follows: Assaying, 5·7; chemistry, 6·4; mineralogy, 5·5; mechanical drawing, 14·0; steam and applied mechanics, 15·4; land and mine surveying, 9·2; mathematics, 21·0; mining, 8·8; Two lady students attend the classes for mathematics and drawing. Five students sat at the annual School of Mines Examinations, the results being four first-class passes, two third-class passes, and two failures in subjects. For the supervision of the examination the services of the Rev. J. Barton, M.A., were obtained, the Director of the Reefton School of Mines being unable to reciprocate with me.

During the year, 107 assays were made for gold, silver, copper, tin, platinum, molybdenum, and also for cerium and thorium. Analyses of bullion were also made for the local banks, and experimental tests of ores by berdan treatment, and by cyanide and chlorination tests; also refining of base bullion, and removal of gold from copper plates has been done, as well as analyses of boiler feed-water and incrustations. Sixty analyses of coal (most of them for the Westport Coal Company) were undertaken; among these, one was a good sample of jet obtained from the coal at Denniston; a portion of it was sent to the Government Analyst for confirmation. His analysis is as follows:—

	Per Cent.
Fixed carbon	27·8
Hydro-carbons	69·8
Water	0·8
Ash	1·6
	100·0

From this it may be noticed that the sample submitted is really a variety of cannel coal.

Another interesting sample of anthracite coal was from Fox's River; our analysis of it was as follows:—

	Per Cent.
Moisture	2·6
Volatile matter	3·4
Fixed carbon	91·0
Ash	3·0
	100·0
Sulphur	0·3

Numerous specimens of minerals and rocks have been identified, but in the case of rocks we are greatly handicapped for the want of a good microscope with polarising attachment.

At a meeting of the members of the Council, students, and general public held last month, the certificates and President's medals were presented to the successful students by His Worship the Mayor of Westport, the gold medal being won by Master Leo Harney, with an aggregate of 165 marks for two subjects. This student's marks for junior mathematics—viz., ninety-three—are the highest gained in the colony for one subject this year.

In conclusion, I wish to thank very heartily those who have assisted us in many ways in the work of the school: the Westport Coal Company, through the medium of their obliging manager at Granity (Mr. G. Fletcher), for the installation of the electric-light in the class-room at Millerton; the Miners' Union for allowing the use of the aforesaid class-room at a nominal rental; the Inspectors of Mines (Messrs. Tennent and Richards) for donations of minerals and ores; the Council of the Westport School of Mines, and particularly the Secretary, Mr. Edward Young; and lastly, Mr. Kenneth Ross, President of the Branch School of Mines Committees of Millerton and Granity, an able and zealous member, to whose indefatigable efforts the success of the institution is due in an eminent degree.

REEFTON SCHOOL OF MINES.

The Director, Mr. J. Henderson, reports as follows:—

I have the honour to submit the following report on the Reefton School of Mines for the year 1905.

Classes were commenced in the second week of March, and continued throughout the year till December.

The attendance was rather unsatisfactory during the first term, but was better during the second and third terms.

	On Roll.	Attendance.
First term	23	18
Second term	29	24
Third term	32	21

Instruction was given in chemistry, assaying, surveying, mining, metallurgy, and mechanical drawing.

At the annual December examinations the following passes were obtained: Eight firsts, three seconds, and two thirds. Mr. J. Williams was successful in securing the School of Mines Scholarship, being the first candidate from the West Coast to do so.

For the examinations held in January, under the Mining Act, five students sat. Of these, one obtained a first-class mine-manager's, and two battery-superintendent's certificates.

During the year seventy-three assays were made for gold and silver, and eight for other metals. Also five parcels of bullion were cleaned, &c.

OTAGO UNIVERSITY SCHOOL OF MINES.

Professor James Park, M. Inst. M.M. (London), M.A. Inst. M.E., F.G.S., reports as follows :—

The mining school for the year ending the 31st December, 1905, showed an attendance of thirty-four students, thirty-one of whom were matriculated students of the University of New Zealand. Of the thirty-four, twenty-five were entered for the full course prescribed for the B.Sc. in mining or metallurgical engineering, and nine for one subject only—namely, general geology.

Diplomas Granted in 1904.

Diplomas were issued to graduate students on production of the necessary certificates of practical work, as follows : Frank Hadfield Statham, Associate in Geology ; Oluf Moen, Associate in Mining ; Oluf Moen, certificate of metallurgical assayer and chemist ; James Campbell Neill, Associate in Mining Leslie M. Jolly, Associate in Metallurgy.

Annual Examinations.

Thirty-four students presented themselves for examination in thirty different subjects, and of these only three failed—namely, two in mineralogy and one in mining geology.

Grey Scholarship.—Robert W. McCullough.

Ulrich Medal.—Alexander M. Finlayson.

New Zealand University Examinations.

1851 *Exhibition Research Scholarship.*—Robert A. Farquharson (resigned in favour of Rhodes Scholarship).

Honours in Natural Science.—Arthur R. Andrew (Birmingham) and Robert A. Farquharson, first-class honours (geology).

Senior Scholarship in Natural Science.—Alexander M. Finlayson (geology) divided this scholarship with an Auckland candidate (botany).

Mining Engineering. — First section (metallurgical), — Gerhardt A. C. Ulrich ; second section, Hugh R. Macdonald, Alex. Gordon Macdonald, and Philip Hastings McDouall passed all the examinations in this section except mechanical drawing ; final section, E. J. Herbert Webb (mining) and Walter A. Given, M.A. (metallurgical).

Master of Science.—Robert A. Farquharson.

Bachelor of Science.—First section, John A. Bartrum, Charles A. Cotton, John F. McPadden ; final, Alexander M. Finlayson.

The Rhodes Scholarship for 1906.

The Committee of Selection, sitting in Government House, Wellington, in February of this year, awarded Mr. Robert A. Farquharson the Rhodes Scholarship for New Zealand for the year 1906. Mr. Farquharson is a distinguished scholar and a prominent athlete. His academic career represents a standard of excellence rarely equalled by a graduate of the New Zealand University ; and it is worthy of note that he was awarded the Rhodes Scholarship before the results of the New Zealand University November examinations were known. When Mr. J. Allan Thomson, B.Sc., carried off the first Rhodes Scholarship for New Zealand two years ago, and was at the same time awarded an 1851 Exhibition Research Scholarship, it seemed hardly within the range of probability that a mining student could have the good fortune to carry off the same prizes within so short a time. Mr. Farquharson has earned our most hearty congratulations.

Graduates of the Mining School.

The diploma of Associate of the Otago School of Mines was first issued in 1887. The diplomas granted in the divisions of mining, metallurgy, and geology since that date are as under :—

Division.	Issued up to 1904.	Issued in 1905.	Total.
Mining	74	2	76
Metallurgy	36	1	37
Geology	12	1	13
Totals	122	4	126

The mining graduates who have taken the ordinary B.Sc. and engineering B.Sc. are as follows :—

	Up till 1904.	In 1905.	Total.
Ordinary B.Sc.	8	1	9
Engineering B.Sc.	3	2	5
Totals	11	3	14

Occupation of Old Students.

The old students who have secured responsible positions during the past year are as follows :—

(1) Percy G. Morgan, M.A., New Zealand Assistant Geologist ; (2) Charles N. Boult, B.Sc., assistant engineer, Ferro-Concrete Company (Limited) ; (3) T. Otto Bishop, A.O.S.M., manager, Skipper's Mine ; (4) Alexander Fyfe, manager, cyanide-works, Barewood ; (5) A. H. Vivian Morgan, M.A., Director, Waihi School of Mines ; (6) G. Geoffrey Sale, A.O.S.M., manager, Slimes Plant, Roodepoort, South Africa ; (7) Ernest Edwards, A.O.S.M., mine-manager, S. Norway ; (8) John Watt, A.O.S.M., dredge-

manager, Fraser River, Canada; (9) Walter A. Given, M.A., B.Sc., lecturer, Thames School of Mines; (10) J. W. H. Piper, superintendent of construction, Eckstein and Co., Johannesburg; (11) Allan Jackson, assistant manager, Guiana Gold Company (Limited); (12) F. B. Allen, M.A., B.Sc., Superintendent of Technical Education, Western Australia; (13) G. W. Thomson, A.O.S.M., assistant mining engineer, Duff Development Company (Limited), Kelantan, Malay States.

The old students who have been placed in responsible positions in the past five years in different parts of the globe so far as can be ascertained are as follows:—

Year.	Number.
1901	8
1902	7
1903	8
1904	11
1905	13
Total	47

The students who occupy such positions as those of cyaniders, assayers, assistant surveyors, &c., are not included in these numbers. These are the posts from which they graduate into more responsible places.

Laboratory.

During the year eighty-four samples of ore and minerals were assayed for the public by Mr. Waters at schedule rates, and in the same period twenty-four samples of rocks and minerals were examined and reported on by the Director free of charge.

Summer Work for Students.

During the summer of 1905–6 employment was obtained by eighteen of our second- and third-year students in mining, metallurgical, surveying or geological work in different parts of the colony at current rates of remuneration.

Senior Scholarships and Honours in Applied Science.

The New Zealand University at the present time grants senior scholarships and honours in all the purely academic subjects—one senior scholarship and honours in three grades in each—but no scholarships or honours in the subjects relating to applied science, such as economic geology, mining, metallurgy, applied mechanics, surveying, &c. This surely ought to be remedied. Applied science is the connecting-link between the university and every-day industrial and professional life, and some incentive should be held out to the university graduate to qualify himself in some measure above the need of the ordinary pass. If the University of New Zealand is to be a living factor in the industrial progress of the colony it will be done chiefly through the efforts of its graduates in applied science.

To grant scholarships and honours in such fundamental subjects as mathematics, physics, mechanics, and chemistry is admittedly right and proper, but to withhold like reward from the graduates who choose a course in which the principles of these subjects are applied, is a phase of our university system not in touch with the times in which we live or in accordance with long-established English usage.

It is gratifying to note that several of the candidates for degrees in mining and metallurgical engineering have in recent years shown an excellence in their examination results, as awarded by the English examiners, that would have entitled them to honours had the subjects of examination been subjects in which honours are granted by the University.

College and University Examinations.

All candidates for the engineering degrees of the New Zealand University are required first to sit for the College examinations, and after an interval of a week or ten days then to sit for the New Zealand University examinations. The papers set by the College and by the New Zealand University ow cover the same ground in all subjects.

The College examinations occupy ten or twelve days, the University examinations about ten days —altogether some three weeks.

After sitting the College examinations the candidates are often quite exhausted and ill-prepared to battle with the University papers, which follow after a too-short interval. Our present method of examination is modelled on the ancient Chinese system, which has now been set aside in China by an Imperial edict, dated 1905, in favour of the more rational methods of examination followed in Germany and America. The German system was fully described by the writer in his annual report for the year 1904.

It should be noted that these remarks are not intended to apply to the humanities, but only to the subjects taught in applied science.

Acknowledgments.

I have much pleasure in placing on record my appreciation of the zealous and efficient work carried on by Dr. Marshall, Mr. D. B. Waters, and Mr. G. Armstrong, lecturers, and Mr. Norman Shand, demonstrator, in their different departments during the past year. Special acknowledgements are due to Dr. Marshall and Mr. Waters.

EXPENDITURE ON SCHOOLS OF MINES.

The following table shows the expenditure by the Government on schools of mines since their inauguration, exclusive of subsidies paid to the University of Otago towards the School of Mines in connection with that institution :—

Financial Years.	Subsidies towards the Erection of Schools of Mines, and Maintenance.	Chemicals and Apparatus, also Mineralogical Specimens supplied to Schools of Mines.	Scholarships.	Salaries of Teachers, and Travelling-expenses, &c.	Total Sum paid by the Department towards the Schools of Mines.
	£ s. d.	£ s. d.	£	£ s. d.	£ s. d.
1885–86 ...	...	36 19 9	...	1,223 9 10	1,260 9 7
1886–87 ...	257 16 6	409 1 4	...	2,716 9 3	3,383 7 1
1887–88 ...	253 15 9	253 14 1	...	1,714 9 6	2,221 19 4
1888–89 ...	42 10 0	6 12 9	...	1,139 4 1	1,188 6 10
1889–90 ...	142 2 0	181 14 10	...	716 3 10	1,040 0 8
1890–91 ...	217 6 6	54 8 0	...	620 9 9	892 4 3
1891–92 ...	181 14 0	...	...	689 5 9	870 19 9
1892–93 ...	312 3 4	...	...	670 1 0	982 4 4
1893–94 ...	197 0 5	...	...	858 19 4	1,055 19 9
1894–95 ...	390 0 0	45 10 10	...	773 17 8	1,209 8 6
1895–96 ...	820 0 0	...	50	849 3 0	1,719 3 0
1896–97 ...	352 14 11	58 18 6	100	834 12 8	1,346 6 1
1897–98 ...	1,089 18 6	29 19 9	100	780 19 0	2,000 17 3
1898–99 ...	740 15 2	32 19 7	50	729 10 11	1,553 5 8
1899–1900 ...	990 3 4	24 3 8	50	52 16 3	1,117 3 3
1900–1901 ...	866 10 11	56 3 4	98	77 7 10	1,098 2 1
1901–1902 ...	1,155 12 3	63 5 1	49	69 16 4	1,337 13 8
1902–1903 ...	1,379 15 6	134 18 8	158	111 0 0	1,783 14 2
1903–1904 ...	1,575 15 3	88 18 8	92	109 15 10	1,866 9 9
1904–1905 ...	1,401 2 11	17 3 0	100	362 19 6	1,881 5 5
1905–1906 ...	1,806 19 5	87 2 1	49	440 9 4	2,383 10 10
Totals ...	14,173 16 8	1,581 13 11	896	15,541 0 8	32,192 11 3

The above statement shows the amount expended on the different schools of mines throughout the colony; but, in addition to this, the sum of £11,553 6s. 2d. has to be added, as that has been paid to the school of mines attached to the University of Otago, £500 being paid last year towards maintaining the school, which makes the total expenditure up to the 31st March last to be £43,745 17s. 5d. This expenditure has extended over a period of twenty-one years.

The appendices which follow contain (*a*) the reports of Inspectors of Mines, Wardens, and Managers of Water-races; (*b*) the questions used at the last examinations of candidates for certificates enabling them to act as managers of mines and superintendents of batteries; (*c*) a list of persons to whom certificates as mine-managers, battery-superintendents, and dredgemasters have been issued; and (*d*) the usual statistical returns.

I have, &c.,

JOHN HAYES,

Inspecting Engineer.

The Hon. the Minister of Mines, Wellington.

APPENDICES.

REPORTS OF INSPECTORS OF MINES.

Mr. JAMES COUTTS, Inspector of Mines, Thames, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Inspector of Mines' Office, Thames, 31st March, 1906.

I have the honour to furnish herewith the returns and report on the gold-mining industry in the Hauraki District for the year ended the 31st December, 1905.

During the year nothing important has been discovered in the Coromandel County, although a number of men have been employed in prospecting at different places; and the returns of gold from this part of the goldfield have been the smallest for a number of years past. At the same time, the number of men employed on wages looking for gold has been very small indeed.

In the Thames County there has been quite a revival in mining, caused, no doubt, by the rich shoot of ore met with in the Waiotahi Mine, from which good returns of gold are being steadily obtained.

In Ohinemuri County excellent returns have been produced from the Waihi and the Talisman Consolidated Mines (the former yielding no less than £693,671 14s., and the latter £129,088 8s. 10d.), bringing up the total yearly return to £1,020,030, or nearly three times as much as it was ten years ago.

WAIHI.

Waihi Gold-mining Company (Limited).—The various and extensive operations in the mine, batteries, and surface-works have been carried out in a systematic and careful manner, every precaution being taken for the safety of the men employed, and anything brought under the notice of the officials by the inspectorial staff which was likely to render the place or appliances more safe has been willingly attended to. Adverse comment has been made by some people outside of Waihi regarding the number of accidents in the Waihi Mine, but considering the number of persons employed and nature of the work (which latter is in some cases dangerous and cannot be avoided if the works are to be proceeded with) the number of accidents is not excessive. The ventilation in the mine is very good (especially as it is "natural," no fan or mechanical power being used to force the air into the workings), but the reason of this is that there are numerous shafts and passes from the workings to the surface, and little or no noxious gas is given off in the mine to pollute the air, also the sanitary arrangements entered into have given entire satisfaction.

The mine continues to produce a large quantity of valuable ore, splendid returns being obtained, and the developments lately made at the lowest levels prove that the ore-bodies continue to keep up their values and width, therefore the prospects are even more encouraging than in the past. Three shafts are principally used for raising the quartz and lowering material, &c., but I am informed the No. 6 shaft (at present used for filling-in purposes) is to be fitted up at once with up-to-date winding machinery and appliances, and will eventually become the principal haulage-shaft. The shaft, having been sunk on the foot-wall side of the lodes, is not likely to be disturbed by any movement of the country through the reefs being worked out, and it will be of a more permanent character. The work of excavation to make room for the machinery—viz., the winding-engine, boilers, ore-bins, railway, and other buildings—is now being proceeded with.

The following is a summary of operations in the mine for the year 1905:—

No. 7 level.—Main crosscuts: A north-west crosscut from No. 4 shaft to No. 1 shaft was driven a distance of 616 ft. The Empire Lode was intersected at 35 ft. from No. 4 shaft and was 4 ft. wide. At 597 ft. the Albert Lode came to hand and proved to be 9 ft. wide. No. 1 shaft, north-west crosscut: This was extended a distance of 126 ft. Martha Lode: At point of intersection the width of this reef is 97 ft., and it carries a band of soft friable ore for a width of 15 ft.; the remainder of the lode is composed of sulphides. Driving: In dealing with this immense width, the drives have been cut along its course close to the walls and connected by crosscuts at intervals to prove the widths and values. The footage recorded on the Regina section of the lode is 360 ft. east and 360 ft. west of the main crosscut. The distance driven on the north section is 355 ft. east and 320 ft. west of the main crosscut. These four drives have been driven in the sulphide ore for the whole of the distance stated above. Crosscuts through the lode have been exploited as follows: East of main crosscut—at 100 ft., lode 88 ft. wide; at 196 ft., lode 97 ft. wide; at 296 ft., lode 89 ft. wide; at 355 ft., lode 77 ft. wide. West of main crosscut—at 105 ft., lode 110 ft. wide; at 257 ft., lode 111 ft. wide; at 357 ft., 110 ft. driven, 29 ft. quartz exposed, crosscut not complete. Main Royal Lode: This lode was intersected at the end of last year (1904), and since then a total length of 1,034 ft. has been opened up—viz., 607 ft. east and 427 ft. west of north section junction, having an average width of 12 ft; in the present western face the lode is a strong body and will require further exploration. Eastern drive: At the 607 ft. mark, the lode reduced to a few inches in width and junctioned with a new lode 4 ft. wide; this lode has an entirely different course to the Royal and strikes across at a right angle; its course has been followed south for a distance of 45 ft., the reef varying in width from 2 ft. to 5 ft. Empire Lode: This

reef was met with at 35 ft. from No. 4 shaft, and was 4 ft. wide; the level was driven west on course of lode 766 ft.; the average width is 24 ft.; sulphide ore is showing in the western face.

No. 6 level.—Martha Lode, north section: Stoping operations have been carried on continuously for the supply of ore to the mills. Martha Lode, south section: Stoping is in progress between Bull and Wheel No. 2 Passes and Trembath and Cameron Passes. Regina Lode: Stoping is in operation between Jones and Gate Passes, the fourth now being taken. Regina Lode, south branch: This branch was found to go off at 250 ft. west of No. 1 shaft, and was followed to 384 ft., when the lode split up. No. 2 reef: The level has been heightened and timbered for stoping from No. 6 shaft crosscut to 385 ft. west. Welcome Lode, south section: Stoping is in progress between No. 11A Pass and No. 13 Pass, the sixth stope having been started. Empire Lode: Stoping has been in progress, and the block between Nos. 6 and 5 levels is nearly completed. Royal Lode: Further development was done at this level; the east end was advanced from 420 ft. to 478 ft., where the old surface which terminates the lode at this level was met; the lode was 4 ft. wide; the west end was advanced from 370 ft. to 570 ft. and is 11 ft. wide. The total length opened up on this level is 1,048 ft. Stoping is in full progress in the block between Nos. 6 and 5 levels. A connection was made from Royal Lode to Royal Filling Pass after crosscutting 157 ft. to the north. L. Lode: Stoping is now in progress between Rea and Waddle Passes. A prospecting crosscut was driven from Martha Lode at Bull's Pass to Magazine Lode, a distance of 125 ft., and the following quartz was met: At 21 ft., quartz 2 ft. wide, course 44° (true), vertical; at 30 ft., quartz 2 ft. wide, course 62° (true), dip 1 in 5 south; at 43 ft., quartz 8 ft. wide, course 53° (true), vertical; at 82 ft., quartz 1½ ft. wide, course 45° (true), vertical; at 96 ft., quartz 2½ ft. wide, course 45° (true), vertical.

No. 5 level.—Martha Lode, north section: Stoping has been continuously carried on over practically the whole length of the block between Nos. 5 and 4 levels, and is still in progress. Regina Lode: Stoping is being done in block west of No. 1 shaft. Welcome Lode: East of No. 2 shaft north-west crosscut—at 20 ft. east the lode was followed to 190 ft. east, when a connection was made to Regina Lode; the lode averages 5 ft. wide. West of No. 2 shaft stoping is in progress between Skinner No. 2 and Emily Passes, the seventh stope being in operation. Albert Lode: Stoping is in progress, and the fifth stope is in operation. Royal Lode: Stoping is in progress, and the fourth stope is in operation.

No. 4 level.—No. 2 reef was driven on a total of 168 ft. west of No. 6 shaft crosscut. Martha Lode, north section: Stoping has been just started in the sulphide block over the level between Bullson and No. 2 and Wheelson Passes, also in the block between Pile and Juno Passes. Regina Lode: The stoping-block between Ready and Gate Passes was completed to within 8 ft. of No. 3 level. Magazine Lode: The stoping-block between Hobart and Bane Passes was completed to floor of No. 3 level, and that level filled. Welcome Lode: The stoping-block between Carson and No. 9 Passes was completed to floor of No. 3 level. Albert Lode: Stoping has been in operation, and the greater part of the block is taken out between Nos. 4 and 3 levels. Empire Lode: Stoping is in operation between A and Hicks Passes, the seventh stope being started. I Lode: The ore has been stoped to within 5 ft. of floor of No. 3 level. Princess Lode: Stoping is in progress and the fifth stope started. Royal Lode: Stoping is in progress and the sixth stope started.

No. 3 level.—Martha Lode, north section: The level has been connected between Nos. 1 and 2 shafts and a foot-wall gangway driven east to Venus Pass. Seven winzes were sunk to open up the stoping-block between Nos. 3 and 4 levels. Welcome Lode, north section: Stoping is in progress, the second being in operation. Empire Lode: The stope at floor of No. 2 level was taken out from east end of lode to Muir's Pass. Albert Lode: Stoping is in progress, the fourth stope being the highest above the No. 3 level. I Lode: Stoping is in progress, the seventh stope being worked.

No. 2 level.—Martha Lode, north section: East of No. 2 shaft, north-west crosscut, 261 ft. was driven, and also 17 ft. west, making a total of 278 ft. This block exists up to the smithy level. Victoria Lode: The western face of the level was advanced from 744 ft. to 837 ft. west of No. 2 shaft, north-west crosscut, in ore averaging 3½ ft. wide. Albert Lode: The north face has been advanced from 271 ft. to 321 ft. north of J Lode junction; lode averages 3 ft. wide. Magazine Lode: Stoping is now in progress; the second stope is being taken.

No. 1 level,—Crosscut: South-east crosscut from Martha Lode near Bell Pass was connected to Welcome Lode. Martha Lode, north section: East of No. 2 shaft, north-west crosscut, 316 ft. was driven, and also 48 ft. west, making a total of 364 ft. Stoping has been started on the north section east and west of No. 2 shaft, north-west crosscut. Welcome Lode: Stoping is in progress in the block west of No. 3 shaft.

Adit level.—Martha Lode: The north section was driven on east of No. 2 shaft, north-west crosscut, 100 ft. and west 90 ft., making a total of 190 ft.

Upper smithy level.—Martha Lode: The block west of Bell Pass has been taken out to surface. Stoping is in progress between Merry and Ford Passes, and the fifth stope is now in operation. South branch of Martha Lode: Stoping has been in operation in the fourth stope. Welcome Lode: Stoping is now in operation.

Shafts.—No. 5 shaft: The No. 8 level chamber has been opened out on north side of shaft at 853 ft. from the surface, or 150 ft. below No. 7 level. C pump: Intermediate plunger was coupled up to the main rod on the 13th June. C pump: Drawlift has been placed in shaft at No. 8 level. A new steam-driven air-compressor with Corliss valve-gear has been installed close to the B pump building. Except Nos. 1, 4, and 5 shafts, the other shafts have not been sunk during the year. The total depths of the

six shafts at the close of the year and the depths sunk during the year are as follows: No. 1 shaft, 708½ ft., 55 ft. sunk during year; No. 2 shaft, 732 ft.; No. 3 shaft, 348 ft.; No. 4 shaft, 703½ ft., 72 ft. sunk during year; No. 5 shaft, 863 ft., 128 ft. sunk during year; No. 6 shaft, 553½ ft. Total number of feet driven, sunk, and risen, 18,678 ft., or 3·537 miles.

Product.—The total tonnage crushed amounted to 298,531 tons (dry weight) of 2,000 lb. per ton. An increased tonnage has been drawn from the Martha, Regina, Royal, Albert, and Reef I, whereas a smaller tonnage has been taken from the remainder of the reefs.

Reduction-works.—The tonnages crushed at the three mills were respectively as follows: Waihi Mill (90 stamps, and 3 tube mills since end of May 1905), 89,216 tons; Victoria Mill (200 stamps), 181,187 tons; Union Mill (40 stamps), 28,128 tons: total, 330 stamps, 298,531 tons.

Waihi Mill (90 stamps).—The increase in the quartz crushed amounted to 9,914 tons. This increase was due to the use of three tube mills during the latter part of the year. The erection of these tube mills, and the necessary enlargement and alteration of the engine-room and treatment plant for dealing with the increased output, was sufficiently advanced to allow of their being started at the end of May, since when (except for sundry small stoppages) they have been kept continuously at work. As the increased tonnage crushed overtaxed the existing stone-breaker department (which consisted of a No. 5 and a No. 3 Gates crusher) a large-sized "Hadfield" Hecklon stone-breaker was ordered, and came to hand at the end of the year and was erected in place of the No. 5 Gates, the latter being used as a finishing crusher instead of the No. 3 Gates, which was taken down. A Babcock and Wilcox boiler was obtained, and is being erected. The adoption of tube mills has necessitated a considerable amount of alteration of and addition to the existing plant. The preliminary filter-pressing of the slimes is performed by means of a vacuum slimes plant.

Victoria Mill (200 stamps).—The third No. 5 Gates crusher was erected and brought into use. It was decided to add two tube mills; the necessary building has been erected. The two elevator-wheels required in connection with this plant have been constructed and partly erected in position. The tube mills themselves are now coming to hand. The large vanner plant is nearing completion. Concentrates Treatment Plant, Victoria Mill: Early in the year two more agitating-vats, 15 ft. in height by 6 ft. diameter, were added, and later on in the year seven more vats of the same size were erected.

Union Mill (40 stamps).—The Leffel wheel obtained during the previous year was erected and dam and penstock completed. It has been in use during the latter part of the year. During the year four out of the eight mortar-blocks were provided with heavy cast-iron anvils, and during the overhaul at Christmas a fifth anvil was put in.

General.—The construction of the Government railway from Paeroa as far as the Victoria Mill, Waikino, was completed by the end of March, the first train of coal-trucks reaching there on the 2nd April. The opening of the line to this point has lessened the difficulties attending the transport of the large quantity of coal and other goods required by the company. A new air-compressor (made by the firm of Messrs. Yates and Thom, of Blackburn, England) for supplying air for the rock-drills was started at the No. 5 shaft in the beginning of November last. It is of the horizontal cross-compound jet condensing type, indicating 260-horse power when running at a speed of seventy revolutions per minute. The air is compressed in two stages, the high-pressure air-cylinder being arranged tandem with the high-pressure steam-cylinder and the low-pressure air-cylinder with the low-pressure steam-cylinder. Steam is supplied at a pressure of 150 lb. per square inch, the air being compressed to 100 lb. per square inch. The high-pressure steam-cylinder has a diameter of 14 in., the low-pressure 30 in., with a common stroke of 3 ft. Both cylinders are fitted with "Corliss" valves, the steam-valves being actuated by the "Dobson" valve-gear admitting of a cut-off of from 0 to 75. The cut-off on the high-pressure cylinder is under the control of the governor, whilst that on the low-pressure cylinder can be altered by hand whilst the engine is in motion. A reheater, supplied with steam at boiler-pressure, is placed between the two cylinders, thus slightly superheating the steam on its way to the low-pressure cylinder and reducing initial condensation. A jet condenser is fitted, an Edwards air-pump being connected to it and driven off the low-pressure-engine crosshead; piston-rods and valve-spindles are fitted with metallic packing; the lubricating arrangements are very complete, both cylinders being fitted with sight-feed adjustable force-pumps; the crank-shaft bearings, eccentrics, &c., are also fed by two rotary pumps driven from the engine, the oil dripping from the bearings being returned to a tank where it is filtered and used over again. The high-pressure air-cylinder has a diameter of 16 in. and the low-pressure cylinder 28 in., with a common stroke of 3 ft. Both cylinders are fitted with "Corliss" valves mechanically operated by eccentrics on the crank-shaft, the inlet-valves having plain eccentric motion, whilst the outlet-valves receive their motion from a wrist-plate. Air is drawn in at the top of the low-pressure cylinder and compressed to a pressure of about 33 lb. per square inch, passing on its way to the high-pressure air-cylinder through a water cooler where the temperature is very considerably reduced. In the high-pressure cylinder it is further compressed to a pressure of 100 lb. per square inch. Both high- and low-pressure air-cylinder bodies and covers are thoroughly water-jacketed; an air governor is also fitted to the engine. This consists of a cylinder fitted with a piston upon which the air-pressure acts, the rod of this piston being connected through a series of levers to the high-pressure-steam cut-off gear. The whole of the valve-gear—both for the steam and air cylinders—is arranged so that it can be easily adjusted to suit the working-conditions. The compressor is capable of supplying 1,780 cubic feet of free air per minute. The company's licensed holdings comprise an area of 874 acres; the average number of men employed during the year was 1,396; the quantity of material operated on during the year, 298,531 tons of 2,000 lb.; the yield of bullion 1,192,046 oz.: total value of bullion, £693,671 14s. The mode of treatment is by wet crushing and cyanide, partly also with amalgamated

copper plates. Amount paid in dividends for the year, £322,339 11s.; total paid in dividends, £1,924,617 16s. 6d.

Waihi Grand Junction Gold Company (Limited).—The following outline of the works carried on by this company for the year ending the 31st December, 1905, is supplied by Mr. Simmons, superintendent, and Mr. Armstrong, chief electrical engineer. The work pushed forward underground during the year was chiefly the driving of the No. 3 level east and west on both the Martha Lode and No. 2 lode, and the opening-up of blocks of ore between Nos. 2 and 3 levels. The Martha Lode has now been driven from the intersection of the lode in the crosscut from the shaft for a distance of 437 ft. east and 340 ft. west, and the No. 2 lode from the same place a distance of 575 ft. east and 11 ft. west. The Martha Lode shows an average of about 20 ft. wide, but has not been tested for the full length of driving. The No. 2 lode averages in width about 5 ft., and along this lode winzes have been sunk every 80 ft. from the No. 2 level, and rises put up from No. 3 level to meet them. In all eight winzes were sunk in this way, seven of which have been connected through to No. 3 level. An intermediate level was also put in, starting from the D winze at a point about 40 ft. from the crosscut between the Nos. 2 and 3 levels, and driven for a distance of 152 ft. along the course of the reef. Summary of work underground: Driving, 1,580 ft.; sinking, 800 ft.; rising, 590 ft.; crosscutting to prove lodes, 281 ft.

During the year the company pushed ahead the erection of the 40-stamp battery which was purchased from Opitonui. Added to this plant was a considerable quantity of new machinery from Home, including three new gyratory crushers and large tube mills, also anvil-blocks, each weighing about 5 tons. These anvil-blocks are of cast-iron, and are to be placed under the stamper-boxes with a sheet of rubber between and take the place of the large wooden blocks at one time used for that purpose. The power-station consists of a steel building 98 ft. by 50 ft., divided into boiler-house and engine-room and separated by galvanised-iron partition. The steam-generating plant consists of three Babcock-Wilcox two-drum water-tube boilers, each having a heating-surface of 3,140 square feet and a grate-area of 55¼ square feet. The working-pressure of the boilers is 200 lb. per square inch, and by means of internal superheaters the temperature corresponding to this pressure can be raised by 100°–120° Fahr. The boilers are designed for burning slack coal, and for this purpose mechanical chain-grate stokers are provided. Weir's feed-water pumps and a feed-water heater are installed for feeding the boilers, and the feed-water on its way to the boilers passes through a Green's economizer. The smoke-stack is 115 ft. high from firing-level of the boilers and 5 ft. 6 in. in diameter. The engine-house contains three Richardson-Westgarth-Parsons steam-turbines, each capable of developing 580 brake horse-power at a speed of 3,000 revolutions per minute, the steam-pressure being 180 lb. Each turbine is direct-coupled to a Brown-Boveri three-phase alternate-current generator wound for a tension of 550 volts and fifty periods per second. The exciting current for the rotor of the generators is provided by a continuous-current dynamo direct-coupled to the generator-shaft and running at 3,000 revolutions, the tension being 110 volts. The switch-board contains three generator-panels and three feeder-panels with six feeder-circuits. All current-carrying apparatus is arranged behind the board, access to the back of switch-board being by a door which is always locked, so minimising the possibility of any person coming into touch with the current-carrying parts. Each generator-panel contains instruments for the exciter and generator and synchronizing apparatus, all the switches being enclosed in oil, and the generator-switches are automatically operated by means of an overload time-limit relay. Each turbine unit is complete with its own condenser, air-pumps, and centrifugal pump for the circulating water for the condensers, all the pumps being driven by motors. An electric winding-machine, manufactured by the International Company, Belgium, is on order and expected to arrive about the early part of May. The engine will be capable of winding 1,000 tons from 2,000 ft. in nineteen hours. The winding-motor is for 300 ft., and of the continuous-current type, current being supplied by a synchronous motor-generator capable of developing sufficient power for the mean load of the winder, the difference between this and the maximum load at starting being supplied by a fly-wheel generator working between 300 and 600 revolutions per minute, and alternately is a motor and generator capable of absorbing between these speeds 100-horse power, the fly-wheel weighing about 5 tons.

The quartz raised from the mine will be dumped into a hopper at the top of the shaft and conveyed by means of an aerial ropeway to the crusher-house at the back of the stamps, then put through a "Heclon" crusher, the smaller quartz passing into a hopper and the larger quartz passing through a second "Heclon" crusher. The whole amount is then to be raised by a bucket elevator and conveyed by means of a belt distributor to the forty heads of stamps at present installed, and, after passing over the amalgamating-plates, will be treated by two tube mills and then undergo the usual cyanide-process treatment. The crushers, stampers, and tube mills are each driven by a 150-horse power three-phase motor, besides which there are several small motors for driving sand-pumps. Preparations are at present being carried out for a further increase of 60 heads of stamps which are on order.

Waihi Extended Mine.—In the beginning of the year sinking operations were in hand and continued until a depth of 134 ft. was reached, making the shaft a total depth of 652 ft. from the surface. This work being completed, the driving of a crosscut in a west-north-west direction with a view of intersecting the reef cut in the 500 ft. level was commenced, and a distance of 406 ft. driven, the result being that no reef was cut although some small quartz-formations were passed through. The work proved that the reef had dipped more than was anticipated. A new crosscut was then started from the chamber in a south-south-west direction to a point directly under the place where the reef was cut in the higher or No. 2 level just before the close of the year. When a distance of 300 ft. had been driven a quartz-body was unexpectedly intersected. Probably this will turn out to be the No. 1 junction reef. If this should be so, then there is no doubt that the reef intersected in the No. 2 level will be found further

to the westward; and this would add considerably to the value of the property. Generally, the work accomplished during the year has been the sinking of the shaft a further 134 ft., the driving of crosscuts for a distance of 734 ft., and the necessary repairing-work. An average of fourteen men have been employed in the mine during the year. It is the intention of the company to continue the present crosscut in the 500 ft. level until the Grand Junction Company's workings are met with, so as to provide good ventilation for the mine.

Pride of Waihi Mine.—This mine (being under protection) was idle during the first six months of the year. Two men have been employed during the latter part of the year driving on one of the quartz-formations met with in the west-north-west crosscut in the Waihi Extended Mine with a view of tracing it into the Pride of Waihi Mine ground, in which direction it is running. If the results arising from this work be of an encouraging nature, the work of sinking a shaft on the property will probably be commenced.

Waihi Syndicate (Limited), (Waihi Consolidated).—The syndicate holding an option over this property commenced operations in August last. In conjunction with the Waihi Grand Junction Company the sum of £3,000 was raised, the syndicate providing £2,000 and the other company £1,000. The work proposed to be carried out was the sinking of a new shaft to a depth of 900 ft., or drainage level. This shaft is some distance to the westward of the Flavonia shaft and southeast of the Waihi Extended. The first work undertaken was the dismantling of the machinery and plant erected at the Flavonia shaft, and the removal of it to the new site, where the sinking of the shaft was commenced and at the end of the year had attained a depth of 25 ft. It is not intended to open out any levels from the shaft until the depth named has been reached. Should no reefs be met with in sinking, crosscutting drives will be put in to intersect any lodes that may traverse this part of the property. An average of eight men were employed during the year.

Walker's Gigantic Mine.—The work in this mine was directed first to the sinking of a shaft, but when a depth of 60 ft. had been reached a large quantity of water was met with which could not be raised by the temporary appliances erected, consequently the stoppage of work was inevitable. Operations were then directed to driving a level from the side of the hill at a depth of 150 ft. below the collar of the shaft, with the intention of connecting the level with the bottom of the shaft by a rise when the drive is in the distance required. Should the shaft (which is divided into three compartments and timbered throughout with 8 in. by 8 in. sets and slabbed all round) then be further sunk, the level named will be used as an adit water level. Eight men have been employed during the year.

Waihi Beach United Mine.—The company has vigorously carried on operations in the mine during the year. The shaft having been sunk to a depth of 356 ft., a crosscut drive was put in at that level and the reef intersected at a distance of 150 ft. The reef, where cut through, was of considerable width, and has been driven on for 33 ft. Although there are ribs of mullock running through it, yet some of the quartz has a very promising appearance, and I am informed contains a fair amount of the precious metal. It is fully expected that as the reef is driven on rich shoots of payable ore will be met with. The shaft being sunk near the sea, it was expected a large quantity of water would have to be contended with, but so far this is not the case, as the workings are, comparatively speaking, dry. Thirteen men have been employed during the year.

Ohinemuri River Syndicate.—There has been little work done on this property since the early part of the year on account of the gold extracted from the tailings not being sufficient to meet the working-expenses. This is somewhat disappointing to the owners, who have spent a large sum of money in trying to make the concern a payable one. I am informed an Australian syndicate is likely to take it over, and hopes of making it a success are entertained.

With the exception of the properties already mentioned, very little work has been done during the year in the Waihi Gold Reefs Mine, the Waihi Consols, Waihi South, or any of the claims in the vicinity of Waihi.

Katikati.

The Eliza Claim.—A syndicate was formed of Waihi and Katikati residents with the object of proving the value of the reef formerly worked on the surface, which was said to contain rich pockets of quartz. Aid for prospecting was applied for and granted, a level was commenced 100 ft. lower down the hill with a view to intersecting the lode at this depth, and, when inspected, was found to have been driven 140 ft. Two men employed.

Owharoa.

The Rising Sun Claim.—This mine was protected during the early part of the year, and when protection expired three men were employed in driving on the reef and making a connection with the surface levels for ventilation. The reef in the face of the level when last visited was about 15 in. in width, and is said to carry payable gold. There are two other parties prospecting in this locality, but they have not discovered anything of a payable character up to the present.

Waitekauri.

Waitekauri.—Very little work has been done on this property during the year, the company having abandoned the greater portion of it, and for some time there was only a caretaker in charge; but latterly a tribute was let to Grace and Collins in the old Waitekauri section. They are reported to be meeting with encouraging prospects, and possibly arrangements may be made with them as to the purchase of this section of the property.

Maorilander.—This mine has been worked continuously during the year by a Waihi syndicate. On their funds becoming exhausted and being unable to get in calls to erect a crushing plant, they ap-

plied, in terms of section 39 of the Mining Act Amendment Act of 1905, and were granted the sum of £248 7s. 6d. to assist them in the erection of crushing machinery. A considerable amount of work has been done in opening up the mine from the lower level, after driving on the reef for some distance. At this level a rise was put up on the lode to a height of 154 ft. to connect with a surface level for ventilation, and 94 ft. up the rise from the low level an intermediate level has been driven for a distance of 354 ft. on the reef, which varies in thickness from 2 in. to 18 in. The mine-manager states that a great portion of the reef already opened up will pay handsomely when the battery is erected and crushing commenced. The low level is only a short distance from the incline tram-line connected with the battery, so that at a very small cost the quartz will be conveyed into the battery from the mine. Four men were employed during the year.

Portsea (*Grace Darling*).—This ground was taken up by Challis and party, who had a good crushing from the sides of a winze sunk on the lode to No. 2 level. They considered the ore in sight was good enough to warrant the erection of a small crushing plant, and made arrangements with a party who agreed to erect a five-stamp battery for half of the mine, or an equal number of shares to the shareholders at that time. A five-stamp battery was accordingly erected, but the ore obtained from the mine since then has not turned out nearly as well as anticipated. The work carried out by the party has been chiefly confined to taking out trial crushings from the various blocks of ground opened up on the reefs by the former Grace Darling Company, and to all appearance the payable ore is only in small patches, the rest being low grade which will not pay to work. An average of four men have been employed in this mine.

New Zealand Jubilee Mine.—This company's operations have been chiefly confined to driving and rising at the low level, but the prospects met with have been rather disappointing to the shareholders, who have expended a large sum of money on the property during the last twelve years. An average of five men were employed during the year.

KARANGAHAKE.

Talisman Consolidated (*Limited*).—This company's operations have proved a great success during the year. The work has been directed to driving and developing on the reef between the No. 8 and No. 13 levels; the reef has varied from 10 ft. to 25 ft. in width, the whole of which was broken out in places and sent to the mill, and from 44,725 tons of ore treated 290,786 oz. 14 dwt. of bullion was obtained, for a total value of £129,088 8s. 10d., which enabled the directors to pay dividends amounting to £30,000 during the year. As these are the first dividends paid since operations were commenced in the mine, the management and shareholders may be congratulated on the success that has crowned their efforts in making the mine a payable concern, and as the prospects for the year entered into are of a most promising nature, it may fairly be expected the shareholders will receive numerous dividends to recoup them for their former outlay. The following is a summary of the work done in the mine during the year: The incline shaft was extended until it reached a point 445 ft. below the river-level (Woodstock No. 5). At 180 ft. below river-level a station was cut for No. 12 level, from which a drive has been driven north 534 ft. and south 318 ft., and I am informed that the ore-shoot in the Talisman section maintains at this level the size and values met with in the level above. At 200 ft. below No. 12 level, No. 13 level was started, and reached the reef just before the Christmas holidays, therefore I cannot say much about it except that it is said to carry payable values. On No. 11 level the south drive has got into the Bonanza section, showing that the high-grade ore found above No. 10 level continues down to the level of No. 11. On No. 10 level the south drive is now in 1,425 ft. from the shaft; this drive is being driven for the Dubbo ore-shoot, and should get under the Dubbo workings in another 250 ft. The development-work for the year has considerably increased the ore-reserves, and the output shows that the values have also increased over those of the previous year. I am informed that the same vigorous development policy will be continued during the ensuing year, and the south drive at No. 12 level will be extended until it gets into the Bonanza section (probably 250 ft. from present face), and the No. 13 level will open up the Talisman ore-shoot. 230 men have been employed during the year.

New Zealand Crown Mines (*Limited*).—This company's operations have not during the past year been productive of as good results as could be desired, although some good ore has been obtained from a block of ground opened up above what may be termed No. 5 or lower level. This has been worked at a great disadvantage: the block of ground being about 1,350 ft. from the No. 1 main underlie shaft, and the No. 5 level not being connected with the inside workings, the ore had to be pulled up a winze with buckets to No. 3 level by means of a small engine, where it was tipped into a hopper and then trucked out of that level and sent up the No. 1 main shaft, thus adding considerably to the cost of the ore mined. The reef here is from 12 ft. to 15 ft. in width. Another large block has been opened up on Lloyd's (or New) Reef, which was intersected in a crosscut driven from the Waitewheta main level; the reef is about 8 ft. in width, and I am informed produces good payable ore. Other blocks of ground on the main lode have been operated on, and the ore treated from the various parts of the mine shows it to be of fairly high grade; 17,541 tons of ore was treated for a value of £36,516 8s. 10d. In a large mine of this kind considerable expenditure is necessarily incurred in keeping everything in proper repair, and this year the trestles and fluming which carry the water-supply over the Waitewheta Stream have shown signs of decay, and necessitated the erection of new fluming, &c., estimated to cost £800. No new or important discoveries have been made in the mine during the year. An average of 129 men have been employed.

Comstock Claim.—The owner, Mr. W. Tregoweth, has not discovered anything of importance during the year. He has continued the driving of the 600 ft. on which he had a subsidy of 3s. per foot from the Ohinemuri County Council and the Government. The work has proved rather disappointing, as

several reefs were expected to be intersected within the distance named. Two men were employed during the year.

Te Aroha District.

Hardy's Mines (Limited).—The operations in this company's mine in the early part of the year were directed to opening up the lode at the low level (something like 70 ft. below the main tram-line), the quartz being raised above the tram-line by a Pelton wheel geared to winding appliances. After a considerable amount of work in the shape of prospecting had been done on the lode at this level, and the ore not proving as valuable as anticipated, all work here was discontinued, and a number of the miners discharged. The few men who were retained were put on to try the blocks of ground over the No. 2 level in the Premier section. No new discoveries have been made, and as the ore won from the mine has not proved payable, the results are very disappointing to the shareholders who were induced to take an interest in the company. 1,727 tons of ore was treated for 2,416 oz. 14 dwt. of bullion, valued at £6,343 16s. 9d. An average of twenty men were employed during the year.

Komata District.

Komata Reefs Mine.—The various works in this company's mine have been carried out very successfully during the year, the ore being highly payable. The bullion obtained from the quartz treated was sufficient to pay all expenses and leave a margin of profit, enabling the directors to pay to the shareholders in dividends £13,333 6s. 8d. The following is a summary of the work carried out: Rising from No. 8 level to connect with the bottom of the main shaft, a distance of 190 ft., and the sinking of the shaft 15 ft. to meet the rise, which was satisfactorily accomplished; opening out from the shaft at Nos. 5, 6, and 7 levels on the No. 2 reef; driving north on No. 2 reef at No. 8 level (the reef in this drive is a fair size but the ore is of low grade); driving north on No. 2 reef at Nos. 3 and 4 levels. The reef at No. 3 level averages 14 ft. in width, and the value of the ore is £2 7s. per ton; on No. 4 level the average width was 5 ft., and the value £3 per ton; in the drive north on the No. 1 reef at No. 3 level the reef averages 7 ft. in width and the value £4 per ton. The total development-work done was as follows: Driving on reef, 1,032 ft.; rising on reef, 256 ft.; crosscutting, 355 ft.; sinking, 238 ft.: total, 1,881 ft. The total driving done on No. 1 reef was 334 fathoms; on No. 2 reef, 504 fathoms: total, 838 fathoms. The development-work produced 5,011 tons; stoping, 11,809 tons: total, 16,820 tons, worth £42,432 10s. 7d. Early in the year it was decided to increase the capacity of the plant by the addition of a 14 ft. by 4 ft. tube mill, filter-press plant, &c., also an additional steam-boiler to supply the extra power required; this work is now pretty well completed. During the incoming year the installation of machine drills is contemplated, as the ground in the low levels is becoming too hard for hand-work. The prospects of the mine are very encouraging, and should the ore in sight yield as well as anticipated a good margin of profit over working-expenses is confidently expected. An average of 140 men were employed during the year.

East Coast Mines.

Auckland (Mananua).—There was little work done in this mine in the early part of the year, but eventually a company was formed who directed their first attention to the working-out of small blocks of ground above Nos. 1 and 2 levels which had been left in by the former company. This was rich ore, and has given the shareholders encouragement to open out the reefs and prove the value of them more thoroughly at Nos. 3 and 4 levels. The battery had been partly removed; but as ten stamps and a few cyanide-vats had been left the company were able to commence treating the ore without hindrance and at little expense, with results which gave renewed confidence in the property. 879 tons of ore was treated for a value of £4,387 14s., or practically an average value of £5 per ton. An average of eight men were employed during the year.

Waimunga.—There was little work done in this mine, only one, and sometimes two, men being employed during the first six months of the year. Protection was then secured for six months. The reef is about 4 ft. in width and is reported to contain payable values. The company have now decided to erect a battery, and development-work is to be energetically proceeded with.

Chelmsford Mine.—Although this mine had been standing idle for some time the directors received some encouraging reports and decided to resume work again. Their whole attention was directed to working out small blocks on the reef at the surface-levels, which were considered by the former mine-manager not worth taking out. As this did not prove payable, and no development-work had been done to discover any new reefs and the funds having become exhausted it was decided to put their affairs into a liquidator's hands and wind up the company. 741 tons of ore was treated for a value of £1,167 18s. 5d. An average of eight men were employed during the year.

Tairua Broken Hills.—The operations in this company's mine have not been quite so successful as in the past; but a new reef has lately been discovered in the hanging-wall, which is stated to contain rich ore and will in all probability pay for the expenditure in opening it up. In the early part of the year the main shaft was sunk a further distance of 90 ft., making a total depth of 200 ft. below the main adit level. When this was accomplished it was found necessary to open out at the 80 ft. level, where payable ore was found; and there driving was proceeded with north and south of the shaft on the Blucher Reef for a total distance of 290 ft. Over this level 150 fathoms of ground was stoped out from the point where Night's Reef junctions with the Blucher Reef. A distance of 333 ft. was driven on that reef and 210 fathoms of ground stoped out over the level. 100 ft. of sinking was done on the same reef from the battery level. On the Punon Reef 20 ft. of driving was done and 26 fathoms of the reef over the battery level stoped out. In the month of November a crosscut was started at the battery level and driven into the hanging-wall of Night's Reef for a distance of 89 ft., where a new reef was

intersected and driven on 70 ft. north and 50 ft. south of the crosscut. The quartz broken out of this reef is considered to be of a payable character. The following is a summary of the work done: Driving, 762 ft.; sinking, 152 ft.; rising, 59 ft.; stoping, 386 fathoms. 2,151 tons of ore was treated during the year for a value of £4,669 3s. 9d., and an average of fifty men were employed.

Coronation Claim.—In the early part of the year a testing plant consisting of five stamps and two berdans, driven by a small portable steam-engine, was erected at the mine; and as there was a large body of ore carrying gold it was considered the best way to prove its value was by treating a quantity instead of depending on assays before erecting an up-to-date crushing plant. After putting 103 tons through the mill for 23 oz. 3 dwt., valued at £57 17s. 6d., the company decided to stop crushing, and directed their attention to prospecting with a view to finding higher-grade ore. An average of two men were employed.

Golden Belt.—The crushing plant in course of erection was increased from thirty to forty stamps, but the work in the mine was not far enough advanced to produce sufficient ore to keep the mill constantly running. The mill and the connections with the mine have not been quite completed. The low level has been driven a total distance of 1,600 ft. to a point under where a winze had been sunk on the reef from the smithy level to a depth of 62 ft. To connect with the bottom of this winze a rise was put up a distance of 92 ft.; this has been a tedious and expensive, although necessary, undertaking in connection with the development of the mine. It has given excellent ventilation and good facilities for working the reefs from the lower level to the surface. The reef (so far as it has been prospected by the present company) is said to contain very high values in places and, taken as a whole, will give payable results. It is expected crushing will now be commenced at an early date. Eight men were employed.

Champion Claim.—This mine has been energetically prospected during the year and a large body of quartz opened out on the surface at different places. These openings appear to indicate a continuous line of reef. Good prospects of gold can be obtained by crushing the stone in a small mortar and panning it off. The prospects met with were such that the shareholders contemplate erecting a crushing plant. Two men have been employed during the year.

Kerikeri.

Kerikeri Mine.—The work proceeded with during the year was the extension of what was formerly known as the low level on the leader, which opens out in places to 2 ft. in width and is composed of a network of stringers of quartz. I am informed that at one place for about 80 ft. along the drive and for 80 ft. over the drive the ore, so far as it has been tested, carries 2 oz. of gold to the ton. The company's attention is also being directed to driving a low level on the south side of the property to intersect the reef. This will give 120 ft. of backs to the bottom of the level before mentioned; and should the reef at this level prove as good as at the levels above an eight-stamp battery and other gold-saving appliances will be erected a few hundred feet below the lowest level. An average of five men employed.

Hikutaia District.

Maratoto Mine.—The work in this mine was of a prospecting character, and no quartz was treated at the company's mill during the year. Four men were employed.

Silver King Mine.—Two men were employed in driving and prospecting on this claim, but no crushings were reported.

Omahu District.

Omahu Mines (*Sheet-anchor*).—In the latter part of the year the company's attention was directed to the erection of a ten-stamp battery and gold-saving appliances with a view to crushing the quartz in sight and opening up the mine on a more extensive scale than hitherto. No quartz was treated during the year. Four men employed.

Puriri District.

Puriri Gold Estates.—Little or nothing has been done on this property during the year.

Miners' Right Claim.—This claim is worked by John McInnis and party, who are engaged in working on small leaders near the surface, but have not been very successful during the year. Two men have been employed.

Thames District.

Waiotahi Mine.—This claim is situated at Waiotahi Creek, and is bounded on the north and north-east by the Kuranui-Caledonian and Moanataiari claims, and comprises an area of 22 acres 3 roods 20 perches. This was a dividend-paying mine up to the end of 1903. The small leaders operated on being exhausted, the mine was considered worked out; but the directors decided to test the lower levels more fully before giving up the mine, and operations were at once directed to opening out on the back of No. 4 chamber of the shaft. After driving a distance of 180 ft., the Waiotahi main reef was met with; when 80 ft. had been driven on the reef rich gold was discovered. The prospects of the mine still look most encouraging, and a large sum of money is expected to be paid in dividends during the year 1906. The following is a summary of the works carried out: The main shaft has been sunk 108 ft., and the Nos. 5 and 6 levels opened up. The Nos. 4 and 5 levels have been connected by two winzes, and the ground is now well opened up for stoping. The drives going east at Nos. 4, 5, and 6 levels are being continued, and are opening up a large block of practically new country. A crosscut is also being driven from the No. 4 level to the old Mary Ann shaft. This shaft has been retimbered throughout and put in order; a new boiler has been built in and poppet-heads erected, and as soon as a connection is made this shaft will be used for winding purposes. At No. 6 level a connection has been made with the

Kuranui-Caledonian Mine, which necessitated some 700 ft. of driving. This has been the means of securing good ventilation and drainage. Whilst driving this crosscut the Cure Reef was met with, carrying good gold, and is now being driven on eastwards; this reef should eventually junction with the Cambria. The total amount of driving done during the past year has been 1,453 ft.; 150 ft. has been sunk in winzes; and 111 fathoms stoped out. The old Waiotahi battery of twenty stamps has been completely renovated, and the company has also acquired a new forty-stamp mill, twenty stamps of which are now running. Also a new tailings plant has been added to the company's reduction-works. An electric-lighting plant has been installed, and the batteries, tailings plant, tramways, and braces are now lit up by electricity. During the year 4,986 tons of quartz and 54 cwt. 40 lb. of picked stone were treated, which yeilded 27,148 oz. 6 dwt. of melted gold, valued at £73,884 9s. 7d., £51,300 of which has been paid in dividends. An average of fifty-two men were employed during the year.

Moanataiari Mine.—The company's operations for the year have not turned out as well as could be desired; but the prospects are said to be very encouraging, and a patch of gold may be discovered at any time as the work now carried on is in the immediate neighbourhood of where rich gold was obtained: 253 tons of ore was treated for a return of 242 oz. 10 dwt. of gold, valued at £676 0s. 3d. This ore was won from the Cambria Reef, below the No. 3 (or 400 ft.) level. A distance of 200 ft. was driven westward on the course of this lode and a crosscut put into the foot-wall country for a length of 400 ft. without meeting with any ore of a payable nature. There is still a large section of undeveloped country here which it is expected will be further prospected at no distant date. At the end of the year the work in progress was principally confined to opening up the Cambria Reef eastward, where the rich patch of gold was obtained, and here a new lode has been discovered entirely intact. As there is fully 300 ft. to drive on the course of this lode before the Moanataiari main slide is met with, there is every probability of payable gold being found as this work proceeds. An average of fourteen men employed.

Kuranui-Caledonian.—Early in the year a contract was let for driving a distance of 661 ft. Just after this work was started the Waiotahi Gold-mining Company, who own the adjoining mine, found that it would be to their advantage to have a connection for drainage and ventilation purposes with this mine. An agreement was consequently entered into and the connection made which provides ample ventilation. As soon as the Cambria Reef was cut and its thickness ascertained, driving east and west was commenced—one drive on the foot-wall and the other on the hanging-wall of the reef, which is 17 ft. thick. Some very nice mineralised stone was met with on the foot-wall, which, although showing no visible gold, gave good assay values. Up to date a distance of 70 ft. on the foot-wall and 224 ft. on the hanging-wall has been opened up, the best results met with being in the eastern drive on the hanging-wall. The quartz here is heavily mineralised and strong blotches of gold have been seen; but, strange to say, the best seems to be in the bottom of this drive. In order to prove whether there is rich ore going down underneath the floor of this drive a winze will be sunk, the necessary excavations being now completed. It is confidently expected that at least payable ore will be found. A winze has also been commenced to catch the dip of the Waiotahi No. 5 reef, which is only 35 ft. from the Caledonian Company's boundary at this level; at a depth of 25 ft. a leader about 2 in. wide was intersected, showing gold freely, and some very nice pieces of picked stone have been selected. It is therefore possible that when the reef is intersected good results will be obtained. The prospects for the year just entered upon are of an exceedingly encouraging character, and give promise that this old mine will again come to the front as a gold-producer.

Old Alburnia.—The company's principal operations have been directed to extending what is known as the Moanataiari main tunnel, which has been driven a distance of 717 ft. during the year, the intention being to drive up to intersect the reef under the rich shoots of ore which were obtained in the upper levels. The country rock has been very hard in places; and, the progress not being as speedy as could be desired, the company decided to put in water and air pipes and carry on the work with the rock-drills instead of by hand-labour. A promising-looking leader met with in the tunnel was driven on for 73 ft., but as it neither contained payable values nor improved as it was driven on the work was discontinued. An average of twenty-eight tributers were employed in the upper levels and twelve men employed on wages. The total quantity of quartz treated from all sources was 375½ tons for 686 oz. 14 dwt. of gold, valued at £1,828 15s. 8d.

Kuranui.—The operations in this mine have been directed to prospecting the No. 2 reef at No. 1 level, opening up No. 2 level 50 ft. below No. 1, cleaning and repairing the Teutonic level with the intention of extending it, and connecting with the present workings on the eastern side of the slide to enable the quartz being conveyed direct to the battery. The No. 2 reef at No. 1 level is from 6 in. to 5 ft. in width, and has been driven on for a distance of 100 ft. So far it has been barely payable, but as gold is frequently seen in breaking out the quartz a patch of rich ore may be met with at any time. A rise has also been put up on this reef, from this level to an intermediate level, a distance of 32 ft., where a few pounds of picked stone was obtained. In the No. 2 level a highly mineralised reef 15 in. in width was intersected, which has been driven on for a distance of 110 ft., and a rise is being put up on it to No. 1 level to give better facilities for getting the ore, &c., passed through. The Teutonic level is in 630 ft., the face being 150 ft. east of the slide, and another 140 ft. will bring this drive under the present workings. The battery has been overhauled preparatory to crushing being commenced at an early date. Six men were employed during the year; no returns.

Victoria Mine.—A considerable amount of development-work has been carried on in this mine at the various levels from the intermediate above the No. 1 down to the No. 4 level, and also a considerable amount of repairs to the machinery, winding-shaft, and the various levels mentioned above, which are now in good working-order. The principal work during the year has been the extension of the No. 4 level crosscut to intersect the Waiotahi Reef. This has now been accomplished by driving a distance of 576 ft., since which a distance of 17 ft. has been driven into the reef without any sign of the hanging-wall. Whilst driving the above-mentioned crosscut four other large ore-bodies were intersected, varying

from 2 ft. to 10 ft. in thickness, but so far no development-work has been done on them. No. 3 level: Driving operations on the course of the Victoria reef have been carried on for a distance of 163 ft. with a view to ascertaining the value of the reef at this level. Although the prospects met with were considered to be of a favourable character, no rich developments have taken place. At No. 1 level a considerable amount of development-work has been done by driving and stoping on the leader in the hanging-wall of the Mariner's Reef, which, on the whole, has been of a payable character. Intermediate level, Victoria reef: A distance of 180 ft. has been driven here, and the prospects on the whole are considered to be very satisfactory; operations in future will be the further extension of the No. 4 level crosscut in a north-west direction with a view to intersecting any other ore-bodies that may exist in the hanging-wall of the Waiotahi Reef, and also driving on the course of the various reefs intersected. It is intended to connect Nos. 3 and 4 levels on the Victoria reef by a rise in order to ascertain its value; further developments north are also to be continued in various other parts of the mine. 153 tons of quartz was treated for 251 oz. 1 dwt. of gold, valued at £691 4s. 9d. An average of fifteen men were employed during the year.

Fame and Fortune.—This mine was worked by tributers until near the end of the year, when it changed hands and a company known as the Thames Gold-mining Company was formed. A scheme being proposed having for its object the prospecting and opening-up of the mine from the Moanataiari main tunnel, air-pipes are now being put in position for the purpose of taking in air to work rock-drills. 175 tons of ore was treated by the tributers during the year for 108 oz. 7 dwt. of gold, having a value of £292 10s. 2d. Ten men were employed during the year.

Nonpariel.—This mine has been worked by tributers, their attention being directed to working on the various leaders above the Waiotahi Creek level; but, as no new development-work has been done in this ground for some years past, the small payable blocks were becoming exhausted, and the owner sold the ground, which is now included with that of the Thames Gold-mining Company. Sixty tons of ore was treated during the year for 205 oz. 16 dwt. of gold, valued at £560 7s. 6d. Six men were employed during the year.

New Saxon.—This mine has been continuously worked during the year but nothing of importance has been discovered. This may be partly accounted for by the company's operations being directed entirely to that portion of the ground above the No. 5 level. Should gold be found in payable quantities at the low levels in the adjoining mine it will give encouragement to the owners of the Saxon Mine to try their property at greater depth. 213 tons of ore was treated for 293 oz. 7 dwt. of gold, valued at £845 0s. 4d. An average of nine men were employed during the year.

New May Queen.—As work had been suspended in this mine for some considerable time previous to its recently being reopened, considerable difficulty was experienced in establishing ventilation in the workings on account of the foul air, the drives, &c., having closed in. Eventually a fair amount of air was led into the workings, and two old passes were retimbered above No. 3 level in order to reach a block of ground previously left in. Here the quartz had a promising appearance, and a rise was put up on it. A crushing of ten loads was broken out which when treated yielded 11 oz. of gold; but, as arrangements to open up the bottom levels were made, this was discontinued for the time being, and the work of unwatering the lower workings was commenced. A borehole was drilled from the bottom of this company's shaft to connect with a crosscut put in from the Queen of Beauty shaft enabling the water to be drained off. A chamber was opened out from the May Queen shaft at a depth of 720 ft. below the surface; and here No. 6 level crosscut was driven 233 ft. where the No. 4 lode was intersected and driven on eastwards to the winze, which was sunk from No. 5 level to a depth of 95 ft., the lode being for the whole distance from 2½ ft. to 3 ft. in width. As these workings are the deepest in which payable gold has been obtained on the Thames, it is encouraging and augurs well for the prospects of finding gold at deep levels. With so much work having to be done in the early part of the year before getting to the lode, the quantity of quartz treated was small, but now that the mine is being opened up, regular monthly returns are expected. Should the quartz continue to carry as rich gold as that treated during the year it will again become one of the dividend-paying mines in the district. 214 tons 10 cwt. of ore was treated during the year for 316 oz. 5 dwt. of gold, valued at £901 4s. 9d. An average of eleven men were employed during the year.

New Una.—The work in this mine has been confined to that part of the property near the new May Queen Extended Company's mine, and worked through that company's main adit. 614 ft. of driving has been done during the year; 414 ft. of this driving was in extending the main cross-cut, the remainder being done on the Nos. 1, 2, and 3 leaders. The No. 1 leader is 6 in. in width, a portion of which was stoped out and treated but did not prove payable. A block of ground of considerable size was stoped out on the No. 2 leader, and although gold was frequently seen in the quartz in breaking it out, yet it did not prove payable. The No. 3 leader (which averaged 18 in. in width) was stoped out 90 ft. in length and 80 ft. in height; several payable crushings were obtained from this, but as the stopes ascended the ore became poorer, and the last crushing not being payable work here was discontinued. The main crosscut is being extended in a southerly direction for the purpose of intersecting the Loyalty, German's, and McKenzie's reefs, the first named being expected to be cut daily; and as a good channel of country is being penetrated in this drive, gold is expected to be found in payable quantities when the lead is met with and worked upon. 200 tons of ore was treated for 163 oz. 6 dwt. of gold, valued at £458 13s. 6d. Six men were employed during the year.

New May Queen Extended.—The operations in this mine have been confined to working on the leaders near the boundary of the New Una Mine, and above the main adit level in breaking out the quartz on those leaders. Gold was frequently seen; and although the quartz contained gold to the value of £2 12s. 1d. per ton, the ore won was not sufficient to pay expenses owing to the small size of the leaders. In the hope that a patch of good ore might be met with at any time, the company were encouraged to proceed with the work. The company intends raising the water by means of a small

engine. 293 tons of quartz was treated for 262 oz. 2 dwt. of gold, valued at £763 6s. 11d. Six men were employed during the year.

Ballarat.—This mine has been worked continuously during the year with four men. No rich finds were discovered, but good ore was obtained, although not in sufficiently large quantities to pay more than expenses of working. Seventy-two tons of general dirt and 18 lb. of picked stone were treated for 75 oz. 19 dwt. of gold, valued at £210 19s. 4d.

West Coast Mine.—This mine is owned by Mr. John Northey, who has held and worked it continuously for a number of years. It is nearly surrounded by the Moanataiari company's mine, and being well situated it has always been expected that something of importance would be discovered. Unfortunately these expectations have not been realised, but still the owner holds on to the property and is sanguine that an important find will yet be made which will pay him for his outlay. Twenty tons of ore was treated for 43 oz. 18 dwt. of gold, valued at £109 15s. Two men were employed.

Arundel Mine.—The syndicate owning this mine has incurred a considerable expense in the erection of a crushing plant and in the depelopment of their property; but so far only a very small quantity of gold has been obtained, a result which must be very disappointing to the shareholders. Fifty-eight tons of ore was treated during the year for 36 oz. 4 dwt. of gold, valued at £104 3s. 10d. An average of four men were employed.

Golden Drop.—This ground is held by G. Fisher and party, whose operations have been confined to driving a low level to intersect the leader they have been working for some time past at the upper levels. They consider this will give a sufficient height of backs over the low levels to keep them working for twelve months. One ton of ore was stoped out of the leader for the year, which yielded 17 oz. 18 dwt. of gold, valued at £47 8s. 8d. Two men were employed during the year.

Claremont Claim.—This property is owned by George Bryant, who treated 118 lb. of stone for 137 oz. of gold, valued at £371 0s. 9d. One man employed.

New Dart (*Fortuna Mine*).—A company was formed in the early part of the year to work what was then known as the Fortuna Mine, the scheme of operations being the extension of the low level from near D. Stewart's property, on the south side of the Hape Creek. This low level would unwater the mine some distance below the collar of the Dart shaft; and should it then be found advisable to work the lower levels below this tunnel level, water could be procured from the Hape Creek to drive machinery at the level named at little expense. This low level is being driven with all possible speed, and the work will soon be accomplished. Four men are employed.

Mascotte Mine.—Early in the year the owners of this mine commenced to increase the size of their shaft; and just as the work was commenced a fatal accident happened to a miner named H. J. Peploe, which appeared to upset their decision, and protection was applied for. They have since made another start, and are engaged in placing a small pumping plant on the shaft to cope with the water.

Tararu Creek Mine.—Work in this mine has been directed to the development of the Sunbeam Reef and the reopening of a block of ground on the Dunedin Reef below the Charter level. A main rise has been put up from the end of the battery level and connected with the old rise to the Sunbeam Reef at a point 156 ft. above that level. Ladder-road and shoots have been put in this rise; and what is known as No. 2 level, Sunbeam, has been driven 356 ft., the last 150 ft. being on the reef. The Charter level has been repaired and a block of ground below that level opened up for stoping. It is intended to connect No. 2 level, Sunbeam, with No. 1 level by a rise; this has been put up 40 ft., leaving about 80 ft. further to rise to make the connection. This work will open up a good block of ground for stoping. No. 2 level will be extended and No. 3 level opened out 100 ft. lower down the winze. Negotiations are now proceeding for raising a sum of £5,000 to open up the Norfolk section from the Day Dawn crosscut battery level. The proposed level will give from 260 ft. to 300 ft. of backs to work on that reef. 956 tons of ore was crushed for 363 oz. 6 dwt. of gold, valued at £1,064 16s. Twelve men were employed.

New Eclipse Gold-mining Company (*Limited*).—Operations in this company's mine for the period ending December, 1905, have been confined principally to the Vulcan Lode, on which 300 fathoms have been stoped out. Starting at the low level north from No. 1 winze, the stopes have been carried along to the main junction of the Eclipse and Vulcan Lodes. At this point the end of the ground has been carried up vertical and holed through to No. 2 winze, which has been sunk 15 ft. below No. 7 level, making the block a total height of 80 ft. The intermediate level has been extended 16 ft. north from the end of the ground. The lode in the present face is a strong ore-body 6 ft. wide, encased in a favourable class of mineralised country. Although no gold has been seen at this point, the ore has a favourable appearance and is expected to improve in value as the drive is extended on the lode. A crosscut has been driven at right angles into the hanging-wall and the Eclipse Lode intersected, showing a width of 5 ft. of solid quartz. This lode is intact from the low level to the surface and is well worthy of further development. In surface works the upper terminal of the aerial tram-line (with hoppers and buildings) has been removed and re-erected on a site west of the low level, and a self-acting tramway constructed to connect. By this means the ore is hoisted from the low level to the aerial tram-line with a water-balance, which is working satisfactorily and has reduced the cost of haulage to one-half the former cost by steam-power. During the year 1,338 tons of ore was treated for a return of 1,153 oz. of gold, valued at £3,193 5s. 4d. An average of twelve men were employed.

New Waiotahi Mine.—Towards the end of the year a company was formed called the New Waiotahi (formerly called the New Caledonian). The ground is situated on the south side of the Waiotahi Creek and near the old Australasia Battery-site. The owners are sanguine of meeting with payable ore, as good crushing-dirt was obtained in former years from leaders which traversed the property. The fresh work will be the opening-up of an adit level above the level of the creek.

Occidental Mine.—A company was lately formed to work this mine. The first work undertaken was to clean up and repair the main adit level, four men being employed.

Lord Nelson and North Star.—This ground has for some time past been worked by James Middleton and party. The work has been confined to trial crushings taken out of various leaders which were formerly driven on at the surface levels. Eighty-six tons of quartz was treated for 26 oz. 18 dwt. of gold, valued at £72 4s. 7d. Four men were employed.

Waiomo District.

Waiomo Mine.—During the year work was confined to extending the No. 4 (or low) level which was driven a distance of 700 ft. on the large reef. A few hundred tons of low-grade ore has been saved but not yet crushed. Something like 500 ft. has yet to be driven to get under the rich shoot of ore worked in the upper levels. Rock-drills are being used in the drive, the work being pushed on with all possible speed. In one place in the drive fair assays were obtained from the quartz, and at some future time when better ventilation is secured this will be further tried. Seven men were employed.

Tapu District.

Mahara Royal.—Operations in this mine have been chiefly confined to the development of the Royal Reef, above and below the bottom level, by sinking, driving, and stoping. The lode has varied from 2 ft. to 10 ft. in width. No rich ore has been met with; that worked only produced an average of 7 dwt. of gold to the ton, yet, on the whole, it has about paid expenses. As the ore in that part of the mine is exhausted, the work is now to be directed in extending the bottom level south to prospect that portion of the mine yet unexplored. Also it is intended to drive a crosscut in the foot-wall of the Royal Reef to intersect the lodes that are known to exist in that part of the mine. 1,232 tons of ore was treated at the company's battery during the year for a return of 513 oz. 6 dwt. of gold, valued at £1,511 0s. 7d. Eight men were employed.

Sheridan Mine.—This mine has been worked by Plumer and party, the work being directed to trying various places on the lode above the low level, but nothing of importance has been discovered. Three men were employed during the year.

Kapowai Mine.—Operations in this mine have been directed to extending the low level to cut the main reef which proved to be very large. After cutting the reef, a level was driven on the foot-wall for about 100 ft. and a block over this level opened up for stoping. The operations for the coming year will be confined to driving on the reef at the low level and stoping over this level. It is also the intention of the proprietor to erect a cyanide plant, preparations for which are now in hand. Four men have been employed during the year; and during that period 1,240 tons of ore was crushed for a return of 974 oz. 7 dwt. of gold, valued at £2,469 12s. 3d.

Big Beetle Mine.—During the early part of the year this mine was worked by a party of tributers. Later the mine and battery were put up for sale when Mr. M. O'Connor became the owner. At the present time the mine, together with the areas formerly known as the Golden Drop and Perseverance, is in the hands of a syndicate who have four men employed in prospecting the property. Should the results of the prospecting prove encouraging, development-work on a considerable scale will be undertaken at once. Seventy-three tons of ore was treated during the year for 48 oz. 12 dwt., value £133 13s.

Coromandel District.

Old Hauraki Mine.—The operations carried on in this mine during the year have been principally confined to tributing. The company have on some occasions paid half wages and half expenses, and joined the tributers to work some of the tribute sections. The tributers are all working in the surface blocks, as the mine below adit level is full of water. I am pleased to say there is a desire on both sides to amalgamate the Old Hauraki and the Bunker's Hill Mines, and such an arrangement is now likely to eventuate. When the water is pumped out and work in the low levels commenced, the benefits of amalgamation of interests will prove better both for the shareholders and for the Coromandel district generally, and be the means of giving employment to a number of men. 54½ tons of ore was treated for 227 oz. 1 dwt. of gold, valued at £681 3s. An average of eighteen men were employed.

Bunker's Hill Mine.—In the early part of the year the company's operations were directed to driving an adit level from the side of the hill above the sea-level with the object of intersecting some of the leaders worked at the low levels, but not finding anything of importance this work was stopped and the mine has been under protection for six months. Five men were employed in the mine for the first six months of the year.

Hauraki Freeholds Mine.—Operations in the early part of the year were directed to working on the leaders in the Hauraki north section. A dispute arose about the drainage of the mines, and it was contended that the Old Hauraki pump did not drain the water from this company's mine, the company declaring that they were baling their own water. Eventually the Old Hauraki pump was stopped for a few months, the result being that the owners of the Hauraki Freeholds Mine were unable to contend with the water, which gradually rose until they were compelled to stop work. Six months' protection was then applied for and granted. Twenty-three tons of ore was treated for 75 oz. 2 dwt. of gold, valued at £206 10s. 6d. An average of three men were employed.

Success Mine.—Very little work has been done in this mine during the year. The property was lately put up for sale, the purchaser being Mr. S. James, of Coromandel, a former owner of the mine, who worked on his own account and obtained several good payable returns from the ore broken out.

Golden Pah Mine.—Work in this mine has been entirely carried on by the tributers, who directed their attention to working on small leaders from the side of the hill above the sea-level. 5 tons 12 cwt. of quartz was treated for 44 oz. 11 dwt. of gold, valued at £122 10s. 3d. An average of six men employed.

Golden Spark Mine.—There has been very little work done in this mine during the year.

Harbour View.—The work in hand in the early part of the year was directed to extending the No. 4 level into the Hauraki Associated portion of the mine. Nothing of a payable character being discovered, the work was stopped for the time being owing to want of funds.

Kapanga Mine.—This mine is now owned by Cornes and Hollis, who have for some time past been putting in prospecting drives from the side of the creek with a view to picking up the cap of the reef which produced a large amount of gold in the early days of the goldfield. A shaft has also been sunk 35 ft. and the cap of the reef discovered and driven on for a distance of 100 ft. The quartz broken out has a promising appearance, and a little gold was seen in the stone; but as there is no height of backs over the drive, and sinking on the dip of the leader is almost impracticable owing to water, little can be done until either pumps are put on the shaft or a low-level tunnel is put in from Kikowhakarere Creek, the length of which would be about 2,000 ft., and give 200 ft. of backs below the present water-level in the engine shaft. If the necessary funds were available for the work named, it would, when completed, no doubt, pay for the outlay, as there are numerous gold-bearing leaders in this property. There has also been a party of tributers working on this ground crushing material from the mullock-tip, 160 tons being put through the battery for 78 oz. 3 dwt. of gold, valued at £234 9s. An average of six men were employed during the year.

Tokatea Consolidated Mine (formerly Tokatea West).—This mine has been almost continuously worked during the year. In the early part of the year the work was confined to that portion of the mine on the western side of the hill, from which 28 tons of quartz was obtained from small leaders. This yielded 223 oz. of gold, valued at £641 15s. 5d. Since the company was re-formed the operations have been directed to opening up and retimbering two levels on the eastern side of the hill for the purpose of getting into leaders said to have yielded payable gold. This work is now in progress, seven men being employed.

Monte Christo Mine.—The owner (Mr. Kemner) has for some time past consistently worked this mine, portions of which he let on tribute. Unfortunately for himself, he has not discovered anything of a payable character, although he has expended a good deal of money as well as his labour in looking for gold.

Royal Oak Mine.—For the first six months of the year the company had several men working on what was termed a new reef below No. 6 level, which yielded gold sufficient to pay the working-expenses; but the ore gradually got poorer, and the result was that all the men on wages were discharged. Blocks of ground were subsequently let on tribute, the company having the right to put on an equal number of men to work in the tribute, the company paying the men's wages and an equal share of the expenses incurred in working the ground, and receiving half of the profits made in addition to a percentage on the gold won. Some of the men complained about this system, but on the whole it worked fairly well. 189 tons 1 cwt. of ore was crushed for 798 oz. 4 dwt. of gold, valued at £2,040 18s. 3d. An average of thirty men were employed.

Four-in-Hand Mine.—The principal work carried out in this company's mine during the year was the extension of the low level to a distance of 800 ft. It is estimated that a further 230 ft. of driving will reach the hanging-wall of the Four-in-Hand Reef. The country rock being extremely hard made progress very slow; but as the drive advances towards the reef the country is improving. In the early part of the year stoping upon the hanging-wall and foot-wall reefs was carried on. The foot-wall reef (which proves to be only a dropper from the main reef) gave promise of being very good when first discovered, but proved disappointing when stoped upon, and work on this reef was discontinued. The prospects of the main reef are very encouraging, as gold is reported to have been left in the bottom of two winzes that were being sunk to prove the ground at greater depth. The quantity of water met with prevented the sinking of these winzes to a greater depth; but now that the low level is nearly under them, communication will be soon effected with the upper workings and a commencement made to get out payable ore to recoup the shareholders for the outlay in the low level. 112 tons of ore was treated for a return of 159 oz. 19 dwt. of gold, valued at £456 10s. Six men were employed.

Prospecting.—A considerable amount of prospecting has been done in this district during the year. In a number of cases prospectors received Government aid, and a subsidy of pound for pound to the extent of £300 was given to prospect the Big Reef on the Tokatea Hill. All these operations have proved disappointing, and in no instance has anything been discovered that could be called payable.

Cabbage Bay District.

White Star Mine.—Very little work has been done in this mine since the early part of the year. 1 cwt. 22 lb. of ore was broken out and treated for 3 oz. 12 dwt. of gold, valued at £9 12s. 6d.

Kuaotunu District.

Waitaia Mine.—The owners continue to carry on mining, but there is little new to report as the work is nearly all confined to stoping on the leaders over the back of the low level, and little or no prospecting has been done for some time past to find anything new nor development in the direction of opening up the block of ground under the present low level, although payable ore is said to have been obtained in the bottom of the level for some considerable distance. The ore broken out has been payable, but has only left a small margin of profit. 635 tons of ore was treated during the year for 817 oz. 9 dwt. of gold, valued at £2,484 2s. 3d., and on the average twenty men have been employed.

Handsworth Mine.—This mine was under protection part of the year, and for a time only one man was employed. The work in progress is the driving of a low level. Fifty-one tons of ore was treated for 56 oz. 18 dwt. of gold, valued at £145 1s. 10d.

Great Mercury Mine.—The owners have persistently worked the mine without any stoppage, driving north and south on the reef from their low-level crosscut, but unfortunately without discovering payable

ore. Although the reef is poor as far as it has been driven upon, yet the owners are sanguine of coming on a payable shoot of ore. Two men have been employed during the year.

Otama Mine.—The work in this mine was carried on by O'Keefe and Ellings, who directed their operations to driving on the Juno Reef to the boundary, a distance of 180 ft., and rising to a height of 45 ft. Finding nothing payable, they commenced driving to the westward on what is known as "Rowes leader," where encouraging prospects were met with, a rise being put up at a point where a few rich specimens were obtained. It was fully expected this ground would prove payable, but results were disappointing, as the gold did not continue up. The party are hopeful of meeting with payable gold as the work proceeds. Ten pounds of stone was crushed for 19 oz. 2 dwt. of gold, valued at £45 2s. 6d. Two men employed.

GREAT BARRIER ISLAND.

Barrier Reefs Gold-mining Company (in liquidation).—There has been little work done in the mine for some time past; but I am informed work is again to be resumed with a view to proving the value of the reefs, as since operations were stopped it has been found that a large amount of gold was carried away in the tailings which, if properly treated at the time the mine was working, would have gone a long way towards making the property a payable concern. 2,300 tons of tailings was treated during the year for 5,927 oz. of bullion, valued at £1,844 1s. 11d. Two men were employed.

Sunbeam Gold and Silver Mine.—The work in the mine has been confined to prospecting, and the work on the surface to the erection of a five-stamp battery and cyanide plant. This, I am informed, is nearly completed, and crushing is expected to be commenced early in the year. Rich assays are reported to have been obtained from the quartz treated from this mine from time to time, and it remains to be seen whether it will pay to be treated in bulk at the crushing plant. Three men were employed.

ACCIDENTS.

During the year six fatal accidents happened in this district.

Date.	Name.	Name of Mine.	Cause.
Jan. 17, 1905	Walter Brislin ..	Waihi Extended	Killed by falling into a truck in No. 1 Chamber.
Feb. 17, 1905	H. J. Peploe ..	Mascotte ..	Killed by a fall of rock while enlarging the shaft.
„ 25, 1905	H. Penno ..	Waihi ..	Killed while repairing a pass.
June 6, 1905	J. Loft	„ ..	Killed by falling out of cage when ascending No. 2 Shaft.
„ 21, 1905	William Richardson	„ ..	Killed by falling down a pass (died on the 9th July).
August 14, 1905	V. Y. Gatland ..	Komata Reefs	Killed by being caught in belting and carried around on the shaft of machinery.

All other accidents of a serious nature that occurred during the year were duly reported.

I have, &c.,
JAMES COUTTS,
Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

MR. ROBERT TENNENT, Inspector of Mines, Westport, to the UNDER-SECRETARY FOR MINES, Wellington.

SIR,— Inspector of Mines' Office, Westport, 7th April, 1906.

I have the honour to report as follows on the gold-mines in the Marlborough, Nelson, and West Coast Districts for the year ended the 31st December, 1905:—

QUARTZ-MINING.

BLENHEIM.

Wairau Gold-mining Company.—The only development in progress is under the direction of Mr. Linstrom, who is working a section of the property on tribute, locally known as the Small Reef, the chief values of the reef being its high percentage of native scheelite and a low percentage of free gold. In order to test the commercial value of the mineral named, it is the intention of the company to ship a portion of the richest stone, and treat the balance by crushing and concentration at their own works. Mr. Linstrom has also taken the contract to extend the main crosscut, and will commence operations directly on arrival of the drilling plant now under order from America. On the occasion of the Assistant Inspector's recent visit the plant was considered due in Wellington.

The Duke of Cornwall lease in the Arm Chair is again taken up, but work was at a standstill when the property was visited.

The Mining Registrar at Blenheim informed the Assistant Inspector that a lease was taken up at the Patriarch. Nothing doing when visited.

Leases on the dividing-range between Mahakipawa and Waikakaho.—These leases, originally held by the Ravenscliffe and Kapai Companies, are now surrendered. About twelve months ago Mr. J. H. Evans pegged out the ground on behalf of a syndicate, but as the titles were not completed they consequently lapsed. The leases are now open for mining purposes.

HAVELOCK.

The Golden Bar and Federated Yorkshire.—No further effort has been made to open these neglected properties.

Mining in the Wakamarina Valley continues to be followed by a few old resident miners, who enjoy comfortable homesteads, and simply make mining a sort of pastime.

COLLINGWOOD.

Anatoki Ranges.—Storey, Flowers, and party of four, having pitched a camp at the Blue Heffer, adjacent to the Boulder Lake, intend to carry out an effective system of prospecting over this highly elevated mountainous region, arrangements being completed to take their food and other mining supplies from Collingwood by way of the Quartz Ranges.

Johnston's United (quartz), Bedstead Gully (C. Y. Fell, Attorney).—The Golden Blocks Gold-mining Company having acquired certain legal rights to prospect the deeper levels of this property, it is proposed to push prospecting development below the original adit, and, providing sufficient inducement is afforded to warrant the expenditure of increased capital at depth, the underlie of the reef will be intersected by a main vertical shaft. All workings are securely timbered and well ventilated. Already six men are engaged sinking a winze from the low-level adit.

Golden Ridge (Taitapu Gold Estates; James Carroll, Mine-manager).—After a continuous series of unsuccessful prospecting on the Ant Hill and Golden Ridge sections of this property, operations were suspended towards the end of August last, the yield of gold being absolutely nil since December of the previous year. At present eight men are engaged driving a prospecting drive in No. 4, east block, south of the Golden Blocks mining-area; but, having driven a distance of 270 ft., values are unimportant, bunches of quartz only being found so far.

Golden Blocks, Taitapu (C. Y. Fell, Attorney, Nelson).—The mining operations on this property continue to maintain their previous standard in values, while development is consistently kept in advance of battery requirements, the average values showing no depreciation against the stone milled, the balance of profit being in favour of the shareholder. Mining has been chiefly confined to extending Nos. 1 and 2 intermediates and No. 2 level south, while stone for milling purposes was taken from stopes on Nos. 1 and 2 levels, the total drivings contributing an aggregate of 737 ft., raisings 1,061 ft., and the areas stoped 5,410 square feet. The various works are faithfully maintained in good order, securely timbered, and well ventilated. The company having acquired the mining rights over a further adjoining area, prospecting is in active progress east of Block 13. The gross tonnage milled, 2,387 tons, yielded 2,796 oz. 7 dwt. melted gold, valued at £11,108 3s. 6d.

WESTPORT.

Red Queen, Mokihinui (Owner, A. W. Mills, Westport).—A tribute party of three men continue to maintain their consistent energy, while with the more reliable prospects ahead and the encouraging increase in values the property is likely to pay fair wages for a considerable time to come. The stone crushed for the year was 118 tons, yielding 134 oz. 17 dwt. 1 gr., valued at £528 5s. 3d.

Lady Agnes.—Nothing further has been done on this property.

Britannia Mine.—Stone for milling purposes is still actively worked on Nos. 4 and 5 levels, the formation being more defined as the base of the hill country is reached. In view of extending operations and to determine the probable existence of the main ore-body on the higher levels of the range country, a new adit was recently started, but the distance so far driven is not estimated to cut the ore *in situ*. To meet the requirements of the property, a suitable site for the erection of additional battery-power and cyanide plant has been prepared on a low-level flat near the head of Stony Creek, the foundations and portion of the plant being now in a forward stage of completion. The milled stone—889 tons—yielded 848 oz. 16 dwt. 7 gr., valued at £3,348 13s. 5d. Compared with the previous year, this is an increase of 83 tons crushed, yielding an increase in value of £841 19s. 7d. in favour of 1905.

LYELL.

Alpine Extended (Frederick Prince, Mine-manager).—During the year mining operations have been practically confined to development, of which the most important may be considered the connection effected between Nos. 10 and 7 levels, the total distance raised being 336 ft. This connection not only provided ample ventilation to meet the requirements of future development, but offered facilities whereby the value of the lode could be easily proved at suitable and convenient distances as required. However, after an extended series of short drivings north and south of the main rise, unprofitable values were the invariable results throughout the whole range of this block, whilst No. 10 north was further extended 32 ft. on a leader without success and subsequently abandoned. No. 7 level has been repaired 100 ft. north of incline shaft, and crosscut east 40 ft. with four men, and west with two men. During the year thirteen men were employed until November, when this number was reduced to seven. The total drivings were 280 ft., and risings 310 ft. It is evident that the numerous short drivings and risings executed throughout the various districts of the mine conclusively prove that, with the exception of holding the direct line of intersection between Nos. 10 and 7 levels, the company has failed to successfully carry out any effective system of prospecting. In collecting all the milling-stone produced from the various drivings 444 tons yielded 54 oz. 6 dwt. of retorted gold, valued at £207 8s. The various workings are in good order and well ventilated.

New Creek Syndicate (Henry Crumpton, Secretary).—When visited, Adam Nahr and W. Sloan were the only party of prospectors found in this isolated region, they being engaged in driving a tunnel through a section of slide country, while the only prospects obtained were bunches of highly auriferous crushed quartz, the natural aspect of these elevated lands showing favourable promise of reef-formation. The tunnel was timbered in a very creditable and workmanlike manner for a driven distance of 60 ft. Further down the hill a continuation of crushed and broken quartz was intersected by a lower level, the stone in the drive showing very nice prospects. Work suspended.

A prospecting track is much wanted to facilitate the transport of food and other mining requisites.
The Italy Syndicate (late Tyrconnel).—Kelly and party have surrendered all their mining privileges.

BOATMAN'S.

Welcome.—In the early months of the year prospecting operations were characterized by somewhat poor results. In September last the property was let on tribute to McKenzie and party, who at the end of the year had taken out a small crushing of 45 tons, which yielded 53 oz. of bullion valued at £212, the company obtaining a minimum of 10 per cent. of the gross gold won.

Kirwan's Reward (William Kirwan, Mine-manager).—More than usual energy has recently been directed in opening out an extensive quartz face on the eastern section of the property, stone for milling purposes having been formerly supplied in quantity from the western side of the range. Encouraged by the favourable results obtained during the mining excavations, the management decided (and already considerable work is effected) to excavate the route of tram-line and hopper-site on a level 70 ft. below the original working; but the exceptionally wet and backward season has tended much to retard the progress of all necessary works, particularly in cleaning and selecting the ore for milling. Ore milled, 7,584 tons, yielding 1,683 oz. 18 dwt. 6 gr., valued at £6,699 13s. 11d.

On the northern bank of the Waitahu River Mr. Kirwan recently discovered a main outcrop 2 ft. 6 in. wide, which is now driven on 71 ft. and sunk 20 ft. Values are considered good, and reef tending to widen at depth.

Lady of the Lake.—Alexander McKenzie continues to carry out his prospecting ideas on this property, but up to date results have not equalled anticipations.

Italian Creek (John Knight in Charge).—Knight's party has reopened this old abandoned property, and have done considerable work in connection with clearing and retimbering old drives, while a small reef was driven on 150 ft. without payable results. In view of extending operations, a crosscut is driven 25 ft. to intersect a reef formerly abandoned on account of the fineness of the gold, which could not be saved when the mine was formerly worked. A steam-driven five-stamp mill has been erected, but it is the intention of the party to erect another five heads, together with a small cyanide plant, provided sufficient inducement is forthcoming. The works are well ventilated.

Fiery Cross, Hopeful, and Alexander Mining-Areas.—Mr. Dunn and party (four men) have been successful in intersecting an outcrop, which has induced them to win the solid lode by crosscutting on a lower level. Future developments will depend wholly on the prospects obtained.

REEFTON.

Wealth of Nations.—The supply of quartz for the battery was principally obtained from No. 6 stopes, these being freely attacked in order to exhaust the Wealth of Nations incline-shaft workings. No. 3 stopes were worked to a small extent until all the profitable stone was exhausted, when No. 7 stopes were more actively pushed. The quartz won from the development of No. 8 level was also milled. During the year the quartz crushed amounted to 11,970 tons, yielding 3,304 oz. 12 dwt. 17 gr. of bullion, valued at £13,662 19s. 6d., or 5 dwt. 12·51 gr. per ton, while the concentrates and slimes shipped to the smelter realised £764 14s. 10d. At the cyanide-works, 8,320 tons of sands (representing 69·507 per cent. of the tonnage crushed) was treated, yielding 1,397 oz. 10 dwt. 9 gr. of bullion, valued at £5,420 16s. 1d., or 13s. 0·369d. per ton. Of this amount 2s. 5·19d. was consumed in working-cost, leaving a profit of 10s. 7·179d. per ton treated. Development-work has been largely carried on from the Energetic shaft. The shaft itself was sunk from No. 8 to No. 9 level, a vertical distance of 125 ft., and No. 7 level driven south a distance of 432 ft. without locating values of any importance. No. 8 level encountered stone at 174 ft. from the shaft, the stone being followed along the level for approximately 200 ft., and the south end further extended till the face was 720 ft. from the shaft. No. 9 level struck stone at 165 ft. from the shaft at the latter end of November, and since then the reef has been opened for 65 ft. in length. Surface equipment is practically unchanged, and directly No. 6 stopes are exhausted the whole output of the Wealth of Nations battery will be hoisted through the Energetic shaft. The old incline shaft will then be abandoned, thus effecting a considerable saving in working-expense.

Golden Fleece.—The hoisting-shaft was sunk to a further vertical depth of 125 ft., making No. 14 level; and while extending No. 13 north a good block of stone was located 80 ft. in length, the face being now 900 ft. north of the shaft. On completion of the shaft and chamber the crosscut was commenced, and the reef-formation intersected at 310 ft. from the shaft, early in October; and at the end of the year the north and south levels were driven 180 ft. and 100 ft. respectively. Stone for milling was chiefly stoped from Nos. 12 and 13 levels, and although upwards of £3,000 was spent in development, the quartz opened failed to keep pace with the quantity extracted. The highest temperature recorded was 65° on the return from No. 12. The quartz crushed—13,985 tons—yielded by amalgamation 5,670 oz. 5 dwt. 12 gr. of bullion, valued at £23,165 11s. 8d., while the sulphurets and slimes shipped to smelter realised £1,955 8s. 8d. The coarse sands, amounting to 9,475 tons (representing 67·751 per cent. of the tonnage milled) were cyanided, yielding bullion to the value of £3,342 1s. 1d., or 7s. 0·654d. per ton treated. Of this, 2s. 2·997d. was consumed in working-cost, the balance of 4s. 9·657d. representing profit.

Progress Mine.—Development-work has been actively pushed on in levels Nos. 8, 10, and 11, and No. 6 level repaired into the east end during the year. Quite a large tonnage of low-grade ore was opened by development, principally in No. 8 level east. Besides sinking the main shaft 155 ft. from Nos. 10 to 11 levels, the total drivings and risings comprise 2,939 ft. Diamond drilling was effected to the extent of 4,193½ ft., the greater portion being drilled with a small machine by the company, while the Goldfields Diamond Drilling Company, with a larger machine, drilled 512 ft. on contract. In all

£7,207 4s. 10d. was expended in development-work. Stoping has been continued on levels Nos. 4, 5, 6, 8, 9, and 10; several blocks have become exhausted, including the Progress blocks from No. 10 upwards, also the big block on No. 4, and the big block close to the shaft on No. 9. Other stopes have been opened to replace these, notably the intermediate levels on No. 6 and the big east-end block on the same level. Equipment and general alterations have been unimportant both at the mine and the battery, with the exception of an overshot water-wheel, 16 ft. in diameter, recently erected at the Progress cyanide-works to utilise the waste water from the mill Pelton wheel in pumping up the cyanide-solutions. A Wilfley slime-table was under construction at the end of the year for the purpose of testing its efficiency in extracting the pyritic particles from the ordinary slime, as compared with the canvas tables in use. The 65-stamp mill ran 322·5 days, crushing exactly 60,000 tons of quartz, yielding 18,147 oz. 11 dwt. of bullion by amalgamation, equal to 6 dwt. 1·18 gr. per ton. The value of the bullion amounted to £75,408 9s. 4d., or £1 5s. 1·63d. per ton. The yield by amalgamation shows a very considerable falling-off as compared with previous years, and unfortunately a corresponding diminution in the working-cost is not shown, but rather an increase. The pyritic concentrates and slimes put through the chlorination-works was 1,105 tons, yielding 2,717 oz. 4 dwt. 18 gr. of gold, valued at £11,238 4s. 7d., equal to 3s. 8·95d. per ton milled. In the cyanide-works, 37,000 tons of coarse sands were treated, yielding 4,032 oz. 17 dwt. 21 gr. of base bullion, valued at £10,204 14s. 7d., the cost of treatment amounting to 1s. 10·06d., and the profit to 3s. 8·13d. per ton. Many attempts have been made to treat the slime particles experimentally, but results have not afforded sufficient success to warrant the erection of a special plant for the purpose. A general summary of the aggregate working-cost, yields, and resulting profits in milling 60,000 tons, cyaniding 37,000 tons, and chlorinating 1,105 tons during 1905 is as follows: Total working-cost, £53,977 18s. 9d., or 17s. 11·911d. per ton; profit, £44,325 11s. 6d., or 14s. 9·303d. per ton: total, £98,303 10s. 3d., or £1 12s. 9·214d. per ton.

Keep-it-Dark (Owners, Keep-it-Dark Gold-mining Company (Limited); Benjamin Sutherland, Mine-manager).—Work at this mine has been continuous, while in point of equipment and general working, efficiency and productive capacity are well maintained. Stoping on Nos. 4 and 5 levels is nearing exhaustion as the faces reach the upper levels, and the open ground is kept well filled in as the faces recede. In extending No. 5 level west, recent development proved a new make of payable stone 6 ft. in thickness for a distance of 100 ft., while work on this level was confined to this driving. Regarding No. 6 level, the extent of lode here is practically unexplored, notwithstanding the fact that the reef has been driven on for a distance of 200 ft., the face still continuing to show a strongly defined ore-body 4 ft. in width, the increase of quantity and average values being computed as factors indicating increased production in the deeper levels. Indications of change in the strike and underlie being strongly defined at depth on part of No. 6, a winze is now in progress to determine the formation and simplify connection with No. 7. Crosscutting is in active progress (50 ft.) from No. 7 chamber, and in laying off the work ample provision has been made for suitable siding accommodation. The stone mined and milled was 12,730 tons, yielding by amalgamation 3,391 oz. 4 dwt. 12 gr. of melted gold, of the value of £13,653 15s. 2d., equal to about 5 dwt. 8 gr. per ton. The total working-cost, including mining, hoisting, development, and general repairs, was £7,092 14s. 7d., or an average of about 11s. 1¾d. per ton milled, while the general expenses attached to the battery were £1,562 4s. 3d. This amount includes new copper plates, all renewals of crushing plant, concentrators, and general repairs to head and tail races—an average of 2s. 4d. per ton. The Wilfley concentrators continue to give good results, and the profits derived from two shipments of concentrates were satisfactory. The extraction by cyanide shows a slight decrease on the previous year, the yield of bullion being 1,629 oz. 18 dwt. 9 gr., valued at £5,697 19s. 11d., or slightly over 8s. 11½d. per ton. This cost, which is a substantial reduction, is attributed to the reduced percentage of cyanide used and the introduction of caustic soda as a more effective solvent in the treatment of antimonial ores. In comparing the total values won during the year 1905 against the year 1904, there is a decrease of £1,316 14s. 8d. With the exception of short intervals necessary to effect slight repairs to the crushing plant, the mill has worked full time.

New Inkerman Mines.—During the first six months of the year the company mined 3,330 tons of stone, yielding 573 oz. 16 dwt. 13 gr. by amalgamation and 148 oz. 19 dwt. 12 gr. by cyanide, giving a total value of £2,811 8s. In July last all works were shut down in good working-order, and subsequently sold to the Consolidated Goldfields of New Zealand (Limited).

The United Gold-mining Company, in the Merrijigs district, has suspended all mining operations.

New Scotia.—This company was reconstructed during the year, and had for its objective the proving of the lode at depth below No. 1 level, off the inclined shaft. Excessive water being a serious item (well known to have existed in the original workings), precautions were taken to guard against the water in the upper level soaking through the upper formation as sinking proceeded. However, in spite of all efforts made to assure success during sinking operations, together with the very unfavourable promise in the bullion-values of the stone mined, operations were ultimately abandoned and the property finally put up for sale. Mining in the Merrijigs district is now practically non-existent.

Victoria and Inglewood (Owner, P. N. Kingswell).—With the object of effecting a holing into the old Victoria workings, driving has been carried on over three shifts per day, but connection was not accomplished at the close of the year. In this extended driving, ventilation is well maintained by the aid of a small water-driven exhaust-fan, which operates on a continuous pipe-line. On the No. 5 or battery level, stone for milling purposes was chiefly stoped from the incline shaft, the lode in this block being well defined and yielding good average values. Battery and cyanide plants are kept in good working-order. Stone milled—1,730 tons—yielded by amalgamation 918 oz. 1 dwt., valued at £3,648 17s. 7d.; while the sand treated by cyanide—1,505 tons—yielded 736 oz. 18 dwt. 2 gr., valued at £2,032 10s. 11d.

Big River.—The hoisting-shaft has been sunk to a total depth of 1,000 ft. from the battery level and 1,200 ft. from the brace. The reef-formation having been duly intersected on No. 8 level, stoping

was continued on a body of high-grade ore. Stoping was also continued on No. 7 level, the lode being more erratic, but values good. Attention was directed to the necessity for certain repairs to one of the winding-cages, and the matter duly attended to. Throughout the mine the workings were in good order and well ventilated. Battery worked sixteen hours per day. The temperature was 52° at a depth of 1,200 ft. Stone milled—920 tons—yielded 879 oz. 2 dwt. 6 gr., valued at £3,514 8s. 3d.

Searchlight Syndicate and *St. George Claims* were not visited.

Last Chance.—Since Morris and Fleming abandoned this property no further effort has been made to resume operations.

Golden Lead.—Pain and party, whilst prospecting on some of the surface outcrops connected with the Golden Lead old working, were fortunate in exposing some rich leaders which gave very handsome values, the work being still continued.

Golden Point (John Bray, Manager).—Developments comprise the extension of the low-level on the line of reef, which maintains an average width of 3 ft. 6 in. At 50 ft. a break occurred in the formation, but indications were considered favourable towards a new make of stone.

New Ulster Mine, Reefton, (A. McCloy in Charge).—Development so far as extended has been chiefly of a prospecting character, without exposing values of any importance. (16/11/05): All underground work was suspended, the miners being engaged in laying a surface tram-line and clearing a site for a low-level tunnel. Two men employed.

Taffy.—In the early part of the year, Mr. Neilson and party (two men) mined leaders yielding 30 oz. 18 dwt. 17 gr., valued at £125 5s. 8d., but owing to the loose and crushed character of this open face, it is scarcely practicable to estimate the quantity of quartz treated.

Crœsus Mining Lease is now held by the Garden Gully Company, but the property continues to be shut down, and the battery plant has been removed and re-erected on the Garden Gully property.

Minerva.—Nothing further has been done on this property.

Garden Gully Gold-mining Company (William Annear, Mine-manager).—When visited in June last all work was suspended in the mine, but ventilation was amply provided to meet the requirements of future development by the rise connection effected between Nos. 2 and 3 levels. Regarding the re-erection of the Crœsus battery on this property, the site was practically excavated and portion of the machinery delivered on the ground, while the sawmilling plant was ready to cut the necessary timbers. The water-race was nearing completion, and the contractor hoped that with favourable weather the erection of the battery would be completed and handed over to the company in about two months. (16/11/05): Crushing not yet commenced, but pipe-lines and other minor works were nearing completion. Whilst removing the old Crœsus battery, 1 oz. 1 dwt. of gold was obtained, valued at £3 3s.

Birthday, Upper Blackwater.—Mr. P. N. Kingswell, of Reefton, has acquired an option over this prospecting-area for three months, on condition that £100 be expended monthly, and providing prospects afford sufficient promise the property will be purchased for a fixed sum. In compliance with conditions of option, James Morris has charge of ten miners, of whom four are driving south on a 2 ft. body of ore, while sinking has been continued on the south of the lease to a depth of 35 ft.; 10 ft. being sunk through alluvial drift, and 25 ft. on a fair body of stone, which has widened from 3½ ft. at top of winze to 6½ ft. in the bottom. In view of further reducing the necessity for all material and stores having to be carried by manual labour to this mining locality, the County Council thoughtfully let another mile of saddle-track, while the balance, a mile and a half, is laid off in a fairly uniform grade.

Craighead and party (two men) are trenching across the hill, with the object of picking up the Birthday Reef, but their efforts have not so far been successful.

Hannah and party are tunnelling through the alluvial drifts, in view of picking up the solid country south of the Birthday, but possible results are doubtful.

Westland Reefs.

Wilberforce (*now Westland Reefs*).—Respecting the development and potentialities of this extensive goldfield, the information necessary to guide the speculator has not yet been acquired, owing chiefly to the exceptionally wet and unfavourable season, together with the unprecedented low snow-line. However, to those interested in the venture, it may be useful to know that already there are thirteen prospecting-areas of 100 acres each granted and two others applied for.

Wilson's Reward.—Practically this is the only driving of consequence whereby any values of note have been determined. On the eastern side of the range a reef has been intersected 21 ft. in width at a driven distance of 196 ft., and at a vertical depth of 175 ft. below the eastern outcrop. Assays give an average value of 15 dwt. per ton. Work was necessarily suspended as the whole area was practically under snow in March. It has been further suggested that as the underlie of the field tends westwards towards the West Coast side of the range, future developments would be more advantageously and economically effected from the west and, as a further inducement, climatic influence is exceedingly more favourable, both for prospecting and general mining operations. In view of the advantages stated, steps are now progressing towards the construction of a strong company for the purpose of developing the Westland field.

The following is a summary of the areas already granted: Grey's prospecting-area, situated south and west, has exposed three outcrops, traceable for 20 chains, gold being obtainable by mortar test, MacIntosh and Baucke hold two areas situated west; no person employed. James Billett's area, situated south of Wilson's Reward and Grey's areas—On this property five outcrops have been discovered, one of which is 15 ft. in width, showing gold by mortar test; the other outcrops are smaller (varying to 2 ft.), gold being freely seen on some of the stone as broken off the 2 ft. reef. On Feddis's area, situated south of Billett's, three different lines of reef are exposed by trenching, the reef varying from 1 ft. to 6 ft. in width, giving good prospects by panning the rubble and also by mortar test, while gold can be

seen occasionally in the stone. Robert Hindman's area, situated east of Feddis's, gives employment to one man since the snow melted; outcrop not yet found. Baucke has an area south of Feddis's with no person employed. Regarding development and tests made of the stone, probably the most favourable prospect yet tested is held by the Kanieri Syndicate, George Pfahlert having very carefully prospected a line of reef 2 ft. in width, from which really good prospects are obtained. Application has been made and it has been recommended that the Government furnish a two-stamp mill for the use of prospectors. Should this request be complied with in the interest of the prospector, work will be much simplified. A suitable site has been selected.

General Remarks.

In reviewing the statistics of working in quartz-mines, as furnished by the employers for the years 1904 and 1905, it is found by careful computation that the ore milled for 1904 was 122,295 tons, yielding bullion to the amount of 59,359 oz. 16 dwt. 17 gr., valued at £224,626 8s. 2d., against 758 persons employed; whilst for the year 1905, milled ore was 116,901 tons, yielding bullion equal to 49,239 oz. 8 dwt. 12 gr., valued at £196,367 11s. 9d., against 757 persons employed. The average stone mined per person employed for the year 1904 was 161·352 tons, and for 1905, 154·426 tons. Comparing the tonnage milled, yield of gold, and values, the following will show the relative decrease for the year 1905: Shortage in tonnage milled, 5,294 tons; shortage in yield of bullion, 8,120 oz. 8 dwt. 5 gr.; shortage in values, £27,158 16s. 5d., against a decrease of one person employed.

HYDRAULIC AND ALLUVIAL MINING.

Mahakipawa.

King Solomon.—In view of unwatering the mine more effectively and placing the company under more favourable circumstances to win the coveted run of gold in the Golden Gate shaft, the two 9 in. pump sets (originally worked in the Hibernian shaft) have been withdrawn, one of which is now worked in the King Solomon old shaft and the other in the Golden Gate. Although these pumps are in constant work, it is evident that unless further capital is forthcoming to instal more efficient pumping-power, abandonment will be the inevitable result. All surface arrangements are well and substantially constructed.

In the *Mahakipawa Valley*, Coombes, Morton, and party (four men) are simply making a living-wage.

Rochfort and party (two men).—This party, working on the right-hand branch of the creek, are more successful, they having won 9 oz. of gold during the first month of the year, including two nuggets—one 2 oz. 8 dwt. and the other 1 oz. 4 dwt.

Several of the miners have left for fresh fields.

Wakamarina and Deep Creek.—The only work worth noting is the reconstruction of the Golden Point dredge, the pontoons having been rebuilt.

Carnes and party (two) have recently had rather a successful time in the Deep Creek.

Fisk and party (four) are doing very well by utilising the water-supply originally held by the Ericon Sluicing Company.

Ericon Hydraulic Sluicing Company.—This property remains shut down.

Roche and party (four men) have just resumed work in the White Pine Gully, where favourable results were obtained two years ago. The party appear determined to give the ground another trial.

Arm Chair Creek.—E. Terral has taken up the old Duke of Cornwall lease, with the object of mining a trial parcel of 20 tons of scheelite for shipment to Germany, and, provided the values are considered profitable, it is intended to work the mineral on a large scale. The ore also contains a low percentage of gold.

Smith and party (five) being satisfied with their former prospects, are now engaged in bringing in a more efficient water-supply, which they consider will much enhance the value of their property.

Takaka.

Takaka Hydraulic Sluicing Company (Charles Campbell, Manager).—During the early months of the year sluicing was continued dipwards to the bed of the creek, but in view of protecting the river-bank it was considered advisable to suspend further operations in that direction until the eastern section of the claim was exhausted. Sluicing has maintained a high average of time worked, the values won being fairly profitable. The various works connected with the claim are kept in workmanlike order.

Upper Anatoki.—When recently visited, prospecting on the ranges was at a standstill owing to the difficulty in getting up provisions, &c., during the very inclement weather. The miners have obtained a contract to construct a road, and on completion of same prospecting will be resumed.

Road-construction is receiving increased attention.

Collingwood.

Parapara Hydraulic Sluicing Company (James Bassett, Manager).—During the year, the Hit or Miss section of the property has been the chief centre of operations, and although the auriferous drifts are nearing exhaustion, the gold won was fairly profitable. To maintain requirements and keep the claim fully employed attention is now being directed to the development of the deeper deposits in West's freehold flat. With this end in view a drainage-tunnel is now in progress, which, when completed, is calculated to effect drainage to a depth of 25 ft. The present proposal is to first exhaust the drained area and finally instal elevators capable of lifting the auriferous deposits from a further depth of 60 ft.

By adopting this method of operations on a comprehensive scale, the management anticipates that the deeper gravels can be profitably worked to a depth of 80 ft., this depth being estimated to clear the marine bottom. The driving of the drainage-tunnel is estimated to employ six men for six months, the computed distance being 620 ft.

Quartz Ranges (Owner, C. Y. Fell, Nelson).—William Diamond and party of six men work this property on tribute, the operations being chiefly confined to Debtors' Terrace. Water-races and other works are kept in satisfactory condition. Value of gold won, £1,537.

Rocky River gives profitable employment to quite a number of miners.

Slate River Sluicing Company.—Sluicing operations are still continued with varied results, scarcity of water being the chief drawback. During the very dry season sluicing was suspended, and the men employed in tunnelling and trenching to divert the waters of the Bedstead Gully Stream into the company's dam. It is anticipated that with this additional water-supply sluicing operations will be more continuous.

WESTPORT.

On the German Creek and its tributaries, mining is practically confined to the energies of some three or four old-age pensioners, whose homes are established in the locality. To occupy their time, these old men do a little digging, and a few pennyweights of gold are gathered from the creek-beds and terraces.

Cook's Terrace, Fairdown.—Gardiner and party continue to earn average wages in their subsidised tunnel, which is located in the vicinity of the General Exploration Company's claim.

Christmas Terrace.—Whilst Findley and Crawford were extending an old tunnel in the vicinity of the Fairdown sluicing claim, they intersected an extensive lead of wet ground which ultimately compelled them to abandon this part of their work. Determined, however, to win the coveted auriferous vein, driving was commenced from the old sluicing claim.

Giles's Terrace.—Hooper and party's subsidised tunnel has been driven from peg 1,200 ft. a further distance of 585 ft. Values not yet decided.

North Terrace, Mokihinui.—Charles Stewart's subsidised tunnel, on being driven 100 ft., intersected a series of heavy washdirt, but not payable so far.

Welshman's Terrace.—Martin Conradson (subsidised) has driven 290 ft. Lead not yet intersected.

Mullocky Creek, Karamea.—McHarrie and Case were authorised to prospect for three months under Class 1 of the regulations.

Waimangaroa River.—In the matter of mining, beyond a little driving with varied results there is nothing eventful along the banks of this river.

Shamrock Lead and Virgin Flat continue as per former reports.

St. John's Terrace, Addison's.—Brady and party (four men): Mining on this terrace has been carried on more or less for the past thirty years, scarcity of water-supply and a suitable means of conveying mining-material up to the terrace being the chief drawbacks. However, with the increased supply from Back Creek, water for sluicing is available for the whole year whilst, with the natural facilities afforded for the discharge of tailings into the vicinity of Dirty Mary's Creek, dumping-ground is practically assured for all time. The various works in connection with the claim are substantially built. The gold-returns give a fair remuneration for the labour and capital expended.

Long Tunnel, Addison's.—The party continue to maintain average wages. The gold earned was 326 oz. 6 dwt. 5 gr., valued at £1,289 6s.

Carmoody and party.—Operations on this party's claim continue to be well maintained, both in condition and equipment, while returns show a good average.

Cement-working.

Halburg and party have suspended all work.

Milligan and party have suspended cement-working, and recently commenced sluicing on Addison's.

CHARLESTON.

Charleston Beach Sluicing Company.—This company was originally formed to operate on the continuation of the Charleston Beach auriferous black sands; but the auriferous values having failed to meet anticipations the property was finally disposed of, and prospecting commenced on the Croninville Plateau prior to laying on a water-supply. As a result of the prospects obtained by sinking and otherwise, work is now in progress to commence sluicing.

Powell's Sluicing and Elevating Claim.—Respecting the working of this black-sand property there is little to note beside the ordinary routine of sluicing and elevating operations, which are not only consistently carried out but yield highly profitable returns.

The Argyle Water-race continues to be let to Walsh and party under a maintenance contract at £1 per week for four years, with right of renewal for a further similar period at the same rate. During the past twelve months the upkeep of race and dam have exceeded the rents by £100, towards which the Mines Department has promised £1 for £1 up to £50. As another instance of the necessity for repairs, the lower gauge-box in the dam has shown considerable weakness for some time past, and unless repairs are early effected the consequences may be serious. Should the box burst away the occurrence will not only entail damage to property, but thirteen miners would be thrown out of employment. It is estimated that the cost of necessary repairs will be about £100.

Beachcombing continues to be one of the principal factors in the mining industry of Charleston.

MURCHISON.

Walker's Maruia Gold-mining Company.—This company was recently formed with the object of constructing a more permanent and efficient water-supply (capable of dealing effectively with this

extensive auriferous area) at an approximate cost of £6,000. Meanwhile all works are suspended pending completion of the necessary surveys, when the various works will be actively pushed. The race is estimated to be two miles and three-quarters in length.

Six-mile Hydraulic Sluicing Company (Thomas Wearns, Manager).—The various works in connection with development have been satisfactorily completed; but when visited in October last sluicing was suspended and the men employed in cutting a low-level tail-race, the expenditure being fully warranted by the remunerative character of previous results.

Horse Terrace Sluicing Company (Charles Beilby, Manager).—The various developments, including water-race and pipe-line construction, electric light and sawmill installation, are substantially completed and operative. In connection with sluicing operations, this property is opened on two extensive faces of washdirt, one of which is worked continuously, the water-supply being ample to meet all present and anticipated requirements.

Hydraulic Sluicing, Fern Flat.—Mr. H. F. Logan, of Wellington, who recently acquired the option of working Mr. Hunt's freehold, has not yet commenced operations.

Lyell Hydraulic Sluicing Company.—Mr. Thornhill Cooper, the previous manager, is now working the claim under a tribute agreement; but the monetary success of operations depends wholly on the water-supply, which is to a large extent regulated by the local rainfall.

New Lyell Sluicing Company.—Preparatory to opening out a new face, operations were directed to cut and sluice out a hard bar of cemented gravels. On the completion of this work the owners anticipate favourable returns, as the water-supply has been much improved by effecting necessary repairs to the supply-race.

Newton River Sluicing Company.—When visited in October, sluicing was suspended owing to subsidence in the water-race, the men being employed in constructing a deviation.

Fairhall and party have completed their water-race and commenced sluicing.

Evans and Fair were unfortunate in having the siphon of their water-race washed out during the recent flood. Happily, repairs were satisfactorily completed, and sluicing is again in full swing.

Johnson's Creek, Matakitaki River.—August Stackpool and party (four men), having completed their water-race and all other works connected with the claim, are now sluicing, with highly profitable results, the elevated situation of the claim providing unlimited tailings-space.

Matakitaki River.—Two miners are working on the Mammoth Claim since the recent floods. Two Europeans and a few Chinese are reported to be doing well on the river-beaches.

Boatman's.

Harold and party have opened out an extensive sluicing-face in the neighbourhood of Larry's Creek. Work was at a standstill when the claim was visited, consequently information regarding prospects and future development was not available.

Costello and party (three men) were cutting a tail-race to open a piece of ground formerly held by Mr. Lockington, situated between Reeves Proprietary dredge and Coughlan's freehold. The wash pans a fair sample.

Whelan and party opened their claim at the base of the terrace lands rising to the coal-area formerly worked by Coughlan, of Capleston. The face, 30 ft. in depth, is a compact deposit associated with huge boulders of coal-formation, which have tended to disturb the auriferous drifts, and locate the gold in pockets. The ground is profitably worked.

Howell and Kennedy were authorised to drive a tunnel at Specimen Hill a distance of 500 ft. The first 92 ft. intersected a reef-track heavily intermixed with foreign material and finely crushed quartz free of visible gold.

James Grieve was authorised to prospect on the south terraces of the Waitahu River for three months, under Class 1.

The usual number of fossickers continue to rake the small tributaries for an odd pennyweight.

Inangahua County.

Charles Clifford was authorised to prospect for nine months near Carton's terrace, under Class 1.

Newcombe and Patterson were authorised to prospect in the Maruia district for three months, under Class 1.

Upper Blackwater Miners' Association have been granted £200 to prospect at the head of the Blackwater River and Snowy Creek.

Dennis Murphy was authorised to prospect on the left-hand branch of Devil's Creek for six months, under Class 1.

Grey Valley.

Blackwater.—Regarding the alluvial mining in this district, recent discoveries are non-important, attention having been more particularly directed to the quartz-reef formations in the Upper or Big River Riding. However, the mining population is well maintained, while the average value in gold won shows no depreciation. The Chinese diggers continue to take a prominent place amongst the local gold-producers. Craighead and Laurenson's subsidised tunnels on Yankee John's Creek are still to the front; other miners eke out an existence more or less favourable.

Dredging on the Blackwater Creek is also being carried on.

Ahaura River continues to find employment for nineteen Europeans and nine Chinese.

Orwell Creek and Napoleon Hill give employment to eighteen miners, with varied results.

Moonlight.—This noted old goldfield still maintains forty miners.

Callaghan's Creek is now reduced to seven resident miners.

In the *Upper Blackball* and *Healey's districts* mining on the whole has been more profitable, owing largely to the favourable wet season. Upper Blackball Creek and its tributaries find employment for nine, and Healey's Gully, eighteen, miners.

Bell Hill Sluicing Company continue operations with four men, who produced 197 oz. 6 dwt. of gold, valued at £771 16s.

The Great Republic subsidised water-race is well maintained, and the working-face is kept in a safe and satisfactory condition. Nine men employed. New development is practically nil.

Case, Hindman, and Hay's parties, who maintain their water-supplies from the subsidised race, are doing very well.

Roaring Meg.—The progress of development is much retarded by the heavy character of the deposits, otherwise the fine alluvial drift is very profitable.

Maori Gully.

Saunder and party (four men) have acquired a lease of 20 acres, with rights to lift ten heads of water from New Creek, and a drainage-area extending over one mile of the race.

The race, when constructed, will comprise five miles and a half of open ditching, half a mile of tunnelling, divided into eight separate drivings (the longest of which will not exceed 1,000 ft.), and 20 chains of siphon. Already a quarter of a mile of race is cut, and as the survey is now completed the work will be more vigorously pushed. In the opinion of the old resident miners the prospect is considered a profitable venture, and on the completion of the works will open up a new era in the locality.

Barrytown

Waiwhero Sluicing and Dredging Company's Claim.—This property, situated about four miles north of Barrytown, was recently purchased by Mr. A. McKay, of Greymouth, who has since effected extensive developments. The constructed line of water-race is seven miles in length by 4 ft. wide and 3 ft. deep, through which a constant supply of thirty heads is discharged at the penstock. Leading from the penstock, the water for distribution is conveyed by an 18-in.-diameter pipe-line three miles and a half in length under a head pressure of 650 ft. The auriferous deposits are a beach-formation of sand 70 ft. in depth, which is treated over a set of gold-saving tables covering a superficial area of 2,544 ft., the system of saving being considered very efficient. Owing to a landslip from the hillside carrying away about 80 ft. of fluming, sluicing was at a standstill when the claim was visited.

Barrytown Sluicing Works (Owner, A. McKay, Greymouth).—Regarding the development of the Barrytown and Mawhera sluicing properties, efficiency in gold-saving and general operations maintain a favourable standard when compared with other similar claims on the Coast. It is true, however, that scarcity of water has been much felt at the Barrytown works during the dry months of summer, but it is also pleasing to note that a scheme is under consideration whereby an additional stream can be utilised at an approximate cost of £3,000. Should this work be carried out, further difficulty in effecting continuous operations will disappear.

Larrikins' Terrace.—Magee and son: Scarcity of water is the chief drawback on this terrace claim, otherwise the wash would yield profitable results.

Von Moltke Terrace.—Stering Tighter, who occupies this terrace, quarries a hard cement, which is crushed and washed during wet weather.

Deadman's Creek.—Very little work is being done here.

Kumara.

According to the reports furnished by the Assistant Inspector, the maintenance of the various sludge-channels, deep levels, dams, and operative works have been well maintained, as also efficiency in general equipment, including pipe-lines, &c.

Kelly's Terrace Drainage-tunnel has been generally overhauled with the object of maintaining a clear watercourse, timber being renewed where required.

Wheel of Fortune Hydraulic Sluicing Company (F. Boyes in charge).—This property is worked continuously when water is available, but it is nevertheless unfortunate that continuous working can only be effected during very wet seasons, the water-supply being much dependent on rainfall. General equipment and working-conditions are well maintained.

Haun and party (three men) having recently acquired a mining privilege located between the Wheel of Fortune property and Lock's freehold, work is now in progress preparatory to sluicing.

The Austrians' Claim.—A complaint relative to the dangerous condition of the tail-race was lodged by the Assistant Inspector, Repairs are now satisfactorily effected.

The Waimea Hydraulic Sluicing Company continue operations with lucrative returns. The general equipment of the property is well maintained.

Hayes' Terrace.—Gilbert and party (four men) are opening out on the land adjoining the Austrians', water for sluicing being supplied from the Erin-Go-Bragh race: the first washing gave very encouraging results. A party of Chinese work on this terrace.

Holtz and party are still on poor ground.

Ryan and son are meeting with more encouraging results.

The Minerals Gold-mining Company.—Work is steadily maintained, and the washdirt shows a gradual improvement as operations proceed. In blocking out, careful timbering is necessary.

Hokitika.

Humphrey's Gully (Mr. Greenbank, Manager).—This property is still worked on tribute; and although operations have been continuous, the values show a considerable shrinkage compared with

the previous year. In the hope of obtaining better results, the faces recently worked were abandoned, and the whole distributing pipe-line system was rearranged to open out fresh ground at the commencement of 1906. The general equipment of plant, &c., is kept in good order and condition.

Craig's Freehold.—This property is still worked on tribute by Butland and Chesterman (six men), but the values obtained have not been encouraging. Timbering and ventilation are well maintained.

University Reserve.—Perry and mate are prospecting on the reserve, but values are not important.

Back Creek.—Peter Fisher has driven a prospecting-tunnel 400 ft. in length under the auspices of the Rimu Prospecting Association. The tunnel is located about one mile south of any previous driving on the Brighton Bottom. Clifton and party (six men) have just completed a tunnel through Hartridgen's ground, to obtain free access to their own claim, which they are now opening out: the tunnel is carefully timbered. Milligan and party are driving with the object of picking up the Brighton bottom, so favourably worked by Hartridgen. Hartridgen and party (two men), having completed driving, are now blocking out the ground on a 7 ft. wash with payable results. Ryan, Knight, and Spence, having completed their low-level driving, are now blocking out on a 5 ft. wash: all work securely timbered. Johnson and party are continuing to block out from their subsidised tunnel: returns only giving small wages.

Subsidised Works.

Arahura Flat.—Harcourt's drainage-tunnel is further subsidised a distance of 666 ft., of which 150 ft. is driven. Attention was drawn to the necessity for better ventilation.

Lark's Terrace.—Noble's subsidised tunnel intersected the auriferous lead at a driven distance of 716 ft., but, the values not being payable, driving was further extended 143 ft.

George Davis (Shallow Rush) was granted £25 to assist in bringing in a tail-race which is now satisfactorily completed.

Arch Creek.—Boyd and party have driven their subsidised tunnel from the 300 ft. peg the authorised distance of 1,200 ft., with unfavourable results. A further subsidy has been authorised to assist the party to drive an additional 1,000 ft.

Park Terrace, Ross.—Coughlan and party drove their subsidised tunnel 541 ft. It collapsed at a section of wet pug about 200 ft. from the face.

Ross.

Mont d'Or.—Sluicing operations at this property are not regularly continuous, owing to the irregular water-supply during dry seasons. The returns for the year show a shrinkage of 229 oz. 15 dwt. 20 gr. For the purpose of effecting the drainage of the deep auriferous deposits, a low-level tail-race is now under construction which is calculated to touch the marine formations, the expenditure being fully justified by the values taken from the sinkings recently carried out at different parts on the face. Water-races and general equipment are well maintained.

Smith and party are sluicing with profitable results when water is available. Water-races and plant are in good order.

Old Ross United.—There are three parties who continue to sluice down the terrace lands with fair success.

McLeod's Terrace.—Development-work, which provided employment for twelve men, is now completed and sluicing commenced. The operations are not yet sufficiently advanced to enable a fair estimate of possibilities being made.

Waiho

Waiho Sluicing and Elevating Company.—5/9/05: This company had eight men employed in removing the elevating plant from the North Bank, Waiho, which will be re-erected on the south side.

Four parties, comprising five men, are fossicking along the banks and beaches of the Waiho River.

Batson and party (three men) have just opened a promising face of wash. From the prospects obtained this should be a profitable concern.

On the application of W. Earnshaw, protection was granted on his dredging and other mining areas for six months, on the plea that the original time was not sufficient to erect the plant necessary for the treatment of fine gold.

Wataroa and Waitaha Rivers.—On the north beach of the Wataroa River five men find employment in washing a deposit which is brought down by the heavy flood-waters.

Duffer's Creek.—McArthur continues to earn a living-wage by prospecting along the banks of this creek.

Big Waitaha.—Four parties, comprising eleven men, are engaged in washing the black-sand deposits on the sea-beach at the mouth of the Big Waitaha.

DREDGING.

The gold-dredging industry continues to show a gradual but steady decline on the Coast, and, with the exception of reconstructing the Golden Point dredge on the Wakamarina River, dredge-building has been practically at a standstill. At the end of December, 1905, the number of dredges in actual work was forty, this being a decrease of five as compared with the preceding year. Of the original companies registered quite a number have liquidated, and in several instances, where the dredges were not dismantled, they were purchased by private parties and are now worked under partnership agreements. According to the annual statistics to hand, the value of gold won amounted to £103,277 17s. 4d.

Working Dredges Inspected.

Name and Locality of Dredge.	Name of Owners.	Dredgemasters.	Remarks.	Date of last Inspection.
Marlborough.				
Golden Point, Wakamarina ...	Wakamarina Golden Point Gold-dredging Co. (Ltd.)	A. Skilton ...	Standing	11/7/05
Alpine, Top Valley	Alpine Gold-dredging Syndicate	...	Removing to Armchair Creek	11/7/05
Nelson.				
Wangapeka, Wangapeka ...	Wangapeka Gold-dredging Co. (Ltd.)	...	Standing	29/8/05
Collingwood.				
Parapara, Parapara Creek ...	Parapara Gold-dredging Co. (Ltd.)	...	No one in charge. Nothing done since previous visit	27/6/05
Karamea, Slate River	Slate River Gold-dredging Co. (Ltd.)	A. H. Bishop ...	Machinery and pontoons receiving overhaul ...	27/6/05
Buller River.				
Rocklands	Rocklands Beach Gold-dredging Co. (Ltd.) ...	...	In liquidation; sold to Bowater and Bryan ...	23/8/05
Old Diggings	Hansen and party	Hans Hansen ...	Standing for repairs	23/8/05
Premier	Hans Hansen and McKays	Hans Hansen ...	Standing for repairs	24/8/05
Buller Junction	Buller Junction Gold-dredging Co. (Ltd.) ...	...	Sold to T. Pearce for syndicate.	
Buller Junction	Buller Junction Syndicate	...	Undergoing repairs about one mile below White Cliffs. Washed away in high flood, on 24th July, 1905	23/8/05
Welcome	Welcome Gold-dredging Co. (Ltd.)	...	In liquidation; sold to Mr. Lockington, and being dismantled by him	23/8/05
Mokoia	Mokoia Gold-dredging Co. (Ltd.)	John R. Dalton ...	Rules well complied with	24/8/05
New Feddersen	New Feddersen Gold-dredging Co. (Ltd.) ...	William Mollison	Complaint *re* boats, hand rails, and planks in pontoons	9/10/05
Belle Vue	Belle Vue Gold-dredging Co. (Ltd.)	C. G. Morel ...	Rules well complied with, except hand-rails up elevators	6/10/05
Amikitia	Amikitia Gold-dredging Co. (Ltd.)	T. Warne ...	Rules well complied with	5/10/05
Kohikohi	Kohikohi Gold-dredging Co. (Ltd.)	T. Warne ..	Rules well complied with	5/10/05
Fern Flat (late Good Hope) ...	R. Liddicoat	...	Dredge washed away and smashed to pieces in high flood on 24th June, 1905.	
Boatman's Creek.				
Reeves's Proprietary I	Reeves's Proprietary Gold-dredging Co. (Ltd.) ...	Robert Scott ...	Rules well complied with	17/10/05
Reeves's Proprietary II ...	Reeves's Proprietary Gold-dredging Co. (Ltd.) ...	Robert Scott ...	Rules well complied with	17/10/05
Boatman's Creek	Boatman's Creek Gold-dredging Co. (Ltd.) ...	...	Dredge sunk; now property of Coughlan and party	17/10/05
A1	A1 Gold-dredging Co. (Ltd.)	Alfred Thomson ...	Boat-hooks and life-lines wanted	17/10/05
Grey River.				
Blackwater, Blackwater Creek ...	Blackwater Gold-dredging Co. (Ltd.)	Marston C. Cuff ...	Rules well complied with	13/3/05
Mawhera, Blackwater Creek ...	Mawhera Gold-dredging Co. (Ltd.)	...	Standing	13/3/05
Callaghan's Creek, Callaghan's Crk.	Callaghan's Creek Gold-dredging Co. (Ltd.) ...	David Clark ...	Everything in good order	1/6/05
Nelson Creek I, Nelson Creek	Nelson Creek Gold-dredging Co. (Ltd.)	A. R. Edmonson ...	Machinery and pontoons receiving overhaul ...	13/11/05
Nelson Creek II, Nelson Creek ...	Nelson Creek Gold-dredging Co. (Ltd.)	A. R. Edmonson ...	New pontoons building	13/11/05
New Trafalgar, Nelson Creek ...	New Trafalgar Gold-dredging Co. (Ltd.) ...	James Cumming...	Rules well complied with	13/11/05
Pactolus I, Nelson Creek ...	Pactolus Gold-dredging Co. (Ltd.)	James Cowan ...	Rules well complied with	13/11/05
Pactolus II, Nelson Creek ...	Pactolus Gold-dredging Co. (Ltd.)	James Cowan ...	Rules well complied with, except lifebuoy .	13/11/05
Jamieson's Reward, Nelson Creek	Jamieson's Reward Gold-dredging Co. (Ltd.) ...	Andrew Dalziel ...	Rules well complied with, except covering of pinions	13/11/05
Aldinga, Nelson Creek	Aldinga Gold-dredging Co. (Ltd.)	...	Standing; sold to Mr. Stevens for removal ...	1/8/05

WORKING DREDGES INSPECTED—*continued.*

Name and Locality of Dredge.	Name of Owners.	Dredgemasters.	Remarks.	Date of last Inspection.
Waipuna River (Branch of Grey.)				
Mosquito I	Mosquito Gold-dredging Co. (Ltd.)		Standing	31/7/05
Mosquito II	Mosquito Gold-dredging Co. (Ltd.)		Standing	31/7/05
Totara Flat, Duffer's Creek	Totara Flat Gold-dredging Co. (Ltd.)		Standing	31/7/05
Sullivan's Lead, Duffer's Creek	Sullivan's Lead Gold-dredging Co. (Ltd.)		Being dismantled; to be shipped to New Sth. Wales	31/7/05
Golden United, Duffer's Creek	Golden United Gold-dredging Co. (Ltd.)		Sold; to be shipped to Fraser Riv., British America	31/7/05
Slab Hut Creek (late Kangaroo), Slab Hutt Creek	Slab Hut Creek Gold-dredging Co. (Ltd.)	Charles Curtis	Standing for repairs; boat-hooks and light-lines wanted in bow, and bow to be fenced	18/11/05
Moonlight, Moonlight Creek	Moonlight Gold-dredging Co. (Ltd.)	James Meffen	Attention called to requirements of Mining Act	15/11/05
North Beach, North Beach	North Beach Gold-dredging Co. (Ltd.)	James Guyton	Covering of pinion-wheels and handrail on gangway ashore not satisfactory	10/8/05
Stony Mosquito Lead, Greymouth	Stony Mosquito Lead Syndicate	George Vick	Effecting repairs	10/8/05
Maori King, Maori Creek	Maori King Gold-dredging Co. (Ltd.)	J. Maunder	Copy of rules posted. The pontoons and machinery to be overhauled next day	3/11/05
Cornwall, Marsden Creek	Cornwall Gold-dredging Co. (Ltd.)	E. Wilson	Rules well complied with. Copy of rules posted	3/11/05
Greenstone Creek.				
Three-mile Greenstone	Three-mile Greenstone Gold-dredging Co. (Ltd.)	J. G. Donaldson	Rules well complied with	7/11/05
Greenstone Creek	Greenstone Creek Syndicate	A. Cowie	Rules well complied with	7/11/05
New Greenstone	Kumara Syndicate (late New Greenstone Gold-dredging Co. (Ltd.)	Robert Burrell	Section I, clauses (*a*), (*b*), and (*c*) must be complied with	7/11/05
Greenstone Junction	Greenstone Junction Gold-dredging Co. (Ltd.)	J. Bennett	Standing for repairs. Rules well complied with	7/11/05
Notown Creek.				
Notown Creek I	Notown Creek Gold-dredging Co. (Ltd.)	A. Cowan	Rules well complied with	10/11/05
Notown Creek II	Notown Creek Gold-dredging Co. (Ltd.)	A. Cowan (in charge)	Standing	10/11/05
Bignell's Notown	Bignell's Notown Gold-dredging Co. (Ltd.)	A. Willey	Rules well complied with	10/11/05
Hokitika.				
Hau Hau, Hau Hau Creek	Hau Hau Gold-dredging Co. (Ltd.)	D. Marshall	Standing	27/10/05
Stafford-Waimea, Waimea Creek	Stafford-Waimea Gold-dredging Co. (Ltd.)	George Wilson	Being repaired	30/10/05
Montezuma, Three-mile Creek	Montezuma Gold-dredging Co. (Ltd.)	James Millington	Standing	27/10/05
Woodstock, Hokitika River	Woodstock Gold-dredging Co. (Ltd.)	D. Sutherland	Standing for repairs	27/10/05
Ross.				
Totara Shellback, Totara Lagoons	Totara Shellback Gold-dredging Co. (Ltd.)		In liquidation	23/5/05
Mikonui Hydraulic, Mikonui River	Mikonui Hydraulic-dredging Co. (Ltd.)		In liquidation	23/5/05
Prince of Wales, Ross	Prince of Wales Gold-dredging Co. (Ltd.)		Purchased by W. H. Robinson for syndicate, and being put in repair	25/10/05
Saltwater Beach, Saltwater Beach	Saltwater Beach Gold-dredging Co. (Ltd.)		In liquidation.	
Gillespie Beach, Gillespie Beach	Earnshaw and Son		Standing.	
Nelson's Suction Dredge, Mikonui Beach	James Nelson		Standing.	

MINERALS OTHER THAN GOLD.

Copper-mines, Nelson.—Mr. Ingram, manager, kindly supplied the following information: The Monster Lode was tapped at a distance of 328 ft. by a level driven from a point 115 ft. below the outcrop. In this face the copper was poor, yielding only 2 per cent. Cu, by assay, gold 4 dwt., and silver 12 dwt., per ton of ore. In the Jackson's Lode shafts were sunk on the north and south ends of the main ore-body to depths of 20 ft. and 12 ft. respectively, the assay values in both shafts yielding an average of 33 per cent. Cu, whilst on the Mount Claude section of the property sinking was also continued to a depth of 12 ft. on a strong ore-body, still living down, this stone yielding a 44 per cent. assay Cu. At the United North the original level was cleared out, and at 53 ft. the lode was found to maintain a width of 6 ft., assay value 4 per cent. Cu. At the Limited the ore was cut at 467 ft., when the levels were extended a further distance of 258 ft., the lode varying in width from 3 in. to 3 ft., assaying 9 per cent. Cu. Further extension of this level for a distance of 200 ft. should undercut a large ore-body in No. 5 level, and, provided the ore lives down, a depth of 360 ft. of backs should be available. There were an average of twelve men employed.

Hidden Treasure, Takaka (N. G. Langford, Secretary, Auckland).—R. C. Campbell in charge of reduction-works, which consist of a Chilian mill and screens driven by an oil-engine. When visited, 75 tons of ore were under treatment, which was expected to yield about 50 tons of graded stuff, through a $\frac{1}{16}$ in. mesh for further treatment at Auckland, the 25 tons of finely powdered ore being specially reserved. Mining was at a standstill.

Adjoining the Hidden Treasure there is another area pegged off, but beyond taking 2 tons of ore to Auckland nothing further has been done.

Washbourne Brothers' Hæmatite-paint Works show no further activity.

ACCIDENTS AND FATALITIES.

QUARTZ-MINES.

Fatal.

Keep-it-Dark Mine.—8/5/05: Albert Young, surface trucker, whilst attending a short filling-in surface pass, was taken down by the *débris* and smothered.

Non-fatal.

New Inkerman Mines.—5/4/05: John Horan, horse-driver, had right leg and left arm broken and left ankle dislocated whilst tailing out a race of trucks on the surface dump.

Progress Mines.—28/6/05: Thomas Willman, miner, had back and groin injured by fall of stone while preparing to timber the ground.

Wealth of Nations Mine.—14/12/05: Thomas Low, miner, had leg broken below the knee by fall of quartz in the face.

ALLUVIAL MINES.

Fatal.

King Solomon Mine.—24/3/05: Charles P. Neilson (partner) was accidentally wound round a revolving-shaft at the Golden Gate Mine.

Gould and Party, Addison's Flat.—28/4/05: Charles McLean (partner) was killed instantaneously by fall of earth in the open face.

Hayes's Terrace, Kumara.—19/10/05: James Stephens (partner) was killed instantaneously by fall of stone in the face.

McLeod's Terrace, Ross.—7/12/05: Simon McLeod, nozzleman, was killed instantaneously by fall of earth in the tail-race.

DREDGES.

Fern Flat Dredge.—24/6/05: R. Liddicoat, master, and W. Craig, winchman, were both drowned in trying to swim ashore when the river was in high flood.

During the year 1905 no fatal accidents occurred in underground quartz-mining. Regarding the accident off Fern Flat dredge, it may be noted that the dredge drifted out to mid-stream in a very high flood with four men aboard, who essayed to swim ashore. Two succeeded in doing so, but the other two were drowned. The bodies were recovered.

I have, &c.,
R. TENNENT,
Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

Mr. E. R. GREEN, Inspector of Mines, Dunedin, to the UNDER-SECRETARY FOR MINES, Wellington.

SIR,— Office of Inspector of Mines (Southern District), Dunedin, 12th April, 1906.

I have the honour to forward the accompanying report by the Assistant Inspector of Mines and myself on quartz-mines, hydraulic and alluvial mines, and gold-dredges in the Otago and Southland Districts for the year ending the 31st December, 1905.

QUARTZ-MINING.

OTAGO.

Shotover.

Mount Aurum Gold-mining Company, Bullendale (F. T. Ware, Mine-manager).—15/2/05: Operations are being continued on the line of reef known as the British-American. Rodgers's drive has been extended a total distance of 375 ft., at which point connection with an old winze on the western side of the hill affords ample ventilation in the workings. The upper level has also been extended 50 ft., and crosscuts to prove the width of the lode have been driven north and south. The crosscut to the foot-wall cut payable stone, which is being mined and sent to the battery. I instructed the mine-manager to provide safer storage for explosives at the mine. Mr. Ware, mine-manager, provides the following account of the aerial ropeway recently constructed under his supervision: To facilitate and cheapen the cost of transporting the quartz from the British-American Mine to the battery, an aerial ropeway on the single-rope system has just been erected. The distance between the two terminal stations is nearly 3,000 ft. From the upper terminal the rope rises 270 ft. to pass over an intervening ridge, from which point to the lower terminal there is a fall of 790 ft., or a mean grade throughout of 1 in 5·09. The terminals consist of two wheels 9 ft. in diameter, the upper wheel being fixed and having a brake attached for regulating the speed. The lower terminal is mounted on wheels and set on rails which have an inclination of 25°, a weighted truck being attached to the terminal to maintain proper tension on the rope. The hauling-rope is of Bullivant's patent steel 2¼ in. in circumference, and is supported throughout its length on fourteen standards fixed at the most advantageous points along the line. To the crown of each standard four movable pulleys are mounted, over which the rope passes. Fixed at equal distances along the rope by means of steel clips and hung on hangers, are forty-two buckets, each capable of holding 2 cwt. of stone. The loading of the buckets at the upper terminal is performed by one man, who, when the empty bucket arrives, simply disengages it from the hanger, which latter passes round the terminal wheel to where there is waiting exactly under the rope a loaded bucket, which is on a small tram on rails for running to the shoot close by, and this is simply hooked on to the hanger as it passes without stopping the rope. The buckets are made self-tipping at the lower terminal by means of a self-acting catch. It is found that the rope will run satisfactorily 6,000 ft. or one complete circuit per hour, and at this speed will deliver 84 cwt. per hour or 33 tons 12 cwt. per day. The rope runs entirely by gravitation. The battery has been overhauled, and is now in regular work. Twelve men are employed.

Shotover Quartz-mining Company, Skipper's (T. O. Bishop, Mine-manager).—15/2/05: The rise to the upper workings for ventilation purposes is being pushed on, the ventilation in the meantime being maintained by the water-driven fan. Stoping is still being carried on in the winze section below the main drive. The stopes are worked almost entirely without timber, ample filling being obtained from the lode-material. The battery is working satisfactorily. A small cyanide plant, consisting of two 6-ton leaching-vats with all accessory plant, has been erected and worked with satisfactory results. Although all operations were at a standstill at the end of the year 1905, the future policy of the company is to raise further capital and rise from the 200 ft. level to locate the payable stone formerly worked by the Nugget Company. The main level will also be pushed forward to open up new stone. Twelve men are employed in and about the mine and battery.

Aspinall's Reef, Packer's Point, Skipper's.—Nothing has been done on this reef during the year.

Crystal Reef, Skipper's.—Operations have been at a standstill during the year.

Eureka Gold-mining Company, Skipper's Point (J. Douglas, Mine-manager).—This company was formed in Reefton to work a reef in Jennings's Gully, Skipper's. The mine has been well prospected, and trial crushings made in the Shotover Company's battery are said to have yielded satisfactory results. Operations are suspended in the meantime pending the erection of a patent two-head battery, the foundations for which are now being excavated. Latest information from the mine is to the effect that mining and crushing operations are being carried on with success.

Alpine Reef, Skipper's Point (W. L. Davies and J. Henderson, Owners).—Two men were engaged for some time prospecting on this reef, but nothing further has been done towards development of the property.

Glenorchy.

Mr. George Read is paying attention to production of scheelite at the Bucklerburn. A ten-head stamp-battery and Wilfley concentrator are being erected. Motive power will be water acting on a Pelton wheel.

Macetown.

Premier Sunrise (New Zealand) Gold-mining Company, Macetown (William Patton, Mine-manager).—1/12/05: On this date operations at the mine were confined to the adit-level area at the top of the main incline. Operations during the year were not successful in the incline tunnel and that section of work was consequently abandoned. The manager, Mr. William Patton, reports as follows on the work done for the half-year ending the 31st December, 1905: "The principal work carried on was prospecting on No. 2 line of reef. Believing from former experience that ore existed on this line of reef, we decided to carry out further prospecting. A tunnel was therefore driven on the main hanging-wall for a distance of 78 ft., 42 ft. of which was driven during the previous half-year; no payable ore was met with in the drive, although to our calculation a sufficient distance was driven to strike the reef. We then decided to drive a crosscut towards the foot-wall. A distance of 20 ft. was driven without striking ore of any kind. Crosscutting was then discontinued, and a rise started on the hanging-wall which was continued up to a height of 15 ft., when a bunch of gold-bearing ore was discovered, which, however, only continued for a few feet. At this point a drive was started from the rise to the west for the purpose of connecting with the old stopes which had been worked in the early days, where gold-bearing

stone was known to have been left. A distance of 18 ft. had been driven when the old stopes were broken into. Here the reef was found to be from 1½ ft. to 2½ ft. in width, which continued for a distance of 20 ft. along the line of reef. The quality of the stone was considered payable. Preparations were then made to start stoping. As usual, we had a considerable amount of timber-work and filling-in to carry out before a start could be made mining the ore. A crushing was then taken out as quickly as possible and the mill started. 140 tons were treated for a return of 55 oz. 5 dwt. 16 gr., or a yield of 7 dwt. 7 gr. per ton. This return we considered fairly satisfactory. Naturally expecting the ore to improve when a greater height was reached, stoping was proceeded with; to our disappointment we found the ore decreasing in value and becoming less in extent. It did not maintain the usual dip, thus leading us into old workings, which, had the reef taken the usual dip, would not have been come in contact with. In December 135 tons of ore was treated for a return of 36 oz. 16 dwt. 11 gr., or 5 dwt. 14 gr. per ton. This return, under the circumstances, could not be made to pay owing to the great amount of timber which would have been required in dealing with the old ground, which was close by in the foot-wall. The ore procured from the last two stopes was not payable. We then decided to discontinue operations on this part of the reef. Preparations were then made to drive a crosscut from the main adit to cut the No. 2 line of reef at a point about 15 ft. west of where payable stone was found to be going down below the adit level; about 16 ft. was required to be driven, where a prospecting-shaft would be sunk to strike the continuation of the same shoot downwards that we had been working on a higher level. If the lode continues down we are in hope that better ore may be discovered. Milling: The mill was running steadily one shift per day during the months of November and December with the result above mentioned. 18 oz. 8 dwt. 12 gr. of gold was also obtained from cleaning up the old Sunrise mill. Repairs to the pressure-pipe line: During the early part of last winter a spell of unusually severe frost set in which caused a considerable amount of damage to our pressure-pipes, about eighteen of which had to be removed and replaced with others which were got from the Sunrise pipe-line." Later information is to the effect that the mine-manager has been instructed by the London board of directors of the company to close down the mines, abandon the claims, and realise upon the plant to best advantage.

Indian Glenrock (Wynaad) Gold-mining Company, Macetown (William Patton, Mine-manager).—1/12/05: Two men were employed for a short time on prospecting-work, but the mine was idle throughout the greater part of the year pending consideration by the Home board of directors of a policy for future working.

New Zealand Consolidated Gold-mines (Limited), Macetown (L. O. Beal, jun., Legal Manager, Dunedin).—The latest information regarding the flotation of these properties on the Home market by Mr. Farrell (the owner) is that "negotiations are assuming definite form, with every appearance of a successful flotation at an early date."

Balch's Quartz Claim, Caledonian Gully, Macetown (Richard Balch, Owner).—1/12/05: Mr. Balch has continued to work on this property of 5 acres during the year, and has recently completed an adit 150 ft. in length to the reef, giving 55 ft. of backs. As the surface stone has worked out and the adit workings have proved the quartz not to be continuous, the future of the mine depends upon the operations being carried on at a still lower level. This may be done by a cross-country drive about 500 ft. in length, giving several hundred feet of backs, but the owner would prefer to sink from the present adit level and instal an oil-engine for winding purposes. The quartz is treated at McKay and party's (late Tipperary) battery. 205 tons of quartz crushed during the year have yielded gold at the rate of 1 oz. of gold to the ton of stone treated. Four men employed.

D. McKay and Party's Quartz Claim, Caledonian Gully, Macetown.—1/12/05: This party secured an area adjoining Balch's and on the same line of reef. A level has been driven along the reef for a distance of 115 ft., giving 40 ft. of backs. The reef is narrow and the country rock forming the walls is soft. Close on 200 tons of quartz was crushed during the year, yielding at the rate of 1 oz. of gold per ton of stone crushed. This party bought the Tipperary battery, and besides crushing their own quartz they are prepared to crush parcels for the adjoining claim-holders, a small charge per ton being made. Three men at work.

Anderson, Hannah, and Party's Quartz-mine, Scanlon's Gully, Macetown (Area of claim, 20 acres).—The attention of the members of this party is divided between this mine and their sluicing claim on Eight-mile Hill. When sluicing-water is slack, operations are carried on at the reef. About 80 tons of quartz has been crushed at the Tipperary battery, yielding at the rate of about 12 dwt. of gold to the ton of stone. Some prospecting and development-work, including track-cutting, has been done during the year.

Patrick Barron's Quartz Reef, Arrow River (Area, 4 acres).—Nothing has been done during the year tending towards the further development of the reef.

Cromwell.

The Cromwell Mine Syndicate's Quartz-mine, Bendigo (W. T. Talboys and D. B. Waters, Trustees).—Active operations are still suspended at this mine, although efforts are being made to provide for the extension of the low-level tunnel. Messrs. Cameron Bros., tributers, have been engaged fossicking for stringers and leads of gold-bearing quartz on the outcrop of the reefs and also doing a little ground-sluicing on the claim.

Alta Mine, Bendigo.—Operations have been at a standstill throughout the year. The oil-engine formerly in use for driving the battery has been sold to Morven Hills Station to provide power for station requirements.

Leaning Rock Range.—Some prospecting was done on this range during the early summer. This is an extensive field well worth the attention of prospectors.

Bannockburn.

Go-by Quartz-mine, Carrick Range (J. B. Holliday, Owner).—After spending about seven years in prospecting on the Carrick Range, Mr. Holliday has latterly secured and erected a ten-head battery. The result of the first crushing was so poor that the battery was immediately closed down. Beyond the erection of this battery very little attention has been paid to reefing in this district, although, as stated in previous reports, there is an unlimited field here for the investment of capital should a method be discovered of successfully treating the refractory ores.

Messrs. Lawrence Bros., Carrick Range.—The Star of the East Claim is equipped with a ten-head stamper battery in which about 50 tons of payable quartz was crushed during the year.

Bald Hill Flat.

White's Reef, Bald Hill Flat (R. T. Symes, Owner).—22/11/05: Mr. Symes has continued to prospect this property apparently without much success. Owing to the cost of driving and the upkeep of the adit Mr. Symes has decided to abandon underground operations in the meantime. A water-right has been secured, and ground-sluicing operations are being conducted on the line of reef with the object of discovering the continuation of the reef in more solid country. Some good stone has been found among the sluicing *débris*, and the proprietor is hopeful of his search proving successful. Two men are employed. The quartz is stacked and put through the battery as a quantity is obtained. From the result of operations at this and the adjoining mine, the reefs at this altitude do not live down but are apparently shed from a reef-system which may exist at a higher altitude.

Excelsior Mine, Bald Hill Flat (T. Holden and R. Gray, Owners), (Area of claim, 19 acres).—22/11/05: Operations in this mine have been continued during the year, but with no great measure of success. A low-level adit has been driven to undercut previous workings, but unfortunately no quartz of a permanent nature has been struck. A rise was being put up to meet good stone left underfoot in the shaft-workings. One man employed driving and one engaged sluicing on the surface. During the year the battery was shifted to a site commanded by the new adit.

Fraser Basin, Obelisk Range.—The ten-head battery has been idle on Nicholsen's Reef for many years.

Campbell's Gully, Obelisk Range.—Although nothing of a definite nature has taken place during the year the reefs of this locality still command some attention.

Alexandra.

Conroy's Gully Reef, Alexandra (J. Robertson and party, Owners), (Area of claim, 20 acres).—23/11/05: This property has been prospected by a shaft and driving to the water-level. At this level it is proposed to put in a drive and stope out the quartz overhead. About 56 ft. of backs are available. To develop this property thoroughly a shaft would be required; but as this would involve considerable outlay of capital in pumping and winding machinery, the proprietors do not intend to incur the expenditure at present. A five-head battery procured from Hindon has been installed, the power for which is furnished by a breast-wheel 17 ft. in diameter. Two heads of water are brought in from Conroy's Creek. Strike of reef, north-west and south-east, and dips north. The country rock of the district is a hard quartzose mica-schist.

Day Dawn Reef, Alexandra.—This well-defined line of reef strikes from Conroy's Gully across the foothills of the Obelisk Range to the Clutha River. Many years ago shafts were sunk at different points, as can be seen at the present day. As far as I can learn, these shafts did not attain a much greater depth than 50 ft., at which depth the necessity arose for winding and pumping plant. This was not provided and the reef has lain idle ever since. Quite recently the property was pegged out and prospected to a limited extent.

Serpentine.

Quartz-mining has been at a standstill in this district since the year 1891, when the Golden Gully United Quartz-mining Company ceased operations. Official returns of crushings in 1890 show that some good stone exists in this field, 130 tons of quartz having then yielded 221 oz. of gold. There are several known reefs in the district, but owing greatly to the fact that the Serpentine is at a high altitude the country has not been thoroughly prospected. This district is worth the attention of prospectors. Entrance to the Serpentine is by way of the Otago Central Railway to Waipiata. A ten-head stamper-battery, water-driven, is in working-position on the field. Mr. John Cogan, Patearoa, owner.

Rough Ridge.

Rough Ridge Quartz Reef, Rough Ridge (F. H. Perry).—This mine and battery have been idle throughout the year. There are several reefs on this field which have been worked by adits in the past, but a suitable shaft would be required to ascertain the value and permanency of the lodes at depth.

Waipori.

O.P.Q. (*Waipori*) *Gold-mining Company* (*Limited*).—This property is still idle. Parts of the machinery applicable to other mines or purposes are being sold and removed from time to time. In sympathy with this property all the quartz reefs and mineral lodes of the Waipori district are being neglected in the meantime. Dredging and alluvial mining have latterly been paramount in this district; but in common with certain other centres these forms of mining are declining here, and the great areas of mountainous country must furnish the mineral wealth of the future. In addition to payable quartz reefs and alluvial goldfields, the minerals scheelite, antimony, cinnabar, copper, and manganese have all been discovered in the district, which includes the eastern slopes of the Lammerlaw Mountain-range.

Milton.

Last Chance Quartz-mine, Canada Reef (Thomas Park, Owner), (Area of claim, 53 acres).—25/5/05: The reef strikes east and west and dips to the south. The width between walls is 7 ft. The quartz is highly oxidized and very friable, explosives not being required to assist in breaking out the lode-material. The shaft was sunk in the hanging-wall to a depth of 90 ft., and operations are being conducted to the rise of the shaft level, all the quartz being wound up the shaft. Ventilation is maintained through passes to the surface. A good class of timber obtained from Southland is used in the mine. Suitable ladders are provided in the shaft. The ten-head battery affords ample crushing-power. Crushing during the year has resulted in an average of 10 dwt. per ton of quartz being saved by amalgamation. The sands are saved with a view to future treatment by cyanide. Ten men are employed about the property. Rules posted. 26/10/05: The mine was revisited on this date, when everything was found to be in good working-order.

Ocean View Reef, Table Hill, Milton (C. Johnston and party).—25/5/05: The success attendant upon operations at the Last Chance Mine has stimulated others to prospect the known reefs in this locality. Johnston and party are engaged prospecting the above line of reef and are taking out a trial crushing. 26/10/05: An extension of the Ocean View Reef has been unearthed—found beneath several feet of overlying clay—and parcels of quartz totalling 123 tons have been crushed from time to time in Park Bros.' battery. Unlike the friable quartz in the Canada Reef, the stone in this reef is hard, compact, and comparatively low grade.

Prospecting.—Other prospectors in the Table Hill district are James Smith and R. Keen, both of whom have done a considerable amount of prospecting-work on the reefs of the district. As Park Bros.' ten-head battery is the only one available in the district, these prospectors find it a difficult matter to get parcels of stone tested. Park's battery is water-driven, and the drought during the season has prevented continuous crushing from taking place. The reef-system of this district deserves more attention being given to it.

Macrae's.

Bonanza Mine, Macrae's (L. O. Beal, jun., Owner).—Operations have been at a standstill throughout the year.

Tait and Party's Mine, Mount Highlay.—27/2/05: Thomas Tait and others took up an area on Matheson's run, Mount Highlay. The property is on the Mount Highlay line of reef and contains quartz carrying payable gold and scheelite. The necessary arrangements are being made to put an up-to-date crushing and concentrating plant on the property.

New Zealand Gold and Tungsten Company, Mount Highlay (Area, 100 acres).—Messrs. W. and G. Donaldsons, proprietors of the Golden Point Mine, have acquired possession of Tait and party's property and portion of Nunn's Mount Highlay Mine, and are proceeding to develop their lease. The machine-site has been excavated, and the erection of the necessary plant is being proceeded with. The plant consists of one Mason rock-breaker for rough crushing, one Blake-Marsden for fine crushing, one 5 ft. Huntingdon mill, and one Wilfley table of the newest pattern. The proprietors prefer the Huntingdon mill for crushing quartz containing scheelite, having found by experience that the scheelite does not slime as readily in the mill as in the stamper-battery. Power will be supplied in the meantime by the Sintz oil-engine, but a Marshall engine and boiler will be installed in the near future.

Highlay Gold and Scheelite Mining Company, Mount Highlay (J. O. Gilmour, Secretary, Dunback), (Area of claim, 20 acres).—This private company bought out Nunn and party, proprietors of Mount Highlay Mine. The property is to be worked for gold and scheelite. The crushing plant (late Mills and party's United) consists of a five-head battery, water-driven.

Golden Bar Quartz-mine, Stoneburn (D. Peddie, Manager), (Area, 49 acres).—28/2/05: The shareholders in this property are all residents of Macrae's. This mine is being worked on good lines. Timber is plentifully used in the stopes and levels. Ventilation good. Rules posted. Explosives well stored and carefully handled. Eleven men are employed in and about the mine and battery. The tailings from the five-head battery are being treated by a cyanide plant managed by A. Tomlinson, a certificated battery-manager. Latest advice from this mine is to the effect that the extension of the main level has opened out a further payable shoot of stone.

Cockerill's Freehold, Macrae's.—28/2/05: Some attention has been directed to this property, the lodes on which are said to contain payable quartz and also scheelite of good quality.

Gilivern Mine, Dunback Hill, Stoneburn (Alfred G. Davies, Owner).—Apparently very little work has been done on this property during the year.

Golden Point Quartz-mine, Macrae's (W. and G. Donaldson, Owners; W. Donaldson, Mine-manager), (Area, 87 acres).—27/2/05: The mine is being worked on the usual safe lines. Timber is freely used in the levels and stopes. The stoped ground is filled in as work progresses. Ventilation good. The crushing plant and concentrating appliances are being driven by water-power, but power is supplied by a 16-horse power Marshall boiler and 14-horse power Marshall engine during dry seasons. Scheelite is still procured and prepared for the foreign market, 55 tons having been obtained during the year. Twenty-seven men are employed in and about the mine and battery.

Ounce Reef, Murphy's Creek, Macrae's.—28/2/05: The original owners of this area, Spiers and Ross, allowed the lease to lapse. The area was then acquired by W. Lidstone and party; and a start has been made to stope out the payable quartz. The reef is small, and the stoped ground is filled in from the hanging-wall. A fair supply of props is kept on the ground. Scheelite occurs in small quantities in the quartz, and it is collected and, I understand, disposed of locally.

Maritana Reef, Golden Point, Macrae's (C. McGill, Owner), (Area, 19 acres).—Several small parallel reefs outcrop on this property, and carry values in gold and scheelite. The installation of an oil-engine to provide power when water is scarce has proved a wise step. Crushing can now be carried

on with more regularity. The Frue vanner is used to save scheelite and concentrates. The mine is now being opened up on a more extensive scale than hitherto. Three men are at present employed.

Prospecting, Macrae's District.—Owing to the high price ruling for scheelite and the success attendant on several of the mines in this district as gold-producing properties, an increased amount of prospecting has been engaged in during the past summer.

Nenthorn.

An area held under license by Hugh Adam, of Dunedin, over Section 3, Block XII, and Section 10, Block XI, is the only evidence that any attention is being devoted to this field.

Barewood.

Barewood Quartz-mine, Barewood (H. S. Mollineaux, Mine-manager).—23/3/05: Stoping operations are being carried out on the rise of the 180 ft. level west, and development-work is being pushed on in the No. 1 level. The mine-workings are in good order throughout. Timber well used. Explosives properly stored and well handled. The shaft and surface plant is in good order. The new five-head battery is working satisfactorily, power being supplied by a Campbell 13 brake horse-power oil-engine. The battery-sands are being saved, and a cyanide plant is in course of erection in order to extract their values. 20/12/05: Above No. 1 level west, stone is being taken out which was regarded as of low value when the rich shoot was previously worked. The increased crushing-power now enables this stone to be profitably worked. It is now proposed to sink the shaft a further 50 ft. As the mine makes from thirty to forty thousand gallons of water per day (and this is raised from the mine by tanks), substantial log dams are being built in the levels to conserve the drainage while sinking operations are in progress. The travelling-passes to the surface have been renewed, and the mine is in good order. Heavy manuka timber is used throughout the workings. Ventilation good. Privy accommodation for the use of the miners has been erected on the surface. Crib is partaken of on the surface, and the mine-workings are kept clear of refuse. A Wilfley concentrating table has been added to the plant. All sands are saved, and two cyanide plants have been installed—one to work in connection with the new battery, and one to treat 3,000 tons of tailings from the old battery. An assay office and all necessary appliances have been erected. Twenty-one men are employed.

Matarae.

Matarae Quartz-mine, Matarae (S. Stevens, Manager).—25/10/05: This mine is situated on Mount Ross Station. Arrangements have now been completed to develop this property, on which past operations have been of a prospecting nature only. Four men are now employed driving an adit level, the present length of which is 400 ft. Only about 40 ft. of backs will be obtainable from this level, so that a shaft will be required to develop the mine thoroughly. The country rock forming the walls of the reef is hard, and very little timber is required. I pointed out that a suitable magazine for storage of explosives should be provided. There is a ten-head stamper-battery on the property awaiting erection. Power is to be obtained at the Taieri River and transmitted by wire-rope a distance of 17 chains to the battery.

SOUTHLAND.

Merrivale.

W. R. Aicken and party have been prospecting for a quartz reef over an area of 50 acres at Orawia. The search was being conducted by ground-sluicing, but at the end of the year no stone had been discovered.

ACCIDENTS.

Quartz-mines (Non-fatal).

21/2/05: W. H. Lidstone, miner, Dunce Quartz-mine, Macrae's, had his right leg broken by a fall of stone while stoping.

21/4/05: A. Hood, miner, Mount Aurum Quartz-mine, Bullendale: Bruised back by fall of clay from side of drive.

12/10/05: John Padgett, miner, Robertson and party's quartz-mine, Alexandra, sustained injuries to chest and back through being struck by a falling beam while engaged erecting battery.

OTHER MINERALS.

CINNABAR.

Waitahuna Cinnabar Company.—Nothing further has been done in connection with this property throughout the year, although efforts are still being made to raise the necessary capital to further develop the mine.

This mineral also occurs in the Upper Nevis in fairly large quantities, and is associated with gold in alluvial deposits.

PLATINUM.

14 oz. 6 dwt. 12 gr. are returned as having been recovered in conjunction with the gold won from the Round Hill Gold-mining Company's Sluicing Claim at Round Hill, Southland.

Platinum is found in small quantities associated with gold in the black-sand beaches of the south and south-west coasts of Otago.

TIN.

The search for this mineral is confined to the Pegasus district, Stewart Island. Prospecting operations have not proved successful, but are being continued.

Copper.

Lodes occur at Reedy Creek, Upper Waitahuna; at Moke Creek, Wakatipu district; and on the Carrick Ranges.

An attempt was made to open up the lode at Moke Creek; but operations were not attended with success, and the property is abandoned in the meantime.

Scheelite.

57½ tons are returned as having been produced and exported during the year from the Macrae's district. The principal producers are Gilmour and party at Mount Highlay, and Messrs. W. and G. Donaldson at Golden Point, the latter being also proprietors of the gold and tungsten mine at Mount Highlay, where crushing and concentrating appliances are now being erected. Some of the scheelite in this district is so pure as only to require to be hand-picked from the quartz. The bulk, however, is saved by concentration after passing through crushing appliances.

Attention has been directed towards the deposits which exist at Burnt Creek, Lammerlaw Ranges, Waipori, and the lodes which occur on Mount Judah, Glenorchy. A syndicate has been formed to exploit the latter at an early date, a mineral license having been secured over an area of 40 acres.

This mineral has also been discovered at the Alta Mine, Bendigo, and in the Lammerlaw Creek, Waipori.

Antimony.

Although lodes occur at Alexandra, Waipori, Mount Stoker, and the Carrick Ranges, no attention has been directed towards them during the year, the principal reasons being the inaccessibility and distance from the seaboard, combined with the low price commanded by crude ore on the Home market.

Manganese.

This mineral is found at Taieri Beach and also at Waipori, Tuapeka. At the prices ruling on the Home market for this mineral there is no possibility of an export trade being established from this colony. The principal supplies of the world come from Russia and Japan, the percentage of ore ranging from 80 to 90 per cent.

Hæmatite.

55 tons 5 cwt. have been taken out by Messrs. McGilvray, Mataura, for use by the Mataura Paper-mills.

Deposits exist in various localities—viz., Clyde, and Table Hill (Milton), the latter deposits being worked on a small scale.

Phosphate Rock.

Mining and burning operations have been carried on during the year by the Ewing Phosphate Company, Clarendon, Otago, and 5,000 tons of phosphate rock have been produced for treatment at the chemical works at Burnside.

A considerable quantity has also been raised by the Milburn Lime and Cement Company from the company's Milburn property.

Deposits of this mineral have been discovered near the Waiau River, Southland.

Limestone.

About 20,000 tons for building and agricultural purposes were produced by the Milburn Lime and Cement Company, Milburn, Otago, during the year. Also 260 tons by the Springburn Lime and Coal Company, Staveley, Canterbury.

Marl.

The expectations that the property at Burnside would have reached a productive stage on a large scale during the year have not been realised. It is understood, however, that arrangements are well forward to commence operations and equip the property with the necessary machinery. 800 tons of marl have been raised from an adjoining property and utilised during the year by the Milburn Lime and Cement Company.

Fireclay.

Used for the manufacture of fireclay goods, bricks, and sanitary pipes.

The following outputs have been returned: Springfield Colliery, Springfield, Canterbury 137 tons; Homebush Colliery, Glentunnel, Canterbury, 480 tons; P. McSkimming, Benhar, South Otago, 1,800 tons: total, 2,417 tons.

Building-sand.

14,484 tons of building-sand were produced during the year from the coal-measures of the Green Island coalfields for use in Dunedin and surrounding districts.

Greenstone.

The extensive deposits discovered and opened up at Milford Sound, Otago, have not been further worked during the year. Operations have been suspended pending the introduction of new capital to further exploit the property and to equip the mine with the necessary machinery.

HYDRAULIC SLUICING AND ALLUVIAL MINING, INCLUDING GOLD-DREDGING.

OTAGO.

Glenore.

Alluvial mining in this district is now represented by the operations of the Gold Bank Dredge, a privately owned concern. This dredge was built to operate on the breccia conglomerates underlying the superficial gold-bearing wash already worked by dredging, but the venture has not yet proved successful.

A. Ferguson and G. Pettigrew are engaged ground-sluicing, and are prospecting for a reef in the valley above Glenore. Gold (evidently shed from a reef) has been found.

Manuka Creek.

Manuka Gold-mining Company (Limited), Manuka Hill (Adam McCorkindale, Manager; R. Pilling, jun., Lawrence, Secretary), (Area of claim, 6 acres).—This claim is now being worked by ground-sluicing in a systematic manner. Improvements have been effected with regard to the water-supply and the hydraulic-sluicing plant. The face is 30 ft. in height, and being composed of quartz grits is easily broken down and washed away. The gold obtained is very fine. The tailings are deposited in the Manuka Valley, and have been the source of railway-ballast supply for many years. The friction hitherto existing between the claim-holders and the farmers in the valley of the Tokomairiro River would now appear to have ceased in regard to the alleged pollution of the stream.

Waitahuna.

Upper German Flat Hydraulic Sluicing Claim (Frank Bell, Manager).—Three working-shareholders find remunerative employment in this claim of 14 acres.

Waitahuna Gully.

City of Dublin Sluicing Claim (J. Ferris and party).—The breccia conglomerate is brought down by large blasts, and further disintegration is effected by spalling and sluicing the material down a paved ground-sluice.

Quilter and Sons' Hydraulic Elevating Claim (Hugh H. Quilter and sons).—Two men still find employment in this claim. The water-supply being poor, operations are not conducted on a large scale.

Thompson and Party, Norwegian Claim (C. Thompson, Manager).—Work done on the cement-deposit in this claim has proved it to be payably auriferous, but extremely hard to break down. The operations of the company will probably be confined to the deposit for the future. Five men are employed.

Sailor's Gully (Waitahuna) Gold-mining Company (Limited) (A. Barr, Manager).—This company continues to work the claim with fair success. The plant is operating on the cement-deposits. Four men are employed.

Waitahuna Gold-dredging Company's Claim (W. Adams and party, Owners; Frank Whelan, Manager).—The extension of the German Flat water-race to command this claim having been completed, hydraulic sluicing and elevating operations were commenced and have been carried on with fair success. The claim is lit at night time by electric light.

Dredging.—Of the three privately owned dredges indicated in last year's report, two continue to operate profitably. The Gordon dredge was closed down during the year, and will probably be dismantled for removal to Victoria.

Wetherstone's.

Golden Crescent Hydraulic Elevating Company (W. Kemp, Manager).—This claim continues to be worked on the usual lines with fair success. The shallow alluvial portion of the claim has now been worked over and operations are being conducted on the conglomerate-deposit. Owing to the hardness of the conglomerate and the poor water-pressure available, great progress cannot be made. The deposit here dips away sharply, and was blocked out on the bottom by Gasgoigne and party in the year 1880. The claim is lighted by the electric light. Eight men are employed.

Golden Rise Hydraulic Elevating Company (W. R. Smythe, Manager).—Seven men have been employed in this claim throughout the year. Operations are being conducted on the usual lines on Wetherstone's Flat with good results. The electric light is used on this claim for night-work.

Local Industry Gold-mining Company (George Dunnett, Manager).—The claim in Wetherstone's is now worked out, and the race is being extended two miles to command a claim taken up in the lower end of Gabriel's Gully, above Lawrence Township. It is expected that this portion of the gully will pay for reworking. Four men are employed.

Paulin's Sluicing Claim.—The plant lately in operation at Bungtown has been transferred to work Paulin's Gully and adjoining terrace ground. The Happy Valley dredge obtained good returns up the flat to a line opposite this gully, where the gold-bearing wash cut out. The property is on the line of strike of the Blue Spur breccia conglomerates through the country.

Dredging is now a thing of the past in this district. The Happy Valley dredge has been removed to the Pomahaka River at Kelso.

Tuapeka.

Blue Spur and Gabriel's Gully Consolidated Gold-mining Company, Blue Spur (J. Howard Jackson, General Manager; J. Uren, Mine-manager).—Gold was discovered in Gabriel's Gully by Gabriel Read in the year 1861, when operations were conducted in the alluvial deposits lying in gullies and on the neighbouring terraces. In 1862, the miners commenced to extract gold from the breccia-conglomerate

deposit forming the divide between Gabriel's Gully and Munro's Gully. For many years the richest parts of the deposit were driven out and the material crushed in stamper-batteries. In 1881 the Blue Spur and Gabriel's Gully Sluicing Company (Limited) started operations in the bed of Gabriel's Gully, where there was an accumulation of tailings deposited from the cement-workings. In order to treat these tailings profitably, the late Mr. J. R. Perry introduced from America and afterwards improved the system of hydraulic sluicing and elevating which became general in use on the Otago goldfields. This claim continued operations until 1888, when, as the result of the amalgamation of all the claims on the Gabriel's Gully side of the cement-deposit, the Blue Spur and Gabriel's Gully Consolidated Company was formed, having its headquarters in London. Mining operations were commenced in 1888, and have been carried on continuously ever since. All the available area of tailings was first worked, so as to carry up an underground drainage channel and also to have worked-out ground on which to dump tailings from the cement-workings. The company acquired valuable water-rights from Beaumont and Waipori watersheds, and was thus enabled to concentrate a large body of water under splendid pressure upon the deposit, with the result that part of the spur has been almost completely broken down and sluiced away, while Gabriel's Gully itself has been filled with tailings from the claim to a depth of from 90 ft. to 100 ft. Work in the claims continues to be carried on in the usual safe manner, the mine having been practically free from accident during recent years. The solid "cement" is shattered by heavy charges of roburite, being subsequently sluiced away from the face and further broken by the workmen with spalling hammers, thence conducted by lengthy paved races to the elevators, where final runs of boxes are in use with gold-saving appliances for recovery of the balance of fine gold which had not been retained by the paved sluicing-runs. Twenty-eight men are employed in and about the claims. Mr. J. Howard Jackson, general manager of the company, supplies the following interesting extracts from his annual report to the London board of directors: "The mean value of the gold per cubic yard of cement works out this year at 3·7 gr., a slight improvement on last year, and, I believe, a world's record for low-grade dirt worked without loss. The 1,722 oz. of gold saved would form 4·644 cubic inches, and 104 millionths of the volume of cement handled in getting it. The above reads uncommonly like a newspaper snippet, but it illustrates in a way the proportion of things at Blue Spur. The dirt is most undeniably low-grade, and requires cautious handling to be made to yield even the meagre margin of profit actually secured. Subjoined are details of the year's work and results: Total gold won, 1904–5, 1,524·8 oz., value £6,062 6s. 2d.; total gold won, 1905–6, 1,721·9 oz., value, £6,836 5s. 5d.: an increase of 197·1 oz., and £773 19s. 3d. Total expenditure, 1904–5, £4,558 10s. 1d.; 1905–6, £4,895 10s. 2d.: an increase of £337 0s. 1d. Deducting the amount referred to above, £200, leaves the actual increase £137 0s. 1d., which is accounted for by the larger number of hours worked. The mean value of the gold contents of the cement treated for 1904–5 was 3·603 gr., or 7·11d. per cubic yard; for 1905–6, 3·717 gr., or 7·435d. per cubic yard: an increase of 0·114 gr., or 0·324d. per cubic yard—a very slight difference of under ½d. per cubic yard. No. 1 Division was worth 3·331 gr., or 7·11d. per cubic yard; No. 2 Division was worth 3·717 gr., or 7·434d. per cubic yard. One requires to be very familiar with low-grade dirt to be able to view these figures without a shudder, when the amount of heavy work necessary to save 1,722 oz. of gold from 333,500 tons of hard-cemented breccia, all of which lies below sluicing-level, is intelligently considered. The value of the cement worked last year was 16s. 8d. per hour (4 dwt. 5 gr.); this year the value is 17s. 9d. per hour (4 dwt. 11 gr.): an improvement of 6 gr., or 1s. 1d. per hour. The cost of winning the gold has been £2 16s. 6½d. per ounce, or 71·61 per cent.; last year the cost was £2 19s. 9½d. per ounce, or 75·19 per cent.: a decrease of 3·58 per cent. Thirty hours' less dumping were necessary this year than last, the cost of which has been, on the basis of what the water used for the purpose would have earned had it been possible to use it for sluicing: Pumping, 525 hours at 17s. 9d. per hour, £465 8s. 9d.; less 71·61 per cent., £333 6s.: cost of pumping, £132 2s. 9d. Cost last year, £115 16s. 6d.: an increase of £16 6s. 3d. The total quantity of water used for all purposes during 1904–5 was 626,321,300 cubic feet in 7,228 hours sluicing and 555 hours pumping—7,783 hours; during 1905–6 613,879,000 cubic feet in 7,653·5 hours sluicing and 525 hours pumping—8,178·5 hours: being 12,442,300 cubic feet less, 425·5 hours more for sluicing, 30 hours less for pumping, and 395·5 hours more altogether; which exhibits a less water-supply more advantageously applied. In other words, the efficiency of both elevators and pump has been increased by remodelling them in such manner as to allow the use of smaller jets, with the result as shown above, that with 12½ millions of cubic feet less volume of water 395·5 hours more work has been done. The pump has worked very well and has given no trouble. It has maintained its previous efficiency. The ratio of sluicing and pumping water is shown by the following figures: Sluicing-water—No. 1 Division 317,520,000 cubic feet, No. 2 Division 275,569,000 cubic feet, total 593,089,000 cubic feet; pumping, 20,790,000 cubic feet: total 613,879,000 cubic feet, or 3·3866 per cent. Last year the percentage was 3·3910, a barely perceptible difference of 0·0044 per cent. The head-races furnished a water-supply for sluicing during 1904–5 of 903·5 eight-hour days; 1905–6, 956·8 eight-hour days: an increase of 53·3 days. And this water was subdivided and applied as under: 1904–5—No. 1 565·6 days, No. 2 338 days, total 903·6 days; 1905–6—No. 1 490 days, No. 2 466·8 days, total 956·8 days: an increase of 53·3 days. The working and upkeep of the head-races for the year has cost—Ordinary wages, £605 16s.; timber-cartage and wages extra, £38 16s. 5d.: total, £644 12s. 5d. Rather more roburite has been used this year than last, more hours have been worked, and consequently more blasting has been necessary. Explosives in 1904–5 cost £426 4s. 8d., in 1905–6, £597 3s.; an increase of £170 18s. 4d. Blast fired in No. 1 face, 24th February, £90. The cost of this blast should really be debited to the current year as no gold has been won from the cement dislodged by it. Wages paid in 1904–5 amounted to £3,001 1s. 2d., in 1905–6, £3,175 9s. 2d., an increase, due to extra hours worked, of £174 8s. The following is a statement of work and values for the year 1905–6:—Sluicing: No. 1 Division, 3,919·5 hours; No. 2 Division, 3,734 hours: total, 7,653·5 hours. Cement: No. 1 Division, 97,987·5 cubic yards; No. 2 Division, 124,342·2 cubic yards: total,

222,329·7 cubic yards. Gold: No. 1 Division, 680·15 oz.; No. 2 Division, 1,041·74 oz.: total, 1,721·89 oz. Value per cubic yard: No. 1 Division, 3·332 gr., 6·66d.; No. 2 Division, 4·021 gr., 8·04d: mean value, 3·7175 gr., 7·435d. It affords me much pleasure to record that no accident, either to men or plant, has occurred, and to attribute our immunity to the mine-managers' constant and careful vigilance. Mr. John Uren, whose attention to his duties throughout the year has been unremitting, is especially entitled to commendation for his management during my absence on sick-leave."

Kitto and Party's Hydraulic Sluicing and Elevating Claim, Munro's Gully.—Work has been continued on the usual lines throughout the year. The cement-face is brought down by blasts of roburite. It is then broken up by hand and sent through the elevator, whence it is discharged down the sluice-boxes. Nine men are employed.

Tuapeka Sluicing Company, Munro's Gully.—This plant is operating on the shallow gullies and terraces bordering the Tuapeka Creek. The gold-bearing wash is found on the rock bottom, overlain by a heavy deposit of clay, in some places 20 ft. in depth.

P. P. Thomas and Party's Claim, Munro's Gully.—Sluicing operations are being continued on the terraces bordering Munro's Creek. These have been partially worked in former days by driving and blocking out. Vertical pressure, 100 ft.; height of terraces, 25 ft. I instructed Mr. Thomas to give the back face more batter for the safety of the workmen.

John Roach and Party, Tuapeka Flat.—The claims for compensation by freeholders along the line of race have been satisfactorily adjusted by arbitration. During the year the water-race from Gabriel's Gully was cut in, as many as seventeen men having been employed while the work was in progress. It is now proposed to proceed to lay down the necessary pipe-line and sluicing plant and proceed to ground-sluice the terrace portion of the claim. These terraces were profitably worked by hand-labour in the early days. So much attention has been devoted to the possibility of working these terraces profitably that it is now proposed to bring in a water-race from the Little Beaumont River. This work was started many years ago, but abandoned for financial reasons.

Tamaiti Gold-mining Company, Tuapeka Flat (A. N. Wakefield, Manager).—This company has been formed by the amalgamation of the interests held by Hogg and party and by Wakefield and party, as indicated in last year's Mines Report. The ground to be worked comprises terrace ground adjacent to the Tuapeka River and extending for a distance of about seventeen miles in length. This ground was partially mined in early years from shafts and drives, but was too wet for continued hand-labour. The working capital of the company is £2,250, and with this amount it is proposed to throw a crib weir across the bed of the Tuapeka River to dam the water back to a height of 30 ft. and also to instal a turbine to provide power for a high-lift centrifugal pump. It is estimated that sufficient power will be obtained to elevate five Government heads of water to a vertical height of 150 ft. The water will then be used for hydraulic sluicing in the ordinary way.

Thomas McLeod and Party, Tuapeka Mouth.—At one time Tuapeka Mouth supported a fairly large mining population, employed along the Tuapeka River and adjoining terraces. When fall was lost for ground-sluicing the ground was abandoned, and has lain idle for many years. It is now proposed to follow the example of the Tamaiti Company and instal a similar plant to enable work to be resumed on these terraces.

In the issue of the 16th December, 1905, the New Zealand Government *Mines Record* has an interesting article dealing with the successful application in Oregon and Alaska of this method of applying water-power to enable placer-beds 400 ft. above the stream-level to be worked.

Dredging.—The greatest number of dredges ever at work in this district was five, and of this number only two are now in operation, the Gabriel dredge having closed down permanently. The ground operated on by the dredges in this district consisted principally of shallow ground previously worked by hand-labour, hence the dredges were enabled to rapidly exhaust large areas.

Waipori.

William Brown and Party's Sluicing Claim, Bungtown Flat.—This hydraulic sluicing and elevating plant was operating on ground previously turned over by Europeans and Chinese. To make the venture payable a plant of large capacity was consequently needed. Unfortunately, the plant was small and the pressure obtainable was low, so that the venture proved unremunerative. Operations have ceased, and the plant has been sold for removal to Happy Valley, Wetherstone's.

Golden Padlock Hydraulic Elevating Claim, Mitchell's Flat (J. Gare and party), (Area, of claim, 4 acres).—Sluicing operations were suspended at the time of my visit, while a tail-race was being brought up to enable work to be carried on to a deeper level. In the meantime some ground-sluicing was being done on the Waipori side of the hill. Four men generally at work.

Reef Creek Hydraulic Sluicing and Elevating Claim, Mitchell's Flat (F. Knight, Owner).—This claim was let on tribute to Eaton Bros., but work having been discontinued, chiefly owing to the unreliability of the water-supply, portion of the plant has been removed to Nor'-west Creek to be used there in connection with the excavation of Messrs. Knight Bros.' reservoir.

Farrell's Deep Lead Hydraulic Sluicing and Elevating Claim (R. J. Cotton, Lessee).—This claim and water-right having been leased to Richard J. Cotton, operations are being continued on Lammerlaw Creek and adjoining shallow terrace-ground. Several large paddocks have been taken out to an average depth of 12 ft. The material is easily turned over, and operations have been carried on with a fair measure of success. The plant and claim is in good working-order. Seven men are generally employed.

Lammerlaw Creek Hydraulic Gold-mining Company (W. E. Caldwell, Manager; W. and F. Knight, Owners).—Sluicing operations in the claim on Lammerlaw Creek have been steadily conducted throughout the greater part of the year, but towards the end of the year there was a temporary cessation of work. The plant was transferred to Nor'-west Creek to be used there in connection with the excava-

tion of a site for a large dam which the proprietors are building to conserve water. The water from this source is to be used for hydraulic mining and for driving dredges equipped with Pelton wheels. The probable cost of the undertaking will be £1,000; but the proprietors consider the work necessary with regard to future gold-mining on Waipori. Owing to the rapid exhaustion of the auriferous areas with which the present-day appliances are fitted to cope, the dredging industry is declining in the district. Holders of water-rights now have to seriously consider the best application of these rights to open up new alluvial ground. The question of consolidation of water-rights is also involved in this. Much of the ground turned over by the present-day steam-driven dredges will pay for working again provided that large plants capable of turning over a great amount of material and being cheaply driven are used. In addition to this, ground proved to a depth of 80 ft. has not yet been worked, and large power is necessary to deal with this ground. With regard to the construction of the dam, nothing is being spared to make the work satisfactory. The schist rock of the locality affords good building-stones, which are conveyed by tramway direct to the walls. Two stone walls are being built 90 ft. apart at the base and 50 ft. apart at the top. The walls are each 10 ft. at the base and 5 ft. at the top, being carried to a height of 30 ft. The site of the dam-walls will allow of the embankment being carried much higher should the necessity arise in the future. The outer face of the structure has a batter of 1 in 6 and the inner face 1 in 1. A novel method of filling in the intervening space between the walls has been adopted. An elevating plant has been erected in the flat which forms the dam-site. The material treated is payably auriferous, and the gold is saved in the elevator-boxes. The tailings, which are composed of clays and gravels, are discharged into the space between the walls. There is every indication that this method will prove successful, while it has also the advantage of being cheap and expeditious. The area of the water-surface will be about 11 acres. Ten men are employed on the work, the completion of which is estimated to take eight months from the date of inception.

Sew Kew and party, Lammerlaw Creek (Area of claim, 40 acres).—Hydraulic sluicing and elevating operations have been continued during the year, four men being employed in the claim. There is still a large area of ground to be worked, and the owner has disposed of the property for a satisfactory figure to Nicholson and party, Waipori, who will continue to work on the usual lines.

Bakery Flat Hydraulic Sluicing and Elevating Company, Upper Waipori (J. T. Johnson, Manager), (Area of claim, 84 acres).—This claim has been worked by hydraulic sluicing and elevating during the year with fair results. The bottom worked to is in places either the schist country rock or the quartz drift filling a deep and tortuous ravine which traverses the length of the claim. It is proposed now to bring the plant and water-supply up to their highest state of efficiency and make an attempt to bottom this channel. A previous attempt to effect this failed at a depth of 61 ft. owing to heavy drainage from the river. Should this undertaking be successfully accomplished and payable auriferous washdirt be discovered, the life of mining in Waipori will be prolonged indefinitely, as this deep lead extends through the valley for about twelve miles.

Golden Point Hydraulic Sluicing Claim, Upper Waipori (D. O'Brien, Manager).—This plant is now operating in shallow ground near the Waipori River. The claim continues to be worked on the usual lines with fair success. Four men usually employed.

Post-office Creek Hydraulic Sluicing Claim, Lower Waipori (J. R. Parker, Manager).—Owing to the poorness of the water-supply and the heavy nature of the material to be sluiced away, work in this claim is not of a very progressive nature. Four men are usually employed.

Munro and George's Hydraulic Sluicing Claim, Lower Waipori.—The plant has been transferred to the lower end of the claim and a large paddock opened out on the Post-office Creek deep lead. The run of gold-bearing wash is very narrow on the bottom, but is, however, fairly rich.

The gullies and creek-beds of the Lammerlaw and Lammermoor Ranges still afford employment to a number of individual miners during the summer season.

Dredging.—Two dredges ceased operations during the year and were dismantled; eight continue to work, seven of these being owned by private or semi-private parties. The most payable areas on Waipori Flat are now about worked out, the remaining ground being such as will support parties of working shareholders only. O'Brien's application of water-power continues to be a success in this district and has enabled the poorer areas of ground to be worked profitably.

Beaumont.

Champion Hydraulic Sluicing and Elevating Company (Limited), (R. Pilling, jun., Secretary, Lawrence; John Fahey, Manager).—Operations were continued during the early part of the year without success. The ground farthest from the river has now been worked out, and future operations (if continued) must be carried out on the river-frontage. The ground is deep and the drainage is consequently heavy, hence the work is considerably hampered. As the outcome of these difficulties, the company sold its water-rights, plant, and claim to J. Fahey and others, who have formed a small company known as the Plunket Gold-mining Company to carry on operations. Should the present proprietors not be successful, the water might be applied to terrace and flat ground further down the Clutha River, below Beaumont, or it could be cut in to the Tuapeka district, where there is ample scope for its application. The carrying-out of either proposal would, however, demand considerable expenditure.

J. Buchanan has a ground-sluicing claim on terraces containing river wash below Beaumont. The water-supply is intermittent.

Dredging.—The New Paul's Beach dredge, situated seven miles below Beaumont and owned by Mr. William Adams, Dunedin, is the only one working in this district. Operations have been carried on during the year with a fair amount of success. The Golden Gravel dredge has been transferred to the Rosedale Syndicate's claim, Waikaka Valley.

Island Block.

Island Block Gold-dredging and Sluicing Company, Island Block (D. Weir, Manager).—The company's dredge has been idle throughout the year, and I understand it is not the intention of the company to resume dredging operations at present. The sluicing plant has continued to work steadily, with profitable returns, and prospects were bright at the end of the year. The claim and plant are in good working-order. Fourteen men are generally employed.

Tallaburn Hydraulic Sluicing Company, Tallaburn (John Whelan, Manager), (Area of claim, 86 acres).—The greater part of the claim consists of shallow ground with very uneven schist-rock bottom. A start was made in the winter to work up the river-beach portion of the claim while the river was low. The claim is being worked economically and systematically, and shareholders are receiving good dividends. The claim and plant are in good working-order. The electric light is provided for use during night-work. Six men are employed.

Cooper and Party's Hydraulic Sluicing Claim.—This party purchased Robert Stewart's claim on the bank of the Clutha River. The original water-race and fluming are considerably out of repair, and pending their reconstruction the dam is filled with by-wash water from the Island Block Company's pipe-line. This supply enables three men to work day shift in the claim for six days in the week. There is a gutter running through the property from which the auriferous wash requires to be elevated.

Gunton's Beach Hydraulic Sluicing Claim, Horse-shoe Bend (Madden and Myers, Owners).—This claim affords remunerative employment to two working shareholders and one wages-man. Owing to the water-supply being light, the plant has been shifted from the deep run of ground, and the shallow ground is now being worked.

Dredging.—The Otago No. 2 dredge has continued to work throughout the year with good results. Johns and party have taken up a claim above and adjoining the Otago Claim and are removing the New Golden River dredge thereto. The Island Block dredge has been idle all the year.

Miller's Flat.

Golden Run Hydraulic Sluicing and Dredging Claim.—As indicated in last year's report, the pressure-pipe line has been continued across the Clutha River. Two masonry piers were erected and the pipes suspended from wire-ropes. The water is now used for sluicing off the loam overlying the heavy river wash. This relieves the dredge from the problem of dealing with a large body of silt which involved maintenance of special machinery and consumption of power. The company employs an average of thirteen men on the property.

Dredging.—Nine dredges are in operation round about Miller's Flat, on the Clutha River. The older type of dredge is being gradually superseded by up-to-date machines. As the river portions of the several claims reach the point of exhaustion the dredges are undertaking the heavier task of working the river-bank portions of their holdings. That the auriferous ground continues into the banks is assured by the returns from the Golden Bed, Golden Run, Golden Treasure, and other dredges, the two first-named having secured as high as 90 oz. of gold per week. Thus, there is evidently a long life before the dredging industry in this district.

Kelso.

McKenzie and Party's Hydraulic Sluicing Claim, Lower Pomahaka.—The plant on this claim was idle for the greater part of the year and has recently been sold to the Duntulm Hydraulic Sluicing party. The claim will be given a further trial, and should the test not prove successful the owners intend to remove the plant to their property on the Fraser Basin, Obelisk Range.

Dredging.—The Ardmore dredge continues to work profitably at Greenvale. The Happy Valley dredge (Wetherstone's) has been removed to a claim on the Pomahaka River below Kelso. This district is attracting some attention as a dredging-field.

Roxburgh.

Hercules Sluicing Claim.—Apparently no advance was made during the year with the proposal to further utilise this plant and water on Anderson's Flat. The plant and claim are still idle.

Roxburgh Amalgamated Mining and Sluicing Company (Limited), (J. H. Waigth, Manager).—A large body of good wash was exposed in an ancient river-bed further back in the flat than had previously been found, and operations at the claim have been carried on profitably during the year, enabling a dividend to be declared. The mine has been worked on the usual lines, having due regard to the efficient working of the property and to the safety of the men employed. Large blocks of ground are stripped ahead from time to time, and the bottom wash sent through the elevators. There are generally two elevators in position on the claim. The workings are lighted at night by electricity. Eighteen men are usually employed. Mr. Waigth, mine-manager, has invented and applied a simple elevator-throat protector or regulator to prevent the passing of large-sized stones and consequent choking of the lift.

Ladysmith Gold-dredging Company (Limited), (W. Donnelley, Manager).—The plant has been transferred from the old position to the upper end of the claim, where a large paddock has been taken out. With the increased water-supply and pressure better work is now being done. Twenty-four heads of water are brought on to the claim under a vertical pressure of 158 ft. Height of lift, 30 ft.; dirt-pipes, 18 in. in diameter; throat, 11 in.; jet, 4½ in. Nine men are employed.

Commissioner's Flat Sluicing Claim, Coulter and party (R. George, Manager).—Sluicing operations at this claim are being continued on the same lines as formerly with successful results. Four men are employed.

Pleasant Valley Hydraulic Sluicing Claim, above Coal Creek Flat (McPherson Bros., Owners; F. Swanwick, Manager), (area of claim, 10 acres).—The plant and water-supply having been placed in good working-order, sluicing operations were continued throughout the year. Four men are employed.

Golden Gate Sluicing Claim (*Manuel Bros.*), *Coal Creek Flat* (Area of claim, 12 acres).—Four men find profitable employment in this privately owned claim, which is worked by hydraulic sluicing and elevating.

Butterfly Sluicing Claim, Teviot (Weatherall Bros.).—This claim was not worked constantly during the year. When in operation the claim affords employment for two men.

Dredging.—There are six dredges operating successfully in this district on the Clutha River. Two of these dredges during the year passed into the hands of parties composed mainly of working shareholders, and have since been successfully worked.

Bald Hill Flat.

Carroll and Lynch's Sluicing Claim.—This claim was worked to a point at which apparently the auriferous ground cut out. Since then the plant has been shifted back to work out blocks of ground left behind by the Last Chance Company.

Ewing and Dowdall's Hydraulic Sluicing Claim.—This plant was operating on freehold land, and the available area having been worked out, operations were suspended.

Last Chance Hydraulic Sluicing and Elevating Company (J. McNeish, Manager).—A large area of shallow ground was sluiced away during the season. Lately the plant has been shifted from the flat to command an area of terrace ground, which is rough, and from which good results are expected. Operations during the year have been conducted with fair success. Ten men are usually employed.

Duntulm Hydraulic Sluicing Party, Fraser Basin (W. Nicholson and party, Owners).—The water-rights and claims formerly belonging to the Fraser Basin Gold-mining Company have been acquired by the above party. It is the intention of the owners to equip the claim with a suitable hydraulic sluicing plant, and resume operations in September, 1906.

It is apparent that the best portion of the auriferous area of the flat is now worked out. Three hydraulic plants have been operating for many years, and have sluiced away a large area of ground. Any future work must be done on blocks of solid ground and terrace ground. It is considered in this district that when the water-supplies are diverted to command the higher slopes of the Old Man (or Obelisk) Range payable reefs will be discovered, as was the case with the Excelsior and White's Reefs. Sluicing operations are now being conducted with a view to locating extensions of these reefs. There is a large field here for the employment of *bona fide* prospectors.

Dredging.—Although the past season has not been very favourable for gorge-dredging, still the New Fourteen-mile Beach dredge was enabled to win 1,335 oz. of gold. The New Golden River dredge, after continued reverses through high river and travelling drift, was forced to close down, and has been sold and transferred to a claim below Miller's Flat.

Naseby.

The following short description enumerates the claims at work in this district:—

Enterprise Gully.—Henry Moore—4 heads of water from E. and W., Eweburn creeks; elevating 16 ft.; 2 men. Lancelot Hore—4½ heads of Government water; elevating 16 ft.; 2 men. W. Guffie—4½ heads of Government water; elevating 16 ft.; 2 men. F. W. Inder and Co.—4 heads of Government water; elevating 18 ft.; 2 men. Enterprise Company—4½ heads of water from E. and W., Eweburn creeks; elevating 20 ft.; 2 men. Marslin and Paisley—5 heads of Government water; elevating 16 ft.; 2 men. Brown Bros.—4 heads of Government water; erecting plant and starting shortly; 2 men.

Hogburn Gully.—John Hore—6 heads of water from Dead-level Company's race; elevating 26 ft.; 2 men. Lock Lung and party—4 heads of water from Little Mount Ida water-race (renting); elevating 20 ft.; 2 men. Charles Hore—4½ heads of Government water; elevating 20 ft.; 2 men. Naseby H.S. Company—4½ heads of Government water; elevating 20 ft.; 2 men. L. J. Hore—4¾ heads of Government water; elevating 20 ft.; 2 men.

Home Gully.—Hugh Tait—4 heads of Government water; elevating 12 ft.; 1 man.

Robinson's Gully.—R. Paisley—4 heads of Government water; elevating 16 ft.; 2 men.

Spec Gully.—John Hore—4 heads of water from Dead-level Company; elevating 16 ft.; 2 men. Inder and Cutten—6 heads of water from the Hit or Miss race (rented); elevating 16 ft.; 3 men. Fred Hore—4¼ heads of Government water; elevating 16 ft.; 2 men. N. S. Reed—4½ heads of Government water; elevating 16 ft.; 2 men.

Coalpit Gully.—Michael Lenane—1 head of water from E. Eweburn, ground-sluicing; 1 man. Matthew Young—1 head of Government water; ground-sluicing; 1 man. Peter Rumble and Son—1 head of Government water; ground-sluicing; 2 men. A. and G. Brown—4 heads of Government water; going to elevate; 2 men.

Enterprise Gully.—C. Rumble and Son—2 heads of Government water; ground-sluicing; 2 men. Hugh Young—2 heads of water from E. Eweburn; ground-sluicing; 1 man.

Main Gully.—Hugh Young—1½ heads of water from E. Eweburn; ground-sluicing, Maori bottom; 1 man. Lee Gin—1 head of water, private; ground-sluicing, Maori bottom; 1 man. Enterprise Company—2 heads of water, private; ground-sluicing, Maori bottom; 1 man. W. Dowdall—2 heads of Government water; ground-sluicing, Maori bottom; 1 man. R. Moore—1½ heads of Government water; ground-sluicing, Maori bottom; 1 man. G. Currie—1½ heads of Government water; ground-sluicing, Maori bottom; 1 man. J. Moore—1½ heads of Government water; ground-sluicing, Maori bottom; 1 man. Kong Sing—1 head of Government water; ground-sluicing, Maori bottom; 1 man. Kum Gow—1 head of Government water; ground-sluicing, Maori bottom; 1 man. Chin Sang—1

head of Government water; blocks and pillars, old ground; 1 man. Mee Hock—1½ heads of Government water; ground-sluicing, old ground; 1 man. Robert Baxter—1 head of Government water; ground-sluicing, solid ground; 1 man. J. McGrath—1 head of Government water; ground-sluicing, solid ground; 2 men.

Mulholland's Gully.—Chinese—1½ heads of Government water; ground-sluicing, solid ground; 3 men.

Home Gully.—Chinese—1 head of Government water; ground-sluicing, solid ground; 1 man.

Robinson's Gully.—Chinese—1½ heads of Government water; ground-sluicing, solid ground; 3 men.

Spec Gully.—I. Parfitt, jun.—1 head of Government water; ground-sluicing, solid ground; 1 man. Ah He—1 head of Government water; ground-sluicing, solid ground; 1 man. W. Hendricksen—1 head of Government water; ground-sluicing, solid ground; 1 man. Chinese and a few fossickers—old-age pensioners.

Little Kyeburn.—Marchant and party—own water; ground-sluicing; 2 men. Smith Bros.—own water; ground-sluicing; 3 men. Phil. Brown—own water; ground-sluicing; 2 men.

Upper Kyeburn.—M. and J. Brown—own water; ground-sluicing; 4 men. J. Blanchard—own water; ground-sluicing; 3 men. Beer's—own water; ground-sluicing; 3 men. George Stewart—own water; ground-sluicing; 1 man. McLellan's—own water; ground-sluicing; 1 man. Parker's—own water; ground-sluicing; 2 men.

Sluicing is in a healthier condition in Naseby district than has been the case for some few years past. Reduced price of Government water to 10s. per sluice-head per week (one shift daily) has encouraged miners to open up ground which had hitherto been considered too poor to pay wages for working.

Mount Buster Gold-mining Company, Naseby (R. Law, Manager).—The old company went into liquidation during last year. The plant and claims were purchased and work continued in the usual manner, the claim being let on tribute to a party of working-miners, who are doing very well.

Dredging.—This form of mining is not now represented in this district. Roberts's Naumai dredge, formerly operating on Church Flat, Kyeburn, has been transferred to Victoria.

Hamilton's.

A few parties continue to work on this field with the small supply of water available.

Patearoa.

Patearoa Hydraulic Sluicing Claim (D. C. Stewart, Manager).—Sluicing operations have been steadily conducted during the year. The plant is now operating in the flat on ground about 20 ft. in depth. Good results have been obtained. The proposal to erect a dredge on part of the company's property has not yet been carried into effect. Six men are employed.

Drumawhandie Tunnelling and Elevating Company (J. T. and A. G. Crerar, Owners), (area of claim, 6½ acres).—Two men find employment driving out and sluicing the wash.

There are also a few other parties engaged in mining on this field.

Upper Taieri River.

Canadian Flat Hydraulic Sluicing and Elevating Claim.—It is now proposed by a large company to acquire this property and water-rights. The water-race will be completed and a large hydraulic sluicing and elevating plant at present in use at the Red Swamp, Teviot district, removed and re-erected on the Canadian Flat Claim. The water-rights attached to this property are taken from the Upper Taieri River, above the Taieri Falls. The claim consists of an extensive area of alluvial ground said to be payably auriferous.

Fortification Hydraulic Sluicing Company, Red Swamp, Lammerlaw Ranges (John Claffey, Manager).—This company has held a prospecting license over 100 acres of land, but results have not been satisfactory. The plant will in all probability be transferred to the Canadian Flat Claim.

Serpentine.

As indicated in last year's report, mining matters are still very quiet in this district. There is a large field here for the employment of prospectors for alluvial ground and mineral lodes.

Deep Stream.

Deep Stream Amalgamated Hydraulic Sluicing Company (Limited), (A. C. Buckland, Manager).—This claim continues working on the usual lines, but is very difficult to work on account of the uneven nature of the bottom, much of the ground being exceedingly shallow. Two elevators are generally in use. The plant is now opening out on a large area of flat land, which has given encouraging prospects. The ground worked during the year did not afford large returns, hence only one elevator is now in use until better ground is opened out. Fifteen men are generally employed.

Sutton.

Hibernia Claim, Natarals.—There was no one about on the date of my visit, but drives have been put into the face of the paddock, and evidently one man is engaged driving and blocking out the wash-dirt.

Rock and Pillar.

With the exception of prospecting work done by N. Maloney, mining matters are quiet on this field.

Idaburn.

Wheeler and Party's Sluicing Claim.—Two men continue to find employment in this claim.

Blackstone Hill (including Ida Valley).—This district has afforded employment to the usual number of fossickers, who make a good living when water is available. The past season has again been unfavourable for sluicing in this district.

Dredging.—The Cairntrodlie dredge, owned by the Wallis Syndicate, Gore, continued to operate successfully during the year. Some prospecting has been carried on lately with a view to placing other dredges on adjoining ground. This class of mining is hampered during dry seasons through scarcity of water.

St. Bathan's.

Eagle and Gray's Sluicing Claim.—This claim is still idle. It is understood that future working depends upon the deepening of the main sludge-channel.

Scandinavian Water-race Company, Surface Hill (Neil Nicolson, Manager).—Sluicing and elevating operations in this extensive claim have been continued on the usual lines throughout the year. A large amount of material was treated with fair success. Elevating, 100 ft. vertical; face, 130 ft. in height. Twelve men are employed.

United M. and E. Water-race Company (Limited), (W. Pyle, Legal Manager; P. T. O'Regan, Mine-manager).—This claim is worked on a large scale by hydraulic sluicing and elevating, the material treated being finally discharged into the main sludge-channel. Operations have been conducted on the usual lines. Elevating, 64 ft.; Nine men are employed.

Shamrock Gold-mining Company, Hawkdun Station.—The plant has been idle throughout the year, and is for sale.

Kildare Hill, St. Bathan's.—Owing to the great depth at which this claim was worked and the height to which the material required to be elevated, operations have not been carried on for some years, awaiting the deepening of the main sludge-channel. This would obviate the necessity for the great expenditure of power in elevating to present height.

Cambrian's.

Vinegar Hill Hydraulic Sluicing Company (T. Morgan, Manager).—This is the largest plant at work in this district. The face is broken down and the material sluiced through a long ground-sluice. Operations have been conducted on the usual lines throughout the year. Seven men are employed.

Fordham and Gay's Hydraulic Sluicing Claims.—Two men have found employment in this claim during the sluicing season.

The various sluicing claims in this district have continued to work as usual in a small way, and do not call for special comment.

Matakanui.

Undaunted Gold-mining Company (Limited), Matakanui (T. C. Donnelly, Manager).—About 1½ acres have been sluiced away during the year, with highly profitable results. The claim is worked on good lines by hydraulic sluicing and elevating. Nine men are employed.

Tinker's Gold-mining Company (Limited), Tinker's (J. Naylor, Manager).—At the time of my visit operations on the deep lead were discontinued owing to the scarcity of water for elevating purposes. The available water was in use ground-sluicing on a higher level. Seven men are employed.

Matakanui Gold-mining Company (Limited), (W. Norman, Manager), (area of claim, 45 acres).—The claim is being worked as usual by hydraulic sluicing and elevating, and operations during the year have been conducted with fair success. Seven men are employed.

Mount Morgan Sluicing Company (Limited), (James Percy, Manager), (area of claim, 62 acres).—The claim is worked by hydraulic sluicing and elevating. Four men are employed.

J. Symes and Son's Sluicing Claim, Matakanui.—This plant continues in operation on the flat below Matakanui Township.

Drybread Diggings.—Mining operations on a large scale on the auriferous lead traversing this locality are still awaiting the liberation of the water-supplies at present in use at Matakanui.

Devonshire Diggings.—As in the case of the Drybread Diggings, this locality is also unworkable through the lack of a suitable water-supply, and is practically abandoned.

Ophir.—There is an extensive field in this district for alluvial mining, but mining is practically at a standstill for want of water for sluicing purposes. Should the Bonanza water-rights become available for public use, there is ample scope for the application of the water in this district for mining purposes. A syndicate is at present dismantling the Enterprise dredge at Alexandra for removal to the flat above Ophir Township.

Springvale.

Springvale Sluicing Claim, near Alexandra South (J. Gartley, Manager).—Sluicing operations are still being continued on shallow gully and terrace ground in this locality.

Dredging.—The Olrig dredge has worked steadily throughout the year with satisfactory results. The Chatto Creek dredge has been sold to N. Bradley, but has been inactive during the year.

Alexandra South.

Alexandra-Bonanza Gold-dredging and Sluicing Company, Galloway Flat (J. Matthews, Manager; J. Davie, Secretary, Dunedin).—During the greater part of the year sluicing operations were continued on this claim, and a large amount of terrace ground was sluiced away. An offer from the Government to purchase the various dams and water-rights, water-races, and plant belonging to the company for the sum of £13,000 has been accepted by the shareholders. There is a considerable demand for water in this district for mining purposes.

Richmond Hill Sluicing Claim (James Rivers, Owner), (area of claim, 10 acres).—The claim is situated on the so-called "granite" lead, but operations have been at a standstill during the year, chiefly owing to the scarcity of water consequent upon a dry season.

Manorburn Gold-mining Syndicate, Galloway Station.—The syndicate holds a large area of ground under protection. The ground has been prospected and held in the expectation that water to work the claims would be available from the Bonanza water-races.

Golden Bend Gold-mining Company, near Alexandra South (Wallace Carr, Manager).—During the past two years the owners have spent considerable time and money in endeavouring to bottom a shaft on this property. Unfortunately the machinery provided was inadequate to deal with the material and cope with the inrush of water, and this method had to be abandoned. Recently a more powerful engine and boiler were installed and a larger pump procured. An attempt is now being made to bottom by means of a large open paddock. At the time of my visit preparations were being made to erect a string of buckets on the principle of a dredge-ladder. Payable gold is believed to exist in the claim, as the operations of the Golden Link dredge proved gold-bearing wash to exist close by.

Dredging.—The past season did not prove a very favourable one for gorge dredging, principally on account of high river and travelling drift. There are now five dredges at work on the Clutha River below Alexandra Bridge and fourteen dredges at work on the river and in the banks above the bridge. Four of the older type of dredge which were in active operation during the greater part of the year are now laid aside as inadequate for working their respective claims. One has been removed to the Manuherikia River, another to Ophir, while the remainder will doubtless be removed to more suitable claims. The river-course proper is here practically worked, and more attention is being directed to the river-banks and the extensive areas of flat and terrace ground lying between Alexandra, Earnscleugh, and Clyde. That the high terraces are workable has been proved by the Earnscleugh No. 3 (electric-power) dredge, which has continuously dredged to a depth of 57 ft. below water-level, the face ahead being 25 ft. above—in all, 82 ft. of working-face. The operations of this dredging company have been successful, and have proved the auriferous ground to extend into Fraser Flat, while the New Perseverance Company's dredges have likewise proved payable ground to exist in the Dunstan Flat. Three privately owned dredges are now at work on the Manuherikia River flats.

Clyde.

With the exception of a few men, alluvial mining other than dredging is at a standstill in this district.

Dredging.—There were three dredges in active operation on the Clutha River towards the close of the year, and one was idle. The Shepherd's Flat dredge continued to work during the season on the Fraser River.

Cromwell.

On the length of the Kawarau River from Wainga to Cromwell Township there were five dredges in active operation during the dredging season. Below Cromwell, on the Clutha River, there were five dredges at work, three of which have been transferred to claims on the Clutha Basin, at Lowburn. In this latter locality there are now nine dredges in more or less active operation. The ground here is deep and heavy, requiring dredges of a superior class and fitted with the ordinary bucket elevator or with Payne and Peck's centrifugal elevator. As the boundaries of the gold-bearing area are found to extend, new dredges are brought on, and this field promises to support a large fleet of powerful dredges. Sluicing around Cromwell district is limited in extent. It has been proposed to convey water by means of a pipe-line from the Roaring Meg Stream to command auriferous land on Cromwell Flat.

Bannockburn.

There is nothing fresh to chronicle in this district regarding alluvial sluicing, which is confined to a few parties holding water-rights.

Kawarau Gorge.

About two years ago Robertson's Terrace gave promise of proving a remunerative field for alluvial mining. Unfortunately the ground proved to be patchy, and required a large body of water to deal with the overburden, so that very little work is being done on this terrace.

The Kawarau River still continues to yield good returns to the dredges operating thereon.

Cardrona.

The Criffel Lead Sluicing Company (Limited), Cardrona (Ed. Trythall, Secretary, Dunedin; Dugald Macgregor, Manager).—This property is situated on the west side of Mount Criffel, at a height of 1,000 ft. above the valley of the Cardrona River. It was formerly worked by parties of men with small water-rights. The nature of the deposit and surrounding country rock is such, however, as to demand that operations be carried on on a scale of greater magnitude, involving amalgamation of properties and water-rights. This company was formed to acquire the rights and titles to five mining properties on Criffel Face. The amalgamated holding now consists of 44 acres, which is to be increased to 100 acres. The water-rights comprise twenty-six Government heads of water and fourteen miles of water-races. One race, three miles and a half in length, is to be put into repair. The company practically has the control of all the available water in the district, and consequently the command of the whole known extent of the Criffel Lead. The claim is to be worked by hydraulic ground-sluicing, for which there is ample pressure available and unlimited area for discharge of tailings.

Walter Little's Hydraulic Sluicing Claim, Cardrona Valley (Ed. Barker, Manager).—This plant has continued to work across the bed of the Cardrona Valley, and, combined with the result of the operations of the White Star dredge, has proved payably auriferous ground to exist in the Cardrona Valley. The small amount of work done by dredges in the large area of ground extending for some nineteen miles

down this wide valley could not possibly prove the presence or extent of payable gold-bearing leads. As in the case of the Waikaia dredging-field, there is ample scope for the judicious use of boring-rods in this district.

Since the advent of the Criffel Lead Sluicing Company on this field the number of individual miners has been reduced. There are a few parties working on a small scale.

Dredging.—Three dredges were at work during the greater part of the year, two being driven by water-power. Unfortunately the capacity of the Sunbeam dredge was too limited for successful work, and the dredge was closed down.

Luggate.

Luggate Mining Company (R. Pilling, jun., Secretary, Lawrence; J. Johnson, Manager), (area of claim, 15 acres).—This property is situated on Luggate Creek, and is worked by hydraulic sluicing. Three men have been employed, but the returns have been moderate.

With the exception of the above claim, there is very little mining being done in this locality.

Dredging.—The Albertown dredge, owned and worked by shareholders, is still the only one at work in this locality. Knewstubb's Upper Clutha dredge still lies sunk above Luggate Ferry.

Arrow River.

Arrow Falls Sluicing Company (J. A. Millar, Manager), (area of claim, 25 acres).—The property embraces the river-bed and terraces adjoining the Arrow River. Work has proceeded up the flat above the gorge, and the claim is now opened out well. Seven men employed.

The Arrow Falls Claim is the only one of importance in the district. There are a few small claimholders in Bracken's Gully and in the surrounding district.

Macetown.

Anderson and Party, Eight-mile Hill, Arrow River.—Three men still find employment in this ground-sluicing claim when sluicing-water is available.

William Reid and Party, Red Hill, Arrow River.—Sluicing away terrace ground with water conveyed across the Arrow River in pipes.

No new alluvial ground has been discovered in this district, and only a few fossickers are engaged, principally about the old workings on the Arrow River and Twelve-mile Creek.

Glenorchy.

Valpy Bros.' Claim, Glenorchy (Head of Lake Wakatipu).—This is a privately owned hydraulic sluicing claim which affords employment and fair returns to three men.

There are also several other small claimholders in this district.

Queenstown.

Reid and Lee, Twelve-mile, Lake Wakatipu.—This hydraulic-sluicing claim has continued to work on the usual lines during the season. There has been a scarcity of water for sluicing purposes owing to the dry weather. Working-face about 300 ft. in height.

Reid and McDonald, Twelve-mile, Lake Wakatipu.—Work intermittent owing to dryness of the season. Claim situated on the western bank of Twelve-mile Creek some little distance inland from Bob's Cove.

Arthur's Point.

Arthur's Point Hydraulic Sluicing and Elevating Company, Arthur's Point, Shotover River (McMallan Bros. and Phelan, Owners).—This plant is operating in the basin of the Shotover River, below Arthur's Point. Work is steadily carried on during the sluicing season, when six men are employed. Holding all the water available, this company has the command of a large area of auriferous ground.

Dredging.—The Wakatipu Gold-dredging Company's dredge on the Shotover River has been raised again, and is now in readiness to recommence dredging operations when the river is favourable.

Lower Shotover.

The claim and plant formerly owned by James Tyrell and party on the bank of the Kawarau River have been sold to Edward Cannon of Queenstown. The claim is let on tribute at present, but depth of ground and heavy drainage militate against successful working.

Moonlight.

Moonlight No. 1 Sluicing Claim, Moonlight Creek, Queenstown.—This claim, owned by W. Patterson, is not in operation. The claim has lately been reported on with a view to purchase by a syndicate.

Moonlight No. 2 Sluicing Claim, Moonlight Creek, Queenstown.—The owner, P. McCarthy, Queenstown, has let this claim on tribute to a party of four men. The property comprises deep terrace ground, from which the material is sluiced into the Moonlight Creek.

Moke Creek, Moonlight Creek, and the terraces adjoining them, still afford employment to a few fossickers.

Shotover River.

There are six claims in operation during the season below Long Gully. These claimholders are working in the bed of the Shotover River when the river is low enough during the winter season. The application of the jet-pump system has enabled ground to be worked which was otherwise too deep and wet for work by wing-damming.

Below Long Gully.—Smith and Ward's claim—jet pump; 2 men. Robertson and Thompson's claim—jet pump; 2 men. Edward McLeod's claim—jet pump; 2 men. Smith Bros.' claim—jet pump; 2 men. McCormack's claim—wing-damming; 1 man. Reissler's claim—wing-damming; 1 man.

Above Long Gully.—Collins's and Sainsbury's sluicing claim, Deep Creek: The water is here applied to working the river-bed in the winter season and to terrace-sluicing when the river is high.

Boomerang Terrace.

Several Chinamen continue to ground-sluice on this terrace.

E. Sainsbury has a small sluicing-claim on Maori Point.

Davis's Sluicing Claim, Stony Creek Terrace, Skipper's (W. L. Davis, Owner).—Five men are employed in this extensive ground-sluicing claim.

Robert Johnstone's Sluicing Claim, Pleasant Creek Terrace, Skipper's.—This ground-sluicing claim has been worked on a small scale during the sluicing season.

Skipper's Sluicing Company, Londonderry Terrace, Skipper's (John Corbett, Manager).—Sluicing operations have been carried on during the year on the usual lines with fair success, and there is no change to note. Four men employed in the claim.

Stevenson and Aspinall's Sluicing Claim, Skipper's Point.—Sluicing was continued as usual during the season. Two men employed.

Upper Shotover River.—There is no change of importance to mention in this district. All the river and terrace claims continued to operate as usual with various results. About twenty men find employment during the sluicing season.

SOUTHLAND.

Nevis.

Our Mutual Friend Hydraulic Sluicing and Elevating Company (Wasters and Adie Bros.), (area, 15 acres).—The claim is situated on Galvin's Terrace lead, and is being worked on the usual lines with moderate success. Four men are employed.

Robertson and Party's Hydraulic Sluicing and Elevating Claim.—This claim adjoins our Mutual Friend claim. It is privately owned, and operations are carried on with good results. Four men are employed.

Keep-it-Dark Gold-mining Company, Galvin's Terrace.—This venture has been abandoned as the shaft and tunnel workings failed to locate the extension of the Galvin's Terrace lead. The winding and pumping plant are being sold as opportunity offers.

Glenore Claim (Rip and Tear), Nevis Township.—This claim has been idle throughout the year. The winding and pumping plant is still in position for work being carried on.

Hogg and Party's Sluicing Claim, Nevis.—A number of men are engaged cutting in a water-race from Burnt Creek to command a large area of auriferous ground in the Nevis Valley. A contract has been let for the supply of the necessary mining plant.

Dredging.—There are five dredges in the district, four of which are privately owned, and operate successfully during about eight months of the year. The Ngapara No. 3, owned by a public company, has ceased operations.

Upper Nevis.

Upper Nevis Sluicing Company, Cinnabar Flat.—Operations have been at a standstill during the season.

Joe Park's Hydraulic Sluicing Claim, Upper Nevis.—Four men are employed in this claim, from which satisfactory results are obtained.

Ed. McMillan's Sluicing Claim, Cameron's Gully, Upper Nevis.—Elevating operations in the shallow ground have been abandoned, and the pipe-line has been extended to command adjoining terrace ground. The face at present being worked is over 60 ft. perpendicular. Ten heads of water are conveyed through a 9 in. line of pressure-pipes and discharged through a 3 in. nozzle. Four men are usually employed. An electric-lighting plant with a Pelton wheel attachment has been installed. The dynamo is by the Westinghouse Brake Company. The claim is lighted by two arc lamps, each 500-candle power.

Ellis Bros.' Hydraulic Sluicing and Elevating Claim, Upper Nevis (R. McDonald, Manager).—Operations at this claim are being conducted on the usual lines with success. The ground is about 16 ft. in depth, and favourable for this class of mining. Six men are usually employed.

O'Connell and Graham's Hydraulic Sluicing Claim, Upper Nevis.—This privately owned claim has been continuously at work during the greater part of the year with good results. Quite recently, however, the gold-bearing wash cut out, and operations are now being conducted with a view to recovering the lead in the vicinity of Whitton's Creek. Eleven heads of water are in use on the claim. The electric light continues to give satisfaction. Seven men are employed.

Undaunted Sluicing Claim, Upper Nevis.—This claim is situated in the Nevis River gorge, and has had to contend with many difficulties since its inception. The latest attempt made to bottom in the gorge by hydraulic elevating has proved unsuccessful, chiefly owing to the poor water-supply. The gorge is also visited by heavy floods, which render any undertaking difficult.

Dredging.—The Upper Nevis dredge is now at work, and is said to be successful. The screen and tables have been taken off and the dredge reconstructed on the sluice-box type, so successful on the southern dredging fields. Owing principally to the successful working of the various sluicing claims, great attention is being devoted to this extensive district, and several additional sluicing and dredging claims have been taken up. The ground in this district, however, requires to be systematically prospected before placing mining plant thereon.

Nokomai.

Lion Hydraulic Sluicing Claim.—Repeated efforts to work this claim profitably, both by hydraulic elevating and by driving and blocking out the auriferous washdirt, did not meet with success. The property changed ownership several times, and has finally been purchased by the adjoining claimholders, the Nokomai Hydraulic Sluicing Company (Limited).

Nokomai Hydraulic Sluicing Company (J. Robertson,) Manager.—No. 1 Claim: Operations in this claim have been carried on throughout the year on the usual lines. Shortage of water has hitherto affected continuous working of this property. With a view to remedying this inefficiency, a dam was built about two years ago having an embankment 26 ft. high. Even this did not answer all requirements, and the dam-bank is being raised 10 ft. higher. At this height the water-area will be about 8 acres in extent. When the work is completed it is expected that a constant supply of water will be available. No. 2 Claim: The claim has continued to work during the season, but progress has been hampered considerably through the scarcity of water and the rough stony nature of the ground. The operations of the company were attended with success, enabling several dividends to be paid. Thirty-six men are employed on the works.

Waikaia.

Argyle Hydraulic Sluicing Company, Winding Creek (J. Stewart, Manager).—During the year the company's dredge, driven by water-power, was erected and dredging was commenced. The system of applying the motive power is an improvement on the practices in other districts. In O'Brien's application, small wooden pontoons are introduced to support the pipes and swivel connections. In the system adopted on the Argyle dredge these pontoons are discarded. The main pressure-line is 11 in. in diameter. At the 11 in. terminal a swivel joint is placed. Thence the water is conveyed through a span of 9 in. piping 66 ft. in length. Another swivel joint is placed at the end of this span, and underneath the swivel a wheel is placed which travels on a single rail curved to a 66 ft. radius. The water is finally conveyed on board the dredge in 9 in. piping. The main machinery is driven by a Pelton wheel 4 ft. in diameter (placed upon the deck), with belt connections. Water for the sluice-boxes is procured by means of an ordinary jet elevator, thus doing away with the wear-and-tear attached to centrifugal pumps. A 22 in. diameter Pelton drives the dynamo for the electric lights. This claim was worked for several years by hydraulic sluicing and elevating, but since dredging has been commenced the company is convinced that the present system is the better method, both with regard to cost and treatment of the ground. The method has since been applied to the Golden Beach dredge, Alexandra South, with success.

Winding Creek Hydraulic Sluicing Claim, Wendonside, Waikaia (John Ramsay, Manager).—This property is owned by the Round Hill Gold-mining Company, and sluicing operations have been carried on during the year. A large area of heavy ground was sluiced off to a depth of about 90 ft. Elevating was then commenced, and bottom was reached at a further depth of 40 ft. Owing to the poor water-supply preventing continuous working throughout the year, improvements are being effected to the head-races. At the time of inspection the water was being utilised to strip (by ground-sluicing) a large area of ground. The claim is lighted up at night by electricity. Six men are employed. For particulars of accident whereby David McKissock was accidentally killed, see list of accidents appended.

Gow's Creek, Upper Waikaia.—There are the usual number of fossickers in this locality.

Upper Waikaia and Whitecombe Districts.—With the exception of the introduction of a small hydraulic sluicing plant by the Upper Waikaia Gold-mining Syndicate (composed of Roxburgh shareholders), there is nothing fresh to record from this district, which still affords employment to a few parties.

Muddy Creek Terraces, Waikaia.—Sluicing with a poor water-supply has been carried on for some considerable time over these terraces, which are known to be payably auriferous. P. Gordon and party had a small sluicing plant at work, but the water-supply was too light for successful work. It is now proposed to convey sufficient water in a race from Dome Creek to enable these terraces to be properly worked. The cost of construction of the race is estimated at about £12,000.

Dredging.—This form of mining has advanced rapidly in this district, and the field is now a pronounced success. Large weekly returns are still won by several of the dredges. The key to the success of the ventures in Waikaia is the fact that each property is systematically prospected by boring, and dredging operations are conducted according to the data furnished by the test boreholes. There are thirteen dredges operating in the Waikaia Valley and in the tributary streams, and arrangements are well forward for the erection of at least four more machines.

Gore.

Dredging is still the only form of gold-mining in this district. There are two privately owned dredges on the Mataura River near Gore, one of which is at work. The total number of dredges in active operation in the Waikaka field is twenty-eight. Two were closed down permanently during the year and one is being erected. Operations are conducted successfully on this field.

Ibbotson's dredge continues at work on Chatton Mining Reserve when water is available.

In the Charlton Valley five dredges have been at work throughout the greater part of the year. One has lately been abandoned owing to poor yield of gold.

There are still five dredges operating in the Waimumu Valley, two of these being privately owned.

Round Hill.

Round Hill Gold-mining Company (A. Reynolds, General Manager; F. Hart, Mine-manager).—The paddock is now about 20 acres in extent, yielding an average value of £1,000 per acre. Both elevators are at work in the paddock, which affords ample dumping-ground for tailings. Plant and claim are maintained in good working-order. This mine has been free from serious accident during recent years.

Ourawera Gold-mining Company (James Coulling, Mine-manager). — Present paddock about 2 acres in extent; depth of ground, 40 ft. to 70 ft. (averaging about 60 ft.); yielded 1,608 oz. of gold in twenty-seven months, value £6,400. Three seams of auriferous wash occur, that on the bottom being the "Coffee Lead" of the old diggers, gold being dark-coloured on outside. Large boulders of diorite occur in the auriferous-quartz gravels, also a heavy

"grey" sand and quantities of black sand. A semi-vertical seam of inferior lignite forms the south-western boundary of the paddock, which, on being exposed, is seen to be really a line of fault against which a semi-vertical seam of sandy-clay rich wash is found. The elevator had fortunately been sunk on what has proved the deepest part of the paddock, which is thus more conveniently worked. Elevating, 64 ft. vertical height. Improvements have been made in elevator and nozzle-tips, giving greater efficiency, the main breaking-down nozzle under the water-gauge pressure of 195 lb. per square inch being capable of directing a stream of water like a solid bore on the 70 ft. face at a safe distance of 60 ft. and over. It was found that notwithstanding the very fine character of the gold saved, the proportion obtained under the ripples of the upper run of boxes had been as three to one of the gold recovered from mattings on the tables. The hydraulically worked log-haulers facilitate handling of heavy stones and buried forest-timber to such an extent that dividends are now frequently paid to shareholders. From thirty to forty fossil footprints of a bird, apparently of the rail species, were found on the banks of an ancient creek, on the "bottom," when cleaning up.

Orepuki Goldfields.

The usual number of ground-sluicing and driving claims continue to be worked as regularly as the limited supply of water to the field will allow.

ACCIDENTS, HYDRAULIC AND ALLUVIAL MINES.

Fatal.

5/4/05.—Frederick Morrow, miner, Orepuki, was working in a drive in his private claim and had not set sufficient timber to maintain the roof, which settled down and crushed him to death.

5/9/05.—David McKissock, nozzleman, Round Hill Gold-mining Company's claim, Waikaia, was struck by a fall of gravel from a face and killed. Deceased had been standing too close in to the face for safety.

Non-fatal.

2/2/05.—James Smith, winchman, Smith Gold-mining Company, Round Hill, had his left arm broken by log-hauling winch-handle reversing suddenly. Smith had been holding the handle carelessly.

28/7/05.—James Christie, miner, Kitto and party's claim, Blue Spur, received slight injuries to his head and hands through returning prematurely to what was judged a miss-shot.

GOLD-DREDGING.

At the end of December, 1904, the total number of dredges in Otago and Southland was 184. At the end of December, 1905, this number had dropped to 172. During the year there was a decrease of 11 working dredges in Otago and an increase of 4 working dredges in Southland. The total number of dredges in Otago was lessened by 10. Of this number 7 were dismantled and not re-erected, and 3 were removed to Victorian dredging-fields. Regarding the 11 dredges standing in Otago, 6 of these had either worked out or proved their claims unpayable, 3 are of the older type of machine and incapable of working the remaining portions of their claims, while 2 are sunk.

In Southland the increase of working dredges was 4. The 5 dredges standing have worked out the payable portions of their claims. There are 48 dredges in operation in the Southern Mining District, which are owned by private parties.

A noticeable feature of the development of the industry is the acquirement of dredging-properties by parties of working shareholders, who are able to work to advantage claims abandoned as unprofitable under large-company ownership and management.

The industry has decreased in the gorges of Clutha and Kawarau Rivers, not on account of lack of gold, but principally owing to the type of machine ordinarily placed in the gorges having proved inadequate and incapable of profitably working the claims.

The Alpine Consols dredge working in the gorge of the Clutha River, below Cromwell, having proved capable of breaking through the hard cemented "false bottom" previously worked to, the dredgemaster (Mr. Goodger) was gratified to find an underlying seam of rich dirt which will considerably enhance the life and value of the claim.

A number of improvements have been effected to working dredges, among which may be mentioned an invention by Mr. William Adams, owner of the Paul's Beach dredge, for saving by amalgamation in a rotary cylinder the fine gold which usually escapes ordinary dredge gold-saving appliances. Improvements to gold-saving tables and appliances are receiving close attention, with the result that a larger proportion of gold is being recovered from the dirt.

Increased attention has latterly been paid to recovery and assay of black and grey sands associated with the gold-bearing gravels.

A shaking sluice-box has been successfully installed on the Rising Sun Company's dredge at Cromwell.

Water-power application to dredges has been improved upon by Mr. R. T. Stewart, manager of the Argyle Sluicing-claim, as applied to the Argyle and Golden Beach dredges, the result being a considerable reduction of working-charges as compared with steam-power.

Water-tight bulkheads in the pontoons for minimising risk of sinking are coming into more general use, and the freeboard of several dredges has been increased by addition of subsidiary pontoons as required.

Twenty-one dredges are now furnished with the electric light and ten with acetylene gas. The type of dynamo found most suitable is one capable of producing 100 volts, equal to 12½ amperes, at 750 revolutions per minute.

Working Dredges inspected, 1905.

[Note.—The owners of all dredges having an asterisk (*) in front of their names have been served with notices that the rivers on which the dredges are working are deep and swift-flowing within the meaning of the Act, and that clause 2 of Regulation 83 of "The Mining Act, 1898," applies thereto.]

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks	Dates of Visits.
Otago.				
Clutha River.				
*New Paul's Beach, below Beaumont	William Adams	L. Johnston	Unable to get aboard owing to high state of river	31/5/05
			Dredge and life-saving appliances in good order	30/8/05
*New Golden Gravel, Beaumont	William Adams, Rosedale Dredging Syndicate, Waikaka		Dredge idle	6/2/05
			Dismantled for removal to Waikaka	31/5/05
*Otago No. 2, Island Block	Otago Gold-dredging Company	A. L. Westcombe (George Bennet, supervising dredgemaster)	Dredge and life-saving appliances in good order	31/8/05
*Johns and party (late New Golden River), Island Block	E. Johns and party	P. McVicar	Removing dredge to claim at Island Block.	
Island Block, Island Block	Island Block Hydraulic-sluicing and Gold-dredging Company		Dredge idle	1/6/05
			,,	1/9/05
Golden Run, Miller's Flat	Golden Run Gold-dredging Company	C. Monson	Suitable well-hole gangway not in use	1/6/05
*Pride of Clutha No. 1, Miller's Flat	J. Pringle and party		Dredge idle	1/6/05
*Pride of Clutha No. 2, Miller's Flat	,,	T. R. Jones	Railing required at bows and stern	1/6/05
*Golden Gate, Miller's Flat	Golden Gate Gold-dredging Company	D. Ballantyne	Dredge and life-saving appliances in good order	30/9/05
*Otago No. 1, Miller's Flat	Otago Gold-dredging Company	E. Reiderer (George Bennet, supervising dredgemaster)	Bow-fencing to be renewed; set-screw on screen-drive to be covered	1/9/05
			Dredge and life-saving appliances in good order	30/9/05
*Old Otago No. 1, Miller's Flat	,,		Dredge idle and securely moored inshore	30/9/05
*Golden Treasure, Miller's Flat	Golden Treasure Gold-dredging Company	J. T. Cornish	Dredge and life-saving appliances in good order	31/8/05
Golden Bed, Ettrick	Golden Bed Gold-dredging Company	A. Maitland	,, ,,	1/6/05
*Majestic, Ettrick	Majestic Gold-dredging Company	A. Johnston	Main fly-wheel to be guarded; rail required on tables	2/6/05
*Ettrick, Ettrick	Ettrick Steam Dredging Company	T. Thompson	Dredge and life-saving appliances in good order	1/6/05
*Grogan and party, Ettrick	Grogan and party	E. T. Kitto	,, ,,	30/9/05
*Gold King, Dumbarton Rock	McLean and party	J. McLean	Second rail required round bows and stern; portion of well-hole to be fenced	1/9/05
*Endeavour, Dumbarton Rock	Magnus and party	G. Magnus	Dredge and life-saving appliances in good order	1/9/05
*Roxburgh Jubilee, Roxburgh	Roxburgh Jubilee Gold-dredging Company	E. Butler	,, ,,	2/9/05
*New Teviot Dredge, Roxburgh	Joseph Sparrow	D. Mitchell	Bows unfenced; handrails required on well-hole gangway; boathook and light line required on stern	2/6/05
			Dredge and life-saving appliances in good order	2/9/05
*Lady Roxburgh, Roxburgh	Lady Roxburgh Gold-dredging Company	A. P. Bremner	,, ,,	2/6/05
*Molyneux Kohinoor, Coal Creek Flat	Molyneux Kohinoor Gold-dredging Company	D. Hepburn	Buoys out of repair; railing required around well-hole and gangway	2/9/05

WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
OTAGO—*continued.*				
CLUTHA RIVER—*continued.*				
Coal Creek to Alexandra Gorge.				
*New Fourteen-mile Beach ..	New Fourteen-mile Beach Gold-dredging Company	G. Poulter ..	Second rails required on bows	5/6/05
*New Golden River	New Golden River Gold-dredging Company	R. N. Woods ..	Dredge and life-saving appliances in good order	5/6/05
			Visited in connection with drowning fatality 14/7/05. For particulars, see List of Accidents appended	16/7/05
Molyneux Falls	— Scott	..	Dredge sunk and being dismantled	5/6/05
*Davis Bend No. 2	Davis Bend Gold-dredging Company	..	Dredge idle	5/6/05
			Dredge exchanged with Sailor's Bend Company, and latter dredge dismantled for removal to Victoria	27/9/05
*New Bendigo	New Bendigo Gold-dredging Company	T. Hogg	Dredge idle	5/6/05
*First Chance	New First Chance Gold-dredging Company	S. Hoy	Recovering buckets from the river; life-saving appliances in good order	5/6/05
*Sailor's Bend	Sailor's Bend Gold-dredging Company	J. Dewar ..	Dredge and life-saving appliances in good order	5/6/05
*Sailor's Bend (late Davis Bend)	Ditto	,, ..	,, ,, ...	27/9/05
*Manuherikia	Manuherikia Gold-dredging Company	Louis Anderson ..	,, ,, ...	27/9/05
*Moa	Clyde Dredging Company ..	William C. Nicholson	Dredge provided with one boat only, notwithstanding warning previously given to dredgemaster that two boats under Reg. 83 of the Mining Act were compulsory. Proceedings being instituted, the dredgemaster was fined £2 and costs for breach of regulations	16/4/05
			Fly-wheel guard not in position; main belts to be guarded	7/6/05
Alexandra.				
*Surprise	Coulson and party	J. Sanders ..	The old Chicago dredge has been repaired to work a claim on the Manuherikia River ..	7/6/05
			Awaiting favourable rise in river to reach the claim on Manuherikia River	4/9/05
*Alexandra Lead	Alexandra Lead Gold-dredging Company	C. Simonsen ..	Dredge and life-saving appliances in good order	17/3/05
			Dredge being fitted with elevator	27/9/05
			Dredge and life-saving appliances in good order	23/11/05
Molyneux Hydraulic ..	Molyneux Hydraulic Gold-dredging Company	S. Cameron ..	,, ,, ...	26/9/05
New Golden Beach	Lane Bros.	J. McDonald ..	Dredge idle on account of shortage of water	7/6/05
			Being fitted with water-power	23/11/05
*Alexandra Eureka No. 1 ..	Alexandra Eureka Gold-dredging Company	C. Bradley ..	Dredge idle on account of low river	7/6/05
*Alexandra Eureka No. 2 ..	Ditto	,, ..	Dredge and life-saving appliances in good order	7/6/05
*Enterprise No. 1	Enterprise Gold-dredging Company	J. Sawle	,, ,, ...	7/6/05
			Dredge ceased operations	4/9/05
*Ngapara Extended	Ngapara Extended Gold-dredging Company	Charles Allen ..	Railing at stern requires to be strengthened	4/9/05
*Ngapara No. 1	Ngapara Gold-dredging Company..	M. Scott ..	Dredge and life-saving appliances in good order	4/9/05
*Enterprise No. 2	Enterprise Gold-dredging Company	P. McVicar ..	Railing at stern requires to be renewed	4/9/05
*Chicago (late New River, Molyneux)	Chicago Gold-dredging Company ..	F. Williams ..	Dredge and life-saving appliances in good order	4/9/05
Earnscleugh No. 1	Earnscleugh Gold-dredging Company	J. Fouhy ..	,, ,, ...	7/6/05
Earnscleugh No. 2	,,	,, ..	,, ,, ...	7/6/05

WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
OTAGO—*continued.*				
CLUTHA RIVER—*continued.*				
Alexandra—continued.				
Earnscleugh No. 3 (Electric) ..	Earnscleugh Gold-dredging Company	C. Weaver ..	Dredge and life-saving appliances in good order	18/3/05
			Dredge and life-saving appliances in good order; extra pontoons slipped on under the stern give the dredge increased freeboard all over	29/9/05
Glasgow	Sandy Point Gold-dredging Company	A. Steel	Dredge and life-saving appliances in good order	7/6/05
*New Preseverance No. 1 ..	New Preseverance Gold-dredging Company	D. Livingstone ..	Screen-driving gear and elevator driving-shaft require to be guarded	5/9/05
*New Preseverance No. 2 ..	Ditto	J. R. Baker ..	Screen-driving gear to be guarded; railing at stern to be strengthened	5/9/05
*Dunstan Lead	Dunstan Lead Gold-dredging Company	D. Bringans ..	Dredge and life-saving appliances in good order	5/9/05
*Matau, below Clyde ..	Matau Gold-dredging Company ..	J. Sanders ..	Fly-wheel to be fenced	5/9/05
*Unity, below Clyde	Unity Gold-dredging Company ..	T. Barry ..	Dredge and life-saving appliances in good order; dredge to be removed to Ophir	5/9/05
*Monte Christo, Clyde ..	New Monte Christo Gold-dredging Company	H. Olsen ..	Two lifebuoys out of repair; railing defective on bows and stern; guards required on pump, screen-driving gear, and fly-wheel	5/9/05
			Dredge and life-saving appliances now in fair order	13/9/05
Clyde to Cromwell Gorge.				
*Wee Macgregor (late Davis Bend No. 2)	Coutts and party	H. Coutts ..	Dredge repairing	13/9/05
*New Halfway House ..	New Halfway House Gold-dredging Company	James Sawle ..	Railing on bows defective	13/9/05
*New Alpine Consols ..	*New Alpine Consols Gold-dredging Company	George Goodger ..	Fencing defective on bows and stern; guards required on screen-driving gear and fly-wheel; two lifebuoys out of repair	13/9/05
			Dredge and life-saving appliances now in fair order	14/9/05
*Riley's Beach	Riley's Beach Gold-dredging Company	John Bourke ..	Fencing defective on bows and stern; screen-driving gear to be guarded	13/9/05
			Dredge being removed to claim on Clutha River	24/11/05
*Alpine No. 2	Alpine No. 2 Gold-dredging Company	J. Holden ..	Operations suspended and dredge to be shifted to Lowburn	13/9/05
*Hartley and Riley	Hartley and Riley Gold-dredging Company	G. McLay ..	One lifebuoy out of repair	14/9/05
Above Cromwell.				
*Clutha River	Clutha River Gold-dredging Company	R. A. Denniston ..	Well-hole not securely fenced; well-hole gangway to be renewed; main belts to be guarded; fencing required on bows	8/3/05
			Dredge and life-saving appliances in good order	14/9/05
Lowburn.				
*Rise and Shine No. 1 ..	Rise and Shine Gold-dredging Company	J. Ray	Dredge and life-saving appliances in good order	8/3/05
		C. D. Brent ..	,, ,, ...	20/9/05
*Rise and Shine No. 2 ..	Ditto	N. P. Kloogh ..	Dredge and life-saving appliances in good order; visited dredge in connection with drowning fatality 12/1/05. For particulars, see List of Accidents appended	14/1/05
*Rising Sun	Rising Sun Gold-dredging Company	W. Kane ..	Dredge and life-saving appliances in good order; visited dredge in connection with fatal accident 13/7/05. For particulars, see List of Accidents appended	14/7/05
*Punt	Punt Gold-dredging Company ..	W. Gibson ..	Lifebuoy in boat condemned, being uncovered and cork perished; others required re-covering and painting	9/9/05
*Revival	Revival Gold-dredging Company ..	F. Kitto	An angle of railing at tail-shoot should be bolted instead of nailed, as it was; dredge equipped according to regulations	9/9/05
Luggate.				
*Upper Clutha	Knewstubb Bros.	..	Dredge sunk	

WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
OTAGO—*continued.*				
CLUTHA RIVER—*continued.*				
Albertown				
*Albertown	Albertown Gold-dredging Syndicate	H. Raitt	Dredge closed down for part of year.	
KAWARAU RIVER.				
*Junction Electric No. 3	Junction Electric Gold-dredging Company	A. Ross	Portions of bows and well-hole to be fenced	14/9/05
*Junction Electric No. 2	Ditto	W. Woods	One lifebuoy out of repair; fencing required on portion of bows and stern	14/9/05
Junction Electric No. 1	,,	J. Richmond	Fencing on bows defective; one lifebuoy out of repair; guard required on screen gear	13/9/05
*Cromwell No. 1	Angus Kennedy, Cromwell and Bannockburn Collieries Company	..	Pontooons moored safely	18/9/05
			Pontoons bought for mine timber	25/11/05
*Lady Ranfurly	Electric Gold-dredging Company	W. Orr	Dredge and life-saving appliances in good order	18/9/05
*Electric No. 2	,,	A. Hedley	,, ,,	20/9/05
*Voltaic	Henderson Bros.	..	Dredge dismantled and pontoons pulled out of river	18/9/05
*Waitiri	Waitiri Gold-dredging Company (private)	E. A. McDonald	Dredge and life-saving appliances in good order	18/9/05
*Grand Junction No. 1	James Horn	..	Dredge idle	9/3/05
			Dredge sold for removal to Victoria	30/10/05
*Kawarau Consolidated	Waitiri Gold-dredging Company (private)	..	Pontoons lying idle	18/9/05
SHOTOVER RIVER.				
*Wakatipu	Wakatipu Gold-dredging Company	J. F. Kitto	This dredge was sunk for the greater part of the year; not visited.	
*Maori Point	Maori Point Gold-dredging Company	T. Hoskins	Not visited.	
Cardrona Valley.				
Sunbeam (water-power)	Sasse and party	William Sasse	Operations suspended	2/12/05
Lone Star	Lone Star Dredging Company	J. Williamson	Dredge and life-saving appliances in good order	2/12/05
Tuohy's Creek (late New La Franchi)	Tuohy's Creek Gold-dredging Company	J. O'Connor	Dredge and life-saving appliances in fair order	2/12/05
NEVIS RIVER.				
Nevis Crossing	James Horn and party	A. Ritchie	Dredge and life-saving appliances in good order	27/11/05
Crewe No. 1	Crewe Gold-dredging Company	J. J. Bardsley	Stern-railing to be strengthened; screen gear to be guarded	27/11/05
New Era	New Era Gold-dredging Syndicate (private)	T. Omand	Dredge and life-saving appliances in good order	27/11/05
Ngapara No. 2	Ngapara Gold-dredging Company	A. Gunion	,, ,,	27/11/05
Ngapara No. 3	Ngapara No. 3 Gold-dredging Company	T. Hogg	Boat required	27/11/05
Crewe No. 2, Upper Nevis	Crewe Gold-dredging Company	J. McLean	Dredge undergoing repairs	28/11/05
MANUHERIKIA RIVER				
Morning Star	Morning Star Dredging Syndicate	D. Bringans	All fencing-chains round the dredge to be tightly stretched; one lifebuoy to be re-covered	12/9/05
Lady Anne	Lady Anne Gold-dredging Syndicate	R. M. Fink	Fencing required on bows and stern; one lifebuoy out of repair; main driving-belt to be guarded	12/9/05
Olrig	Olrig Gold-dredging Company	E. A. Johnston	Fencing required on bows; boat not kept in the paddock	12/9/05
Chatto Creek	B. Davis	..	Dredge idle throughout the year	12/9/05

WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
OTAGO—*continued.*				
FRASER RIVER.				
Loch Lomond, Shepherd's Flat	Loch Lomond Gold-dredging Company	A. McLean ..	Dredge and life-saving appliances in good order	15/9/05
IDA VALLEY.				
Wallis Syndicate	Wallis Gold-dredging Syndicate ..	P. Bushbridge ..	Gangway required on bows, otherwise dredge and life-saving appliances in good order ..	3/8/05
NASEBY.				
Roberts's Naumai, Upper Kyeburn	..	..	Dredge removed to Victoria.	
TUAPEKA.				
Taniwha, Tuapeka Flat ..	Taniwha Gold-dredging Company..	A. N. Wakefield ..	Dredge and life-saving appliances in good order	16/5/05
Reliance, Tuapeka Flat ..	Reliance Gold-dredging Company ..	J. Harris	Fencing required on bows	16/5/05
Gabriel No. 1, Tuapeka Flat ..	Gabriel Gold-dredging Company ..	..	Dredge and life-saving appliances in fair order	16/5/05
Happy Valley, Weatherstone's	Kelso Gold-dredging Company ..	..	Under removal to claim at Kelso	16/5/05
Havelock, Waitahuna ..	Havelock Gold-dredging Company..	M. McCarrody ..	Second rail required on bows	15/5/05
Gordon, Waitahuna	Gordon Gold-dredging Company ..	T. Thompson ..	Dredge undergoing repairs	15/5/05
Imperial, Waitahuna.. ..	Imperial Gold-dredging Company ..	J. S. Sinclair ..	Dredge and life-saving appliances in good order	15/5/05
GLENORE.				
Gold Bank, Glenore	W. R. Frost	..	Dredge closed down throughout the year, but is about to start work again	15/5/05
Stirling	Stirling Gold-dredging Company ..	..	Dredge dismantled	15/5/05
WAIPORI.				
Quilter and party	Quilter and party	W. Carr	Dredge and life-saving appliances in fair order	14/11/05
Johnson's Submerged Jet ..	Bakery Flat Sluicing Company ..	J. T. Johnson ..	Dredge idle throughout the year	14/11/05
Upper Waipori	Upper Waipori Gold-dredging Company	C. Haggitt ..	Dredge and life-saving appliances in good order	14/11/05
Jutland Hydraulic	Jutland Hydraulic Gold-dredging Company	T. Jefferson ..	Dredge undergoing repairs	18/11/05
Waipori Consolidated ..	Waipori Consolidated Gold-dredging Company	C. F. Truesdale ..	Dredge and life-saving appliance. in good order	16/11/05
Perseverance	McNeill and party	T. Aitken ..	,, ,, ...	18/11/05
Oceanic	R. J. Cotton	..	Machinery dismantled	18/11/05
Success	Wilson and party	William Wilson ..	Dredge and life-saving appliances in good order	17/11/05
Empire No. 1	Empire Gold-dredging Company ..	..	Machinery dismantled	17/11/05
New Empire (late Empire No. 2)	New Empire Gold-dredging Company	J. Hughes ..	Railing requires to be renewed	17/11/05
Motor	Hydraulic Motor Gold-dredging Company	William O'Brien ..	Dredge and life-saving appliances in good order	17/11/05
Enfield	Enfield Gold-dredging Company ..	..	Machinery sold for removal	17/11/05
SHAG RIVER.				
Inchdale, Inch Valley ..	Inchdale Gold-dredging Company..	P. Brennan ..	Not visited.	
POMAHAKA RIVER.				
Greenvale, Scrubby Flat ..	Knewstubb Bros.	..	Dredge sunk	19/5/05

WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
OTAGO—*continued.*				
POMAHAKA RIVER—*continued.*				
Ardmore, Kelso	Ardmore Gold-dredging Company	George Reid	Dredge undergoing extensive repairs	23/2/05
			Dredge and life-saving appliances in good order	19/5/05
Kelso, Kelso	Kelso Gold-dredging Company		Re-erecting Happy Valley dredge from Weatherstone's	..
SOUTHLAND.				
MATAURA RIVER.				
*Graham's Syndicate	Graham's Gold-dredging Syndicate	..	Dredge idle throughout the year	17/10/05
*Central Mataura Syndicate	Central Mataura Gold-dredging Syndicate	W. Shore	Main-engine belts to be guarded; cover required for pump-spindle	14/6/05
			Operations suspended	17/10/05
WAIKAKA RIVER.				
Graham and party's	Graham and party	J. A. Graham	Dredge and life-saving appliances in fair order	5/4/05
Waikaka Syndicate	Waikaka Dredging Syndicate	R. Henderson	,, ,,	13/4/05
Sheddon's Freehold	Sheddon's Freehold Gold-dredging Company	T. Stevenson	Dredge idle; company in liquidation	13/4/05
Waikaka Syndicate No. 2 (late Sheddon's Freehold)	Waikaka Dredging Syndicate	,,	Dredge and life-saving appliances in good order	17/10/05
Sheddon's Rex	Sheddon's Rex Gold-dredging Company	J. Graham	,, ,,	5/5/05
Argyle	Argyle Gold-dredging Company	D. Caithness	,, ,,	5/5/05
Lee and party's steel dredge	R. Lee and party	J. Wilson	Dredge and life-saving appliances in fair order	13/4/05
Lilliesleaf	Lilliesleaf Gold-dredging Syndicate	R. F. White	Dredge and life-saving appliances in good order	13/4/05
Junction, Waikaka	Junction Waikaka Gold-dredging Company	..	Dredge idle; company in liquidation	13/4/05
Garden Gully	Garden Gully Gold-dredging Company	F. Keam	Dredge and life-saving appliances in good order	13/4/05
Star, Waikaka	Star Gold-dredging Company	J. Aitken	,, ,,	13/4/05
Waikaka, Waikaka	Waikaka Gold-dredging Company	J. Watt	Dredge undergoing repairs	13/4/05
McGeorge's Freehold No. 2, Waikaka	McGeorge Bros.	George McVicar	Dredge and life-saving appliances in good order	4/5/05
Paterson's Freehold No. 2, Waikaka	Paterson's Freehold Gold-dredging Company	L. Robinson	,, ,,	4/5/05
McGeorge's Freehold No. 1, Waikaka	McGeorge Bros.	H. McColl	,, ,,	4/5/05
Paterson's Freehold No. 1, Waikaka	Paterson's Freehold Gold-dredging Company	J. Paterson	,, ,,	4/5/05
Record, Waikaka	Record Gold-dredging Company	W. McCorkindale	,, ,,	4/5/05
Phœnix, Waikaka	Phœnix Gold-dredging Company	M. McCorkindale	,, ,,	14/4/05
Ibbotson and party's No. 1, Waikaka	Ibbotson and party	J. H. Blaikie	,, ,,	4/5/05
Perry's Pioneer No. 2, Waikaka	Mrs. E. T. Grey	H. Rankin	New dredge; machinery not efficiently guarded	4/5/05
Perry's Pioneer No. 1, Waikaka	,,	,,	Dredge and life-saving appliances in good order	23/5/05
LITTLE WAIKAKA RIVER.				
Ibbotson and party's No. 2, Waikaka	Ibbotson and party	D. McKenzie	,, ,,	14/4/05

WORKING DREDGES INSPECTED—*continued*.

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
SOUTHLAND—*continued*.				
LITTLE WAIKAKA RIVER—*continued*.				
Waikaka United No. 1, Waikaka	Waikaka United Gold-dredging Company	J. Louden ..	Dredge and life-saving appliances in good order	23/3/05
Waikaka United No. 2, Waikaka	Ditto	C. M. Turnbull ..	,, ,, ...	14/4/05
Waikaka Queen, Waikaka ..	Waikaka Queen Gold-dredging Company	J. Wallace ..	,, ,, ...	14/4/05
Waikaka Forks No. 1, Waikaka	R. Irving and party	J. McNeil ..	,, ,, ...	14/4/05
Waikaka Forks No. 2, Waikaka	,, ...	,, ..	,, ,, ...	14/4/05
CHATTON.				
Ibbotson and party's, Chatton Reserve	Ibbotson and party	T. H. Ibbotson ..	Dredge starting again after extensive repairs; machinery not efficiently guarded	24/5/05
WAIMUMU.				
Waimumu Venture	Waimumu Venture Gold-dredging party	John Caithness ..	New dredge with machinery not efficiently guarded; not properly equipped with life-saving appliances	6/4/05
			Dredge and life-saving appliances in good order	14/6/05
Marshall Bros.' Freehold ..	Marshall Bros.	Marshall Bros. ..	Dredge and life-saving appliances in fair order	6/4/05
Waimumu Queen	Waimumu Queen Gold-dredging Company	J. Murray ..	Dredge undergoing repairs	6/4/05
Waimumu	Waimumu Gold-dredging Company	W. White ..	Dredge and life-saving appliances in fair order	6/4/05
Waimumu Extended ..	Waimumu Extended Gold-dredging Company	..	Dredge being dismantled	6/4/05
Waimumu Royal	Waimumu Royal Gold-dredging Company	W. Wilson ..	Dredge and life-saving appliances in good order	6/4/05
Burrell's Freehold	W. H. Grey	..	Dredge shifted to Waikaka.	
McLean's Freehold	J. McLean	..	Dredge shifted to Lower Waimumu as Waimumu Venture.	
CHARLTON CREEK.				
Charlton.				
MacCharlton	MacCharlton Gold-dredging Company	P. Brandt ..	Bows require to be fenced; pump-belt to be guarded	10/5/05
Charlton Creek	Charlton Creek Gold-dredging Company	C. Bennett ..	Dredge and life-saving appliances in good order	10/5/05
Central Charlton	Central Charlton Gold-dredging Company	James McCorkindale	,, ,, ...	10/5/05
Charlton Valley	H. F. Ness	B. Marslin ..	Railing required at stern and on elevator	18/5/05
Mill Creek Freehold	Mill Creek Freehold (Limited) ..	J. Brownlie ..	Dredge undergoing extensive repair	18/5/05
WAIKAIA RIVER.				
Waikaia.				
Argyle, Winding Creek ..	Argyle Gold-dredging and Hydraulic-sluicing Company	J. Stuart	Erecting machinery; dredge to be driven by water-power	17/2/05
			Dredge and life-saving appliances in good order	8/5/05
			.. ,, ...	18/10/05
Hessey's Winding Creek ..	Hessey's Gold-dredging Company ..	G. Pettigrew ..	,, ,, ...	17/2/05
			,, ,, ...	19/10/05
Mystery Flat, Landslip ..	Mystery Flat Gold-dredging Company	A. Thomas ..	Flywheel not guarded, otherwise dredge and life-saving appliances in good order	10/4/05

WORKING DREDGES INSPECTED—*continued.*

Name of Dredge and Locality.	Owners.	Dredgemaster.	Remarks.	Dates of Visits.
SOUTHLAND—*continued.*				
WAIKAIA RIVER—*continued.*				
Waikaia—continued.				
Masterton, Landslip	Masterton Gold-dredging Company	Edward Lawson ..	Dredge and life-saving appliances in good order	10/4/05
Duke of Gordon, Landslip ..	Duke of Gordon Gold-dredging Company	F. Browne ..	,, ,, ...	18/10/05
New Fairdown, Landslip ..	New Fairdown Gold-dredging Company	..	Dredge stranded	8/5/05
Te Aroha (late New Fairdown)..	Te Aroha Gold-dredging Company	P. Uren	Screen gear to be guarded and stern fenced. Boathook and light lines required	18/10/05
Waikaia, Landslip	Waikaia Gold-dredging Company ..	N. Sligo	Set-screw on tension-pulley to be covered; pump-belt to be guarded	12/1/05
			Dredge and life-saving appliances in good order	10/4/05
			,, ,, ...	18/10/05
Waikaia Kia Ora, Muddy Terraces	Waikaia Kia Ora Gold-dredging Company	G. Crowley ..	,, ,, ...	8/5/05
Lady Annie, Muddy Creek ..	Lady Annie Gold-dredging Company	D. Murray ..	Two rails required on bows; stern to be fenced	12/1/05
			Dredge and life-saving appliances in fair order	8/5/05
Lady Gordon, Muddy Terraces	Lady Gordon Gold-dredging Company	J. Gordon ..	New dredge; machinery not efficiently guarded; not properly equipped with life-saving appliances	11/1/05
			Pump and main driving-belts to be guarded; set-screw on pump-spindle to be covered ..	12/1/05
			Dredge and life-saving appliances in fair order	9/5/05
Muddy Creek, Muddy Creek ..	Muddy Creek Gold-dredging Company	F. H. Hamer ..	Dredge and life-saving appliances in good order; visited dredge in connection with drowning fatality on 5/5/05. (See list of accidents appended.)	7/5/05
			Dredge and life-saving appliances in good order	18/10/05
Nugent Wood, Muddy Creek ..	Nugent Wood Gold-dredging Company	..	Operations have been suspended	18/10/05
Garryowen, Muddy Creek ..	Garryowen Gold-dredging Company	..	Dredge being removed to Magnum Bonum claim	8/5/05
Magnum Bonum (late Garryowen), Muddy Creek	Magnum Bonum Gold-dredging Company	H. B. Morris ..	Dredge and life-saving appliances in good order	18/10/05

SUMMARY OF DREDGES IN SOUTHERN MINING DISTRICT AT 31ST DECEMBER, 1905.

Working—		
In Otago	95	
In Southland	50	
	—	145
Standing—		
In Otago	11	
In Southland	5	
	—	16
Removing—		
In Otago	4	
In Southland	..	
	—	4
Dismantling—		
In Otago	7	
In Southland	..	
	—	7
Total		172
Decrease of working dredges—		
Otago		11
Increase of working dredges—		
Southland		4

ACCIDENTS, GOLD DREDGES.

Fatal.

12/1/05.—Charles Maddock, winchman, Rise and Shine No. 2 dredge, Cromwell, was drowned in the dredge-paddock. The dredge was well fenced, and there was no evidence produced to show how he had got into the water.

5/5/05.—William Stewart, winchman, Muddy Creek dredge, Waikaia, was found drowned in the dredge-paddock. The dredge was well railed in, and there was no evidence to show how he had got into the water.

13/7/05.—John Hosking, fireman, Rising Sun dredge, Cromwell, while attempting to release a belt in an improper manner, was caught by the arm and whirled round the screen driving-shaft, being instantaneously killed.

14/7/05.—Alexander MacGregor, winchman, New Golden River dredge, below Alexandra, was leaning against a railing (which had been previously weakened while repairing), when it gave way, and he was precipitated into the river and drowned.

12/8/05.—John Luck, fireman, Waikaka United No. 1 dredge, Waikaka, was found drowned in the dredge-paddock. The dredge was well railed in, and there was no evidence to show how he had got into the water.

21/11/05.—James Johnston Burns, dayman, McGeorge's Freehold No. 2 dredge, Waikaia, was found drowned in the dredge-paddock. He was last seen alive on the bank, and there was no evidence to show how he had got into the water.

Non-fatal.

11/3/05.—M. Harliwich, winchman, Endeavour dredge, Roxburgh: Right hand injured by winch-brake strap breaking.

—/5/05.—Alexander Thomson, blacksmith, Moa dredge, Alexandra: Eye struck by splinter of wood, necessitating removal of the eye.

2/9/05.—John McKenzie, winchman, New Halfway House dredge, below Cromwell: Slight scalp-wound, through sheer-legs of coaling appliances giving way and striking him on the head.

22/11/05.—Edward Ryan, winchman, Mill Creek Freehold dredge, Gore: Fracture of arm by being jammed between the rope-barrel and the framing of the winch.

22/11/05.—A. Dickson, winchman, Mill Creek Freehold dredge, Gore: Toe crushed by ribs of winch-barrel.

Six fatalities occurred in connection with gold-dredges during the year. Of these, five were drowning cases, and the other was occasioned by an act of bravado on the part of deceased. It is somewhat remarkable that only one of the drowning cases could be accounted for (that of MacGregor), leaving four cases in doubt as to how the men got into the water where they were found. In each of the latter cases the dredges and appliances were examined and found in good order and according to the regulations, and the causes leading to the men being in the water are wrapped in mystery to this day.

The non-fatal accidents on dredges do not call for comment, being such as are incidental to the calling.

There were no boating accidents reported to me during the year.

I have, &c.,

E. R. GREEN,

Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

REPORTS OF WARDENS.

The Warden's Office, Auckland, 1st February, 1906.

Mr. Warden DYER, Auckland, to the UNDER-SECRETARY FOR MINES, Wellington.

SIR,—

In compliance with your circular letter of the 25th ultimo, I return the forms duly completed in so far as they relate to the Puhipuhi Mining District. Mining is practically dormant in the district. An application has been made for a mineral license to mine for copper at Kaeo, which is in the north, beyond the limits of the mining district. I granted the application, but there is an appeal pending, as other parties claim that they had priority. The parties are very confident that it will develop into a payable mine, but I can offer no opinion on that point myself.

I have, &c.,
J. W. DYER, Warden.

The Under-Secretary, Mines Department, Wellington.

Mr. Warden BUSH, Thames, to the UNDER-SECRETARY, Mines Department, Wellington.

Warden's Office, Thames, 22nd May, 1906.

SIR,—

I have the honour to forward herewith the Warden's annual report on this field for the year ending the 31st December, 1905.

It affords me great pleasure to state that the discoveries in the Waiotahi Company's mine, Thames, have given a considerable impetus to mining in this portion of the field. This mine has yielded large quantities of gold, and during the past year it amounted to £73,918. The mine has now paid £121,800 in dividends to its shareholders. There is every prospect of a continuance of these good returns during 1906.

Of the up-country portion of the district, the Waihi, the Talisman, the New Zealand Crown Mines, and the Komata Reefs have been the principal gold-producing properties. The total output from these amounts to £931,357 for year. Of this, the great Waihi Mine is responsible for £720,494, the Talisman £129,088, the Crown £38,639, and the Komata Reefs £43,136.

I regret to say that mining in and round the Coromandel portion of the district is very quiescent; but should a discovery be made, no doubt a revival would quickly follow.

A discovery of fullers' earth has been made in the Tararu locality upon Native ceded land, and an area taken up under a mineral license with a view to testing the ground thoroughly. Nothing, however, of any great importance has so far been discovered, but the owners of the license are sanguine of securing good results after an opportunity has been afforded to work and develop their ground.

THAMES DISTRICT.

In this portion of the district the outlook has not been so bright for many years. The discovery of gold in the low levels of the Waiotahi Mine has had the effect of inducing other companies to test their ground at a lower level than hitherto. Numerous large lodes are known to exist; though of low grade, it should pay to explore them with the prospect of striking one of those rich patches for which the Thames field is notorious. Water and want of capital have hitherto prevented this being done, but now that it has been shown that there is still good gold at a lower level than the 400 ft., people have been induced to take up shares in the several companies which are shaft-sinking. There is a large area of ground which has never had a pick in it below the 400 ft. level. With a pump, such as the Hauraki, capable of draining the field to 1,000 ft. at a comparatively small annual drainage-rate, it may fairly be assumed that our deep levels will be tested in the near future.

A lode of fullers' earth has been discovered up Tararu Creek, and is now being worked. I have seen some of the mineral in its raw state, and it certainly looks as if a valuable find has been made. The ground is held by a party of Gisborne gentlemen, who intend to erect a fair-sized plant to dress the mineral.

Waiotahi.—Splendid results have been obtained from the old Waiotahi main reef. Having almost worked out the upper western portion of the mine, it was decided about eighteen months ago to go down and test the lower levels instead of searching for gold in an easterly direction. As gold has been discovered in winzes sunk on the main reef, it was decided to sink the shaft to another level and drive a crosscut to meet the reef under the winzes. Good gold was struck, the run extending for 100 ft. The success attendant on those operations induced the managemnt to sink the shaft to a further level and again crosscut to the main reef. The run of gold was again picked up in this level, No. 5, richer than at No. 4. Sinking for another level, No. 6 was at once commenced, and the reef struck within a few weeks. It is about 10 ft. wide, and gold has been seen. About 30 ft. of driving has yet to be done before it reaches the spot under the run of gold. The Kuranui-Caledonian Company, which holds the adjoining ground, agreed to let the Waiotahi Company crosscut from their ground to meet the Waiotahi workings in order to provide drainage and ventilation. The connection has been made, and now there is ample air. The reef is opened up at the Nos. 4, 5, and 6 levels, and a large block of highly payable ore is in sight. The Golden Age battery of forty stamps has been purchased and put into good going-order, and now the company can treat a large quantity of ore monthly. A total of 4,986 tons of quartz and 54 cwt. 40 lb. of picked stone has been crushed for a yield of £73,884. An average of fifty-two men has been employed.

Moanataiari Mine.—The operations carried on by this company have not met with the success that was anticipated. The prospects are now said to be improving. The work now going on is not far away from where good gold was found some years ago, and the country is of a favourable character for

gold. There is a large area of unprospected ground which it is intended to open up, so there is no saying what may be met with. The Cambria reef was driven on a distance 200 ft. westward, and 253 tons of ore from the drive crushed for a return of £676. Towards the latter part of the year work was confined to opening up the Cambria reef eastwards. A new lode was unearthed, and as it is intended to drive on the reef (which has 300 ft. to go before it reaches the Moanataiari main slide) a patch of good gold may be met with. An average of fourteen men has been employed.

Kuranui-Caledonian.—This mine adjoins the Waiotahi, and the company, encouraged by the good results in the latter mine, decided to go in for a more vigorous policy. The capital has been greatly increased, and a comprehensive scheme of development-works will be shortly commenced. To this end an expert is now drawing up a report for future operations. As I mentioned in my remarks on the Waiotahi Mine, an arrangement was come to with that company to assist in driving from the No. 4 level, which corresponds to the Waiotahi No. 6, towards the Waiotahi. This drive will tend to prospect the Kuranui-Caledonian ground, and will drain and ventilate the Waiotahi. Gold was found in the No. 4 level, and in order to see if the gold goes down, winzes are being sunk. It is confidently expected that payable ore will be discovered. Taking everything into consideration, the prospects of this mine are good. An average of twenty-five men has been employed, and 193 tons of ore crushed for a return of 396 oz. 14 dwt., value £1,069 9s. 10d.

Old Alburnia.—The main work of this company has been extending the Moanataiari tunnel so as to get under the place where rich ore was found in the upper levels. On this work twelve men have been engaged and 717 ft. driven. A small leader was cut in the tunnel, but was found not payable, and work on it was discontinued. Besides the wages-men, twenty-eight tributers have been employed. Ore crushed amounted to 375½ tons, and yielded 686 ozs. 4 dwt. of gold, valued at £1,828 15s.

Victoria.—This company has repaired and overhauled its winding machinery, put its levels in good order, and gone in for development-works. The No. 4 level has been extended 576 ft., and the Waiotahi reef intersected. The reef was cut into 17 ft. without any sign of the foot-wall, but nothing of any consequence was discovered. While driving this crosscut four other bodies of ore were met with, but no work has been done on them yet. At No. 5 level the Victoria reef has been driven on for 163 ft. to find out the value; no rich developments have occurred, although the prospects are favourable. At the intermediate level operations have been carried on with encouraging indications. An average of fifteen men has been employed, and 153 tons of quartz treated for 251 oz. 1 dwt. of gold, valued at £691 4s.

Thames Mine.—This is the old Fame and Fortune and Nonpareil Mines, which were recently purchased by Mr. H. H. Adams, and a company called the Thames formed. It is intended to prospect the ground from the Moanataiari main tunnel. Air stopes are now being put in for working the drives. This ground has always been considered to be worth prospecting at the low levels, but water has hitherto prevented this being done. The work proposed will drain the mine and allow of work being carried on at a lower level than hitherto. Ten men have been employed.

New Saxon.—The operations of this company have been confined to that portion of the mine above the No. 5 level, but nothing of any importance has been discovered. If the developments in the adjoining mine (the May Queen) prove satisfactory at the lower levels, no doubt this company will sink and try the ground at the low levels. The ground is in a good locality, immediately adjoining the Hauraki Pump, and well drained. Nine men have been employed, and 215 tons of ore crushed for a yield of £845.

May Queen.—The company has cleaned out and ventilated the workings, which had become full of foul air, and in some places unsafe, through being so long unused, and two passes above the No. 3 level have been opened up in order to reach a block of unworked ground. Work was gone on with here for some time, but it was finally decided to knock off, and open up the bottom levels. A borehole was put down from the bottom of the shaft to connect with a crosscut put in from the Hauraki shaft, and the water drained off. At 720 ft. a chamber was cut, and a crosscut driven a distance of 233 ft., where the No. 4 lode was intersected. This lode was driven on in a westerly direction to a winze which had been sunk 95 ft. from the No. 5 level. The lode is payable, and averages 3 ft. in width. This is the lowest depth at which payable quartz has been found, and it is expected that the gold will go down. Now that the mine has been opened up regular returns may be expected. Eleven men have been employed.

New Una.—This mine has been worked from the main level of the May Queen Extended, which was extended 414 ft. In all 614 ft. of driving was done, 200 ft. being on the leaders called the Nos. 1, 2, and 3. A portion of No. 1 leader was stoped out and crushed, but was found not payable. On the No. 2 leader a big block of ground was worked out, and, although gold was seen in the quartz, the results of the crushing were not satisfactory. Several fair crushings were taken out of No. 3 leader, which was 18 in. wide, but as the reef was risen on the ore decreased in value and work was discontinued. With the object of cutting the Loyalty, German's, and McKenzie's reefs, the main crosscut is being extended towards the south. The Loyalty reef may be met with any time; and as the country through which the drive is now passing is of a favourable nature for gold, good payable ore may be found. Six men have been employed, and 200 tons of ore treated for a return of £458.

May Queen Extended.—This company has been working on the leaders close to the boundary of the New Una and above the main adit level, but as the leaders were small the returns were not profitable. The company now intend to test the ground at a lower level, draining the water by means of a small pump. Ore treated amounted to 293 tons, valued at £763. Six men were employed.

Ballarat.—Four men have been working this mine, and crushed 72 tons of quartz for a return of £210 19s. 4d.

West Coast.—The owner, Mr. John Northey, and one man have been employed all the year. The ground is in a good run of country, being next the Moanataiari Mine, and the owner is always expecting

to "strike it rich." During the year 20 tons of ore were crushed, which yielded 43 oz. 18 dwt., value £109 15s.

Arrindell.—This mine is worked by a Scotch syndicate. So far nothing payable has been found. A crushing plant was erected at a cost of about £1,000, but only 58 tons of ore have been put through for a return of £104. Four men have been employed.

Golden Drop.—The owners, Fisher Bros., have taken out and crushed 1 ton of ore for a yield of 17 oz. 18 dwt., value £47 8s. 8d. Their principal work has been driving a low level to cut the leaders they have been working on the upper levels. When this is done they say they will have enough ground opened up to give them twelve months' employment.

New Dart.—This mine was formerly known as the Fortuna. Early in the year Mr. H. H. Adams purchased the mine and floated a company. Operations were at once commenced by starting a low level from the Hape Creek side to a spot below the old Dart, or Consols shaft. When completed, this level will drain the mine below the collar of the shaft and enable work to be commenced from the bottom. Four men are employed.

Tararu Creek.—This mine has been well and systematically worked during the year. The owner, Mrs. Agnes Graham Trower, is an English lady who was deeply interested in the late Tararu Creek Company, and has been working the mine since the company was wound up in hopes of getting back some of the capital she had invested. The works carried on during the year were the opening up of a block on the Dunedin reef and developing the Sunbeam reef. A rise has been put up from the battery level to connect with the rise in the Sunbeam. Ladder-ways and shoots have been put in at this rise. No. 2 level in the Sunbeam has been extended 356 ft., 150 ft. being on the reef. A block of ground below the Charter level has been opened up, and stoping will be commenced at once. A rise is being put up to connect No. 1 and No. 2 Sunbeam levels, which, when completed, will enable a large block of ground to be worked. If the necessary capital of £5,000 is forthcoming, a drive will be put in from the Day Dawn crosscut to open up the Norfolk section. This would give from 200 ft. to 300 ft. of backs on a probably payable block of ground. The ore found in the mine is mostly of low grade, running to about £1 5s. per ton; and as the ground is hard, there is not much profit. Ore crushed, 956 tons, for 363 oz. 6 dwt., value £1,064. Twelve men have been employed.

Eclipse.—Considerable work has been done on this mine during the year, with fair results. On the Vulcan lode, 300 fathoms have been stoped out from the low level in a northerly direction from No. 1 winze along to the junction of the Vulcan and Eclipse reefs. In the intermediate level the lode is about 6 ft. wide, and passes through well-mineralised ground favourable for gold. The ore should improve in value as the drive is extended on the reef. The Eclipse reef has been cut in a crosscut driven into the hanging-wall at right angles. At the point cut the lode is 5 ft. wide and very solid. A large body of ore is thus opened up, and the reef is intact right up to the surface, and should prove payable. The position of the upper end of the aerial tramway has been changed to near the low level, and a self-acting ground tramway constructed to connect the level and the aerial line. These alterations have greatly reduced the cost of haulage. The ore crushed was 1,338 tons, and yielded 1,153 oz. of gold, valued at £3,193. Twelve men have been employed.

The New Waiotahi (late New Caledonian), Lord Nelson, Occidental, Manchester, and Southern Queen (late Karaka) Mines are all being worked by small companies, but nothing has been found of any consequence; but as they are all in good localities, they may at any time meet with payable ore.

Monowai.—The old company having decided to cease operations, all the plant and ground were sold by auction. Messrs. Craig and Adams became the owners and floated a company, which has been working the ground during the year. The low level has been extended and a few tons of ore taken out. There is still 500 ft. to drive before they get under where the rich ore was found a couple of years ago. The ore is very refractory, and has not yet been successfully treated in the colony, although good returns have been obtained, when the concentrates have been sent to Newcastle for treatment by smelting. Seven men have been employed.

Tapu District.

Mahara Royal.—This company has been engaged in developing the Royal reef at the bottom level. The lode is from 2 ft. to 10 ft. wide, and goes about 7 dwt. per ton. This is just about sufficient to pay expenses. Work is now going on prospecting the unexplored part of the mine, for which purpose a crosscut is being put in the foot-wall of the Royal reef. It is expected that several lodes found in the upper levels will be intersected. Eight men have been employed, and 1,232 tons of ore crushed for a return of 513 oz. 6 dwt. of gold, valued at £1,511.

Sheridan.—This ground was purchased by the Plummer Brothers from the Bullion Company (which had to be wound up), and has been worked by the purchasers during the year. A little ore has been found now and then, but they have not been able to make wages. Three men are employed.

East Coast District.

Auckland.—This mine was formerly known as the Mananu, and worked by the Mananu Company (English); but the results of its operations not being satisfactory, the ground and plant were sold to Mr. H. H. Adams and party. A company was formed, and work commenced at once. Several small blocks of ground between No. 1 and No. 2 levels were worked, and good payable ore found. The company are now opening out and developing the reefs at No. 3 and No. 4 levels. A total of 879 tons of ore was treated for a yield of £4,387 14s. Eight men have been employed.

Waimangu.—A company was formed to work this ground towards the end of the year, but have not had much time to do much work. For the first six months the ground was under protection. It is reported that good payable ore exists in the mine—at any rate, the prospects are considered so good that the company has decided to erect a battery and go in for extensive workings.

Chelmsford.—Work was resumed in this mine about the middle of the year, and small blocks of the reef at the surface levels were taken out and crushed, but were found not payable, and work was discontinued. The company is now in liquidation. Ore treated, 741 tons, yielding £1,167.

Tairua Broken Hills.—Early in the year the main shaft was sunk a further distance of 90 ft., and the reef opened up to the 80 ft. level. Payable ore was discovered here, and driving was proceeded with north and south of the shaft. The Blucher reef was driven for 290 ft., and 150 fathoms of ground stoped out. Towards the end of the year a crosscut was put in from the battery level and a new and payable reef discovered. Taking everything into consideration, it looks as if the former prosperity of this mine has returned. Ore crushed, 2,151 tons, for £4,669. Men employed, fifty.

Coronation.—This mine being supposed to contain a large body of payable ore, a small plant of five stamps, driven by steam, was erected. After 103 tons of ore had been put through for a return of 25 oz. 3 dwt., value £57 17s. (which was not payable), crushing was discontinued and prospecting-works undertaken in order to find more payable ore. Two men were employed.

Neavesville District.

Golden Belt.—Work during the year has principally been the erection of a crushing plant of forty stamps, and extending the low level to 1,600 ft., which brings it under the winze from the smithy level. A rise of 92 ft. has been put up to the bottom of the winze, and now there is good ventilation. The reefs from the lower level to the surface can also be worked economically. The reefs are said to be payable, so that when crushing is commenced this mine may become a dividend-payer. Eight men have been employed.

Champion.—During the year two men have been employed prospecting. A large body of ore was discovered at the surface, which gave very good results when panned off. A low level is being put in to cut the reef at depth. If this reef goes down and is of the same character as that found on the surface, a good payable mine has been discovered. Efforts are being made to float a company to find capital to further prospect the mine.

Kiri Kiri.—Towards the end of the year, a company was formed called the Kiri Kiri Mines (Limited), which took over the ground from Mr. J. H. Fleming. The company at once commenced a low level at the southern end of the mine to intersect the reef cut in the upper levels some time ago. In the upper levels the reef is composed of numerous small stringers which contain good gold. It is expected that the reef will solidify as it goes down. If it does, then the prospects will warrant the erection of a battery. The company has secured a site some 100 ft. below the low level. Five men have been employed.

Omahu District.

The mines in this locality have all been more or less under protection; indeed, for a time the Capstan, Sheet Anchor, and Klondyke were abandoned. Lately the Capstan and Sheet Anchor were taken up again, and a company is being formed to prospect them more extensively than previously. The surface prospects were good, but as the reefs went down broken country was met with and the reef heaved about considerably. It is intended to put in a drive at a lower depth than hitherto to ascertain if the reef makes again. Four men are employed in this work.

Waihi.

Waihi.—The Waihi Company has been vigorously working the whole of this year, and its returns have increased to £61,890, from 24,698 tons, for the month of March last. Great activity is displayed in all branches of mining on this property, which finds employment for upwards of thirteen hundred persons in various capacities. The total output had reached £4,557,762 in March, and £1,962,896 had been paid in dividends up to the 1st March last. The prospects of this mine still continue cheering, and, from all accounts, the lower levels are turning out as well as the higher ones have proved to be. There is thus every prospect of the present prosperity remaining with the mine for some years to come, and developments in the lower levels may prove its resources to be unlimited. It is the mainstay of the Upper Thames portion of the field. Extensive pumping machinery has been erected during the past year to enable the water to be removed from the lower levels. The mine appears to have a good future before it in every respect.

Waihi Grand Junction.—This company has persevered in its mining operations for some years under somewhat difficult circumstances and at great cost, mainly owing to the great quantity of water it has to cope with. This difficulty now appears to have been got over, and the development-works have been actively carried on, and have proved sufficiently encouraging to warrant a battery being erected, which will shortly be completed; and I trust when reporting next year to be able to chronicle another fairly rich mine. This company deserves success for the very plucky manner in which it has persevered in endeavouring to make a profitable mine of its property. The company has expended some £200,000 in mining operations without receiving any result so far for the expenditure. This company has recently acquired the properties held by the Consols and Waihi South Companies. Upwards of two hundred men have found employment under this company during the past year, and if the operations during the current year turn out as successful as it is anticipated, probably five hundred men will be engaged.

Waihi Extended.—This company has been working during the year with some fifteen men, endeavouring to make a mine of the property. A portion of what was reported to be one of the Waihi Company's reefs was cut on the boundary of this claim, which gave the management some hope of eventually discovering a payable ore-body. With this object, developments have been carried on, but so far nothing of value has been unearthed. It is hoped that between this and the next report discoveries may be made which will place this in the class of gold-producing mines.

The Pride of Waihi.—In the past six months this mine has been worked with two men, who have been employed on one of the quartz formations met with in the Waihi Extended Mine with a view of tracing it into the Pride ground, into which it is said to be running.

Waihi Consolidated.—The Waihi Syndicate (Limited) has an option over this property, and about the middle of 1905 commenced operations in conjunction with the Grand Junction Company. A sum of £3,000 was raised, the syndicate providing £2,000 and the Grand Junction Company £1,000. It is proposed to sink a shaft to 900 ft., the drainage level. This shaft will be situated to the westward of that on the Favona ground. The machinery from the Favona shaft has been removed and re-erected on the new site, and the shaft sunk 25 ft. It is not proposed to do any driving until the proposed depth is reached. Eight men have been employed during the past year on this property.

Walker's "Gigantic" Group.—The licensee of this property is in England, having proceeded there in the hope of raising capital to enable the ground to be thoroughly tested. Within the last year some £1,000 has been spent in shafting, but when the shaft reached 60 ft. a great deal of water was met with which could not be taken away with the windlass and bucket. This compelled the shaft-work to cease, and a level from the hillside was begun at a depth of 150 ft. below the collar of the shaft with the intention of connecting the level with the bottom of the shaft. Eight men have been employed.

Waihi Beach United.—This company has been carrying on its operations with thirteen men. A shaft is sunk to a depth of 356 ft., from which a crosscut was put in intersecting the reef at 150 ft. Fair prospects were obtained, and the shareholders anticipated their property will yet become a gold-producing mine.

Ohinemuri River Syndicate.—This venture so far has not been successful from a financial point, the extractions not reaching anticipations. The owners have spent several thousands of pounds in their undertaking. Recently, however, an Australian association have turned their attention to these claims and have sent a representative over here to thoroughly test the claims, and if his report is favourable they probably will find capital to work them.

The other mines in existence—viz., the Waihi Consols, the Waihi South, the Waihi Gold Reefs—have not done very much in the way of advancement. The want of capital is the great stumbling-block to the development of Waihi properties.

There are a few other claims on the Register, but the history of these may be summed up in the words "mostly protected," the owners having no means to work them, hence, after exhausting the maximum limit of protection, they are abandoned, to be taken up by others, who pass through the same process and then throw them up. Some of this area is generally held by some one or other who, after fruitless attempts to secure capital, is compelled to give it up.

Katikati.

The Eliza Claim has again recently come into existence, and is being prospected with aid granted for prospecting. Two men are employed, and report states that good-quality stone has been found.

Waitekauri.

I regret to have to report that the former glory of Waitekauri has departed: let us hope it is only for a time. The Waitekauri Company, which mined here for several years with fair success, have surrendered all their properties and withdrawn from them. Some of the abandoned ground is being worked by persons who took it up; but the present work is on a very small scale, yet the parties concerned anticipate receiving something for their labour in the no-distant future.

The Maorilander.—This is a property worked by a syndicate which has received some £250 as a grant to assist it in erecting a crushing plant. A considerable quantity of work has been done, a reef has been opened up, and it is stated it will pay handsomely when the plant is ready for crushing the ore. Four men have been employed during the year.

Portsea Claim (formerly the Grace Darling) is one of the properties formerly owned by the Waitekauri Gold-mining Company, but now owned by Challis and others, who obtained sufficiently encouraging prospects to warrant them in erecting a small crushing plant with five stamps; but since its completion the ore has not turned out as well as expected. Four men employed.

New Zealand Jubilee Mine has given no encouragement to its owners during the year to cause any activity in their mining operations. A large sum has been spent on this mine during past years. Five men employed.

Karangahake.

Talisman.—The Talisman Consolidated may be said to have proved itself the premier producer of gold during the past year in this locality, having treated 44,725 tons of ore, the bullion from which was worth £129,088, which gave the company an opportunity to pay £30,000 in dividends. This is the first dividend paid since operations commenced. The mine is working well at present, and it is said the recent returns will continue for a while. This company purchased the Woodstock Company's properties, but so far have discovered nothing upon them of a payable nature. A great deal of work is being carried on by this company, which is employing 230 men.

New Zealand Crown Mines (Limited).—The operations of this company during the past year have not resulted in the same output of gold, although some fairly rich ore was handled, 17,541 tons yielding £36,516. Development-works on a fairly large scale are being carried on, and it is hoped will ere long lead to fresh discoveries of ore rich enough to put through the battery to pay something beyond expenses of mining. 129 men have been employed.

Comstock United.—This claim has been worked by the owner with more or less help from the County Council, which has given monetary assistance as well as foregone the rent. According to the owner, this mine only requires development to prove a veritable bonanza. The discoveries in the Talisman

property have enabled him to dispose of the claim to a company, and it is expected that with the capital secured development-works will be more actively carried on. Two men employed.

Te Aroha District.

Hardy's Mines (Limited).—This property has been taken over by a company, the object being to procure further capital for working the properties. The property has been worked during the year with twenty men, whose labour has resulted in the treatment of 1,727 tons, the bullion of which was worth £6,343. A considerable amount of development-work has been done on this property, but no ore of a rich quality was discovered.

There are one or two other claims in existence in this locality, but these are doing very little work, the want of means being the obstacle.

Komata.

The Komata Reefs Mine has been working vigorously during the past year, finding employment for some one hundred and forty men, whose efforts have resulted in bullion being produced to the value of £13,333. A great deal of work has been done on the property during the twelve months. This mine bids fair to be one of the gold-producers of the district.

There are one or two other claims in this locality, but there is nothing to report in connection with them.

Coromandel.

The Hauraki Mine has been working during the year, but the persons engaged therein have been principally tributers, whose work has been confined to the surface blocks, owing to the mine below adit levels being full of water. There is, however, a talk of the owners of this and the Bunker's Hill Mine amalgamating: if this should take place the mine will be unwatered and more vigorous work result, which will find employment for more men. About eighteen men have found work there during the past year, whose labour has resulted in gold to the value of £681 being obtained. Mining operations are very dull here, and, the population being compelled to obtain work elsewhere, there are many empty dwellings about.

Bunker's Hill Mine.—For the first six months of the year five men were employed driving an adit level in the hope of intersecting some of the leaders in the low levels, but this work having proved unsuccessful operations were stopped and protection applied for.

Hauraki Freeholds.—In the early portions of the year this company was working, but a dispute arose with the Hauraki Company in respect to pumping. This led to the latter company stopping their pump, the result being such an increase of water in the workings of the former as compelled them to stop work and seek protection. Three men were employed, and gold to the value of £206 was secured.

Success Mine.—Very little was done upon this during the year. The property was sold to a former owner, who, I understand intends to work it very shortly.

Golden Pah.—Worked by tributers on small leaders. Six men employed, who treated 95 tons of stone, valued at £122.

Golden Spark.—Very little work done.

Harbour View.—Attempt made to work, but as no results therefrom, compelled to stop for want of funds.

Kapanga Mine.—A portion of the old Kapanga Company's property is now owned by Messrs. Cornes and Hollis. These parties have been driving to secure the cap of the reef, which produced a large amount of gold in the early days of the field. The cap of the reef has been discovered and driven on for a distance of 100 ft. The stone broken out has a promising appearance, and some gold has been seen in the stone. There is a prospect of this old property being taken in hand by a syndicate; if so there are expectations of its being further developed.

Tokatea Consolidated.—This property has been worked with seven men, who secured ore to the value of £641.

Monte Christo Claim.—No discovery of any importance.

Royal Oak.—For the first six months of the year the company had several men at work, whose labour was paid for out of gold obtained; but later on the ore got poorer, the result being that all the wages-men were discharged and tributes were let. The result of the year's work was gold valued at £2,040. The average number of men employed was thirty.

Kennedy Bay.

Four in Hand.—This company has been engaged putting in an extension of its low level, which now is driven 800 ft. and is within some 200 ft. of the hanging-wall of the reef. So far nothing worthy of note has been unearthed in this extension. 112 tons of ore was treated, yieldingg old valued at £456.

A considerable amount of assisted prospecting has taken place, notably on the Big Reef on the Tokatea Hill, but so far nothing of a payable nature has been discovered.

Cabbage Bay.

White Star Mine.—Very little work done. Result, ore secured valued at £9.

Kuaotunu.

Waitaia Mine.—Work still carried on by the company—confined solely to stoping out the leaders over the back of the low levels. No fresh work undertaken. The ore taken out has been poor yielding a very small profit. Average of twenty men has been employed, whose labours resulted in obtaining bullion valued at £2,484.

Handsworth Mine.—Protected for portion of the year. Yielded gold valued at £145.

Great Mercury Mine.—Two men employed during the year, whose labour has so far revealed nothing beyond poor-grade ore; still the owners are hopeful of better things before long.

Otama Mine.—At present worked by Messrs. O'Keefe and Ellings. A fair amount of work has been done, of a disappointing nature to the workers. Ten pounds of stone obtained, however, yielded bullion valued at £45.

GUMTOWN.

Kapowai Mine.—This mine has been worked by the owner with four men, who have got out 1,240 tons of stone, which upon being crushed returned gold of the value of £2,469. It is stated the proprietor proposes erecting a cyanide plant.

Big Beetle Mine.—This property was worked by tributers for a portion of the year, but subsequently the mine and battery were sold to Mr. O'Connor. This ground, together with the Perseverance and Golden Drop claims, is in the hands of a syndicate, which has four men prospecting the area; and if decent prospects are obtained it is intended to prosecute development-works on a larger scale. Seventy-three tons of quartz were treated during the year, resulting in a yield of gold valued at £133.

I have, &c.,
R. S. BUSH,
Warden.

The Under-Secretary, Mines Department, Wellington.

Mr. Warden ROBERTS, Tauranga, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Warden's Office, Tauranga, 28th March, 1906.

I have the honour to acknowledge receipt of your memorandum of the 26th January, with certain forms attached thereto to be filled up, and asking me to report on the general condition of the mining industry in my district.

In reply thereto, I have to report that during the year ended the 31st December, 1905, little or nothing has been done to work or develop the goldfields in the Tauranga portion of the Hauraki Mining District, only one man being employed.

The forms are filled up and returned herewith.

have, &c.,
J. M. ROBERTS,
Warden.

The Under-Secretary, Mines Department, Wellington.

Mr. Warden SMITH, Blenheim, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Warden's Office, Blenheim, 12th April, 1906.

I have the honour to report that during the past year the mining industry in this district has not been marked by any noteworthy development.

Quartz-mining operations have been continued in the Wairau Valley Gold-mining Company's property at Top Valley, where a low-level tunnel is being driven to intersect a reef found on the Lord Hopetoun Claim. Six men have on an average been employed at this work, and during the year a total of 300 ft. has been driven, leaving 800 ft. to drive before the point is reached at which it is expected to cut the reef. Scheelite of good quality is found on this property and is being mined.

Active operations have not been carried on in any other quartz claim, with perhaps the exception of a little prospecting on Mount Patriarch.

Dredging is represented by the Golden Point Company at Wakamarina and the Alpine Gold-dredging Company at Top Valley, but in neither case has the dredge been at work during the year. As mentioned in my last report, both dredges met with misfortunes, and up to the close of the year had not been replaced on the claims in working-order.

As regards alluvial mining, it is understood that at Mahakipawa and the Wakamarina a few good claims are being worked and that on the whole a general advance on recent years is shown in those localities.

Statistical returns are forwarded herewith.

I have, &c.,
T. SCOTT SMITH, Warden.

The Under-Secretary, Mines Department, Wellington.

Mr. Warden KENNY, Nelson, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Warden's Office, Nelson, 3rd April, 1906.

I have the honour to forward herewith statistical returns for the year ending the 31st December, 1905, together with a general report upon the mining districts under my administration.

SUBDISTRICT OF COLLINGWOOD.

To make this report as comprehensive as possible, I shall deal with the various operations being carried on in the different parts of the district individually, and then add a few general remarks.

Parapara Hydraulic Sluicing and Mining Company (Limited).—This company is the holder of several special alluvial claims, but during the period to which this report relates labour has been concentrated on sluicing operations at the Hit or Miss saddle; and the returns on the whole have been fairly satisfactory. The ground worked is very heavy and rough, and the gold-bearing wash underlies hills of considerable height, so that, as the wash is removed, enormous slips from the hillsides occur, bringing down large quantities of shattered rock, which has to be broken up and stacked or sluiced away. The gold-bearing wash at this face is now, however, almost exhausted, and the company is proceeding to

work its freehold property known as Appo's Flat. A contract has been let to drive a tunnel 620 ft. long through rock. This tunnel is only being driven from one end, and will therefore take some months to complete, and when completed will serve as a tail-race through which the whole of the surface or upper portion of Appo's Flat will be sluiced down to a depth of 25 ft., below which depth elevating will have to be resorted to. The ground on Appo's Flat, I am informed, is very deep, and should be the means of providing years of profitable work; and it appears to be generally regarded here as a promising property. About an acre at the upper end of this flat was worked by the primitive methods in use in the early days of these goldfields, and is said to have given good returns considering the mode of working adopted. Sluicing operations should commence on this flat about the month of June next. The quantity of gold won by this company for the year was 769 oz. 2 dwt. 19 gr., valued at £2,985.

Slate River Sluicing Company (Limited).—The operations of this company have been again considerably hampered during this year owing to the shortage of water, and steps have now been taken to augment the supply passing into the company's big dam at Toitoi Flat for storage purposes. A license for a dam in Bedstead Gully has been obtained, and also a license for a water-race commencing at the dam in Bedstead Gully and conveying the water to the big dam in Toitoi Flat. With the increased water-supply available when the dam and water-race mentioned are completed, the company should be enabled to carry on sluicing operations with much less broken time than hitherto. During the twelve months 313 oz. 0 dwt. 17 gr. of gold, valued at £1,179 10s. 3d., has been won. In the course of conversation with the company's manager I gathered that it is his intention to cease work at the old face and open up a fresh face at the old claim locally known as Nicholas's, where good prospects have been obtained.

Quartz Ranges.—Sluicing operations have been carried on at the Quartz Ranges by a party of tributers on the special claim held by Mr. Charles Y. Fell, lately the property of and worked by the Collingwood Goldfields Company. This party has command of a splendid water-supply, enabling operations to be carried on throughout the whole year. The quantity of gold actually taken from this claim during the year was 194 oz., valued at £679. This, however, does not represent more than seven or eight months' working, as the clean-up for the run commencing late in the year 1905 has not yet been made. It is confidently expected that the next run will prove highly payable, as the ground to be attacked is known to be rich.

Slate River Gold-dredging Company (Limited).—I regret to have to report that on the 12th January last the shareholders of this company passed an extraordinary resolution that the company, being by reason of its liabilities unable to continue its business, be wound up voluntarily, and Mr. F. West, of Collingwood, mining agent, was appointed liquidator. The dredge produced 458 oz. 19 dwt. of gold, valued at £1,659 15s. 3d., during the year 1905, the cost of carrying on the operations of the company for that period being £1,804. The river at the point at which this company's dredge has been engaged is narrow and confined between high banks, and the dredge was therefore subjected to considerable danger of being carried away by the current in times of flood, and was on two occasions, unfortunately, left stranded on heaps of tailings over which she had floated during floods. The working of the dredge was also rendered difficult at times owing to the rocky nature of the bed of the river. Hopes had been entertained in this district (where the majority of the shareholders reside) that this dredge would have been successful, and that the dredging industry in this district—in which the failure of no less than four dredging companies has been brought about—would have been revived and carried on with a larger measure of success.

Golden Blocks, Taitapu (Limited).—This quartz-mine is the most consistent (as regards the gold-yield) of any concern in the district, and during the year no less than 2,320 oz. 10 dwt. of gold has been obtained from 1,950 tons of stone treated. The reef, however, is more or less patchy, and during the last few months the returns have been below the average; but I am informed by the company's manager, Mr. Giles, that the next clean-up should show a considerable improvement.

General Observations.—A considerable amount of prospecting work has been done during the last six months at the old Johnston's United Gold-mining Company's mine at Bedstead Gully, which is now held under application by Mr. Charles Y. Fell; and although I understand that nothing rich has yet been struck, hopes are still entertained that the rich reef will yet again be struck.

Active operations have been commenced by the Anatoki Prospecting Company, chiefly in the Upper Anatoki Valley and in the vicinity of the Boulder Lake, and Mr. Charles E. Storie, who has been through the country mentioned in charge of a prospecting party, speaks very hopefully of the future of the company. Application has already been made for a license for a prospecting area of 100 acres and for a water-right, both in the vicinity of the Boulder Lake.

Takaka County.

Bubu.—At Bubu the Takaka Sluicing Company are still getting payable gold. For the year ending December last three dividends were paid to the shareholders of 1s. per scrip in each instance. The part of the ground the company is now working is only 8 ft. deep, and is showing gold freely. The claim is a very inexpensive one, only employing ten men all told. The men work three shifts of eight hours each.

The ground adjoining the Takaka Sluicing Company is held on one side by Frank Roach and on the other side by Charles Cate. These men are doing very little, as the means of working used are very primitive. Both claims are now under offer to the Takaka Company. There is also another man (an old-age pensioner) fossicking in the creek.

On the 29th March, 1901, the Takaka Sluicing Company applied for and was granted a right to divert fifty heads of water from the Anatoki River, above the big bend of the Bubu, to sluice the terraces between the Anatoki and Bubu Rivers. The ground which the water would command is supposed to be payable.

At the head of the Waingaro River one man is working, and he has done very well for the last two months; but the great drawback is the want of water to command the terraces. He has now to barrow his washdirt for some distance to the creek, and yet it pays him to do so.

At Waitoi three old men are fossicking, but doing very little.

The Anatoki River, at the head, would, it is said, probably support two hundred men if a horse-track was made so that the miners could get their food by packhorses. As it is now it takes two days from Takaka to get on the ground with their supplies, as they have to carry them several miles through the bush on their backs.

WANGAPEKA.

In that part of my district which includes Wangapeka, Sherry, and Baton, there has been practically no change during the past year so far as mining is concerned. Some six or seven miners only have been working, and none of them have earned more than a living wage. The dredge on the Wangapeka has been idle throughout the whole year.

The construction of the Midland Railway (which passes through this subdistrict) has, by absorbing all surplus labour, doubtless kept a few men from prospecting and other mining operations who would otherwise have engaged in them.

MOTUEKA.

I regret to say that the mining industry is practically non-existent in this portion of my district. There are only three men employed, and they are meeting with but little encouragement. No mining privileges were applied for during the year, and the only business done in the Warden's office was confined to the issue of three miners' rights. There does not appear to be any prospect of a revival of the interest formerly taken in mining matters so far as this subdistrict is concerned.

I have, &c.,

The Under-Secretary, Department of Mines, Wellington. H. EYRE KENNY, Warden.

Mr. Warden KENRICK, Reefton, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Warden's Office, Reefton, 2nd June, 1906.

Herewith I have the honour to forward to you the detailed reports on the several subdivisions of the mining district under my charge for the year ending the 31st December, 1905.

REEFTON DISTRICT.

Mr. E. W. Spencer, engineer for the Progress Mines of New Zealand (Limited), supplies the following report on that company's operations during the year 1905:—

"The development-work has been pushed ahead on levels 8, 10, and 11, and No. 6 level has been repaired into the east end during the year. Quite a large tonnage of low-grade quartz has been opened up by development, principally in No. 8 east level. In all 2,939 ft. of development-work was done, besides sinking the main shaft 155 ft. from No. 10 to No. 11 level. Diamond drilling to the extent of 4,193½ ft. was carried out, the greater portion being drilled with a small machine by the company, the latter 512 ft. being done by the Goldfields Diamond Drilling Company, on contract, with a larger machine. In all £7,207 4s. 10d. was expended in development-work during the year.

"Stoping has been continued on levels 4, 5, 6, 8, 9, and 10, several blocks having become exhausted. The Progress blocks, for instance, from No. 10 upwards are completely finished, so also is the big block on No. 4 and the big block close to the shaft on No. 9. Other stopes have been opened to replace these, notably the intermediate levels on No. 6 and the big east-end block on the same level.

"On surface no material alterations have been made either at the mine or the battery, with the exception of an overshot water-wheel 16 ft. in diameter which was erected at the Progress cyanide-works, taking the waste water from the mill Pelton to pump up the cyanide-solutions with. A Wilfley slime-table was also being erected at the end of the year for the purpose of testing its efficiency as compared with the canvas tables in use, for the purpose of extracting the pyritic particles from the ordinary slime.

"During the year the sixty-five stamp mill ran 322·52 days, crushing exactly 60,000 tons of quartz, yielding 18,147 oz. 11 dwt. of bullion by amalgamation, equal to 6 dwt. 1·18 gr. per ton. The value of the bullion amounted to £75,408 9s. 4d., or £1 5s. 1·63d. per ton. The yield by amalgamation shows a very considerable falling-off as compared with previous years, and unfortunately we cannot point to a corresponding diminution in the working-cost, but rather to an increase.

"1,105 tons of pyritic concentrates and slimes were put through the chlorination-works during the year, yielding 2,717 oz. 4 dwt. 18 gr. of gold, valued at £11,238 4s. 7d., equal to 3s. 8·952d. per ton milled.

"*Cyanide Plant.*—During the year 37,000 tons of coarse sands were treated, yielding 4,032 oz. 17 dwt. 21 gr. of base bullion, valued at £10,204 14s. 7d. The cost of treatment amounted to 1s. 10·06d., and the profit to 3s. 8·133d. per ton. Many attempts have been made to treat the slime-particles experimentally, but without sufficient success to warrant the erection of a plant for the purpose. This is greatly to be regretted, for were it possible to obtain the same profit from the slimes as from the sands it would make a very appreciable increase in the output.

"A general summary of the aggregate working-cost, yields, and resulting profit in milling 60,000 tons, and cyaniding 37,000 tons, and chlorinating 1,105 tons during 1905 is as follows:—Total working-cost, £53,977 18s. 9d., or 17s. 11·911d. per ton; profit, £44,325 11s. 6d., or 14s. 9·303d. per ton; yield, £98,303 10s. 3d., or £1 12s. 9·214d. per ton. The profit for the past year is 4s. 8·218d. per ton less than it was for the year 1904, owing to a slightly increased working-cost and to treating quartz of lower

grade, the value per ton milled being 6 dwt. 1·18 gr. in 1905, as against 7 dwt. 3·93 gr. for 1904, an unfortunate drop; and from the appearance of the mine the year 1906 will show a further reduction in values.

"The same policy will be pursued underground in the future as heretofore—viz., to vigorously push the development-work ahead—and we look forward to locating quartz of value by extending No. 9 and No. 11 levels."

Mr. E. W. Spencer, Engineer for the Consolidated Goldfields of New Zealand, (Limited), supplies the following reports on the various mines under the control of that company:—

"*Wealth of Nations and Energetic Mine.*—The supply of quartz for the battery during the past year has principally been obtained from No. 6 stopes, which have been freely attacked. No. 3 stopes were worked to a small extent until all the profitable stone was exhausted, and No. 7 stopes have been worked regularly by a small force of men. The quartz won from the development of No. 8 level was also milled. 11,970 tons of quartz was crushed during the year, yielding 3,304 oz. 12 dwt. 17 gr. of bullion, valued at £13,662 19s. 6d., or 5 dwt. 12·51 gr. per ton. The concentrates and slimes were shipped to the smelter, realising £764 14s. 10d. At the cyanide-works 8,320 tons of sands (representing 69·507 per cent. of the tonnage crushed) was cyanided, yielding 1,397 oz. 10 dwt. 9 gr. of bullion, valued at £5,420 16s. 1d., or 13s. 0·369d. per ton. Of this amount 2s. 5·190d. was consumed in working-cost, leaving a profit of 10s. 7·179d. per ton treated. A large amount of development-work has been carried on during the year from the Energetic shaft. The shaft itself was sunk from No. 8 to No. 9 level, a vertical distance of 125 ft. No. 7 level was driven south a distance of 432 ft. without locating anything of value. No. 8 level encountered stone at 174 ft. from the shaft; the stone was followed along the level for approximately 200 ft., and the south end again extended till the face was 720 ft. from the shaft. No. 9 level struck stone at 165 ft. from the shaft at the latter end of November, since when the reef has been opened for 65 ft. in length. No alterations of importance have been made to the surface equipment during the year. In the near future—as soon as No. 6 stopes are exhausted—the whole of the output for the Wealth of Nations battery will have to be hoisted through the Energetic shaft. The old incline shaft will then be abandoned. This will effect some considerable saving in expense.

"*Golden Fleece.*—The shaft at this mine was sunk to another level (No. 14) during the year, a vertical distance of 125 ft. below No. 13. No. 13 level was extended a considerable distance north, and located a good block of stone 80 ft. in length. This level is now 900 ft. north of the shaft. No. 14 level: As soon as the shaft was sunk and the chamber cut the crosscut was commenced, and at 310 ft. from the shaft encountered the reef-formation early in October. At the end of the year the north drive was 180 ft. in length and the south 100 ft. Although upwards of £3,000 was spent in development the quartz opened up did not keep pace with the amount extracted. During the year 13,985 tons of quartz was crushed, yielding by amalgamation 5,670 oz. 5 dwt. 12 gr. of bullion, valued at £23,165 11s. 8d. The sulphurets and slimes were shipped to the smelter, realising £1,955 8s. 8d. The coarse sands, amounting to 9,475 tons (representing 67·751 per cent. of tonnage milled), were cyanided, yielding bullion to the value of £3,342 1s. 1d., or 7s. 0·654d. per ton treated. Of this 2s. 2·977d. was consumed in working-cost, the balance of 4s. 9·657d. representing profit.

"*Welcome Group.*—In the early months of the year prospecting operations were carried on with but poor results. In September last the property was let on tribute to McKenzie and party, who at the end of the year had taken out a small crushing of 45 tons, which yielded 53 oz. of bullion, valued at £212. The company obtain a minimum of 10 per cent. of the gross gold won as tribute.

"*Inkerman Mine.*—In July last the Consolidated Goldfields of New Zealand (Limited) purchased the property of the New Inkerman Mines (Limited) at break-up value. Before dismantling, however, it was thought advisable to take out two trial crushings, one from the 155 ft. level, the other from the west end of the battery level. The result of these crushings was not at all encouraging, so milling operations were suspended and some prospecting-work done on the surface. Should this work not turn out satisfactorily the machinery will probably be dismantled."

Keep-it-Dark Quartz-mining Company (Limited).—Mr. W. S. Hindmarsh, Manager of the company, supplies the following report:—"Mine department: The work for the year has principally consisted of stoping out quartz from Nos. 4, 5, and 6 levels. The blocks of quartz which are being stoped in Nos. 4 and 5 levels will be worked up to the level in about four months. In the west end of No. 5 level a new make of quartz has been driven on for a distance of 100 ft., the average thickness being 6 ft.; it is good payable stone. In No. 6 level the full extent of the lode is not yet known; upwards of 200 ft. has been driven on the reef, and at the present time there is 4 ft. of good stone in the face of the level which is being driven. There is a large quantity of quartz in this level of good average quality. A winze has just been started to indicate the underlie and strike the lode going down, as there seems to be a change of underlie in part of this level. In No. 7 level the chamber has been completed and a crosscut started to intersect the lode. The drive is now in 50 ft., and has been taken in 30 ft. from chamber of sufficient width to allow a double line of rails for that distance. 12,730 tons of quartz has been raised from the mine and sent to the battery during the year, the total expense being £7,092 14s. 7d., costing within a small fraction of 11s. 1¾d. per ton. This includes all development-work, repairs to old levels, and all expenses incurred with the upkeep and working of the mine and winding plant. The mine and winding plant are in good order, and at present the mine is looking as well for permanency as at any previous time. Battery department: The battery has been running fairly regularly for the year, very little crushing-time being lost. 12,730 tons of quartz has been crushed, the yield being 3,391 oz. 4 dwt. 12 gr. of melted gold, being nearly 5 dwt. 8 gr. per ton. The expense of the battery for the year is £1,562 4s. 3d. This amount includes new copper plates, and all renewals

of crushing plant and concentrators, upkeep of head-race and tail-race, and (deducting £78 17s. 10d., being the cost of 7 chains of new fluming on head-race which has just been completed) makes the cost just a little under 2s. 4d. per ton. The Wilfley concentrators are still doing good work. Two shipments of concentrates have been sent away during the year, from which a large profit has been derived. All the crushing plant is in excellent order, and no stoppage for repairs will be necessary for a lengthened time. Cyanide department: The amount of gold obtained in this department for the twelve months is slightly less than it was last year, but is equal to and exceeding what it was in former years. Bullion obtained for the year, 1,629 oz. 18 dwt. 9 gr., value £5,697 19s. 11d. This gives an extraction of very nearly 8s. 11½d. per ton on the gross tonnage crushed. The expenses for the year, which include royalty, salary, labour, cyanide, zinc, and all goods used, amount to £2,087 16s. 5d., being just a little over 3s. 3¼d. per ton on the total tonnage. This is a substantial reduction on the cost of treatment from previous years. Mr. R. M. Aitken, who is in charge of this department, has overcome the antimony difficulty by the use of caustic soda, and has effected a saving of quite 30 per cent. of cyanide. Mr. Aitken has patented the process, and hopes to be able to still further reduce the consumption of cyanide. The whole of the plant is in good order. The settling-tanks have been roofed in, and the work is going on satisfactorily."

Kirwan's Reward Gold-mining Company (Limited).—Mr. B. P. McMahon, Manager, reports: "During the past year, 7,584 tons of quartz rubble was milled, and yielded 1,683 oz. 18 dwt. 6 gr. of gold, of the value of £6,699 13s. 11d. The whole of this company's workings are on the surface, and consist of open cuttings. The material treated consists of loose quartz and rubble."

New Scotia Gold-mining Company (Limited).—Mr. T. H. Lee, Manager, reports: "This company's mine did not resume operations again under the above proprietary in consequence of the whole of the company's capital having been called up towards the end of last year. It then became necessary to reconstruct the company or raise additional capital in some other way. All efforts in that direction having failed, the company decided to go into voluntary liquidation and dispose of its property and assets. This course was carried into effect, and the whole of the mine, battery, cyanide plant, and all other assets were disposed of in May, 1905, to a syndicate of local speculators who formed themselves into a small private company under the title of the 'New Scotia Syndicate.'"

Mr. T. H. Lee, manager of New Scotia, Ulster, United Mines, and Big River companies, supplies the following information:—

"*New Scotia Syndicate.*—This private company acquired the whole of the New Scotia mine, battery, cyanide plant, &c., early in May, 1905, and immediately afterwards active operations were commenced in the mine. The first work undertaken was the unwatering of Martin's winze, after which the sinking of the latter was again resumed on the lode. This was followed for a further depth of 81 ft. on a reef varying in width from 2 ft. to 4 ft. At that point the winze went through the lode and sinking was stopped. A level was then opened out from the winze and driven on the reef for about 70 ft. in length, the width of stone being about the same as that cut in sinking the winze. A trial crushing of 250 tons from this reef was put through for a return of 35 oz. 5 dwt. of gold, valued at £137 9s. 6d., and 150 tons of the coarse sands was cyanided for a yield of bullion valued at £39 13s. 6d. These results not being payable all operations were stopped, and the syndicate resolved in November, 1905, to wind up, and dispose of the plant, &c. Negotiations are now proceeding between the Government and the owners with a view of the former acquiring the battery plant for public use. It is felt that should the plant be removed a great hardship will be inflicted on that portion of the Reefton field, as the battery is now the only one left there for use by adjoining mines.

"*United Gold-mines (Limited).*—Early in the year this company ceased all prospecting-works at the mine in consequence of the reef that was cut to the south of the first workings not carrying payable prospects. A meeting of the shareholders was convened early in April to consider the company's position and prospects, and it was then determined not to persevere any longer and the company was placed in voluntary liquidation. The plant has been dismantled, and a large quantity has already been disposed of.

"*Ulster Gold-mining Company (Limited).*—The winze on the south reef outcrop which was in progress of sinking at end of last year (35 ft. being then sunk) was continued until a point 150 ft. deep had been reached. A large reef-formation 5 ft. to 6 ft. wide was followed the whole distance, but no solid body of stone was discovered. A large amount of crosscutting was also carried out at different points of the winze, but results were disappointing. Work was thereupon stopped in that direction, and an uprise was carried through on the small north reef for a distance of 40 ft. In the uprise the lode was between 1 ft. and 2 ft. wide, and of payable quality. It was then decided to drive a tunnel under an outcrop of the reef north of the present workings. This drive is now in about 30 ft., and it is estimated that the reef should be intersected at a point between 125 ft. and 150 ft. in.

"*Big River Gold-mining Company (Limited).*—At the beginning of the year the new level (No. 8) had just been commenced, and this work was prosecuted with all possible speed until the end of May, when the line of reef was intersected at 395 ft. from the main shaft. At the point of intersection the lode was small and irregular, so the drive was turned off to follow it west and at the same time to reach the perpendicular of No. 7 winze. 39 ft. was driven on the track and an uprise put through to the bottom of the winze sunk from No. 7 level. The rise connected at 65 ft. above No. 8 level. An intermediate level was then commenced for the winze, 90 ft. below No. 7, and stoping operations started. The continuation of No. 8 on the reef-track was then resumed and a large block of stone was encountered. The average width of this reef was from 4 ft. to 8 ft., all of good quality, and the length of block

was found to be 48 ft. The opening-up of the No. 7 winze block, and this last reef in No. 8 being sufficiently far advanced, the battery was started at the end of September, and has continued running since. Nine hundred and twenty tons of stone has been milled for a yield of 879 oz. 2 dwt. 6 gr., valued at £3,514 8s. 3d. The reef in No. 8 stopes averages about 3 ft. wide, but has been rather irregular and difficult to follow. In No. 7 winze stopes, the reef has been of good quality, but small and broken in places. In the battery one of the latest pattern No. 5 Wilfley concentrators has been installed to extract the concentrates from the sands from the mill. This will be running early in the new year, and should materially add to the values being won.

"*Main Reef Gold-mining Company.*—This company's property is situate in the vicinity of the Kirwan's Reward battery, and was taken up to secure a discovery of a reef made by Mr. W. Kirwan. The reef was energetically prospected by the company (a private one), from four to six men being employed in driving a tunnel and sinking on the lode. After giving the find an extensive trial it was found to be unpayable, so operations were discontinued and the ground has since been abandoned."

New Discoveries.—The only new find of any importance in the district is that which is now known as the Blackwater reef. In the month of November a party of prospectors from Blackwater were successful in locating what appears to be a very valuable reef in the locality of the Snowy Creek reefs. The property has been acquired by Mr. P. N. Kingswell, who has now a number of men employed developing the reef. Other outcrops have been discovered in the vicinity of Kingswell's lease, and in all probability a valuable quartz-field will soon be opened up in this portion of the district.

Alluvial Mining.—With regard to alluvial mining, very little is being done in the Reefton subdistrict. There are still a few miners, both European and Chinese, employed at Upper Blackwater, Antonio's, Merrijigs, and Capleston; but the alluvial drift is being gradually worked out, and the Chinese are leaving for other localities.

Dredging.—Dredging operations are still being carried on in the Boatman's Creek district, Blackwater, and at Slab Hut Creek. At Boatman's, the Reeves Proprietary No. 1 dredge has been dismantled owing to the pontoons becoming decayed, and the prospects do not warrant rebuilding; No. 2 (or Merrimac) dredge is still working with varying success. The A1 Company is operating in Redman's Creek, a branch of Boatman's Creek; and the Boatman's Creek dredge, which is now owned by a local syndicate, has been refloated after being submerged for some six months, and will shortly resume operations in the creek close to the junction of Redman's and Boatman's. At Blackwater, the Ikamatua dredge is still lying idle, while in the adjoining claim the Blackwater River dredge is kept constantly working and gaining good returns. Extensive improvements in the machinery have been made. At Slab Hut Creek dredging operations commenced about the month of June, and the dredge has been kept continuously working with payable results. The dredge is small, but suits the claim, as it is not deep wash; it is being worked very cheaply owing to the railway-station being close at hand. It will, in my opinion, be a regular dividend-payer for some time to come.

Gold-yield, Reefton District, for Year 1905, from Quartz-mines.

Name of Company.	Calls.	Dividends.	Tons treated.	Yield of Gold.	Value of Gold.
	£	£		Oz. dwt. gr.	£ s. d.
Progress Mines of New Zealand (Limited)	Nil	34,375	60,000	24,897 13 15	96,851 8 6
Consolidated Goldfields of New Zealand (Limited)	Nil	12,118	...	...	...
(1.) Golden Fleece	...	...	13,985	6,541 10 0	26,507 12 9
(2.) Wealth of Nations ...	...	...	11,970	4,702 3 2	19,083 15 7
(3.) Welcome*	...	...	45	53 0 0	212 0 0
(4.) New Inkerman ...	...		Nil	Nil	Nil.
Keep-it-Dark Quartz-mining Company (Limited)	Nil	6,750	12,730	5,021 2 21	19,351 15 1
Kirwan's Reward Gold-mining Company (Limited)	Nil	2,100	6,250	1,949 19 15	7,764 16 7
Ulster Gold-mining Company (Limited)	800	Nil	Nil	Nil	Nil.
Big River Gold-mining Company (Limited)	1,500	Nil	920	879 2 6	3,514 8 3
United Gold-mines (Limited)† ...	...	...	...	...	...
New Scotia Gold-mining Company†	...	...	...	...	...
Private companies—					
New Scotia Syndicate ...	1,150	Nil	250	46 15 0	177 3 0
Main Reef Syndicate	420	Nil	Nil	Nil	Nil.
	3,870	55,343	106,150	44,091 6 11	173,462 19 9

*Let on tribute. † Company wound up.

Gold-yield, Reefton District, for Year 1905, from Quartz-mines—continued.

Name of Company.	Calls.	Dividends.	Tons treated.	Yield of Gold.	Value of Gold.
	£	£		Oz. dwt. gr.	Approximate. £ s. d.
Dredges—					
A1 Gold-dredging Company (Limited)	...	Nil	...	780 16 0	3,075 0 0
Reeve's Proprietary Company ...	...	Nil	...	1,347 9 0	5,300 0 0
Blackwater River Gold-dredging Company (Limited)	...	3,079	...	2,030 16 22	8,000 0 0
Slab Hut Creek Gold-dredging Company (Limited)	...	...	...	559 10 4	2,148 3 6
	...	3,079	...	4,718 12 2	18,523 3 6
Other alluvial gold—					
Sold to National Bank of New Zealand (Limited)	...	...	...	1,835 1 5	7,144 19 4
Sold to Bank of New Zealand ...	...	...	...	1,140 3 13	4,512 0 2
				2,975 4 18	£11,656 19 6

Statement showing the Comparative Returns from the Quartz-mines in the Reefton District from the 1st April, 1880, to the 31st March, 1901, and a similar Return for the Years ending the 31st December, 1901 to 1905.

Years ending	Calls made.	Dividends declared.	Quartz crushed.	Yield of Gold.	Value of Gold.
	£ s. d.	£	Tons.	Oz. dwt. gr.	£ s. d.
31st March, 1881 ...	10,218 17 6	19,650	25,926	17,597 14 10	68,630 13 10
" 1882 ...	25,504 3 4	37,643	14,894	20,154 0 0	78,600 12 0
" 1883 ...	64,345 0 0	32,600	18,928	19,194 0 0	74,856 12 0
" 1884 ...	49,456 0 0	16,500	23,433	16,547 0 0	64,533 6 0
" 1885 ...	29,333 0 0	34,100	34,349	23,997 0 0	93,588 6 0
" 1886 ...	24,565 0 0	14,500	27,198	14,591 0 0	56,904 18 0
" 1887 ...	21,596 0 0	33,450	23,930	21,143 0 0	83,171 15 5
" 1888 ...	30,432 0 0	17,550	24,403	16,775 0 0	66,030 11 5
" 1889 ...	38,919 0 0	16,688	28,564	18,663 0 0	72,720 18 0
" 1890 ...	27,531 0 0	18,250	32,394	17,780 0 0	69,676 12 1
" 1891 ...	20,404 0 0	27,325	39,643	23,347 0 0	91,998 8 10
" 1892 ...	25,956 0 0	30,743	35,562	23,390 0 0	95,885 5 1
" 1893 ...	18,800 0 0	16,900	37,693	20,171 0 0	80,894 5 1
" 1894 ...	14,350 0 0	18,832	34,518	18,413 0 0	73,752 14 11
" 1895 ...	10,153 0 0	11,012	26,602	13,426 10 0	53,509 5 1
" 1896 ...	8,418 0 0	25,925	29,816	22,025 0 0	87,935 18 4
" 1897 ...	9,033 6 8	4,900	13,270	8,365 4 20	33,824 7 1
" 1898 ...	7,859 3 4	50	9,751	4,266 7 1	18,253 7 3
" 1899 ...	5,920 6 8	900	42,305	21,487 18 15	87,587 1 0
" 1900 ...	10,747 8 9	47,050	58,277	26,693 3 18	108,455 17 8
" 1901 ...	5,826 9 7	35,300	82,618	33,979 5 5	134,557 7 11
31st December, 1901 ...	6,233 6 8	58,199	97,870	46,066 16 12	186,719 6 7
" 1902 ...	6,900 0 0	48,475	98,485	46,561 9 9	188,655 2 5
" 1903 ...	4,587 0 0	57,641	109,571	58,840 6 15	195,468 16 10
" 1904 ...	5,262 0 0	54,674	113,375	49,693 16 7	215,996 3 6
" 1905 ...	3,870 0 0	55,343	106,150	44,091 6 11	177,462 19 9
Totals	486,220 2 6	734,200	1,189,525	647,259 19 3	2,559,670 12 1

Westport-Charleston Subdivision.

In taking a general view of this subdistrict, from the Heaphy River in the north to Brighton in the south, one cannot help being forcibly struck with the great possibilities the district exhibits from a mining point of view. It has in the past produced large quantities of gold from very primitive workings, and has given remunerative employment to thousands of men. Scientific prospecting from belt to belt is what is urgently required to develop this division, together with the other divisions of the West Coast.

Commencing in the north, we have the Heaphy Valley. Very little prospecting has been done here, but traces of alluvial gold have been found right up the river. There are, however, no tracks or

other means whereby stores and the necessary prospector's equipment could be transported from place to place, so that this part of the country is practically unexplored.

Leaving the Heaphy, we come down to the Oparara–Karamea Valley. There are several parties of miners working alluvial claims in this locality, and they are doing very well. No quartz-mining is being carried on, but it is believed that in the future rich quartz reefs will be discovered in the vicinity. The miners report that when washing up they frequently find quartz adhering to any coarse gold they get. Further inland is Fenian Creek, a tributary of the Oparara River. Here are several parties of miners working alluvial claims. Lowe, Allen, and party have two 10-acre claims. They are at present engaged in bringing in water from Fenian Creek. In this locality there are hundreds of acres of alluvial ground that would probably pay well if water could be got that would command the area. In the future it may be found advisable to go to the expense of bringing in a long race from one of the larger rivers. This would require the expenditure of a considerable amount of capital, an expenditure beyond the powers of a small party of working-miners. In the same district are two more alluvial claims of 20 acres each, one owned by E. H. Donaldson and the other by Bennett and party. It is reported that these claims show a face of 50 ft. of wash that has averaged 6d. per cubic yard. The drawback here is the want of a good supply of water. The ground is exceedingly heavy, and the water available is not nearly sufficient for requirements. The expenditure of a considerable sum of money would be necessary to bring in a supply of water to work the ground effectively. A party of men are now engaged in opening up a new face, and the prospects are said to be excellent. Indications of the existence of a good quartz-bearing reef in this locality are numerous. In the Karamea River valley itself, the settlers in the early days made very good wages in washing the river-sand. The first six miles of the river from the sea still contains river-beaches that would yield good wages to energetic miners. The next four miles is a very rough gorge, with here and there little beaches and crevices. These are said to contain very rich wash, but the inaccessible nature of the country renders mining at present impracticable. Here, again, we see the necessity for constructing tracks, thereby opening another field to the hardy prospector. About ten miles up the river it is stated there is good open country containing considerable areas very suitable for sluicing, with plenty of water procurable, and good terraces carrying payable gold. The great drawback to the immediate development of this locality is the difficulty in getting supplies through. Two or three reefs carrying a small percentage of gold have been found in this district, but they have never been prospected for the reasons above mentioned.

Coming still further south, we get into the Little Wanganui Valley. Here the country is also very rough and almost trackless. A considerable quantity of alluvial gold has been taken out of this locality in days gone by, and it has always been a tradition amongst the miners that some day a rich gold-bearing reef would be discovered hereabouts. It is just possible that the anticipations of the old miners will not be disappointed in that respect, as a party of prospectors (Johnson and party) are said to have discovered a large gold-bearing reef. The party is so sanguine of the value of their find that they have pegged out and applied for several prospecting licenses each, and intend beginning prospecting operations at the earliest possible moment. It is also alleged that silver and copper exist in considerable quantities in this locality.

From here we come to the Rough-and-Tumble – Mokihinui basins. Several quartz claims have been taken up. Gilmer and party have a 100-acre claim, and are just commencing operations. Bennett and party, and Quinn and party each have a 20-acre claim, and have been working for some time. They have so far only found leaders, but are hopeful of striking the main reef which should prove very good. Application has also been made by the Nine-mile Gold-mining Company for a 20-acre claim. The Red Queen Gold-mining Company (Limited) hold a 20-acre quartz claim in the Mokihinui district, about eleven miles above Seddonville. This company, after many vicissitudes, has gone into liquidation. The claim is now being worked by three men on tribute. The gold-bearing quartz runs in a narrow lead of from a few inches to a foot in width. There is a two-stamp battery driven by a Pelton wheel attached to this mine. The stone in the lead is fairly rich, averaging an ounce to the ton, but as the lead is so thin a lot of dead-work has to be done.

We next come to the Birchfield district, and here we find the Britannia Gold-mining Company (Limited) with a claim of just on 100 acres granted in September, 1901. There is a four-stamped battery driven by a Pelton wheel attached to the mine, and the company has just completed the erection of a very complete cyanide plant. There are eighteen men employed in and about the mine, and there is every indication that the shareholders will receive a good return on the capital invested. The company has since its inception crushed 3,658½ tons of stone for a return of 3,387 oz 6 dwt. 16 gr. of gold, valued at £13,292 16s. 4d.

After leaving Birchfield we come to the Waimangaroa River, most of which was acquired as dredging-areas during the boom. No dredges are at work now, but in time to come this river-bed is likely to be dredged as the wash is considered to be rich. It will, however, take very powerful machines to contend with the heavy ground. At Christmas Terrace, near Westport, a party of miners (Crawford and party) are working an alluvial claim, and are reported to be making wages.

On the sea-beach, from four to eight miles up the coast from Westport, there are about twenty old miners at work. These men have in the past made very good wages.

After crossing to the south side of the Buller River we find several parties of miners at work on Bradshaw's Terrace. Lowther and party have an 18-acre alluvial claim which they have been working and crushing the cemented sand. Good returns have resulted from their operations, and there are good prospects before the party. They intend in the future to work their claim by means of sluicing. Jamieson and party hold a 14-acre alluvial claim also worked by cement-crushing. This party has

been doing well, and has good prospects for some time to come. Dennehy and Curry hold a 16-acre claim in the same locality. They have been engaged in sluicing operations with good results. This party is slightly hampered through not having a sufficient supply of water.

From Bradshaw's we go to Addison's, famed in the annals of West Coast gold-digging. Although much of the easily worked ground has been exhausted there are several parties of miners doing fairly well. Gould and party have an old claim which has in past years yielded good returns. During the last year or two the returns have not been very satisfactory. Senior and party have a 20-acre alluvial claim which they have been working by cement-crushing. They are now preparing to work it as a sluicing claim. The battery used at the mine is a twelve-head driven by an overshot wheel. Future prospects are good and returns satisfactory. The Addison's Long Tunnel Gold-mining Company (Limited) has a 19-acre alluvial claim. This is worked as an open-face sluicing claim, and employs four men. The return since the inception of the company is 1,907 oz. 18 dwt. 12 gr., valued at £7,533 10s. 7d. This company has a fair area of good ground still to be worked. Millikin and party hold a 20-acre claim worked by hydraulic sluicing and cement-crushing. They have a ten-head battery driven by a Pelton wheel. The returns from this claim have been good and future prospects are satisfactory. McNeight and party hold a 25-acre claim worked as an open-face sluicing claim. Their returns have been very satisfactory and future prospects are good. Carmody and party have a licensed holding of 22 acres. They are engaged in sluicing operations with very fair results. They have good ground for several years to come, in front of them.

The general prospects of gold-mining in the Westport Subdivision are at the present brighter than they have been for some years past.

After leaving the locality of Addison's we enter into the Charleston subdistrict. Here we find that the mining industry during the past twelve months has well held its own when compared with the past few years. Most of the claims are worked by means of hydraulic sluicing, and the returns as a whole have proved satisfactory. Mr. J. M. Powell has two large beach-sluicing claims with good ground in front that will last for several years. He has two water-races coming from near the head of the Totara River, and is thus able to work his claims to advantage. Nine men are employed in the claims, and if report speaks truly the returns are very satisfactory indeed. A number of Shetlanders who live a little back from the Charleston Beach have been working small beach claims for some years. Fifteen such claims are at present being worked, and the miners are reported to be making wages. The Charleston Beach Sluicing Company (an Auckland company) has two claims at Croninville. These claims are being worked by ground-sluicing, under the management of Mr. Thomas Radford. Eight men are employed here, and the returns are satisfactory. At Back Lead, Charleston, Mr. P. Welch and Messrs. Dwyer and Son have small claims, from which the returns have not been very satisfactory. Norris brothers have a sluicing claim at Darkies' Creek. They are at present engaged in working old tailings in the bed of the creek, the ground being worked is poor, but they have better ground in front of them. The wash shows a good face of about 6 ft., and is worked by the hydraulic system. Higgins brothers and B. Shepherd have claims in this locality worked by cement-crushing. P. Walsh and party have taken a lease of the Argyle Water-race from the Buller County Council for a term of five years, at a rental of £45 per annum with a right of renewal. They are maintaining this race in good repair, and let the water to miners at a reasonable price. This party intends working some old tailings in the Back Lead.

There are one or two claims being worked at Candlelight, about two miles outside of Charleston. J. Woodcock is working an alluvial claim by means of ground-sluicing. The face, which shows from 12 ft. to 15 ft., promises well. Very fair returns appear to be got from this claim. Butterworth brothers also have a claim here. They are at present engaged in cutting a tunnel tail-race in order to get fall. It is rumoured that the ground that they intend working is very rich.

At Brighton, some miles below Charleston, there is a considerable area of rich ground, but unfortunately there is no natural fall. This ground has been well prospected, but on account of the large expenditure of capital necessary to bring in water with which to work it, and the want of fall, it is lying idle.

The following is a brief summary of the business done in the Westport office, exclusive of land business, during the year: Cases filed, 23; amount claimed, £510; amount recovered, £300; revenue—miners' rights £110 10s., residence-sites, &c., £1 9s., water-races, &c., £5, gold-mining rents £366 5s. 8d., registrations £12 11s. 6d., fees and fines £54 19s., miscellaneous £1,774 19s. 1d., colliery reserve rents £971 17s., total £3,297 11s. 3d.

Lyell and Murchison Subdistricts.

Quartz.

The Alpine Extended Company's operations for the year consisted of a rise from No. 10 level holed through to winze—height of rise 240 ft., depth of winze 96 ft.; opened out 125 ft. from No. 10 level; intermediate level driven 70 ft. north and 46 ft. south; 17 ft. of stoping south and 15 ft. north; 20 ft. of driving north of rise 100 ft. from No. 10 level; 32 ft. of driving on leader in No. 10 level; opened out 40 ft. under No. 7 level; drove 28 ft. north and 26 ft. south; 70 ft. of rising and 16 ft. of crosscutting over No. 7 level on old 90 ft. track; 42 ft. of crosscutting in incline shaft, east. No. 7 level has been repaired 100 ft. north of incline shaft and crosscut 40 ft. to the east; crosscut west, 50 ft. Quantity of stone crushed was 444 tons, yielding 54 oz. 13 dwt. of retorted gold. To the 25th November thirteen men were employed, and to end of the year seven men were employed.

Kelly and party have discontinued work at the Eight-mile, and have surrendered their claims.

A Reefton syndicate have had two men putting in a tunnel at New Creek, but so far nothing permanent has been discovered.

A Westport syndicate have had two men out prospecting in the ranges towards Mokihinui for some months past, but up to the end of the year nothing was discovered.

Alluvial.

Walker Maruia Gold-sluicing Company (Limited).—During the year this company acquired the mining privileges of Messrs. George and Hector Bates Walker, at Maruia, and they intend carrying on sluicing operations on a large scale. A number of men have been employed for some time past in constructing the races to bring the water in from Manuka and Waterfall Creeks. Altogether about eight miles of races, capable of carrying eighty heads of water, have to be constructed. It is thought that the races will be completed and operations in full swing about June, 1906.

Horse Terrace Sluicing Company (Limited).—This company is carrying on sluicing operations at Horse Terrace, Matakitaki, and during the year has done a considerable amount of work, but the returns have not been large enough to enable dividends to be declared.

Newton River Hydraulic Sluicing Company (Limited).—This company had considerable trouble with their water-race during the winter months owing to the side of the hill gradually slipping down and causing breaks in the race. Towards the end of the year the company went into liquidation, and the mining privileges were acquired by Messrs. Clerken, Beilby, and Kane. The old road acquired by the company is now being sluiced away, and the results are believed to be satisfactory.

New Lyell Sluicing Company (Limited).—This company has been carrying on sluicing operations about three miles below Lyell. The results are not satisfactory, and it would appear as though the ground is too poor to pay for sluicing.

Dredging.

Dredging on both the Buller River and Matakitaki River during the year has not been at all successful. Two dredges on the Buller River sank, and after the machinery had been removed they were abandoned.

The *Fern Flat* dredge broke away from her moorings at Fern Flat during the big flood in June, and was completely wrecked, and two of her crew were drowned.

The *Buller Junction* dredge also broke away from her moorings at Inangahua Junction, and was stranded about four miles down the river. The dredge was purchased by a Reefton party, and, after receiving a thorough overhauling, was refloated and commenced operations immediately above where she was stranded.

The *Premier* dredge, owned by Messrs. Hansen and Kay, is working the island at Three-channel Flat, and satisfactory results are being obtained.

The *Mokoia* dredge, working higher up the river, has not done at all well during the year. The dredge was shifted about a good deal.

The *Feddersen* dredge which last year was working opposite New Creek, shifted further down the river, and is now engaged dredging near Mr. Feddersen's freehold. This dredge has not done nearly so well as last year.

The *Kohikohi* dredge, working on the Matakitaki River about six miles above Murchison, has been dredging the company's freehold, but the returns have not been satisfactory, and unless the ground improves the dredge will have to close down.

The *Amikitia* dredge, which was laid up during the previous year, commenced operations again on the company's freehold, and fair returns were obtained.

The *Bellevue* dredge, working three miles from Murchison, was closed down during a portion of the year, but commenced dredging again. The returns have been small, and no dividends have been declared.

AHAURA DISTRICT.

Moonlight.—The population in this district remains about the same as during the previous two years. A number of alluvial miners are still carrying on operations in a small way. The Moonlight dredge has been let on tribute to Messrs. Flaherty Bros., who are getting payable returns. The tributers have a lease for a small coal-seam, from which the dredge is supplied with fuel cheaply. The Shetland Terrace Sluicing Company has been compelled to cease operations, through want of sufficient capital to complete its water-race. The Shellback Creek dredge, having been purchased by Messrs. Allison and five others, is working with good results, the owners expressing satisfaction at the returns. Towards the end of the year a party of two men discovered a 68 oz. nugget, with a number of smaller ones, in the right-hand branch of Moonlight Creek.

Blackball and Healey's Gully.—Here also the number of miners remain the same, no new finds having been reported. The Republic Sluicing Company has let three of the faces in their claim to tributers. The Montgomery Terrace Company has been reconstructed, and is resuming operations.

The company is building a large reservoir, the want of a sufficient supply of water having been in the past a serious drawback. The Garden Gully Quartz-mining Company, carrying on operations on the Paparoa Ranges, has had a crushing of stone, but the result has been unsatisfactory.

Nelson Creek.—The dredges in this creek continue to give good results. The Nelson Creek Company having worked out the lower portion of its claim has had a new dredge constructed on the upper portion known as the Back Lead, which had previously been thoroughly prospected under the supervision of the dredgemaster. Should this portion prove remunerative the company should have a number of years' work still before it. Unfortunately the rich returns of this company's dredge during previous years were not maintained during the portion of this year in which it was working. Pactolus Gold-dredging Company: This company still continues to give splendid returns, its dividends amounting during the year to more than the dividends of all other dredging companies. Its prospects are still apparently as good as ever, the whole length of the claim having been worked with uniform good results. For the dividends paid during the year attention is directed to Table C. The New Trafalgar Gold-dredging Company, whose claim is next below the Pactolus Company's, has been working regularly with fair results. Jamieson's Reward Gold-dredging Company is working the claim adjoining the Pactolus Company's, and has during the year paid regular dividends, dividing with Blackwater Company the honour of second place as a dividend-payer. Alluvial mining in Nelson Creek has not increased, Donnellan and party's sluicing claim being the principal, from which a steady return of about 200 oz. per year has been obtained.

No Town and Red Jack's.—A small amount of alluvial mining is done in these creeks, but in the former there are three dredges at work. Bignell's No Town Gold-dredging Company has had a fairly satisfactory year. The dredge has obtained good returns and is cheaply and efficiently worked. No Town No. 2 Gold-dredging Company with two dredges had not all the success anticipated, although it was enabled to return 5s. per share in dividends. No. 2 dredge worked up to the bottom boundary of the No. 1 claim and was then stopped, the returns not justifying further operations at present. No. 1 dredge worked fairly constantly throughout the year and produced many good returns.

Waipuna and Mosquito Creeks.—Very few alluvial miners now remain in this district. Mosquito No. 1 Gold-dredging Company having gone into liquidation, the dredge was sold to a private party of dredgemen who are about starting operations. Mosquito No. 2 Gold-dredging Company, also in liquidation: The dredge was sold to a private party who have been latterly working at a profit.

Duffers and Half-ounce.—About the same number of men are mining in this locality, tunnelling and sluicing. Baybutt and party have opened up a new claim and are said to be obtaining good results.

Callaghan's Creek.—The only work of any importance is that carried on by the Callaghan's Creek dredge. After returning small but regular dividends for some years the upper boundary of the claim has been reached, and during the last two months of the year the dredge was engaged in working back to the lower half of the claim.

Snowy Creek and Upper Grey River.—Owing to the discoveries of quartz reefs between Snowy and Blackwater Creeks (as detailed in the report on the Reefton portion of the district) a considerable number of men have gone out prospecting to the hills between the Snowy Creek and the Grey River.

Ahaura River and Riverview.—Along the north bank of the river there have for years been considerable numbers of miners (mostly Chinese) sluicing with varying success. Owing to the necessary water having to be purchased and the supply being small, operations have been seriously retarded. Recently a party obtained a water-right from Lake Hochstetter to the south bank of the river, a race of some six or seven miles requiring to be constructed. Should the project be carried out it will be of considerable benefit to the whole of the locality. Such a race would also command about 1,000 acres of auriferous ground at the head of Callaghan's Creek.

General.—In common with the other portions of the West Coast the timber industry has of late years assumed comparatively large proportions in this district, the search for timber land being exceptionally keen. Generally the prospects of the district are good and are likely to remain so.

Greymouth District.

Alluvial.

The only locality in which sluicing operations are being carried on to any extent is at Barrytown, where Messrs. McKay and White still continue to obtain satisfactory returns from their two claims. In other portions of the district mining operations are carried on as usual by the ordinary individual miner whose number now is gradually diminishing.

Dredging.

Table A, appended hereto, contains particulars of seventeen dredging companies, having during the year 1905 had twenty dredges at work, as against twenty-six companies which during 1904 had twenty-nine dredges at work. Of these, nine companies paid £29,742 17s. 6d. in dividends as against eight which in 1904 paid £13,885 15s. (See Table D.) But this increase is largely due to the splendid returns of the Pactolus Company, which during 1905 declared a greater amount in dividends than all other dredging companies. During the year the following companies have ceased operations: Fern Flat, Buller Junction, Mokoia, Trafalgar, Feddersen, Moonlight, Mosquito, Totara Flat, Stony and Mosquito Leads. The New Trafalgar and the New Feddersen were companies reconstructed from the defunct ones, and, working consistently throughout the year, have both achieved a greater measure of success than the original companies. In the majority of the remaining instances detailed private parties have purchased the assets and work the claims with varying success.

Table A.—List of Companies having Dredges actually at Work on their Claims during the Year 1905.

Name of Company.	Date of Completion of Dredge.	Present Capital at Par of Company on which Dividends are payable.	Borrowed on Debentures, Overdraft, or otherwise.	Location of Dredge.	Number of Hours worked from 1st January, 1905, to 31st December, 1905.	Number of Ounces of Gold won from 1st January, 1905, to 31st December, 1905.	Total Amount declared in Dividends to Shareholders.
		£ s. d.	£ s. d.			Oz. dwt. gr.	£ s. d.
North Beach Gold-dredging Company (Limited) ..	April, 1902 ..	3,000 0 0	..	North Beach, Greymouth	2,880	370 18 0	..
A1 Gold-dredging Company (Limited)	June, 1901 ..	8,500 0 0	764 12 3	Redman's Creek, Inangahua ..	5,681	780 16 0	2,125 0 0
No Town Creek Gold-dredging Company (Limited) ..	No. 2, purchased 1904; No. 1, 19th December, 1901	12,000 0 0	..	No Town Creek, Grey County ..	9,606	2,243 10 20	13,800 0 0
Reeves's Proprietary Gold-dredging Company (Limited)	No. 1, November, 1900; No. 2, March, 1903	14,200 0 0	*2,500 0 0 †2,000 0 0	Boatman's Creek, Inangahua ..	4,480	923 10 0	610 0 0
				" " ..	3,348	433 19 0	
Mokoia Gold-dredging Company (Limited)	13th October, 1900	9,000 0 0	..	Three-channel Flat, Buller River ..	..	654 14 0	1,925 0 0
New Feddersen Gold dredging Company (Limited) ..	Purchased 1904 ..	2,312 10 0	..	Buller River, three miles below Lyell	2,819	742 16 0	1,271 17 6
Kohikohi Gold-dredging Company (Limited) ..	3rd September, 1901	14,667 0 0	1,000 0 0	Matakitaki River, Buller	No record	470 0 0	..
Amikitea Gold-dredging Company (Limited) ..	1901	12,500 0 0	1,650 0 0	" "	No record	441 2 0	..
Belle Vue Gold-dredging Company (Limited) ..	June, 1903 ..	3,400 0 0	1,870 0 0	" "	2,861	489 8 15	..
Pactolus Gold-dredging Company (Limited) ..	No. 1, 26th February, 1902; No. 2, 3rd September, 1902	9,375 0 0	..	Nelson Creek, Grey County ..	6,144	2,700 4 0	20,937 10 0
			..	" " ..	5,637	3,204 5 0	
Callaghan's Creek Gold-dredging Company (Limited)	8th March, 1902 ..	7,187 10 0	..	Callaghan's Creek, Grey County ..	6,406	1,324 3 0	5,312 10 0
Nelson Creek Gold-dredging Company (Limited) ..	8th December, 1900	8,500 0 0	..	Nelson Creek, Grey County ..	5,840	1,106 17 14	23,375 0 0
Blackwater River Gold-dredging Company (Limited)	23rd January, 1903	9,475 0 0	..	Blackwater River, Inangahua ..	4,806	2,030 16 22	6,395 12 6
Jamieson's Reward Gold-dredging Company (Limited)	6th August, 1903 ..	9,990 0 0	..	Nelson Creek, Grey County ..	No record	2,232 15 1	4,740 10 0
New Trafalgar Gold-dredging Company (Limited) ..	..	6,500 0 0	..	" " ..	2,940	586 9 18	325 0 0
Bignell's No Town Gold-dredging Company (Limited)	January, 1904 ..	9,000 0 0	..	No Town Creek, Grey County ..	6,240	1,300 12 12	2,250 0 0
Slab Hut Creek Gold-dredging Company (Limited) ..	End of 1904 ..	4,565 0 0	..	Slab Hut Creek, Inangahua ..	3,101	559 10 4	470 0 0
Totals	..	144,172 0 0	9,784 12 3	..	72,789	22,596 8 10	83,538 0 0

* Debentures. † Preference shares.

NOTE.—The North Beach Gold-dredging Company, having been reconstructed, has been working consistently throughout the year, but the results have not been very satisfactory. The Slab Hut Creek Gold dredging Company deserves special mention for the admirable manner in which it is managed and the uniform consistency of its results. Within twelve months from the registration of the company a dredge had been purchased and erected, and won for its shareholders a dividend of 1s. The dredge is working alongside the Tawhai Railway-station, and a tramline of a few chains suffices to bring fuel and stores to the vessel's side. This company will, I think, continue to pay dividends for some years. For brief mention of other dredging companies, see reports under the headings of Lyell, Reefton, and Ahaura; see also Tables B, C, and D.

Table B.—Dredges working during the Year 1905 under Private Ownership.

Owners.	Location of Dredge.	Remarks.
Hansen and Kayes ...	Three-channel Flat ..	Late Premier.
Gerald Perotti and Others ...	South Beach	Late Stony and Mosquito Leads.
Flaherty Bros.	Moonlight Creek	Late Moonlight Company.
Allison and Others ...	Shellback Creek	Late Shellback Company.
Coghlan and Others ...	Capleston	Late Boatman's Creek Company.
George Hill and Others ...	Mosquito Creek, Waipuna ...	Late Mosquito Creek Company.
" ...	" " ...	Late Mosquito No. 2 Company.
Kingswell and Others ...	Rocklands	Late Buller Junction Company.

Of these privately owned dredges very scanty information of an authoritative nature is obtainable; they are individually dealt with along with the dredges owned by companies.

Table C.—Companies which have paid Dividends during 1905, showing Amount paid during Year, and also Total since Date of Formation.

Name of Company.	Number of Shares.	Amount Paid up on each Share.	Dividends, 1905.	Dividends paid since Date of Commencement.	Dividends per Share, 1905.	Total Dividends per Share.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
No Town (two dredges) ...	12,000	1 0 0	3,000 0 0	13,800 0 0	0 5 0	1 3 0
New Feddersen	4,625	0 10 0	462 10 0	1,2.1 17 6	0 2 0	0 5 6
Pactolus (two dredges) ...	9,375	0 15 0	15,625 0 0	20,937 10 0	1 5 0	1 13 6
Callaghan's Creek	12,500	0 11 6	2,187 10 0	5,312 10 0	0 3 6	0 8 6
Blackwater River	9,475	1 0 0	3,079 7 6	6,395 12 6	0 6 6	0 13 6
Jamieson's Reward	9,990	1 0 0	3,243 10 0	4,740 10 0	0 6 6	0 9 6
New Trafalgar	6,500	1 0 0	325 0 0	325 0 0	0 1 0	0 1 0
Bignell's No Town	9,000	1 0 0	1,350 0 0	2,250 0 0	0 1 6	0 2 6
Slab Hut Creek	4,700	0 18 0	470 0 0	470 0 0	0 2 0	0 2 0
Total dividends ...	...	...	29,742 17 6	55,503 0 0	...	...

In compiling Table C no notice has been taken of privately owned dredges, since the information required can be obtained only in isolated instances and is worthless in consequence of its meagreness, hence its unreliability.

It will be noted that of the total amount distributed in dividends during 1905 more than one-half was declared by the Pactolus Gold-dredging Company, and in addition to £1 13s. 6d. returned to the shareholders in that company on fifteen-shilling shares a second dredge was constructed and paid for out of gold won by the first dredge, which if converted into dividends would have represented about 12s. per share more.

Table D.—The Number of Dredges working, the Yield and its Value, the Total Working-cost and the Average Working-cost per Dredge, and the Total Dividends paid during each Year from 1901 to 1905 inclusive:—

For Year ending 31st December.	Number of Dredges working.	Gold won by Dredges.	Value of Gold won.	Dividends paid.	Total Approximate Working-cost.	Average Working-cost per Dredge.
		Oz. dwt. gr.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1901 ...	31	12,938 6 14	51,105 0 0	4,522 10 0	46,582 0 0	1,502 0 0
1902 ...	31	23,579 0 0	93,137 0 0	16,739 5 0	80,600 0 0	2,600 0 0
1903 ...	34	27,426 0 0	108,332 0 0	26,758 5 0	81,574 0 0	2,399 0 0
1904 ...	26	23,557 0 0	93,050 0 0	13,885 15 0	79,164 0 0	3,044 0 0
1905 ...	20	22,596 8 10	90,380 0 0	29,742 17 6	60,638 0 0	3,031 0 0
Total ...	...	110,096 15 0	436,004 0 0	91,648 12 6	348,558 0 0	...

The apparent smallness of the average working-cost of dredges in 1901 and 1903 is partly accounted for by the fact that a number commenced work only towards the end of those years. The accuracy also is slightly affected by the total working-cost for each year being arrived at by finding the difference between the value of the yield and the dividend declared in the same year, which, although a fairly accurate estimate when the results of a number of years are added together, may, on a single year prove fallacious, since a number of dividends were no doubt declared early in the year on the yields of the

latter portion of the previous year. The apparent increase in the latter years may also be real, since it is to be expected that machinery having been in constant use for some years will cost more to maintain than when new. The figures of 1904 and 1905 may therefore be taken as the actual average working-cost of eachdredge during those years.

I am indebted to Mr. Edward Iveah Lord for the following information :—

Paroa and Rutherglen.

The dredging enterprises in this locality have been failures. No new finds are reported, and a few miners are engaged either in working old leads over again with their own water or sluicing new and poor ground for small wages.

Many old miners have erected comfortable dwellings on residence areas, which they cultivate, and, in addition to mining, run a few head of cattle on Crown lands. Between the two occupations a fair livelihood is gained.

This district is fairly well roaded. The Hokitika–Grey Railway traverses it along the sea-coast, and there are main roads from Greymouth to Paroa, Cameron's, Marsden, and Teremakau, besides the old Marsden Road, which runs from Greymouth through the old Welshman's diggings, and is one of the prettiest tourist drives in the colony.

From a miner's point of view the future prospects of this locality are not encouraging.

A cement lead runs in a northerly direction from the New River through Rutherglen and parallel to the coast-line as far as Nelson Creek. The lead is 150 ft. above sea-level, and it has been partly worked in the early days. It consists of cemented black sand, which requires crushing and water-power, and unless worked in a very extensive manner is too poor to give wages.

As the country in this vicinity is mostly of limestone formation, it will eventually be cleared, grassed, and utilised as grazing-runs; a few sheltered spots are also adapted for orchards. It would be a wise step to allow *bona fide* miners to take up more land, for the combined pursuits of agriculture and mining.

Marsden and Dunganville.

This district, which takes in the valley of the New River and its tributaries, was one of our richest goldfields. The New River and every branch of it has been worked out to its source. The branches of this well-known river were all the objectives of former rushes, and in this connection we have the Left-hand Branch and its tributaries, Wood's, Italians', and Lancashire Creeks. The eastern watershed feeds the following well-known creeks: No Name, Cockeye, Irishman's, Mosquito, Cockabulla, Eight-mile, and Maoris', German Gully, &c., all of which were rich in gold-bearing gravel and have been worked as long as a trickle of water remained to fill a dam—in other words, to an elevation of about 400 ft. above sea-level. The Eight-mile Range rises to a height of 1,200 ft., and there is payable sluicing-ground right to the top—but no water.

A considerable number of miners are still at work in this district, and those who own water-rights do fairly well.

The country is well roaded, and horse-tracks have been made to all the mining centres.

Dredging has been tried in the locality so far without success; but many miners are of opinion that there is ground that would give good returns if treated in this way.

To command a considerable area of sluicing-ground, a high-level race is required which should deliver water on Eight-mile Terrace at an elevation of at least 620 ft. A race from the eastern Hohonu River could be brought in at the level named, but to do so a siphon 210 chains long would be necessary to enable the valley of the Hohonu River to be crossed at the required elevation. The total length of race would be twelve miles, and the cost greater than the miners at present on the field can afford.

Maori Gully and Arnold.

Maori Gully was formerly a rich mining centre, and from it and a tributary known as the Waimea Creek large quantities of gold were obtained. These creeks rise in Mount Riley, a hill 1,200 ft. high, and gold was found right up to the summit.

There is a good metalled road from Maori Gully to Stillwater, and the Kokiri Station on the Midland Railway is a mile and a half from the township.

The present mining operations are confined to a few parties who own catch-water dams and races, and they depend on the rainfall for supply.

Payable sluicing-ground is reported on the banks of the Arnold and Stillwater Creek, as well as in the vicinity of Maori Gully, but a race to command this country would require an elevation of about 500 ft. above sea-level. A water-race from Deep Creek, a tributary of the Arnold, would be of sufficient height to work a considerable area. The race would be about ten miles long, and would require a siphon across the Arnold River for three-quarters of a mile, or six miles and three-quarters from the source; and at this point the sluicing-ground commences. With the exception of the siphon, there will be no expensive work on this race.

Two years ago a dredge was erected on Stillwater Creek, about half a mile below Maori Gully Township, but it was swamped by a flood in the stream before the ground had been properly tested.

The whole of the country reported on in these notes is heavily timbered forest, mostly covered with red-pine; but on the high level pakihis between Marsden and Dunganville there are patches of silver-pine which in the near future will become a valuable asset.

General.

During the year the following business was performed in the Warden's office and Court at Greymouth: Applications pending on the 31st December, 1904, 11; applications received during 1905,

170: total, 181. Applications heard during 1905, 169; applications pending on 31st December, 1905, 12: total, 181. Of the applications heard, 5 were objected to, 139 were granted, 12 refused, and 18 withdrawn. Suits called on during 1905, 8, as follows: Heard, 3; withdrawn, 1; struck out, 3; pending on the 31st December, 1905, 1. Miners' rights issued, 518; water-race registrations and renewals under repealed Acts, 10. Revenue—Miners' rights, £129 10s.; water-races, £2 12s. 6d.; registration certificates, 4s.; rents, £188 10s. 3d.; miscellaneous, £2,621 13s. 1d.; territorial revenue, £2,989 1s. 3d.; fees and fines in stamps, £39 3s.: total, £5,970 14s. 1d.

I have, &c.,
W. G. R. KENRICK,
Warden.

The Under-Secretary, Mines Department, Wellington.

Mr. Warden ACHESON, Hokitika, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Warden's Office, Hokitika, 13th April, 1906.

I have the honour to report concerning gold-mining operations in the Westland Mining District for the year ending the 31st December, 1905, as follows:—

KUMARA DISTRICT.

Dredging.—All the dredging in this district is confined to the Greenstone Creek. During the year four dredges worked in that locality. The Greenstone Junction dredge averaged 11 oz. per week. During the big flood in June this dredge sank, and a great deal of time was lost in refloating her. She is at present being worked by tributers. The New Greenstone Gold Syndicate's dredge averaged about 18 oz. per week. Messrs. Cowie and Bice, who have the old Bun Tuck dredge, have worked to the Blackwater Creek, and averaged 40 oz. per week. The Three-mile dredge, which is owned by a Dunedin company, obtained on an average 20 oz. during the same period.

Alluvial.—Nothing very notable occurred during the year. Three prospecting shafts were sunk at Larrikin's by a private association without any result. At Dillmanstown, three claims are working with success—viz., McGrath's, the Long Tunnel Gold-mining Company, and Cullen and party. The Long Tunnel Company paid two dividends of 3s. per share. Vocasovich and party worked at Tramway Terrace, but the ground did not turn out to be very rich. At Cape Terrace, about five sluicing claims are working with varying success. In some cases a scarcity of water affects the returns considerably. At Hayes's Terrace, four claims have been worked—by Gilbert and Tomasi, McIlroy and party, Evenden and à Court, and some Chinese, with fair average results. At the Greenstone, Chinamen have been sluicing along Quinn's Terrace, near the Three-mile, and up Fuchsia Creek with (so far as I can ascertain) average success, and the same applies to the five claims which are being worked in the same neighbourhood.

Quartz-mining.—There is no mining of this description in this locality.

STAFFORD AND GOLDSBOROUGH DISTRICTS.

Dredging.—A new company was formed in the place of the Stafford-Waimea Gold-dredging Company, which went into liquidation in 1904. The company was registered on the 17th May, 1905, it commenced operations immediately after that date, and worked continuously to the end of the year for a return of 511 oz. 10 dwt. of gold, value £1,969 4s. 6d., divisible after paying expenses among seven shareholders.

Alluvial.—At the beginning of the year 1905 377 acres were held under license. During that year 48 acres were taken up and 133 acres surrendered. From this it will appear that the area over which operations are being conducted has decreased; but I am quite certain that more work has been done and a greater quantity of gold obtained than during the previous year. The want of water prevents larger and more successful operations being carried on. At Middle Branch Flat, where there is a Government supply of water, most of the claims have been working continuously, and with excellent results; and the locality is regarded as a field for mining operations for some considerable time to come, especially when the holdings—several of which are at present locked up owing to want of connection with the Waimea Main Tail-race—become connected with the sludge-channel. At Callaghan's, the miners are now getting a supply of water from the Government race, and are in consequence working continuously and with much better results than hitherto. The Wheel of Fortune Hydraulic Sluicing Claim, which was purchased early in the year by a local syndicate, has been working very steadily, and the new owners are quite satisfied with the result of the year's operations. In other parts of the district miners have to depend to a large extent on the rainfall; and this results in disaster when a dry season occurs. German Gully, Fourth and Fifth Terraces, and Lamplough would, I am confident, with a little better supply of water pay handsomely and provide employment for a large number of men.

Quartz-mining.—There is none in this district.

HOKITIKA DISTRICT.

Dredging.—There have been only two dredges working in this locality—the Montezuma and the Woodstock. The former has been greatly hampered by the sea breaking into the dam and either sinking her or silting her up; this last happened towards the end of the year, and caused operations to be discontinued. I may say that since then she has been dismantled. The latter is working continuously, but, being owned privately, it is impossible to ascertain with what result. Certainly the fact of constant working would lead to the conclusion that the dredge must be paying the owners well.

Alluvial.—The returns from this source during the year have been up to the average of recent years. At Humphrey's Gully the Consolidated Claim is being worked by tributers, and the results, although

not great, have been satisfactory. At Blue Spur there are many small claims which appear to provide their owners with a good living, while the Minerals (Limited) towards the end of the year struck a good patch which realised £1,113, and enabled the company to pay off all liabilities and place £558 to its credit at the bank. About Kanieri Forks, Woodstock, Arthurstown, and Craig's Freehold small parties appear to be doing fairly well; but the main alluvial field at Woodstock suffers considerably from want of water, which, if obtainable, would doubtless result in far larger and more remunerative mining operations. The various mining privileges at Back Creek, or Seddon's Terrace, now being worked are giving good results for the money invested. The subsidised tunnel of Johnson and party has paid good wages to the workmen since completion. At present two layers of gravel are being turned out, known respectively as the Blue Wash and the Brighton bottom.

Quartz-reefing.—The Wilberforce Reefs are about 5,000 ft. above the sea-level, and in the range dividing Canterbury from Westland. During the year several of the prospecting claims have been worked with a view to defining the quartz reefs, which have been proved to exist on all the claims excepting one. In the Wilson's Reward a tunnel has been driven 100 ft. below the surface where the outcrop appears, and the reef has been found at that depth to be over 20 ft. wide, and greater in width than at the outcrop. Tests made have proved the stone to be highly payable. No work has been done on Grey's, Hyndman's, Billett's, McIntosh's, Hutchison's, and McClay's claims, as most of them were only taken up at the end of the year. On Fidde's Reward—which contains three distinct lines of gold-bearing reef—a very good reef has been traced to a length of fully 30 chains: 11 chains of this has been carefully prospected, and the reef proved to be of an average width of over 2 ft. In the 11 chains the reef is exposed in sixteen places, and yields prospects equal to 2 oz. to the ton. Baucke's claim has been well prospected. The reef in Fidde's Reward continues in this claim, but in addition there are two other outcrops. Two of these reefs yield from 1 oz. to 2 oz. to the ton, but the ore in the other is of lower grade. Considerable prospecting has been done on Pfahlert and party's claim; the reef has been traced a distance of 10 chains, and proved to be of an average thickness of 3½ ft. and highly payable.

Ross District.

There is not much to report as having occurred in this district during the year.

In dredging matters, the Prince of Wales and the Kohinoor went into liquidation. The former was bought by several persons previously interested in her, and under their management there has been a considerable increase in the returns of gold. The latter was sold, and deported.

In sluicing matters, the evergreen Mont d'Or claim has continued to declare regular dividends to the fortunate shareholders, and is likely to continue doing so. The McLeod's Terrace Company has not been so fortunate. The want of an adequate supply of water has been a considerable handicap to the mining operations, and the blue clay or pug in the claim is a great obstacle. An unexpected fall of this material caused the death of one of the workmen, who was highly respected in the locality and wherever he was known.

There is no quartz-mining in this district.

I cannot conclude my report on this subdistrict without drawing attention to the tremendous possibilities which await the capitalistic investor. At Ross, where the Mount d'Or Sluicing Company has won from Mother Earth 40,700 oz. of gold and divided in profits £52,200, there exists a large flat known as the Ross Flat. One man named Cassius obtained from this flat over 22,000 oz. of gold in two years, and at the top end, known as Jones's Flat, over 5 tons of gold have been obtained. The old Ross (Limited) Company—which worked the Ross Flat until operations were stopped by water—obtained 2,500 oz., and its big shaft (which was sunk to a depth of 392 ft.) passed through eight distinct layers of gold-bearing wash without finding the bottom. How many more layers or levels of payable wash there are below this shaft no one can tell. That such a marvellous deposit is not being exploited to-day is more than remarkable, since the Government is offering the whole of this area (100 acres) and a subsidy of £15,000 to any person or company whose proposed method of working is approved by the Government Engineer. That this flat can be drained to a depth of 500 ft. if necessary is proved by the Beaconsfield Mine in Tasmania, where 5,000 gallons of water are lifted per minute from a shaft 2,000 ft. deep, in four lifts, with plunger pumps, at a cost of £10 per annum per horse-power. The old company failed because it tried to drain this flat with water-power. With the completion of the railway to Ross—in about a year's time—coal could be landed at the boilers on this claim for 15s. per ton, and the flat easily drained with an outlay of £50,000.

Okarito District.

Dredging.—During the early part of the year a dredge was worked on the Salt-water Lagoon on tribute, but as sufficient gold was not obtained to pay expenses operations ceased. The Five-mile Company attempted to place a dredge on the Five-mile, but owing to the difficulty of landing the machinery the attempt was abandoned.

Alluvial.—Very little work has been done. The Westland Company and Batson at the Waiho have opened up a large block of country on the south side of the Waiho River, but it is impossible to say with what result. The company employs nine men, and Batson one man. In the early part of the year a great deal of beach-gold was obtained. A Mr. Gibb and his family are credited with getting between 800 and 1,000 pounds' worth in a few weeks. It was reported at the end of the year that good coarse-gold-carrying quartz had been got at the Omeru River. A prospecting party of two men are working in Cook's River, but with what result is unknown.

The number of applications in the Warden's Court fell from thirty-four in 1904 to twenty-one in 1905, showing there is not much mining development in this district.

Other Minerals.

Large blocks of greenstone, or jade, are constantly being unearthed at Kumara during sluicing operations. This stone is now very much in demand in Europe, having lately become very fashionable. It is known to exist in many other localities on this coast, but it cannot be found in any other part of the colony, and as a consequence must in time command a large price.

The existence of coal of a very good quality has been proved at Touchier's Gully, near Lake Kanieri; at Koiterangi, fifteen miles from Hokitika; in the lower Paringa Valley; at Bullocky Creek, ten miles north of the Haast River; and close to Jackson's Bay.

Copper has been discovered in the Upper Hokitika Valley; the Upper Wanganui Valley; at Copper Creek, in the Matakitaki Range; near Maori River, south Westland.

Iron has been found close to the terminal of the Fox Glacier; in the lower Paringa Valley; in the lower Smoothwater Valley, near Jackson's Bay; and in the Upper Cascade Valley, below Jackson's Bay.

Granite exists in large quantities in the Teremakau Valley; the Island Hill, at the head of the Kawhaka Valley; Mount Tuhua (Lake Kanieri); and in the upper valley of the Hokitika River.

Freestone is abundant in the Otira Valley; at Koiterangi; at Abbey Rocks, six miles south of the Paringa River; and in Smoothwater Valley, near Jackson's Bay.

Silver has been found at Mount Rangitoto.

General.

In addition to the Wilberforce Reefs now in process of development, gold-bearing quartz has been found at Kelly's Range, and at the Cedar Creek Reefs at the head of the Totara Valley, near Ross.

Although dredging for gold has not been so successful in this district as in other parts of the colony, I am convinced that the failure to equal the records elsewhere has been caused, not by the non-existence of the gold, but because the dredges used have not been sufficiently strong to overcome the obstacles met with in the shape of sunken timber and large boulders nor been capable of dredging deep enough to obtain the precious metal, which I have no doubt exists almost everywhere on this golden coast.

On the sea-shore, extending for hundreds of miles, are sands laden with fine gold, and being constantly renewed. A fortune awaits the inventor who will discover a process of washing this sand or extracting the gold therefrom so that none may be lost.

I have, &c.,

The Under-Secretary, Mines Department, Wellington. R. Acheson, Warden.

Mr. Warden Cruickshank, Dunedin, to the Under-Secretary, Mines Department, Wellington.

Sir,— Warden's Office, Dunedin, 23rd February, 1906.

Herewith I have the honour to enclose my returns for the Hindon portion of the Otago Mining District for the year ended the 31st December, 1905, and to inform you that I have nothing fresh to report, the general conditions of the field remaining the same as at the end of 1904.

I have, &c.,

G. Cruickshank, Warden.

Mr. Warden McEnnis, Naseby, to the Under-Secretary, Mines Department, Wellington.

Sir,— Warden's Office, Naseby, 5th April, 1906.

In forwarding the annual mining statistics for 1905, I have the honour to accompany same with a few remarks of a general nature respecting the condition of mining in the various centres in my district, as follows:—

Macrae's Flat.

The usual amount of mining has been carried on during the year. There has been more activity than usual in quartz-mining, and several fresh areas have been taken up; but in most cases not much has been done, as want of capital hinders efficient work.

The Golden Bar Mine has been very successful during the year, and paid good dividends to the owners. Towards the end of the year the good stone gave out, but a fresh make was discovered.

The Ounce Mine has been worked by W. Lidstone, and a small amount of stone treated which, I believe, has left a very little margin of profit.

At the *Maritana Mine*, owned by C. McGill, a considerable amount of work has been done and a small quantity of scheelite produced, but the gold-returns were, I understand, small. The mine has been connected with the battery by a three-rail tramway, and an oil-engine put in to augment the water-power.

The Golden Point Mine, owned by Messrs. W. and G. Donaldson, has been in regular work during the year, and employed an average of twenty-five men. The low-level tunnel has been extended, and is now following the reef to the dip. The reef contains very good gold-bearing stone. The yield of gold has been good, and 60 to 70 tons of scheelite has been produced during the year of an average value of about £80 a ton.

Mount Highlay Mine (Gilmour and party).—This mine changed hands during the year, and the purchasers have done a considerable amount of work. They put in a concentrator, and with it have saved some scheelite; but the battery has not been kept constantly going. There is a prospect of more vigorous work being undertaken next year.

The Gold and Tungsten Mine, near Mount Highlay, owned by Messrs. W. and G. Donaldson, was one of the most recently taken-up properties, and although it was at first held by six parties, it is now entirely in the hands of Messrs. W. and G. Donaldson, who have spent £1,500 in a plant which

is situated on a branch of the Mareburn Creek and within 500 yards of the mine. The plant consists of a receiving-bin and screen, a coarse rock-breaker then a fine-crusher (Blake-Marsden), ore-feeder (Challenge), a 5 ft. Huntington-roller mill, copper plates, and a Wilfley concentrator (latest pattern). An oil-engine will be used to start the plant until a large steam-boiler and engine is put in. This is ready to be erected, and has ample power to drive an enlarged plant. The reefs contain very fair gold, and one has a good percentage of scheelite in it. Messrs. Donaldson believe in the Huntington mill for crushing scheelite stone, as their experience has shown them that there is nothing like the loss in slimes (and scheelite is very apt to slime) with the mill as with modern stamps. The plant is expected to start in February, and will employ ten or twelve men.

Matakanui.

The Undaunted Gold-mining Company (*Limited*) has paid in dividends £1,125 for the year 1905, and won 618-odd oz. of gold. The number of men employed is nine. The mine is lit by electric light at night-time. The mode of operations is by hydraulic elevating—from a depth of 56 ft. The water was very slack from the beginning of March up to the end of August. The autumn was about the driest ever experienced in this locality, and the winter about the mildest, scarcely any snow or heavy frost. A fair quantity of rain fell from the 1st September to the end of the year. This company hold 114 acres.

The Tinker's Gold-mining Company (*Limited*) has paid in dividends £1,687 10s. and won 739 oz. of gold. Nine men employed; elevating from a depth of 60 ft.; claim, 87 acres.

The Matakanui Gold-mining Company (*Limited*) has paid in dividends during the year £1,049 11s. and won 589 oz. of gold—they are on a rich vein of gold. The face being operated on is about 65 ft. deep, composed of gravel wash and small bands of clay; they strip about 20 ft. and elevate the remainder. Eight men employed; company holds about 45 acres.

The Mount Morgan Gold-mining Company (*Limited*) are working below the township and obtaining fair returns. Four to five men employed; elevating about 20 ft.; company holds 100 acres.

At Drybread and Devonshire Gully old diggings, four men are employed ground-sluicing, and they are believed to be doing fairly well.

St. Bathan's.

Mining in this locality has made steady progress during the last twelve months, notwithstanding the dry weather that prevailed, the supply of water being scarce and intermittent.

A large amount of work has been done in the St. Bathan's Basin by the *United M. and E. Company*. They lowered their elevator last March to a depth of 60 ft., and the paddock was cleaned down in November last for a return of 400 oz. The manager estimates that in consequence of dry weather and consequent want of water only about four months' work could be done. At the lower end of the claim a large amount of overburden has been stripped off, and the gold-bearing layers exposed for a considerable distance, so that when the ground now being operated upon is elevated the company can shift to the lower portion of the claim and start elevating immediately. I understand that a rich vein of gold has been met with lately in present elevating-paddock. The gold-return for the year was about 850 oz.

The Scandinavian Company have done a little work to their claim in the St. Bathan's Basin; the outlet is at present seriously impeded by the volume of water in Ewing's Kildare Hill Claim, which has done damage to the company's tail-race, and probably to a portion of their claim on Ewing's boundary. The management has decided to await the result of litigation, now going on, before commencing operations on a scale hitherto unthought-of in New Zealand, so far as hydraulic mining is concerned. This company has done a large amount of work in their claims at Surface Hill and the Lagoon, where two powerful and up-to-date elevators have been continuously employed in removing large quantities of gravel and clay. The elevator at Surface Hill is lifting material to a height of 120 ft., and the average amount of stuff removed has been about 70 tons per hour. Last spring some good gold was discovered and a small elevator put down to a depth of 20 ft. below the present large one. The returns have been steady and consistent, and are expected to remain so for a considerable time. The company are now washing down, and anticipate a further return of 500 oz. of gold.

Vinegar Hill Company.—This company has been carrying on operations in a vigorous way, and the gold-returns are very satisfactory. The hydraulic elevator is lifting the quartz drift a height of 100 ft.; and, as the plant is one of the best in the district and the available head is over 500 ft., it can easily be understood that a greater depth can still be attained. About 600 oz. of gold was won during the year.

The only other mining operations of any consequence in elevating is by Messrs. O'Hara and McCarthy, who are elevating poor ground, but making it pay fair returns.

At Cambrian's there are four mines sluicing, with satisfactory results.

At Kyeburn and Middlemarch (including Hyde) there is nothing worthy of note to record—mining matters jog along quietly, and the miners appear satisfied with their earnings, as has been the case for years past.

Patearoa and Serpentine.

The year 1905 has been one of the most successful as far as mining interests are concerned for quite a number of years. The old claims have yielded better returns, owing principally to more up-to-date and active methods.

The Patearoa Hydraulic Sluicing Company has done exceptionally well, prospects ranging from 2 dwt. to 2 oz. 15 dwt. to a dish being obtained, and yielding returns up to 200 oz. per month. Being

a private concern, the returns are not published. This claim is undoubtedly a good one, and has a long lease of life before it. About 2,000 ft. of new 15 in. piping is now ready on the ground to be added to the present plant, and when in position will greatly increase the working-power. The water-right is one of the best in Otago, and the locality is such that little inconvenience arises from climatic conditions.

Messrs. Johnston Bros., at the Old Caledonia Gully claim, have been adding to their hydraulic plant during the year to reach the deeper levels. The gold-returns for the year have also been higher than previously, and the owners are well satisfied with their property. A high-level race is the only disadvantage; but it is intended to bring in more water from the Taieri side of the range, and afterwards the loss of time will not be so great.

McLean and party are sparing no expense on their new race. This is a heavy undertaking for a small party, and it is hoped that when completed they will meet with the success their energies merit.

Messrs. Cambridge and Wilson have suffered for want of water this season. The scarcity of snow in the earlier part of the year, before the heavy frost set in, put a limit to their operations, nevertheless the ground turned over gave satisfactory remuneration.

At the Serpentine the mild winter enabled an early start to be made in the spring, and several of the miners here are reported to be doing well. A couple more hydraulic elevating plants are to be in full swing shortly, and expectations are high.

At Hamilton's a number of men always make a livelihood, but the methods are still too primitive, otherwise the gold-yield would be much higher. Hamilton's has yet a brilliant future before it. There are still thousands of ounces in the "Old Hill," and it only wants all the water-supplies converted into one body and the united forces brought to bear on one spot when the difficulties now lying in the way would vanish.

Ophir and Ida Valley.

A small syndicate, composed chiefly of working-men, has purchased a dredge sold in liquidation cheaply, dismantled and removed it to Black's Flat, where it will soon be at work. I understand the ground was prospected in the first instance, and found to give satisfactory results, and it is to be hoped that this venture will turn out well.

The Cairntrodlie dredge, Ida Valley, is keeping well at work, and evidently the owners are satisfied with the yield of gold obtained; but as it is a private concern the gold-returns are not published.

The Government having purchased the Bonanza Water-race property, it is hoped the race will be extended to command the high range at Black's, which ridge is believed to be payably auriferous with a good water-supply. If this eventuates, there will be a number of miners at work there in the near future.

There are a few miners at work at German Hill and other localities—making a living at least.

At Naseby nothing of importance in mining has occurred since date of last return; everything appears to be going in a satisfactory manner as usual.

Gold to the value of £4,309 17s. 10d. was produced in this district, and sold to the various banks during the year.

I have, &c.,

The Under-Secretary, Mines Department, Wellington.

J. McEnnis,
Warden.

Mr. Warden Cruickshank, Lawrence, to the Under-Secretary, Mines Department, Wellington.

Sir,— Warden's Office, Lawrence, 6th April, 1906.

I have the honour to forward to you herewith statistical returns for the year ended the 31st December, 1905, and to submit the following report on the several mining subdistricts under my charge for the same period:—

Wetherstone's and Blue Spur.

In the Wetherstone's district three claims have been working during the year—viz., the Golden Rise mining party, the Golden Crescent Sluicing Company (Limited), and the Local Industry Gold-mining Company (Limited). The latter company, having worked out their claim at Wetherstone's, has now commenced operations at the lower end of Gabriel's Gully, where there is a heavy deposit of tailings.

The manager of the Blue Spur and Gabriel's Gully Consolidated Gold Company (Limited), (Mr. J. Howard Jackson) has kindly supplied me with the following details of the year's work at the Consolidated Mine at Blue Spur: Average number of men employed, 28; quantity of cement treated, 222,330 cubic yards; quantity of gold won, 1,722 oz., value £6,836 5s. 5d.; cost of winning the gold, £2 16s. 6½d. per oz.; amount paid in wages, £3,875 9s. 2d.; amount paid for explosives, £597 3s.; amount paid for upkeep of water-races, £644 12s. 5d.; total local expenditure for the year, £4,895 10s. 2d. The water-supply, owing to a dry period in late winter and spring, was not so good as during the previous year; but in consequence of improvements in the design of the elevators their efficiency has been materially increased. It is gratifying to note that no accidents or labour troubles occurred at the mine during the year. I have to report that the men at this mine consider they have a grievance to complain of, inasmuch as the tariff impositions appear to have excluded competition in gum boots; the price of indiarubber has increased considerably, and one firm of makers would seem to have a monopoly; and the consequence is that gum boots, which cost the men £1 8s. a pair a year or so ago, are now £2 3s., and the men cannot work without them.

In Munro's Gully, the claims owned by Messrs. Kitto and party, Thomas and party, and Browne and party have been working throughout the year with fair results.

Tuapeka Flat.

Messrs. Smith, Wallis, and party are about to commence sluicing at their claim near Doherty's Bridge, the water-race having been brought round through the freeholds from the head of Gabriel's Gully.

Messrs. Harris and party have been carrying on dredging operations in the Tuapeka River bed in the vicinity of Fitzgerald's Bridge during the year with fair success.

At Labes' Bridge, lower down the Tuapeka River, the Taniwha dredge has been working throughout the year, and obtained very good returns, having won 715 oz. of gold valued at £2,750; but the dredge has now closed down, the claim lately acquired not being payable.

At a point on the Tuapeka River, about ten miles below Lawrence, a new company known as the Tamaiti Gold-mining Company (Limited) has acquired a special claim and licenses to construct a water-race and dam. The latter is now being constructed across the Tuapeka River at a narrow place. It is a work of considerable magnitude, and will take many months to complete. The estimated cost is about £1,100.

Beaumont.

On the Clutha River above the Beaumont, the Otago Dredge No. 2 has been working with very satisfactory returns; and below the Beaumont at Paul's Beach, Mr. William Adams owns a dredge, which yields satisfactory returns when the river is suitable.

The Tallaburn Hydraulic Sluicing Company, at Horseshoe Bend, has been operating during the year with good results to the shareholders.

The Champion Gold-mining Company (Limited), at the Beaumont, closed down during the year and a new company was formed and took over the property under the name of the Plunket Sluicing Company.

Waitahuna.

There is very little that is new to report in this locality. The Imperial dredge and the Havelock, above the township, have worked steadily for the year, but the Gordon dredge, below the township, ceased operations owing to the returns not proving payable.

The following sluicing claims have been working steadily during the year at Waitahuna Gully: viz., Thomson and party, Joseph Ferris, Quilter and party, the Sailor's Gully Sluicing Company (Limited), and the Waitahuna Hydraulic Sluicing Company. The latter company commenced operations on the 1st July last, and by the end of the year had won 1,121 pounds' worth of gold, which cleared off all debt and paid £100 in dividends, being 1s. per share. The Sailor's Gully Company paid dividends during the year amounting to 5s. 6d. per share.

Waipori.

The fleet of dredges in this locality is now reduced to seven, and out of this number four are being driven by water-power, under O'Brien's patent. Most of them are private concerns, and the returns are not published, but they are, on the whole, I think, satisfactory.

The following sluicing claims have been carrying on operations during the year: viz., Russell and party (formerly the property of Sew Kew), R. J. Cotton (on tribute from Mr. W. J. Farrell), the Lammerlaw Hydraulic Sluicing Company (owned by Messrs. Knight Bros.), the Golden Point (worked by D. O'Brien and party), the Bakery Flat Sluicing Company, Gare and party (Mitchell's Flat), and Messrs. George and Munro at Post Office Creek.

Recently Mr. J. T. Johnson (mine-manager) has been sinking for the deep lead at Waipori by means of hydraulic sluicing; he is reported as having made good progress with the work, and should his operations prove successful it will probably mean a revival in mining at Waipori.

I would also mention that Messrs. F. W. and W. Knight, proprietors of the Lammerlaw Hydraulic Sluicing Company, are at present building a large storage-dam to conserve water in the Nor'-west Creek, Waipori. In the construction of the dam every endeavour is being made to carry out the work in a satisfactory manner. The water from this source is used for hydraulic mining and for driving dredges equipped with Pelton wheels. The undertaking will probably cost about £1,000; but the proprietors deem the work necessary to efficiently cope with future gold-mining at Waipori. Holders of water-rights now have to seriously consider the best application of these rights to open up any new alluvial ground. Much of the ground turned over by the present-day steam-driven dredges, it is considered, will pay for working again, provided large plants capable of successfully treating a great quantity of material, and cheaply driven, are used. The Messrs. Knight Bros. are, I think, to be commended for their enterprise in connection with this work.

Tapanui.

The only mining carried on in this locality consists of one dredge (a private concern) working on the Ardmore Estate, near the Pomohaka River, and employing eight men.

Gore and Surrounding District.

Charlton.

During the year four dredges have been working on the Charlton Creek, two of which—Nees and Scott, and the Mill Creek Freehold—are private companies. Their returns are not made public, but I understand both dredges are paying. The remaining two are public companies, and are doing fairly well, obtaining from 16 oz. to 18 oz. per week. In this locality the area of land is limited, being freehold, and the only auriferous deposit being practically the bed of the stream and the narrow valley on either side thereof.

Messrs. Tait and Co. have opened up a coal-pit in the Hokonuis, and have laid a tramway down the Charlton Valley to the dredges; the coal is lignite of a very fair quality, and the use of the tramway will be a great convenience to dredge-owners in the Charlton Valley, as the obtaining of coal in the winter months is a serious matter owing to the bad state of the roads.

Waimumu.

There are five dredges on this stream, three of which are public companies and two private—viz., the Waimumu Venture and Marshall Bros'. I understand all these dredges are paying, with the exception of the public company known as the Waimumu, which was the first dredge to start operations in this locality.

Mataura River.

There is only one dredge on this river, known as the Central Mataura, which is owned by a party of working-miners.

Some prospecting operations have been carried on on this river a few miles below Gore, opposite what is known as Riverview, with, I understand, satisfactory results. Three prospecting licenses have been granted, and a company has been formed for the purpose of acquiring a dredge to place on the Mataura River, opposite Riverview. Should dredging operations prove successful, there is room for several dredges in the locality.

Waikaka.

Between Gore and Waikaka Township, including Chatton, there are twenty-five dredges carrying on operations, and another nearing completion, known as the Rosedale. A number of these dredges are owned by private companies, therefore the returns are not made public, but the fact of the dredges continuing operations can generally be taken as evidence that the returns are payable, because they invariably stop when the gold recovered is below paying-point.

The Waikaka Syndicate have during the year acquired the Sheddan's Freehold dredge and also acquired further freehold, and the returns are said to be satisfactory.

In this valley experiments have been made by the Argyle and Sheddan's Rex companies of planting trees on the ground which has been dredged, and the experiments have turned out eminently satisfactory. Experiments are now being made in sowing flax, and experts seem to think that there is no reason why this should not also be successful. If so, the cultivation of this valuable product will go a long way to dispel the cry about the dredges ruining the freehold.

WAIKAIA.

I have much pleasure in reporting that mining, especially dredging, is in a very flourishing condition in this locality. No less than twelve dredges are in full work yielding good returns and paying regular dividends. Besides the above there are three dredges in course of construction. A large number of the dredges have yielded big returns during the year. The gold won has been very considerable, and from inquiries made it is estimated that the yield was about 12,700 oz., valued at over £50,000, the local bank having bought over 38,500 pounds' worth during the year; the balance was disposed of outside the district.

Of course this prosperity has caused a considerable increase in the working-population of the district, and it is estimated that at least 260 Europeans and about thirty Chinese are employed in the Waikaia and Nokomai districts in dredging, sluicing, and coal-mining.

The principal hydraulic-sluicing companies in this locality are the Round Hill Mining Company at Waikaia, and the Nokomai Hydraulic Company at Nokomai; but there are several other smaller companies and parties carrying on mining operations very successfully in this district also. The past season having been a very wet one, water for sluicing purposes has been very plentiful.

Another thing that is likely to greatly benefit the district is the fact that a large area of the Otago School Commissioners' land has lately been proclaimed open for mining. Already a number of prospecting licenses have been taken up, and should any extent of the land prove payably auriferous it will mean a splendid thing for the district generally.

The revenue collected by the Receiver of Gold Revenue at Waikaia for the year 1905, for rent and royalties, amounted to £702.

On the whole this portion of my district is exceedingly prosperous.

I have, &c.,

The Under-Secretary, Mines Department, Wellington. G. CRUICKSHANK, Warden.

Mr. Warden BURGESS, Queenstown, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Warden's Office, Queenstown, 31st May, 1906.

I have the honour to forward herewith statistical returns relating to this portion of the Otago Mining District for the year ended the 31st December, 1905, together with a general report on mining in the several subdistricts under my charge.

QUEENSTOWN AND ARROWTOWN.

There is not much change to report in this portion of my district. In the Queenstown division the chief mining has been confined to the Shotover River. All the claims mentioned in my last report are still at work and are yielding profitable, though not large, returns.

Mr. Robert Johnston has in contemplation, in connection with the working of his claim at Pleasant Creek, Upper Shotover, the construction of a capacious dam and two very large tail-races. These

races will be constructed as the work on the claim proceeds, and will not reach completion for some years. One of these races is 600 yards long with an extreme depth of 250 ft.; the other is 1,000 yards long and of the same dimensions. The estimated cost of these races is about £6,000. The claim is worked from a water-race carrying ten heads of water.

Mills and party, working at Muddy Creek branches, got over a fair quantity of ground during the latter part of the year, and appear satisfied with their prospects.

Smith brothers are working a claim at Strohle's Flat. They are at present employed in opening up their ground, and when this work is completed they look forward to successful operations for some time to come.

Lee's claim at Monk's Terrace, at the Sandhills, is reported to have done very well during the past year.

Messrs. Rogers and Johnson have done a large amount of work at Jenkins' Terrace. They have a very complete plant in good working-order and are said to have had very satisfactory returns.

At Londonderry Terrace, J. Corbett, Manager of Skipper's Sluicing Company, has had difficult and heavy ground to contend with but by careful management, I am informed, has been able to make it pay.

Davis brothers are doing a large amount of work on their claim on Stony Creek Terrace—sluicing the terrace into the river—and are meeting with a fair amount of success.

Collins and son are still energetically working their claim at Maori Point and are reported to be doing very well. They have a very complete and extensive plant, to which they are constantly adding.

Ward brothers have had good returns from their claim in the Shotover River during the past season.

Thompson and party, who struck a rich patch about two years ago, are still working with success on their claim on the Upper Shotover.

McCormick and party are about to commence operations on a river claim on the Upper Shotover, and intend to build a wing-dam to divert the water of the river so as to work the beaches and the river-bed. Two or three other parties are carrying on works of a similar description in other parts of the river.

Oxenbridge brothers have taken up a special river claim in the bed of the Shotover River, including a portion of the claim lately held by the Arthur's Point Dredging Company. Dredging operations on this ground proved an entire failure, but it is believed that gold in payable quantities still exists in this portion of the river, and it is the intention of the owners to construct a tunnel and an open cutting of 650 ft. in length through the terrace on the western side of the river, for the purpose of diverting the stream and exposing the river-bed. Owing to the rocky nature of the country this undertaking will involve a large amount of labour and probably take eighteen months to accomplish.

Dredging.

There are only two dredging companies in existence in this portion of the district.

The Maori Point dredge has been working in the company's claim at Maori Point on the Upper Shotover. Since spring operations have been very successful and the returns have been good. The dredge is still steadily at work.

The Prince Arthur dredge is not working. Ever since operations were commenced on this claim the unfortunate owners have met with nothing but ill luck. The dredge has been twice sunk in the river, and already two companies have gone into liquidation in their endeavours to work their property. At the end of the year the dredge was still under water, but a new company has since been formed to take over the claim and dredge. The dredge has been raised and another attempt will be made to reach the gold-bearing strata which is confidently believed to exist at the river-bottom.

Quartz-mining.

At Skipper's Creek the Mount Aurum Company (who have acquired the property known as the Achilles Mine at Bullendale) have been steadily carrying on work during the year. Underground the work has been entirely confined to the British-American portion of the property, and has been almost wholly exploratory. The two existing drives on the eastern side of the spur above the Old Man Creek have been reopened and the upper drive has been extended 50 ft., some payable stone being met with. The lower drive (58 ft. below the former) has been driven 370 ft. and a rise put up in the end, which communicates with an existing crosscut on the western side of the hill. At 150 ft. from the mouth of the lower drive a rise has been put up to the upper drive. In this rise payable auriferous stone has also been met with. Surface: To facilitate the transportation of the stone from the mine to the battery (a distance of 3,000 ft.) a self-acting aerial ropeway has been erected, capable of transporting about 40 tons of stone per day of eight hours at a cost of about 6d. per ton. Battery: This has been overhauled and copper plates substituted for the blankets formerly used for recovering the gold. A fresh water-supply has also been laid to the battery, giving a 500 ft. head for driving the machinery.

Shotover Quartz-mine.—This mine is owned and worked by the Shotover Quartz-mining Company, of Dunedin, the object of the present operations being to pick up, at a lower level, the blocks of ore which gave good returns to the local companies years ago. The low-level tunnel 330 ft. below the former workings has now been driven 1,500 ft., and payable blocks of stone have been met with at three points—viz., 300 ft., 700 ft. and 1,380 ft., returns from the latter having been obtained as high as an ounce to the ton. From this level an uprise has been driven 240 ft. and at 200 ft. a level was started, and during the last year driven 230 ft., with the object of making a connection with the old workings. This work has still to be completed, and the funds of the company being exhausted the directors are now engaged upon a scheme of reconstruction which will give £3,000 further available capital. Work will

probably be resumed in a short time. The mine is well equipped with crushing and amalgamating appliances, and has also a small cyanide plant for the treatment of tailings. The working-costs when crushing were 19s. 6d. per ton, and driving the prospecting-level cost £1 3s. per foot. If the old blocks of stone worked by the former companies can be picked up at a low level the mine has a very promising future.

Eureka Quartz-mine.—This mine is the property of a small Reefton syndicate, and the work is in the hands of Mr. J. Douglas. Two levels have been driven some 70 ft. apart, showing a promising reef from 6 in. to 6 ft. wide, the average value being 7 dwt. per ton. During the year a small crushing plant of two stamps driven by an oil-engine has been erected, but owing to the small quantity (20 tons per week—full time) which this machine can treat and the high cost of crushing—viz., 15s. per ton—the plant has proved quite unsuitable for the mine, and operations have been carried on at considerable loss. Efforts are being made to reconstruct the company with a view to provide capital to purchase a more suitable crushing plant and to further prospect the mine.

In the Arrow district there is no quartz-mining of any importance at present being carried on. The Indian Glenrock Company, who have been carrying on operations for some years at Macetown and were mentioned in my last report as having temporarily closed down their workings, have now decided to cease operations altogether. They have surrendered their claims, and are disposing of their water-rights and machinery. This is the last of a series of companies that have from time to time taken this property in hand and expended large sums in mining operations. The yield of gold, though at times most encouraging, has never been sufficiently good or lasting to insure the permanency of the undertaking.

A number of small quartz claims, taken up during last year, have been tried and have one after another been surrendered.

There has been no improvement in alluvial mining during the year. The claims mentioned in my last report are still working and are yielding moderate but payable returns.

At Cardrona the Lone Star Dredging Company have been steadily working their claim with satisfactory results. To avoid the large amount expended on coal, the carriage of which from the pit to the claim is very costly, the company have decided to work their dredge by water-power. They have secured water-rights for the purpose from the Cardrona River, and are making preparations to have the necessary alterations made in the machinery. The use of water instead of steam will greatly reduce the working-expenses of the dredge. With the exception of this company's operations very little mining has been carried on in the Cardrona Valley during the past year, and what has been done has not proved profitable to the owners.

A powerful company has been formed to work the ground on the Criffel Face near Cardrona. This company has acquired claims comprising 120 acres of land and has already had a number of men employed. They own a water-race five miles in length, 7 ft. wide, with a depth of 2 ft. This race is capable of carrying thirty heads of water and runs with a fall of 12½ ft. to the mile. The race is cut for its entire length in the soil, no fluming having been required in its construction. There will be about 600 ft. of pressure at the end of the pipe-line. About thirty men have been employed since November. The company will work the claim by means of a large tail-race 100 ft. deep with a width at the top of 300 ft.. It is also the intention of the company to erect an electric-lighting plant on the ground. For many years a rich run of gold has been believed to exist in this locality, but the expense of working the ground has been beyond the means of the ordinary miner, and with the exception of a little fossicking now and then no efforts have been made to test the extent of the gold-deposits. It is exceedingly gratifying, therefore, to know that through the operations of an energetic company there is every prospect of the ground being thoroughly tried during the coming year.

Scheelite Claim, Bucklerburn, Lake Wakatipu.

This claim was until lately held by Mr. John Watson and party, but they have done very little work for some years. Recently Mr. George Reid, of Queenstown, applied to the Warden's Court for forfeiture of the claim, which was granted and the land has been applied for and granted to him. The new proprietor contemplates taking steps at once for the development of the property and is pushing ahead with all speed with the erection of a battery. He intends to fit up a Wilfley ore-concentrator, a machine believed to be highly suitable for the treatment of this ore. The battery will be driven by a large Pelton wheel and the concentrator by a smaller one. As soon as the machinery is complete a quantity of ore now being got out will be at once treated.

CROMWELL.

During the year twelve dredging-claims and nine alluvial claims were granted in the Warden's Court, as compared with thirteen dredging and twelve alluvial claims during the previous year. The dredges have worked very steadily in this portion of the district during the past year. The state of the river has permitted most of the dredges to have a longer season than usual.

On the Kawarau River the Electric Company's two dredges have been getting excellent returns, though not equal to those of the previous year. The Junction Electric Company's three dredges have been getting steady payable returns. At Waitiri, on the Kawarau River, the Waitiri Syndicate have worked their dredging-claim (formerly the Meg and Annie) with very great success. Perhaps the most noteworthy event of the year has been the removal of three dredges from below the junction of the Clutha and Kawarau Rivers to the upper part of the Clutha River (above the junction), reducing the number of dredges in the gorge in this subdistrict to two, and increasing the fleet in the Clutha River above to nine. The two remaining in the gorge are the Hartley and Riley, which has been working during the year at a loss, and the Alpine Consols which has been getting payable returns.

The yield obtained by the Clutha dredges above Cromwell has borne out the high opinion formed of the auriferous nature of the river, and the fact of three dredges abandoning the gorge below Cromwell in its favour shows the confidence felt in the upper portion of the river as a profitable dredging-field. The Rise and Shine Company and the Rising Sun Company have worked continuously—the former with two dredges—and both have paid dividends. The Punt Company have worked vigorously since they got their dredge on their claim, and should soon be ranked among the dividend-paying companies.

On the Fraser River the Loch Lomond dredge has been working fairly steadily, but the returns have not been large.

At Nevis all the dredges, with the exception of the Ngapara III, have had a good year.

The principal alluvial mining in the district is carried on at Nevis. The season has been a short one owing to the want of water, but the claims have done very well, especially at Upper Nevis, and during the year some large new areas have been taken up.

The only quartz-mining has been at Bendigo, the famous old mine being let to two tributers who have got fair returns; but the water-supply has been inadequate for crushing purposes. At the Carrick Range a new battery was erected upon an old claim, but upon trial it was found that the ore was too poor to pay.

The prospects generally for the coming year appear to be good, and with regard to the Upper Nevis decidedly bright. The Crewe No. 2 dredge having struck good gold has resulted in all available ground in that locality being pegged out, and much profitable work is looked for in the near future.

Clyde and Alexandra.

At and near Clyde dredging has been declining for some time, until at present it has almost ceased to be carried on. Since my last report the Wee McGregor (late Old Dunstan) and the Unity dredges have ceased operations, while the New Monte Christo and the Matau are only working intermittently.

The Matau Company during the year, however, succeeded in paying dividends amounting to £350, but it does not seem probable that the present year's operations will prove as profitable to the company.

The Dunstan Lead (a powerful dredge) is working on the company's claim half-way between Clyde and Alexandra. Operations are extending into the east bank of the Clutha River, but are somewhat impeded by the quantity of silt which has to be contended with. In the earlier part of the year good returns were obtained and dividends paid amounting to £1,718, but the present operations are just paying expenses.

The dredges in and about Sandy Point are all paying handsomely, and with the exception of two or three will continue to do so for several years.

The Golden Beach Claim, which for many years has been worked by various companies with disappointing results, has now become the property of Mr. Lane, of Dunedin. The new owner has substituted water-power for steam, and as the machinery is now working very satisfactorily a more favourable year is confidently expected.

The Molyneux Hydraulic and the Alexandra Lead are not meeting with the success which was hoped for, but the Alexandra Eureka and the Clyde dredges have had a profitable year.

The dredges working in the gorge below Alexandra have had a very unfavourable season, the high state of the river having proved a great hindrance to continuous operations. There are now only four working when opportunity offers, and these in the aggregate worked fifty-five weeks, obtaining during that time 2,937 oz. of gold, or an average of 53 oz. per working-week for the four dredges. Out of this the shareholders of the Manuherikia and the Fourteen-mile Beach received £2,340 in dividends.

The prospect of obtaining water under pressure for motive power on dredges on the Manuherikia has led to the marking-out of fresh ground in this locality, and three or four new claims have been applied for. The result of previous operations has shown that the difference between profit and loss in dredging in this valley has been the cost of fuel, and in the event of Messrs. Allens' and the Alexandra Bonanza races becoming available for this purpose there is reason to believe that this locality will yet prove a profitable area for dredging.

The Manorburn Syndicate, relying upon obtaining water from the Bonanza Race, have not commenced the construction of their own race granted to them from one of the tributaries of the Manorburn. They have, however, thoroughly prospected their claims—of which they hold three—and seem quite satisfied with the auriferous nature of the country and of the probability of remunerative work with an adequate water-supply. It will be some time yet before they will be in a position to commence mining on a scale of any magnitude.

The claim taken up and worked by Mr. Rivers on the terrace overlooking the Manuherikia beyond Tucker's Flat has not proved a success. A great deal of work was done, and an immense quantity of the hillside sluiced away, but the return of gold was small and not sufficient to remunerate the enterprising owner for his labour. Mr. Rivers has marked out and has had granted to him a fresh claim on the same run of country, but in a gully a short distance to the eastward. He has secured the necessary tail-races and will extend the line of pipes carrying the water from his race to the new claim. He is of opinion that this ground will prove more auriferous than the last.

A claim has been taken up on Tucker's Flat for the purpose of working the cement which there underlies the gold-bearing wash. This cement is known to contain gold, but is not amenable to ordinary treatment as it is extremely hard. A small plant for crushing and treating this cement is being procured and is expected to be shortly in operation.

Bald Hill Flat.

Alluvial mining is still carried on here in a few claims which have been in continuous work for several years. The returns are not large but are sufficient to induce the owners to continue operations. The Last Chance Company which has owned and worked a claim for a good many years is still actively engaged in sluicing. They have recently struck richer ground and there is every prospect of improved returns during the coming year.

Quartz.—Mr. R. Symes, after twenty-three years of struggle and hard work on the reef known as Whites, in the Old Man (or Obelisk) Range, has, through the poorness of his returns, been compelled to relinquish his claim and abandon his undertaking. He is, notwithstanding, still of the opinion that a payable reef exists in the vicinity, but having exhausted his funds he is now unable to give the locality a further trial.

The Excelsior, the only other quartz claim working here, is not likely to continue much longer in operation as the owner, Mr. Gray, has not met with success in his enterprise.

Roxburgh.

If anything, dredging is improving both here and at Miller's Flat. The eleven dredges owned by companies which publish their returns obtained 13,926 oz. during the past year, out of which dividends amounting to £16,405 were paid to shareholders. There are at least six other dredges owned by private parties, which, according to report, are doing equally well, if not better, than the above, but their returns are not available.

Sluicing.—The Roxburgh Amalgamated and the Ladysmith companies at Roxburgh East are both meeting with success, and as the claims held by them are of considerable areas, and the quality of the ground much the same as that at present being worked, many years must elapse before the claims are worked out.

Messrs. George and party at Commissioners' Flat, and Messrs. Samuel brothers at Coal Creek, are still profitably employed on their respective claims. The seams contain excellent gold, but lying as they do below the ordinary level of the Clutha River operations are more or less affected by the rise and fall of the river.

I have, &c.,
Fred. J. Burgess, Warden.

The Under-Secretary, Mines Department, Wellington.

Mr. Warden McCarthy, Invercargill, to the Under-Secretary for Mines, Wellington.

Sir,— Invercargill, 9th June, 1906.

I have the honour to report as follows :—

Round Hill Goldfield.

The operations on this field are now confined to the three mining companies—the Round Hill Company, the Ourawera Company, and the Smith Gold-mining Company—whose yields have been up to previous years. A fourth company is preparing to make a start at Jewett's Gully, near to Round Hill, on the claim carried on last year by Joseph Harrison.

Orepuki Goldfield.

As with the remainder of this district, there is not much to report on this portion. There have been a number of beach claims taken up on the coast of Te Waewae Bay, towards the Waiau River; these depend for their yields on the sand brought in by heavy weather, and therefore the profits are somewhat precarious. Increased activity in mining has also taken place around Orepuki, so that though no new auriferous ground has been discovered, the industry is still maintaining its position. Another effort is being made to revive the shale-works, which have been lying idle for the past three years.

Preservation Goldfield.

No work has taken place on the Preservation Goldfield in the past year. An Invercargill syndicate bought the old Morning Star Company's property, but through legal troubles were unable to commence operations.

Stewart Island.

The mineral claims on the island are still being carried on with fair success. The Government have been approached to assist in the development of the present claims at Pegasus, but so far without practical result.

I have, &c.,
S. E. McCarthy,
Warden.

The Under-Secretary, Mines Department, Wellington.

GOVERNMENT WATER-RACES.

Mr. JAMES ROCHFORD, Manager Waimea-Kumara Water-races, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Kumara, 19th May, 1906.

I have the honour to forward the following report on the working of the Waimea-Kumara Water-races for the financial year ending the 31st March, 1906:—

WAIMEA RACE.

The cash received for sales of water from this race for the year ending the 31st March, 1906, was £623 19s. 2d., and the expenditure for the same period on gauging, maintenance, and repairs amounted to £658 5s. 1d., showing a debit balance of £34 5s. 11d. on the transactions for the year.

The average number of miners supplied with water from the race for sluicing purposes during the year was 27·91, showing an increase of 7·66 as compared with the previous year; and the approximate quantity of gold obtained by them was 1,760 oz., having a value of £6,864.

The total sales of water for the year amounted to £585 4s. 4d., or £28 5s. 11d. less than the previous year. This does not mean that a smaller quantity of water was supplied during the year—on the contrary, a much larger quantity was sold. The falling-off in the value of the sales of water is accounted for by the fact that the price was reduced by 50 per cent. from the 1st May, 1905, or eleven months of the present financial year. Had this reduction not taken place the value of water supplied from this race would have shown an increase of £521 9s. 2d. on the previous year.

The quantity of gold obtained was approximately 70 oz. less than the preceding year, representing a decrease in value of £273.

Notwithstanding the reduction in the price of water above alluded to, the cash received for sales of water was £102 18s. 9d. greater than during the previous year.

The expenditure on gauging, maintenance, and repairs was £22 2s. 11d. less than during the preceding year, and the headworks at Kawhaka, the Waimea Siphon, the fluming and tunnels, and the main and branch races have been maintained and repaired, and are now in good working-order.

The only parties using water from the Stafford portion of the race are Chinamen, and the revenue received from this section shows a slight improvement on last year. As there is still a considerable area of unworked ground in this locality that should pay fair wages there is very little likelihood of the demand for water falling off for some time to come.

At Tunnel Terrace, in the Goldsborough portion of the district, there are seven parties using water from the race, and as far as I can learn the results for the year have been fairly satisfactory. There is still a large area of ground in this locality commanded by the Government race which will pay for working at the present price of water.

The Waimea Hydraulic Sluicing Company have still their claim and plant let on tribute. The tributers used water during the whole of the year, with payable results, and they are still sluicing on the terrace above Goldsborough, where there is a large extent of unworked ground. Should the ground prove payable as they get further in from the face of the terrace this claim will last for some considerable time.

A party of Chinamen at Red Jack's started to take water from the race in September last, and they have been using it continuously ever since.

One or two short stoppages from breaks took place during the year, but repairs were promptly effected and the water again turned on.

There was an excellent supply of water throughout the year.

The Waimea Siphon, which carries about thirty-two heads, was practically running full all the time. Notwithstanding this fact, the present demand for water greatly exceeds the supply, and during the year one or two applications for water were made by parties who proposed to open up new claims.

Authorised free water to the value of £11 was supplied from this race during the year to parties opening out new ground.

The following tabulated statement shows the sales of water, the cash received, and the cost of maintenance of the Waimea Water-race for the year ending the 31st March, 1906, and also the approximate quantity of gold obtained by parties using water from the race:—

Month.	Sales of Water.	Cash received for Sales of Water.	Expenditure.	Outstanding Moneys at the End of each Month.	Number of Men employed.	Approximate Quantity of Gold obtained.	Value of Gold obtained.
1905.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		Oz.	£ s. d.
April	36 9 3	85 3 9	59 16 8	108 10 0	21	109	425 2 0
May	53 15 0	61 13 0	57 11 8	100 13 8	31	159	620 2 0
June	56 19 10	65 10 6	58 10 5	93 12 3	30	171	666 18 0
July	57 6 8	66 2 0	57 10 0	84 12 3	23	171	666 18 0
August	45 11 1	41 5 1	48 2 6	90 2 0	26	135	526 10 0
September	57 2 7	41 8 7	46 9 6	105 5 8	26	171	666 18 0
October..	60 3 1	62 1 0	45 10 0	70 10 0	30	180	702 0 0
November	50 15 6	22 1 3	48 3 3	97 11 10	30	153	596 14 0
December	37 14 3	80 5 9	64 8 11	55 4 4	30	114	444 12 0
1906.							
January	28 6 3	20 9 0	70 5 9	62 16 7	30	84	327 12 0
February	43 15 4	37 15 3	51 6 3	68 16 10	27	142	553 16 0
March	57 5 6	40 4 0	50 11 0	85 18 4	31	171	666 18 0
Totals	585 4 4	623 19 2	658 5 11	..	27·91 (average)	1,760	6,864 0 0

Branch Race to Callaghan's and Middle Branch of Waimea Creek.

The cash received for sales of water from this race for the year ending the 31st March, 1906, was £722 5s. 2d., and the expenditure for the same period on gauging, maintenance, and repairs was £561 10s. 5d., showing a credit balance of £160 14s. 9d. on the transactions for the year.

The average number of miners supplied with water for sluicing purposes from this race during the year was 14·5, a decrease of 2·08 as compared with last year, and the approximate quantity of gold obtained by them was 1,751 oz., having a value of £6,828 18s. The total sales of water for the year from this race amounted to £695 2s. 3d., an increase of £9 17s. 8d. on the preceding year, and the cash received for sales of water showed an increase of £203 3s. 10d. Taking into consideration that the water was reduced to half-price on the 1st May, 1905, these figures are highly satisfactory, and show a substantial improvement for the year. The increase of £9 17s. 8d. really represents an increase of £667 0s. 6d. in the quantity of water supplied as compared with the previous year.

The approximate quantity of gold obtained by the miners was 43 oz. greater than during the previous year, representing an increase in value of £167 14s.

The expenditure on gauging, maintenance, and repairs during the year was £34 14s. 3d. greater than the previous year. This increased expenditure was caused by two breaks that occurred in the flush race leading to the Waimea Main Tail-race during wet weather, and the construction of two by-washes to minimise the possibility of a like occurrence in the future.

For the first four months of the year five parties were sluicing into the Waimea Main Tail-race, but a new claim was opened out in August and six parties were sluicing into it during the last eight months of the year, and the Main Tail-race worked most satisfactorily.

Raby and party have extended the Main Tail-race a further distance of 200 ft. during the year, and when they have driven another 100 ft. they intend to open out their claim and start sluicing.

In Callaghan's Flat, Honey and party have been sluicing on a fairly big scale during the year with satisfactory results, and they are prepared to take double the quantity of water that can at present be supplied to them. Manzoni and party have also applied for additional water. This speaks well for the locality, and as there is a large extent of unworked ground commanded by the water from this race I do not anticipate any falling-off in the revenue for some time to come.

Flushing-water was supplied to the Waimea Main Tail-race during the year, and authorised free water to the value of £18 15s. was supplied to Betty and party for opening out their claim.

The following tabulated statement shows the sales of water, cash received, and the cost of maintenance of the Callaghan's and Middle Branch Race for the year ending the 31st March, 1906, and also the approximate quantity of gold obtained by parties using water from the race :—

Month.	Sales of Water.	Cash received for Sales of Water.	Expenditure.	Outstanding Moneys at the end of each Month.	Number of Men employed.	Approximate Quantity of Gold obtained.	Value of Gold obtained.
1905.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		Oz.	£ s. d.
April	37 19 5	79 8 6	48 0 9	318 6 2	14	95	370 10 0
May	33 16 0	30 7 6	42 18 5	322 2 2	14	85	331 10 0
June	63 8 1	83 19 4	72 19 10	310 3 5	14	157	612 6 0
July	69 7 1	63 2 2	38 4 0	313 9 7	14	175	682 10 0
August	74 6 8	76 11 4	45 7 7	310 3 8	14	185	721 10 0
September	58 2 1	73 4 8	45 8 11	292 13 7	17	145	565 10 0
October	59 10 0	53 0 6	46 5 11	207 3 10	17	147	573 6 0
November	75 18 9	56 6 5	36 15 0	232 16 2	14	190	741 0 0
December	54 7 1	46 0 0	39 1 3	242 2 0	14	135	526 10 0
1906.							
January	44 9 2	60 15 0	51 16 3	217 14 11	11	130	507 0 0
February	60 7 11	34 11 0	46 10 0	245 0 7	14	150	585 0 0
March	63 10 0	64 18 9	48 2 6	248 10 7	17	157	612 6 0
Totals	695 2 3	722 5 2	561 10 5	..	14·5 (average)	1,751	6,828 18 0

KUMARA RACE.

The cash received for sales of water from this race for the year ending the 31st March, 1906, was £451 10s. 4d., and the expenditure for the same period on gauging, maintenance and repairs was £877 18s. 4d., showing a debit balance of £426 8s. on the transactions for the year; but £246 12s. 5d. of this amount was lost during the first three months of the financial year.

The average number of miners supplied with water from this race during the year was 16·66, a decrease of 3·09 as compared with the previous year, and the approximate quantity of gold obtained by them was 878 oz., of the value of £3,424 4s.

The total sales of water for the year amounted to £438 2s. 2d., a decrease of £374 6s. 11d. on the preceding year, and the cash received for sales of water shows a decrease of £201 19s. 8d. This falling-off is entirely due to the reduction in the price of water which took place on the 1st May, 1905. Had the price prevailing last year been maintained the sales of water would have amounted to £858 17s. 3d., an increase of £46 8s. 2d. on the previous year.

The approximate quantity of gold obtained by the miners was 750 oz. less than during the previous year, representing a decrease in value of £2,925. The expenditure on gauging, maintenance, and repairs

during the year was £406 4s. less than during the preceding year, and all the dams, races, branch races, tunnels, and siphons have been maintained and are now in a thorough state of repair.

There has been no sluicing in the No. 3 channel during the year. The No. 3 channel deviation has been driven, fully timbered, boxed, and blocked for a distance of 1,727 ft. At 1,711 ft., the No. 2 shaft, 55 ft. in depth, has been sunk, timbered, and centred. A chamber has also been excavated and timbered, which connects the shaft with the deviation. The sinking of this shaft was found necessary for ventilating purposes.

The two original parties are still sluicing into the No. 4 channel. As far as I can learn, the results for the year have been satisfactory, but the ground is by no means rich, and it is only by using large quantities of water and sluicing on a big scale that payable results can be obtained. As there are only two parties sluicing into this channel, the channel dues are very heavy, and, in addition to this, each party has a long tail-race to maintain. Both parties have still a considerable area of ground to work, which, at the present price of water, ought to pay fair wages.

There are only two parties at present sluicing into the No. 5 channel, and one of them was engaged driving a tail-race and doing other dead-work for the first eight months of the year. Each of the parties have a large area of ground yet to work that under ordinary circumstances should pay good wages, but, like the parties sluicing into the No. 4 channel, they are greatly handicapped by the costly maintenance of the long length of channel and their own private tail-races.

During the first ten months of the year water was supplied in small quantities to one private race, but the ground is now worked out.

The supply of water throughout the year has been more than sufficient for all requirements.

The folowing table shows the number of days in each month on which water was running over the dams, and the total quantity of water lost during the year, also the number of holidays on which no water was used for sluicing :—

Month.	Water running over Dam.	Quantity of Water lost.	Holidays.	No Water for Channel.	Dams empty.
1905.	Days.	Days.	Days.	Days.	Days.
April	5	5½	6	..	..
May	8	23½	..	..	..
June	6	19	..	..	..
July	11	29½	..	..	..
August	7	18½	..	..	..
September	9	11½	..	..	..
October	5	15½	..	..	..
November	15	25	..	..	..
December	14	24	6	..	..
1906.					
January	4	13	7	..	..
February	1	0½	..	..	..
March	2	4½	..	..	..
Totals	87	190	19	..	..

The usual quantity of flushing-water authorised by the Department was supplied to each of the main tail-races—viz., No. 4 channel, ten sluice-heads; No. 5 channel, twenty sluice-heads.

Authorised free water was supplied to Thorn and party to the value of £15 15s. for opening out a new claim.

Water was supplied for fire-brigade purposes to the Borough of Kumara, and for washing-up purposes to all the claims using water from the race free of charge.

Prospecting.

Prospecting operations were started by the Mines Department in the flat between Kumara and the railway-line on the 19th February, but up to the present the results have not been very satisfactory. There are, however, other large areas of ground to be prospected in the vicinity of the Kumara Goldfield, particularly at the head of Larrikin's, in the Kapitea Valley, and on the north side of the Teremakau River, in the neighbourhood of Payne's Gully. Should payable gold be found in either of these localities, the prosperity of the Kumara field would be assured for many years to come.

Kumara Deep-level Tunnel.

No work has been done in the Kumara Deep-level Tunnel during the year, and considerable repairs will be necessary before any further prospecting can be done. The drainage-tunnel is driven in a good central position, and at the lowest level at present obtainable from the front of the terrace. Its termination is practically only under the edge of the old workings, and if payable gold is found it can be extended to drain the whole of the Kumara Goldfield, where such rich returns were found in the past on the upper level.

The following tabulated statement shows the sales of water, the cash received, and the cost of maintenance of the Kumara Race for the year ending the 31st March, 1906, and also the approximate quantity and value of gold obtained by parties using water from the race :—

Month.	Sales of Water.	Cash received for Sales of Water.	Expenditure.	Outstanding Moneys at the End of each Month.	Number of Men employed.	Approximate Quantity of Gold obtained.	Value of Gold obtained.
1905.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		Oz.	£ s. d.
April	17 7 1	32 7 4	82 5 0	1,560 4 3	8	34	132 12 0
May	43 5 10	24 7 9	109 7 10	1,579 2 2	13	86	335 8 0
June	31 13 4	16 5 0	127 19 8	1,594 10 6	17	64	249 12 0
July	24 9 9	62 16 3	67 14 3	1,556 4 0	18	50	195 0 0
August	44 10 0	13 5 0	60 2 7	1,590 4 0	18	90	351 0 0
September	29 13 1	58 17 0	56 16 8	1,548 12 9	17	60	234 0 0
October	40 3 6	47 15 0	52 19 6	894 15 5	18	80	312 0 0
November	42 12 3	20 0 0	66 0 10	915 7 2	18	86	335 8 0
December	35 17 1	66 5 11	74 17 7	884 18 4	20	70	273 0 0
1906.							
January	30 10 5	17 10 0	66 10 0	897 18 9	20	62	241 16 0
February	53 0 3	22 2 6	54 12 10	928 16 6	17	106	413 8 0
March	44 19 7	69 18 7	58 11 7	903 17 6	16	90	351 0 0
Totals	438 2 2	451 10 4	877 18 4	..	16·66 (average)	878	3,424 4 0

The table opposite shows the result of working the Kumara Race for the twenty-three years from the 1st April, 1883, to the 31st March, 1905.

Waimea–Kumara Water-races.

The following tabulated statement shows the revenue, cost of maintenance, approximate quantity of gold obtained, and the number of miners employed in sluicing in the claims taking water from the Government water-races in the Waimea–Kumara district for the year ending the 31st March, 1906 :—

Month.	Sales of Water.	Cash received for Sales of Water.	Expenditure.	Outstanding Moneys at the End of each Month.	Number of Men employed.	Approximate Quantity of Gold obtained.	Value of Gold obtained.
1905.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		Oz.	£ s. d.
April	91 15 9	196 19 7	190 2 5	1,987 0 3	43	238	928 4 0
May	130 16 10	116 8 3	209 17 11	2,001 18 0	58	330	1,287 0 0
June	152 1 3	165 14 10	259 9 11	1,998 6 2	61	392	1,528 16 0
July	151 3 6	192 0 5	163 8 3	1,954 5 10	55	396	1,544 8 0
August	164 7 9	131 1 5	153 12 8	1,990 9 8	58	410	1,599 0 0
September	144 17 9	173 10 3	148 15 1	1,946 12 0	60	376	1,466 8 0
October	159 16 7	162 16 6	144 15 5	1,172 9 3	65	407	1,587 6 0
November	169 6 6	98 7 8	150 19 1	1,245 15 2	62	429	1,673 2 0
December	127 18 5	192 11 8	178 7 9	1,182 4 8	64	319	1,244 2 0
1906.							
January	103 5 10	98 14 0	188 12 0	1,178 10 3	61	276	1,076 8 0
February	157 3 6	94 8 9	152 8 3	1,242 13 11	58	398	1,552 4 0
March	165 15 1	175 1 4	157 5 1	1,238 6 5	64	418	1,630 4 0
Totals	1,718 8 9	1,797 14 8	2,097 13 10	..	59·08 (average)	4,389	17,117 2 0

It will be seen from the above statement that the value of the sales of water from the combined races last year was £1,718 8s. 9d., as against £2,111 3s. 11d. for the previous year, thus showing a decrease in the value of the sales of water last year of £392 15s. 2d. As previously pointed out, this decrease is entirely due to the reduction in the price of water. Calculating the quantity of water supplied during the year at the price charged the previous year, the sales of water would show an increase of £1,233 17s. 10d. The expenditure on gauging, maintenance, and repairs was £2,097 13s. 10d., as against £2,491 6s. 6d. for the former year, thus showing a decrease on the cost of maintenance last year of £393 12s. 8d. The cash received during the year was £1,797 14s. 8d., as against £1,693 11s. 9d. for the previous year, thus showing an increase in revenue of £104 2s. 11d. over the previous year.

The following schedule shows the claims that have been sluicing on the Kumara Goldfield during the year ending the 31st March, 1906, the number of men in each claim, the fall and width of boxes in each tail-race, number of sluice-heads of water used in sluicing, number of cubic yards of wash sluiced away per hour, and the name of race from which the water was supplied :—

SUMMARY showing the RESULT of WORKING the KUMARA WATER-RACE for Twenty-three Years, from 1st April, 1883, to 31st March, 1906.

Water supplied.	Year.	Rate per Sluice-head per Week.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	Total Value of Water sold.	Total Value Free for Assistance.	Total Value Free for Deviations.	Total for Construction of No. 3 Channel.	Total Value Water supplied.	Average Number of Sluice-heads supplied Daily.	Expenditure.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		£ s. d.
Water sold ..	1883–84	3 0 0	371 16 5	465 2 1	700 2 6	583 9 7	702 7 6	626 16 3	808 10 5	777 3 9	774 17 11	698 2 6	1,064 0 0	774 6 0	8,346 14 11	..	..	..	..	..	..
Free	1883–84	..	46 2 6	44 5 0	183 11 8	108 19 2	108 0 0	85 7 6	244 7 6	172 18 9	63 12 6	103 9 2	86 5 0	139 3 4	..	1,386 2 1	..	..	..	..	..
			417 18 11	509 7 1	883 14 2	692 8 9	810 7 6	712 3 9	1,052 17 11	950 2 6	838 10 5	801 11 8	1,150 5 0	913 9 4	..	..	..	..	9,732 17 0	46·35	2,153 5 5
Water sold ..	1884–85	3 0 0	580 4 4	937 19 4	667 3 11	906 16 10	882 6 10	997 1 5	919 12 3	1,126 11 10	819 17 3	289 4 2	756 9 2	821 0 10	9,704 8 2	..	..	..	..	..	..
Free	1884–85	..	92 5 0	56 19 7	78 18 9	55 13 9	149 0 10	18 11 3	145 13 4	69 3 9	39 15 0	26 12 6	45 3 9	2 16 8	..	780 14 2	..	..	..	..	..
			672 9 4	994 18 11	746 2 8	962 10 7	1,031 7 8	1,015 12 8	1,065 5 7	1,195 15 7	859 12 3	315 16 8	801 12 11	823 17 6	..	..	..	..	10,485 2 4	49·92	1,656 0 1
Water sold ..	1885–86	2 10 0	665 16 0	796 6 9	893 5 3	745 19 7	773 19 10	943 13 5	953 15 6	997 7 8	697 13 5	686 4 0	708 15 8	935 19 7	9,788 16 8	..	..	..	..	..	..
Free	1885–86	..	24 13 9	9 2 0	..	..	23 15 0	31 3 4	22 1 3	18 11 10	18 7 2	49 1 4	1 5 0	13 2 6	..	221 3 2	..	..	..	..	..
			690 9 9	805 8 9	893 5 3	745 19 7	797 14 10	974 16 9	975 16 9	1,015 19 6	716 0 7	735 5 4	710 0 8	949 2 1	..	..	..	..	10,009 19 10	57·20	1,454 19 5
Water sold ..	1886–87	2 10 0	758 0 4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Water sold ..	1886–87	2 0 0	..	19 10 8	488 3 9	315 7 11	599 5 0	643 7 11	682 8 9	686 7 5	562 0 10	345 12 7	673 0 0	747 9 2	6,470 14 4	..	..	..	..	..	..
Free	1886–87	..	..	776 0 11	242 0 11	40 13 9	120 9 7	83 15 10	74 5 0	45 9 2	32 15 0	46 8 9	49 16 8	36 3 4	..	1,547 18 11	..	..	..	..	..
			758 0 4	795 11 7	730 4 8	356 1 8	719 14 7	727 3 9	706 13 9	731 16 7	594 15 10	392 1 4	722 16 8	783 12 6	..	..	..	..	8,018 13 3	56·19	1,398 18 10
Water sold ..	1887–88	2 0 0	535 5 10	679 7 8	167 10 10	656 4 7	684 16 1	694 5 0	591 12 1	710 0 0	535 10 10	519 15 5	670 17 6	734 4 5	7,169 10 3	..	..	..	..	..	..
Free	1887–88	..	26 11 8	40 19 2	15 13 9	23 10 0	47 7 11	4 11 8	34 16 8	42 10 0	27 10 0	28 6 8	19 11 8	15 17 3	..	347 6 5	..	..	..	..	..
			561 17 6	720 6 10	183 4 7	679 14 7	732 4 0	698 16 8	626 8 9	752 10 0	553 0 10	548 2 1	690 9 2	750 1 8	..	..	..	..	7,516 16 8	53·68	982 12 0
Water sold ..	1888–89	2 0 0	490 6 8	338 7 7	532 1 1	626 19 10	667 8 3	542 8 4	702 12 6	664 1 7	395 12 3	465 2 1	623 18 4	667 8 4	6,716 6 10	..	..	..	..	..	..
Free	1888–89	..	107 17 3	90 18 0	87 1 4	75 1 10	32 10 0	16 9 5	38 1 4	13 0 0	34 9 2	58 6 8	90 10 10	74 13 4	..	492 0 0	227 0 0	..	..	..	..
			598 3 11	429 5 7	619 2 5	702 1 8	699 18 3	558 17 9	740 13 10	667 1 7	430 1 5	523 9 7	714 9 2	742 1 8	..	..	..	..	7,435 6 10	53·10	1,024 1 9
Water sold ..	1889–90	2 0 0	401 13 4	495 16 4	256 16 8	377 16 3	353 4 2	237 7 11	318 10 10	293 8 4	159 18 9	219 15 10	248 19 7	186 16 8	3,550 4 8	..	..	..	..	..	..
Free	1889–90	..	45 15 0	55 3 4	43 0 0	92 15 0	105 15 0	93 1 8	41 10 0	103 18 4	105 13 4	48 17 6	54 8 4	71 5 0	..	396 2 6	465 0 0	..	..	..	..
Free, No. 3 Channel	1889–90	..	..	..	..	..	122 19 1	335 1 3	330 11 8	275 8 0	97 13 4	6 0 0	221 18 1	102 11 5	..	..	..	1,492 2 10	..	..	..
			447 8 4	550 19 8	299 16 8	470 11 3	581 18 3	665 10 10	690 12 6	672 14 8	363 5 5	274 13 4	525 6 0	360 13 1	..	..	..	..	5,903 10 0	42·16	1,424 13 3
Water sold ..	1890–91	2 0 0	300 12 6	355 11 11	368 3 2	423 9 0	622 17 11	666 7 1	720 16 1	701 5 10	578 1 8	546 17 11	691 17 11	689 11 8	6,665 12 8	..	..	..	..	..	..
Free	1890–91	..	113 5 0	119 14 2	70 7 11	71 17 6	82 9 7	110 16 8	93 13 9	106 0 10	57 5 5	113 6 8	133 2 6	130 5 10	..	409 5 5	793 0 5	..	..	..	..
Free, No. 3 Channel	1890–91	..	272 11 11	247 3 6	246 17 10	115 2 11	32 2 2	..	..	..	..	..	..	..	..	..	..	913 18 4	..	..	..
			686 9 5	722 9 7	685 8 11	610 9 5	737 9 8	777 3 9	814 9 10	807 6 8	635 7 1	660 4 7	825 0 5	819 17 6	..	..	..	..	8,781 16 10	62·72	1,766 4 3
Water sold ..	1891–92	2 0 0	616 5 10	655 4 11	542 9 1	179 11 11	426 16 1	769 15 5	784 13 8	642 4 2	469 10 0	291 3 9	543 7 6	724 8 8	6,645 11 0	..	..	..	..	..	..
Free	1891–92	..	143 11 5	191 16 8	44 3 6	..	82 16 11	151 14 7	118 10 1	233 1 8	213 11 3	137 0 10	64 11 8	28 9 2	..	996 4 5	413 3 4	..	..	..	..
			759 17 3	847 1 7	586 12 7	179 11 11	509 13 0	921 10 0	903 3 9	875 5 10	683 1 3	428 4 7	607 19 2	752 17 10	..	..	..	..	8,054 18 9	57·53	1,584 10 11
Water sold ..	1892–93	2 0 0	495 17 1	505 12 11	493 5 10	495 13 6	602 2 8	635 1 3	571 1 8	458 7 1	382 2 1	390 19 2	450 7 6	308 10 0	5,789 0 9	..	..	..	..	..	..
Free	1892–93	..	44 18 9	80 2 6	72 4 2	61 2 1	43 5 10	38 2 6	44 0 10	66 2 6	157 6 8	94 4 2	77 10 10	64 2 6	..	444 15 8	398 7 8	..	..	..	..
			540 15 10	585 15 5	565 10 0	556 15 7	645 8 6	673 3 9	615 2 6	524 9 7	539 8 9	485 3 4	527 18 4	372 12 6	..	..	..	..	6,632 4 1	47·35	1,782 11 0
Water sold ..	1893–94	2 0 0	451 16 5	480 13 7	541 11 11	542 9 6	575 10 5	486 9 2	539 8 4	402 11 11	451 5 5	303 0 10	415 5 5	392 1 8	5,582 4 7	..	..	..	..	..	..
Free	1893–94	..	101 5 2	119 5 7	99 4 6	110 7 1	92 9 10	147 16 2	112 11 0	164 18 5	82 0 4	112 3 10	132 15 10	70 6 10	..	1,306 0 3	39 4 4	..	..	..	..
			553 1 7	599 19 2	640 16 5	652 16 7	668 0 3	634 5 4	651 19 4	567 10 4	533 5 9	415 4 8	548 1 3	462 8 6	..	..	..	..	927 9 2	49·48	1,917 8 5
Water sold ..	1894–95	2 0 0	477 1 8	437 17 4	501 3 4	482 1 3	513 7 11	413 0 5	213 19 2	375 7 6	428 8 9	298 2 5	198 7 1	308 2 11	4,646 19 9	..	..	..	..	..	..
Free	1894–95	..	76 11 8	98 12 8	103 1 3	92 17 11	83 5 0	122 17 6	96 4 2	105 6 8	81 11 8	74 14 2	72 17 6	86 12 6	..	1,054 12 8	40 0 0	..	5,741 12 5	41·01	1,976 17 7
			553 13 4	536 10 0	604 4 7	574 19 2	596 12 11	535 17 11	310 3 4	480 14 2	510 0 5	372 16 7	271 4 7	394 15 5	..	..	..	..	..	..	..
Water sold ..	1895–96	2 0 0	277 5 10	379 15 0	349 12 1	322 15 10	345 1 8	354 1 8	351 16 8	336 5 5	331 0 0	315 15 5	336 3 4	406 18 4	4,106 11 3	..	..	..	..	..	..
Free	1895–96	..	95 3 4	96 1 8	139 19 2	81 16 3	76 19 7	77 10 10	110 9 7	114 12 1	67 3 4	92 8 4	90 18 11	86 16 3	..	1,129 19 4	..	..	..	..	..
Free, No. 4 Channel	1895–96	..	..	..	..	..	5 12 6	39 14 2	62 7 6	56 9 2	65 4 7	32 10 0	36 1 3	34 15 10	..	..	..	332 15 0	5,569 5 7	39·78	1,943 8 7
			372 9 2	475 16 8	489 11 3	404 12 1	427 13 9	471 6 8	524 13 9	507 6 8	463 7 11	440 13 9	463 3 6	528 10 5	..	..	..	..	..	..	..
Water sold ..	1896–97	{2 0 0 / 1 10 0}	286 13 4	307 0 0	166 9 6	387 13 8	318 10 7	310 7 4	356 16 4	322 8 10	144 13 3	319 1 3	284 1 3	299 1 8	3,502 17 0	..	..	..	..	..	..
Free	1896–97	..	100 5 0	99 4 10	22 18 2	31 1 10	12 19 4	22 16 10	13 18 4	12 11 3	12 18 9	51 18 9	58 16 2	39 19 9	..	479 9 0	..	..	..	..	..
Free, No. 4 Channel	1896–97	..	15 0 0	14 16 8	4 0 10	18 0 0	7 0 0	18 0 0	9 0 0	12 0 0	7 0 0	6 0 0	10 0 0	13 0 0	..	..	..	133 17 6	4,116 3 6	40·41	1,786 15 9
			401 18 4	421 1 6	193 8 6	436 15 6	338 9 11	351 4 2	379 14 8	347 0 1	164 12 0	377 0 0	352 17 5	352 1 5	..	..	..	..	..	..	..
Water sold ..	1897–98	..	243 11 2	240 5 1	204 19 1	210 11 1	266 15 6	147 4 8	296 9 10	213 1 9	255 19 11	208 16 2	415 13 9	185 15 3	2,889 3 3	..	..	..	..	..	..
Free	1897–98	..	29 1 3	39 16 3	18 1 10	29 5 0	29 0 0	51 5 0	49 14 4	52 10 0	38 2 6	29 1 3	..	48 15 0	..	414 12 5	..	..	..	..	..
Free, No. 4 Channel	1897–98	..	..	..	..	..	..	..	..	..	2 10 0	14 0 0	17 0 0	..	..	33 10 0	..	3,337 5 8	..	1,841 0 0	
			272 12 5	280 1 4	223 0 11	239 16 1	295 15 6	198 9 8	346 4 2	265 11 9	296 12 5	251 17 5	432 13 9	234 10 3	..	..	..	..	..	..	..
Water sold ..	1898–99	..	160 6 6	194 11 5	171 13 0	226 15 6	224 0 6	251 9 1	202 2 11	233 18 5	258 15 4	196 19 9	320 17 10	270 4 2	2,711 14 5	..	..	..	..	..	..
Free	1898–99	..	28 15 0	59 1 3	30 7 6	42 3 9	45 13 9	54 7 6	33 15 0	37 10 0	28 8 1	28 2 6	37 10 0	44 1 3	..	469 15 7	..	..	..	..	..
Free, No. 4 Channel	1898–99	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3,181 10 0	..	2,174 3 11	
			189 1 6	253 12 8	202 0 6	268 19 3	269 14 3	305 16 7	235 17 11	271 8 5	287 3 5	225 2 3	358 7 10	314 5 5	..	..	..	..	..	..	..
Water sold ..	1899–1900	1 10 0	227 5 6	312 9 1	251 19 9	244 19 2	196 14 3	157 7 1	218 13 4	129 12 10	177 13 11	122 1 4	193 0 2	226 19 3	2,458 15 8	..	..	..	..	..	..
Free	1899–1900	..	44 7 6	52 9 0	46 17 5	55 18 9	43 7 7	40 6 3	46 2 6	44 7 6	46 17 6	41 5 0	45 0 0	42 15 0	..	549 14 0	..	..	..	..	..
Free, No. 5 Channel	1899–1900	..	..	..	..	..	..	..	..	..	..	..	36 11 2	93 14 11	..	..	..	130 6 1	3,138 15 9	43·60	1,904 7 9
			271 13 0	364 18 1	298 17 2	300 17 11	240 1 10	197 13 4	264 15 10	174 0 4	224 11 5	163 6 4	274 11 4	363 9 2	..	..	..	..	..	..	..
Water sold ..	1900–1901	{1 10 0 / 1 0 0}	108 8 6	259 2 0	167 4 3	220 5 9	265 12 4	220 6 10	235 19 2	143 2 5	111 0 1	122 2 7	196 2 1	132 5 0	2,181 11 0	..	..	..	..	..	..
Free	1900–1901	..	34 7 6	49 6 3	35 18 1	41 5 0	44 4 4	53 8 8	61 14 4	51 3 8	50 17 5	12 15 8	..	..	..	435 0 11	..	..	..	..	..
Free, No. 5 Channel	1900–1901	..	68 18 2	14 1 3	47 10 0	78 18 1	21 14 4	4 4 5	4 4 4	26 11 3	11 17 6	1 12 1	13 8 1	12 16 8	..	..	..	305 16 2	2,922 8 1	45·91	2,077 16 10
			211 14 2	322 9 6	250 12 4	340 8 10	331 11 0	277 19 11	301 17 10	220 17 4	173 15 0	136 10 4	209 10 2	145 1 8	..	..	..	..	..	..	..
Water sold ..	1901–1902	1 0 0	203 18 9	236 8 2	199 19 2	209 17 9	174 8 7	172 4 10	215 9 6	213 17 1	167 15 7	127 11 6	161 15 10	167 5 5	2,250 12 2	..	..	..	..	..	..
Free	1901–1902	..	8 12 6	15 15 0	12 15 0	7 17 6	7 12 1	6 5 0	9 7 6	7 3 9	5 6 3	19 17 6	10 10 0	..	..	111 2 1	..	..	2,361 14 3	48·0	1,706 10 0
			212 11 3	252 3 2	212 14 2	217 15 3	182 0 8	178 9 10	224 17 0	221 0 10	173 1 10	147 9 0	172 5 10	167 5 5	..	..	..	..	..	..	..
Water sold ..	1902–1903	1 0 0	116 16 1	161 7 4	103 12 10	120 2 10	142 19 3	135 11 8	101 9 10	133 2 9	131 17 1	94 8 9	145 0 8	147 5 3	1,528 14 4	..	..	..	..	..	..
Free	1902–1903	..	6 8 4	3 2 3	16 7 9	32 7 10	47 17 7	34 10 5	36 5 5	28 8 9	23 2 1	15 5 0	25 15 5	1 10 0	..	271 0 10	..	..	1,799 15 2	38·37	1,684 16 6
			123 4 5	164 9 7	120 0 7	152 10 8	190 16 10	170 2 1	137 15 3	161 11 6	154 19 2	109 13 9	170 16 1	148 15 3	..	..	..	..	..	..	..
Water sold ..	1903–1904	1 0 0	81 9 7	142 12 0	115 2 1	159 11 8	144 13 9	132 12 6	114 10 0	148 0 0	96 13 6	66 14 9	139 1 0	125 1 3	1,466 2 1	..	..	..	..	..	..
Free	1903–1904	..	7 16 3	17 7 11	25 8 4	..	33 6 10	29 7 1	36 13 4	38 9 6	9 1 3	21 0 0	25 10 0	19 3 4	..	263 3 10	..	..	1,729 5 11	36·5	1,612 12 10
			89 5 10	159 19 11	140 10 5	159 11 8	178 0 7	161 19 7	151 3 4	186 9 6	105 14 9	87 14 9	164 11 0	144 4 7	..	..	..	..	..	..	..
Water sold ..	1904–1905	1 0 0	63 10 0	75 5 0	62 19 2	78 2 6	81 4 2	60 10 10	76 14 7	59 10 10	82 19 4	41 17 6	92 14 9	37 0 5	812 9 1	..	..	..	..	..	..
Free	1904–1905	..	52 3 9	51 3 9	45 10 5	57 12 6	60 7 11	48 1 10	2 16 3	56 18 9	..	..	..	5 12 6	..	380 7 8	..	..	1,192 16 9	..	1,284 2 4
			115 13 9	126 8 9	108 9 7	135 15 0	141 12 1	108 12 8	79 10 10	116 9 7	82 19 4	41 17 6	92 14 9	42 12 11	..	..	..	..	..	..	..
Water sold ..	1905–1906	{1 0 0 / 0 10 0}	17 7 1	43 5 10	31 13 4	24 9 9	44 10 0	29 13 1	40 3 6	42 12 3	35 17 1	30 10 5	53 0 3	44 19 7	438 2 2	..	..	..	..	..	..
Free	1905–1906	..	12 12 11	..	12 7 6	1 16 3	2 13 9	7 2 6	14 12 5	10 8 4	5 18 4	4 11 3	10 9 2	6 14 7	..	89 7 0	..	..	527 9 2	..	877 18 4
			30 0 0	43 5 10	44 0 10	26 6 0	47 3 9	36 15 7	54 15 11	53 0 7	41 15 5	35 1 8	63 9 5	51 14 2	105,422 17 0	14,009 8 4	2,375 15 9	3,308 15 11	125,116 17 0	13·5	38,893 14 1

Name of Party.	Number of Men employed in each Claim.	Fall to 12 ft. in Tail-race.	Width of Boxes in Tail-race.	Number of Sluice-heads used in sluicing.	Auriferous Wash sluiced away per Hour.	Race from which the Sluicing-water is supplied.	Remarks.
		Inches.	Inches.	Heads.	Cubic Yards.		
No. 4 Channel—							
Cullen and party	5	7	24	20	140	Kumara	Sluiced twelve months.
Long Tunnel Co.	5	7	26	22	154	Kumara & private	"
No. 5 Channel—							
Thorn and party (new claim)	4	7	24	10	70	Kumara	"
Giffney and party	4	7	26	11	77	Kumara	Sluiced four months.
Private Races—							
Pascoe and party	3	7	16	4	28	Kumara	Sluiced eleven months.
McGrath and party	10	8	24	22	176	Private	"

WAINIHINIHI WATER-RACE.

The supply of water from this race has been very good throughout the year, and, with the water from the Kawhaka Creek, it has kept the siphon which supplies the Waimea-Callaghan's and Middle Branch Races practically full all the year. No breaks have occurred, and there have been no stoppages of any kind during the year; the race has been well maintained, and is in a thorough state of repair, and in good working-order.

I have, &c.,
JAMES ROCHFORD,
Manager Water-races.

The Under-Secretary, Mines Department, Wellington.

Mr. R. MURRAY, Manager, Mount Ida and Blackstone Hill Water-races, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,— Naseby, 22nd May, 1906.

I have the honour to submit the following report on the Mount Ida and Blackstone Hill Water-races for the year ending the 31st March, 1906:—

The total sales of water from the Mount Ida Water-race during the year amounted to £1,141 19s. 11d. The expenditure on maintenance and repairs for the same period was £1,490 18s. 6d., a decrease of £72 11s. on that of the last year. The total cash received was £1,141 19s. 11d. On account of payment in advance, free water to the value of £12 8s. was supplied, and free water for washing up was also supplied to the value of £82 3s. 8d. The total value of water supplied from this race during the year amounted to £1,236 11s. 7d. The average number of miners supplied with water was 46·83, an increase of 8·58 on that of last year. The approximate quantity of gold obtained by parties using water from this race was 1,965 oz., valued at £7,565 5s. The reduction in the price of water from the 1st May, 1905, accounts for the falling-off in revenue.

In consequence of the continued dry weather, which set in in January, 1905, the miners could only be supplied half-time (week about) until the end of May. On the 3rd June, hard frost having set in, I was compelled to turn the water out of the race as the ice began to pack. Heavy rain setting in on the 12th, had the water turned on on the 13th, and the miners at work to the end of the month, throughout the whole of July, and on to the 19th August.

Started to clean out the race on the 22nd August, and the water was turned on to those supplied from Coalpit dam on the 6th September. As a large amount of flume and box repairs had to be done, the water could not be turned on to those on the east side of the main gully until the 11th September. The weather during the clearing-out was very rough. On reaching Idaburn on the 22nd September, it became so rough that the men had to knock off, there being 8 in. of snow at the camp; finished on the 1st November. As a good many of the sets in the East Eweburn tunnel were showing signs of decay, centre-sets had to be put in. Used 6 in. blue-gum for props and caps, as the heart of red-pine does not last. About half the legs of the flume in the main-race crossing, Main Gully, having sunk, they had to be raised, levelled, strengthened, and the boxwork repaired, as it leaked badly. On account of the extra demand for water in Spec and Enterprise Gullies, larger gauge-boxes had to be put in each of them; repairs had to be made to two large flume-boxes in, and two dray-crossings over, the main race, besides repairs to several small boxes and a long shoot. A small branch race in Spec Gully had to be widened for about two miles and a half to supply an elevating claim. To supply the demand in Enterprise Gully the branch race (five miles in length) from Coalpit dam to Enterprise Terrace had to be widened to carry twenty heads, four elevating claims being supplied by it in addition to small ground-sluicing parties. As there are three elevating claims being supplied at the lower end of this branch, the building of the dam on the terrace (which was finished on the 18th November) saves a large quantity of slack water, and allows of the full head pressure to be kept steadily on the different elevators.

On the 13th December a heavy thunder-cloud burst over Pearce's Gorge Creek, causing a break in the race one chain in length where the country is very steep and of a rotten-rock formation. To

repair it it had to be cut back, and a length of nearly two chains formed anew. The side of the range was scored by the water like corrugated iron. The race has been very free from breaks during the year, this being the only one of any consequence.

The season on the whole has been a dry and cold one; snow fell during every month of the year.

On several occasions the miners had to be put on half-time, as the race is not large enough to carry the quantity required, even when there is plenty of water. Seventeen elevating claims have been at work in the district during the year, twelve of them being supplied from the Government race, using fifty-three heads per day. Six parties have been during the year intermittently sluicing in the Maori bottom. The number of days on which no water was supplied to the mines was—winter, 27; Christmas, 1; New year, 1; Naseby races, 2—a total of 31 days. The winter was an extraordinary short and open one. The subsidence in the Eweburn Reservoir dam-bank was filled up to its original level.

Blackstone Hill Race.

The total sales of water from this race during the year amounted to £34 9s. 7d. The total cash received was £34 9s. 7d. The total cost of maintenance and repairs was £19 8s. The number of miners supplied with water was three. The only party supplied from this race is R. Johnstone and Sons. The accumulation of sandbanks and heavy side growth necessitated its getting a good cleaning-out, as it has had very little done to it since 1903–4.

I have, &c.,
R. Murray, Manager.

GEOLOGICAL SURVEY.

Dr. J. M. Bell, Director Geological Surveys, to the Under-Secretary, Mines Department, Wellington.

Sir,— Mines Department (Geological Survey Branch), Wellington, 1st June, 1906.

I have the honour herewith to present the annual report of the Geological Survey Department for the period ending the 31st December, 1905, the first one since the reorganization of the Survey in March of the same year.

In connection with the reorganization of the Survey, provision was made for the retention of the services of the Government Geologist, Mr. A. McKay, who had been conducting the entire geological work carried on by the Government for some years prior to my arrival, and, in addition, for the appointment of the following officers under the Director's supervision: (1) Topographer—to have charge of all the topographical work of the survey; (2) General Geologist—to conduct geological surveys in areas of general geological interest; (3) Mining Geologist—to carry on surveys in areas in which mining is or was an active industry; (4) Draughtsman—to prepare the necessary maps for publication as the result of the field labours of the Director, Topographer, General Geologist, and Mining Geologist; (5) Shorthand writer and typist—to have charge of the general office work, library, &c. Besides these permanent officers, allowance was made for the appointment of temporary assistants on the various field staffs, and for the obtaining of skilled assistance, if required, during the summer season for extra work.

The first geological survey of all New Zealand was started in 1867, when, on the 10th October of that year, an Act was passed by the New Zealand Government "to establish an Institute for the Advancement of Science and Art in New Zealand, and to make provision for the carrying-out of the geological survey of the colony"; the provincial surveys then at work being discontinued.*

Sir James Hector—then Dr. Hector—was chosen Director of the Geological Survey, an office which he ably filled with many others until his retirement in 1903. With Sir James Hector several gentlemen were associated, those whose geological work is of most prominence being Mr. S. Herbert Cox (now Director of the London School of Mines), Captain F. W. Hutton, F.R.S., Mr. A. McKay, F.G.S., and Professor James Park, F.G.S. The hearty appreciation of the officers of the present Geological Survey is due to the Director and staff of this early Survey, the pioneers of geological work in New Zealand. When Sir James Hector first took charge of the Survey the difficulties of travel were enormous. The country contained comparatively few roads and practically no railways. Communication was mainly by rough tracks, or by boats along a generally dangerous coast. One marvels at what was accomplished with so small a staff under such conditions. Now most of the country is open to communication by roads, railroads, or tracks. In addition to good facilities of travel now available to us we have the successful results of the labours of the former Survey on which to base our geological operations, while to our predecessors in commencing their work the geology of the country was unknown. Our work is in great part a detailed study of features mapped broadly by the former Survey, and to a less degree of a reconnaissance survey of areas which are still practically a *terra incognita*.

For purposes of reference, a list is inserted of the officers of the original Geological Survey from the time of its inception until it became part of the Mines Department in 1893.

Officers of the Geological Survey between 1866 and 1893.

Hector, Sir James, K.C.M.G., F.R.S., &c., Director.
Buchanan, J., draughtsman (retired 1885, died 1898).
Cox, S. Herbert, Assistant Geologist.
Gore, R. B., clerk (died 1904).
Hutton, Captain F. W., F.R.S. (died October, 1905).
Davis, E. H.
McKay, A., F.G.S., Geologist.
Park, James, F.G.S.
Palethorpe, H., engraver.
Pierard, C. H., draughtsman.
Rayer, W., assistant.
Paul, J., field assistant (1885).
Skey, W., Analyst to Survey.

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* "Colonial Museum Bulletin," No. 1, 1905.

EMPLOYED BY THE SURVEY TEMPORARILY TO REPORT ON VARIOUS MATTERS.

Binns, G. J.
Campbell, W. D.
Denniston, R. B.
von Haast, Sir J.
Lindop, A. B.
Rowe, W. E.

CONTRIBUTORS OF REPORTS AND PAPERS PUBLISHED IN THE REPORTS OF THE SURVEY.

Davis, J. W.
Macfarlane, D.
Tate, Professor Ralph.
Ulrich, Professor G. H.

LIST OF PUBLICATIONS OF THE SURVEY.

Reports.

Survey Reports Nos. 1 to 22 (1866–94).
Report on the Fossil Remains of New Zealand. J. W. Davis. (From Trans. Royal Dublin Society, Vol. iv, Ser. 11, 1885.)
Bulletin No. 1, 1888: Amuri Earthquake. A. McKay. October, 1888.
Bulletin No. 2, 1888: On the Ophir District, Otago. James Park. November, 1888.
Index to Geological Reports, 1866 to 1885. 1889.
Bulletin No. 1, 1892: West Coast Goldfields. A. McKay. 1892.

Maps.

Geological Map of Both Islands of New Zealand, 1869.
Geological Map of Both Islands of New Zealand, 1873.
Geological Map of Both Islands of New Zealand, 1880; and on a reduced scale in handbook (Melbourne Exhibition).
Geological Map of Both Islands, 1883, in "Handbook of New Zealand, 1883," and in Geological Report No. 16, 1884.
Geological Map of Both Islands, 1885. Same as above, but dated 1885 in Catalogue of New Zealand Court, Indian and Colonial Exhibition, 1886.
Sketch-map of Mineral Localities, 1886. In Geological Report No. 16, 1887.

Published by Mines Department of New Zealand Government (1894–1904).

Reports of the Government Geologist and others, as parliamentary papers. (*Vide* papers and reports relating to minerals and mining.)
Annual Reports of the Colonial Analyst from 1893. No. 28 to date have been issued by the Mines Department.

Separate Publications.

Catalogue of Geological Models and Casts.
Palæontology of New Zealand: Part IV—Fossil Corals and Bryozoa. Tenison-Woods.
Report on the Tarawera Volcanic District. F. W. Hutton. 1887.
Handbook of New Zealand Mines. 1887.
Report on the Eruption of Tarawera and Rotomahana. Professor Thomas. 1888.
Report on the Auriferous Drifts of Central Otago. A. McKay. 1894.
Report on the Recent Seismic Disturbances in the Cheviot Country in Northern Canterbury and the Amuri District of Nelson. A. McKay. 1902.
Rocks of Cape Colville Peninsula. Determined by Professor Sollas. Introduction and Descriptive Notes by A. McKay. Vol. i, 1905.

NOTE.—The list of officers and publications of the Geological Survey is taken from Colonial Museum Bulletin No 1, by A. Hamilton, Esq., Director.

A list of papers on New Zealand geology, arranged under authors' names, is given in Vol. xxxv, page 469, of the Transactions of the New Zealand Institute; and this, of course, gives the whole of the papers written by officers of the Geological Survey of New Zealand.

The reorganized Geological Survey Department has outlined a scheme for the preparation of a detailed topographical and geological map of New Zealand. For purposes of convenience the colony has been divided into ten chief districts — Auckland, Taranaki, Hawke's Bay, Wellington, Nelson, Marlborough, Canterbury, Westland, Otago, and Southland. These chief districts agree in boundary with the land districts of the Lands and Survey Department of New Zealand. Each chief district contains a number of divisions or so-called quadrangles. The word "quadrangle" is used in a very loose sense, and the areas enclosed are not, as a rule, actually four-sided, owing to the great irregularity of the coast-line of New Zealand and of the boundaries of the chief land districts. Each of these is supposed to present a geological problem of especial interest, or several such problems, which can be conveniently considered together. For example, the Hauraki quadrangle is of note chiefly on account of the wide distribution of richly auriferous veins occurring in that locality. The North Westland quadrangle is of marked interest because of the auriferous gravels, and of the veins and rock-masses from which these were derived. The South Westland qaudrangle is for the most part unknown, and is considered an area suitable for much exploratory work. The Rotorua quadrangle contains the chief manifestations of the remarkable thermal phenomena for which New Zealand is justly famed—and so on. A division or quadrangle contains a number of survey districts which generally correspond exactly in boundary with those of the Lands and Survey Department. A number of survey districts which can be conveniently grouped together to give a continuous section of country comprise a subdivision. Thus the Survey Districts of Browning's Pass, Turiwhate, Kanieri, and Mahinapua, which represent a section

from the alpine divide to the west coast, are included within the Hokitika subdivision of the North Westland quadrangle. The maps covering subdivision of a quadrangle thus grouped are collectively spoken of as a sheet, while those covering a whole division or quadrangle are contained in an atlas folio.

In carrying out the geological field-work a good topographical map is the first requisite; and on it, as a basis, the geological work is placed. The whole area which is being investigated is most carefully examined, the various creeks ascended, and the spurs and ridges followed in mountainous country. Every phase of geological science is given attention—the palæontologic, petrographic, structural, physiographic, and economic. However, especial stress is laid upon the economic side of geology, which relates to the occurrence of minerals of commercial value and has a direct bearing upon the mining industry, the development of which is so important in any new country.

As the result of our labours, carefully prepared geological maps of the areas examined, especially arranged with a view to aid prospectors, will be obtainable. On these maps we do not pretend to locate every feature of economic interest, though many of these may be discovered in the course of our examinations; but we do hope to delineate the horizon within which prospecting for deposits of commercial value may be conducted with a reasonable hope of success.

During the season of 1905–6 detailed work has been undertaken in the North Westland quadrangle, in the Hauraki quadrangle, and in the Central Otago quadrangle. The first work undertaken was on the Hokitika sheet of the North Westland quadrangle, which was started in April, 1905, with Mr. Colin Fraser, M.Sc., as Geological Assistant, Mr. C. E. Adams, B.Sc., as Topographer, and myself in charge of the survey. At the end of May, leaving the Westland work in Mr. Fraser's hands, I departed on a general tour throughout the North Island and part of the South Island in order to familiarise myself with the various mining localities of the colony. The goldfields of Coromandel, Thames, and Waihi were visited in company with Mr. P. G. Morgan, M.A., who had been chosen to fill the position of General Geologist on my staff from the 1st June. After leaving Waihi a hurried reconnaissance was made of the centres of thermal activity at Rotorua, Whakarewarewa, Tarawera, Waimangu, Wairakei, and Taupo. This area is filled with features of geological interest, and it is hoped that for the benefit of science a detailed survey will soon be made of its many wonderful and constantly changing phenomena. The thermal area near Whakarewarewa casts some enlightening information on the origin of gold and silver. These metals are constantly being deposited by one of the springs at least—namely, the large pool just behind the Geyser Hotel, from which the supply of hot water for the baths is drawn. An assay of a siliceous deposit formed in the troughs conducting the water from the spring to the baths gave the following result — gold, 12 gr. per ton; silver, 15 dwt. 3 gr. per ton: while a sulphurous sinter formed on the edge of the spring carried—gold, 1 dwt. 4 gr. per ton; silver, 4 oz. and 18 gr. per ton.

After leaving Rotorua I proceeded to the South Island *via* Wellington, and the following mining localities were hurriedly visited: Aniseed Valley, near Nelson; Parapara; Puponga; Reefton; Westport; and Greymouth. By the beginning of August I was back at work on the Hokitika sheet of the North Westland quadrangle with Mr. Fraser, who had before my arrival been joined by Mr. Morgan. The topographical work now passed into the hands of Mr. R. P. Greville, who succeeded to the position of Topographer of the Survey some weeks after Mr. Adams had retired from the work in July. Mr. Greville, Mr. Morgan, Mr. Fraser, and myself were constantly engaged in the Hokitika area until the end of October. At the end of that month I left for Coromandel to start the detailed work on the second quadrangle to be examined by the reorganized Survey—the Hauraki quadrangle—where I was in a few weeks joined by Mr. Fraser, while Mr. Morgan commenced operations on the Mikonui sheet of the North Westland quadrangle, the next sheet south of the Hokitika sheet. Mr. Greville meanwhile remained in North Westland to carry out the survey of the hitherto unsurveyed parts of the Hokitika and Mikonui sheets. The reason for my departure and that of Mr. Fraser when the work on the Hokitika sheet was incomplete will be understood when it is explained that we had finished the examination of practically all the country which had been at that time sufficiently surveyed topographically for our purpose and which was free from snow. Snow, of course, covers much of the Hokitika area during the winter, owing to its mountainous nature, and prevents an adequate examination at that time of the year. Therefore it was considered economical to carry on work elsewhere until such time as the snow on the mountains should have melted.

A study of the Hauraki quadrangle seemed most necessary owing to the many occurrences of auriferous lodes within its boundaries, and geological examinations were being conducted by myself and Mr. Fraser in its northern portion at the close of the year 1905.

A detailed report, giving the results of the geological investigations on the Hokitika sheet of the North Westland quadrangle will, it is hoped, be published under separate cover as Bulletin No. 1 of the new series of reports of the Geological Survey during the coming year.

Mr. P. G. Morgan's field-work on the Mikonui sheet, which was not started until November, as prior to that date he was assisting on the Hokitika sheet, is progressing very favourably, but will not not be completed soon enough to allow of the publication of a report at the same time that Bulletin No. 1 is issued. It is somewhat premature to anticipate the various results that may be looked for in the area under investigation by Mr. Morgan, but the Pounamu formation, with its interesting series of minerals, will probably be located, and likewise auriferous-quartz veins of more of less importance.

Professor James Park, who has been temporarily employed by the Department for the present season, started geological explorations on the Alexandra subdivision of the Central Otago quadrangle in November, and this work was still in progress at the close of the year 1905. Professor Park expects to have his report on this area completed by July, 1906, when it will be issued as a separate bulletin.

Mr. R. P. Greville, who joined the Geological Survey staff as topographer on the 1st September, has in the four months which have intervened between that date and the close of the year been able to cover a great deal of territory, and has successfully mapped topographically much hitherto unsurveyed

country. Mr. Greville started work on the Taipo River, which he mapped almost to its head-waters, or to a point where heavy snow prevented further progress. All the principal tributaries of this river within the Hokitika sheet were traversed. These are all high-grade streams, and the largest of them, Hunt's Creek, is described by Mr. Greville as particularly difficult of ascent owing to its flowing through an impassable gorge a short distance above its junction with the Taipo. Hunt's Creek is a possible source of a considerable amount of motive power, the stream falling some 2,500 ft. in the lower five miles of its course. Even by tapping the stream above the gorge about 60 chains above its junction with the Taipo a fall of 250 ft. could be obtained. Mr. Greville measured the water in this creek in October last, at a time when it stood about normal level, and it was found to have a volume of 154 cubic feet per second. With the head of 250 ft. this would produce 3,400 effective horse-power.

On the 25th October Mr. Greville and party shifted camp to the Upper Kokatahi, from which place the survey of much unmapped country in the Browning's Pass and Toaroha Survey Districts was undertaken. This country is drained by the Kokatahi and Toaroha Rivers, the major right-hand branches of the Hokitika River. Surveys were made of these two rivers with their various tributaries from the points near where they debouch on the Westland coastal plain right to their head-waters. In both instances great difficulties, especially in the transportation of provisions and camp equipment, were successfully overcome, although the weather during a great part of the time was somewhat inclement.

Apart from the actual topographical survey, economically by far the most important result of Mr. Greville's explorations is the discovery of the great and easily developed water-power of the Toaroha Cañon. The fall in this cañon from the upper to the lower end is 765 ft., and two separate estimations of the volume of water, made when the river was at its minimum flow for the season of the year (December and May), gave results of 440 and 435 cubic feet per second. If it be assumed that there is a flow of not more than 200 cubic feet per second, then there is a volume of water which, with a head of 750 ft., is capable of developing 13,000 effective horse-power, and the race and tunnel necessary to afford this head would not exceed 50 chains in length. When it is pointed out that the power could be transmitted to Hokitika over a line not more than seventeen miles in length, its great commercial value will be readily appreciated. There is power here awaiting development which is capable of running the railways of Westland and of supplying light and power to the various centres of population from Hokitika to Greymouth. Not only would the many industries now in operation benefit by the abundance of cheap motive power, but many other industries at present impracticable might then be brought into existence.

Another feature of considerable interest discovered by members of Mr. Greville's party is a hot spring near the junction of Wren Creek with the Toaroha. The spring, situated amid charming surroundings, lies less than twenty-five miles from the town of Hokitika.

In connection with our geological explorations in New Zealand, the nature of the country prevents more than a very limited area being examined in a single year with the staff at present available; but the work that is completed from time to time may be regarded as practically final. Of course the classification of the rocks according to age can only be arrived at after considerable areas have been examined, and hence the grouping adopted in the earlier bulletins is subject to alteration. Similarly other general features may require revision.

Much of the mountainous country of New Zealand, which occupies a considerable portion of the whole, is unsuitable for agriculture or pasturage, and its chief value would seem to be in the mining line. As yet we have no comprehensive idea as to what our mineral resources actually comprise, since much of the country, especially the mountainous part, is still not thoroughly explored. To gain this required knowledge a careful and detailed geological survey is desirable.

The present permanent geological staff, in addition to myself, the Director, is as follows: Palæontologist and Geologist, Alexander McKay, F.G.S.; General Geologist, Percy Gates Morgan, M.A.; Topographer, Reginald Palmer Greville, licensed surveyor; Mining Geologist, Colin Fraser, M.Sc.; Draughtsman, Robert James Crawford; Shorthand writer and typist, John Thompson.

I wish here to express my appreciation of much kindness shown me in connection with my year's work by Sir James Hector, formerly Director of the New Zealand Geological Survey; the Surveyor-General for New Zealand, Mr. J. W. A. Marchant; the Chief Surveyor for Westland, Mr. G. J. Roberts, and the various members of his staff; and the Chief Surveyor for Canterbury, Mr. Thomas Humphries. Acknowledgments for much freely given service are especially due to the Colonial Analyst, Dr. J. S. Maclaurin, and his assistant, Mr. W. Donovan.

I have, &c.,
J. M. Bell,
Director of the Geological Survey.

The Under-Secretary, Mines Department, Wellington.

APPENDIX I.

MINE-MANAGERS' AND BATTERY-SUPERINTENDENTS' EXAMINATION PAPERS.

Questions to be used in Examination of Mining Managers for First-class and Second-class Certificates.

Subject A.—*The Laying-out and Construction of Shafts, Chambers, Main Drives, Adits, Rises, Stopes, &c.*

1. From the following notes draw a section on a scale of 100 feet to an inch. Position *A* is the most westerly (left-hand side of drawing):—

Position.	Altitude above Sea-level.	Horizontal Distance East from A.	Remarks.
	Feet.	Feet.	
A	1,000	...	Reef-outcrop 4 ft. 0 in. wide, dipping east 32° from horizon.
B	1,068	385	" 5 ft. 6 in. " " 55° "
C	965	680	" 4 ft. 6 in. " " 78° "
D	898	815	Vertical borehole 445 ft. to reef. } Reef is 14 ft. wide.
E	750	985	" 530 ft. " }
F	700	1,400	Ground practically level beyond F.

Show the relation of the reefs to each other. The boreholes fail to prove any other reefs at lesser or greater depth. By trenching and boring on the line of strike, the several reefs are found to maintain their widths and values for a distance of 2,000 feet.

It is desired to open out a mine in two main divisions. Show the best method of doing this, assuming the reef to live down to 100 feet below sea-level. Allowing 38 cwt. per cubic yard of ore, an average value of £3 10s. per ton, and an efficient extraction at the battery of 95 per cent., calculate the tonnage and value which each opening would command.

2. How would you proceed with the sinking of a three-compartment shaft intended for a large output, the first 80 feet being soft wet ground resting on hard rock? Show how the sides would be secured and the water kept back.

3. Assuming it is necessary to secure a chamber with brickwork (the top being arched), would you build solid against the country or not? Give reasons for answer.

4. An adit tunnel, with a clear superficial area of not less than 60 square feet, has to be driven through damp ground liable to swell: how would you construct such a tunnel to serve for the life of the mine, which is estimated at twenty-five years?

5. An area of 30 acres of auriferous gravel has to be worked from a depth of 120 ft. The deposit is lying practically horizontal, is 3 feet in thickness, and immediately overlaid by 25 feet of hard compact sand. Show how you would open and work the mine. Carbonic-acid gas has to be dealt with.

Subject B.—*On the Timbering of Shafts, Adits, Main Drives or Levels, Passes, Stopes, and generally on the Systems of timbering Mines, and also in filling up Old Workings.*

1. Describe and sketch the method of timbering a large rectangular shaft divided into four compartments for winding, pumping, and ladder-way; provision to be made for catching the pump-rods in case of accident.

2. A level, the bottom of which is very liable to swell, has to be maintained 8 feet 6 inches wide for a double road. Show how you would timber it.

3. An old level, originally driven 6 feet 6 inches high by 4 feet 6 inches wide, collapsed. After being closed for a considerable time it has to be reopened and enlarged to 7 feet high by 9 feet wide. Show how you would proceed with the work and securely timber the level.

4. In working a reef it is found that the heavy caps used in timbering the main levels are very liable to break. The reef is of considerable width and somewhat variable inclination, the average of the latter being about 50°. A modification of the "square set" system is adopted for timbering the stopes, and the worked ground is kept only moderately well filled. What is the cause of the breakage of heavy caps in the levels, and what would you do to obviate this?

5. Describe, and illustrate by sketch, how a three-compartment pass would be constructed. State the uses to which the compartments would be put.

6. Show how you would timber the stopes in a reef 6 feet wide lying at 65° from the horizon, the hanging-wall being firm and the foot-wall subject to slippery joints.

7. In filling up the stopes referred to in the last question, would you bury or draw the back timbers? Give reasons for answer.

Assuming that (as a matter of economy) timber has to be drawn, what method would you adopt to do this with safety?

SUBJECT C.—*The Ventilation of Mines and Composition of Gases.*

1. What gases are usually met with in metalliferous mines? Give their composition, symbols, and specific gravities. State the effects of each gas on the human system, and explain how the presence of the several gases may be detected in the mine-workings.

2. Show the best means of ventilating (*a*) a stone tunnel in the driving of which six men are employed on each shift, and (*b*) a shaft which is being sunk, eight men being on the bottom at one time; efficiency and practical economy to be considered.

3. Describe the several methods used to secure the permanent ventilation of extensive mines. Compare their capabilities, advantages, and relative working economies.

4. If the H.P. of a ventilating-current is 40·5 and the water-gauge reading is 2·6 inches, what volume of air (in cubic feet per minute) is in circulation?

5. A fan circulates 60,000 cubic feet of air per minute at 1·5 W.G. Allowing 7½ per cent. of the indicated H.P. of the engine being spent on frictional resistances and the efficiency of the fan as compared with the effective H.P. of the engine is 74 per cent., what indicated H.P. will be required to circulate 90,000 cubic feet of air per minute, the airways remaining unaltered?

6. Show how you would ventilate the workings of a mine as per sketch-plan attached. Assume a heavy blower of CO_2 being struck at A.

What power would you employ for permanent ventilation, and where would you apply it?

SUBJECT D.—*Tapping Water in Mines, and the Mode of constructing Dams in Underground Workings to keep the Water back.*

1. In sinking a shaft, a feeder of water flowing at the rate of 10,000 gallons per hour is met with some 200 feet above the point at which the shaft will intersect the reef, and well clear of any crosscuts. Show how you would deal with this water, and give reasons for answer.

2. A reef has been worked to a depth of 300 feet and the mine abandoned: old workings consequently fill up with water and the shafts collapse. A new shaft is to be sunk to work the reef from the level of the old workings to a depth of 1,000 feet. The accumulated water must be dealt with so as to prevent its being a source of danger in the sinking of the shaft and subsequent working of the reef at lower levels. How would you accomplish this with efficiency and economy?

3. A roadway is 6 feet wide and 8 feet high. Show how you would construct a dam to keep back water having a vertical head of 160 feet above floor of roadway. Give total pressure on dam.

4. Under what conditions would you adopt dams of (*a*) wood, (*b*) brick, and (*c*) concrete?

SUBJECT E.—*Blasting, and the Use of Explosives.*

1. Give relative strengths of the explosives generally used in mines, taking that of blasting-powder as 1. Explain under what conditions each may be used to the best advantage, and the precautions to be taken to obtain the best results.

2. How would you fire a round of shots simultaneously?

3. In the case of a miss-fire what action would you take (*a*) where ordinary fuse is used, and (*b*) where the charges are fired electrically?

4. What precautions are necessary in the storage of nitro-glycerine compounds? High and low temperatures to be taken into consideration.

5. How would you prepare frozen nitro-glycerine compounds for effective use, and what precautions would you observe to prevent accident?

SUBJECT F.—*A Knowledge of Arithmetic and the Method of keeping Mining Accounts.*

1. Work out the cost of the following timber:—

6 pieces	20 ft.	long by	1 ft. 6 in.	broad by	1 ft.	thick
18 "	12 ft.	" by	9 in.	" by	6 in.	"
100 "	12 ft.	" by	4 in.	" by	3 in.	"

at 15s. per 100 superficial feet 1 in. thick.

1,500 props, each 7 ft. long, at 11s. 6d. per 100 lineal feet.

2. A block of quartz is proved in several levels, and the following measurements obtained at various places:—

Length.	Height of Backs.	Width.
Ft.	Ft.	Ft. in.
360	590	3 6
470	650	4 9
390	420	5 0
420	390	3 9
450	570	4 3

Allowing 38 cwt. per cubic yard, what tonnage of ore does this block contain?

3. Taking the tonnage obtained in answer to the preceding question, and an average assay value of £3 12s. 6d. per ton, what amounts will be recovered by amalgamation, cyanide treatment, and concentration, the extraction being 55 per cent., 22½ per cent., and 17½ per cent respectively? What is the balance of value lost?

4. A wire rope weighing 9·7 lb. per fathom is a mile in length. What is the cost of this at 56s. per cwt?

5. A pumping plant costing (together with necessary steam-boilers) £5,000 is worked for 14 hours daily, and pumps 15,000 gallons of water per hour. Two enginemen are employed at 10s. per day each, and the cost of fuel, oil, and stores is 32s. 6d. per day. Allowing 17½ per cent. per annum on the capital for interest, depreciation, and repairs, what is the cost per 1,000 gallon of water pumped?

SUBJECT H.—*Pumping Appliances and the Drainage of Mines.*

1. It is necessary to pump 300,000 gallons of water daily from a depth of 600 feet. Describe the class of pump which could be most advantageously used for this work, and the general provisions to be made for efficiency and economy. Consider the matter practically in relation to the actual working of a mine.

2. Assuming a Cornish or similar pumping-engine being adopted for the work referred to in the last question, what diameter of plunger is necessary and what length of stroke would you adopt, the piston-speed being 90 feet per minute? Also state H.P. required.

3. A bucket pump, 16 inches in diameter with a travel of 80 feet per minute, works 12 hours daily. It is desired to replace this with a pump having three single-acting plungers, each travelling at the rate of 85 feet per minute, and capable of doing the work in 8 hours. Give diameter of plungers required.

4. Assume a piston pump having a suction-pipe 4 inches in diameter being used to drain a portion of a mine. After the water has been lowered a short distance it becomes necessary to lengthen the suction-pipe, but no pieces of the required diameter being immediately available a pipe 3 inches in diameter has to be utilised. In what part of the suction-length should this smaller pipe be placed? Give reasons for answer.

SUBJECT I.—*The Haulage in Shafts and on Underground Planes; also the Strength of Haulage Ropes and Chains.*

1. An output of 500 tons per shift is required from a shaft 600 feet deep; two cages used; steam-pressure 90 lb. per square inch; coupled engines, with drum on crank-shaft, to be adopted; each engine must be capable of starting the load. Give diameter of cylinders, length of stroke, diameter of drum, and size of plough-steel rope required, allowing 10 as a factor of safety for the latter. Consider the question from a practical working standpoint.

2. Sketch a suitable head-gear (poppet-legs) for the above work, giving leading dimensions and diameter of pulleys. Strength, without undue weight or unnecessary material, to be considered.

3. Describe the various appliances adopted to promote safety in winding operations, and also to ease the shock to which a winding-rope is subjected when lifting a loaded cage off the bottom.

4. An incline is 2,400 feet long, has a grade of 1 in 4, and is laid with a single line of rails. Output required, 200 tons per shift. Steam-pressure, 100 lb. per square inch. Drum connected to engines by gearing. Give dimensions (diameter of cylinders and length of stroke) of coupled engines, together with diameter of drum, ratio of gearing, and size of plough-steel rope required, allowing 8 as a factor of safety for the latter. The plant to be suitably proportioned for satisfactory working.

SUBJECT J.—*The Effect that Faults, Slides, and Mullock-bars have on Lodes, and how to ascertain the Direction of Slides and Heavals.*

1. Define a "fault," and describe its effects upon strata.

2. In driving a level in a northerly direction—the reef underlying to the east—a fault is met with which dips in front and crosses the level from S.E. to N.W. How would you proceed to pick up the reef again?

3. Illustrate and describe mullock-bars, gash-veins, lenticular aggregations, contact deposits, and reticulated veins.

SUBJECT L.—*A Knowledge of the Different Rocks where Gold, Silver, Tin, Copper, Zinc, Lead, and Antimony are found, and the Formation of Lodes and Leads.*

1. Describe the formation of a lode.

2. In what classes of rock is gold found in various parts of New Zealand?

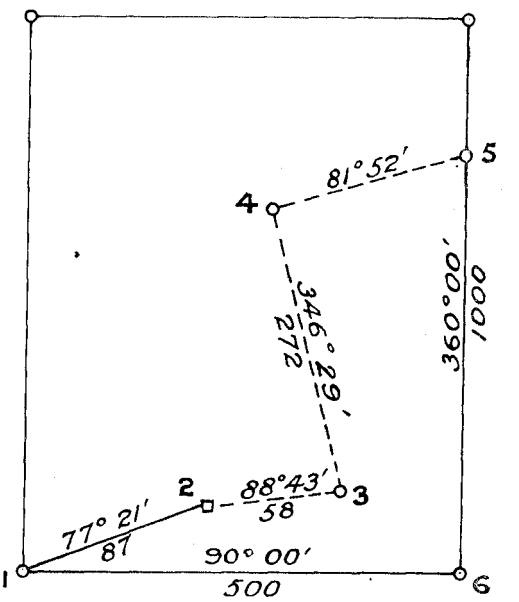
3. What metals other than gold are found in the quartz reefs of New Zealand?

4. What metallic ores would you expect to find in granite, schist, slate, diorite, serpentine, andesite, rhyolite, and limestone? How would you distinguish them without assay?

SUBJECT G.—*A Knowledge of Part V. of "The Mining Act, 1905."*

Oral.

SUBJECT K.—*A Knowledge of Underground Surveying and of making Plans of Underground Workings, showing the Dip or Inclination and Strike of Reefs or Lodes.*



1. (*a.*) The accompanying diagram represents a mining claim, the positions of a shaft (2), and points (3 and 4) in the underground workings. You are required to compute the distance which should be driven from 4 to 5 to strike the eastern boundary of the claim; and please also compute and give the distance 5 to 6.

(*b.*) There is a fall from the bottom of the shaft (2) to station (3) which was observed to be 10° 15′. What is the difference in height, in links?

(Maximum number of marks for question (*a*) 45, (*b*) 10.)

2. (*a.*) How would you transfer true bearing to the underground traverses? and (*b*) what precautions would you adopt to avoid errors in the underground survey of an extension mine and encroachment on adjoining claims? (Maximum number of marks for question, 20.)

3. Describe shortly the terms "dip" and "strike," and give illustrations. (Maximum number of marks for question, 25.)

NOTE.—After the foregoing examination the candidate will be required to undergo an oral examination by the Examiner, including questions (1) as to the use and adjustment of the theodolite, prismatic compass, clinometer, and other instruments; (2) as to measuring accurately horizontal and slope distances with steel tapes and long bands; and (3) as to the best manner of keeping field notes so as to indicate clearly all bearings, measurements, and other details relating to underground workings.

SUBJECT A.—*The Different Modes of reducing and pulverising Ores.*

1. State where and by whom you were employed, and the dates you were engaged in crushing-batteries where bullion was recovered by cyanide-of-potassium treatment.

2. Describe the actions of Blake-Marsden, Gates, and Dodge ore-breakers; give the speed at which they are driven; and show by sketch where they are placed in relation to stamps in a crushing-battery. Also state what you consider the most economical dimensions to which the ore should be broken before it goes to the stamps. Give your reasons fully.

3. If you were constructing a crushing-battery of thirty heads of stamps, with ore-breakers and concentrators, show by sketch-plan how you would erect it, giving the levels of the different portions of the battery with accessories in relation to the lowest floor-level.

4. A Pelton water-wheel 6 feet in diameter is used to drive thirty heads of stamps. Each stamp is 1,200 lb. weight, having a drop of 6 in. and making 102 drops per minute. The wheel is under a 200-feet head of water. Show by calculation the number of revolutions at which the wheel requires to be driven to give its maximum power; also the diameter of the nozzle to give the necessary quantity of water to supply the requisite power to do the work, allowing the Pelton wheel to give 80 per cent. of the theoretical power of the water and that friction in working the battery absorbs 33 per cent. of the power transmitted by the Pelton wheel.

5. Describe the action of a Krupp mill. Give the speed it is driven at, the horse-power required to work it, and its crushing-capacity through a 40-mesh screen in twenty-four hours.

6. If you were ordering a steam-engine to drive a stamp-battery where the theoretical power required was 80-horse, show by calculation the diameter of a single cylinder capable of developing that power; the initial pressure of steam being 100 lb. per square inch, cut off at one-half the stroke; the piston-speed being 450 feet per minute.

7. What is meant by "concentration" of ore? Why is it required? And state the class of ore most suitable for concentration. Also describe fully how the concentrates are treated to recover the bullion they contain.

SUBJECT B.—*Amalgamating-machines.*

1. Give fully a description of the amalgamating-machines you have used. Give their speed, their capacity, and the horse-power required to work them. Also state where you would place them in a crushing-battery in relation to the stamp-mortars.

2. Describe the class of auriferous ore suitable for concentration; also give a description of ore unsuitable for treatment by that process. Give your reasons fully.

3. What effect, if any, has heat on the amalgamation of bullion contained in ore? How is heat applied to amalgamating-machines; and what temperature would you consider most suitable for the amalgamation of bullion in the ore? Describe fully.

4. Describe the action of berdans, Wheeler's pans, combination pans, and Boss pans. State the quantity of pulverised ore each is capable of treating in twenty-four hours, the quantity of quicksilver used in each, the speed at which each is driven, and the horse-power required to work them.

SUBJECT C.—*The Use of Quicksilver, and Methods of using it in connection with the Extraction of Gold and Silver from Ores.*

1. What is meant by the "sickening" of quicksilver? (*a.*) How is it caused? (*b.*) How do you ascertain that quicksilver is sickened? (*c.*) What precaution would you take to prevent the sickening of quicksilver? (*d.*) How would you remove the impurities from quicksilver? Describe fully.

2. How is amalgamation effected by copper or muntz-metal plates? (*a.*) How are the plates prepared? (*b.*) How is the bullion removed from the plates? (*c.*) State the length, width, thickness, and gradient at which plates are laid down for amalgamating purposes in a stamp-battery.

3. What effect, if any, had sodic chloride (NaCl) and cupric sulphate ($CuSO_4$) in the amalgamation of bullion in auriferous and argentiferous ores; and how is it applied?

4. How is gold and silver removed from quicksilver, and put into ingots fit for market? Give a description of the whole process from the time the ore is submitted to the action of quicksilver until the precious metals are in a marketable condition.

SUBJECT D.—*Cyanide, Chlorination, and other Chemical Processes of recovering Gold and Silver from Ores.*

1. State fully the class of ore you consider best suited for treatment with KCN solutions; also the class of ore most suitable for treatment by chlorination; and give your reasons for same.

2. Describe fully how you would test the strength of KCN solutions, and how you would make up stock solutions.

3. If you had to make up 30 tons of a 0·2-per-cent. KCN solution, using 25 tons of a sump solution containing 0·09 per cent. of KCN, how many pounds of crude cyanide containing 76 per cent. KCN would you require to make the solutions up to the required strength?

4. How many tons of a 5-per-cent. KCN solution would be required to make up 40 tons of a 0·3-per-cent. solution, using a sump solution containing 0·05 per cent. KCN?

5. Describe fully how KCN solutions are applied to pulverised ore: (*a*) The condition of the ore before being subjected to KCN solutions; (*b*) how the vats are filled with ore, and how the KCN solutions are used; (*c*) how the solutions are drawn off; (*d*) how it is ascertained when the ore has been completely treated.

6. Describe how you would ascertain the best strength of KCN solutions for the treatment of any particular class of ore.

7. Show by calculation the cubic contents of a vat 32 feet in diameter and 8 feet 4 inches deep.

8. Describe fully the process of recovering the bullion from slimes subjected to KCN solutions, from the filling of the agitator-vats until the bullion is precipitated in the zinc extractors.

9. State fully what remedies you would apply in the case of any workman showing signs of KCN poisoning.

10. Describe the Siemens-Halske process for the electrical precipitation of gold from KCN solutions.

11. How is the chlorination of ores effected? (*a.*) How is chlorine gas produced? (*b.*) How long is ore subjected to chlorination by the Newbery-Vautin process? (*c.*) How is the gold precipitated and dealt with before it is in a marketable condition?

12. Describe fully how the gold is recovered from the zinc extractors and put in a fit state for market.

SUBJECT E.—*Sampling and Testing of Ores.*

1. Describe how you would take a sample for assay—(*a*) from a large heap of tailings, (*b*) from a truckload of ore as it comes from the mine.

2. How would you estimate the copper in a sample of pyrites?

3. Describe (*a*) a "wet" method and (*b*) a "dry" method of determining lead in galena.

4. Describe exactly how you would determine the presence of the various elements if given a sample of rock containing sulphides of silver, copper, arsenic, iron, and nickel.

SUBJECT F.—*A Knowledge of Arithmetic and the Method of keeping Battery Accounts.*

1. If ore contained by assay before treatment 2 oz. 11 dwt. 12 gr. of gold and 11 oz. 12 dwt. 12 gr. of silver to the ton, and after treatment the gangue assayed 4 dwt. 12 gr. of gold and 2 oz. 16 dwt. 12 gr. of silver to the ton, show the value of the gold and silver recovered from 100 tons of ore, taking the value of gold to be £4 4s. per ounce and silver 2s. 4d. per ounce.

2. The gold extracted from a goldfield made a pyramid 3 feet square at the bottom and 8 feet 6 inches high: how many pounds avoirdupois did the pyramid contain, taking the specific gravity of gold to be 19·25?

3. The wages of 20 men employed in connection with the treatment of ore was £60 per week. These men were divided into 4 classes: A class had 10 men, B class 5 men, C class 3 men, and 2 men were in D class. Each man in B had $\frac{1}{8}$ more than each man in A, each man in C had $\frac{7}{8}$ of each man in B, and each man in D had $\frac{1}{4}$ more than each man in C: how much did each man receive?

4. A certain piece of work took 10 men and 3 boys 72 hours to accomplish; each boy did two-thirds the work of a man. How long would it take 5 men and 9 boys to do the same work?

5. Divide 0·0034 by 67, and extract the cube root of the quotient.

SUBJECT G.—*A Knowledge of Part V. of "The Mining Act, 1905."*

Oral.

LIST OF MINE-MANAGERS AND BATTERY-SUPERINTENDENTS WHO HAVE OBTAINED CERTIFICATES UNDER THE MINING ACTS.

THE MINING ACT.

First-class Service Certificates.

Issued under "The Mining Act, 1886," without Examination.

Adams, H. H., Waiorongomai.
*Anderson, P., Thames.
*Andrews, R., Coromandel.
Andrews, T., Thames.
Barclay, T. H., Thames.
Bennett, J., Alexandra.
Benney, J., Coromandel.
Black, T., Waiomo.
Bollersley, N., Boatman's.
Bradbury, M., Reefton.
Bray, John, Lyell.
Burch, W. H., Thames.
Byrne, J. F., Stafford.
Cameron, A., Macetown.
*Cameron, E., Te Aroha.
Chapman, J. A., Dunedin.
Clarke, G. S., Thames.
*Comer, R., Thames.
Conradson, M., Lyell.
*Corin, W., Thames.
Cornes, C. A., Karangahake.
Coutts, J., Thames.
Crawford, T. H., Thames.
Crowley, C., Reefton.
Cummings, W., Reefton.
Davis, J. E., Queenstown.
*Davey, C., Ross.
*Donald, J., Cromwell.
*Dryden, S., Thames.
Dunlop, T. A., Thames.
Edwards, J., Skipper's.
Elliott, J., Macetown.
*Evans, F., Skipper's.
Evans, J. H., Skipper's.
*Fitzmaurice, R., Reefton.
Frewen, J. B., Queenstown.
Gavin, T., Te Aroha.
Gilbert, J., Reefton.
Gilmour, T., Thames.
Giles, G. F., West Wanganui.
Glass, W. M., Naseby.
Goldsworthy, J., Waiorongomai.
Greenish, J., Reefton.
*Greenville, W., Ohinemuri.
*Hall, J. P.
*Hansen, P. C., Thames.
Harris, J., Owen's Reefs.
Harrison, R. H., Coromandel.
*Hicks, T. B., Thames.
Hilton, G. P., Bendigo.
*Hodge, F., Coromandel.
Hollis, W., Thames.
Hunter, R., Thames.
James, F., Thames.
Jamieson, A., Coromandel.
Jenkins, M., Wakatipu.
Johnstone, H., Bluespur.
Julian, J., Boatman's.
Kelly, J., Lyell.
Kerr, J., Thames.
Lawn, E., Black's Point.
*Lawn, H., Boatman's.
Lawn, J., Reefton.
*Littlejohn, W., Karangahake.
Lowe, E. W., Thames.
Malfroy, J. M. C., Ross.
Martin, W. G., Thames.
McCallum, J., Reefton.
McCullough, R., Thames.
McGruer, G. N., Karangahake.
*McIlhaney, J., Thames.
McIntosh, D., Bluespur.
McKay, J., Ross.
McKenney, J., Reefton.
McKenzie, W., Thames.
*McLeod, G., Coromandel.
McLiver, F., Thames.
*McLiver, H., Thames.
McMaster, J., Reefton.
Moore, H. W., Thames.
*Moore, J. H., Thames.
Morgan, R., Otago.
Morrisby, A. A., Glenorchy.
*Nasmyth, T., Reefton.
Newman, W., Naseby.
Northey, J., Thames.
*O'Sullivan, D. E., Thames.
Polton, A., Karangahake.
Porter, J., Waipori.
Purvis, G., Ross.
Quinn, E., Te Aroha.
Radford, T., Thames.
Ralph, J. G., Thames.
Ranger, J., Reefton.
Rasmussen, C. L., Mokihinui.
Rasmussen, C. P., Mokihinui.
Reid, P., Coromandel.
Resta, L., Macetown.
Roberts, E., Ross.
Rooney, F., Reefton.
Scott, T., Waiorongomai.
Searight, A., Reefton.
*Senior, J., Thames.
Smith, J. E., Thames.
Stone, F., Karangahake.
Steedman, J. B., Thames.
Sturm, A., Waipori.
Taylor N., Thames.
Todd, C., Heriot.
Treloer, J. S., Reefton.
Tripp, R. S., Arrowtown.
Vivian, J. G., Thames.
Vivian, S., Reefton.
*Waite, C. D., Thames.
*Waite, E., Thames.
Walker, J. W., Thames.
Watson, T., Reefton.
Wearne, J. E., Endeavour Inlet.
Wearne, T., Endeavour Inlet.
*Wilcox, J., Thames.
Williams, J., Skipper's.
Wright, G., Boatman's.
Wylie, W., Ross.
Young, G., Skipper's.

First-class Mine-managers' Certificates, issued after Examination, under "The Mining Act, 1886," and Amendment Acts.

Adams, B., Thames.
Baker, W., Thames.
Black, G., Reefton.
*Caples, P. Q., Reefton.
*Carter, J., Thames.
Casley, G., Reefton.
*Cochrane, D. L., Reefton.
Colebrook, J. D., Coromandel.
Coombe, J., Reefton.
Crawford, J. J., Thames.
Cummings, W., Reefton.
Donaldson, W., Otago.
Fleming, M., Thames.
Gardner, W. P., Reefton.
Harris, W., Thames.
Horn, G. W., Thames.
Horne, W., Coromandel.
Hornick, M., Thames.
Hosking, G. F., Auckland.
Kruizenza, W., Reefton.
Lawn, T., Reefton.
Logan, H. F., Wellington.
Mangan, T., Thames.
Mouat, W. G., Dunedin.
Truscott, G., Thames.
Watkins, W. E., Reefton.
Wilkie, J., Reefton.

First-class Mine-managers' Certificates, issued on Production of Certificate from a Recognised Authority outside the Colony, under "The Mining Act, 1886," "The Mining Act, 1891," and "The Mining Act, 1898."

Argall, W. H., Coromandel.
Beckwith, L. H., Wellington.
Datson, J., Manaia.
Dodd, William Milton.
Griffiths, A. P., Auckland.
Griffiths, H. P., Auckland.
Hailey, R. C., Dunedin.
McKenna, Thomas, Dunedin.
Molineaux, H. S., Gore.
Rich, F. A., Auckland.
Williams, W. H., Auckland.

First-class Mine-managers' Certificates, issued after Examination, under "The Mining Act, 1891."

Agnew, J. A., Thames.
Annear, William, Reefton.
Arcott, R., Waihi.
Bennett, E. P., Thames.
Boydell, H. C., Coromandel.
Bradley, R. J. H., Te Puke.
Bray, E., Reefton.
*Bruce, Malcolm, Thames.
Carroll, J., Lyell.
Cartwright, E., Thames.
Crabb, J., Reefton.
*Dobson, J. A., Auckland.
Evans, H. A., Wellington.
Fahey, P., Reefton.
Flannigan, Francis, Reefton.
Gilmour, J. L., Thames.
Hodge, J. H., Thames.
*Hughes, D., Thames.
James, T., Thames.
Keam, P. E., Thames.
Lane, J., Reefton.
Lawn, C. H., Capleston.
Linck, F. W., Thames.
Marshall, F., Reefton.
Morrison, R., Thames.
McDermott, J., Thames.
McDermott, G., Thames.
McDermott, W., Thames.
McGregor, W. T., Thames.
McKenzie, H. J., Coromandel.
McPeake, J., Thames.
O'Keeffe, M. D., Thames.
Paul, Matthew, Thames.
Paltridge, Henry, Thames.
Prince, F. H., Reefton.
Robertson, D. B., Stafford.
Ross, Richard, Thames.
Russell, Murray, Dunedin.
Shepherd, H. F., Thames.
Stanford, W. J., Macetown.
Steedman, J. G., Thames.
Sutherland, Benjamin, Reefton
Tierney, R., Thames.
Vialoux, F., Coromandel.
Warne, George, Thames.
Waters, D. B., Skipper's.
Watt, J., Thames.
White, G. H., Thames.
Whitley, A., Thames.
Williams, C., Capleston.

* Deceased since issue of certificate.

FIRST-CLASS SERVICE CERTIFICATES AS MINE-MANAGERS—*continued.*

First-class Mine-managers' Certificates, issued after Examination, under "The Mining Act, 1898."

Allen, Henry, Waihi.
Barker, B., Thames.
Bennie, Boyd, Waihi.
Bishop, Thomas Otto, Skippers, Otago.
Blenkhorn, C., Coromandel.
Bolitho, Joseph, Reefton.
Bower, J. W., Coromandel.
Buddle, Frank, Coromandel.
Bull, C. W., Waihi.
Caisley, John, Karangahake.
Carroll, A. M., Reefton.
Carroll, John, Kuaotunu.
Carter, R. P., Waihi.
Clouston, R. E., Kaitangata.
Cooper, J. H., Thames.
Cooper, Thornhill, Waihi.
Cordes, F. M., Karangahake.
Cornes, J. G., Waihi.
Daley, John William, Waihi.
Docherty, W. H., Coromandel.
Ellery, John, Reefton.
Evered, N. J., Waihi.
Fry, S., Waimangaroa.
George, M. T., Waihi.
Goldsworthy, C., Karangahake.
Goldsworthy, W., Coromandel.
Grayden, P., Thames.
Hitchcock, W. E., Barewood.
Hooker, John, Coromandel.
Irwin, Samuel, Waihi.
Jackson, G. T., Waihi.
Johnson, J. H., Coromandel.
Langford, G. S., Waihi.
Lawn, Nicholas, Reefton.
Lewis, Ralph Reginald, Waihi.
Mackie, Portland Geo. Alex., Waihi.
McConachie, W., jun., Waihi.
MacDuff, R. B., Thames.
McGruer, A., Karangahake.
MacLaren, J. A. J., Coromandel.
McMahon, J. H., Reefton.
McMahon, T., Reefton.
Mitchell, William J., Barewood.
Morgan, William, Waihi.
Morrison, William, Waihi.
Moye, Michael, Reefton.
Oats, John, Black's Point, Reefton.
O'Sullivan, J. W., Thames.
Rabe, John, Thames.
Rimmer, J. C., Helensville.
Rodden, John, Reefton.
Saunders, W. H., Reefton.
Sheehan, D., Karangahake.
Stewart, F., Waihi.
Thomson, Thomas, Waihi.
Tucker, E. S., Coromandel.
Turnbull, E. V., Coromandel.
Turner, C. E., Murchison.
Watson, J. L., Thames.
Webber, J. H. A., Reefton.
Weir, Thomas, Waihi.
Whyte, N. McG. H., Waihi.
Williams, C., Thames.
Wilson, Allan, Thames.
Wood, P. H., Reefton.
Wotherspoon, James, Waihi.

First-class Mine-managers' Certificates, issued under Section 313 of "The Mining Act, 1891."

Edwards, George, Westport.
Hornibrooke, H. P., Coromandel.
Martin, James, Reefton.
Rickard, John, Thames.
Snow, Thomas, Huntly.
Thomas, James, Thames.
Trelease, J. H., Thames.
Williams, John, Kuaotunu.
White, John S., Karangahake.

First-class Mine-managers' Certificates of Competency granted to Holders of Provisional Warrants under Section 32 of "The Mining Act Amendment Act, 1896."

Alexander, Thomas, Deep Creek.
Argall, A. E., Coromandel.
Battens, H., Coromandel.
*Begley, Thomas, Reefton.
Bennett, Charles Henry, Kuaotunu.
Bunney, Joseph, Waihi.
Campbell, Alexander, Cullensville.
Carlyon, Samuel, Coromandel.
Cornes, C. A., jun., Karangahake.
Daldy, Edward Arthur, Coromandel.
Draffin, Samuel, Waitekauri.
Farmer, C. S., Waitekauri.
Goldsworthy, Thomas, Tokatea.
Goldsworthy, William, Karangahake.
Govan, Joseph, Thames.
Harvey, A. G., Coromandel.
*Howard, Samuel, Karangahake.
James, Robert, Thames.
Jamieson, John, Reefton.
Johns, Thomas, Waihi.
Kennerley, W. H., Thames.
Langford, James, Coromandel.
McCombie, John, Karangahake.
MacDonald, H., Coromandel.
McEnteer, James, Tararu.
McFarlane, Charles M., Tokatea.
McLean, Benjamin J., Waitekauri.
McLean, Charles, Thames.
McLean, James, Tararu, Thames.
Meehan, James, Westport.
Moorecraft, Walter, Coromandel.
Morgan, William, Owharoa.
Moyle, Thomas, Thames.
Patton, William, Macetown.
Pearce, Francis, Reefton.
Potter, William H., Thames.
*Rabe, Henry, Karaka.
Rillstone, Charles, Waipori.
Somervell, John, Thames.
Stackpole, Robert, jun., Karangahake.
Thomas, Archelaus, Tapu, Thames.
Turnbull, Thomas A., Whangamata.
*Willets, Henry, Thames.
*Wilson, James R. S., Kuaotunu.

First-class Mine-managers' Certificates, issued to Inspectors of Mines, by virtue of Office under the Mining Acts, 1886, 1891, and 1898.

Binns, G. J., Dunedin.
Cochrane, N. D., Westport.
Gordon, H. A., Wellington.
*Gow, J., Dunedin.
Green, E. R., Dunedin.
Hayes, J., Dunedin.
McLaren, J. M., Thames.
Tennent, R., Westport.
*Wilson, G., Thames.

SECOND-CLASS SERVICE CERTIFICATES AS MINE-MANAGERS.

Issued under "The Mining Act, 1891."

Adams, W. J., Thames.
Agnew, J. A., Coromandel.
Allen, Richard, Reefton.
Argall, A. E., Coromandel.
Beard, W. T., Reefton.
Begley, Thomas, Reefton.
Bennett, C. H., Coromandel.
Blair, Thomas, Kuaotunu.
Bolitho, James, Reefton.
Bone, William, Reefton.
Borlase, J. H., Capleston.
Bowler, John, Thames.
Bray, Edwin, Reefton.
Bremner, John, Coromandel.
Brokenshire, James, Thames.
Brown, John, Macrae's.
Brownlee, Thomas James, Thames.
Bunny, Joseph, Thames.
Byrne, John, Karangahake.
Caird, Alexander McNeil, Reefton.
*Campbell, J., Kuaotunu.
*Climo, Noah, Coromandel.
Comer, W. W., Thames.
Comer, George, Thames.
Corbett, T., Paeroa.
*Cowan, Hugh, Kuaotunu.
Crabb, Thomas, Reefton.
Daniel, P. F., Greymouth.
Dobson, John Allen, Kuaotunu.
Edwards, George, Westport.
Ellery, John, Reefton.
Flannigan, Francis, Reefton.
Foster, Thomas, Wellington.
*Gale, C. W., Coromandel.
Gemmings, Charles, Thames.
Gill, George, Thames.
Glasgow, T. M., Thames.
Goldsworthy, Henry, Thames.
Goldsworthy, William, Mauku, Auckland.
Govan, Joseph, Thames.
Gribble, James, Norsewood.
Griffin, Patrick, Thames.
Grimmond, Joseph, Ross.
Guthrie, John, Wellington.
*Guy, Robert, Kuaotunu.
Hardman, James Edward, Thames.
*Harris, R., Thames.
Harvey, William, Reefton.
Hetherington, William, Thames.
*Hicks, W., Thames.
Hill, Alex. Grey, Waikakaho.
Hollis, Fred. J., Waihi.
Hore, John, Wellington.
Hornibrook, H. P., Kuaotunu.
Jamieson, John, Reefton.
Jobe, James, Thames.
Johns, Thomas, Thames.
Johnstone, William, Collingwood.
Kendall, Henry, Thames.
Kerr, George, Kamo.
Kirker, Thomas, Thames.
Laughlin, David, Thames.
Law, John, Thames.
*Lough, H., Thames.
Loughlin, S., Thames.
Mackay, William, Nenthorn.
Martin, David, Black's Point.
Martin, James, Reefton.
Mayn, John, Coromandel.
McCombie, John, Karangahake.
*McCormick, Charles, Coromandel.
McEwen, James, Reefton.
McLean, James, Thames.
McLean, Alex., Coromandel.
McLean, Charles, Thames.
McNeill, Daniel, Thames.
McNeill, George, Upper Kuaotunu.
McLoghry, Archibald, Karangahake.
McQuillan, John, Reefton.
Meagher, John, Karangahake.
*Mills, George, Thames.
Milne, John, Thames.
Morgan, William, Upper Thames.
Moorecroft, Thomas, Thames.
Moyle, Thomas, Thames.
Naysmith, James, Reefton.
Newdick, Alfred, Thames.
Notman, Alexander, Reefton.
O'Keefe, M. W. D., Thames.
Page, John, Lyell.
Parkiss, Jos. W., Reefton.
Peebles, Alexander, Kuaotunu.
Pettigrew, Robert, Sydney.
*Phillips, W. H., Thames.
*Pollock, John, Thames.
Potts, W. H., Thames.
Primrose, J., Kuaotunu.
Rabe, Henry, Thames.
Radford, Thomas, Thames.
Reid, Thomas Groat, Thames.
Rickard, John, Thames.
Richards, A. H., Kuaotunu.
Rogers, Charles Henry, Reefton.
Rogers, William Henry, Kumara.
Ross, J., Thames.
*Rowe, James, Thames.
Shaw, James, Karangahake.
Sligo, Alex., Nenthorn.
Thomas, James, Thames.
Thomas, A., Thames.
Thomson, John, Dunedin.
Tregellas, James, Reefton.
Tregoweth, William, Thames.
Wells, Charles Lewis, Thames.
Willets, Henry, Thames.
Williams, James, Thames.
Williams, John, Thames.
*Wilson, James R. S., Kuaotunu.
Wilson, J. G., Thames.
Whisker, Charles, Thames.
White, John S., Karangahake.
Woodcock, James, Thames.
Worth, Robert, Waihi.

*Deceased since issue of certificate.

SECOND-CLASS SERVICE CERTIFICATES AS MINE-MANAGERS—*continued.*

Second-class Mine-managers' Certificates, issued after Examination, under "The Mining Act, 1891."

Benney, J., jun., Paeroa.
Christie, William, Waitekauri.
Draffin, S., Waitekauri.
Dunkin, T., Coromandel.
Evans, H. A., Skipper's.
*Gatland, V. Y., Coromandel.
Mathewson, A., Hyde.
McNeil, A. H., Coromandel.
White, F. H., Kuaotunu.
White, G. H., Thames.

Second-class Mine-managers' Certificates, issued after Examination, under "The Mining Act, 1898."

Bennie, Boyd, Coromandel.
*Cahill, T. M., Upper Kuaotunu.
Carroll, John, Upper Kuaotunu.

Second-class Mine-managers' Certificates, issued under Section 313 of "The Mining Act, 1891."

Connon, William, Thames.
Coran, Henry, Thames.
Edwards, E., Coromandel.
Kelso, Archibald, Coromandel.
McCormick, W. J., Waitekauri.

Second-class Mine-managers' Certificates of Competency granted to Holders of Provisional Warrants under Section 32 of "The Mining Act Amendment Act, 1896."

Allen, W. J., Coromandel.
Barney, Montague T., Waitekauri.
Brownlee, Henry, Thames.
Collins, Charles, Waitekauri.
Curtis, Charles, Taylorville.
Davis, James, Coromandel.
Gardner, James, Waimangaroa.
Howe, Albion S., Waitekauri.
Johnson, Frank H., Collingwood.
Kirwan, William, Reefton.
McDonald, John, Tairua.
McInnes, John, Puriri.
Martin, William, Tararu, Thames.
Murphy, Joseph, Coromandel.
O'Brien, John, Westport.
Prescott, Arthur J., Coromandel.
Radford, Samuel, Waihi.
Ruffin, Richard, Manaia, Coromandel.

BATTERY-SUPERINTENDENTS' CERTIFICATES.

Issued under "The Mining Act 1891 Amendment Act, 1894," without undergoing Examination.

Adams, H. H., Waihi.
Aitken, R. M., Reefton.
Banks, Edwin Gripper, Waihi.
Barry, Hubert Percy, Waihi.
Goldsworthy, Henry, Kuaotunu.
Goldsworthy, John, Kuaotunu.
Greenway, H. Howard, Auckland.
Heard, G. St. Clair, Waihi.
Hope, John S., Waitekauri.
Hutchison, William, Karangahake.
Margetts, Frederick Ernest, Kuaotunu.
McKenna, T. N., Tararu.
McLellan, William, Waitekauri.
Mellett, Richard Sheridan, Waitekauri.
Napier, James, Karangahake.
Noble, James R., Karangahake.
Park, James, Thames.
Shepherd, Henry Franklin, Waihi.
Sims, C. F., Tararu.
Walker, James A., Kuaotunu.
Wilson, Arthur E., Waihi.
Wilson, James Kitchener, Auckland.

Battery-superintendents' Certificates, issued after Examination, under "The Mining Act 1891 Amendment Act, 1894."

Adams, A. A., Thames.
Allen, F. B., Thames.
Allom, H. O., Thames.
Ansley, Comyn, Paeroa.
Ansley, Walter, Thames.
Banks, J. H., Waihi.
Bowers, W., Thames.
Brown, A. E., Thames.
*Carter, Samuel, Thames.
Clarke, J. L., Thames.
Clarke, R., Waitekauri.
Clarke, W. J., Waihi.
Day, A. T., Thames.
Dixon, Clement, Waihi.
Doveton, G. D., Thames.
Fleming, G. C. S., Thames.
Fuller, J. P., Kuaotunu.
Gray, J. W., Waihi.
Hayward, F. W., Komata.
Horn, G. W., Kuaotunu.
Jackson, J. H., Paeroa.
Jones, Achison, Waihi.
Kidd, F. D., Thames.
Laurie, D. B., Karangahake.
Lee, J. W., Reefton.
Macdonald, W., Waihi.
McKenzie, H. J., Thames.
McMicken, S. D., Thames.
Morgan, P. G., Thames.
Morrin, W. S., Thames.
Noakes, H. L., Waihi.
Raithby, R. W., Reefton.
Robinson, J. R., Waitekauri.
Stafford, B. H., Waihi.
Taylor, C. H., Tararu.
Thorpe, A. H., Thames.
Vercoe, R. B., Thames.
Wingate, H. M., Maratoto.
Winslow, G., Thames.
Williams, A. G. R., Thames.

Battery-superintendents' Certificates, issued after Examination, under "The Mining Act, 1898."

Adams, Richard W., Tararu, Thames.
Adams, J. H., Thames.
Airey, Hubert, Karangahake.
Aitken, Alexander Hugh, Waihi.
Allen, D. V., Thames.
Allen, H. E., Wellington.
Anderson, David, Waihi.
Auld, J. B., Crushington.
Baker, W. H., Thames.
Banks, C. A., Waihi.
Banks, E. J., Thames.
Barrance, K. McK., Karangahake.
Barrett, J. J., Karangahake.
Barron, Wm. E., Waikino.
Baskett, E. G., Karangahake.
Bidlake, A. E., Waiomo.
Bishop, T. O., Reefton.
Blackadder, Wm., Crushington.
Bradley, R. J. H., Karangahake.
Browne, E., Waitekauri.
Brown, F. M., Karangahake.
Brown, J. E., Komata.
Burns, William, Waiomo.
Bush, E. F., Parawai.
Bush, George Arthur, Karangahake.
Bush, H. R., Thames.
Campbell, Colin, Thames.
Carpenter, W. E., Karangahake.
Carter, S., Waihi.
Carroll, John, Kuaotunu.
Chappell, G. A., Karangahake.
Clark, John L., Waihi.
Clarke, Thomas, Waihi.
Coote, J. M., Thames.
Corbett, G. L., Waitekauri.
Couper, J., Thames.
Cowles, R. K., Crushington.
Crompton, H., Maratoto.
Croucher, Herbert, Waihi.
Dawson, B., Ellerslie.
Donnelly, Thomas, Waihi.
Donovan, Willie, Waikino.
Draffin, Eugene, Kuaotunu.
Eaton-Turner, Geoffrey William, Waihi.
Ellis, L. L., Waitekauri.
Empson, J. B., Karangahake.
Evans, J., Waihi.
Evans, W. B., Reefton.
Ewen, H. F., Auckland.
Fletcher, H. T., Katikati.
Fraser, J. M., Reefton.
Fuller, John P., Kuaotunu.
Fyfe, A., Dunedin.
Gardner, E. A., Reefton.
Gibson, William, Waihi.
Gilpin, J., Waihi.
Gow, E. A., Crushington.
Grayden, J., Waitekauri.
Grayden, Peter, Thames.
Grumitt, P. H., Thames.
Gwilliam, Ben., Karangahake.
Halliwell, L. V., Karangahake.
Hargraves, E. P., Waihi.
Hay, Adam, Karangahake.
Hazard, T. R. C., Waitekauri.
Hitchcock, W. E., Barewood.
Hogg, B., Karangahake.
Hogg, T. R., Karangahake.
Horn, G. W., Kuaotunu.
Johnson, Edward, Waihi.
Jones, R. D., Karangahake.
Kidd, R. B., Waitekauri.
Kingsford, A., Karangahake.
Langford, G. S., Waikino.
Launder, G. H., Waitekauri.
Lawless, L. J., Paeroa.
Littlejohn, W. D., Karangahake.
Lovelock, J. E., Crushington.
Mackay, John, Crushington.
Matheson, Alex. M., Barewood.
Maltman, A., Reefton.
McEwin, J. A., Reefton.
McKinlay, John, Waihi.
McNeil, A. R., Karangahake.
Montgomery, A. E., Opitonui.
Morgan, Robert James, Waihi.
Motherwell, Wm., Waihi.
Moyle, W. T., Upper Tairua.
Orbell, G. S., Waikouaiti.
Paltridge, F., Thames.
Pond, H. C., Auckland.
Porteous, J., Crushington.
Quick, J. N., Thames.
Reid, J. E., Great Barrier.
Reynolds, E. A., Auckland.
Roberts, H. C., Waihi.
Rodden, Wm., Lyell.
Rosewarne, R. H., Thames.
Royse, W. G., Reefton.
Sanford, A. G., Waihi.
Shaw, D. S., Waikino.
Stephens, H., Dunedin.
Sutherland, J. A., Reefton.
Thomson, G. W., Bendigo.
Thurlow, J. R., Coromandel.
Tomlinson, A., Karangahake.
Tomlinson, David Mitchell, Barewood.
Tomlinson, W. F., Dunedin.
Turnbull, E. V., Waihi.
Ulrich, G. A. C., Komata.
Ulrich, Herstall, Whangapoua.
Walker, Alfred James Dickson, Waihi.
Waters, D. B., Waihi.
Watson, A. B., Waitekauri.
Watson, A. P., Crushington.
Watson, J. R., Reefton.
White, A. S. H., Karangahake.
Williams, A. C. Waihi.
Williams, James, Reefton.
Williams, William Eustace, Waihi.
Wilson, A. P., Crushington.

* Deceased since issue of certificate.

Dredgemasters' Certificates, without Examination, issued under "The Mining Act, 1898," and Amendment Acts, 1901 and 1902.

Allen, Chas., Alexandra.
Anderson, L. C., Alexandra.
Andrews, Ralph, Canvastown.
Baker, J. R., Alexandra.
Ballantyne, D., Miller's Flat.
Barnes, T. J., Beaumont.
Barry, Thos., Clyde.
Bradley, Neil, Alexandra.
Bennett, Geo., Gore.
Bennett, James, Kumara.
Blue, G. P., Alexandra.
Brand, Peter, Waikaka.
Bremen, Philip, Palmerston S.
Bremner, A. P., Lower Shotover.
Brice, Wm. H., Cromwell.
Bringans, D., Alexandra
Brown, T. G., Ahaura.
Bunting, James, Murchison.
Busbridge, P., Gore.
Butler, Ewen, Roxburgh.
Butler, M. J., Kanieri.
Cameron, Saml., Alexandra.
Clarke, Ed., Port Chalmers.
Compton, Albert, Dobson.
Cormack, W., Greymouth.
Cornish, J. T., Miller's Flat.
Coutts, Henry, Miller's Flat.
Cowan, Alexander, Stillwater.
Cowan, James, NelsonCreek.
*Crookston, W. L., Three-channel Flat.
Crowley, J. B., Edendale.
Cumming, J. C., Beaumont.
Cunningham, Geo., Kanieri.
Curtis, Chas., Stillwater.
Cutten, W. H., Dunedin.
Deniston, R. A., Cromwell.
Dewar, John, Alexandra.
Donaldson, J. G. A., Greenstone.
Edmonds, A. R., Nelson Creek.
Faithful, Wm., Greymouth.
Gibb, Wm., Croydon Siding.
Gibson, A., Island Block.
Goodger, G. W., Waenga.
Graham, J. M., Gore.
Grogan, Wm. A., Miller's Flat.
Hansen, Wm., Alexandra.
Hay, James, Dunedin.
Hedley, A., Cromwell.
Herbert, J., Beaumont.
Hewitt, James, Clyde.
Hogg, Thos., Cromwell.
Hoskins, Thos., Maori Point.
Hoy, Samuel, Alexandra.
Inwood, W. J., Rocklands Beach.
Johnston, E. A., Alexandra.
Johnstone, Alexander, Cromwell.
Keen, Thos., Clyde.
Kennedy, Angus, Alexandra.
Kitto, Ed. T., Miller's Flat.
Kitto, Francis, Lowburn.
Kitto, Jno. F., Miller's Flat.
Kitto, W. H., Cromwell.
Kloogh, N. P., Lowburn Ferry.
Lawson, Ed., Dunedin.
Ledingham, J., Bannockburn.
Lee, George, Collingwood.
*Lidicoat, R. H., Fern Flat.
Louden, Alexander, Clyde.
Luke, S. J., Alexandra.
Magnus, A., Roxburgh.
Magnus, Olaf, Box 130A, Christchurch.
Mailer, John, Stillwater.
Maitland, A. E., Miller's Flat.
Maxwell, John, Dunedin.
McClure, F. C., Rongahere.
McConnell, J., Cromwell.
McCormack, D., Kanieri.
McDonald, E. A., Waitiri.
McDonald, J., Sofala.
McDonald, Jno., Cromwell.
McGeorge, J., Dunedin.
McGeorge, Alexander, Dunedin.
McGregor, D., Kanieri.
McGregor, G. R., Alexandra.
McIntosh, D. J., Lowburn Ferry.
McLay, Geo. Cromwell.
McLean, D., Waitiri.
McMath, D. C., Ross.
McMath, Thos., Alexandra.
McVicar, Peter, Roxburgh.
Mills, Ed., Murchison.
Mitchell, D. A., Dunedin.
Morel, C. G., Inangahua Junction.
Morris, G. S., Cromwell.
Murray, D., Clyde.
Murray, Madget, Cromwell.
Neilson, S., Miller's Flat.
Nicholson, W. E., Alexandra.
O'Leary, D., Waiau.
Olsen, Chas., Roxburgh.
Parsons, J. D., jun., Clyde.
Percy, John, Clyde.
Perkins, A. C., Dunedin.
Pettigrew, Geo., Nelson Creek.
Poulter, G. W., Alexandra.
Pringle, John, Miller's Flat.
Ray, J. C., Totara Flat.
Reeder, Philip, Bald Hill Flat.
Rennie, Andrew, Roxburgh.
Ross, Alexander, Cromwell.
Ross, Robert, Alexandra.
Richmond, J., Gibbston.
Ritchie, J. S., Waitiri.
Sanders, H. P., Clyde.
Sanders, John, Cromwell.
Sanders, Thos., Alexandra.
Schaumann, H., Alexandra.
Scott, M. G., Alexandra.
Scott, Robert, Capleston.
Shore, T. M., Queenstown.
Shore, Wm., Gore.
Simonsen, Chas., Alexandra.
Skilton, A. G., Old Diggings.
Sligo, N. K., Ahaura.
Smeaton, S. H., Inangahua Junction.
Smith, Alfred, Inangahua Junction.
Steel, Archibald, Kawarau Gorge.
Steel, Thos., Dunedin.
Templeton, Ivie, Rongahere.
Thompson, J., Alexandra.
Thompson, T., Miller's Flat.
Toohey, J. M., Alexandra.
Tough, John, Miller's Flat.
Troy, G. C., Cromwell.
Turnbull, W. D., Canvastown.
Tyson, John, Rongahere.
Von Haast, J. H., Clyde.
Wallace, John A., Miller's Flat.
Watt, John, Cromwell.
Weaver, Chas., Alexandra.
Williamson, R., Millar's Flat.
Williamson, Walter, Miller's Flat.
Wilson, S. W., Waikaka Valley.
Wood, R. M., Cromwell.
Woodhouse, W. S., Roxburgh.
Young, Andrew, jun., Roxburgh.

Dredgemasters' Certificates, after Examination, issued under "The Mining Act, 1898," and Amendment Acts, 1901 and 1902.

Anderson, Andrew, Alexandra South.
Anderson, Bertram, Maori Point.
Anderson, G. B., Roxburgh.
Baird, William G., Clyde.
Bardsley, John James, Cromwell.
Bishop, Hugh Arthur, Collingwood.
Blair, G., Abbotsford.
Borthwick, Robert, Alexandra.
Burke, John, Clyde.
Brent, C. D., Cromwell.
Briggans, Thomas, Alexandra.
Briggans, William, Alexandra.
Broderick, T., Lyell.
Bruce, J. A., Kawarau Gorge.
Burley, J. P., Westport.
Burnside, Walter, Alexandra.
Burton, A. P., Miller's Flat.
Callaghan, E., Three channel Flat.
Carnegy, A., Three-channel Flat.
Carter, W. W., Sandy Point.
Chapman, Robert, Maori Point.
Clark, D., Callaghan's Creek.
Coup, George, Albertown.
Cox, R. D., Alexandra.
Craig, D. A., Shag Point.
Croawell, James, Three-channel Flat.
Curno, C. B., Alexandra.
Dalton, J. R., Three-channel Flat.
Donaldson, John, Lawrence.
Downie, Henry, Totara Flat.
Eaton, Edgar W., Alexandra.
Elder, D. D., Roxburgh.
Faithful, Alfred, Bannockburn.
Farmer, Nathan C., Miller's Flat.
Farquharson, Geo., Alexandra.
Fisher, Hurtle, Miller's Flat.
Forno, D., Inangahua Junction.
French, T. E. K., Three-channel Flat.
Gibson, William H., Cromwell.
Gillooly, T., Roxburgh.
Gillstrom, Carl A., Berlin's
Graham, Thomas Arthur, Gore.
Gunn, W. E., Beaumont.
Guyton, James, Dunedin.
Hanning, C. J., Clyde.
Hansen, H. C., Three-channel Flat.
Harden, J., Stafford.
Harliwick, Matthew, Roxburgh.
Hewetson, Sydney, Nelson Creek.
Hogg, J., Nevis.
Holden, Charles, jun., Cromwell.
Holden, John, Cromwell.
Hopburn, D. O., Alexandra.
Hughes, John L., Miller's Flat.
Johnston, John, Maori Gully.
Johnston, Louis, Beaumont.
Jones, David Rowland, Island Block.
Jones, T. R., Miller's Flat.
Junker, Frank J., Berlin's.
Kane, William, Clyde.
Kane, William, Cromwell.
Kean, F. F., Waikaka.
Kitto, John, Clyde.
Linney, William, Island Block.
Livingstone, D., Alexandra.
Lloyd, Arthur, Inangahua Junction.
Lloyd, Hubert, Lyell.
MacDonald, C. J., Cromwell.
MacGinnis, J. A., Cromwell.
MacGinnis, M. P., Alexandra.
MacLaren, John, Alexandra.
Marklund, C. O., Lowburn Ferry.
Mathews, James Halbert, Miller's Flat.
Matthews, A. A., Three-channel Flat.
Mayne, W. C., Nelson Creek.
McDonald, C. J., Waitere.
McDonald, G., Alexandra.
McCallum, W. S., Alexandra.
McGregor, Dougald S., Alexandra.
McKenzie, John, Roxburgh.
McKinnon, John, Alexandra.
McLean, John. Roxburgh.
Melvin, J. R., Roxburgh.
Merchant, Isaiah, Clyde.
Moffitt, R. W., Miller's Flat.
Mollison, William, Stillwater.
Moncrieff, Henry, Miller's Flat.
Monson, C. H., Miller's Flat.
Morel, A. E., Nobles.
Morel, L. H., Inangahua Junction.
Morris, V., Cromwell.
Munro, R. F., Ross.
Murray, H. B., Cromwell.
Murray, Robert John, Canvastown.
Nelson, Edgar, Brunnerton.
Nelson, George L., Brunnerton.
Newick, Albion Edgar Charles, Bannockburn.
Nicholson, Charles, S. G., Mataura.
Olsen, Hans, Alexandra.
Omond, Thomas, Nevis.
Orkney, H. E., Cromwell.
Orr, William W., Cromwell.
Parker, P. R., Roxburgh.
Patterson, J., Clyde.
Plumb, E. H., Maori Point.
Poppelwell, William, Alexandra.
Rait, Hume, Albertown.
Ray, J. F., Bannockburn.
Ray, Robert Marshall, Bannockburn.
Reiderer, Edward, Cromwell.
Ritchie, William John, Cromwell.
Robertson, D. J., Alexandra.
Robertson, W. R., Alexandra.
Rooney, J. B., Roxburgh.
Rumble, Chas., Ngahere.
Rumble, Joseph, Miller's Flat.
Sanders, W. J., Ahaura.
Sawle, J., Cromwell.
Sawyer, J. F., Alexandra.
Simpson, Edward Robert, Cromwell.
Taylor, Alexr., Alexandra.
Taylor, J. T., Dunedin.
Vickerman, E. M., Cromwell.
Wasserbrenner, M., Alexandra.
Wathen, James, Miller's Flat.
Watson, E. H., Collingwood.
Weir, W., Nevis.
Wescombe, Alfred L., Island Block.
Westcott, P. A., Miller's Flat.
Williams, Frederick, Alexandra.
Wilson, George, Marsden.
Wilson, Stephen L., Inangahua Junction.
Wood, W. W., Cromwell.
Woodhouse, F., Bannockburn.
Wylde, G. R., Inangahua Junction.

* Deceased since issue of certificate.

STATEMENT showing the Whole of the QUARTZ-CRUSHING MACHINES and APPLIANCES for treating Auriferous and Argentiferous Ores in the HAURAKI MINING DISTRICT for the Year ended the 31st December, 1905.

[NOTE.—Under heading "Power Employed" the letter H indicates hand; O, oil; S, steam; and W, water-power.]

Locality where Machine is situated.	Name of Machine.	Name of Owners.	Number of Rock-breakers.	Number of Stamps.	Number of Ore-crushers.	Number of Berdans.	Number of Pans.	Number of Settlers.	Number of Mortars.	Number of Retorts.	Number of Furnaces for Gold-melting, &c.	Number of Furnaces for Assay Purposes.	Number of Plants for Cyanide Process.	Number of Concentrating Plants.	Power employed.
Coromandel County.															
Coromandel	Telephone	Hauraki Gold-mining Co.	..	15	..	8	..	..	3	3	1	..	..	1	S
"	Union Beach Tailings Plant	Samuel James	..	..	..	1	1	3	..	1	1	..	1	..	W
"	Public battery	School of Mines Board in trust	..	5	..	2	..	..	1	2	1	..	..	..	O
"	Scotty's	J. T. Martin	..	9	..	8	..	..	1	2	1	..	..	..	W
Tokatea	Tokatea	Royal Oak of Hauraki Gold-mining Co.	1	15	..	8	..	..	2	2	1	..	..	..	W, S
"	West Tokatea	Tokatea Consolidated	..	3	..	2	..	..	1	1	..	..	..	..	S
Waikoromiko	Four-in-Hand	Four-in-Hand Gold-mining Co.	..	10	..	2	..	..	1	1	1	1	..	..	S
Cabbage Bay	Vizard's	C. Blasch	..	4	..	1	..	..	1	1	1	..	..	..	W
Mata Mata Harakiki	Macaronic	Macaronic Syndicate	..	5	..	2	..	..	1	1	1	..	..	..	O
Opitonui	Owera	Kauri Freehold Gold Estates Gold-mining Co.	..	16	..	4	..	..	2	2	1	..	..	..	S
Kuaotunu	Great Mercury	Thompson and others	..	10	..	1	..	..	1	4	2	1	1	1	S
"	Irene	Waitaia Gold-mining Co.	..	10	..	2	..	..	1	2	1	1	1	..	S
"	Handsworth	Louis Woodcock	..	3	..	1	..	..	1	1	..	..	..	..	W
Mercury Bay	Mahakirau	Coromandel County (in trust)	..	3	..	1	..	..	1	1	..	..	..	..	S
Thames County.															
Gumtown	Kapowai	M. O'Conor	..	8	..	3	..	..	1	1	1	..	..	..	S
"	Big Beetle	Big Beetle Gold-mining Co.	1	2	..	2	..	..	2	1	..	..	..	..	W
Tapu	Bullion	Plumer Bros.	..	15	..	4	..	..	2	2	1	..	..	..	W
"	Mahara Royal	Mahara Royal Gold-mining Co.	..	20	..	18	..	..	2	2	1	..	..	..	W
Waiomo	Monowai	Monowai Gold-mining Co.	1	10	1	1	..	2	1	2	1	..	..	..	S, W
Puru	Puru	..	..	10	..	2	..	..	1	1	1	..	..	..	W
Tararu	Tararu	A. Trower	..	30	..	6	..	3	2	1	1	1	1	..	S, W
"	New Alburnia	New Alburnia Gold-mining Co.	..	20	..	7	..	2	1	3	1	..	..	..	W
"	Eclipse	Eclipse Gold-mining Co.	..	10	..	3	1	..	1	2	1	..	..	..	W
"	Chicago	..	..	10	..	2	1	..	1	1	..	..	..	..	W
Karaka	Claremont	George Bryant	..	1	..	1	..	..	1	1	..	..	..	..	W
"	Junction	McGregor and Taylor	..	5	..	1	..	..	1	1	..	..	..	..	W
"	Arundel	George A. Dugall	1	5	..	3	..	..	1	1	1	..	..	..	S
Hape	Fortuna	H. H. Adams	..	5	..	2	..	..	1	1	1	..	..	..	W
"	Anchor	James Middleton	..	5	..	2	..	..	1	1	1	..	..	..	W
Kirikiri	Kirikiri	Kirikiri Gold-mining Co.	..	4	..	2	..	..	1	1	1	..	..	..	S
Puriri	Puriri	Puriri Gold Estates Gold-mining Co.	..	8	..	2	..	..	1	1	1	..	..	..	W
"	Hit or Miss	J. McInnis	..	6	..	2	..	..	1	1	1	..	..	..	S, W
Tairua	Tairua Broken Hills	Tairua Broken Hills Gold-mining Co.	1	20	..	6	..	..	1	1	1	1	1	..	S, W
"	Chelmsford	Chelmsford Gold-mining Co.	1	10	..	2	..	..	1	1	1	1	1	..	W
"	Taniwha	Taniwha Gold-mining Co.	..	3	..	1	..	..	1	1	1	..	..	..	O
"	Coronation	Coronation Gold-mining Co.	..	5	..	1	..	..	1	1	..	..	..	..	S
Whangamata	Mananu	Auckland Gold-mining Co.	1	10	..	1	..	..	1	1	1	1	1	..	S, W
Ohua	Waihua	..	..	2	..	1	..	..	1	1	1	..	..	..	W
Omahu	Sheet Anchor	..	..	10	..	2	..	..	1	1	1	..	..	..	S
"	Klondike	..	..	5	..	2	..	..	1	1	..	..	..	..	W
Thames Borough.															
Thames Borough	Kuranui	Kuranui Gold-mining Co.	..	20	..	6	..	..	2	2	1	..	..	..	W
"	Moanataiari	A. and G. Price	..	60	..	21	4	..	2	6	1	1	1	1	S, W
"	Comer's	Kuranui-Caledonian Gold-mining Co.	..	20	..	5	..	..	2	2	1	..	..	..	W
"	Judd's	Charles Judd	..	..	..	2	9	..	..	..	..	..	..	..	W
"	May Queen	May Queen Gold-mining Co.	..	33	..	8	3	..	2	3	2	..	..	..	W
"	Waiotahi	Waiotahi Gold-mining Co.	..	21	..	5	..	2	2	1	..	..	..	..	S
"	New Battery	"	2	40	..	5	..	..	..	..	..	..	..	..	W
"	Cambria	"	..	..	..	2	7	..	..	..	..	..	..	..	W
"	Fame and Fortune	Fame and Fortune Gold-mining Co.	..	21	..	16	..	..	2	2	1	..	..	..	W
"	School of Mines	School of Mines Board (in trust)	1	2	..	1	1	1	3	3	1	4	1	..	W
"	May Queen Extended	May Queen Extended Gold-mining Co.	..	..	..	..	..	..	..	..	..	..	..	..	..

STATEMENT showing the Whole of the QUARTZ-CRUSHING MACHINES and APPLIANCES for treating Auriferous and Argentiferous Ores in the HAURAKI MINING DISTRICT for the Year ended the 31st December, 1905—*continued*.

Locality where Machine is situated.	Name of Machine.	Name of Owners.	Number of Rock-breakers.	Number of Stamps.	Number of Ore-crushers.	Number of Berdans.	Number of Pans.	Number of Settlers	Number of Mortars.	Number of Retorts.	Number of Furnaces for Gold-melting, &c.	Number of Furnaces for Assay Purposes.	Number of Plants for Cyanide Process.	Number of Concentrating Plants.	Power employed.
Thames Borough—otd															
Thames Borough ..	Bank of New Zealand	Bank of New Zealand ..	..	..	..	..	..	..	2	2	1	1	..	..	H
" ..	Bank of New South Wales	Bank of New South Wales	..	..	..	..	..	..	2	2	1	1	..	..	H
Ohinemuri County.															
Paeroa	Bank of New Zealand	Bank of New Zealand ..	1	..	..	..	..	..	2	1	1	1	..	..	H
Karangahake ..	Crown	New Zealand Crown Mines (Ltd.)	2	60	..	4	..	..	2	2	1	1	1	..	S, W
" ..	Woodstock	Talisman Consolidated Gold-mining Co. ..	2	40	..	2	..	..	2	2	1	1	1	1	S, W
" ..	Talisman		4	60	..	5	..	..	3	3	1	1	1	1	S, W
Komata	Komata Reefs ..	Komata Reefs Gold-mining Co.	2	20	..	4	..	..	2	2	1	1	1	1	S, W
Waitekauri ..	Waitekauri ..	Waitekauri Gold-mining Co.	..	10	..	2	..	..	1	1	..	..	..	..	W
" ..	Grace Darling ..	Ditto	1	10	..	3	..	..	1	2	1	1	1	..	S, W
" ..	Portsea	Chalis and party ..	..	5	..	2	..	..	..	..	..	..	..	..	W
" ..	Jubilee	..	..	10	..	5	2	1	1	2	1	1	1	..	S
Maratoto	Maratoto ..	Maratoto Gold-mining Co.	..	10	..	2	..	..	1	2	1	1	..	..	S
" ..	Hikutaia ..	Hikutaia Gold Syndicate	1	5	..	2	..	..	1	2	1	1	..	..	S
Waihi Borough.															
Waihi	Waihi Gold Reefs	Waihi Gold Reefs Syndicate	1	5	..	..	..	..	1	1	..	..	..	..	O
"	Waihi	Waihi Gold-mining Co. ..	2	90	..	5	..	..	3	6	1	1	1	1	S, W
"	Union-Waihi ..	" ..	2	40	..	2	..	..	2	2	1	1	1	1	S, W
Waikino	Waikino ..	" ..	4	200	..	12	..	..	3	4	1	1	1	1	S, W
Piako	Waiorongomai ..	E. H. Hardy	1	10	..	4	1	..	2	2	1	1	1	1	W
Great Barrier Island	Barrier Reefs ..	Henry Brett	1	20	..	3	..	2	3	2	1	1	1	1	S
Auckland	Bank of New Zealand	Bank of New Zealand ..	..	..	..	1	1	2	6	4	2	..	..	..	W
			34	1,159	..	251	31	28	102	119	57	28	20	11	

The following batteries are in course of erection and not quite completed: Tairua—Golden Belt, forty stamps; Waihi—Grand Junction, forty stamps; Great Barrier—Sunbeam, ten stamps; Omahu—Puriri Gold-mines, ten stamps.

STATEMENT showing QUARTZ-CRUSHING MACHINES and APPLIANCES for treating Auriferous Ores in the MARLBOROUGH, NELSON, and WESTLAND MINING DISTRICTS for the Year ended the 31st December, 1905.

[NOTE.—Under heading "Power Employed" the letter H indicates hand; O, oil; S, steam; and W, water-power.]

Locality where Machine is situated.	Name of Machine.	Name of Owner.	Number of Rock-breakers.	Number of Stamps.	Number of Ore-crushers.	Number of Berdans.	Number of Pans.	Number of Settlers.	Number of Mortars.	Number of Retorts.	Number of Furnaces for Gold-melting or retorting	Number of Furnaces for Assay Purposes.	Number of Plants for Cyanide Process.	Number of Plants for Chlorination.	Number of Concentrating Plants.	Power employed.
Marlborough County.																
Top Valley ..	Wellington ..	T. W. Young and P. K. Watty	..	10	..	1	..	..	..	1	..	..	..	..	..	S
" ..	Jubilee	Wairau Valley Gold-mining Co. (Limited)	..	10	..	..	..	..	..	..	..	..	..	..	..	W
Collingwood County.																
Taitapu	Golden Ridge ..	Taitapu Gold Estates (Limited)	2	20	..	4	..	1	1	2	1	1	..	..	..	W
"	Golden Blocks ..	Golden Blocks (Taitapu) (Limited)	..	8	..	..	..	1	1	2	..	..	..	..	..	S
Buller County.																
Mokihinui ..	Red Queen ..	A. W. Mills	..	2	..	..	..	..	..	..	..	..	..	..	..	W
Waimangaroa ..	Britannia ..	Britannia Gold-mining Co. (Limited)	..	2	..	..	..	..	..	..	..	..	..	..	..	W
" ..	Stony Creek ..	Stony Creek Gold-mining Co. (Limited)	..	10	..	2	..	..	2	2	..	..	..	..	..	W
Lyell	Alpine Extended ..	Alpine Extended Gold-mining Co. (Limited)	..	20	..	4	..	1	1	2	..	..	1	..	..	W
Inangahua County.																
Bourke's Creek ..	Gardiner's ..	W. P. Gardiner and Sons ..	..	..	..	12	..	..	1	2	..	..	..	..	..	W
Victoria Range ..	Kirwan's Reward ..	Kirwan's Reward Gold-mining Co. (Limited)	..	15	..	..	..	..	..	1	1	..	..	..	..	W
Capleston ..	Welcome	Welcome Gold-mining Co. (Limited)	..	10	..	..	..	..	..	2	1	..	1	..	..	S
Reefton	Golden Fleece ..	Consolidated Goldfields of New Zealand (Limited)	1	20	..	1	..	..	..	2	1	..	1	..	1	S
"	Wealth of Nations ..	Ditto	..	20	..	1	..	..	2	2	1	..	1	..	..	W
"	Keep-it-Dark ..	Keep-it-Dark Quartz-mining Co. (Limited)	..	20	..	4	..	1	1	2	1	1	1	..	1	W
"	Progress Mines ..	Progress Mines of New Zealand (Limited)	3	65	..	1	..	..	2	2	1	1	1	1	1	W
"	New Scotia ..	New Scotia Gold-mining Co. (Limited)	..	10	..	1	..	..	1	1	..	..	1	..	..	S
"	Golden Lead ..	Golden Lead Gold-mining Co. (Limited)	..	10	..	..	..	..	..	1	..	..	..	..	..	W
"	Last Chance ..	Alex. Fleming and party ..	..	5	..	..	..	..	..	1	1	..	..	..	..	S
"	New Inkerman ..	New Inkerman Mines (Limited)	..	20	..	3	..	..	1	1	1	1	1	..	1	S
"	Big River ..	Big River Gold-mining Co. (Limited)	..	10	..	4	..	..	2	2	1	1	1	..	..	W
"	King George ..	St. George Gold-mining Co. (Limited)	..	5	..	..	..	..	1	1	..	..	..	..	..	W
"	Inglewood ..	P. N. Kingswell ..	..	10	..	..	..	..	..	..	..	..	1	..	..	S
Grey County.																
Paparoa Ranges ..	Garden Gully ..	Garden Gully Gold-mining Co. (Limited)	..	10	..	1	..	..	1	1	..	..	..	..	..	W
Ten-mile Creek ..	Taffy	Taffy Gold-mining Co.	..	5	..	1	..	..	..	1	..	..	..	..	..	W
			6	317	..	40	..	4	19	30	9	5	10	1	4	

QUARTZ-CRUSHING MACHINES and APPLIANCES for treating Auriferous Ores in the SOUTHERN MINING DISTRICT for the Year ended the 31st December, 1905.

Locality where Machine is situated.	Name of Machine.	Name of Owner.	Number of Rock-breakers.	Number of Stamps.	Number of Ore-crushers.	Number of Berdans.	Number of Pans.	Number of Settlers.	Number of Mortars.	Number of Retorts.	Number of Furnaces for Gold smelting.	Number of Furnaces for Assay Purposes.	Number of Plants for Cyanide Process.	Number of Concentrating Plants.	Power employed.
Tuapeka County.															
Waipori	Otago Pioneer Quartz	Otago Pioneer Quartz (Waipori) Gold-mining Co.	1	10	..	..	..	..	1	1	1	1	..	1	S
"	Victoria	R. Cotton	..	5	..	..	..	..	..	..	..	..	..	..	W
"	Bella	Bella Gold-mining Syndicate	..	5	..	..	..	..	..	..	..	..	..	..	W
Bruce County.															
Waitahuna	Burnt Creek	Table Hill Quartz-mining Co.	..	10	..	..	..	..	..	..	..	..	..	..	W
"	Canada	Canada Reef Gold-mining Co.	..	10	..	..	..	..	..	..	..	..	..	..	W
"	Last Chance	G. Park & Co.	..	5	..	..	..	..	..	..	..	..	..	..	W
Lake County.															
Queenstown	Invincible	Invincible Gold-mining Co.	..	10	..	7	..	..	1	..	..	..	1	1	W
Macetown	Premier	Premier Sunrise (N.Z.) Gold-mining Co.	1	20	..	2	..	1	1	1	1	1	1	..	W
"	Tipperary	D. McKay & party	..	10	..	1	..	1	..	1	1	1	1	..	W
Skipper's	Shotover	Shotover Quartz-mining Co.	..	10	..	..	..	..	..	..	..	..	..	..	W
"	Reefton United	Reefton United Gold-mining Co.	..	2	..	..	..	..	..	..	..	..	..	..	O
Bullendale	Achilles	Mount Aurum Gold-mining Co.	1	30	..	..	..	..	1	1	1	1	..	..	W
Bannockburn	Day Dawn	Lawrence Bros.	..	4	..	1	..	..	1	..	..	..	..	..	W
"	Carrick	James Lawrence	..	10	..	..	..	..	1	..	..	..	..	..	W
"	Star of the East	Lawrence Bros.	..	10	..	..	..	..	..	..	..	..	..	..	W
"	Go-bye	J. B. Holl day	..	10	..	..	..	..	..	..	..	..	..	..	W
"	..	Macabe and Son	..	2	..	..	..	..	..	..	..	..	..	..	W
Bendigo	Bendigo	Cromwell Proprietary Gold-mining Co.	..	20	..	4	..	..	1	1	1	1	..	..	S, W
"	..	Bendigo Tailings Syndicate	..	..	..	..	..	..	..	..	1	1	..	..	..
"	Alta	Alta Gold-mining Co.	..	4	..	..	..	..	..	..	..	..	..	..	O
Fiord County.															
Te Oneroa	New Star	New Star Gold-mining Co.	..	10	..	14	..	..	..	..	..	..	..	..	S, W
"	Alpha Dawn	Alpha Dawn Gold-mining Co.	..	10	..	2	..	..	..	..	..	..	..	..	W
"	Golden Site	Golden Site Gold-mining Co.	..	10	..	4	..	..	..	..	..	..	..	..	W
Vincent County.															
Bald Hill Flat	Excelsior	F. W. and R. T. Gray	..	3	..	..	..	..	1	1	1	..	..	..	W
"	White's Reef	R. T. Symes	..	5	..	1	..	..	1	1	1	..	..	..	W
"	Nicholson's Reef	..	..	10	..	..	..	..	..	..	..	..	..	..	W
Alexandra	Convoy's Gully	J. N. Robertson and party	..	5	..	..	..	..	..	..	..	..	..	..	W
Manototo County.															
Hyde	Mount Highlay	Mount Highlay Gold and Scheelite Mining Co.	..	12	..	..	..	..	..	..	..	..	..	1	W
"	N.Z. Gold and Tungsten	W. and G. Donaldson	2	..	1	..	..	..	..	..	..	..	..	1	O, S
Serpentine	..	John Cogan	..	10	..	..	..	..	..	..	..	..	..	..	W
Rough Ridge	Great Eastern	F. H. Perry	..	5	..	..	1	..	..	1	1	..	..	..	W
Waihemo County.															
Macrae's	Maritana	C. McGill	..	6	..	..	..	..	..	..	..	..	..	1	O, W
"	Ounce	Ounce Gold-mining Co.	..	8	..	..	..	..	..	..	..	..	..	..	W
"	Bonanza	L. O. Beal, jun.	1	5	1	..	1	..	1	1	1	..	..	..	W
"	United	Gilmour and party	..	5	..	1	..	..	1	1	1	..	..	..	S
"	Golden Point	W. and G. Donaldson	1	10	1	1	2	..	1	1	..	1	..	2	S, W
Stoneburn	Golden Bar	Golden Bar Gold-mining Co.	..	10	..	..	..	..	1	1	1	..	1	..	S
"	Gilivern	A. G. Davies	..	5	..	..	..	..	..	1	..	..	..	..	S, W
Taieri County.															
Hindon	Parker's	A. Parker	..	4	..	..	..	..	..	..	..	..	..	..	O
Barewood	Barewood	Barewood Gold-mining Co.	1	10	..	..	..	..	1	1	..	1	2	1	O
Matarae	Matarae	Matarae Gold-mining Co.	..	10	..	..	..	..	..	..	..	..	..	..	W
Dunedin City	School of Mines	Otago University	1	3	..	1	..	..	1	..	..	..	1	..	Gas
			9	343	3	39	4	2	15	14	12	8	7	8	

STATEMENT showing the QUANTITY of QUARTZ CRUSHED and GOLD OBTAINED in the HAURAKI MINING DISTRICT for the Year ended the 31st December, 1905.

Locality and Name of Mine.	Average Number of Men employed.	Quartz crushed.	Gold obtained.		Estimated Value.
			Amalgamation.	Cyanide.	
GREAT BARRIER ISLAND.					
		Tons cwt. qr. lb.	Oz. dwt.	Oz. dwt.	£ s. d.
Barrier Reefs	2	*2,070 0 0 0	..	5,927 0	1,844 1 11
COROMANDEL COUNTY.					
Cabbage Bay—					
White Star	1	0 1 0 22	3 12	..	9 12 6
Waikoromiki—					
Four-in-Hand	6	112 2 0 19	159 19	..	456 10 0
Tokatea—					
Royal Oak	30	189 1 1 14	798 4	..	2,040 18 3
Harbour View	2	0 1 2 0	4 12	..	12 15 3
Tokatea West	7	27 1 3 9	223 11	..	641 15 5
Big Reef	6	124 0 0 0	4 10	..	11 5 0
	45	340 4 2 23	1,030 17	..	2,706 13 11
Kapanga—					
Kapanga	6	160 0 0 0	78 3	..	234 9 0
Golden Spark	1	1 10 0 0	5 4	..	13 0 0
	7	161 10 0 0	83 7	..	247 9 0
Hauraki Block—					
Old Hauraki	18	54 9 3 22	227 1	..	681 3 0
Hauraki Freehold	3	23 0 0 20	75 2	..	206 10 6
Golden Pah	4	5 12 0 6	44 11	..	122 10 3
Hauraki South	2	3 0 0 0	4 16	..	13 4 0
	27	86 2 0 20	351 10	..	1,023 7 9
Union Beach Tailings	1	*180 0 0 0	..	35 10	40 7 6
Kuaotunu—					
Waitaia	21	635 0 0 0	582 7	235 2	2,484 2 3
Handsworth	1	51 0 0 0	56 18	..	145 1 10
	22	686 0 0 0	639 5	235 2	2,629 4 1
	109	1,566 0 1 0	2,268 10	270 12	7,113 4 9
Sundries	6	33 18 1 23	150 10	..	348 5 10
Totals	115	1,599 18 2 23	2,419 0	270 12	7,461 10 7
THAMES COUNTY AND BOROUGH.					
Tapu—					
Mahara-Royal	8	1,232 0 0 0	513 6	..	1,511 0 7
Tararu—					
Tararu Creek	12	956 0 0 0	227 4	136 2	1,064 16 0
Eclipse	12	1,338 0 0 0	1,153 0	..	3,193 5 4
	24	2,294 0 0 0	1,380 4	136 2	4,258 1 4
Moanataiari—					
Moanataiari	12	253 0 0 0	242 10	..	676 0 3
Alburnia	40	375 10 0 0	686 14	..	1,828 15 8
Kurunui-Caledonian	25	193 11 1 11	396 14	..	1,069 9 10
	77	822 1 1 11	1,325 18	..	3,574 5 9
Waiotahi—					
Waiotahi	53	4,988 8 1 27	27,148 6	..	73,884 9 7
Waiotahi Tributers' Mullock-tip	3	5,060 0 0 0	166 3	..	437 6 8
Fame and Fortune	9	175 0 0 0	108 7	..	292 10 2
Nonpareil	6	60 0 0 0	205 16	..	560 7 6
Golden Drop	2	1 0 0 0	17 18	..	47 8 8
Ballarat	4	72 0 0 18	75 19	..	210 19 4
West Coast	2	20 0 0 0	43 18	..	109 15 0
	79	10,376 8 2 17	27,766 7	..	75,542 16 11
Grahamstown—					
Victoria	15	153 0 0 0	251 1	..	691 4 9
New Saxon	9	213 0 0 0	293 7	..	845 0 4
Judd's Tailing Plant	4	*3,560 0 0 0	330 16	..	827 0 0
	28	3,926 0 0 0	875 4	..	2,363 5 1

* Tailings.

STATEMENT showing the QUANTITY of QUARTZ CRUSHED and GOLD OBTAINED in the HAURAKI MINING DISTRICT for the Year ended the 31st December, 1905—*continued*.

Locality and Name of Mine.	Average Number of Men employed.	Quartz crushed.	Gold obtained.		Estimated Value.
			Amalgamation.	Cyanide.	
THAMES COUNTY AND BOROUGH—*continued*.					
Karaka—		Tons cwt. qr. lb.	Oz. dwt.	Oz. dwt.	£ s. d.
New May Queen	11	214 10 0 0	316 5	..	901 4 9
May Queen Extended	6	293 0 0 0	262 2	..	763 6 11
New Una	6	200 0 0 0	163 6	..	458 13 6
Claremont	1	0 1 2 13	137 0	..	371 0 9
Arundel	6	50 0 0 0	33 15	..	97 16 4
	30	757 11 2 13	912 8	..	2,592 2 3
Hape Creek—					
North Star	4	86 0 0 0	26 18	..	72 4 7
Victory	1	0 0 1 14	14 9	..	36 2 6
	5	86 0 1 14	41 7	..	108 7 1
Gumtown—					
Kapowai	14	1,240 0 0 0	974 7	..	2,469 12 3
Big Beetle	3	73 0 0 0	48 12	..	133 13 0
	17	1,313 0 0 0	1,022 19	..	2,603 5 3
Tairua—					
Tairua Broken Hills	50	2,151 0 0 0	1,145 9	1,667 1	4,669 3 9
Chelmsford	10	741 0 0 0	278 8	502 0	1,167 18 5
Coronation	2	103 0 0 0	23 3	..	57 17 6
	62	2,995 0 0 0	1,447 0	2,169 1	5,894 19 8
Whangamata—					
Auckland	8	879 0 0 0	665 10	1,615 10	4,387 14 0
	..	24,681 1 3 27	35,950 3	3,920 13	102,835 17 11
Sundries	25	326 3 2 22	1,203 1	..	2,376 18 3
Totals	363	25,007 5 2 21	37,153 4	3,920 13	105,212 16 2
WAIHI BOROUGH.					
Waihi	1,396	298,531 0 0 0	75,022 4	1,117,023 16	693,671 14 0
Waihi Gold-reefs Syndicate ..	4	150 0 0 0	..	253 11	127 12 0
Ohinemuri River Syndicate ..	2	1 10 0 0	..	262 14	134 12 6
Totals	1,402	298,682 10 0 0	75,022 4	1,117,540 1	693,933 18 6
OHINEMURI COUNTY.					
Waitekauri	3	4 13 0 0	72 9	..	156 7 11
Portsea	4	20 0 0 0	15 11	..	37 6 4
	7	24 13 0 0	88 0	..	193 14 3
Karangahake—					
Talisman Consolidated	230	44,725 0 0 0	110,676 13	155,345 18	129,088 8 10
New Zealand Crown	129	17,541 0 0 0	..	15,952 2	36,516 8 10
	359	62,266 0 0 0	110,676 13	171,298 0	165,604 17 8
Komata—					
Komata Reefs	140	16,820 0 0 0	7,412 18	43,224 17	42,432 10 7
Totals for Ohinemuri County	506	79,110 13 0 0	118,177 11	214,522 17	208,231 2 6
PIAKO COUNTY.					
Waiorongomai—					
Hardy's Mines (Limited) ..	20	1,727 0 0 0	2,416 14	..	6,343 16 9
SUMMARY.					
Great Barrier	2	2,070 0 0 0	..	5,927 0	1,844 1 11
Coromandel County	115	1,599 18 2 23	2,419 0	270 12	7,461 10 7
Thames County and Borough ..	363	25,007 5 2 21	37,153 4	3,920 13	105,212 16 2
Waihi Borough	1,402	298,682 10 0 0	75,022 4	1,117,540 1	693,933 18 6
Ohinemuri County	506	79,110 13 0 0	118,177 11	214,522 17	208,231 2 6
Piako County	20	1,727 0 0 0	2,416 14	..	6,343 16 9
Grand totals, 1905 ..	2,408	408,197 7 1 16	235,188 13	1,342,181 3	1,023,027 6 5
„ 1904 ..	2,305	415,089 11 0 3	109,544 19	1,139,755 6	893,634 15 4
Increase ..	103	..	125,643 14	202,425 17	129,392 11 1
Decrease ..	..	6,892 3 2 15	..	..	..

Number of men employed on development-work, erection of batteries, &c., in the whole district from which no gold has been obtained is 245 men.

BATTERY RETURNS from QUARTZ-MINES in the MARLBOROUGH, NELSON, and WEST COAST MINING DISTRICTS for the Year ended the 31st December, 1905.

Name and Locality of Mine.	Quartz crushed.	Yield of Gold.	Approximate Total Values.
	Tons.	Oz. dwt. gr.	£ s. d.
Collingwood District—			
Golden Blocks, Taitapu	2,387	2,796 7 0	11,108 3 6
Hidden Treasure, Onakaka	..	41 11 0	103 16 4
Westport District—			
Red Queen, Mokihinui	118	134 17 1	528 5 3
Britannia, Waimangaroa	889	848 16 7	3,348 13 5
Lyell District—			
Alpine Extended, Lyell	444	54 6 0	207 8 0
Boatman's District—			
Welcome, Capleston	..	53 0 0	212 0 0
Buller United, Italian Gully	50	14 0 0	55 6 0
Kirwan's Reward, Victoria Range	7,584	1,683 18 6	6,699 13 11
Reefton District—			
Wealth of Nations, Crushington	11,970	4,702 0 2	19,053 15 9
Golden Fleece, Murray Creek	13,935	6,541 10 0	26,507 12 9
Progress, Devil's Creek	60,000	24,879 13 15	96,851 8 6
Keep-it-Dark, Crushington	12,730	5,021 2 21	19,351 15 1
New Inkerman, Rainy Creek*	3,330	722 15 1	2,811 8 0
New Inkerman, Rainy Creek†	564	11 17 12	33 16 10
New Scotia, Merrijigs	250	46 15 0	170 3 0
Inglewood Victoria, Murray Creek	1,730	1,654 19 2	5,681 8 6
Big River, Big River	920	879 2 6	3,514 8 3
Greymouth District—			
Taffy, Upper Blackball	..	30 18 7	125 5 8
Garden Gully, Paparoa Ranges‡	..	1 1 0	3 3 0
Totals	116,901	50,118 10 18	196,367 11 9

* When worked by the New Inkerman Mines (Limited). † After being taken over by the Consolidated Goldfields of New Zealand (Limited). ‡ Clean up of the Old Crœsus Battery.

RETURNS from QUARTZ-MINES in the SOUTHERN MINING DISTRICT for the Year ended the 31st December, 1905.

Name and Locality of Mine.	Ordinary Quartz crushed.	Produce of Amalgam.	Retorted Gold.	Melted Gold.	Value.	Tailings treated.	Gold from Tailings.		Tailings treated by
							Quantity.	Value.	
	Tons.	Oz. dwt. gr.		Oz. dwt. gr.	£ s. d.	Tons.	Oz. dwt. gr.	£ s. d.	
Premier Sunrise (New Zealand), Macetown	310	492 0 0	..	164 0 9	632 0 0	..	..	..	..
Indian Glenrock (Wynaad), Macetown	..	..	..	..	..	..	..	..	..
R. Balch, Macetown ..	205	465 0 0	..	254 1 2	931 3 9	..	..	..	..
W. H. Anderson and party, Macetown	79	47 7 0	..	43 16 3	166 4 5	..	..	..	..
D. McKay and party, Macetown	62	112 0 0	..	45 17 14	178 15 0	..	..	..	..
Shotover, Skipper's ..	947	1,086 0 0	..	401 11 5	1,498 15 2	226	45 6 17	169 0 0	Cyanide.
Morning Star, Preservation Inlet	..	..	..	..	..	40	7 4 7	23 4 2	Battery clean-up
Star of the East (Lawrence Bros.), Bannockburn	50	..	..	29 12 0	107 17 0	..	..	..	..
Go-bye (J. B. Holliday), Bannockburn	50	..	..	7 17 6	28 13 0	..	..	..	..
Sundries	5,797	7,804 4 0	..	1,486 3 16	5,801 11 3	411	116 16 6	284 12 4	..
Barewood, Barewood ..	2,612	2,721 15 0	..	1,023 17 12	3,840 0 0	..	58 7 15	169 9 7	Treated in N.S.Wales
Last Chance (T. Park & Co.), Canada Reefs	1,967	..	..	876 0 0	3,091 11 0	..	..	..	..
Johnston and Smith (Canada Reefs)	123	..	..	34 13 0	135 2 0	..	..	..	..
Scheelite (Macrae's) ..	57	..	..	..	..	..	..	..	..
Totals	12,259	12,728 6 0	..	4,367 9 19	16,411 12 7	677	227 14 21	646 6 1	..

STATEMENT of VALUE of GOLD WON from QUARTZ CRUSHED for ALL DISTRICTS for the Years ended the 31st December, 1905 and 1904.

Mining District.	Year ended the 31st December, 1905.	Year ended the 31st December, 1904.
	£	£
Hauraki	1,023,027	893,635
Marlborough, Nelson, and West Coast	196,368	224,626
Otago and Southland...	17,058	15,998
Totals	1,236,453	1,134,259

GROSS TOTALS and VALUE of GOLD PURCHASED by BANKS for Year ended the 31st December, 1905.

Bank.	Gold purchased.	Value.
Hauraki Mining District.		
	Oz. dwt. gr.	£ s. d.
Bank of New Zealand	49,609 10 0	107,009 6 10
Bank of New South Wales	5,249 8 0	13,010 18 11
Totals	54,858 18 0	120,020 5 9
Marlborough, Nelson, and Westland Mining Districts.		
Bank of New Zealand	28,145 4 0	109,822 18 11
National Bank of New Zealand	29,475 0 8	114,395 11 7
Bank of New South Wales	12,049 3 2	47,483 17 5
Union Bank of Australasia	2,404 0 0	9,567 0 0
Totals	72,073 7 10	281,269 7 11
Otago and Southland Districts.		
	Oz. dwt. gr.	£ s. d.
Bank of New Zealand	103,035 10 8	395,657 18 10
Bank of New South Wales	10,076 0 13	39,020 5 5
National Bank of New Zealand	39,729 14 17	153,457 0 3
Bank of Australasia	1,580 15 5	6,155 1 8
Union Bank of Australasia	16,080 10 0	63,336 9 6
Private buyers (A. H. Vernon-King)	530 5 4	2,067 2 7
Totals	171,032 15 23	659,693 18 3
Grand totals	297,965 1 9	1,060,983 11 11

SUMMARY OF WORKS CONSTRUCTED.

The following statement shows the whole of the different classes of works constructed by the Department, either by direct grants or by subsidies to local bodies, during the last twenty-four years (the votes for this purpose having been under the control of the Hon. the Minister of Mines), for the purpose of opening up the mineral belts throughout the colony, and also for the development of the mining industry:—

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
UP TO YEARS 1882–83 AND 1883–84.	£ s. d.	£ s. d.	£ s. d.
Water-races	29,252 1 11	14,853 9 5	14,398 11 6
Roads on goldfields	21,437 11 2	13,089 16 0	8,347 15 2
Roads and tracks undertaken by County Councils, subsidised by Mines Department	52,841 17 0	21,844 16 7	10,207 15 9
Works undertaken by prospecting associations, subsidised by Mines Department	13,216 13 4	3,350 0 0	3,400 0 0
Construction of drainage and sludge channels, subsidised by Mines Department	5,750 0 0	2,468 15 4	781 4 8
	122,498 3 5	55,606 17 4	37,135 7 1
1884–85.			
Water-races	4,846 1 9	14,596 2 9	4,648 11 6
Roads on goldfields	13,667 10 1	9,630 9 6	12,384 15 9
Roads and tracks undertaken by County Councils, subsidised by Mines Department	13,566 14 1	6,293 16 6	12,739 17 6
Roads to mines, other than gold, subsidised by Mines Department	4,594 10 0	111 19 0	2,888 1 0
Works undertaken by prospecting associations, subsidised by Mines Department	850 0 0	108 0 0	3,692 0 0
Construction of drainage and sludge channels, subsidised by Mines Department	4,050 0 0	1,050 0 0	1,931 4 8
Diamond and other drills	3,600 0 0	1,858 0 0	..
	45,174 15 11	33,648 7 9	38,284 10 5

SUMMARY OF WORKS CONSTRUCTED—*continued.*

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
1885–86.	£ s. d.	£ s. d.	£ s. d.
Water-races	3,660 4 9	6,063 2 3	6,964 4 4
Roads on goldfields	27,543 18 8	12,360 14 9	27,567 19 8
Roads undertaken by County Councils, subsidised by Mines Department	14,773 2 3	13,043 15 9	12,477 9 2
Roads to mines, other than gold, subsidised by Mines Department	1,551 19 10	4,327 0 10	490 12 8
Works undertaken by prospecting associations, subsidised by Mines Department	11,860 18 0	1,999 5 7	6,389 5 9
Construction of drainage and sludge channels, subsidised by Mines Department	10,051 14 9	3,994 16 6	6,995 9 9
Schools of Mines	2,160 9 7	1,260 9 7	900 0 0
	71,602 7 10	43,049 5 3	61,785 1 4
1886–87.			
Water-races	..	1,928 14 4	3,466 0 8
Roads on goldfields	12,453 3 5	22,229 16 1	17,791 7 0
Roads and tracks undertaken by County Councils, subsidised by Mines Department	12,613 4 8	7,415 19 6	10,455 1 5
Roads to mines, other than gold, subsidised by Mines Department	..	306 1 0	110 13 1
Works undertaken by prospecting associations and companies, subsidised by Mines Department	15,671 19 6	4,521 7 3	4,618 4 7
Construction of drainage and sludge channels, subsidised by Mines Department	5,549 14 6	6,207 18 0	672 6 10
Diamond and other drills	422 15 6	422 15 6	..
Schools of Mines	3,183 7 1	3,383 7 1	700 0 0
	49,894 4 8	46,415 18 9	37,813 13 7
1887–88.			
Water-races	6 6 6	6 6 6	..
Roads on goldfields	6,860 4 3	17,281 11 3	7,370 0 0
Roads and tracks undertaken by County Councils, subsidised by Mines Department	2,998 15 0	8,012 5 2	3,942 4 2
Roads to mines, other than gold, subsidised by Mines Department	..	14 5 4	..
Works undertaken by prospecting associations and companies, subsidised by Mines Department	6,456 8 0	2,703 19 3	924 8 0
Construction of drainage and sludge channels, subsidised by Mines Department	..	1,110 4 11	2,054 10 6
Schools of Mines	1,859 3 7	2,221 19 4	337 4 3
Aids to treatment of ores	1,200 0 0	390 18 3	209 1 9
	19,380 17 4	31,741 10 0	14,837 8 8
1888–89.			
Roads on goldfields	10,253 5 3	4,304 3 9	13,218 11 6
Roads and tracks undertaken by County Councils, subsidised by Mines Department	7,318 1 0	2,466 16 8	5,195 6 1
Works undertaken by prospecting associations and companies, subsidised by Mines Department	474 0 0	236 0 0	687 8 0
Construction of drainage and sludge channels, subsidised by Mines Department	..	54 10 6	..
Wharves, contributions by Mines Department	589 19 5	96 6 0	343 13 5
Aids to treatment of ores, subsidised	..	209 1 9	..
Schools of Mines	895 16 10	1,188 6 10	44 14 3
	19,531 2 6	8,555 5 6	19,489 13 3
1889–90.			
Roads on goldfields	3,834 9 7	9,148 5 9	8,005 5 4
Roads and tracks undertaken by County Councils, subsidised by Mines Department	8,507 15 8	3,451 17 11	5,928 1 3
Works undertaken by prospecting associations and companies, subsidised by Mines Department	..	..	663 0 0
Water-races	2,200 0 0	719 0 0	681 0 0
Wharves	..	150 0 0	193 13 5
Schools of Mines	1,040 0 8	1,034 0 11	50 14 0
Aids to treatment of ores	142 8 9	142 8 9	..
Tracks to open up mineral lands	1,000 0 0	207 3 6	792 16 6
Diamond drills	425 14 5	425 14 5	..
	17,150 9 1	15,278 11 3	16,314 10 6

SUMMARY OF WORKS CONSTRUCTED—*continued.*

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
1890–91.	£ s. d.	£ s. d.	£ s. d.
Roads on goldfields	8,811 14 4	10,815 14 8	5,201 5 0
Roads and tracks undertaken by County Councils, subsidised by Mines Department	2,703 5 0	2,252 5 5	5,027 8 4
Works undertaken by prospecting associations and companies, subsidised by Mines Department	..	..	663 0 0
Water-races	5,542 19 8	6,234 4 6	..
Wharves	..	39 9 9	..
Schools of Mines	3,847 10 0	3,898 4 0	..
Tracks to open up mineral lands	..	78 4 7	419 19 5
	20,905 9 0	23,318 2 11	11,311 12 9
1891–92.			
Roads on goldfields	14,226 5 1	8,460 0 3	11,767 9 10
Roads and tracks undertaken by County Councils, subsidised by Mines Department	3,162 0 0	1,720 18 6	4,937 10 2
Works undertaken by prospecting associations and companies, subsidised by Mines Department	1,455 5 5	336 15 9	1,663 0 0
Water-races	2,256 13 6	2,256 13 6	..
Wharves	..	..	..
Schools of Mines	1,370 19 9	1,370 19 9	..
Tracks to open up mineral lands	40 0 0	41 16 0	418 3 7
	22,511 3 9	14,187 3 9	18,786 3 7
1892–93.			
Roads on goldfields	15,199 2 4	17,325 10 0	9,628 6 10
Roads and tracks undertaken by County Councils, subsidised by Mines Department	550 0 0	1,033 0 0	4,831 9 10
Works undertaken by prospecting associations and companies, subsidised by Mines Department	970 4 9	865 4 3	1,768 0 6
Water-races	3,811 1 10	3,811 1 10	..
Wharves	..	..	..
Schools of Mines	1,232 4 4	1,232 4 4	..
Tracks to open up mineral lands	..	..	419 19 5
Artesian-well boring, Maniototo Plains	550 0 0	281 3 6	268 16 6
	22,312 13 3	24,548 3 11	16,916 13 1
1893–94.			
Roads on goldfields	18,418 19 2	15,056 0 11	13,013 18 5
Roads and tracks undertaken by County Councils, subsidised by Mines Department	5,038 11 6	2,718 17 8	5,576 10 7
Works undertaken by prospecting associations and companies, subsidised by Mines Department	2,245 19 4	1,709 18 5	1,027 7 11
Water-races	5,271 17 1	5,271 17 1	900 0 0
Drainage-channels	..	..	1,000 0 0
Wharves	..	..	..
Schools of Mines	1,555 19 9	1,555 19 9	..
Tracks to open up mineral lands	..	..	..
Repairing flood-damages	500 0 0	500 0 0	..
Artesian-well boring, Maniototo Plains	800 0 0	518 16 6	..
	33,831 6 10	27,331 10 4	21,517 16 11
1894–95.			
Roads on goldfields	20,908 13 7	15,160 3 5	18,752 10 7
Roads and tracks undertaken by County Councils, subsidised by Mines Department	685 18 4	2,295 9 2	1,934 5 7
Works undertaken by prospecting associations and companies, subsidised by Mines Department	10,805 15 4	2,378 13 2	3,006 13 0
Water-races	4,801 19 7	2,427 10 11	2,151 18 8
Drainage-channels	1,521 0 0	673 14 10	3,647 5 2
Wharves	..	..	..
Schools of Mines	999 8 6	999 8 6	..
Tracks to open up mineral lands	..	..	..
Repairing flood-damages	..	..	..
Artesian-well boring, Maniototo Plains	505 19 11	505 19 11	..
Diamond drills	..	..	..
	40,228 15 3	24,440 19 11	29,492 13 0
1895–96.			
Roads on goldfields	14,554 0 7	19,970 6 6	14,086 4 8
Roads and tracks undertaken by County Councils, subsidised by Mines Department	4,614 11 1	1,607 8 6	4,290 16 11
Works undertaken by prospecting associations and companies, subsidised by Mines Department	3,477 7 0	1,726 4 8	10,093 3 0
Water-races	6,820 18 3	5,162 9 2	2,515 7 9
Drainage-channels	5,100 0 0	2,240 5 1	2,657 0 1
Wharves	..	..	..
Schools of Mines	999 3 0	999 3 0	..
Tracks to open up mineral lands	..	..	..
Repairing flood-damages	..	..	..
Artesian-well boring, Maniototo Plains	..	..	..
Diamond drills	216 1 6	216 1 6	..
	35,782 1 5	31,921 18 5	33,642 12 5

SUMMARY OF WORKS CONSTRUCTED—*continued.*

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
1896–97.	£ s. d.	£ s. d.	£ s. d.
Roads on goldfields	57,685 9 6	30,720 12 7	35,622 15 3
Roads and tracks undertaken by County Councils, subsidised by Mines Department	11,677 0 0	1,759 6 5	4,079 18 3
Works undertaken by prospecting associations and companies, subsidised by Mines Department	1,570 7 3	1,533 6 7	2,915 14 3
Water-races	3,090 11 1	3,927 18 0	1,678 0 10
Drainage-channels	1,409 0 0	2,149 3 11	2,516 16 2
Wharves	..	..	..
Schools of Mines	1,682 19 5	1,682 19 5	..
Tracks to open up mineral lands	..	..	..
Repairing flood-damage	..	..	..
Artesian-well boring, Maniototo Plains	..	..	..
Resumption of land	300 0 0	300 0 0	..
Prospecting deep levels	25,500 0 0	2,697 14 5	22,802 5 7
	102,915 7 3	44,771 1 4	69,615 10 4
1897–98.			
Roads on goldfields	71,318 11 7	37,410 14 3	33,907 17 4
Roads and tracks undertaken by County Councils, subsidised by Mines Department	25,151 9 8	12,158 6 7	9,677 14 0
Works undertaken by prospecting associations and companies, subsidised by Mines Department	3,939 8 1	2,357 15 1	1,581 13 0
Water-races	3,275 8 9	2,272 5 0	1,003 3 9
Drainage-channels	4,481 14 0	1,212 14 9	3,268 19 3
Schools of Mines	1,780 17 3	1,780 17 3	..
Prospecting deep levels	25,500 0 0	21,520 15 0	1,281 10 7
Water-conservation	507 3 9	507 3 9	..
Construction of telephone-lines	60 0 0	50 0 0	..
Compensation proclamation of rivers	5,196 13 10	5,196 13 10	..
	141,211 6 11	84,467 5 6	50,720 17 11
1898–99.			
Roads on goldfields	48,201 0 2	42,358 8 6	39,825 9 0
Roads and tracks undertaken by County Councils, subsidised by Mines Department	21,025 12 0	4,191 7 9	5,914 7 5
Works undertaken by prospecting associations and companies, subsidised by Mines Department	2,936 11 8	2,143 14 1	1,103 13 1
Water-races	3,853 16 5	2,932 12 1	1,719 6 3
Drainage-channels	3,539 7 5	2,426 13 5	3,802 16 4
Schools of Mines	1,450 15 2	1,450 15 2	..
Prospecting deep levels	25,500 0 0	1,281 10 7	..
Water-conservation	12,483 13 1	7,893 19 4	..
Construction of telephone-lines	..	..	..
Compensation proclamation of rivers	676 0 8	676 0 8	..
	119,666 16 7	65,355 1 7	52,365 12 1
1899–1900.			
Roads on goldfields	46,442 15 10	44,258 2 6	42,010 2 4
Roads and tracks undertaken by County Councils, subsidised by Mines Department	4,625 0 0	2,865 7 4	5,011 0 11
Works undertaken by prospecting associations and companies, subsidised by Mines Department	2,549 7 2	1,400 9 6	1,784 3 0
Water-races	7,909 5 11	8,430 14 0	963 11 10
Drainage-channels	1,090 0 0	1,435 7 5	2,627 14 7
Schools of Mines	1,866 13 3	1,866 13 3	..
Prospecting deep levels	..	..	..
Water-conservation	6,925 10 9	6,925 10 9	..
Resumption of land	2,812 7 0	2,812 7 0	..
Compensation proclamation of rivers	811 0 0	811 0 0	..
Aid towards the treatment of ores	915 1 4	915 1 4	..
	75,947 1 3	71,720 13 1	52,396 12 8
1900–1.			
Roads on goldfields	48,835 2 1	44,757 0 1	* 46,088 4 4
Roads and tracks undertaken by County Councils, subsidised by Mines Department	1,495 8 2	2,882 6 2	3,133 4 10
Works undertaken by prospecting associations and companies, subsidised by Mines Department	2,353 5 10	1,266 11 7	1,033 7 9
Water-races	3,954 1 6	4,251 19 8	50 0 0
Drainage-channels	2,058 0 0	517 0 4	927 7 3
Schools of Mines	1,598 2 1	1,598 2 1	..
Prospecting deep levels	..	..	..
Water-conservation	2,680 19 1	3,787 17 9	..
Resumption of land	..	..	..
Compensation proclamation of rivers	6,083 18 9	6,083 18 9	..
Aid towards the treatment of ores	778 1 0	778 1 0	..
	69,836 18 6	65,922 17 5	51,232 4 2

SUMMARY OF WORKS CONSTRUCTED—*continued.*

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
1901–2.	£ s. d.	£ s. d.	£ s. d.
Roads on goldfields	80,602 9 4	44,697 10 0	35,904 19 4
Roads and tracks undertaken by County Councils, subsidised by Mines Department	34,216 16 8	2,847 17 3	1,909 0 11
Works undertaken by prospecting associations and companies, subsidised by Mines Department	2,578 10 8	1,509 10 9	1,826 6 2
Water-races	5,860 3 5	6,665 15 1	1,760 16 1
Drainage-channels	1,005 1 8	889 4 6	1,390 3 7
Schools of Mines	2,087 13 8	2,087 13 8	..
Prospecting deep levels	..	..	..
Water-conservation	2,114 12 5	942 13 10	1,171 19 7
Resumption of land	..	..	..
Compensation proclamation of rivers	5,318 2 9	5,318 2 9	..
Aid towards the treatment of ores	77 17 0	27 17 0	50 0 0
	133,861 7 7	64,986 4 10	44,013 5 10
1902–3.			
Roads on goldfields	62,389 0 5	50,230 12 3	48,063 7 6
Roads and tracks undertaken by County Councils, subsidised by Mines Department	2,285 0 0	1,409 0 8	1,512 1 11
Works undertaken by prospecting associations and companies, subsidised by Mines Department	1,595 17 0	1,131 0 4	1,821 17 7
Water-races	6,122 11 11	5,316 10 3	..
Drainage-channels	2,896 14 2	1,567 13 8	2,454 14 9
Schools of Mines	2,533 14 2	2,533 14 2	..
Prospecting deep levels	..	..	..
Water-conservation	2,535 0 10	2,982 0 5	725 0 0
Resumption of land	..	..	..
Proclamation of rivers	13,215 10 8	13,215 10 8	..
Aid towards the treatment of ores	50 12 5	50 12 5	..
	93,624 1 7	78,436 14 10	54,577 1 9
1903–4.			
Roads on goldfields	60,427 18 6	45,116 3 0	23,375 3 0
Roads and tracks undertaken by County Councils, subsidised by Mines Department	600 0 0	428 10 1	..
Works undertaken by prospecting associations and companies, subsidised by Mines Department	1,994 8 0	1,088 17 3	1,380 9 7
Water-races	883 12 3	683 12 3	200 0 0
Drainage-channels	2,135 17 0	1,684 15 9	458 5 0
Schools of Mines	2,366 9 9	2,366 9 9	..
Prospecting deep levels	6,099 18 1	6,099 18 1	..
Water-conservation	1,819 4 5	1,544 4 5	..
Proclamation of rivers	5,176 17 7	5,176 17 7	..
Aid towards the treatment of ores	49 10 0	49 10 0	..
	81,553 15 7	64,238 18 2	25,413 17 7
1904–5.			
Roads on goldfields	58,098 14 10	25,975 14 2	32,123 0 8
Roads and tracks undertaken by County Councils, subsidised by Mines Department	253 0 0	136 10 0	40 0 0
Works undertaken by prospecting associations and companies, subsidised by Mines Department	3,229 16 8	2,569 11 8	1,627 17 6
Water-races	631 1 0	509 8 6	21 12 6
Drainage-channels	893 4 1	747 17 10	145 6 3
Schools of Mines	2,381 5 5	2,381 5 5	..
Prospecting deep levels	178 5 7	178 5 7	..
Water-conservation	372 7 11	372 7 11	..
Proclamation of rivers	1,880 5 8	1,880 8 5	..
	67,918 1 2	34,751 9 6	33,957 16 11
1905–6.			
Roads on goldfields	45,643 10 3	44,694 10 10	33,072 0 1
Roads and tracks undertaken by County Councils, subsidised by Mines Department	850 0 0	15 0 0	450 0 0
Works undertaken by prospecting associations and companies, subsidised by Mines Department	5,126 18 10	1,802 14 9	1,274 10 5
Water-races	13,534 10 2	13,534 10 2	..
Drainage-channels	2,301 17 5	835 3 8	16,12 0 0
Schools of Mines	2,883 10 10	2,883 10 10	..
Prospecting deep levels	676 18 0	676 18 0	..
Water-conservation	241 3 6	241 3 6	..
Proclamation of rivers	1,422 14 11	1,422 14 11	..
Aid towards the treatment of ores	448 7 6	448 7 6	..
	73,129 11 5	66,554 14 2	36,408 10 6

SUMMARY OF WORKS CONSTRUCTED—*continued.*

Nature of Works.	Total Cost of Construction, or Amount authorised to be expended.	Expenditure, by way of Subsidy or otherwise, by Mines Department.	Amount of Liability by Mines Department on Works in Progress.
SUMMARY.	£ s. d.	£ s. d.	£ s. d.
Roads on goldfields	617,691 8 6	584,619 8 5	33,072 0 1
Subsidised roads and tracks	175,502 1 5	103,283 12 2	450 0 0
Subsidised roads and tracks other than on goldfields ..	6,146 9 10	4,759 6 2	..
Prospecting	92,433 16 4	36,740 0 7	1,274 10 5
Water-races	115,563 2 1	111,855 17 3	..
Wharves	435 15 9	285 15 9	..
Schools of Mines	39,776 4 1	39,776 4 1	..
Drainage-channels	46,283 5 9	31,265 0 5	1,612 0 0
Diamond drills	5,170 11 4	3,428 11 4	..
Treatment of ores	3,661 18 0	3,011 18 0	..
Tracks to open up mineral lands	325 8 1	325 8 1	..
Artesian-well boring, Maniototo Plains	800 0 0	800 0 0	..
Repairing flood-damages	500 0 0	500 0 0	..
Prospecting deep levels	57,955 1 8	32,455 1 8	..
Resumption of land	3,112 7 0	3,112 7 0	..
Water-conservation	25,197 1 8	25,197 1 8	..
Construction of telephone-lines	60 0 0	50 0 0	..
Proclamation of rivers	39,781 7 7	39,781 7 7	..
	1,230,395 19 1	1,021,247 0 2	36,408 10 6

LIST of WORKS on GOLDFIELDS undertaken wholly by the Mines Department, or by Subsidies to County Councils, Local Bodies, and Prospecting Associations, in Progress on the 31st March, 1906.

Locality and Nature of Works.	Total Cost, or Amount authorised.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
NORTH ISLAND.			
ROADS (SUBSIDISED).			
Great Barrier Island.	£ s. d.	£ s. d.	£ s. d.
Road from Sunbeam Mine to battery	300 0 0	..	150 0 0
Coromandel County.			
Hoununga Bridge	100 0 0	..	50 0 0
Thames County.			
Metalling Tapu Creek Road	50 0 0	..	25 0 0
MIDDLE ISLAND.			
ROADS (SUBSIDISED).			
Buller County.			
Charleston Main Road to Croninville Claim	200 0 0	..	100 0 0
Westland County.			
Track, Muller's to McLeod's Terrace Claim	50 0 0	..	25 0 0
Ross Borough Council.			
Repairs, Donnelly Creek Bridge	200 0 0	..	100 0 0
	900 0 0	..	450 0 0

LIST of WORKS on GOLDFIELDS undertaken wholly by the Mines Department, or by Subsidies to County Councils, Local Bodies, and Prospecting Associations, in Progress on the 31st March, 1906.

Locality and Nature of Works.	Total Cost, or Amount authorised.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
WORKS UNDER CONSTRUCTION WHOLLY BY MINES DEPARTMENT.	£ s. d.	£ s. d.	£ s. d.
Cemetery Road, Kuaotunu	15 0 0	..	15 0 0
Cardrona Coal-pit Road	50 0 0	25 0 0	25 0 0
Wainihinihi Water-race Track	50 0 0	..	50 0 0
Omeera Prospecting Track	200 0 0	..	200 0 0
Main South Road (repairs)	2,749 17 6	2,470 6 6	279 11 0
Road to Mines, Great Barrier	100 0 0	..	100 0 0
Tairua–Whenuakite	1,050 0 0	950 0 0	100 0 0
Coromandel–Kuaotunu *via* Matarangi	2,443 0 0	2,243 0 0	200 0 0
Tiki–Kaimarama	1,585 10 0	1,495 10 0	90 0 0
Manaia–Waikawau	5,695 0 0	5,531 0 0	164 0 0
Kuaotunu–Mercury Bay	1,872 11 6	1,772 11 6	100 0 0
Whitianga–Gumtown	1,159 6 6	1,101 1 6	58 5 0
Mercury Bay Bridge	150 0 0	..	150 0 0
Kikowhakarere–Cabbage Bay	1,700 0 0	1,500 0 0	200 0 0
Wharf Road, Coromandel	1,778 12 6	1,578 12 6	200 0 0
Whitianga–Kaimarama	1,374 13 6	1,299 13 6	75 0 0
Opitonui Road	999 0 0	849 0 0	150 0 0
Gumtown Road	200 0 0	60 0 0	140 0 0
Waitaia Mine to Battery	457 17 3	382 17 3	75 0 0
Kennedy Bay to Matamataharakeke	100 0 0	65 0 0	35 0 0
Ward's Road–Cape Colville	500 0 0	450 0 0	50 0 0
Kaimarama Bridge	500 0 0	..	500 0 0
Manaia Goldfield Road	100 0 0	..	100 0 0
Colville II, Moehau II, and Harataunga I Blocks	200 0 0	100 0 0	100 0 0
Bridge at Break in Big Bay–Cabbage Bay Road	200 0 0	100 0 0	100 0 0
Tokatea–Kennedy Bay	1,210 0 0	1,160 0 0	50 0 0
Thames–Waikawau	2,981 15 3	2,904 5 3	77 10 0
Thames–Hikutaia	2,779 15 5	2,765 0 9	14 14 8
Upper Tararu Road	1,806 9 11	1,780 15 2	25 14 9
Hikutaia–Whangamata "Wires" Track	2,611 7 6	2,524 6 6	87 1 0
Omahu–Whangamata	2,195 0 0	2,165 15 0	29 5 0
Waimangu Mine Road	200 0 0	..	200 0 0
Puriri–Neavesville	1,199 10 0	999 15 0	199 15 0
Neavesville–Upper Landing	927 0 0	727 0 0	200 0 0
Upper Landing–Tairua	850 0 0	637 10 0	212 10 0
Kaueranga Valley Road (protection)	150 0 0	12 0 0	138 0 0
Hape Creek Road	300 0 0	280 0 0	20 0 0
Gumtown–Big Beetle	250 0 0	..	250 0 0
Tapu–Gumtown	1,062 0 0	836 8 0	225 12 0
Moanataiari Road	300 0 0	250 0 0	50 0 0
Maratoto Road	300 0 0	254 6 10	45 13 2
Tararu Creek Road	100 0 0	50 0 0	50 0 0
Omahu Bridge	225 0 0	..	225 0 0
Champion Mine Road	250 0 0	..	250 0 0
Neavesville Road (protection)	100 0 0	..	100 0 0
Moanataiari Aqueduct (repairs)	110 0 0	..	110 0 0
Karaka Creek (clearing)	100 0 0	..	100 0 0
Hikutaia–Waihi	3,940 0 0	3,773 8 6	166 11 6
Waitekauri–Golden Cross	2,664 0 0	2,465 15 0	198 5 0
Paeroa–Te Aroha	1,143 11 2	943 11 2	200 0 0
Paeroa–Waitoa	2,285 13 4	2,235 13 4	50 0 0
Seddon–Waikino	100 0 0	..	100 0 0
Netherton Roads	1,178 0 0	1,078 0 0	100 0 0
Komata Creek Road	954 10 0	834 10 9	119 19 3
Waitawheta Road (deviation)	714 0 0	559 10 0	154 10 0
Bridge Road–Karangahake	100 0 0	..	100 0 0
Hikutaia–Maratoto	594 2 6	493 12 6	100 10 0
Waitekauri Hill Track	100 0 0	..	100 0 0
Waitekauri–Jubilee	300 0 0	200 0 0	100 0 0
Waitawheta–Waihi	100 0 0	..	100 0 0
Ford Road–Mackaytown	100 0 0	47 6 6	52 13 6
Rahu Road	100 0 0	..	100 0 0
Cadman Road	100 0 0	..	100 0 0
Onamalutu–Wakamarina Forks	808 0 0	728 10 0	79 10 0
Wakamarina Road and Bridges	50 0 0	24 13 9	25 6 3
Deep Creek Bridge	613 0 0	..	613 0 0
Kaituna Bridge	688 1 0	100 0 0	588 1 0
Ferntown–Pakawau	807 3 0	755 16 6	51 6 6
Takaka–Collingwood "Inland" Road (Collingwood County)	3,973 19 11	3,961 17 1	12 2 10
Pakawau–Puponga	300 0 0	..	300 0 0
Pakawau–Tamatea	373 18 0	247 18 0	126 0 0
Muddy Creek Bridge	200 0 0	..	200 0 0
Pakawau–Mangarakau	200 0 0	..	200 0 0
Takaka Hill Road	300 0 0	150 0 0	150 0 0
Anatoki Track	450 0 0	350 0 0	100 0 0
Vants–Bubu	450 0 0	350 0 0	100 0 0
Long Plain Road	100 0 0	..	100 0 0
Bubu Bridge	300 0 0	..	300 0 0
Takaka–Collingwood "Inland" Road (Takaka County)	170 0 0	126 12 3	43 7 9
Long Plain Bridge (approaches)	200 0 0	..	200 0 0

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost, or Amount authorised.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
WORKS UNDER CONSTRUCTION WHOLLY BY MINES DEPARTMENT—*continued.*	£ s. d.	£ s. d.	£ s. d.
Upper Anatoki Pack-track	250 0 0	..	250 0 0
Motueka River (protective works)	280 5 8	200 0 0	80 5 8
Wangapeka–Baton	1,000 0 0	750 0 0	250 0 0
Thorpe–Baton	100 0 0	55 6 4	44 13 8
Shaggery Bridge	300 0 0	131 12 2	168 7 10
Riwaka–Kaiteriteri	203 19 6	178 8 6	25 11 0
Graham River Bridge	200 0 0	100 0 0	100 0 0
Aniseed Valley Road	200 0 0	100 0 0	100 0 0
Dart River (Chandler's) Bridge	130 0 0	..	130 0 0
Motueka Valley – Wangapeka	100 0 0	..	100 0 0
Millerton Road (widening)	1,700 0 0	1,600 0 0	100 0 0
Wilson's Lead Road	1,450 0 0	1,400 0 0	50 0 0
Granity Creek Southwards	1,950 0 0	1,850 0 0	100 0 0
Westport–Mokihinui	2,200 0 0	2,100 0 0	100 0 0
Karamea–Mud-flat	1,050 0 0	850 0 0	200 0 0
Long Tunnel – Addison's	250 0 0	..	250 0 0
Brighton – Grey County Boundary	1,150 0 0	900 0 0	250 0 0
Channel Flat – Mackley's	250 0 0	150 0 0	100 0 0
Loopline Road	500 0 0	250 0 0	250 0 0
Lyell – Cedar Creek	100 0 0	..	100 0 0
Fox's Bridge (repairs)	100 0 0	50 0 0	50 0 0
Millerton Township	200 0 0	100 0 0	100 0 0
Granity Creek – Ngakawau	150 0 0	100 0 0	50 0 0
Seddonville – Mokihinui Mine	250 0 0	100 0 0	150 0 0
Lyell–Eight-mile	300 0 0	150 0 0	150 0 0
Burnett's Face – Coalbrookdale	600 0 0	400 0 0	200 0 0
Mokihinui end of Westport Road	250 0 0	150 0 0	100 0 0
Cedar Creek – Denniston	100 0 0	75 0 0	25 0 0
Welshman's Flat Bridge	1,300 0 0	..	1,300 0 0
Waimangaroa–Granity	750 0 0	300 0 0	450 0 0
Charleston–Four-mile	400 0 0	100 0 0	300 0 0
Fairdown – Sergeant's Hill, *via* Railway	650 0 0	600 0 0	50 0 0
Seddonville Roads	300 0 0	275 0 0	25 0 0
Seddonville Colliery to Township	400 0 0	350 0 0	50 0 0
Millerton Township Streets	300 0 0	250 0 0	50 0 0
Mear's Road	350 0 0	300 0 0	50 0 0
Denniston – Burnett's Face	550 0 0	350 0 0	200 0 0
Mokihinui – Inangahua Junction	300 0 0	250 0 0	50 0 0
Bullock Creek Track	250 0 0	82 0 0	168 0 0
Mine Creek Township	100 0 0	..	100 0 0
Victory Mine Track, Lyell	100 0 0	75 0 0	25 0 0
New Creek Road	150 0 0	100 0 0	50 0 0
Prospecting Track, St. John's Terrace, Addison's	100 0 0	75 0 0	25 0 0
Reefton–Maruia	3,574 0 0	3,524 0 0	50 0 0
Boatman's Short Track	262 0 0	229 13 11	32 6 1
Ulster Mine Road	150 0 0	..	150 0 0
Matakitaki–Glenroy–Maruia	1,871 15 6	1,723 16 4	147 19 2
Maruia–Glenroy	250 0 0	70 7 9	179 12 3
Murray Creek Road	899 10 7	447 8 3	452 2 4
Loughnan's Coal-mine Road	150 0 0	..	150 0 0
Just-in-Time Shaft to Victoria Range	200 0 0	..	200 0 0
Road to Matakitaki River Bridge	388 0 0	193 0 0	195 0 0
Maruia Road, *via* Caslani's	563 0 0	366 14 4	196 5 8
Snowy Creek to Reefs	950 0 0	932 11 10	17 8 2
Murray Creek to Kirwan's Battery	500 0 0	..	500 0 0
Ten-mile Suspension Bridge	200 0 0	160 2 5	39 17 7
Kirwan's Reward to Battery-site	156 0 5	100 0 0	56 0 5
Inglewood–Painkiller	100 0 0	85 18 6	14 1 6
Boatman's Road	100 0 0	..	100 0 0
Blackwater Road (widening)	225 0 0	195 0 0	30 0 0
McLiver and Kearn's Coal-mine Road	100 0 0	..	100 0 0
Crushington Road (widening)	100 0 0	53 1 0	46 19 0
O'Rorke's – Horse Terrace	150 0 0	..	150 0 0
Specimen Hill Road (widening)	150 0 0	25 15 0	124 5 0
Blackwater – Big River	300 0 0	..	300 0 0
Blackwater Creek Track	200 0 0	150 0 0	50 0 0
Seven-mile – Nine-mile Bluff	3,252 2 2	3,152 2 2	100 0 0
Teremakau Bridge – Payne's	100 0 0	75 0 0	25 0 0
Moonlight–Blackball	800 0 0	780 0 0	20 0 0
Nelson Creek – Bell Hill	250 0 0	230 0 0	20 0 0
Maori Creek – Maori Gully	100 0 0	80 0 0	20 0 0
Ahaura – Moonlight Shellback	100 0 0	..	100 0 0
Seven-mile – McLean's Creek	100 0 0	..	100 0 0
Kumara–Greenstone–Inchbonnie	100 0 0	80 0 0	20 0 0
Waipuna Road	100 0 0	..	100 0 0
Payne's Gully Track	150 0 0	75 0 0	75 0 0
Ahaura Bridge	100 0 0	70 0 0	30 0 0
Nelson Creek Foot-bridge	50 0 0	30 0 0	20 0 0
Cobden–Barrytown	100 0 0	75 0 0	25 0 0
Greymouth–Reefton	100 0 0	80 0 0	20 0 0
Deadman's Creek Prospecting Track	100 0 0	..	100 0 0
Upper Moonlight Road	150 0 0	125 0 0	25 0 0
Marsden Road and Bridges	200 0 0	150 0 0	50 0 0

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost, or Amount authorised.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
WORKS UNDER CONSTRUCTION WHOLLY BY MINES DEPARTMENT—*continued.*	£ s. d.	£ s. d.	£ s. d.
Grey–Barrytown Road to State Coal-mine	250 0 0	..	250 0 0
Brunner–Blackball	1,035 4 7	735 4 7	300 0 0
Browning's Pass Track (widening)	350 0 0	200 0 0	150 0 0
Humphrey's Track – Milltown	100 0 0	82 6 6	17 13 6
Waiho Prospecting Tracks	150 0 0	30 0 0	120 0 0
Westland Reefs Track	800 0 0	750 0 0	50 0 0
Larrikins–Loopline	399 16 9	250 15 3	149 1 6
Fox's Road	200 0 0	146 10 0	53 10 0
Taipo Prospecting Tracks	200 0 0	148 7 6	51 12 6
Greek's Creek (protection)	100 0 0	68 15 0	31 5 0
Kanieri Lake Road	100 0 0	83 4 0	16 16 0
Westland Reefs Prospecting Tracks	250 0 0	150 0 0	100 0 0
Gillam's Gully Track (extension)	200 0 0	147 10 0	52 10 0
Milltown Improvement	100 0 0	47 10 0	52 10 0
Lawrence–Roxburgh	850 0 0	666 13 3	183 6 9
Waipori–Waitahuna	549 19 0	483 19 0	66 0 0
Doherty and Hopkin's Bridges	260 0 0	..	260 0 0
Lawrence–Clyde (Tuapeka County)	2,916 17 6	2,868 7 6	48 10 0
Ryan Coal-pit Road	150 0 0	..	150 0 0
Fraser River Bridge	300 0 0	..	300 0 0
Wanaka Lake Track	100 0 0	..	100 0 0
Lawrence–Clyde (Vincent County)	2,154 12 6	2,100 0 0	54 12 6
Garston–Nevis (Lake County)	575 0 0	500 0 0	75 0 0
Queenstown – Gentle Annie	845 0 0	725 0 0	120 0 0
Shotover Valley Road	100 0 0	..	100 0 0
Colac – Round Hill	700 0 0	400 0 0	300 0 0
Nokomai Road	50 0 0	..	50 0 0
Garston–Nevis (Southland County	400 0 0	300 0 0	100 0 0
Riversdale–Waikaia	100 0 0	..	100 0 0
Waikaka Valley Main Road (repairs)	100 0 0	..	100 0 0
Waikaia Bridge	500 0 0	..	500 0 0
Waikaka Valley Road to Dredging Claims	350 0 0	250 0 0	100 0 0
Waikaia to Dredges	100 0 0	..	100 0 0
Waimumu Road to Dredging Claims	100 0 0	..	100 0 0
Stewart Island Road	200 0 0	..	200 0 0
Stewart Island Road to Mines	250 0 0	70 0 0	180 0 0
Motueka Bridge	1,000 0 0	..	1,000 0 0
Big Ohika Bridge	986 7 4	901 6 4	85 1 0
Mokihinui – Little Wanganui	8,008 7 4	7,325 16 3	682 11 1
Waitahu River Bridge	100 0 0	..	100 0 0
Inangahua Bridge	2,162 9 9	1,629 2 1	533 7 8
Deviation Reefton–Hokitika–Ross Road to Stafford and Goldsboro' with bridge	1,600 0 0	..	1,600 0 0
Reefton–Hokitika–Ross	24,591 17 11	24,330 9 1	261 8 10
Wilberforce – Westland Reefs	1,000 0 0	24 0 4	975 19 8
Survey Kokatahi Track	450 0 0	28 7 0	421 13 0
Donnelly's Creek Bridge	402 6 6	2 6 6	400 0 0
Kanieri Bridge	950 0 0	312 19 5	637 0 7
Okarito–Forks Prospecting Track	164 8 0	64 8 0	100 0 0
Collingwood Bridge and Approaches	9,755 0 4	9,755 0 4	..
Denniston Hill Road	8,587 13 1	8,587 13 1	..
Fairdown–Waimangaroa	515 10 9	515 10 9	..
Westport–Waimangaroa	455 10 2	455 10 2	..
Arnold Bridge (repairs)	918 1 4	918 1 4	..
Taylorville Bridge	2,327 11 11	2,282 11 11	45 0 0
Mount Hercules (deviation)	574 2 3	574 2 3	..
	188,837 16 7	155,765 16 6	33,072 0 1
SCHOOLS OF MINES.			
Schools of Mines	28,222 17 11	28,222 17 11	..
School of Mines (Otago University)	11,553 6 2	11,552 6 2	..
	39,776 4 1	39,776 4 1	..
PROSPECTING SUBSIDIES.			
Coromandel County (A. McNeil)	13 0 0	..	6 10 0
Coromandel County (J. Hickey)	25 0 0	..	22 10 0
Coromandel County (R. H. M. Kemner)	90 0 0	..	45 0 0
Coromandel County (J. and M. Fitzgerald)	216 0 0	93 1 0	15 0 0
Coromandel County (F. O'Dowd)	60 0 0	11 2 0	18 18 0
Coromandel County (Grace and Huntly)	26 0 0	11 0 0	2 0 0
Coromandel County (J. Bray)	30 0 0	12 0 0	3 0 0
Coromandel County (McGuinness and party)	90 0 0	..	45 0 0
Coromandel County (Hollis and Cornes)	120 0 0	45 0 0	15 0 0
Coromandel County (W. Meikle)	13 0 0	..	6 10 0
Coromandel County (O'Keefe and party)	156 0 0	60 0 0	18 0 0

LIST of WORKS on GOLDFIELDS, &c.—*continued*.

Locality and Nature of Work.	Total Cost, or Amount authorised.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
PROSPECTING SUBSIDIES—*continued*.	£ s. d.	£ s. d.	£ s. d.
Coromandel County (A. S. Ford)	30 0 0	..	15 0 0
Coromandel County (G. J. Panter)	60 0 0	..	30 0 0
Waitaia Gold-mines (Ltd.)	360 0 0	..	180 0 0
Thames County (S. Stephens)	30 0 0	..	15 0 0
Ohinemuri County (Williams and How)	90 0 0	15 0 0	30 0 0
Ohinemuri County (tunnel, Eclipse Claim)	30 0 0	..	15 0 0
Tauranga County (tunnel, Waitakohe)	60 0 0	21 18 0	8 2 0
Miners' Association, Takaka, prospecting Upper Anatoki	48 0 0	..	24 0 0
Buller County (C. Stewart)	90 0 0	15 0 0	30 0 0
Buller County (Young and McKay)	310 0 0	60 1 9	94 18 3
Buller County (Findlay and Crawford)	120 0 0	70 15 6	39 4 6
Buller County (M. Conradson)	150 0 0	43 10 0	31 10 0
Inangahua County (Newcombe and Patterson)	26 0 0	7 0 0	6 0 0
Inangahua County (P. Cunningham)	26 0 0	6 10 0	6 10 0
Inangahua County (Howell and Kennedy)	150 0 0	13 16 0	61 4 0
Upper Blackwater Miners' Association (P. Hayden)	180 0 0	..	91 5 0
J. T. Johnson, Waipori Deep Lead	250 0 0	61 19 7	63 0 5
Westland County (prospecting Rimu)	4,998 18 6	2,499 9 3	..
Westland County (Jamieson and Garvin)	125 0 0	22 17 9	40 6 3
Westland County (R. A. Harcourt)	200 0 0	22 10 0	78 0 0
Westland County (G. Noble)	460 0 0	34 10 6	195 9 6
Westland County (Boyd and party)	300 0 0	125 2 6	17 12 6
Westland County (G. Davis)	50 0 0	20 0 0	5 0 0
	9,082 18 6	3,272 3 10	1,274 10 5
WATER-RACES.			
Waimea–Kumara Water-race	51,662 5 7	51,662 5 7	..
Mount Ida Water-race	11,466 6 10	11,466 6 10	..
Alexandra–Bonanza Water-race	13,084 10 2	13,084 10 2	..
	76,213 2 7	76,213 2 7	..
DRAINAGE AND TAILINGS CHANNELS.			
Jones Creek Storm-channel	125 0 0	125 0 0	..
Waimea Main Tail-race	2,117 6 8	2,042 6 8	75 0 0
St. Bathan's Channel	3,000 0 0	2,000 0 0	1,000 0 0
Kelly's Terrace Tunnel	2,177 0 6	2,147 0 6	30 0 0
Kumara Sludge-channel No. 3 Extension	1,689 2 5	1,182 2 5	507 0 0
	9,108 9 7	7,496 9 7	1,612 0 0
WATER-CONSERVATION ON GOLDFIELDS.			
Engineer's salary and expenses	3,219 0 2	3,219 0 2	..
	3,219 0 2	3,219 0 2	..

Summary of Works.

Roads subsidised—			
Great Barrier Island	300 0 0	..	150 0 0
Coromandel County	100 0 0	..	50 0 0
Thames County	50 0 0	..	25 0 0
Buller County	200 0 0	..	100 0 0
Westland County	50 0 0	..	25 0 0
Ross Borough Council	200 0 0	..	100 0 0
Works under construction wholly by Mines Department	188,837 16 7	155,765 16 6	33,072 0 1
Schools of Mines	39,776 4 1	39,776 4 1	..
Prospecting subsidies	9,082 18 6	3,272 3 10	1,274 10 5
Water-races	76,213 2 7	76,213 2 7	..
Drainage-channels	9,108 9 7	7,496 9 7	1,612 0 0
Compensation, proclamation of rivers	39,781 7 7	39,781 7 7	..
Water-conservation on goldfields	3,219 0 2	3,219 0 2	..
Totals	366,918 19 1	325,524 4 4	36,408 10 6

LIST of WORKS on GOLDFIELDS constructed wholly by the Mines Department, or by Subsidies to County Councils, Local Bodies, and Prospecting Associations, and completed prior to the 31st March, 1906.

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
NORTH ISLAND.						
ROADS (SUBSIDISED).						
Bay of Islands County.	£	s.	d.	£	s.	d.
Tiriwhanga Gorge to Galbraith's Road, Puhipuhi	237	0	0	118	10	0
Air-line Road to battery-site, Puhipuhi	73	0	0	36	10	0
Tiriwhanga Gorge to Puhipuhi	800	0	0	800	0	0
New Bay of Islands Coal Company	500	0	0	250	0	0
Road, Taumarere Railway-station to Puhipuhi	482	0	0	146	0	0
	2,092	0	0	1,351	0	0
Coromandel County.						
Improving road to Iona and Just-in-Time Companies' mines	200	0	0	133	6	8
Making and improving track from Tokatea towards Kennedy Bay	320	0	0	213	6	8
Golden Belt Track	100	0	0	50	0	0
Tokatea Road (repairs)	300	0	0	150	0	0
Making and improving track from Golden Belt to Tiki	239	3	3	159	8	10
Making road from Ring's Bridge to Kapanga Mine	150	0	0	100	0	0
Making road to Kapanga Mine	132	0	0	88	0	0
Temporary track from Tokatea Saddle to Waikoromiko	50	0	0	33	6	8
Continuation of track from Success Company's mine to top of main range	80	0	0	53	6	8
Completion of road from Tokatea Saddle to Tokatea Battery	50	0	0	33	6	8
Widening road from Matawai to Vaughan's claim	357	0	0	238	0	0
Improving track, Mercury Bay to Waitai	100	0	0	66	13	4
Continuation and improving Waikoromiko Track	150	0	0	100	0	0
Emily Battery to Rocky Creek	60	0	0	40	0	0
Track, Bismarck Battery to Kennedy Bay	200	0	0	133	6	8
Road up Manaia	675	10	6	450	7	0
Extension of Vaughan's and Vizard's Tracks	150	0	0	100	0	0
Vizard's towards Marebel	200	0	0	133	6	8
Extending and widening Waitaia Road	100	0	0	66	13	4
Makarau to Waiau	1,600	0	0	1,066	13	4
Waikawau to Tiki	500	0	0	333	6	8
Paul's Creek to Cabbage Bay	200	0	0	133	6	8
Waikawau Creek Track	100	0	0	50	0	0
McLaughlin's Road	100	0	0	50	0	0
Manaia to McGregor's New Find	100	0	0	50	0	0
Manaia to Tiki	500	0	0	250	0	0
Old sawmill towards Matawai	200	0	0	100	0	0
Extension of Paul's Creek Track	300	0	0	150	0	0
Matarangi Track	400	0	0	200	0	0
Thames–Coromandel Road *via* Manaia	300	0	0	150	0	0
Harbour View extension	210	0	0	105	0	0
Kapanga to Paul's Creek	200	0	0	100	0	0
Mercury Bay to Kuaotunu	360	0	0	180	0	0
Wainara to Kuaotunu	450	0	0	225	0	0
Sea-beach to Kuaotunu	1,650	0	0	1,450	0	0
Just-in-Time Road, extension to Coromandel	450	0	0	225	0	0
Road, Waikawau Bridge to McLaughlin's	67	10	0	45	0	0
Mercury Bay Road	990	0	0	495	0	0
Bridge to Dugend's store, and widening and metalling road from bridge to Log Hut	450	0	0	300	0	0
Road from junction of Red Mercury battery up Pumpkin Flat to Waitaia	345	0	0	230	0	0
To connect road from Log Hut to commencement of contract of Kuaotunu–Mercury Bay Road	150	0	0	100	0	0
Road, with culverts and bridge, from Kapanga Hill to Scotty's Gold-mining Company's mine	200	0	0	150	0	0
Pumpkin Flat–Just-in-Time Road	310	0	0	170	0	0
Lower road from Great Mercury battery to Kapai low level and battery-site	450	0	0	300	0	0
Road from main road, Kapanga to Success Mine	600	0	0	300	0	0
Cemetery Road and Bridge, Kuaotunu	100	0	0	75	0	0
Road from Coromandel–Kennedy Bay Main Road to Wereroa Creek	300	0	0	150	0	0
Leading Wind Mine Road	100	0	0	50	0	0
Fury's Bridge	450	0	0	225	0	0
Carroll's Bridge	400	0	0	200	0	0
Horne's Bridge	200	0	0	100	0	0
Road from Main Kennedy Bay Road to Monte Carlo and other claims	300	0	0	150	0	0
Castle Rock Mine Road, Tiki	200	0	0	100	0	0
Road between Bismarck Battery and Hauraki Associated Gold-reefs	400	0	0	200	0	0
Bridge, Warekaho Creek	300	0	0	150	0	0
Cabbage Bay to Mines	300	0	0	150	0	0
Two bridges and approaches, Kuaotunu Main Road	300	0	0	150	0	0
Road from Success Road to workings of Karaka Block Syndicate	200	0	0	100	0	0
Widening Waitaia Battery Road	100	0	0	50	0	0
Cabbage Bay–Waitete	240	0	0	120	0	0
Cabbage Bay–Ward's Track	200	0	0	100	0	0
Repairs, bridges, Kuaotunu Main Road	200	0	0	100	0	0
Coromandel–Mercury Bay	200	0	0	35	0	0
	19,286	3	9	11,455	15	10

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
Te Aroha Town Board.	£ s. d.	£ s. d.
Road to connect with railway-station	120 0 0	60 0 0
Lipsey's Bridge	64 0 0	32 0 0
Repairing flood-damages	150 0 0	75 0 0
	334 0 0	167 0 0
Thames County.		
Making new road from Ohinemuri River to Karangahake Quartz-mine	650 0 0	433 6 8
Dray-road to connect Otanui Mines with crushing-battery at Maungawherawhera Creek	710 0 0	473 6 8
Improving roads from Waitekauri Road to Katikati Road	250 0 0	166 13 4
Improving road up Karaka Creek to Lucky Hit Company's mine	263 1 0	175 7 4
Improving road to upper mines, Waitahi	258 18 10	172 12 7
Karangahake to battery	300 0 0	200 0 0
Ralph's Battery, Waitekauri	399 1 0	199 10 6
Otanui Road to mines	299 18 0	199 18 8
Road to Wick's Battery	70 0 0	46 13 4
Rocky Point Road, Tararu	300 0 0	200 0 0
Thames Borough boundary to hæmatite-mine	350 0 0	233 6 8
Widening road from bridge over Hape Creek to Otanui Mines	183 17 0	122 11 4
Track, Karangahake Goldfield	784 1 0	522 14 0
Kauaeranga Valley to Otanui	470 7 0	313 11 4
Tapu Road to mines	81 17 9	54 11 10
Tauranga Road to Karangahake Bridge-site	341 5 0	227 10 0
Karangahake Bridge	229 6 6	152 17 8
Track up Maungakerikeri Creek	93 4 4	62 2 11
Thames Borough boundary to Hape Creek No. 2	600 0 0	300 0 0
Upper Karaka Road	179 13 0	119 15 4
Repairing flood-damages, Waiotahi, Moanataiari, Karaka, and Collarbone Roads	350 0 0	175 0 0
Sea-beach to Waiomo	750 0 0	375 0 0
Te Papa Gully Road	75 0 0	37 10 0
New Find to Waiomo Battery	110 0 0	55 0 0
Rocky Point Road	429 11 10	214 15 11
Waiotahi towards Mercury Bay	522 11 0	261 5 6
Te Mata Road	178 17 6	89 8 9
Waiomo Creek to Tapu	1,499 0 0	749 10 0
Alabama Creek Track	100 0 0	50 0 0
Road from Prospectors' Mine, Puriri, to battery	50 0 0	25 0 0
Karaka Creek to Lucky Hit	365 0 0	182 10 0
Bullion Mine, Tapu, to battery	36 5 0	18 2 6
Track to Hikutaia Goldfield	147 15 2	73 17 7
Upper Tararu Road to Sylvia Mine	684 7 0	342 3 6
Road to Puriri Battery	11 13 0	5 16 6
Thames–Waikawau Road	37 10 0	18 15 0
Track from Tararu Creek Road to McDermot's Claim	45 0 0	22 10 0
Track to Try Fluke Claim, Tapu	94 15 0	47 7 6
Waiomo to Puhoi Creek	33 0 0	16 10 0
Waiokaraka Road, Bella Street, and Campbell Street to Moanataiari Creek	200 0 0	100 0 0
Moanataiari Creek Road	100 0 0	50 0 0
Tararu Creek Road and Tararu Road	150 0 0	75 0 0
Hape Creek Road	150 0 0	75 0 0
Omahu–Tairua	100 0 0	42 0 0
Karaka Creek Road	150 0 0	68 4 6
Onetai Valley Road	40 0 0	12 10 0
Townsend's Road	30 0 0	26 12 0
Gumtown–Kapowai	300 0 0	196 9 0
Footbridge, Pepe Creek	300 0 0	51 18 6
Road from Taniwha to fourth branch Tairua River	200 0 0	100 0 0
	14,054 15 11	7,934 6 11
Thames Borough.		
Repairing roads	975 19 2	600 0 0
Widening and straightening Karaka Creek	300 0 0	150 0 0
Metalling goldfields roads	800 0 0	672 12 6
Removing *débris*, Karaka Creek	300 0 0	150 0 0
Half-cost damage, Hawk's stable	96 0 0	48 0 0
Repairs, Moanataiari Creek Tunnel	100 0 0	52 0 0
Repairs, Moanatairi and Waiotahi Aqueducts	620 0 0	375 0 0
Repairs, Waiotahi Creek Bridge	50 0 0	25 0 0
Removing *débris*, Karaka and Waiotahi Creeks	350 0 0	275 0 0
Water-tables, Kirkwood Street	20 0 0	11 12 6
Clearing *débris*, Waiotahi Creek	225 0 0	112 10 0
	3,836 19 2	2,471 15 0
Ohinemuri County.		
Jubilee Mine Track	118 0 0	59 0 0
Track up Tui Creek	306 0 0	153 0 0
Prospecting-track, Whangamata and Waitekauri	200 0 0	166 13 4
Tramway, Karangahake to Riley's reduction-works	400 0 0	200 0 0
Strengthening bridges, Waihi Road	200 0 0	133 6 8
Paeroa to Hikutaia	400 0 0	200 0 0
Repairs, flood-damages	34 13 8	17 6 10
Hikutaia River to Marototo Mine	180 15 0	90 7 6

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
Ohinemuri County—continued.	£ s. d.	£ s. d.
Karangahake through Gorge (bridge and culverts)	200 0 0	100 0 0
Waitekauri Lower Road	360 0 0	189 2 8
Metalling Karangahake Gorge Road	170 0 0	85 0 0
Karangahake and Waihi Road	237 10 0	118 15 0
Karangahake Hill Track	87 4 0	43 12 0
Bridge over Ohinemuri River at Karangahake	12 11 0	6 5 6
Hikutaia–Paeroa Road	500 0 0	250 0 0
Paeroa–Te Aroha Road	200 0 0	100 0 0
Tui Creek Track	129 18 6	64 19 3
Waitekauri to Lowrie's and Birnie's	200 0 0	100 0 0
Road, Karangahake to Waihi	246 12 3	164 8 2
Lower Waitekauri Road	347 13 4	230 16 4
Road, Thames Road to Netherton Punt	60 0 0	50 0 0
Komata Creek Road	600 0 0	300 0 0
Road, Paeroa Bridge to Kuaoti Creek	400 0 0	133 6 8
Punt at south end Netherton–Paeroa Road	275 0 0	175 0 0
Repairs, Waitekauri Township Road	200 0 0	100 0 0
Bridge, Paeroa–Te Aroha Road	60 0 0	30 0 0
Karangahake Bridge	1,032 0 0	512 16 9
Drain along Mill Road, Paeroa	200 0 0	90 2 5
Road, Te Iringa-o-Pirori Block	200 0 0	143 0 0
Road running south on left bank Waihou River	400 0 0	384 19 0
Kaimanawa Road	200 0 0	126 2 6
Mangaiti and Waitoa Road and Punt	200 0 0	119 7 10
Earl of Glasgow Claim Track	400 0 0	300 0 0
Low Level Tunnel, Jubilee Mine (E. Kersey Cooper)	1,500 0 0	750 0 0
	10,257 17 9	5,687 8 5
Waitoa Road Board.		
Drain, Te Aroha West	200 0 0	130 0 0
Piako County.		
Extension and completion of Te Aroha Tramway	18,000 0 0	12,000 0 0
Tramway to Fergusson's Battery, Waiorongomai	1,500 0 0	1,000 0 0
Road, Waiorongomai	497 17 0	331 18 0
Track to claims at Buck's Reef	55 5 6	36 17 0
Track, Fern Spur to Butler's Spur	231 17 9	154 11 10
Tracks up Stony Creek, Te Aroha Goldfield, &c.	54 0 0	36 0 0
Repairs, Upper Premier Track and new track towards Waitawheta	40 0 0	20 0 0
Repairs, Te Aroha–Lichfield Road	302 0 0	125 0 0
Waiorongomai Tramway	263 2 0	175 0 0
Gordon–Waharoa	100 0 0	50 0 0
Te Aroha–Gordon	200 0 0	100 0 0
Murphy's Bridge	24 0 0	12 0 0
Repairs, Waiorongomai Tramway	600 0 0	385 0 0
Waihou Bridge	580 0 0	290 0 0
Repairs, Te Aroha Tramway	150 0 0	75 0 0
	22,598 2 3	14,791 6 10
Katikati Road Board.		
Katikati–Karangahake Track	400 0 0	200 0 0
Bridge on branch road to Katikati	68 0 0	34 0 0
Te Aroha Track	39 19 6	19 18 9
	507 19 6	253 18 9
Hutt County.		
Road to connect Otorongo Bay with Albion Company's battery, also to connect Terawhiti Quartz-mine with battery	509 16 6	210 17 0
Road, Makara Junction to Terawhiti	450 0 0	225 0 0
	959 16 6	435 17 0

SOUTH ISLAND.

ROADS (SUBSIDISED).

Marlborough County.		
Track, Deep Creek to Dead Horse Creek	68 0 0	45 6 8
Mouth of Gorge to Forks, Cullensville to Mahakipawa Diggings	450 0 0	225 0 0
Formation of road at Cullensville, Mahakipawa	217 4 0	108 12 0
Havelock–Mahakipawa Road	905 0 0	505 0 0
Dead Horse Creek to Sunnyside	75 0 0	50 0 0
	1,715 4 0	933 18 8
Waimea County.		
Road to open up Table Diggings	260 0 0	130 0 0
Punt over Motueka River	100 0 0	50 0 0
Repairing Baton to Table-land Track	40 0 0	20 0 0
Dove River to Baton Saddle, and from Rolling River to Wangapeka Saddle	120 0 0	60 0 0
Repairs, Motueka Bridge	939 8 8	469 14 4
	1,459 8 8	729 14 4

LIST of WORKS on GOLDFIELDS, &c.—*continued*.

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
Collingwood County.	£ s. d.	£ s. d.
Road, West Wanganui	300 0 0	200 0 0
Bridge over Aorere River	173 14 0	115 16 0
Extending Anatoki Bridle-track	160 0 0	80 0 0
Bridge over Takaka River at Pain's Ford	1,597 7 8	798 13 10
Repairs, Silverstream Bridge, and forming and metalling Bainham Road	200 0 0	100 0 0
Kaituna–Ferntown	250 0 0	150 0 0
Takaka roads	600 0 0	400 10 0
Collingwood–Kaituna	400 0 0	300 0 0
	3,681 1 8	2,144 19 10
Buller County.		
Deviation of road from Candlelight Flat to Deep Creek, Charleston	370 0 0	246 13 4
Road from Orowaiti Lagoon to North Terrace	256 18 6	171 5 8
Prospecting-track from Razorback to Paparoa Range	100 0 0	66 13 4
Track from Seatonville to Larrikin's	438 9 6	292 6 4
Waimangaroa to Denniston	787 0 0	393 10 0
Road to connect alluvial workings with Charleston Road	400 0 0	266 13 4
Track, Four-mile Creek towards Grey Valley	300 0 0	200 0 0
Road to connect alluvial diggings north of Deadman's Creek	278 0 0	185 6 8
Ngakawau to Mokihinui *via* beaches	100 0 0	66 13 4
Road to connect Ngakawau Railway with Mokihinui Coal Company's workings	193 0 0	128 13 4
Lyell Bluff to Victor Emmanuel Claim	650 0 0	433 6 8
Beach, Little Wanganui to Mokihinui	300 0 0	100 0 0
Cape Foulwind Road	450 0 0	300 0 0
Road up Nile Valley	56 16 4	28 8 2
Denniston extension	850 0 0	425 0 0
Promised Land towards Motueka	380 0 0	190 0 0
Road over Gentle Annie	200 0 0	100 0 0
Extension, Lyell Creek to Low-level Tunnel	60 0 0	30 0 0
Extension of track 50 chains south of Brighton	140 0 0	70 0 0
Continuation of road, Deadman's Creek	437 17 0	218 18 6
Ngakawau Railway-station to Mokihinui	50 0 0	25 0 0
Addison's Flat towards ranges	20 0 0	10 0 0
North Terrace to Oparara Diggings	500 0 0	333 6 8
Extension of Croninville Road	100 0 0	50 0 0
Waimangaroa to sea-beach	80 0 0	40 0 0
Extension of track, Oparara to Fenian Creek	100 0 0	50 0 0
Con's Creek to Beaconsfield	80 0 0	40 0 0
Addison's Flat to Caroline Terrace	200 0 0	100 0 0
Waimangaroa to sea-beach extension	390 0 0	195 0 0
Addison's Flat to Gallagher's Lead	50 0 0	25 0 0
Road to Swanston's Gold-mining Company	50 0 0	25 0 0
Repairs to roads at Lyell	200 0 0	100 0 0
Track, Fairdown from North Terrace	150 0 0	97 8 0
Improving road to Four-mile Creek, Charleston	900 0 0	450 0 0
Bridge, Waimangaroa River	70 0 0	35 0 0
Road to Piper's Flat, Addison's	450 0 0	150 0 0
Lyell Creek to Gibstown	200 0 0	66 13 4
Buller River Footbridge below Lyell	250 0 0	170 0 0
Virgin Flat Road	200 0 0	100 0 0
Orowaiti Bridge	350 0 0	325 0 0
Long Tunnel Road, Addison's	200 0 0	100 0 0
Stony Creek–Waimangaroa	300 0 0	200 0 0
	11,638 1 4	6,600 16 8
Inangahua County.		
Dray-road from Soldier's Creek to Devil's Creek	647 0 0	431 6 8
Dray-road from Inangahua to Rainy Creek Battery	900 10 0	606 6 8
Dray-road from Capleston up Little Boatman's Creek	379 0 0	252 13 4
Dray-road from Capleston up Main Boatman's Creek	697 0 0	464 13 4
Dray-road from Westport Road to Inangahua River	224 5 0	149 10 0
Track from Devil's Creek to Big River	134 3 6	89 9 0
Track from Waitahu River to Capleston	358 0 0	238 13 4
Survey and expenses	250 0 0	166 13 4
Track from Cariboo to Big River	728 0 0	364 0 0
Dray-road up Murray Creek to United Inglewood Claim	3,472 0 0	2,314 17 4
Road from Reefton to Big River *via* Devil's Creek	614 0 0	307 0 0
Road up Big River	922 19 0	615 6 0
Continuation of dray-road up Little Boatman's Creek	169 7 6	112 18 4
Road from Capleston to Larry's Creek	640 0 0	426 13 4
Track to connect Capleston with Lone Star	75 0 0	50 0 0
Crushington to Globe Company's workings	403 0 0	201 10 0
Snowy Creek Track	85 15 0	42 17 6
Reefton to Big River	1,792 0 0	1,194 13 4
Glenroy to Horse Terrace	254 0 0	122 10 0
Devil's Creek to Globe Hill	917 6 2	458 13 1
Extension of dray-road to Boatman's *via* Painkiller	53 17 6	26 18 9
Mangles Valley to McGregor's Station	600 0 0	300 0 0
Globe Hill to Merrijigs	1,397 6 0	698 13 0
Larry's Creek to Lyell	1,061 15 0	530 17 6
Widening Larry's Creek Road	118 10 0	59 5 0
Road up Burke's Creek, Little Boatman's	149 0 0	74 10 0
Widening track from Scotia Tunnel, on Big River Road, to Inkermann Mine	200 0 0	80 9 0
Widening track from Fiery Cross Battery to Just-in-Time Shaft	300 0 0	150 0 0
	17,552 14 8	10,530 17 10

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
Grey County.	£	s.	d.	£	s.	d.
Road from No Town to Deep Creek	1,100	0	0	550	0	0
Road from Langdon's to Moonlight	1,600	0	0	800	0	0
Contribution from goldfields vote towards main road	2,296	6	6	2,296	6	6
Track, Waipuna to Clarke's River	1,200	0	0	800	0	0
Track, Cameron's to Cape Terrace	700	0	0	466	13	8
Road, Limestone to Maori Creek	800	0	0	533	6	0
Red Jack's to Nelson Creek	601	17	6	401	5	4
Barrytown to Deadman's	2,240	0	0	1,493	6	8
German Gully to Arnold's Flat	120	0	0	60	0	0
Baird's Terrace to Lake Brunner	400	0	0	200	0	0
Hatter's Terrace Road	1,000	0	0	500	0	0
Irishman's to Lake Brunner	2,400	0	0	1,200	0	0
Hatter's Terrace	600	0	0	400	0	0
Track, Baird's Terrace to Irishman's	250	0	0	125	0	0
Deep Creek to Bell Hill	1,331	0	0	665	10	0
Track to Blackball Diggings	790	0	0	395	0	0
Track from Ahaura, Kopara, Reese's Flat, to new rush on banks of Ahaura River	20	0	0	10	0	0
Renewal, bridge over Nelson Creek, Marsden–Dunganville Road	38	0	0	19	0	0
Repairs (corduroying), Cobden–Seven-mile Road	36	0	0	18	0	0
Repairs, Cobden–Point-Elizabeth Road	30	0	0	15	0	0
Extension Ngahere–Blackball Road to Blackball Ferry	50	0	0	25	0	0
Dray-bridge, Ten-mile Creek	688	0	0	344	0	0
Deviation, Moonlight Track	100	0	0	50	0	0
Repairs, bridges, Marsden–Dunganville Road	348	0	0	219	0	0
Seventeen-mile Bluff to Barrytown	80	0	0	40	0	0
Removing rocks, Nine- and Ten-mile Bluffs	100	0	0	50	0	0
Crœsus Battery-site, Paparoa	200	0	0	79	5	0
New River Bridge wing	100	0	0	86	0	0
River View Road	200	0	0	140	0	0
Mosquito Road	500	0	0	252	10	0
Road to Totara Flat Dredge	50	0	0	25	0	0
Maori Gully Bridge	150	0	0	75	0	0
Culverts, Nelson–Grey–Hokitika Road	300	0	0	150	0	0
Paparoa track–Garden Gully	200	0	0	100	0	0
Repairs, No Town Creek Bridge	200	0	0	110	0	0
Protective works, Big Grey Bridge	200	0	0	79	8	1
Cape Terrace Road Deviation	73	0	0	36	10	0
	21,092	4	0	12,810	1	3
Westland County.						
Improving track, Butcher's Creek to Gentle Annie Terrace	225	10	0	163	13	4
Bridle-track to Kanieri Lake	719	11	0	359	5	6
Bridle-track to Eel Creek	168	9	0	84	4	6
Tunnel-track, Galway Beach to Gillespie's Beach	437	5	0	218	12	6
Road from Duffer's Creek, Greenstone Road, to fifteen-mile peg, Christchurch Road	726	9	0	480	4	6
Continuation of track, Back Creek to Eel Creek	249	4	0	166	3	4
Bridle-track, Duffer's Creek, Bowen and Okarito Road, to sea-beach	333	18	0	222	12	0
Ross Borough boundary to Mount Greenland	1,280	15	0	853	16	8
Track, Kanieri Lake to Humphrey's Gully	279	2	0	186	1	4
Track, Larrikin's to Loop-line Dam	449	11	0	299	14	0
Rough Wainihinihi to Upper Dam	450	0	0	300	0	0
Browning's Pass to Reefs	3,311	6	0	2,207	10	8
Okarito Forks to Teal Creek	600	0	0	400	0	0
Road, Christchurch to Baldhill Range reefs	500	0	0	250	0	0
Extension of Tucker's Flat Road to New Rush	170	19	6	85	9	9
Hokitika Borough boundary (Reefton) to Shotover Rush	120	0	0	60	0	0
Track to New Rush, Back Creek	100	0	0	50	0	0
Repairing old track round Wataroa Bluff	50	0	0	25	0	0
New Rush, south side of Hokitika River	37	18	6	18	19	3
Cedar Creek Road to Farmer's Creek	55	7	0	27	13	6
Road to gold discovery near Blue Spur	75	0	0	37	10	0
Widening Seddon's Terrace Track	150	0	0	65	10	0
Branch Road at Seddon's Terrace	38	10	6	19	5	3
Track up Middle Branch, Styx River	30	0	0	15	0	0
Improving road, Seven-mile–Taipo	150	0	0	73	3	6
Widening Shallow Rush Track	300	0	0	54	17	3
Hut, Westland Reefs	30	0	0	15	0	0
	11,038	15	6	6,739	6	10
Taieri County.						
Mullocky Gully to Silver Peak	499	15	0	333	3	4
Lake County.						
Track, Skipper's to Phœnix and Scandinavian Reefs	292	2	3	194	14	10
Track to connect scheelite-mine with Lake Wakatipu	225	0	0	150	0	0
Arrowtown to Macetown, construction	225	0	0	150	0	0
Arrowtown to Macetown, maintenance	150	0	0	100	0	0
Invincible Quartz-reef Track, Rees River	300	0	0	200	0	0
Rees Valley to company's workings	61	7	6	30	13	9
Pack-track, Criffel Diggings	50	6	6	33	11	0
Left-hand Branch Road, Skipper's	63	9	10	31	14	11
Old Morven Ferry Road	289	0	0	144	10	0
Road to workings above Cardrona	70	0	0	35	0	0
Piers, Victoria Bridge	725	0	0	362	10	0
Skipper's Road Saddle to Deep Creek	200	0	0	100	0	0
Road up Dart River	150	0	0	75	0	0
Cutting on Homeward-bound Hill	100	0	0	75	0	0
Skipper's Bridge	4,244	0	0	3,244	0	0
	7,145	6	1	4,926	14	6

LIST of WORKS on GOLDFIELDS, &c.—*continued*.

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
	£	s.	d.	£	s.	d.
Tuapeka County.						
Making road from top of Terrace to Waipori Bush	300	0	0	200	0	0
Road, Beaumont to Remarkable Bush	300	0	0	200	0	0
Improving road from Waipori Township to antimony-mines, Lammerlaw Ranges	200	0	0	133	6	8
Waipori Township to Waipori Bush	200	0	0	133	6	8
Clutha River to Campbell's	76	9	0	50	19	4
Waitahuna to copper-mine	200	0	0	133	6	8
Road to open up quarry for Waitahuna Bridge	160	9	10	106	19	11
Waipori Road *via* Bungtown	566	8	10	283	4	5
Miller's Flat Bridge	11,242	0	0	6,621	0	0
Shelter-sheds and snow-poles	100	0	0	50	0	0
Waipori Bridge	800	0	0	400	0	0
Metalling, Lawrence–Waipori	550	0	0	341	3	6
Repairs, FitzGerald's Bridge	1,500	0	0	410	0	0
	16,195	7	8	9,063	7	2
Cromwell Borough.						
Removal of sand	500	0	0	250	0	0
Wallace County.						
Track, Colac Bay to Round Hill	200	0	0	133	6	8
Pack-track to Round Hill, Colac, and Orepuki	1,050	0	0	500	0	0
Cutting tracks, Longwood	59	6	0	29	13	0
	1,309	6	0	662	19	8
Vincent County.						
Renewal bridge to Bannockburn	1,532	0	0	850	0	0
Maniototo County.						
Road to Serpentine Diggings	136	10	0	91	0	0
Pig and Whistle to Clarke's Diggings	200	0	0	133	6	8
Shepherd's Hut Flat to Vinegar Hill	100	0	0	66	13	4
Kyeburn Peninsula to main road	82	0	0	41	0	0
	518	10	0	332	0	0
Fiord County.						
Dusky Sound, tracks	300	0	0	200	0	0
Waitaki County.						
Road, Naseby to Livingstone	1,841	12	0	20	16	0
Southland County.						
Improving tracks from Mataura to Nokomai	75	0	0	50	0	0
Improving road, Waikaka to Leatham	150	0	0	100	0	0
Improving road from Waikaka Township to Leatham Creek	30	0	0	20	0	0
Improving road from Waikaka to Waikaka railway-siding	150	0	0	100	0	0
Widening and improving bush-track to Waikawa	150	0	0	100	0	0
Waikaka to Switzer's	150	0	0	100	0	0
Road near Waikaka Township	150	0	0	100	0	0
Waipapa to Six-mile Beach	175	0	0	87	10	0
Repairing bridges, Waikaia Bush	38	13	4	13	4	0
Dray-road to Ferry Terrace, Nokomai	100	0	0	50	0	0
Waikaia to Whitecomb	511	6	8	280	13	4
Parawa to Switzer's *via* Nokomai	150	0	0	75	0	0
Track to Switzer's Freehold Gold-mining Company	175	0	0	175	0	0
Nevis Road	100	0	0	50	0	0
Parawa to Nokomai	150	0	0	75	0	0
Waikaia to Break-'em-All Claim	100	0	0	50	0	0
Maitland Village–Mining Reserve	100	0	0	50	0	0
	2,455	0	0	1,476	7	4
DIAMOND AND OTHER DRILLS.						
Inangahua County Council (diamond)	2,000	0	0	1,000	0	0
Springfield Colliery Company (diamond)	1,250	0	0	625	0	0
Westland County Council (tiffin)	350	0	0	233	0	0
Diamond-drills for prospecting purposes	1,570	11	4	1,570	11	4
	5,170	11	4	3,428	11	4
WHARVES.						
Repairs to wharf, Coromandel	300	0	0	150	0	0
Anikiwi Jetty, Marlborough	135	15	9	135	15	9
	435	15	9	285	15	9
AIDS TO PROSPECTING.						
Construction of low-level tunnel, Terawhiti	750	0	0	150	0	0
Queen of Beauty Company, prospecting deep levels	300	0	0	150	0	0
Caledonian Low-level Company, prospecting deep levels	300	0	0	150	0	0
Red Hill Gold-mining Company, prospecting deep levels	600	0	0	300	0	0
Caledonian Low-level Company, low-level tunnel	2,700	0	0	300	0	0
Lyell Creek Extended Company, low-level tunnel	300	0	0	150	0	0
New Cromwell Gold-mining Company	250	0	0	100	0	0
Deep-level Association, Waipori	450	0	0	300	0	0

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
AIDS TO PROSPECTING—*continued.*	£ s. d.	£ s. d.
Little Boatman's deep-level tunnel	600 0 0	300 0 0
Oterongia Prospecting Association	198 17 2	99 8 7
Vincent County	137 9 0	68 14 6
Tapanui Prospecting Association	25 0 0	12 10 0
Tuapeka County	12 0 0	6 0 0
Maniototo County	500 0 0	250 0 0
Pullar, Shelmerdine, and Basan	400 0 0	200 0 0
Royal Oak Association	300 0 0	150 0 0
Star of the East Quartz-mining Company	150 0 0	75 0 0
West Coast Prospecting Association	300 0 0	150 0 0
McBride and party	169 2 2	84 11 1
McLean and party	66 0 0	33 0 0
Deep-level tunnel, Tokatea	700 0 0	350 0 0
Deep-level tunnel, Owharoa	300 8 0	200 5 4
Deep-level tunnel, Tapu	1,200 0 0	600 0 0
Deep-level tunnel, Cedar Creek	1,207 10 0	603 15 0
Manuka Flat Prospecting Association	200 0 0	100 0 0
Red Hill Minerals Company	437 19 10	218 19 11
Tuapeka Prospecting Association	277 0 0	138 10 10
Cardrona Prospecting Association	800 0 0	400 0 0
Cromwell Prospecting Association	500 0 0	250 0 0
Coromandel County	550 0 0	275 0 0
Thames County	309 18 0	154 19 0
Thames Borough	200 0 0	100 0 0
Buller County	146 12 6	73 6 3
Inangahua County	488 7 0	244 3 6
Westland County	1,236 19 4	618 9 8
Grey County	871 15 2	435 17 7
Deep-level Prospecting Association, Waipori	432 9 8	216 4 10
Waipu Prospecting Association	180 0 0	90 0 0
Hokianga County	100 0 0	50 0 0
Vulcan Smelting-works, Onehunga	30 0 0	15 0 0
Ohinemuri County	100 0 0	50 0 6
Waitaki County	29 5 0	14 12 6
Waihemo County	85 9 0	42 14 0
William Fox and party	711 1 8	355 10 11
Kirk and party	176 0 10	88 4 10
Hodge and party	98 13 8	49 6 10
Carey and Hyndman	441 9 4	220 14 0
Don, Boyce, and party	107 16 0	53 18 0
Quentin McKinnon	58 10 0	29 5 0
Bullion Mine deep-level tunnel	300 0 0	150 0 0
Sutherland and party	30 0 0	15 0 0
Inangahua low-level tunnel	6,966 0 0	3,000 0 0
Deep-level tunnel, Manaia	451 4 0	225 12 0
Waimea Miners' Association, prospecting at Callaghan's	50 0 0	50 0 0
Totara Miners' Association, Ross	51 3 6	51 3 6
Ross, Cunningham, and another	9 0 0	9 0 0
William Thompson, stores from Benmore Station	2 1 10	2 1 10
Totara Miners' Association, Ross	8 6 6	8 6 6
Harris, Davidson, and party	27 7 6	27 7 0
Boatman's Tailings Company	150 0 0	150 0 0
Boys's tunnel, Bluespur	94 12 3	94 12 0
Totara Miners' Association (Ross, Montina, and party)	246 10 0	246 10 0
Gillam's Gully Prospecting Association	94 15 0	94 15 0
Deep-level Prospecting Committee, Dillmanstown	407 0 3	407 0 3
Westport Prospecting Association	25 0 0	25 0 0
Te Aroha Prospecting Association	20 12 6	20 12 6
Robert Richie, Kuaotunu	72 3 0	36 1 0
Owharoa Tunnel (Lindsay Jackson)	325 0 0	162 10 0
Coromandel County (£1 for £1)	200 0 0	100 0 0
Mr. G. Rehay, Arahura	98 15 0	49 7 6
Hyndman and party, Callaghan's Flat	552 14 6	276 7 3
Lakes Mapourika, Waiho, and Wataroa Miners' Association	53 12 0	26 16 0
Kumara Miners' Association	22 10 0	11 5 0
Thames Miners' Union	75 15 0	37 17 6
Star of Canterbury Miners' Association	38 5 0	19 2 6
Miners' Association, Rimu	16 0 0	8 0 0
Buller County (Messrs. Negri and others)	27 0 0	13 10 0
Johnson and party, tunnel at Callaghan's Flat	90 0 0	45 0 0
W. L. Webb, Nelson	24 0 0	12 0 0
Kumara Miners' Association (Solberg, Stewart, and party)	64 15 0	32 7 6
Buller County, between head of Fox's River, Brighton, and Deadman's Creek	29 5 0	14 12 6
Welcome United Gold-mining Company, Greymouth	245 12 6	122 16 3
Orepuki Miners' Association	90 0 0	45 0 0
Totara Miners' Association (Gagliardi and party)	12 10 0	6 5 0
Contingencies	484 15 10	242 7 11
Halligan and party, tunnel at Cedar Creek	198 1 10	99 0 11
Totara Miners' Association (Chamberlain and party)	208 10 0	104 5 0
Miners' Association, Greenstone	59 0 0	29 10 0
Westland County (T. Radonicki and party)	40 0 0	20 0 0
Waimea Miners' Association (Lot, Keir, and party)	90 0 0	45 0 0
Cardrona Prospecting Association	140 5 4	70 2 8
Waimea Miners' Association, Stafford	113 1 0	56 10 6

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost			Amount of Contribution paid by Mines Department.		
AIDS TO PROSPECTING—*continued.*	£	s.	d.	£	s.	d.
H. Crossan, Beaumont	28	0	0	14	0	0
Prospecting Association, Westport	39	0	0	19	10	0
Cape Colville Prospecting Syndicate	32	0	0	16	0	0
Port Charles Prospecting Association	28	0	0	14	0	0
Totara Miners' Association, Ross	24	0	0	12	0	0
Lake Mapourika Miners' Association	12	0	0	6	0	0
Lister and Robertson, Karamea	13	0	0	13	0	0
Canada Reefs Tunnel	187	10	0	93	15	0
Otago Miners' Association	600	0	0	291	8	2
Westland County (Goudie and party)	215	19	9	107	19	6
Paparata Road Board	26	0	0	13	0	0
Tauranga County (Te Puke Prospecting Association)	50	0	0	25	0	0
Havelock Miners' Association	78	0	0	39	0	0
Ohinemuri County	200	0	0	6	0	0
Mr. Olderog, Arahura	54	18	0	16	4	0
Miners' Association, Ross (J. Smith and party)	135	0	0	61	7	6
Extension of low-level tunnel, Boatman's	300	0	0	137	7	11
Prospecting-tunnel, south side Inangahua River	60	0	0	25	0	0
Prospecting Association, Mokihinui	40	0	0	15	0	0
Miners' Association, Kumara (John Kane)	9	0	0	1	2	6
Prospecting Association, Invercargill	150	0	0	68	13	6
Miners' Association, Kuaotunu	40	0	0	13	2	6
Miners' Association, Ross (Waylen and party)	50	0	0	16	13	0
Prospecting Association, Coromandel (Leahy and others)	200	0	0	100	0	0
Adit-level, Maungatawhiri Creek (G. B. Osmond)	120	0	0	68	17	0
Bay of Islands County Prospecting, Pokaka	112	13	0	112	13	0
Prospecting Russell's Outcrop	100	0	0	100	0	0
Fox's River Prospecting Association (A. T. Bate, secretary)	19	10	0	19	10	0
Buller County (Newton and party, shaft, Ballarat Terrace)	22	15	0	22	15	0
Buller County (Spence and party)	19	10	0	19	10	0
Wairau Miners' Association	50	0	0	48	4	0
Miners' Association, Nelson Creek (Thrower and Potts)	45	0	0	45	0	0
Miners' Association, Dillmanstown (Turnbull and others)	7	10	0	7	10	0
Miners' Association, Ross (Gagliardi and party)	64	18	0	64	18	0
Miners' Association, Ross (Allen and Son)	40	0	0	20	0	0
Miners' Association, Greenstone (Black and party)	27	0	0	27	0	0
Miners' Association, Cardrona	40	0	0	40	0	0
Miners' Association, Lowburn (E. Murrell)	20	0	0	13	5	0
Puhipuhi Prospecting Association	200	0	0	13	15	0
Thames County (F. and J. Wallis)	97	10	0	35	19	2
Thames County (Sheridan Company's tunnel, Tapu)	180	10	0	30	5	0
Cinnabar Mining Company, Auckland (£1 to £1 10s.)	162	16	9	108	11	2
H. H. Adam's, Waiorongomai	250	0	0	48	3	9
Miners' Association, Ross (Moye and Son)	15	10	0	6	10	6
Westland County (J. Staines)	96	0	0	4	10	0
Westland County (O'Brien and Glynn)	40	0	0	36	10	6
Upper Moutere Road Board	40	0	0	1	16	0
Buller County (Mohan and party)	220	0	0	71	8	6
Buller County (Gardiner and McKay)	56	0	0	24	0	0
Buller County (Negri and others)	43	0	0	29	1	3
Buller County (Scarlett and McHarrie)	39	0	0	18	0	0
Kumara Miners' Association (Scatterini and Anderson)	124	0	0	6	13	6
Kumara Miners' Association (Henley and party)	58	14	0	2	8	0
Kumara Miners' Association (M. Manton)	57	10	0	3	18	9
Kumara Miners' Association (Rogers and Block)	75	0	0	35	6	6
Frying-pan Tail-race	600	0	0	161	11	3
Prospecting Association, Mokihinui (French and others)	58	10	0	11	5	0
Prospecting Association, Westport	432	6	0	197	9	0
Dyer and party, Kuaotunu	120	0	0	37	16	0
Gillam's Gully Prospecting Association (Bramhall and party)	60	0	0	12	3	0
Miners' Association, Riverton	100	0	0	32	0	0
Kennedy-Waikaia Miners' Association, Invercargill	100	0	0	9	0	0
Inangahua District Miners' Association	100	0	0	25	17	6
New El Dorado Sluicing Company, Fat Boys, Criffel	300	0	0	94	4	9
Miners' Association, Greenstone (O'Donnell and party, and J. Pope)	75	0	0	30	4	3
Miners' Association, Tinkers, prospecting Matakanui	6	0	0	3	0	0
Chatterbox Tunnel (G. Clapton)	6	0	0	2	17	9
Port Charles Prospecting Association	20	0	0	11	8	0
Miners' Association, Lake Mapourika	17	4	0	7	13	3
Pitchers and Kitto, Anderson's Flat	100	0	0	20	5	11
Miners' Association, Nelson Creek (Kelly and party)	23	5	0	9	18	0
South British Prospecting Association, Lyell	135	0	0	6	15	0
Miners' Association, Ross (A. Zala)	69	0	0	69	0	0
Miners' Association, Ross (McKay and Muir)	39	0	0	39	0	0
Miners' Association, Ross (McKay and Brown)	13	0	0	13	0	0
Miners' Association, Ross (McEwen and McKechnie)	26	0	0	26	0	0
Miners' Association, Ross (C. Porter)	226	0	0	128	0	0
Miners' Association, Riverton	18	0	0	18	0	0
Katikati Prospecting Association	52	0	0	26	0	0
Cornwall, Walker, and party's tunnel, Boatman's	302	10	0	154	14	0
Miners' Association, Greenstone (Crawford and party)	109	7	6	109	7	6
Mararoa Mining Association	18	0	0	18	0	0
Hororata Prospecting Association	30	15	0	30	15	0

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
AIDS TO PROSPECTING—*continued.*	£ s. d.	£ s. d.
Paparata Road Board (Parker and Piggott)	32 10 0	32 10 0
New Bay of Islands Coal Company, prospecting Moody's Outcrop	200 0 0	173 4 3
Longwood Sluicing Company	300 0 0	150 0 0
Red Jack's Miners' Association (Drummond and McDonough)	28 0 0	28 0 0
Kapanga Gold-mining Company (Limited)	20,600 0 0	1,735 3 11
Kuaotunu Prospecting Association	48 10 0	26 0 0
Te Aroha Town Board	100 0 0	37 17 6
Bombay Prospecting Association	40 0 0	16 7 9
Charleston Miners' Association	110 0 0	33 8 6
Buller County (Reaney and Rasmussen)	120 0 0	30 0 0
Buller County (Samuel and party)	100 0 0	5 0 0
Gold-mining League, Westport (McFarlane and others)	39 0 0	13 10 0
Inangahua County (Gabriel and party)	100 0 0	11 11 0
Miners' Association, Dillmanstown (Black and party)	31 10 0	12 0 0
Tapanui Prospecting Association	40 0 0	18 10 0
Miners' Association, Lowburn (Tilliman and party)	57 10 0	42 9 9
Miners' Association, Upper Waikaia	19 10 0	13 0 0
Main and party's tunnel, Kanieri	200 0 0	188 7 0
Ryan and Son's tunnel, Dillmanstown	42 0 0	21 12 0
R. A. Harcourt's tunnel, Blue Spur	180 0 0	90 0 0
Miners' Association, Ross (Archer and Horseby)	13 0 0	13 0 0
Inangahua County (R. Lees)	2 10 0	2 10 0
Westland County (Rebay and party)	112 0 0	56 0 0
Red Jack's Miners' Association (Drummond and Raynor)	24 0 0	12 0 0
Westland County (McGoveran and party)	50 0 0	37 10 0
Westland County (N. Johnson's tunnel, Fox's Flat)	140 0 0	59 0 5
Miners' Association, Ross (Gagliardi and Son)	70 0 0	17 10 0
Miners' Association, Ross (Marchesi and Scott)	200 0 0	153 15 0
Miners' Association, Greenstone (Dickson and party)	72 0 0	15 18 0
Westland County (Patrick and Moynihan)	86 0 0	45 0 0
Westland County (Ryan and Son)	120 0 0	60 0 0
Westland County, prospecting, Kanieri (£1 for £1)	1,228 15 0	614 7 6
Westland County (Dwyer and party, Blue Spur)	800 0 0	758 6 0
Miners' Association, Waiho (Batson and Snow)	9 0 0	9 0 0
Miners' Association, Nelson Creek (Coll and Moran)	160 0 0	160 0 0
Miners' Association, Nelson Creek (Hurley and party)	164 0 0	82 0 0
Miners' Association, Blackball (Keenan and Falconer)	5 17 0	5 17 0
Miners' Association, Blackball (McKenzie and O'Brien)	43 10 0	43 10 0
Miners' Association, Ross (McLeod and Dunlop)	63 14 6	40 8 6
Miners' Association, Ross (Smith and Regan)	164 2 0	164 2 0
Miners' Association, Greenstone (Candy, Roberts, and Evans)	100 0 0	60 8 6
Buller County (Jeffreys and Walker)	8 0 0	8 0 0
Buller County (Christmas and party)	4 15 0	4 15 0
Buller County (Burkitt and party)	13 0 0	13 0 0
Buller County (Stewart and party)	12 0 0	12 0 0
Buller County (Robertson and Sangwell)	26 0 0	26 0 0
Buller County (Ramsey and O'Connor)	4 15 0	4 15 0
Buller County (Clough and McGonagle)	8 0 0	8 0 0
Buller County (Negri and others)	12 0 0	12 0 0
Buller County (Quinn and party)	34 0 0	18 0 0
Buller County (Murray and Forsyth)	9 0 0	9 0 0
Buller County (Salter and party)	6 10 0	6 10 0
Inangahua County (Z. E. Curnow)	6 10 0	4 15 0
Culley and Hislop, prospecting, Kawakawa	125 0 0	125 0 0
Prospecting Association (Riverton)	25 0 0	25 0 0
Tuapeka County (Gabriel's Gully)	400 0 0	223 10 10
Nobel, Stenhouse, and Crawford's tunnel, New Chum Creek	240 0 0	240 0 0
Holmes and party's tunnel, Tucker's Flat	400 0 0	208 8 0
Deep Levels, Kumara	3,269 0 0	1,197 10 4
Miners' Association, Ross (Moye and Son)	60 0 0	14 19 6
Miners' Association, Ross (Paterson and McGowan)	26 0 0	13 0 0
Miners' Association, Waiho (Nelly and Murray)	26 0 0	12 0 0
Miners' Association, Red Jacks (Drummond and party)	50 0 0	24 0 0
Westland County (Roseveri and party)	160 0 0	80 0 0
Prospecting Mokihinui Mine (Lomas and party)	500 0 0	250 0 0
Towai-Hukerenui Coal Syndicate	200 0 0	35 2 0
Ohinemuri County (P. Prudence)	6 0 0	1 4 0
Westland County (Irwin and party)	100 0 0	35 0 0
Buller County (Brand and party)	80 0 0	74 14 3
Miners' Association, Havelock (Kearns and McCusker)	100 0 0	76 0 0
Westland County (Patrick and Moynihan)	300 0 0	195 5 0
Greymouth Harbour Board (boring for coal)	500 0 0	250 0 6
Westland County (Beroz and Mills)	200 0 0	155 0 0
Ohinemuri County (Scanlon and Eyre)	32 0 0	16 0 0
Ross Borough Council (Smith and party)	70 0 0	35 0 0
Johnston, Bryan, and party's tunnel	305 0 0	305 0 0
Blackwater Miners' Association (Banman Bros.)	81 0 0	81 0 0
Inangahua County (P. Tangney)	2 5 0	2 5 0
Westland County (G. McArthur)	6 10 0	3 10 0
Westland County (Rebay and Rebustitti)	80 0 0	40 0 0
Westland County (Ryan and Son)	80 0 0	38 15 0
Westland County (W. Roblofski and party)	150 0 0	75 0 0

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
AIDS TO PROSPECTING—*continued.*	£	s.	d.	£	s.	d.
Westland County (Singer and party)	19	10	0	19	10	0
Westland County (Smith and party)	18	0	0	12	0	0
Golden Basin Prospecting Association	435	0	0	146	6	0
Miners' Association, Charleston	110	0	0	58	2	3
Miners' Association, Nelson Creek (Kelly and party)	110	0	0	29	15	9
Ohinemuri County (Scanlon and Eyre)	46	0	0	23	0	0
Buller County (Glass-eye Creek)	26	0	0	13	0	0
Coromandel County, Tunnel Whakaroa Creek	60	0	0	30	0	0
Miner's Association, Kanieri (McQuilkin and party)	20	0	0	11	5	0
Westland County (Harvey and McDonald)	12	0	0	12	0	0
Coromandel County (A. Kelso)	60	0	0	60	0	0
Coromandel County (New Hero Syndicate)	60	0	0	30	0	0
Coromandel County (Dyer and O'Keefe)	25	10	0	12	15	0
Coromandel County (Hosie and Marshall)	21	0	0	15	0	0
Coromandel County (Little Hero Tunnel)	50	0	0	25	0	0
Coromandel County (C. Blasch)	36	0	0	18	0	0
Coromandel County (J. Hickey)	45	0	0	22	10	0
Coromandel County (Horne and McIsaac)	12	0	0	6	0	0
Blackwater Miners' Association (O'Flaherty and Lawrence)	160	0	0	80	0	0
Kumara Miners' Association	25	0	0	12	11	6
Westland County (R. A. Harcourt)	200	0	0	99	10	0
Westland County (G. L. Tacon)	24	0	0	12	0	0
Westland County (Warren and party)	120	0	0	60	0	0
Gill and McDonald shaft(Rock and Pillar)	25	0	0	9	6	6
Kanieri Miners' Association (Singer and Harvey)	40	0	0	26	8	0
Buller County (Gardner and Bettzeman)	90	0	0	22	10	0
Westland County (Holst and party)	80	0	0	31	12	9
Contingencies	217	5	8	217	5	8
Coromandel County (J. Dyer)	60	0	0	30	0	0
Coromandel County (A. McNeil)	75	0	0	37	10	0
Coromandel County (W. Newsham)	13	0	0	6	10	0
Coromandel County (Big Reef Prospecting Association)	600	0	0	300	0	0
Coromandel County (J. D. Regan)	93	0	0	46	10	0
Coromandel County (Prospecting parties)	939	10	0	939	10	0
Victoria Gold Mining Company, "Favourite," foreshore claim	1,184	0	0	497	10	8
Thames Goldfields Improvement Committee	2,400	0	0	1,887	11	1
Ohinemuri County (W. Tregoweth)	200	0	0	119	16	0
Ohinemuri County (Hugh Butler)	10	0	0	5	0	0
Ohinemuri County (Cornes and Gordon)	47	0	0	23	10	0
Miners' Association, Takaka (Lloyd and another)	24	0	0	12	0	0
Buller County (McHarrie and Case)	26	0	0	13	0	0
Buller County (Hooper and party)	200	0	0	93	4	6
Inangahua County (D. Murphy)	26	0	0	13	0	0
Inangahua County (C. Clifford)	26	0	0	13	0	0
Inangahua County (J. Grieve)	13	0	0	6	10	0
Upper Blackwater Miners' Association	138	0	0	69	0	0
Ross Borough (Coughlan and party)	200	0	0	114	13	0
Moturoa Petroleum Company	229	0	0	229	0	0
	83,350	17	10	33,467	16	9
WATER-RACES.						
Water-main, Bull's Battery	350	0	0	100	0	0
Round Hill Water-race	200	19	0	133	19	4
Tomkiss's Water-race	100	0	0	100	0	0
Cardrona Sludge-channel	100	0	0	50	0	0
New water-mains, Thames Water-race	1,479	10	4	739	15	2
Nelson Creek	957	16	9	957	16	9
Mikonui Water-race	14,279	16	4	14,279	16	4
Brown and party, Kumara	90	0	0	22	10	0
Randall Creek Water-race	222	2	3	222	2	3
Thames Water-race	1,250	0	0	1,250	0	0
Contingencies	659	12	8	659	12	8
Randall Creek Water-race	100	15	0	100	15	0
Quinn's Creek Water-race	70	0	0	70	0	0
Survey, water-race, Ninety-mile Beach	65	6	7	65	6	7
Improving water-supply, Oamaru	1,700	0	0	1,600	7	2
Roaring Meg Water-race (Jones, Baxter, and party)	1,600	0	0	800	0	0
Sulky Gully Water-race	504	0	0	218	0	0
Gentle Annie Creek, Mata (R. Kelly)	200	0	0	40	0	0
Purchase Byrne, O'Hallahan, and Murdoch's water rights	35	0	0	35	0	0
Argyle Water-race	8,453	15	1	8,453	15	1
Bell Hill Sluicing Company	1,000	0	0	500	0	0
Finlay and McLiver's Water-race, at Measletown	400	0	0	34	5	4
Mountain Hut water-race	4,879	12	0	4,879	12	0
Back Creek Water-race survey	651	13	6	350	1	0
	39,349	19	6	35,642	14	8

List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
Drainage and Tailings Channels.	£ s. d.	£ s. d.
Drainage-channel, Lawrence (total cost, approximate)	3,000 0 0	2,000 0 0
Subsidy towards purchase of Messrs. Laidlaw and Crawford's freehold in Spotti's Creek, to allow tailings to be deposited (Tinker's Diggings)	500 0 0	400 0 0
Damage by floods, Thames	1,000 0 0	500 0 0
Sludge-channel, Smith's Gully, Bannockburn	1,000 0 0	251 1 0
Round Hill Sludge-channel survey	52 19 7	52 19 7
Compensation to J. Costello, damage done by tailings	788 0 0	788 0 0
Long Gully Sludge-channel	150 0 0	100 0 0
New Pipeclay Gully Sludge-channel	4,547 18 0	773 19 0
Kumara Sludge-channel No. 2	2,762 17 2	2,762 17 2
Ophir Tail-race	2,300 0 0	1,150 0 0
Lawrence Drainage-channel	1,150 0 0	1,092 9 0
Tailings-outlet, Maerewhenua	1,595 4 0	1,595 4 0
Ross Sludge and Storm-water Channel	1,675 10 6	1,675 10 6
Kuaotunu Sludge-channel (£1 for £1)	400 0 0	200 0 0
Branch tail-race to No. 4 Channel	100 0 0	100 0 0
Rimu Drainage-channel	500 0 0	191 19 6
Kumara Sludge-channel No. 4	1,200 0 0	1,151 10 8
Donnelly's Creek Tail-race	1,657 0 0	444 4 5
Muddy Creek Channel	2,000 0 0	1,000 0 0
Drain, Te Aroha West	200 0 0	61 0 0
Kumara Sludge-channel No. 5 and extension	5,654 15 11	5,654 15 11
Waimumu Main Tail-race	3,502 13 5	1,339 13 0
Compensation, Owen Roberts	75 0 0	75 0 0
Charlton Main Tail-race	1,362 17 7	408 7 1
	37,174 16 2	23,768 10 10
Aid towards the Treatment of Ores.		
Testing-plant, School of Mines, Thames	1,200 0 0	600 0 0
Testing minerals, Dunedin Exhibition	192 8 9	142 8 9
Testing-battery, Mercury Bay	915 1 4	915 1 4
Public crushing-plant (Coromandel School of Mines)	906 0 5	906 0 5
Maoriland Gold-mining Syndicate, erection of battery	248 7 6	248 7 6
Public Battery, Kuaotunu	200 0 0	200 0 0
	3,661 18 0	3,011 18 0
Aid towards Construction of Telephone-lines.		
Bannockburn to Nevis	60 0 0	50 0 0
Water-conservation on Goldfields.		
Reports on Drainage, Ross Flat	284 10 8	284 10 8
Coromandel Harbour and Kuaotunu Sludge-channels	80 12 6	80 12 6
Eweburn Reservoir	16,459 15 10	16,459 15 10
Mackeytown Water-supply	351 0 0	351 0 0
Waitekauri Water-supply	445 2 5	445 2 5
Karangahake Water-supply	607 6 5	607 6 5
Clyde Water-supply	1,121 13 2	1,121 13 2
Home Gully Dam	1,028 0 6	1,028 0 6
Thames Drainage Board (contribution)	1,000 0 0	1,000 0 0
Alexandra Water-supply	600 0 0	600 0 0
	21,978 1 6	21,978 1 6
Works wholly constructed by Mines Department.		
Construction of road, Arrowtown to Macetown	9,270 6 8	9,270 6 8
Road to open up Woodstock Goldfield	1,000 0 0	1,000 0 0
Ahaura to Amuri	2,504 19 7	2,504 19 7
Waikaia Bush Road	1,000 0 0	1,000 0 0
Waitahuna Bridge	750 0 0	750 0 0
Merrivale tracks	500 0 0	500 0 0
Mokihinui to Specimen Creek	1,238 7 5	1,238 7 5
Wilberforce Quartz-reef Road	1,830 17 7	1,830 17 7
Opening Mokau River	552 8 0	552 8 0
Lyell to Mokihinui	5,098 8 6	5,098 8 6
Brighton to Seventeen-mile Beach	1,789 7 2	1,789 7 2
Wangapeka to Karamea	2,000 0 0	2,000 0 0
Hatter's Terrace to Bell Hill	500 0 0	500 0 0
Cedar Creek Road	3,000 0 0	3,000 0 0
Owen Valley Road	2,208 9 2	2,208 9 2
Cobden to Seventeen-mile Beach	3,036 1 4	3,036 1 4
Cedar Creek Road	1,500 0 0	1,500 0 0
Bridle-track to Upper Anatoki	722 8 0	722 8 0
Whangamata Road	141 10 6	141 10 6
Karangahake through Gorge	1,000 0 0	1,000 0 0
Arthur's Point to Skipper's	12,167 4 1	12,167 4 1
Tracks to Coal Island	54 6 3	54 6 3
Grey Valley to Teremakau	900 0 0	900 0 0
Rimu to New Rush	829 17 9	829 17 9
Tapu to Waikawau	750 10 0	750 10 0
Puhipuhi Road	1,396 17 9	1,396 17 9

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
WORKS WHOLLY CONSTRUCTED BY MINES DEPARTMENT—*continued.*	£	s.	d.	£	s.	d.
Jackson's Bay to Cascade and Gorge River district	5,310	10	11	5,310	10	11
Improving roads and tracks, Collingwood to Takaka and Motueka	10,905	8	11	10,905	8	11
Tramway from New Find to Waitekauri	100	0	0	100	0	0
Havelock–Mahakipawa Dray-road	1,311	9	0	1,311	9	0
Mokihinui to Wanganui	200	0	0	200	0	0
Burnett's Face to Coalbrookdale	200	0	0	200	0	0
Deadman's to Christmas Terrace	20	0	0	20	0	0
Low-level Alpine Claim, Lyell	80	0	0	80	0	0
Bowen Road to Salt-water Beach	60	0	0	60	0	0
Repairing damage done by floods, Westland County	100	0	0	100	0	0
Deviation of road at Kanieri Forks	140	0	0	140	0	0
Road up Dart River	200	0	0	200	0	0
Kuaotunu to Mercury Bay	350	0	0	350	0	0
Thames to Manaia	500	0	0	500	0	0
Cobden to Seventeen-mile Beach	400	0	0	400	0	0
Bridge over Mahinapua Creek	503	16	10	503	16	10
Track up Waiho River	105	0	0	105	0	0
Haast Ferry to Glue-pot	126	0	0	126	0	0
Paeroa–Waihi Road	114	0	0	114	0	0
Waitekauri to New Find	250	0	0	250	0	0
Mahakipawa to Waikakaho	183	12	1	183	12	1
Oparara through gorge to gold-workings	150	0	0	150	0	0
Okira Bridge, at Dirty Mary's Creek	100	0	0	100	0	0
Lagoon Bridge	100	0	0	100	0	0
Widening Cape Terrace Road	100	0	0	100	0	0
Deviation, Granville Road	70	0	0	70	0	0
Tucker's Flat Road	247	18	7	247	18	7
Dillman's–Larrikin's Road	125	15	0	125	15	0
Track at Kanieri Lake and McIntosh Falls, Lake Mahinapua	195	4	6	195	4	6
Extension of road, Rimu to Shallow Rush	150	0	0	150	0	0
Gillam's Gully Track	149	16	0	149	16	0
McKay's Creek, Kokatahi Track	100	0	0	100	0	0
Aorere Valley to Karamea and Mokihinui	29,938	1	2	29,938	1	2
Arrowtown to Macetown	450	0	0	450	0	0
Nelson Creek Bridge	100	0	0	100	0	0
Cascade to Barn Bay Road	411	7	0	411	7	0
Repairs to decking, Tapu Wharf	100	0	0	100	0	0
Waitekauri Battery from Junction–Waihi Road	150	0	0	150	0	0
Deep Creek, Wakamarina, to Empire City Company's claim	50	0	0	50	0	0
Track to diggings at Cape Foulwind	497	11	0	497	11	0
Bridge over Fox's River at Brighton	100	0	0	100	0	0
Totara Bridge	255	0	0	255	0	0
Road from Mokihinui Bridge to gold-workings	75	0	0	75	0	0
Clearing two miles of old track from right-hand branch of Kanieri River to Gentle Annie Terrace	13	0	0	13	0	0
Extending horse-track to Blackball Creek	500	0	0	500	0	0
Matawai to Kaimarama	150	0	0	150	0	0
Tiki to Mahakirau	250	0	0	250	0	0
Karangahake Gorge to Waihi	350	0	0	350	0	0
Upper Tararu Road	471	10	3	471	10	3
Red Hill Road	249	8	1	249	8	1
Repairs, Nile Bridge	1,131	2	6	1,131	2	6
Miller's Flat to Skipper's	580	0	0	580	0	0
Cobden to Coal Creek	375	0	0	375	0	0
Track to New Find, Tairua	47	11	6	47	11	6
Cedar Creek Dray-road	466	11	2	466	11	2
Road to Matarangi Goldfield	75	0	0	75	0	0
Repairs, Manaia Track	90	0	0	90	0	0
Upper Township School Bridge	50	0	0	50	0	0
Tiki Bridge across Waiau	256	0	0	256	0	0
Scott's Bridge	175	0	0	175	0	0
Oteau Bridge	150	0	0	150	0	0
Mercury Bay–Kaimarama Road	50	0	0	50	0	0
Stoney Creek Track	15	0	0	15	0	0
Road to mines, Waiomo	50	0	0	50	0	0
Upper Hill Track to branch track, Waiorongomai	30	0	0	30	0	0
Canadian Gully Bridge, and repairs to tunnel on horse-grade, Waiorongomai	70	0	0	70	0	0
Waiorongomai Road	100	0	0	100	0	0
Track from Slate River to Rocky	225	0	0	225	0	0
Pack-track to Killdevil	100	0	0	100	0	0
Repairs, Wangapeka Road towards Crow Diggings	153	0	7	153	0	7
Repairing flood-damages, Grey County	370	0	0	370	0	0
Taipo Track to Seven-mile	194	5	8	194	5	8
Repairs, Totara Bridge	336	0	0	336	0	0
Repairs, Kanieri Lake Road	80	0	0	80	0	0
Mercury Bay to Whenuakite and Boat Harbour	150	0	0	150	0	0
Tiki to Gumtown, *viâ* Kaimarama	160	0	0	160	0	0
Driving Creek to Cabbage Bay, and Driving Creek to Cape Colville	660	0	0	660	0	0
Tiki to Waikawau	600	0	0	600	0	0
Paeroa to Te Aroha	365	0	0	365	0	0
Puriri to east side of range	596	19	6	596	19	6
Onamalutu to Wakamarina Forks	400	0	0	400	0	0
Waimangaroa to Denniston	100	0	0	100	0	0

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
WORKS WHOLLY CONSTRUCTED BY MINES DEPARTMENT—*continued.*	£	s.	d.	£	s.	d.
Road to Lyell's Creek Extended Company's tunnel	200	0	0	200	0	0
Jackson's Bay to Cascade	1,110	8	1	1,110	8	1
Bridge over Ogilvie's Creek	150	0	0	150	0	0
Gillam's Gully Track	220	0	0	220	0	0
Bridge over Kanieri River at Kokatahi	467	10	10	467	10	10
Road to Oparara Diggings	100	0	0	100	0	0
Millerton Road	249	0	3	249	0	3
Waiau to Preservation Inlet	7,961	19	6	7,961	19	6
Hatter's Terrace to Haupiri	1,650	0	0	1,650	0	0
Grey River to Moonlight	530	0	0	530	0	0
Blackball Track	1,185	12	5	1,185	12	5
Ahaura–Kopara Road	400	0	0	400	0	0
Mackley's to Waipuna Terrace	100	0	0	100	0	0
Footbridge over Blackball Creek	150	0	0	150	0	0
Waipapa to Waikawa	200	0	0	200	0	0
Waipapa to Six-mile	100	0	0	100	0	0
Drain at Adamson's	50	0	0	50	0	0
Maruia Track, between Reefton and Maruia	50	0	0	50	0	0
Sledge-track to Langdon Reefs	30	0	0	30	0	0
Track to Blackball Township, repairs	40	0	0	40	0	0
Track, Old Man Range	50	0	0	50	0	0
Road to gold discovery near Blue Spur	45	0	0	45	0	0
Bartlett's Creek Track	200	0	0	200	0	0
Prospecting-track, Brunnerton to Paparoa	125	0	0	125	0	0
Extension Seddon's Terrace Track to new claim	208	10	6	208	10	6
West Tokatea Road	50	0	0	50	0	0
Waitaia Battery Road	150	0	0	150	0	0
Preece's Point Road	150	0	0	150	0	0
Tokatea – Kennedy Bay Road	100	0	0	100	0	0
Main Cabbage Bay Road	50	0	0	50	0	0
Hooker's to Mercury Bay	100	0	0	100	0	0
Opeto Road	100	0	0	100	0	0
Blagrove's Road	400	0	0	400	0	0
Cemetery – Cabbage Bay Road	100	0	0	100	0	0
Rails for Coromandel Wharf	31	5	0	31	5	0
Culverts, Tiki Road	100	0	0	100	0	0
Soldier's Creek Road	198	5	0	198	5	0
Road to Barrytown	300	0	0	300	0	0
Tracks to western sounds	7,307	17	11	7,307	17	11
Road to R. Kelly's claim, Gentle Annie Creek	100	0	0	100	0	0
Waitekauri to New Find	250	0	0	250	0	0
Paeroa Mill Road	50	0	0	50	0	0
Owharoa to Waitawheta	50	0	0	50	0	0
Deviation Road, Earl's Hill	200	0	0	200	0	0
Waihi to Katikati	75	0	0	75	0	0
Bridge over Slate River	50	0	0	50	0	0
Pack-track to Glover's Flat, Lower Anatoki	50	0	0	50	0	0
Clearing Karaka Creek of flood-damage	50	0	0	50	0	0
Track up right-hand branch of Cullen's Creek	25	0	0	25	0	0
Footbridge, Waimangaroa River	50	0	0	50	0	0
Track up Callary Branch, Waiho River	70	0	0	70	0	0
Converting Wilson's Lead Track, Addison's, into a dray-road	400	0	0	400	0	0
Cabbage Bay to mines	400	0	0	400	0	0
Coromandel to Kuaotunu	2,070	0	0	2,070	0	0
Manaia to mines	100	0	0	100	0	0
Whitianga to Mahakirau	300	0	0	300	0	0
Whangapoua Mill Road	100	0	0	100	0	0
Kuaotunu Bridge	200	0	0	200	0	0
Granity Creek to Ngakawau	100	0	0	100	0	0
Crow Diggings Track	527	8	2	527	8	2
Road to diggings, Cape Foulwind	100	0	0	100	0	0
Ngahere to Blackball	600	0	0	600	0	0
Fencing land, Blackball Road	110	0	0	110	0	0
Prospecting-track, Greek's Gully to Kanieri Forks	150	0	0	150	0	0
Repairing Jones's Creek and Donohue's Storm-channels	100	0	0	100	0	0
Deviation, Pleasant Creek Track	130	0	0	130	0	0
Road-works at Ohaeawai	500	0	0	500	0	0
Mahakirau Creek Road	200	0	0	200	0	0
Puriri to mines	100	0	0	100	0	0
Katikati–Waihi Road	150	0	0	150	0	0
Pack-track from Kerikeri	50	0	0	50	0	0
Track to Waitakohe Goldfield	50	0	0	50	0	0
Repairing bridges to mines, Te Puke	250	0	0	250	0	0
Helena Bay to Whakapara Railway-station	100	0	0	100	0	0
Gordon Settlement to Waharoa	600	0	0	600	0	0
Waiorongomai Road	300	0	0	300	0	0
Approach to railway-bridge, Te Aroha	150	0	0	150	0	0
Upper Waitekauri Bridge	250	0	0	250	0	0
Junction Waihi Road to New Find, Waitekauri	328	8	0	328	8	0
Repairing bridges, Doctor's and Staunton's Creeks	200	0	0	200	0	0
Four-mile Bridge	100	0	0	100	0	0
Fox's Bridge	100	0	0	100	0	0
Charleston – Nine-mile Beach	200	0	0	200	0	0

List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
Works wholly constructed by Mines Department—*continued.*	£ s. d.	£ s. d.
Road, Promised Land – Karamea	550 0 0	550 0 0
Karamea Bridge and approaches	3,565 19 8	3,565 19 8
Approaches, Matakitaki Bridge	279 15 0	279 15 0
Snowy Creek Bridge	300 0 0	300 0 0
Big River Road	4,571 0 0	4,571 0 0
Footbridge across by-wash, Ngahere – Blackball Ferry	210 0 0	210 0 0
Track to Healey's Gully	90 0 0	90 0 0
Track, Lancashire Flat to head of Clearwater Creek	50 0 0	50 0 0
Granville Road	100 0 0	100 0 0
Footbridges, Blackwater and Greenstone	300 0 0	300 0 0
Brown's Terrace to Arnold	200 0 0	200 0 0
Protective works, main Grey Bridge	191 0 0	191 0 0
Extension, Tucker's Flat Road	103 2 6	103 2 6
Butcher's Creek Bridge, Kanieri Lake Road	129 17 6	129 17 6
Kapitea Creek Bridge, Lamplough Track	118 0 0	118 0 0
Widening Milltown Track to Humphrey's Gully	600 0 0	600 0 0
Pack-track, Seddon's Terrace to Eel Creek	246 17 6	246 17 6
New bridge, Kapitea Creek, Loop-line Road	30 8 7	30 8 7
Stribbing's Creek Bridge	70 8 11	70 8 11
Widening Seddon's Terrace Road extension	199 0 0	199 0 0
Compensation, Larrikin's Road	56 0 0	56 0 0
Garston to Nevis	1,965 17 2	1,965 17 2
Nevis Valley Road	400 0 0	400 0 0
Okarito River Bridge	300 0 0	300 0 0
Drainage, Stafford Township	399 17 5	399 17 5
Wangapeka Track, Rolling River – Kiwi Creek	149 19 10	149 19 10
Tracks, Stewart Island	718 7 8	718 7 8
Widening Lake Mapourika – Waiho Road	782 6 8	782 6 8
Roads, Great Barrier	604 4 2	604 4 2
Riversdale–Waikaia	200 0 0	200 0 0
Prospecting-track, Lyell–Larry's	100 0 0	100 0 0
Track to New Find, Victoria Range	500 0 0	500 0 0
Extending road into bush, Addison's	100 0 0	100 0 0
Clearing rocks and easing curves, Nine- and Ten-mile Bluffs	129 6 11	129 6 11
Repairs flood-damages, South Westland	100 0 0	100 0 0
Hungerford's Bridge	444 11 5	444 11 5
Waitangi Bluff Track	99 18 9	99 18 9
Track from Cedar Creek Road to Ford and Thompson's claim	20 0 0	20 0 0
Repairs Mount Greenland Track	50 0 0	50 0 0
Ross Road, towards Ranges	199 12 6	199 12 6
Repairs pack-track, Cedar Creek	100 0 0	100 0 0
Kinsella's land, taken for Blackball Road	5 11 0	5 11 0
Maratoto to mines	149 5 6	149 5 6
Hatter's Terrace – Haupiri	200 0 0	200 0 0
Upper Waiotahi Road	492 10 0	492 10 0
Inland from Omahu	400 0 0	400 0 0
Gannon's to Painkiller	196 10 6	196 10 6
Netherton Road	28 14 6	28 14 6
Repairs, Tapu Creek Road	66 0 0	66 0 0
Repairs, Karaka Creek Road	40 0 0	40 0 0
Gravelling road through Mr. Adams's property	100 0 0	100 0 0
Gravelling Onamalutu Track	100 0 0	100 0 0
Road to Fenian Creek, Karamea	250 0 0	250 0 0
Westport and Mokihinui Railway-line to Jones's Creek	100 0 0	100 0 0
Footbridge, No Town Creek	50 0 0	50 0 0
Wood's Creek Bridge	80 0 0	80 0 0
Maori Creek Bridge	50 0 0	50 0 0
Main South Road to Mikonui Beach	15 15 0	15 15 0
River-protection works, Te Aroha	200 0 0	200 0 0
Drains, Maratoto	100 0 0	100 0 0
Repairs, Mata Bridge	300 0 0	300 0 0
Roads, Tauranga County	1,226 17 5	1,226 17 5
Re-metalling Wakamarina Road	500 0 0	500 0 0
Pakawau Bush Road	425 0 0	425 0 0
Scott's Creek Bridge	170 0 0	170 0 0
Richmond–Collingwood	250 0 0	250 0 0
Deadman's Creek – Christmas Terrace	250 0 0	250 0 0
Denniston – Cascade Creek	100 0 0	100 0 0
Big Totara River Bridge	450 0 0	450 0 0
Little Totara River Bridge	350 0 0	350 0 0
Twins Road	100 0 0	100 0 0
Track up Four-mile and Nile Rivers	250 0 0	250 0 0
Culverts, Devil's Creek	100 0 0	100 0 0
Moonlight–Paparoa	100 0 0	100 0 0
Footbridges, Cobden – Seven-mile Road	342 10 0	342 10 0
Grey River – Moonlight	500 0 0	500 0 0
Bridge, Brandy Jack's Creek	150 0 0	150 0 0
Track up Ten-mile Creek	100 0 0	100 0 0
Road, Cobden to Warren's and Ten-mile Bluff to Barrytown	500 0 0	500 0 0
Cape Terrace Road continuation	150 0 0	150 0 0
Lake Brunner Road to Maori Creek	150 0 0	150 0 0

LIST of WORKS on GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
WORKS WHOLLY CONSTRUCTED BY MINES DEPARTMENT—*continued.*	£	s.	d.	£	s.	d.
Hampden to Horse Terrace	3,450	18	6	3,450	18	6
Track to Adamstown	375	4	0	375	4	0
Brunnerton–Paparoa	50	0	0	50	0	0
Waikupakupa Ocean Beach to Main Road	100	8	0	100	8	0
Totara River to Farmer's Creek	194	13	0	194	13	0
Doughboy Road	300	0	0	300	0	0
Widening and repairing Lamplough Track	145	15	0	145	15	0
Extension, Gillam's Gully Track	100	0	0	100	0	0
Adair's Track, Mahinapua Road	150	0	0	150	0	0
Mahinapua and South Terrace Track	250	0	0	250	0	0
Veronica Creek Track	200	0	0	200	0	0
Waipori–Berwick Road	1,976	18	9	1,976	18	9
Roxburgh-Clyde	500	0	0	500	0	0
Orepuki–Block I, Longwood	500	0	0	500	0	0
Tableland horse-track	199	9	3	199	9	3
Landing Creek Bridge	289	16	6	289	16	6
Walker's Creek Bridge	214	12	2	214	12	2
Greenstone–Teremakau	240	0	3	240	0	3
Bell Hill Road	199	9	4	199	9	4
Bridge over Kanieri River	94	5	0	94	5	0
Main South Road to Mikonui Beach	84	15	0	84	15	0
Deviation, Larrikin's Road	1,375	4	2	1,375	4	2
Pine-tree Road	45	10	7	45	10	7
Wire Bridge, German Gully Track	89	19	6	89	19	6
Road-formation, Waitekauri to Cross Road	271	11	11	271	11	11
Bridge, Mariposa Battery Road	24	0	0	24	0	0
Crosbie Settlement Road	50	0	0	50	0	0
Waitaia Battery-site to Low Level	50	0	0	50	0	0
Repairs, Tauranga–Te Puke	25	2	6	25	2	6
Rockville–Slate River	51	0	0	51	0	0
Aorere Main Road, gravelling	60	0	0	60	0	0
Ferntown footbridges and gravelling	48	0	0	48	0	0
Swamp Road, Ferntown	30	0	0	30	0	0
Clearing slips, Seventeen-mile Bluff	150	0	0	150	0	0
Clearing slips, Nelson–Grey–Ross Road	115	0	0	115	0	0
Bridges over Raleigh Creek (3)	324	10	0	324	10	0
Hampden Cemetery to Schoolhouse, Murchison	345	1	6	345	1	6
Squaretown Bridge over Little Grey River	75	0	0	75	0	0
Berwick–Waipori, repairs	75	0	0	75	0	0
Beaumont–Miller's Flat	250	0	0	250	0	0
Track to Police-station, Seddonville	37	19	2	37	19	2
Improving track, Sealer's Creek	49	12	8	49	12	8
Kiripaka to Coal-mines	80	0	0	80	0	0
Waiorongomai Road	150	0	0	150	0	0
Tiki–Opitonui	250	0	0	250	0	0
Taumatawahine Bridge	300	0	0	300	0	0
Cemetery Road, Kuaotunu	100	0	0	100	0	0
Tiki–Matawai	45	0	0	45	0	0
Puriri–Tairua	1,135	14	6	1,135	14	6
Beach Road, Thames	100	0	0	100	0	0
Puru Creek Road	400	0	0	400	0	0
Tararu Creek Bridge	100	0	0	100	0	0
Turua–Netherton	200	0	0	200	0	0
Te Aroha Bridge	250	0	0	250	0	0
Bartlett's Creek Road	449	4	7	449	4	7
Mount Patriarch Road	200	0	0	200	0	0
Takaka River Footbridge	250	0	0	250	0	0
Karamea Track	250	0	0	250	0	0
Bainham–Upper Aorere	200	0	0	200	0	0
Shaggery Road	100	0	0	100	0	0
Seddonville–Mokihinui	920	0	0	920	0	0
Mokihinui to Reefs, widening	500	0	0	500	0	0
Mokihinui to Wanganui, improving	600	0	0	600	0	0
Lyell–Victoria Range	450	0	0	450	0	0
Nile Saddle–Maori Creek	150	0	0	150	0	0
Seddonville–Cardiff	100	0	0	100	0	0
Painkiller–Murray Creek	844	7	6	844	7	6
Little Grey River Bridge	400	0	0	400	0	0
Improving crossings, Waitahu River and Road, up Kirwan's Creek	450	0	0	450	0	0
Fagan's Creek, Barrytown, to Paparoa	425	0	0	425	0	0
Nelson Creek Bridge	950	0	0	950	0	0
Callaghan's Creek Bridge	250	0	0	250	0	0
Mosquito–Maori Creek	100	0	0	100	0	0
Deviation, Westbrook–Teremakau	450	0	0	450	0	0
Bridge, Cobden–Brunner Road	125	10	0	125	10	0
Moonlight Track, deviation	140	0	0	140	0	0
Totara River to Constitution Hill	123	1	0	123	1	0
Teremakau–Paroa	250	0	0	250	0	0
Back Creek Road, deviation	200	0	0	200	0	0
Blue Spur Creek Bridge	29	8	0	29	8	0
Young Hill Creek Road	150	0	0	150	0	0

List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
Works wholly constructed by Mines Department—*continued.*	£	s.	d.	£	s.	d.
Repairs to road between Sections 17 and 45, Waikaka	100	0	0	100	0	0
Skippers–Bullendale	200	0	0	200	0	0
Wangapeka–Wanganui	2,324	17	2	2,324	17	2
Okuru River Ford Track	342	18	8	342	18	8
Gillespie's Bluff Track	151	14	1	151	14	1
Maori River Road	149	19	6	149	19	6
Clifden Bridge, Waiau	1,115	3	0	1,115	3	0
Whangamata Harbour to Wentworth	100	0	0	100	0	0
Waiorongomai–Gordon	150	0	0	150	0	0
Easing grade Kahika Hill	75	0	0	75	0	0
Bartlett's Creek – Cat Point	200	0	0	200	0	0
Bridges, Dead Horse and Walker's Creeks	25	0	0	25	0	0
Black Creek Bridge	75	0	0	75	0	0
Wharton's Dam to Deep Creek	25	0	0	25	0	0
Piano Flat Company's Track	50	0	0	50	0	0
Waikaia–Whitecomb (repairs)	50	0	0	50	0	0
Mangles Bridge	4,323	4	8	4,323	4	8
Karangarua Bridge	448	13	6	448	13	6
Repairs Donnelly's Creek Bridge	440	1	3	440	1	3
Waiau Bridge to Old Mill-site	150	0	0	150	0	0
Donnelly's Bridge	136	10	0	136	10	0
Sullivan's Creek Bridge	164	0	0	164	0	0
Rings Road Bridge	325	0	0	325	0	0
Railway-stations roads	500	0	0	500	0	0
Matatoke Outfall-drain	100	0	0	100	0	0
Komata Reefs – Paeroa	500	0	0	500	0	0
Grace Darling Road	392	0	0	392	0	0
Komata Creek Road	150	0	0	150	0	0
Waitekauri Creek Bridge	160	0	0	160	0	0
Papamoa – Te Puke	275	0	0	275	0	0
Tauranga – Te Puke	400	0	0	400	0	0
Slate River Road	100	0	0	100	0	0
Motupipi Bridge	100	0	0	100	0	0
Tracks, Wakamarina and Mahakipawa	46	16	6	46	16	6
Promised Land – Ohinemuri Creek	400	0	0	400	0	0
Fairdown to Beach	100	0	0	100	0	0
Paparoa River Track	100	0	0	100	0	0
Capleston–Larry's	415	0	0	415	0	0
Blackball–Paparoa	1,686	10	0	1,686	10	0
Coal Creek Bridge	538	0	0	538	0	0
Totara Flat Road	100	0	0	100	0	0
Dowling Creek Bridge	175	0	0	175	0	0
Granite Creek Bridge	100	0	0	100	0	0
Blackball Road (improvements)	100	0	0	100	0	0
Sunny Bight Track (widening)	200	0	0	200	0	0
Callery Track and Wire Bridge	400	0	0	400	0	0
Mikonui River (approaches)	100	0	0	100	0	0
McKay's Creek Bridge	270	12	0	270	12	0
Haast – Blue River Road	100	0	0	100	0	0
Arawata Track	100	0	0	100	0	0
Turnbull and Okuru Rivers Track	100	0	0	100	0	0
Waitahuna – Bruce County boundary	300	0	0	300	0	0
Clyde–Ophir	200	0	0	200	0	0
Nokomai Road	250	0	0	250	0	0
Skipper's – Gallant Tip	100	0	0	100	0	0
Beale's Hill Road deviation	100	0	0	100	0	0
Gore–Waikaka	400	0	0	400	0	0
Riversdale–Waikaia	200	0	0	200	0	0
Charlton Road	200	0	0	200	0	0
Orepuki–Shale-works	200	0	0	200	0	0
Havelock–Mahakipawa	191	5	1	191	5	1
Dee Creek Bridge	538	3	10	538	3	10
Cook's River Flat (widening)	396	13	6	396	13	6
Galway – Bluff Track	147	15	10	147	15	10
Kokotahi Road	451	2	5	451	2	5
Donoghue's deviation	229	18	6	229	18	6
Mason's Bay Track	150	9	6	150	9	6
Granity Creek Bridge	431	12	0	431	12	0
Mount Hercules deviation (Great South Road)	1,119	4	6	1,119	4	6
Waitaia Mine to battery	100	0	0	100	0	0
Gumtown Landing to post-office	50	0	0	50	0	0
Repairs, track, Thames Road to McLaughlin's	50	0	0	50	0	0
Maratoto Road	199	13	10	199	13	10
Thames River – Whangamata	200	0	0	200	0	0
Cullensville–Waikakaho	55	0	0	55	0	0
Road to Golden Bar Mine	83	3	6	83	3	6
Tuamarina–Kaituna	184	0	0	184	0	0
Neudorf–Ngatimoti	100	0	0	100	0	0
Graham River Bridge	150	0	0	150	0	0
Takaka Bridge protective works	150	0	0	150	0	0
Takaka Hill Road	150	0	0	150	0	0
Cobden–Barrytown (repairs)	1,572	0	0	1,572	0	0
Brown's Terrace – Kotuku	100	0	0	100	0	0

List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
Works wholly constructed by Mines Department—*continued.*	£	s.	d	£	s.	d.
Blackball footbridge approaches	250	0	0	250	0	0
Twelve-mile Bluff – Fourteen-mile Bluff	100	0	0	100	0	0
Cobden – Point Elizabeth	100	0	0	100	0	0
Nelson Creek – Bell Hill	250	0	0	250	0	0
Big River – Slatey Creek	100	0	0	100	0	0
Big River – St. George	249	14	0	162 249	14	0
Kanieri River Bridge	30	15	0	30	15	0
Arrow–Matatapu	100	0	0	100	0	0
Bridles Point – Deepwater	100	0	0	100	0	0
Blind Bay – Whangaparapara	844	1	5	844	1	5
Karaka Creek Road	100	0	0	100	0	0
Lower Tairua – Broken Hill	150	0	0	150	0	0
Waitekauri–Wharekiraupunga	98	8	6	98	8	6
Mill Road	200	0	0	200	0	0
Waitekauri–Hill Track	100	0	0	100	0	0
Repairs, Kaituna Bridge	81	3	6	81	3	6
Lloyd's Valley Road bridges	150	0	0	150	0	0
Glenrae–Tadmor	100	0	0	100	0	0
Brooklyn Valley Road	100	0	0	100	0	0
Oparara River Road, Karamea	550	0	0	550	0	0
Bradshaw's Lead Road	200	0	0	200	0	0
Fenian Creek Track	250	0	0	250	0	0
Karamea River Protective Works	200	0	0	200	0	0
Coalbrookdale – Cedar Creek	200	0	0	200	0	0
Nile River Bridge, Charleston	360	0	0	360	0	0
Deadman's Creek, Brighton	150	0	0	150	0	0
Caroline Terrace Road	100	0	0	100	0	0
Mulliky Creek – Karamea	100	0	0	100	0	0
Murray Creek – Waitahu	568	16	6	568	16	6
Black's Point Road (widening)	1,051	3	3	1,051	3	3
Blackball Footbridge (Brunner–Moonlight Road)	520	0	0	520	0	0
Barrytown–Paparoa	200	0	0	200	0	0
Eight-mile Creek Bridge	442	16	10	442	16	10
Granville – Grey River	150	0	0	150	0	0
Middle Branch – Styx River	400	0	0	400	0	0
Kumara Beach Road – Teremakau	976	0	0	976	0	0
Ross Cemetery Road	200	0	0	200	0	0
Table Hill – Canada Reefs	100	0	0	100	0	0
Beaumont–Rankleburn	250	0	0	250	0	0
Clyde–Queenstown	1,100	0	0	1,100	0	0
White's Reef – Fraser Basin	100	0	0	100	0	0
Hawea – Lindis Pass	150	0	0	150	0	0
Alexandra Bridge	750	0	0	750	0	0
Dairy Creek – Coal-pits	88	0	0	88	0	0
Waimumu Claims Road	200	0	0	200	0	0
Croydon dredging claims	200	0	0	200	0	0
Glenary Bridge	400	0	0	400	0	0
Ross Creek Bridge	84	18	11	84	18	11
Wangapeka–Kiwi	381	0	0	381	0	0
Larry's Creek Bridge (extension)	627	11	1	627	11	1
Belgrove–Westport–Reefton	9,393	6	11	9,393	6	11
Glenroy Bridge	916	19	8	916	19	8
Warwick–Maruia Bridge	7	15	6	7	15	6
Stafford–Awatuna	2,329	3	11	2,329	3	11
Stewart Island Road to Mines	219	8	2	219	8	2
Roads, Preservation Inlet	442	16	8	442	16	8
Tracks, Cromarty	216	6	3	216	6	3
Roads, Stewart Island	113	15	1	113	15	1
Lake Hochstetter Track	178	19	7	178	19	7
Ahaura–Haupiri	1,247	18	4	1,247	18	4
Ahaura – Orwell Creek	668	9	3	668	9	3
Deadman's Creek Bridge	147	7	4	147	7	4
Saltwater Creek Bridge	105	14	4	105	14	4
Mercury Bay, Hospital Road	50	0	0	50	0	0
Coromandel – Mercury Bay	165	0	0	165	0	0
Omahu–Whangamata Track to Klondike Mine	100	0	0	100	0	0
Rocky Point Road	50	0	0	50	0	0
Waitekauri Hill Track	5	0	0	5	0	0
Golden Cross Road (repairs)	34	14	6	34	14	6
Protective works, Main Road, Karangahake	94	18	8	94	18	8
Karangahake–Rotokohu	307	10	0	307	10	0
Aorere River Bridge (repairs)	100	0	0	100	0	0
Burning coal-seam, Boatman's	69	10	0	69	10	0
Paroa–Teremakau	200	0	0	200	0	0
Doolan's Coal-pit Road	300	0	0	300	0	0
Ahaura Bridge	3,314	14	3	3,314	14	3
Orwell Creek Bridge	185	12	2	185	12	2
Dredging Titri Canal	12	0	0	12	0	0
Whakapara–Puhipuhi	585	0	0	585	0	0
Macaronic Mine Road	200	0	0	200	0	0
Owera Bridge	350	0	0	350	0	0
Driving Creek School Bridge	200	0	0	200	0	0
Matatoki Road	467	10	0	467	10	0

LIST OF WORKS ON GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost			Amount of Contribution paid by Mines Department.		
WORKS WHOLLY CONSTRUCTED BY MINES DEPARTMENT—*continued.*	£	s.	d.	£	s.	d.
Wharepoa Settlement Road	1,059	1	5	1,059	1	5
Crosbie Settlement Road	100	0	0	100	0	0
Peel's Creek Road	100	0	0	100	0	0
Karangahake Track extension	105	0	0	105	0	0
Waihi–Tauranga	197	3	4	197	3	4
Mangakara Creek Bridge	150	0	0	150	0	0
Karangahake–Mangakara	132	7	10	132	7	10
Protecting Bridge, Waitapu	200	0	0	200	0	0
Milnthorpe Road	200	0	0	200	0	0
Pakawau–Puponga	100	0	0	100	0	0
Chandler's – Wangapeka Junction	200	0	0	200	0	0
Chandler's – Rolling River	200	0	0	200	0	0
Tableland Track	40	0	0	40	0	0
Lyell–Eight-mile (widening)	750	0	0	750	0	0
Canaan Road	250	18	8	250	18	8
Addison's Road	100	0	0	100	0	0
Virgin Flat Road	100	0	0	100	0	0
Blackwater Track	200	0	0	200	0	0
Welshman's Terrace Track	200	0	0	200	0	0
Fairdown–Waimangaroa	350	0	0	350	0	0
Coal Creek Extension	200	0	0	200	0	0
Warwick–Maruia Bridge	198	2	10	198	2	10
Fairdown Station – Waimangaroa (widening)	300	0	0	300	0	0
Just-in-Time Track	300	0	0	300	0	0
Road to Matakitaki River Bridge	200	0	0	200	0	0
Glenroy River Road	300	0	0	300	0	0
Waipuna Road	925	0	0	925	0	0
Cape Terrace Road	400	0	0	400	0	0
Hatter's Terrace – Bell Hill	500	0	0	500	0	0
Nelson Creek Bridge, Grey–Marsden Road	100	0	0	100	0	0
Nelson Creek Bridge – Hatter's Terrace	200	0	0	200	0	0
Maori Creek Bridge	100	0	0	100	0	0
Eight-mile Creek Bridge Approaches	130	0	0	130	0	0
Moonlight Road	250	0	0	250	0	0
Kokatahi Road	255	0	0	255	0	0
Doughboy Road	210	2	9	210	2	9
Humphrey's–One-mile	238	8	6	238	8	6
Milltown Track Deviation	342	15	0	342	15	0
Lamplough Track	257	0	0	257	0	0
Blue Spur Road Bridge	50	0	0	50	0	0
Tucker Flat Road	88	15	9	88	15	9
Three-mile Bluff – Okarito	150	0	0	150	0	0
Metalling Awatuna Road	100	0	0	100	0	0
Johnston's Creek Road Extension	450	0	0	450	0	0
Waimumu Road	300	0	0	300	0	0
Stoney Ford Bridge – Nokomai	300	0	0	300	0	0
Waikaia Goldfield Road	150	0	0	150	0	0
Waikaia–Whitecomb	100	0	0	100	0	0
Parrawa–Nokomai Bridge	250	0	0	250	0	0
Stewart Island Road to Mines	311	7	6	311	7	6
Karamea Bridge (rebuilding)	4,044	6	4	4,044	6	4
Westport–Waimangaroa	1,045	0	1	1,045	0	1
Waipuna Bridge	260	12	10	260	12	10
Boatman's Creek Bridge	3	19	0	3	19	0
Sawyer's Creek Bridge	246	17	8	246	17	8
Potts' Creek Bridge	330	0	9	330	0	9
Opitonui Footbridge	90	0	0	90	0	0
Gumtown Road	824	0	0	824	0	0
Paeroa–Waihi	570	0	0	570	0	0
Komata Drain	100	0	0	100	0	0
Thompson's Track	4,723	19	11	4,723	19	11
Waihi–Katikati	2,199	16	0	2,199	16	0
Caledonian Terrace Track	100	0	0	100	0	0
Boatman's Valley Road Bridge	435	0	0	435	0	0
Repairs Kaituna Bridge	68	16	6	68	16	6
Approaches Moonlight Bridge	35	0	0	35	0	0
Repairs Upper Callary Track	50	0	0	50	0	0
Lower Ford Track, Wataroa	50	0	0	50	0	0
Humphrey's Road	18	16	6	18	16	6
Gillam's Gully Track	799	19	7	799	19	7
Back Creek Road and Bridge	99	18	1	99	18	1
Milltown Road	58	15	6	58	15	6
Tucker Flat Road	11	4	3	11	4	3
Clarendon–Berwick	400	0	0	400	0	0
Repairs Great South Road	100	0	0	100	0	0
Campion's Road	150	0	0	150	0	0
Garvie Burn Road	100	0	0	100	0	0
Mataura River Bridge repairs	50	0	0	50	0	0
Edge's Coal-pit Road	150	0	0	150	0	0
Burke's Creek Bridge	245	3	0	245	3	0
Prospecting-tracks, Rimu	75	0	0	75	0	0
Waiwawa River Bridge	500	0	0	500	0	0

List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
Works wholly constructed by Mines Department—*continued.*	£ s. d.	£ s. d.
McColl's Creek Bridge	100 0 0	100 0 0
Driving Creek – Tokatea	200 0 0	200 0 0
Opitonui – Mercury Bay	200 0 0	200 0 0
Bridge and approaches, Waitaia Mine Road	100 0 0	100 0 0
Swamp Creek Bridge	100 0 0	100 0 0
Whangamata–Wentworth	440 0 0	440 0 0
Upper Tairua Bridge	250 0 0	250 0 0
Kaueranga Suspension-bridge	250 13 4	250 13 4
Komata Reefs – Waitekauri	405 0 0	405 0 0
Hikutaia–Waitekauri	1,095 0 0	1,095 0 0
Grace Darling Road	47 8 9	47 8 9
Tui Mine Track	599 14 0	599 14 0
Karangahake Mountain-track	136 0 0	136 0 0
Dividing Range Track	225 0 0	225 0 0
Karangahake Hill Track	210 0 0	210 0 0
Waitekauri Hill Track	100 0 0	100 0 0
Te Aroha–Karangahake–Waitawheta	199 14 0	199 14 0
Havelock–Tuamarina	679 0 0	679 0 0
Cullensville Road and track	50 0 0	50 0 0
Bonny Doon Road	1,785 17 7	1,785 17 7
Kaituna–Ferntown	300 0 0	300 0 0
Taitapu boundary Track	200 0 0	200 0 0
Bainham Bridge	578 10 0	578 10 0
Slate River road	200 0 0	200 0 0
Thorpe–Churchill	300 0 0	300 0 0
Shaggery Road	200 0 0	200 0 0
Motueka Valley – Baton	200 0 0	200 0 0
Stanley Brook Bridge	300 0 0	300 0 0
Lyell Bridge – Ryan's	1,100 0 0	1,100 0 0
Addison's Road – Buller Road	1,250 0 0	1,250 0 0
Mokihinui end of Westport Road	1,050 0 0	1,050 0 0
Fairdown to Beach	200 0 0	200 0 0
Charleston–Brighton	400 0 0	400 0 0
Waimangaroa–Birchfield	600 0 0	600 0 0
Lyell – Denniston Hill	300 0 0	300 0 0
Mountain Creek – Addison's	100 0 0	100 0 0
Cascade Creek Road	450 0 0	450 0 0
Eight mile–Mokihinui	200 0 0	200 0 0
Cedar Creek–Denniston	200 0 0	200 0 0
Blackwater – Big River	600 0 0	600 0 0
Kotuku – Bell Hill	500 0 0	500 0 0
Teremakau Bridge – Payne's	200 0 0	200 0 0
Waipuna–Mosquito	150 0 0	150 0 0
Nelson Creek – Bell Hill	500 0 0	500 0 0
Paroa–Teremakau	1,141 0 0	1,141 0 0
Brown's Creek Bridge – Old Marsden Road	250 0 0	250 0 0
Saltwater Creek Bridge	250 0 0	250 0 0
Adair's Track (widening)	430 0 0	430 0 0
Browning's Pass Track	485 1 0	485 1 0
Ogilvie's Beach Track	1,122 9 8	1,122 9 8
Kanieri Forks Road	450 0 0	450 0 0
Duffer's Road (widening)	300 0 0	300 0 0
Kanieri Lake Road	430 0 0	430 0 0
Dillman's Road – Nos. 4 and 5 Channels	210 6 0	210 6 0
Larrikin's Road	296 1 7	296 1 7
Saltwater Track	138 9 10	138 9 10
Whitcomb Valley Road	174 13 0	174 13 0
Waitahuna–Lawrence	500 0 0	500 0 0
Beaumont – Miller's Flat	200 0 0	200 0 0
Waitahuna – Round Hill	200 0 0	200 0 0
Nevis Valley Road	600 0 0	600 0 0
Cromwell Borough–Lowburn	200 0 0	200 0 0
Clyde–Cromwell (repairs)	500 0 0	500 0 0
Cromwell–Nevis	250 0 0	250 0 0
Crown Terrace – Cardrona	449 17 0	449 17 0
Arthur's Point – Moke Creek	260 0 0	260 0 0
Arrow Falls Road	300 0 0	300 0 0
Sawyer's Gully Road	100 0 0	100 0 0
Road to dredging claims, Waimumu	200 0 0	200 0 0
Nokomai Saddle Road	200 0 0	200 0 0
Waikaka Valley Main Road (repairs)	200 0 0	200 0 0
Central Charlton Road	100 0 0	100 0 0
Waikaka to Coal-pit	150 0 0	150 0 0
Picton–Grove	3,278 16 3	3,278 16 3
Hokitika–Jackson's	2,391 11 4	2,391 11 4
Solberg's Hill	49 18 4	49 18 4
Upjohn's Hill	174 9 3	174 9 3
Moonlight Creek Bridge	800 15 7	800 15 7
Okarito Forks – Waiho	1,960 13 8	1,960 13 8
Mahakirau Goldfield Road	420 0 0	420 0 0
Edwards Bridge	40 0 0	40 0 0
Wataroa Bluff Track	594 4 8	594 4 8

List of Works on Goldfields, &c.—*continued.*

Locality and Nature of Works.	Total Cost.			Amount of Contribution paid by Mines Department.		
Works wholly constructed by Mines Department—*continued.*	£	s.	d.	£	s.	d.
Coromandel–Whangapoua	1,703	0	0	1,703	0	0
Opitonui Bridge	400	0	0	400	0	0
Ohuka Creek Bridge	510	0	0	510	0	0
Driving Creek School Bridge, Tokatea Road	400	0	0	400	0	0
Kennedy Bay – Matamataharakeke	100	0	0	100	0	0
Karaka Creek encroachment	100	0	0	100	0	0
Dredging Waiwawa River	255	17	6	255	17	6
Manaia Goldfield Road	100	0	0	100	0	0
Harataunga I and II Blocks	100	0	0	100	0	0
Coromandel – Cabbage Bay	884	0	0	884	0	0
Tapu Creek and extension	1,756	1	11	1,756	1	11
Waiotahi Road	387	16	5	387	16	5
East side of Range Track	100	0	0	100	0	0
Tapu and Mercury Bay Track	250	9	0	250	9	0
Tairua – Broken Hills	298	10	0	298	10	0
Waiotahi Aqueduct (repairs)	100	0	0	100	0	0
Waiomo Creek Road	700	0	0	700	0	0
Mackaytown–Rahu	200	0	0	200	0	0
Paeroa – Te Aroha Bridge	500	0	0	500	0	0
Thorpe–Neudorf	200	0	0	200	0	0
Bainham – Upper Aorere	200	0	0	200	0	0
Aorere Bridge (repairs)	250	0	0	250	0	0
West Wanganui Inlet Bridge	379	0	0	379	0	0
Long Plain Road extension	150	0	0	150	0	0
North Beach – Karamea	150	0	0	150	0	0
Lyell – Victoria Range	150	0	0	150	0	0
Promised Land – Ohinemuri	300	0	0	300	0	0
Land of Promise Road	700	0	0	700	0	0
Glass-eye Creek Track	200	0	0	200	0	0
Lyell – Cedar Creek	550	0	0	550	0	0
Granity Creek – Ngakawau	250	0	0	250	0	0
Seddonville – Mokihinui Mine	450	0	0	450	0	0
Coal Creek extension	100	0	0	100	0	0
Seatonville – Mokihinui Mine	300	0	0	300	0	0
Nile Creek Bridge	100	0	0	100	0	0
Blackadder's Coal-mine Road	100	0	0	100	0	0
Crushington Road	100	0	0	100	0	0
Maori Creek – Maori Gully	250	0	0	250	0	0
Grey–Dunganville Road bridges	400	0	0	400	0	0
Upper Moonlight Road	150	0	0	150	0	0
Hohonu River Bridge – Cape Terrace	200	0	0	200	0	0
Repairs (flood damages), Grey County roads	250	0	0	250	0	0
Repairs (flood damages), Brunner Borough	150	0	0	150	0	0
Inglewood–Painkiller	177	4	9	177	4	9
Great South Road (repairs)	300	0	0	300	0	0
Big Dam Track (repairs)	75	0	0	75	0	0
Roaring Meg Bridge	150	0	0	150	0	0
Nevis River Bridge	150	0	0	150	0	0
Arrowtown–Macetown	1,700	0	0	1,700	0	0
Shotover River Track	500	0	0	500	0	0
Orepuki–Shale-works	100	0	0	100	0	0
Waikaka Valley Road (repairs)	250	0	0	250	0	0
Tiki – Te Koumu	525	0	0	525	0	0
Cemetery Road, Mercury Bay	50	0	0	50	0	0
Golden Cross Road (repairs)	15	5	6	15	5	6
Repairing chair, Buller River	30	0	0	30	0	0
Repairing suspension-bridge, Eight-mile	30	0	0	30	0	0
Repairing overflow-bridge, Karamea	40	0	0	40	0	0
Clearing slips, Promised Land Road	65	0	0	65	0	0
Clearing track to Denniston	15	0	0	15	0	0
Gibson's Creek Bridge (repairs)	20	0	0	20	0	0
Mangle's Valley Road	1,110	0	0	1,110	0	0
Paparoa – Garden Gully	150	0	0	150	0	0
New River Bridge (repairs)	250	0	0	250	0	0
Improving Upper Browning's Pass Track	10	0	0	10	0	0
Clearing track, South Kanieri	40	0	0	40	0	0
Westland Reefs Survey	613	18	0	613	18	0
Wainihinihi Race to Kawhaka	162	3	9	162	3	9
Christchurch Road to Wainihinihi	187	9	7	187	9	7
Cabbage Bay – Port Chalmers and Cape Colville	2,822	0	0	2,822	0	0
Tiki – Manaia	1,908	13	0	1,908	13	0
Waikoromiko Road	156	10	0	156	10	0
Kapowai Track	689	0	0	689	0	0
Four-in-Hand Road	473	8	0	473	8	0
Mercury Bay – Whenuakite and Boat Harbour	700	0	0	700	0	0
Bridle's Point – Deepwater	380	0	0	380	0	0
Kauris – Mahakirau	150	0	0	150	0	0
Scottys' Mine – Battery	110	0	0	110	0	0
Waikawau – McLaughlin's	100	0	0	100	0	0
Sullivan's Bridge, near Hooker's	100	0	0	100	0	0
Mercury Bay – Tairua	300	0	0	300	0	0
Cabbage Bay Bridge	350	0	0	350	0	0
Mercury Bay Wharf (repairs)	244	2	6	244	2	6
Kauris–Ecclestone	100	0	0	100	0	0

LIST OF WORKS ON GOLDFIELDS, &c.—*continued.*

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
WORKS WHOLLY CONSTRUCTED BY MINES DEPARTMENT—*continued.*	£ s. d.	£ s. d.
Mahaki Goldfield Track	250 0 0	250 0 0
Hikuwai Bridge	150 0 0	150 0 0
Thames–Whangamata	672 5 2	672 5 2
Karaka Creek Road	250 0 0	250 0 0
Waiotahi Road	50 0 0	50 0 0
Crosbie Settlement Road	250 0 0	250 0 0
Big Slip, Thames–Waikawau	150 0 0	150 0 0
Metalling Goldfields Road	200 0 0	200 0 0
Thames–Tapu	100 0 0	100 0 0
Waihi–Whangamata	907 0 0	907 0 0
Alpha–Komata	100 0 0	100 0 0
Rotokohu–Karangahake	100 0 0	100 0 0
Hill Track–Willows Camp	98 0 0	98 0 0
Rocky Point (widening)	140 0 0	140 0 0
Mangakino Track	100 0 0	100 0 0
Cullensville–Waikakaho	30 0 0	30 0 0
Collingwood–Taitapu	200 0 0	200 0 0
Waratah–Puponga	100 0 0	100 0 0
Turua–Netherton	1,538 5 0	1,538 5 0
Kaueranga Bridge	299 6 0	299 6 0
Waihi–County Boundary	1,393 5 3	1,393 5 3
Pariwhakaha–McArtneys	100 0 0	100 0 0
Chandler's–Wangapeka Junction	200 0 0	200 0 0
Riwaka Bridge (protective works)	100 0 0	100 0 0
Stanley Brook Bridge	650 0 0	650 0 0
Costellos Hill Road	1,250 0 0	1,250 0 0
Mokihinui–Ngakawau	1,500 0 0	1,500 0 0
Road to Dredges, Lyell	200 0 0	200 0 0
Britannia Mine Road	900 0 0	900 0 0
Millerton–Mine Creek	545 0 0	545 0 0
Darkies Hill Road and Bridge	41 12 6	41 2 6
Boatman's Creek Bridge	93 19 7	93 19 7
Reefton–Progress	820 0 0	820 0 0
Painkiller–Murray Creek	300 0 0	300 0 0
Waitahu River Foot-bridge near Gannons	150 0 0	150 0 0
Blackwater Bridge	359 2 9	359 2 9
Blackball–Healey's Gully	1,400 0 0	1,400 0 0
Main Grey Bridge (repairs)	2,945 9 11	2,945 9 11
Orangipuku Footbridge	50 0 0	50 0 0
Deviation, Notown Road	150 0 0	150 0 0
Ahaura–Orwell Creek	70 0 0	70 0 0
Lamplough Track	100 0 0	100 0 0
Seven-mile Creek–Taipo	1,270 0 0	1,270 0 0
Fourth Terrace–Lamplough	100 0 0	100 0 0
Seddon's Terrace Track (extension)	849 15 0	849 15 0
Humphrey's Road and Bridges	100 0 0	100 0 0
Kanieri Fork's Road	130 0 0	130 0 0
Teremakau–Paroa	268 8 0	268 8 0
Grading No. 4 Channel Road	200 0 0	200 0 0
Totara Track	100 0 0	100 0 0
Wataroa Gorge Track	316 1 10	316 1 10
Larrikins Main Road (extension)	200 0 0	200 0 0
Duffers Creek Bridge	500 0 0	500 0 0
Styx River–Wilberforce	650 0 0	650 0 0
Adair's Track (widening)	200 0 0	200 0 0
Waipori Bush Road	750 0 0	750 0 0
Lawrence–County Boundary	825 0 0	825 0 0
FitzGerald's Bridge	80 0 0	80 0 0
Beaumont–Rankleburn	200 0 0	200 0 0
Waipori–Outram	150 0 0	150 0 0
Lawrence–Waipori	2,175 0 0	2,175 0 0
Gentle Annie–Clyde	945 0 0	945 0 0
Ophir Bridge	1,000 0 0	1,000 0 0
Cromwell–Nevis	100 0 0	100 0 0
Arrow–Cardrona, *via* Crown Terrace	100 0 0	100 0 0
Arthur's Point–Arrowtown	200 0 0	200 0 0
Waikaka Township–Little Waikaka	300 0 0	300 0 0
Cardrona Coal-pit Road	250 0 0	250 0 0
Waikaka Coal-pit	100 0 0	100 0 0
Charlton Creek Road	100 0 0	100 0 0
Makarewa–Hedgehope (flood-channel)	400 0 0	400 0 0
Top Valley Road	728 19 8	728 19 8
State Coal-mine Township Road	250 11 2	250 11 2
McCullough and Parker's Creeks (protection)	160 0 0	160 0 0
Okarito–Forks	35 11 0	35 11 0
Orepuki–Preservation Inlet	3,884 12 0	3,884 12 0
Great South Road	19,379 16 0	19,379 16 0
Compensation for accidents	131 4 6	131 4 6
Contingencies	1,419 10 5	1,419 10 5
	428,853 11 11	428,853 11 11

Locality and Nature of Works.	Total Cost.	Amount of Contribution paid by Mines Department.
Roads to open up Mines other than Gold.	£ s. d.	£ s. d.
Aniseed Valley to Champion Copper-mine	4,963 10 6	4,116 10 6
Richmond Hill to copper-mine	315 16 0	209 4 0
Track, Ohinemuri Coal-seam	267 3 4	133 11 8
Road, Kanieri Coalfield	600 0 0	300 0 0
	6,146 9 10	4,759 6 2
Tracks to open up Mineral Lands.		
Glory Harbour to Kopack	50 0 0	50 0 0
Port Pegasus Track	155 7 6	155 7 6
Removing snags and felling timber, Mokau River	40 0 0	40 0 0
Ngakawau Footbridge	80 0 7	80 0 7
	325 8 1	325 8 1
Repairing Flood-damages.		
Thames Borough	500 0 0	500 0 0
Artesian-well Boring.		
Maniototo Plains	800 0 0	800 0 0
Prospecting Deep Levels.		
Thames-Hauraki Goldfields (Limited), Queen of Beauty shaft	50,500 0 0	25,000 0 0
Thames-Hauraki Goldfields (Limited), Queen of Beauty shaft, Inspector's fee	500 0 0	500 0 0
Purchase of plant, machinery, and properties of Thames-Hauraki Goldfields (Limited)	6,099 18 1	6,099 18 1
Maintenance of plant, machinery, of Thames-Hauraki Goldfields (Limited)	855 3 7	855 3 7
	57,955 1 8	32,455 1 8
Resumption of Land for Mining.		
Resumption of J. Holmes's land at Kumara for a tailings-site	300 0 0	300 0 0
Resumption of O'Neil and McCormack's land at Back Creek	562 7 0	562 7 0
Purchase Cassrell and Bennett's leaseholds, Paeroa Township	2,250 0 0	2,250 0 0
	3,112 7 0	3,112 7 0

Summary of Works.

	£ s. d.	£ s. d.
Roads (subsidised)—		
Bay of Islands County	2,092 0 0	1,351 0 0
Coromandel County	19,286 3 9	11,455 15 10
Te Aroha Town Board	334 0 0	167 0 0
Thames County	14,054 15 11	7,934 6 11
Thames Borough	3,836 19 2	2,471 15 0
Ohinemuri County	10,257 17 9	5,687 8 5
Waitoa Road Board	200 0 0	130 0 0
Piako County	22,598 2 3	14,791 6 10
Katikati Road Board	507 19 6	253 18 9
Hutt County	959 16 6	435 17 0
Marlborough County	1,715 4 0	933 18 8
Waimea County	1,459 8 8	729 14 4
Collingwood County	3,681 1 8	2,144 19 10
Buller County	11,638 1 4	6,600 16 8
Inangahua County	17,552 14 8	10,530 17 10
Grey County	21,092 4 0	12,810 1 3
Westland County	11,038 15 6	6,739 6 10
Taieri County	499 15 0	333 3 4
Lake County	7,145 6 1	4,926 14 6
Tuapeka County	16,195 7 8	9,063 7 2
Cromwell Borough	500 0 0	250 0 0
Wallace County	1,309 6 0	662 19 8
Vincent County	1,532 0 0	850 0 0
Maniototo County	518 10 0	332 0 0
Fiord County	300 0 0	200 0 0
Waitaki County	1,841 12 0	20 16 0
Southland County	2,455 0 0	1,476 7 4
	174,602 1 5	103,283 12 2
Diamond and other drills	5,170 11 4	3,428 11 4
Wharves	435 15 9	285 15 9
Aids to prospecting	83,350 17 10	33,467 16 9
Water-races	39,349 19 6	35,642 14 8
Drainage and tailings channels	37,174 16 2	23,768 10 10
Aid towards treatment of ores	3,661 18 0	3,011 18 0
Roads wholly constructed by Mines Department	428,853 11 11	428,853 11 11
Roads to open up mines other than gold	6,146 9 10	4,759 6 2
Tracks to open up mineral lands	325 8 1	325 8 1
Repairing flood-damages	500 0 0	500 0 0
Artesian-well boring, Maniototo Plains	800 0 0	800 0 0
Resumption of land for mining	3,112 7 0	3,112 7 0
Aid towards construction of telephone-lines	60 0 0	50 0 0
Prospecting deep levels	57,955 1 8	32,455 1 8
Water-conservation on goldfields	21,978 1 6	21,978 1 6
	863,477 0 0	695,722 15 10

RETURN showing the VALUE of the SALES of WATER, and EXPENDITURE on, and COLLATERAL ADVANTAGES derived from, the Working of the WATER-RACES constructed and maintained by GOVERNMENT during the Year ending 31st March, 1906.

Name of Water-race.	Value of Sales of Water and Channel Fees.	Expenditure on Maintenance.	Profit or Loss.	Cost of Construction.	Total Cost of Construction.	Average Number of Men employed.	Approximate Amount of Gold obtained.	Value of Gold obtained.	Average Weekly Earnings of Men after deducting Value of Sales of Water and Channel Fees.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.		Oz.	£ s. d.	£ s. d.
Waimea	623 19 2	685 5 11	61 6 9*	147,463 7 9	219,169 18 4	27·91	1,760	6,864 0 0	4 5 10
Kumara	451 10 4	877 18 4	426 8 0*	49,741 12 5		16·66	878	3,424 4 0	3 8 5
Kumara Sludge-channel	..	..	..	21,964 18 2		..	..	..	..
Callaghan's	722 5 2	561 10 5	160 14 9	6,027 15 6	6,027 15 6	14·5	1,751	6,828 18 0	8 1 5
Nelson Creek	..	..	..	90,722 10 8	90,722 10 8	..	..	..	..
Argyle	..	..	..	15,151 15 3	15,151 15 3	..	..	..	..
Mikonui	..	..	..	25,927 4 6	25,927 4 6	..	..	..	..
Mount Ida	1,141 19 11	1,490 18 6	348 18 7*	73,123 14 3	73,123 14 3	46·83	1,965	7,565 5 0	2 12 6
Blackstone Hill	34 9 7	19 8 0	15 1 7			3	..	..	..
Totals	2,974 4 2	3,635 1 2	660 17 0*	430,122 18 6	430,122 18 6	..	6,354	24,682 7 0	..

* Loss on working.

WARDEN'S COURT TABLES.

No. 1.

STATEMENT showing the REVENUE of the GOLDFIELDS collected in the several DISTRICTS of the COLONY of NEW ZEALAND, for the Period from 1st January to 31st December, 1905.

District.	Miners' Rights.	Business Licenses, Machine and Residence Sites.	Water-races, Sluices, &c.	Gold-mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous.	Totals.
AUCKLAND.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Coromandel ..	37 10 0	..	..	390 14 4	..	..	42 2 9	470 7 1
Te Aroha ..	60 0 0	729 16 5	21 0 0	131 2 5	7 16 0	3 13 0	5 6 0	958 13 10
Ohinemuri ..	136 10 0	168 0 3	..	1,620 1 5	..	38 1 0	184 7 3	2,146 19 11
Thames ..	343 5 0	140 18 7	5 0 0	1,646 8 4	30 8 0	70 9 6	47 18 9	2,284 8 2
Whangarei ..	3 0 0	0 15 0	..	1 17 6	..	..	..	5 12 6
Tauranga ..	1 15 0	..	..	5 11 0	..	..	0 15 0	8 1 0
Waihi	229 10 0	392 3 11	0 5 0	1,735 19 6	42 15 0	75 19 0	248 7 9	2,725 0 2
Totals ..	811 10 0	1431 14 2	26 5 0	5,531 14 6	80 19 0	188 2 6	528 17 6	8,599 2 8
NELSON.								
Motueka ..	0 15 0	..	..	12 0 0	..	..	..	12 15 0
Collingwood ..	13 15 0	1 10 0	0 15 0	217 0 10	5 6 0	9 14 0	22 13 6	270 14 4
Westport ..	110 10 0	1 15 0	5 0 0	366 5 8	12 11 6	54 19 0	1,774 19 1	2,326 0 3
Charleston ..	33 0 0	..	..	36 16 9	1 1 0	6 2 0	9 15 0	86 14 9
Ahaura	49 15 0	..	3 10 0	885 11 0	14 10 0	26 3 0	55 17 9	1,035 6 9
Reefton.. ..	206 10 0	9 10 9	..	1,447 8 9	..	48 19 0	110 5 2	1,822 13 8
Wangapeka ..	3 0 0	..	0 5 0	..	0 1 0	..	0 17 0	4 3 0
Lyell and Murchison	34 5 0	0 1 0	..	392 0 2	..	23 14 0	66 13 6	516 13 8
Takaka ..	5 5 0	..	0 5 0	13 17 6	0 5 0	1 19 0	7 10 0	29 1 6
Totals ..	456 15 0	12 16 9	9 15 0	3,371 0 8	33 14 6	171 10 0	2,048 11 0	6,104 2 11
MARLBOROUGH.								
Havelock ..	13 0 0	5 0 0	2 0 0	34 3 9	0 18 0	3 17 0	0 13 6	59 12 3
Blenheim ..	5 0 0	1 2 6	0 5 0	90 8 0	0 11 0	1 5 0	2 7 6	100 19 0
Totals ..	18 0 0	6 2 6	2 5 0	124 11 9	1 9 0	5 2 0	3 1 0	160 11 3
WESTLAND.								
Hokitika and Kanieri	52 5 0	..	..	170 1 5	..	..	72 3 0	294 9 5
Greymouth ..	129 10 0	..	2 12 6	188 10 3	0 4 0	39 3 0	6,365 16 10	6,725 16 7
Ross	23 0 0	65 0 0	1 15 0	340 15 2	5 7 0	..	0 6 0	436 3 2
Stafford.. ..	24 10 0	0 5 0	6 0 0	360 4 1	..	19 12 0	..	410 11 1
Okarito	9 10 0	..	..	67 15 1	2 12 0	2 2 0	16 1 11	98 1 0
Kumara ..	61 5 0	..	..	466 0 1	9 19 0	19 5 0	..	556 9 1
Totals ..	300 0 0	65 5 0	10 7 6	1,593 6 1	18 2 0	80 2 0	6,454 7 9	8,521 10 4
CANTERBURY.								
Ashburton ..	1 15 0	..	..	..	..	..	..	1 15 0
OTAGO AND SOUTHLAND.								
Middlemarch ..	0 15 0	0 5 0	0 15 0	14 3 4	0 6 0	0 12 0	..	16 16 4
Tapanui ..	1 5 0	..	0 9 0	23 19 0	..	0 6 0	..	25 19 0
Hindon	18 5 0	..	..	67 5 0	0 6 0	3 11 0	1 19 4	91 6 4
Naseby	59 5 0	18 10 0	..	432 9 4	0 14 0	41 1 0	45 15 6	597 14 10
Black's .. Alexandra Clyde .. Roxburgh	112 15 0	40 12 0	22 5 0	2,573 3 8	20 2 0	48 18 0	25 5 5	2,843 1 1
Cromwell ..	65 5 0	20 3 4	1 15 0	691 6 1	..	50 2 0	73 14 9	902 6 2
Queenstown ..	42 10 0	..	0 10 0	340 6 7	..	15 1 0	4 10 2	402 17 9
Arrowtown ..	14 5 0	2 0 0	..	210 2 10	..	25 8 0	8 16 0	260 11 10
Lawrence ..	69 0 0	0 9 0	1 5 0	799 6 4	12 15 0	14 6 0	6 9 6	903 10 10
Orepuki ..	..	..	..	27 15 1	..	14 15 0	10 17 0	53 7 1
Riverton and Longwood	35 0 0	4 11 0	..	164 4 9	..	2 12 0	15 7 0	221 14 9
Pembroke ..	6 10 0	..	..	0 18 0	..	..	..	7 8 0
Waikaia ..	7 15 0	..	..	587 4 1	..	11 2 0	14 15 0	620 16 1
Wyndham ..	3 0 0	..	0 5 0	6 16 3	0 8 0	1 0 0	0 5 0	11 14 3
Gore	6 5 0	..	0 5 0	217 5 9	0 13 0	2 5 0	12 2 0	238 15 9
Totals ..	441 15 0	86 10 4	27 9 0	6,156 6 1	35 4 0	230 19 0	219 16 8	7,198 0 1
Grand totals ..	2,029 15 0	1602 8 9	76 1 6	16,776 19 1	169 8 6	675 15 6	9,254 13 11	30,585 2 3

No. 2.

STATEMENT showing the REVENUE of the GOLDFIELDS collected in the several DISTRICTS of the COLONY of NEW ZEALAND for the Period from the 1st January to the 31st March, 1906.

District.	Miners' Rights.	Business Licenses, Machine and Residence Sites.	Water-races, Sluices, &c.	Gold-mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous.	Totals.
AUCKLAND.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Coromandel ..	9 10 0	..	..	159 11 1	..	..	2 17 0	171 18 1
Thames ..	106 10 0	15 15 0	0 15 0	503 12 6	5 14 0	11 1 0	12 5 0	655 12 6
Te Aroha ..	4 15 0	104 16 4	6 10 0	52 11 9	0 14 0	..	..	169 7 1
Ohinemuri ..	18 15 0	40 9 0	..	390 13 8	..	11 9 6	48 14 1	510 1 3
Whangarei ..	2 15 0	..	..	6 16 0	..	..	..	9 11 0
Tauranga ..	1 10 0	..	..	..	..	..	0 5 0	1 15 0
Waihi ..	47 15 0	116 5 11	..	580 15 9	10 12 0	26 7 0	220 3 8	1,001 19 4
Totals ..	191 10 0	277 6 3	7 5 0	1,694 0 9	17 0 0	48 17 6	284 4 9	2,520 4 3
NELSON.								
Collingwood ..	3 0 0	..	..	127 2 6	3 15 0	1 13 0	0 16 0	136 6 6
Westport ..	28 15 0	0 13 0	0 15 0	73 3 10	6 4 0	10 12 0	360 9 4	480 12 2
Charleston ..	9 0 0	..	..	6 7 0	0 9 0	..	0 7 0	16 3 0
Ahaura ..	10 5 0	..	1 5 0	274 16 9	2 7 0	10 3 0	14 16 0	313 12 9
Wangapeka ..	1 0 0	..	..	..	..	..	..	1 0 0
Reefton ..	11 5 0	6 3 7	..	539 17 4	..	24 17 0	80 12 0	662 14 11
Lyell and Murchison	2 15 0	0 1 0	..	103 19 0	..	4 0 0	15 8 10	126 3 10
Motueka ..	..	..	..	..	..	..	..	..
Takaka ..	1 15 0	..	..	1 14 0	..	0 16 0	..	4 5 0
Totals ..	67 15 0	6 17 7	2 0 0	1,127 0 5	12 15 0	52 1 0	472 9 2	1,740 18 2
MARLBOROUGH.								
Havelock ..	1 10 0	0 15 0	..	17 6 9	0 4 0	0 3 0	0 5 0	20 3 9
Blenheim ..	0 5 0	0 5 0	..	80 11 3	..	0 15 0	..	81 16 3
Totals ..	1 15 0	1 0 0	..	97 18 0	0 4 0	0 18 0	0 5 0	102 0 0
WESTLAND.								
Hokitika and Kanieri	19 0 0	..	..	84 1 9	..	..	5 0 0	108 1 9
Greymouth ..	32 15 0	..	..	37 14 5	..	12 4 0	2,197 2 3	2,279 15 8
Ross	4 15 0	2 10 0	..	44 0 0	0 6 0	..	..	51 11 0
Stafford ..	8 15 0	..	1 5 0	75 17 9	0 11 0	9 13 6	..	96 2 3
Kumara ..	14 15 0	..	..	97 18 9	2 0 0	7 14 0	..	122 7 9
Okarito ..	2 5 0	..	0 15 0	27 14 10	1 16 0	0 10 0	0 14 0	33 14 10
Totals ..	82 5 0	2 10 0	2 0 0	367 7 6	4 13 0	30 1 6	2,202 16 3	2,691 13 3
CANTERBURY.								
Ashburton ..	..	..	..	..	..	..	..	..
OTAGO AND SOUTHLAND.								
Tapanui ..	0 10 0	..	..	5 1 3	..	0 6 0	0 5 0	6 2 3
Hindon ..	5 15 0	..	..	15 17 6	0 5 0	2 4 0	2 1 0	26 2 6
Naseby ..	13 10 0	3 0 0	..	84 16 3	..	6 16 0	8 18 0	117 0 3
Roxburgh, Alexandra, Clyde, Black's	29 10 0	0 5 0	7 10 0	682 0 3	6 3 0	15 17 0	0 15 0	742 0 3
Pembroke ..	0 15 0	..	..	..	..	..	..	0 15 0
Cromwell ..	12 5 0	8 15 0	..	289 1 2	..	28 16 0	2 2 0	340 19 2
Queenstown ..	14 10 0	..	..	92 2 11	..	10 1 0	2 2 0	118 15 11
Arrowtown ..	3 5 0	1 0 0	..	90 4 9	..	10 8 0	..	104 17 9
Lawrence ..	13 5 0	0 3 0	1 0 0	340 3 3	4 14 0	3 19 0	..	363 4 3
Waikaia ..	2 15 0	..	..	198 1 0	..	4 16 0	17 0 0	222 12 0
Orepuki ..	..	..	..	14 5 9	..	3 10 0	1 19 0	19 14 9
Riverton ..	7 10 0	1 10 0	..	76 6 0	..	2 2 0	3 18 0	91 6 0
Wyndham ..	1 15 0	..	..	6 2 6	0 5 0	0 12 0	4 6 0	13 0 6
Middlemarch ..	..	..	..	4 15 0	..	..	..	4 15 0
Gore	3 5 0	..	..	79 18 4	0 9 0	0 18 0	10 7 0	94 17 4
Totals ..	108 10 0	14 13 0	8 10 0	1,978 15 11	11 16 0	90 5 0	53 13 0	2,266 2 11
Grand totals ..	451 15 0	302 6 10	19 15 0	5,265 2 7	46 8 0	222 3 0	3,013 8 2	9,320 18 7

No. 3.

COMPARATIVE RETURN of REVENUE derived from the GOLDFIELDS in the several DISTRICTS of NEW ZEALAND during the Years 1904 and 1905, showing INCREASE or DECREASE under each Head of Revenue.

District.	Miners' Rights.	Business Licenses, &c.	Water-races, Sluices, &c.	Gold-mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous.	Gold Duty.	Totals.
AUCKLAND—	£	£	£	£	£	£	£	£	£
Year 1904	588	1,215	8	3,352	105	143	2,172	22,989	30,572
Year 1905	811	1,432	26	5,532	81	188	529	22,254	30,853
Increase	223	217	18	2,180	..	45	..	..	281
Decrease	..	..	..	..	24	..	1,643	735	..
NELSON—									
Year 1904	273	45	15	5,069	41	182	2,042	..	7,667
Year 1905	457	13	9	3,371	34	171	2,049	..	6,104
Increase	184	..	..	..	..	..	7	..	..
Decrease	..	32	6	1,698	7	11	..	..	1,563
MARLBOROUGH—									
Year 1904	19	2	1	264	2	4	3	..	295
Year 1905	18	6	2	125	1	5	3	..	160
Increase	..	4	1	..	..	1	..	..	..
Decrease	1	..	..	139	1	..	..	..	135
CANTERBURY—									
Year 1904	..	..	..	..	..	..	..	..	..
Year 1905	2	..	..	..	..	..	..	..	
Increase	2	..	..	..	..	..	..	..	2
Decrease	..	..	..	..	..	..	..	..	..
WESTLAND—									
Year 1904	272	1	9	2,492	23	132	2,322	..	5,251
Year 1905	300	65	10	1,594	18	80	6,455	..	8,522
Increase	28	64	1	..	..	..	4,133	..	3,271
Decrease	..	..	..	898	5	52	..	..	..
OTAGO—									
Year 1904	377	109	36	6,428	75	222	382	..	7,629
Year 1905	442	86	28	6,156	35	231	220	..	7,198
Increase	65	..	..	..	..	9	..	..	..
Decrease	..	23	8	272	40	..	162	..	431
Total increase	502	285	20	2,180	..	55	4,140	..	1,425
Total decrease	1	55	14	3,007	77	63	1,805	735	..

No. 4.

COMPARATIVE RETURN of the TOTAL AMOUNTS of GOLDFIELDS REVENUE (exclusive of Gold Duty) collected in the several Districts during the Years 1904 and 1905 and the Quarters ending 31st March, 1905 and 1906 respectively, showing the INCREASE or DECREASE in respect of each District.

District.	Years 1904 and 1905.				Quarters ending 31st March, 1905, and 31st March, 1906.			
	1905.	1904.	Increase.	Decrease.	1906.	1905.	Increase.	Decrease.
AUCKLAND.	£	£	£	£	£	£	£	£
Coromandel	470	530	..	60	172	131	41	..
Thames	2,284	1,609	675	..	656	1,046	..	390
Whangarei	6	54	..	48	9	8	1	..
Ohinemuri	2,147	1,698	449	..	510	640	..	130
Te Aroha	959	682	277	..	169	249	..	80
Tauranga	8	14	..	6	2	6	..	4
Waihi	2,725	2,997	..	272	1,002	790	212	..
NELSON.								
Motueka	13	13	..	..	..	1	..	1
Collingwood	271	362	..	91	136	118	18	..
Westport	2,326	2,282	44	..	481	763	..	282
Charleston	87	115	..	28	16	31	..	15
Ahaura	1,035	2,177	..	1,142	314	550	..	236
Reefton	1,823	1,920	..	97	663	732	..	69
Wangapeka	4	106	..	102	1	1	..	..
Lyell and Murchison ..	516	661	..	145	126	285	..	159
Takaka	29	31	..	2	4	8	..	4
MARLBOROUGH.								
Havelock	60	61	..	1	20	6	14	..
Blenheim	101	233	..	132	82	34	48	..
WESTLAND.								
Hokitika ..	294	367	..	73	108	89	19	..
Kanieri ..								
Greymouth	6,726	3,614	3,112	..	2,280	2,767	..	487
Ross	436	369	67	..	52	34	18	..
Stafford and Goldsborough	411	312	99	..	96	47	49	..
Okarito	98	70	28	..	34	24	10	..
Kumara	557	519	38	..	122	151	..	29
CANTERBURY.								
Ashburton	1	..	1	..	..	1	..	1
OTAGO AND SOUTHLAND.								
Hindon	91	98	..	7	26	40	..	14
Naseby	598	670	..	72	117	241	..	124
Alexandra ..								
Black's ..								
Clyde ..	2,843	2,602	241	..	742	871	..	129
Roxburgh ..								
Cromwell	902	1,429	..	527	341	280	61	..
Arrowtown	261	267	..	6	105	68	37	..
Queenstown	403	521	..	118	119	163	..	44
Pembroke	7	7	..	..	1	1	..	..
Lawrence	903	1,064	..	161	363	368	..	5
Waikaia	621	315	306	..	223	141	82	..
Tapanui	26	6	20	..	6	1	5	..
Orepuki, Preservation, Longwood, and Riverton	275	371	..	96	111	133	..	22
Wyndham	12	12	..	..	13	4	9	..
Middlemarch	17	8	9	..	5	6	..	1
Gore	239	259	..	20	94	117	..	23
Totals	30,585	28,425	5,366	3,206	9,321	10,946	624	2,249
Net decrease ..	..	..	..	..	..	..	..	..
Net increase ..	..	..	2,160	..	..	..	..	1,625

No. 5.

RETURN of GOLD DUTY credited to LOCAL BODIES for the Year ended 31st December, 1905, and Quarter ended 31st March, 1906.

Local Body.	For the Year ended 31st December, 1905.	For the Quarter ended 31st March, 1906.
COUNTIES—	£ s. d.	£ s. d.
Coromandel	552 15 11	72 8 4
Ohinemuri	5,007 17 10	1,168 17 0
Piako	45 6 5	18 14 3
Thames	415 13 3	201 10 2
BOROUGHS—		
Te Aroha	10 3 3	..
Thames	889 16 11	480 19 4
Waihi	15,332 10 10	3,803 9 4
Totals	22,254 4 5	5,745 18 5

ROBERT J. COLLINS,
Assistant Secretary to the Treasury and Accountant.

The Treasury, Wellington, 21st May, 1906.

No. 6.

RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY* for EXPORTATION from NEW ZEALAND from 1st APRIL, 1857, to 31st DECEMBER, 1905.

PRODUCE OF THE GOLDFIELDS IN		DURING THE QUARTER ENDED 31ST DECEMBER, 1905.		ENTERED FOR EXPORTATION TO THE 30TH SEPTEMBER, 1905.		TOTAL ENTERED FOR EXPORTATION FROM NEW ZEALAND TO THE 31ST DECEMBER, 1905.	
County or Borough.	District.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		Oz.	£	Oz.	£	Oz.	£
County of Thames ..	Auckland	2,015	8,227				
„ Ohinemuri ..		18,441	65,152				
„ Coromandel		390	1,640				
„ Piako ..		22	77				
Borough of Thames ..		4,809	20,172				
„ Waihi ..		42,721	179,096				
		68,398	274,364	3,628,523	13,519,944	3,696,921	13,794,308
	Wellington ..	..	..	188	706	188	706
County of Marlborough	Marlborough ..	..	..	89,099	347,214	89,099	347,214
County of Collingwood	Nelson	502	2,009				
„ Waimea ..		..	..				
		502	2,009	1,711,133	6,783,712	1,711,635	6,785,721
County of Buller ..	West Coast	275	1,109				
„ Inangahua ..		12,307	48,881				
„ Grey ..		4,793	19,247				
„ Westland ..		1,296	5,228				
Borough of Kumara ..		..	..				
„ Hokitika ..		..	..				
„ Ross ..		..	..				
		18,671	74,465	5,114,258	20,357,614	5,132,929	20,432,079
	Canterbury ..	..	..	99	387	99	387
County of Taieri ..	Otago	312	1,257				
„ Tuapeka ..		8,448	34,017				
„ Vincent ..		13,261	53,453				
„ Maniototo ..		1,421	5,706				
„ Waihemo ..		258	1,044				
„ Waitaki ..		683	2,763				
„ Lake ..		1,319	5,332				
„ Wallace ..		1,311	5,240				
„ Waikouaiti ..		..	..				
„ Bruce ..		76	303				
„ Clutha ..		..	..				
„ Fiord ..		6	23				
„ Southland ..		10,623	41,812				
„ Stewart Island		..	..				
		37,718	150,950	6,477,831	25,718,395	6,515,549	25,869,345
	Unknown ..	..	..	207	824	207	824
Totals		125,289	501,788	17,021,338	66,728,796	17,146,627	67,230,584

* Gold duty abolished in the South Island on the 31st March, 1891, by "The Gold Duty Abolition Act, 1890."

No. 7.

COMPARATIVE RETURN for the YEARS ended 31st DECEMBER, 1905 and 1904.

PRODUCE OF THE GOLDFIELDS IN THE DISTRICT OF	DURING THE QUARTER ENDED				TOTALS FOR YEAR 1905.		TOTALS FOR YEAR 1904.	
	31st March, 1905.	30th June, 1905.	30th September, 1905.	31st December, 1905.	Quantity.	Value.	Quantity.	Value.
	Oz.	Oz.	Oz.	Oz.	Oz.	£	Oz.	£
Auckland ..	46,679	55,442	61,696	68,398	232,215	935,602	223,010	791,529
Marlborough ..	..	..	..	..	..	..	473	1,890
Nelson ..	2,533	2,085	1,349	502	6,469	25,862	5,049	20,141
West Coast ..	31,801	28,733	30,499	18,671	109,704	438,258	122,310	489,177
Otago ..	42,962	40,482	50,936	37,718	172,098	694,214	169,478	684,764
Totals for 1905	123,975	126,742	144,480	125,289	520,486	2,093,936	..	..
Totals for 1904	125,083	142,222	137,045	115,970	..	..	520,320	1,987,501

W. T. GLASGOW,
Secretary and Inspector.

Department of Trade and Customs,
Wellington, 17th January, 1906.

No. 8.

RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY* for EXPORTATION from NEW ZEALAND from 1ST APRIL, 1857, to 31ST MARCH, 1906.

PRODUCE OF THE GOLDFIELDS IN		DURING THE QUARTER ENDED 31ST MAR., 1906.		ENTERED FOR EXPORTATION TO THE 31ST DECEMBER, 1905.		TOTAL ENTERED FOR EXPORTATION FROM NEW ZEALAND TO THE 31ST MARCH, 1906.	
County or Borough.	District.	Qu'ntity	Value.	Quantity.	Value.	Quantity.	Value.
		Oz.	£	Oz.	£	Oz.	£
County of Thames ..	Auckland	1,907	8,003				
" Ohinemuri ..		11,688	41,617				
" Coromandel ..		724	3,053				
" Piako ..		187	783				
Borough of Thames ..		12,350	52,015				
" Waihi ..		35,639	149,088				
Great Barrier Island ..		..	..				
		62,495	254,559	3,696,921	13,794,308	3,759,416	14,048,867
	Wellington ..	..	..	188	706	188	706
County of Marlborough	Marlborough ..	..	..	89,099	347,214	89,099	347,214
County of Collingwood ..	Nelson	485	1,918				
" Waimea ..		..	..				
" Takaka ..		..	..				
		485	1,918	1,711,635	6,785,721	1,712,120	6,787,639
County of Buller ..	West Coast	3,695	14,758				
" Inangahua ..		13,395	53,195				
" Grey ..		10,035	40,097				
" Westland ..		5,658	22,642				
Borough of Kumara ..		..	..				
" Hokitika ..		21	80				
" Ross ..		289	1,156				
		33,093	131,928	5,132,929	20,432,079	5,166,022	20,564,007
	Canterbury ..	..	..	99	387	99	387
County of Taieri ..	Otago	448	1,789				
" Tuapeka ..		7,328	29,842				
" Vincent ..		7,492	30,971				
" Maniototo ..		2,729	10,904				
" Waihemo ..		436	1,766				
" Waitaki ..		889	3,558				
" Lake ..		3,624	14,492				
" Wallace ..		1,917	7,750				
" Waikouaiti ..		..	..				
" Bruce ..		189	749				
" Clutha ..		..	..				
" Fiord ..		261	1,044				
" Southland ..		8,303	33,489				
Stewart Island ..		..	..				
		33,616	135,454	6,515,549	25,869,345	6,549,165	26,004,799
	Unknown ..	..	..	207	824	207	824
Totals ..	..	129,689	523,859	17,146,627	67,230,584	17,276,316	67,754,443

* Gold duty abolished in the South Island on 31st March, 1891, by "The Gold Duty Abolition Act, 1890."

No. 9.

COMPARATIVE RETURN for the QUARTERS ended 31ST MARCH, 1906, and 31st MARCH, 1905.

District.	Quarter ended 31st March, 1906.		Quarter ended 31st March, 1905.	
	Quantity.	Value.	Quantity.	Value.
	Oz.	£	Oz.	£
Auckland	62,495	254,559	46,679	189,207
Marlborough	..	..	..	..
Nelson	485	1,918	2,533	10,130
West Coast	33,093	131,928	31,801	127,097
Otago	33,616	135,454	42,962	173,755
Totals	129,689	523,859	123,975	500,189

W. T. GLASGOW,
Secretary and Inspector.

Department of Trade and Customs, Wellington, 10th April, 1906.

No. 10.

STATEMENT showing the PRICE of GOLD per OUNCE, PRICE charged per TON for CRUSHING QUARTZ or CEMENT, and PRICES charged for WATER per SLUICE-HEAD per WEEK, during the Year ending 31st December, 1905.

District.		Price of Gold per Ounce.	Price charged per Ton for crushing Quartz or Cement.	Price charged for Water per Sluice-head per Week.	Remarks.
		£ s. d.	£ s. d.	£ s. d.	
AUCKLAND—	Thames	2 12 6	0 5 0	£3 to £4	..
	Coromandel	£3 15s. to £4	10s. to £1	..	..
	Paeroa	4 4 0	..	..	..
	Te Aroha	4 4 0	..	..	..
	Waihi	4 4 0	..	..	..
	Tauranga	..	..	..	..
MARLBOROUGH—	Havelock	£3 15s. to £3 17s.	..	..	No water sold.
	Blenheim	£3 12s. to £3 15s.	..	..	..
NELSON—	Wangapeka	£3 10s. to £3 15s.	..	..	..
	Motueka	..	..	..	..
	Charleston	3 19 0	..	2 5 0	20 in.
	Inangahua	£3 18s. to £4.	..	..	..
	Collingwood	£3 10s. to £4 1s.	..	..	..
	Takaka	3 14 6	..	..	..
	Westport	3 17 6	..	..	..
	Murchison .. Lyell	£3 17s. to £4 1s.	0 10 0	..	..
WESTLAND—	Hokitika, Kanieri, and Waimea ..	£3 18s. to £4	..	2 10 0	..
	Totara and Ross . ..	3 18 0	..	..	..
	Stafford	3 18 0	..	0 15 0	..
	Greymouth	3 18 0	0 12 0	0 10 0	20 in. by 2 in.
	Kumara	3 18 0	..	0 10 0	..
	Ahaura	3 19 0	0 10 0	1 0 0	..
	Okarito	3 18 0	..	..	..
OTAGO AND SOUTHLAND—	Hindon	3 17 0	..	..	..
	Tuapeka	3 17 6	..	2 10 0	..
	Longwood .. Preservation and Waiau Orepuki and Round Hill	3 18 6	..	1 10 0	..
	Arrow (Wakatipu Goldfield) and Queenstown	3 17 0	0 13 6	1 5 0	..
	Mount Ida .. Macrae's, Hyde .. Hamilton, Serpentine	3 17 0	..	0 10 0	40 cubic in. 1 sluice-head.
	Maerewhenua	3 17 0	..	1 0 0	20 in. by 2 in.
	Cromwell	3 17 0	0 8 0	1 4 0	..
	Waikaia	3 17 6	..	..	..
	Tapanui	3 17 0	..	..	..
	Wyndham	£3 16s. to £3 18s.	..	..	..
	Roxburgh .. Clyde and Alexandra Black's	3 17 0	..	..	..
	Gore	3 17 3	..	..	..

No. 11.

RETURN showing the AVERAGE PRICES of PROVISIONS and LIVE-STOCK for the Year ending 31st December, 1905.

District.	Beer.	Brandy.	Bread—Wheaten.	Butter—Fresh.	Butter—Salt.	Cheese.	Coffee.	Flour.	Grain—Wheat.	LIVE-STOCK.					MEAT.			Milk.	Rice.	Salt.	Sugar.	Tea.	Tobacco.	Wine.
										Cattle—Horned.	Goats.	Horses.	Sheep.	Swine.	Beef.	Mutton.	Pork.							
	Per. hhd.	Per gall.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per 100 lb.	Per Im. bushel.	Per head.	Per head.	Per head.	Per head.	Per head.	Per lb.	Per lb.	Per lb.	Per qt.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per gallon.
			d.							£		£			d.	d.	d.	d.	d.	d.	d.			
AUCKLAND—																								
Thames	90/	27/	1¾	1/1	/7	/7	1/10	11/6	4/6	8	10/	12	15/	12/	5	4	6	4	2½	½	3	1/6.	5/6	15/–20/
Paeroa.. ..	80/	17/	2	1/1	/9	/7	1/6	15/	5/9	6/10–10	..	10–40	15/-22/6	30/–60/	5	5	6	3	2½	1	2½	1/6	5/6	18/
Coromandel	100/	27/	2	1/1	/10	/7	1/4–1/10	12/6	3/9	7–10	10/	5–40	17/6	4d. lb.	5–9	3–7	7	4	2½	1	3	1/4–3/	5/6	26/
Tauranga	90/	30/	1½	/10–1/	..	/8–/9	1/6–2/	12/6	4/6	7	..	5–40	20/	25/–40/	3–8	3½–6	5	3	3	1	2⅓–4	1/–2/6	5/2–6/6	18/
Te Aroha	80/	17/	2	1/1	/9	/7	1/6	15/	5/9	6/10–10	..	10–40	15/-22/6	30/–60/	5	5	6	3	2½	1	2⅓	1/6	5/6	18/
Waihi	108/	..	1¾	1/	/9	/6	1/	..	5/	5–10	..	20–40	16/	30/	5	4	6	4	2	1	3	2/	5/9	..
MARLBOROUGH—																								
Blenheim	84/	30/	1½	/8	/7	/7	1/9	10/9	..	4	..	25	12/6	22/6	5	5	6	3	3	1	3	1/10	5/3	20/
Havelock	140/	48/	1¾	/9	..	/7	2/	12/	..	6	..	20	16/	..	9	6	9	4	3½	1	3	2/	6/8	32/
NELSON—																								
Wangapeka	100/	35/	2	/9	/9	/8	1/6	15/6	5/6	5–10	..	15–40	15/–20/	30/–70/	5	5	5	4	3	1½	3	2/3	7/	20/
Collingwood	93/	23/3	3½	/11	/8	/8	2/	13/	4/9	6	..	10–50	14/	20/	4	4	5	4	3	1	3	1/11	6/	15/
Takaka	90/	30/	3½	/7	..	/8	1/9	11/6	4/6	..	..	20–50	14/	..	4	4	4	4	3	1	3	2/	6/	8/
Inangahua	90/	25/	2	1/1	/11	/8	2/	15/	4/6	7/10	10/	7–70	20/	5/	5–7	6	6	5	3	1	3	2/	6/	15/–24/
Lyell ..	110/	26/	2½	1/2	1/	/9	1/9	16/	7/	7	5/	18–40	21/	40/	6	7	7	4	3	1	3½	2/	6/	26/
Murchison ..																								
Westport	90/	26/	1¾	1/	/10	/6	1/9	12/6	4/3	11	10/	20	20/	37/	6	6	6	5	3	1	3	1/9	5/6	16/6
Charleston	90/	35/	2	1/1	..	/8	2/	12/6	5/6	7/10	..	40	22/	70/	6	6	6	6	3	1	3	1/10	6/	18/
Ahaura	112/6	25/	2	1/	/9	/8	2/	16/	6/	7–12	5/	10–50	15/–25/	40/–80/	6	6	8	4	3	2	3	2/	5/6–6/6	15/
WESTLAND—																								
Stafford ..	110/	26/	1¾	1/1	1/	/8	1/6	13/	5/6	4	5/	20	17/	20/	5	5	6	6	3	1	3	2/	6/	18/
Waimea ..																								
Hokitika and Kanieri ..	85/	24/	1¾	/10	/7	/7	1/6	11/6	4/	7–8	..	12–40	15/6	30/–35/	6–8	6–7	7	5	2½	1	3	2/–3/6	5/6	12/
Ross	85/	25/	2	1/	/10	/9	1/9	14/	5/	2–10	2/–10/	10–60	17/6-20/	10/–40/	8	6	6	4	4	1	3	2/	5/6	13/
Okarito	114/	30/	3	1/3	1/	/9	2/	16/	..	8/10–9	..	15–40	20/	..	5½	5½	..	..	4	2	4	2/6	6/6	22/
Kumara	80/	25/	1⅓	1/	1/	/8	2/	12/	5/	8	..	15–60	19/	60/–100/	6	6	6	6	3	2–3	3	1/9	5/6–6/	12/–17/
Greymouth	90/	26/	1½	1/	1/	/7	1/9	12/	4/3	3–9/10	..	10–45	11/–22/	17/–68/	4–7	4–7	7	4	2¼	1¼	3	2/	5/	16/6
OTAGO—																								
Hindon	..	..	2	1/3	/10–1/	/9	2/3	16/	..	6–12	..	12–40	13/–24/	..	4–8	6	..	4	3½	1½	3½	2/3	6/	..
Tuapeka	90/	25/	1½	/11	/10	/6	1/6	12/6	3/6	6	..	15–40	17/6	25/	6	5½	6	3	2½	1	2¾	1/10	5/6	21/
Tapanui	..	..	..	/8	/10	/8	1/8	11/6	3/6	5/10/0	..	25	15/	30/	5	5	4	3	3	1	3	1/8	5/6	..
Cromwell	100/	28/	1¾	1/	1/	/8	1/9	11/	3/6	8	..	15–60	20/–27/	40/	5	5	6	4	3	1¼	3¼	1/8	6/	18/
Clyde ..																								
Alexandra ..	80/	28/	2	1/3	1/	/8	1/9	12/	4/6	1–5	..	5–50	12/6	60/	6	5	8	5	2	1½	3	2/	5/–7/	18/
Roxburgh ..																								
Black's ..																								
Queenstown	90/	28/6	1¾	1/	/10	/8	1/9	10/	3/	3–4	..	25–60	10/–12/	10/–60/	4–6	4–6	6	3	3	1	3	1/10	6/	15/
Arrow (Wakatipu Goldfield)	100/	23/	2	1/	/10	/8	1/6	11/	3/	6	..	25–60	10/–15/	22/6	6	5½	6	2	2½	2	3	1/10	6/	15/
Mount Ida ..	102/	27/–42/	1¾	1/2	/10	/8	1/6-2/3	6/6	4/	5–8	..	10–45	17/–23/	50/–60/	5½–7	5–6	6	4	3	2	3	1/6–2/4	5/3–8/	18/–25/
Nenthorn ..																								
Waikaia	90/	30/	2	1/2	1/	/9	2/	15/	3/6	6/10–12	..	10–45	11/–23/	17/–55/	7	6	6	4	4	2	4	1/6-3/	6/	30/
Riverton and Orepuki ..	80/	28/	1¾	1/	/10	/8	1/9	12/6	3/6	5	..	25–40	18/	35/	6	5	8	3	3	1	3	1/10	5/	18/
Gore	..	..	3	/9	/8½	/7	1/8	10/6	3/	5	..	30	19/6	27/6	3½	4	6	3	3	1	3	1/9	5/6	..

No. 12.

TABLE showing the AVERAGE RATE of WAGES per WEEK for the Year ending 31st December, 1905.

District.	General Managers.	Legal Managers.	Mining Managers.	Engineers.	Engine-drivers.	Stokers.	Blacksmiths.	Carpenters.	Miners.	Labourers.	Boys.	Chinese.	Agricultural Labourers.	Domestic Servants.
AUCKLAND—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Coromandel	..	1 0 0	£4 to £5	4 0 0	2 14 0	2 8 0	2 14 0	£2/14 to £3	£2/2 to £2/1	2 8 0	1 10 0	..	..	10/ to 12/
Thames	£500 to £1000	£1 to £2	£3 to £5	£3 to £3/10	2 14 0	2 8 0	2 8 0	3 0 0	2 11 0	2 2 0	0 15 0	..	1 10 0	12/
Te Aroha	500 0 0	2 0 0	£4 to £7	£3 to £6	£2/8 to £3	£2/2–£2/14	3 0 0	£2/17 to £3/6	£2/8 to £3	2 8 0	£1/4 to £1/16	..	1 5 0	7/6 to 15/
Paeroa	£200 to £1200	£1 to £2	£4 to £10	£4 to £6	£2/10 to £3	£2/5–£2/11	£2/14 to £3	£2/17 to £3/10	£2/8 to £3/10	£2 to £2/10	£1 to £2	..	10/ to 30/	10/ to 17/6
Tauranga	2 8 0	..	..	..	..	2 5 0	2 14 0	3 0 0	..	2 2 0	1 0 0	..	1 16 0	10/ to 15/
Waihi	..	..	..	3 12 0	2 14 0	2 8 0	2 8 0	3 6 0	2 8 0	2 8 0	1 16 0	..	1 10 0	18/
MARLBOROUGH—														
Havelock	..	..	3 0 0	3 0 0	3 0 0	..	3 0 0	..	3 0 0	..	..	..	..	..
Blenheim	..	1 0 0	..	3 0 0	3 0 0	2 16 0	2 10 0	3 0 0	£2/8 to £2/14	£2/2 to £2/8	7/6 to 15/	..	25/ and found	7/ to 15/
NELSON—														
Collingwood	£8 to £10	..	£8 to £10	£3/10 to £4	3 0 0	2 10 0	3 6 0	3 0 0	2 17 0	2 14 0	..	..	2 10 0	10/ to 20/
Takaka	4 0 0	..	..	..	2 10 0	..	2 5 0	2 14 0	2 8 0	2 2 0	19/ and found	..	£1 and found	7/ to 15/
Inangahua	..	£1 to £2	£4 to £10	4 0 0	£3/10 to £4	3 0 0	£3/10 to £4	£3/10 to £4	£2/17 to £3	2 11 0	1 0 0	..	£1/ to £1/5	5/ to 20/
Charleston	..	..	..	..	..	..	..	3 12 0	3 0 0	2 14 0	1 0 0	..	2 14 0	15/
Westport	..	£1 to £1/10	4 0 0	..	3 0 0	2 14 0	3 0 0	3 12 0	2 14 0	2 8 0	1 10 0	..	..	12/ to 20/
Lyell and Murchison	..	..	5 0 0	4 0 0	3 10 0	3 0 0	3 10 0	3 10 0	3 0 0	2 14 0	1 0 0	0 15 0	£1 and found	12/
Ahaura	..	£1 to £1/5	5 0 0	4 0 0	3 10 0	3 0 0	3 12 0	3 12 0	2 14 0	2 8 0	1 10 0	1 5 0	£1 to £1/5	15/
WESTLAND—														
Waimea and Stafford	6 0 0	..	5 0 0	3 10 0	3 0 0	2 0 0	3 0 0	3 0 0	2 14 0	2 8 0	2 0 0	1 0 0	1 0 0	10/
Hokitika and Kanieri	..	1 10 0	£4 to £5	4 0 0	3 12 0	3 0 0	3 3 0	3 18 0	2 14 0	£2/8 to £2/14	1 10 0	1 16 0	1 16 0	7/6 to 10/
Ross	..	1 5 0	5 0 0	4 0 0	3 10 3	3 0 0	3 10 0	3 10 0	3 0 0	3 0 0	1 5 0	..	2 14 0	15/
Kumara	..	0 10 0	4 0 0	3 0 0	3 0 0	3 0 0	3 0 0	3 12 0	2 14 0	2 14 0	1 10 0	1 16 0	2 2 0	10/
Greymouth	..	£1 to £2	£4 to £6	£3 to £4/10	3 5 0	2 15 0	£3 to £3/12/6	£3/4 to £3/10	£2/10 to £3	2 14 0	8/ to 25/	15/–30/ found	20/–30/ found	7/6 to 20/
Okarito	..	..	6 0 0	..	£3 to £3/10	£3 to £3/10	3 10 0	£3/10 to £4	£3 to £3/10	2 10 0	..	..	25/–30/ found	15/
OTAGO AND SOUTHLAND—														
Hindon	..	1 10 0	5 0 0	2 0 0	2 14 0	..	3 0 0	..	£2/8 to £2/14	2 2 0	..	..	..	..
Tuapeka	12 0 0	£60 p.a.	4 0 0	4 0 0	2 10 0	2 2 0	2 14 0	3 0 0	2 2 0	2 0 0	0 10 0	1 0 0	1 0 0	10/ to 14/
Tapanui	..	..	4 0 0	3 10 0	2 15 0	2 8 0	2 8 0	3 0 0	2 8 0	2 5 0	1 0 0	1 5 0	1 2 6	12/6
Cromwell	£4 to £6	£1 to £4	£4/10 to £6	4 10 0	3 0 0	3 0 0	£3 to £3/12	£3 to £3/10/	3 0 0	£2/8 to £2/14	15/ to £1/10	£1/5 to £1/10	15/ to 35/ and found	6/ to 20/
Clyde														
Alexandra	5 0 0	1 10 0	5 0 0	4 0 0	3 0 0	..	4 0 0	3 10 0	3 0 0	2 8 0	10/ and found	1 5 0	£1/5 & found	12/6 to 15/
Black's														
Roxburgh														
Waikaia	..	5 0 0	4 0 0	4 0 0	2 14 0	..	3 0 0	3 12 0	2 8 0	2 2 0	0 12 6	0 17 6	1 0 0	12/
Orepuki and Riverton	..	1 13 0	1 13 0	..	..	..	2 14 0	2 14 0	2 8 0	2 10 0	1 0 0	0 6 0	1 5 0	10/ to 14/
Arrow	..	..	£4 to £7	4 0 0	3 10 0	2 10 0	3 0 0	3 0 0	2 10 0	2 8 0	10/ to 20/	£1/5 to £1/10	1 5 0	8/ to 15/
Queenstown	..	..	£4 to £7	4 0 0	3 10 0	2 10 0	3 0 0	3 0 0	2 10 0	2 8 0	10/ to 20/	£1/5 to £1/10	1 5 0	8/ to 15/
Mount Ida	5 0 0	..	4 0 0	..	..	..	3 0 0	3 0 0	2 8 0	£2/2 to £2/8	10/ to 15/	£1 and found	20/–25/ found	7/ to 12/6
Gore	..	£75 p.a.	4 0 0	2 14 0	2 8 0	..	2 14 0	3 12 0	3 0 0	2 8 0	..	..	..	10/

No. 13.

NUMBER of MACHINES employed in ALLUVIAL and QUARTZ MINING, and the VALUE thereof, for the Year ending 31st December, 1905.

District.	Machinery employed in Alluvial Mining.													Machinery employed in Quartz-mining.								Approximate Value of all Mining Plant included in this Return.
	Steam-engines employed winding, crushing, &c.		Puddling-machines.	Whims.	Whips or Pulleys.	Sluices, Toms, and Sluice-boxes.	Water-wheels.	Hydraulic Hose.	Pumps.	Dredges.	Quicksilver and Compound Cradles.	Derricks.	Stamp-heads crushing Cement.	Boring-machines.	Steam-engines employed winding, crushing, &c.		Crushing-machines.	Stamp-heads.	Water-wheels.	Whims.	Whips or Pulleys.	Derricks.	Berdans.	
	No.	Aggregate h.p.													No.	Aggregate h.p.								
																								£
AUCKLAND—																								
Paeroa	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	1,343	11	305	10	..	..	..	..	149,710
Coromandel ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	24	706	..	168	5	..	..	..	..	94,896
Thames	..	..	..	..	..	..	..	..	..	..	..	..	..	..	29	1,297	31	472	25	..	..	..	149	181,306
Te Aroha	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	..	..	..	..	..	2,500
Waihi	..	..	..	..	..	..	..	..	..	..	..	..	..	..	26	5,000	4	345	9	..	..	..	..	287,640
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	95	8,346	46	1,300	49	..	..	..	149	716,052
MARLBOROUGH—																								
Wakamarina ..																								
Cullen's Creek ..																								
Waikakaho ..																								
Blenheim ..																								
	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2	20	1	..	..	..	..	7,000
Totals ..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2	20	1	..	..	..	..	7,000
NELSON—																								
Wangapeka ..	..	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1,000
Collingwood ..	..	..	..	..	..	4	..	5	..	1	..	3	..	..	1	5	2	28	1	..	..	..	..	38,000
Takaka	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Inangahua ..	..	..	..	..	..	..	..	..	..	6	..	..	..	..	30	800	22	440	28	2	3	..	65	216,362
Charleston ..	..	..	..	..	..	..	6	..	..	..	1	..	23	..	..	..	..	..	..	..	..	..	..	600
Lyell	..	..	..	..	..	88	..	6	..	5	..	..	..	..	..	..	2	30	2	..	..	..	..	..
Murchison ..	..	..	..	..	..	350	1	12	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Westport	..	..	..	..	..	35	5	20	..	..	..	..	17	..	..	..	4	14	3	..	..	..	..	6,500
Ahaura	..	..	..	..	..	750	..	2,500	..	14	..	1	..	1	..	..	2	11	2	..	..	..	..	84,000
Totals ..	..	..	..	..	..	1,227	12	2,548	..	30	1	4	40	1	31	805	32	523	36	2	3	..	65	346,462
WESTLAND—																								
Stafford	..	..	..	..	6	7,000	6	200	4	1	3	..	..	..	..	..	..	..	..	..	..	..	..	40,000
Ross	..	..	..	..	..	4	..	4	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	15,000
Hokitika and Kanieri	..	..	..	..	..	56	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3,000
Greymouth ..	..	..	..	..	..	183	..	570	26	4	14	..	..	..	2	..	..	..	..	..	..	..	..	51,380
Kumara	..	..	..	..	..	26	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	24,000
Totals ..	..	..	..	..	6	7,269	6	774	30	13	17	..	..	..	2	..	..	..	..	..	..	..	..	133,380
OTAGO AND SOUTHLAND—																								
Tapanui	..	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	3,000
Hindon	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	16	1	5	..	..	..	..	..	710
Tuapeka	..	..	..	..	..	450	..	40	..	14	..	..	..	..	2	16	3	15	2	..	..	..	..	70,000
Cromwell	..	..	..	..	..	..	..	10	..	26	..	..	..	..	4	30	4	30	1	..	..	..	..	..
Clyde and Alexandra																								
Roxburgh ..																								
Black's	..	..	..	..	..	900	1	25	..	45	..	..	..	..	..	..	3	15	..	1	1	..	..	375,000
Orepuki, Waiau, and Roundhill Preservation	..	..	..	..	..	160	..	127	9	..	..	..	..	1	1	14	2	10	4	2	..	..	11	..
Waikaia (Switzers)	..	..	..	..	..	140	..	32	..	13	..	..	..	..	..	..	..	..	..	..	..	..	..	52,000
Arrow	1	4	..	..	..	20	..	12	2	2	..	1	..	1	1	4	4	40	..	..	..	1	..	12,000
Queenstown ..	..	..	..	..	..	400	..	50	2	2	..	..	..	..	1	8	5	42	..	..	..	..	..	30,000
Naseby																								
Kyeburn and Clarke's																								
Hamilton's and Sowburn																								
Hyde and Fullerton's																								
Macrae's, Strath Taieri, and Shag Valley	..	..	..	..	..	147	..	110	..	1	..	33	..	..	4	68	10	75	6	..	..	..	5	70,826
Serpentine ..																								
St. Bathan's, Ida Valley, &c.																								
Gore	..	..	..	..	..	..	..	..	..	37	..	..	..	..	..	..	..	..	..	..	..	..	..	129,000
Totals ..	1	4	..	1	..	2,217	1	406	13	141	..	34	..	2	15	156	32	232	13	3	1	1	16	742,536

SUMMARY.

Auckland	..	..	..	..	..	..	..	..	..	..	..	..	..	..	95	8,346	46	1,300	49	..	..	..	149	716,052
Marlborough ..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	2	20	1	..	..	..	..	7,000
Nelson	..	..	..	..	..	1,227	12	2,548	..	30	1	4	40	1	31	805	32	523	36	2	3	..	65	346,462
Westland	..	..	..	..	6	7,269	6	774	30	13	17	..	..	..	2	..	..	..	..	..	..	..	..	133,380
Otago	1	4	..	1	..	2,217	1	406	13	141	..	34	..	2	15	156	32	232	13	3	1	1	16	742,536
Totals ..	1	4	..	1	6	10,713	19	3,728	43	185	18	38	40	3	143	9,307	112	2,075	99	5	4	1	230	1,945,430

No. 14.

TABLE showing approximately the NUMBER, DESCRIPTION, and VALUE of the WATER-RACES, TAIL-RACES, DAMS, RESERVOIRS, and GROUND-SLUICES in Operation during the Year ending 31st December, 1905.

District.	Water-races.				Tail-races.		Dams.		Reservoirs.		Ground-sluices.		Approximate Total Cost.
	No.	Length in Miles.	No. of Sluice-heads.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	
AUCKLAND—				£		£		£		£		£	£
Coromandel ..	6	6	21	4,500	..	..	3	510	3	50	..	..	5,060
Thames	19	25	160	58,000	7	360	70	770	2	5,000	..	..	64,130
Te Aroha ..	3	2	13	2,500	..	..	2	200	..	..	..	..	2,700
Paeroa	168	199	2,468	122,446	1	1,000	35	5,000	3	3,000	..	..	131,446
Waibi	17	38	379	..	..	..	20	..	..	..	..	..	..
Totals ..	213	270	3,041	187,446	8	1,360	130	6,480	8	8,050	..	..	203,336
MARLBOROUGH—													
Blenheim ..	19	15	119	..	8	..	6	..	..	..	..	..	..
Havelock ..	18	27	52	3,345	..	..	2	130	..	..	..	..	3,475
Totals ..	37	42	171	3,345	8	..	8	130	..	..	..	..	3,475
NELSON—													
Wangapeka, Baton, and Sherry	3	4	12	400	2	100	..	..	..	..	2	60	560
Collingwood ..	109	129	1,103	139,436	70	7,995	77	11,004	..	..	6	..	158,435
Inangahua ..	524	413	3,720	165,413	546	52,457	625	23,510	..	..	..	..	241,380
Charleston ..	36	166	340	3,400	41	220	30	3,000	..	..	..	..	6,620
Westport ..	251	166	1,344	13,555	187	25,142	408	14,170	..	..	..	..	52,867
Lyell	100	92	235	7,100	27	2,560	22	2,250	..	..	..	..	11,910
Murchison ..	259	210	1,072	11,000	73	2,600	63	3,780	..	..	..	..	17,380
Ahaura	225	450	1,750	170,000	95	19,000	85	2,800	..	..	..	..	191,800
Motueka ..	7	4	23	..	4	..	5	..	..	..	1	..	..
Takaka	8	5	47	2,300	6	100	8	100	..	..	6	..	2,500
Totals ..	1,522	1,639	9,646	512,604	1,051	110,174	1,323	60,614	..	..	15	60	683,452
WESTLAND—													
Hokitika & Kanieri	332	227	568	160,370	139	3,095	319	3,630	..	..	..	..	167,095
Ross	73	67	320	37,350	60	11,000	49	1,850	..	..	5	500	50,700
Kumara ..	27	35	221	15,990	31	15,655	27	6,450	..	..	26	520	38,615
Greymouth ..	532	464	2,153	26,672	827	20,030	1,039	14,514	..	..	..	..	61,216
Okarito	25	25	174	14,582	..	..	3	94	..	..	..	..	14,676
Stafford	240	310	560	25,000	200	8,000	300	5,000	6	750	100	1,000	39,750
Totals ..	1,229	1,128	3,996	279,964	1,257	57,780	1,737	31,538	6	750	131	2,020	372,052
OTAGO AND SOUTHLAND—													
Hindon	25	25	100	5,000	5	70	3	356	..	..	5	36	5,462
Tuapeka ..	330	920	1,850	18,000	300	8,000	325	9,000	..	..	..	..	35,000
Tapanui ..	2	3	8	185	..	..	..	..	..	..	..	..	185
Clyde, Alexandra, Black's, and Roxburgh	605	1,430	2,580	84,000	300	12,000	160	17,500	2	8,500	..	..	122,000
Arrow	102	221	223	14,213	130	4,803	25	1,415	..	..	..	..	20,431
Cromwell ..	570	1,464	2,292	105,182	312	14,678	242	11,320	..	..	..	..	131,180
Waikaia ..	230	400	800	40,000	200	2,000	125	2,500	..	..	8	500	45,000
Riverton and Orepuki	151	241	812	29,533	25	4,840	56	1,822	..	..	..	..	36,195
Queenstown ..	130	198	783	52,320	160	15,980	422	2,015	..	..	..	..	70,315
Naseby													
Kyeburn & Clarke's													
Hamilton's and Sowburn													
Hyde & Fullerton's	1370	3,280	4,575	76,202	766	23,675	365	19,290	..	..	..	..	119,167
Macrae's, Strath Taieri, and Shag Valley													
Serpentine ..													
St. Bathan's and Ida Valley													
Gore	1	1	2	10	..	..	..	..	..	..	..	..	10
Totals ..	3,516	8,183	14,025	424,645	2,198	86,046	1,723	65,218	2	8,500	13	536	584,945

SUMMARY.

Auckland	213	270	3,041	187,446	8	1,360	130	6,480	8	8,050	..	..	203,336
Marlborough ..	37	42	171	3,345	8	..	8	130	..	..	..	..	3,475
Nelson	1,522	1,639	9,646	512,604	1,051	110,174	1,323	60,614	..	..	15	60	683,452
Westland	1,229	1,128	3,996	279,964	1,257	57,780	1,737	31,538	6	750	131	2,020	372,052
Otago	3,516	8,183	14,025	424,645	2,198	86,046	1,723	65,218	2	8,500	13	536	584,945
Totals ..	6,517	11,262	30,879	1,408,004	4,522	255,360	4,921	163,980	16	17,300	159	2,616	1,847,260

No. 15.

RETURN of CASES in the WARDENS' COURTS, and COSTS AWARDED, for the Year ending 31st December, 1905.

District.	Number of Mining Disputes adjudicated on.	Aggregate Amount of Value.		Amount of Costs awarded.	Cases wherein Judgment has decreed Specific Performance.
		Claimed.	Recovered.		
AUCKLAND—		£ s. d.	£ s. d.	£ s. d.	
Coromandel	4	100 0 0	13 10 0	5 4 0	..
Thames	12	145 2 2	49 7 4	7 10 0	..
Te Aroha	10	31 0 0	4 0 0	0 17 0	..
Paeroa	28	64 4 0	27 19 0	7 9 0	..
Waihi	14	309 15 0	7 15 0	19 1 0	..
MARLBOROUGH	6	70 10 6	40 3 9	6 6 0	..
NELSON—					
Inangahua	18	25 0 0	25 0 0	31 6 0	10
Collingwood	6	19 0 6	7 0 9	0 14 0	..
Lyell and Murchison	11	81 10 1	81 10 1	18 5 0	..
Westport	23	510 0 0	300 0 0	57 6 2	..
Charleston	6	2 15 0	..	3 18 0	..
Takaka	1	..	..	3 3 0	1
Wangapeka	..	..	..	..	..
WESTLAND—					
Kumara	4	33 11 8	45 12 6	27 15 0	..
Greymouth	7	73 7 0	41 17 0	1 11 0	..
Hokitika and Kanieri	6	84 0 7	57 13 9	3 12 6	..
Stafford	4	168 6 6	..	0 15 0	..
Ross	2	..	..	2 2 0	..
Ahaura	19	100 15 7	100 15 7	18 15 0	..
Okarito	5	..	..	..	5
OTAGO AND SOUTHLAND—					
Tapanui	..	..	..	..	..
Hindon	..	..	..	..	..
Tuapeka	6	24 1 0	13 0 0	5 5 0	..
Cromwell	6	150 18 9	15 18 9	4 4 0	5
Roxburgh	10	2,320 9 0	17 9 0	49 16 6	4
Black's					
Clyde and Alexandra ..					
Waikaia	15	2 0 0	..	17 0 0	..
Orepuki, Longwood, and Riverton ..	4	133 0 6	47 14 9	5 17 0	..
Arrow (Wakatipu Goldfield) ..	1	5 0 0	..	..	..
Queenstown	4	42 0 0	36 0 0	6 19 0	1
Gore	1	10 0 0	..	..	..
Mount Ida	11	211 2 1	161 2 1	8 13 0	7
Totals	244	4,717 9 11	1,093 9 4	313 4 2	33

No. 16.

RETURN of the NUMBER of MINING LEASES or LICENSES in Force on the 31st December, 1905, the EXTENT of GROUND LEASED or held under LICENSE, and RENTAL per ANNUM.

Mining Leases.

District.	No.	Gross Acreage.			Rental per Annum.		
		A.	R.	P.	£	s.	d.
AUCKLAND—							
Coromandel	82	3,230	3	3	426	10	0
Thames	118	6,329	1	4	1,239	3	6
Te Aroha	11	575	2	25	97	0	0
Paeroa	56	2,756	3	38	805	0	0
Waihi	61	5,003	0	12	1,720	0	9
MARLBOROUGH—							
Havelock	4	106	0	0	34	7	6
Blenheim	7	467	1	0	123	13	9
NELSON—							
Collingwood	5	2,075	3	32	360	4	0
Inangahua	173	6,969	2	25	1,041	2	0
Charleston	26	555	0	0	65	17	6
Ahaura	180	6,500	0	0	1,250	0	0
Lyell	29	952	2	16	276	0	0
Murchison	39	1,053	0	27	375	15	0
Westport	19	491	0	23	145	2	6
Motueka	2	31	0	0	11	12	6
Nelson	3	225	0	0	84	15	0
WESTLAND—							
Hokitika and Kanieri	64	652	0	10	192	0	0
Kumara	49	633	1	10	180	7	6
Greymouth	59	4,834	0	0	1,501	16	6
Ross	37	2,183	0	27	569	15	0
Okarito	13	427	0	0	104	17	6
OTAGO AND SOUTHLAND—							
Cromwell	90	3,007	0	0	751	2	0
Tuapeka	81	2,754	1	32	822	10	0
Waikaia	36	1,314	0	0	394	13	0
Black's	111	4,942	0	0	1,516	12	6
Clyde and Alexandra							
Roxburgh							
Tapanui	2	31	1	36	11	7	6
Naseby	142	2,073	0	0	586	2	6
Arrow (Wakatipu Goldfield) ..	568	2,512	0	3	129	4	4
Queenstown	533	3,683	2	38	365	4	9
Riverton and Orepuki	58	2,142	3	5	309	14	0
Totals	2,658	68,512	2	6	15,491	11	1

STATEMENT of AFFAIRS of MINING COMPANIES, as published in accordance with the Mining Companies Acts, 1891, 1894, and 1900

Name of Company.	Date of Registration.	Subscribed Capital.	Amount of Capital actually paid up.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares allotted.	Amount paid up per Share.	Arrears of Calls.	Number of Shareholders at present.	Number of Men employed.	Quantity and Value of Gold or Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid.	Amount of Debts owing by Company.
										Quantity.	Value.			
AUCKLAND DISTRICT.														
		£	£	£		£ s. d.	£			Oz.	£	£	£	£
Auckland Gold-mining Co. (Ltd.)	7/7/05	5,000	1,875	..	100,000	0 0 4½	..	153	45	..	4,368	3,141	..	1,112
Coromandel Freehold Proprietary Gold-mining Co. (No Liability)	11/11/95	18,750	313	..	150,000	0 0 0½	..	172	..	..	..	11,366	..	266
Coronation Gold-mining Co. (Ltd.)	17/8/04	5,000	1,572	250	100,000	3d. & 4d.	..	156	2	23	47	1,618	..	26
Golden Belt Gold-mining Co. (Ltd.)	12/8/02	24,957	17,123	5,250	249,567	6d., 1/, 2/, & 3/	105	223	12	..	..	19,923	..	887
Harbour View Gold-mining Co. (No Liability)	15/4/03	1,925	1,834	..	77,000	0 0 6	..	76	..	190	496	2,981	..	..
Hardy's Mines (Ltd.)	6/5/04	24,832	12,322	10,275	49,665	10/ & 5/	1,089	68	18	347*	883	18,661	..	450
Hauraki Freeholds (Ltd.)	25/1/99	20,000	1,275	18,725	100,000	0 3 0	..	396	..	1,373	4,217	5,513	..	16
Hauraki No. 2 Gold-mining Co. (No Liability)	10/7/95	12,000	7,302	..	80,000	0 2 7	..	12	..	..	27	7,834	..	12
Kiri Kiri Mines (Ltd.)	17/5/05	6,825	1,023	2,500	68,650	0 0 6	59	71	10	15	42	1,112	..	316
Kuranui Gold-mining Co. (Ltd.)	12/9/95	22,394	9,391	3,450	89,575	0 2 11	170	106	8	..	848	9,580	..	125
Mahara Royal Gold-mining Co. (Ltd.)	9/4/03	6,376	3,856	1,500	152,416	Various	191	210	10	1,661	4,981	9,714	..	818
May Queen Extended Gold-mining Co. (No Liability)	12/11/95	15,000	7,911	..	97,028	0 1 11⅘	..	117	6	..	2,330	10,137	..	..
Minerals (Ltd.)	13/6/03	7,492	4,917	2,575	30,476	0 5 0	..	98	6	..	1,926	5,280	191	4
Moanataiari Extended Gold-mining Co. (Ltd.)	10/3/05	2,602	508	2,398	100,000	1/ & 3d.	121	311	6	..	..	1,030	..	26
New Dart Gold-mining Co. (Ltd.)	23/10/05	5,000	731	..	100,000	2d. & 1d.	102	87	6	..	..	561	..	54
New Eclipse Gold-mining Co. (Ltd.)	9/9/03	10,000	3,958	5,000	100,000	0 0 9½	..	167	12	1,423	4,022	6,792	1,250	434
New May Queen Gold-mining Co. (Ltd.)	13/10/04	5,400	3,150	..	108,000	0 0 7	..	275	19	294	839	3,980	..	438
New Maratoto Gold-mining Co. (Ltd.)	3/10/04	9,150	1,454	2,500	183,000	1d. & 3d.	1,038	22	6	1,701	366	3,108	..	953
New Moanataiari Gold-mining Co. (Ltd.)	6/6/04	5,000	2,127	..	100,000	5d. & 5½d.	165	246	8	651	1,796	5,754	..	379
New Monowai Gold and Silver Mines (Ltd.)	4/10/04	7,500	4,583	..	100,000	0 0 11	..	92	10	..	..	4,307	..	31
New Occidental Gold-mining Co. (No Liability)	7/9/05	7,000	500	575	63,000	6d. & 3d.	22	94	3	..	..	371	..	25
New Saxon Gold-mining Co. (Ltd.)	15/5/04	5,000	2,917	..	100,000	0 0 7	..	195	10	375	1,069	3,132	..	80
New Sylvia Gold-mining Co. (Ltd.)	24/10/05	10,000	938	625	100,000	0 0 3	..	114	4	..	..	603	..	21
New Una Gold-mining Co. (Ltd.)	10/9/03	4,341	1,931	239	57,874	5d., 6d., 8d., & 9d.	72	97	4	254	683	2,324	..	3
Old Alburnia Gold-mining Co. (Ltd.)	25/7/03	11,000	8,250	..	110,000	0 1 6	..	210	20	20	59	9,341	..	147
Old Hauraki Gold-mining Co. (Ltd.)	31/3/03	12,500	3,750	8,000	100,000	0 0 10	..	106	2	1,652	5,038	13,733	1,250	178
Omahu Mines (Ltd.)	28/8/05	7,865	1,172	5,300	78,650	0 1 0	111	47	8	..	..	1,027	..	497
Pride of Waihi Gold-mining Co. (Ltd.)	15/1/01	50,000	2,500	1,250	100,000	0 0 9	..	241	2	..	..	1,771	..	11
Rising Sun Gold-mining Co. (No Liability)	16/10/95	18,000	4,024	1,900	89,484	0 1 3⅜	..	79	3	..	..	4,148	..	15
Royal Oak Gold-mining Co. (Ltd.)	22/3/04	12,500	..	6,875	100,000	..	..	41	4	3,248	8,962	8,723	..	302
Sunbeam Gold and Silver Mining Co. (Ltd.)	30/6/03	11,539	4,610	..	153,850	0 1 5	163	112	3	..	..	4,102	..	33
Tairua Broken Hills Gold-mining Co. (Ltd.)	12/7/99	14,550	14,550	..	145,500	0 2 0	..	175	50	34,813	62,971	59,682	22,891	1,408
Te Puke Gold Reefs (Ltd.)	4/5/98	11,514	11,514	..	101,478	2/3¼ & 2/6	..	110	1	..	..	12,012	4,545	220
Thames Gold mining Co. (Ltd.)	16/12/05	15,000	2,006	..	150,000	6d. & 3d.	1,744	109	4	..	..	1,983	..	14
Vanguard Gold-mining Co. (Ltd.)	6/7/05	9,900	1,152	192	99,000	0 0 5	640	119	8	..	..	1,588	..	577
Victoria Gold-mining Co. (Ltd.)	2/9/90	25,600	18,722	1,600	110,829	0 3 9½	..	271	15	..	14,075	29,713	..	..
Waihi Beach Gold-mining Co. (No Liability)	7/4/05	14,000	2,332	..	140,000	0 0 4	1	216	11	..	..	2,255	..	18
Waihi Consolidated (Ltd.)	23/3/00	25,000	1,875	15,000	100,000	0 3 4½	1	141	12	..	..	3,790	..	5
Waihi Consols Gold-mining Co. (Ltd.)	27/5/03	12,500	2,788	2,500	100,000	0 0 7	168	81	..	..	..	2,767	..	7
Waihi Discovery Gold-mining Co. (Ltd.)	17/11/05	12,000	554	1,125	120,000	0 0 3	..	99	..	..	..	168	..	150
Waihi Extended Gold-mining Co. (Ltd.)	12/8/95	149,967	21,683	5,498	149,967	0 3 7½	..	482	11	..	..	21,737	..	88
Waihi South Gold-mining Co. (Ltd.)	21/6/04	32,181	3,196	22,527	128,725	0 4 0	..	167	1	..	..	3,097	..	20
Waihi Standard Gold-mining Co. (Ltd.)	23/3/05	5,000	208	..	100,000	0 0 0½	..	23	..	..	..	76	..	13
Waimangu Gold-mining Co. (Ltd.)	1/12/04	8,925	1,308	2,500	89,250	8d. & 1/	10	142	..	..	..	1,021	..	15
Waiotahi Gold-mining Co. (Ltd.)	1/8/71	18,000	15,000	..	60,000	0 5 0	..	295	103	..	266,998	173,513	91,800	1,570
		719,085	214,705	130,129	4,782,984	..	5,972	6,824	463	48,040	387,043	495,069	121,927	11,764

* Also 183 tons concentrates value at mine, £3,582.

STATEMENT of AFFAIRS of MINING COMPANIES, as published in accordance with the Mining Companies Acts, 1891, 1894, and 1900—*continued.*

Name of Company.	Date of Registration.	Subscribed Capital.	Amount of Capital actually paid up.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares allotted.	Amount paid up per Share.	Arrears of Calls.	Number of Shareholders at present.	Number of Men employed.	Quantity and Value of Gold or Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid.	Amount of Debts owing by Company.
										Quantity.	Value.			
NELSON DISTRICT (INCLUDING WEST COAST).														
		£	£	£		£ s. d.				Oz.	£	£	£	£
Addison's Long Tunnel Gold-mining Co. (Ltd.)	24/9/98	1,500	1,408	83	1,500	1 0 0	9	24	4	1,825	7,204	7,855	724	13
A1 Gold-dredging Co. (Ltd.)	13/11/99	8,500	6,700	..	8,500	1 0 0	..	127	7	4,317	16,866	21,666	2,125	765
Atlas Prospecting and Gold-mining Co. (Ltd.) ..	4/8/02	21,000	558	..	21,000	0 0 6½	10	19	..	..	..	535	..	14
Bellevue Gold-dredging Co. (Ltd.)	17/10/02	3,400	2,300	1,000	3,400	1 0 0	..	10	9	852	3,341	4,407	..	2,689
Bignell's No Town Gold-dredgingCo. (Ltd.) ..	10/4/00	9,000	4,840	4,160	9,000	1 0 0	..	126	9	2,707	10,547	12,628	2,250	..
Big River Gold-mining Co. (Ltd.)	11/4/91	12,000	11,475	..	24,000	0 9 9	..	69	30	25,854	103,940	69,905	47,366	236
Blackwater River Gold-dredging Co. (Ltd.) ..	27/4/00	9,475	5,892	3,000	9,475	0 18 0	..	99	9	5,065	20,229	22,876	5,965	..
Britannia Gold-mining Co. (Ltd.)	3/3/99	10,000	1,934	7,160	20,000	0 7 1⅔	..	22	15	3,129	12,287	11,132	3,342	280
Craig's Freehold Gold-dredging Co. (Ltd.) ..	20/8/00	6,500	4,205	2,500	9,000	0 14 0	330	116	10	1,158	4,478	5,110	..	2,152
Daylight Gold-dredging Co. (Ltd.)	15/5/00	6,000	4,243	1,899	7,899	1 0 0	177	88	..	..	..	3,885	..	..
Garden Gully Gold-mining Co. (Ltd.)	8/8/01	13,913	7,079	9,318	23,230	Various	593	239	12	5	19	6,845	..	863
Greenstone Junction Gold-dredging Co. (Ltd.) ..	22/9/99	7,500	7,500	1,500	12,000	0 15 0	..	129	7	3,158	12,227	20,355	..	1,335
Horse Terrace Sluicing Co. (Ltd.)	2/8/04	5,000	3,000	2,000	5,000	1 0 0	..	16	6	286	1,109	4,380	..	512
Keep-it-Dark Quartz-mining Co. (Ltd.) ..	2/3/74	20,000	6,208	10,000	20,000	0 16 2½	..	45	47	98,819	380,430	251,293	145,667	55
Kells' Sluicing Co. (Ltd.)	7/4/02	2,988	2,988	1,250	4,468	20/ & 7/6	3	15	..	21	81	3,631	..	531
Mineral Belt Copper-mining Co. (Ltd.) ..	12/11/03	16,170	4,505	10,000	16,170	20/& 15/	..	54	12	..	..	4,407	..	150
Minerva Gold-mining Co. (Ltd.)	24/2/90	12,000	6,428	400	17,285	0 6 3	..	18	1	821	2,947	11,135	..	64
Mokoia Gold-dredging Co. (Ltd.)	21/4/99	9,000	7,750	1,250	9,000	1 0 0	..	187	8	5,271	20,081	25,935	1,925	312
Mont d'Or Gold-mining and Water-race Co. (Ltd.)	25/7/82	12,000	10,800	..	12,000	0 18 0	..	32	14	29,590	115,593	85,176	40,200	..
Macleod's Terrace Sluicing and Water-distributing Co. (Ltd.)	4/4/03	15,645	9,589	..	15,645	1 0 0	56	38	6	8	32	10,258	..	750
Nelson Creek Gold-dredging Co. (Ltd.) ..	1/7/99	8,500	6,000	2,500	8,500	1 0 0	..	85	12	12,785	50,506	43,383	23,364	171
New Feddersen Gold-dredging Co. (Ltd.) ..	1/8/04	2,313	2,313	..	4,625	0 10 0	..	19	8	144	5,599	6,583	1,272	323
New Shetland Terrace Sluicing Co. (Ltd.) ..	20/5/04	1,805	1,265	..	1,805	0 15 0	89	41	1	160	637	2,225	..	..
No Town Creek Gold-dredging Co. (Ltd.) ..	9/3/00	8,500	8,500	3,500	12,000	1 0 0	..	115	10	8,758	34,116	27,212	13,775	84
Parapara Hydraulic Sluicing and Mining Co. (Ltd.)	18/6/92	50,600	26,210	20,000	40,600	20/ 12/ 5/	150	63	20	8,087	31,088	56,418	..	..
Reeves's Proprietary Gold dredging Co. (Ltd.) ..	19/10/99	14,200	11,700	2,500	14,200	1 0 0	..	252	18	4,725	18,619	34,519	608	2,600
Slate River Gold-dredging Co. (Ltd.)	12/3/04	1,353	1,353	100	1,453	1 0 0	..	51	10	962	3,519	3,746	..	719
Slate River Sluicing Co. (Ltd.)	26/7/00	14,680	14,647	1,200	13,480	1 0 0	33	85	..	1,234	..	18,075	..	..
Stafford Gold-dredging Co. (Ltd.)	17/5/05	289	289	1,734	2,023	1 0 0	..	7	7	512	1,969	1,589	..	218
Takaka Sluicing Co. (Ltd.)	28/1/01	5,395	5,395	3,725	9,120	1 0 0	..	44	10	3,264	12,328	17,160	4,104	67
Three-mile (Greenstone Creek) Dredging Co. (Ltd.)	15/9/99	6,500	6,500	1,500	8,000	1 0 0	..	105	10	4,131	16,015	22,712	400	346
Ulster Gold-mining Co. (Ltd.)	20/4/04	7,500	1,949	450	30,000	1/10 & /4	55	43	2	..	..	1,964	..	54
Totals	..	323,226	195,523	92,729	394,378	..	1,505	2,383	314	227,665	885,807	819,000	293,087	15,303

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										Quantity.	Value.			
OTAGO DISTRICT (INCLUDING SOUTHLAND).														
		£	£	£		£ s. d.	£			Oz.	£	£	£	£
Alexandra Bonanza Gold-dredging and Sluicing Co. (Ltd.)	5/9/99	27,000	17,352	3,000	21,393	1 0 0	..	152	7	414	1,614	21,569	..	723
Alexandra Eureka Gold-dredging Co. (Ltd.) ..	14/11/99	12,000	..	12,000	12,000	1 0 0	..	35	8	8,807	33,981	19,108	14,250	182
Alexandra Lead Gold-dredging Co. (Ltd.) ..	26/7/99	17,521	14,521	3,000	17,521	1 0 0	..	186	9	7,065	27,356	27,830	14,032	842
Alpine No. 2 Gold-dredging Co. (Ltd.)	1/5/99	6,220	6,220	825	6,220	1 0 0	..	125	8	3,212	12,425	13,623	3,416	351
Argyle Gold-dredging Co. (Ltd.)	24/12/02	6,000	6,000	..	6,000	1 0 0	..	11	11	3,385	13,518	15,772	3,600	53
Arrow Falls Gold-mining Co. (Ltd.)	4/4/98	30,500	2,350	27,750	30,500	20/ & 4/	..	33	7	1,550	5,991	9,251	..	282
Bakery Flat Sluicing Co. (Ltd.)	10/9/96	2,500	2,013	300	2,500	0 18 6	..	28	..	2,915	10,983	12,022	1,063	269
Barewood Gold-mining Co. (Ltd.)	24/12/03	8,000	1,200	6,000	8,000	0 12 0	200	41	21	3,749	14,307	14,316	2,800	97
Central Charlton Dredging Co. (Ltd.)	8/12/99	5,300	5,300	1,700	7,000	1 0 0	..	111	8	4,930	19,234	20,018	4,550	..
Charlton Creek Gold-dredging Co. (Ltd.) ..	5/5/99	4,000	4,000	1,000	5,000	1 0 0	..	70	9	5,378	20,846	23,217	4,623	..
Chicago Gold-dredging Co. (Ltd.)	1/11/99	2,500	6,750	2,500	5,000	1 0 0	..	72	7	5,474	21,299	16,783	2,364	191
Clutha River Gold-dredging Co. (Ltd.)	31/3/04	3,500	1,300	2,200	2,300	1 0 0	..	45	8	675	2,611	3,651	..	783
Clyde Dredging Co. (Ltd.)	17/5/95	6,000	5,850	150	6,000	1 0 0	..	82	8	13,504	52,012	36,658	22,700	205
Crewe Gold-dredging Co (Ltd.)	7/9/02	2,000	2,000	3,000	5,000	1 0 0	..	70	9	5,378	20,846	23,217	4,623	..
Deep Stream Amalgamated Hydraulic Sluicing Co. (Ltd.)	4/2/97	8,500	8,500	3,500	12,000	1 0 0	..	57	15	6,317	24,197	32,567	7,747	385
Dunstan Lead Gold-dredging Co. (Ltd.) ..	15/5/00	6,000	4,243	1,899	7,899	1 0 0	177	88	..	..	..	3,885	..	..
Earnscleugh Gold-dredging Co. (Ltd.)	15/7/01	8	8	10,992	11,000	1 0 0	..	9	33	18,323	70.876	48,430	6,875	843
Electric Gold-dredging Co. (Ltd.)	2/9/99	26,000	..	26,000	26,000	1 0 0	..	277	21	41,196	160,092	41,003	116,342	1,843
Enterprise Gold-dredging Co. (Ltd.)	24/8/91	7,000	3,500	3,500	7,000	1 0 0	..	139	8	18,648	72,249	46,961	26,420	260
Ettrick Gold Steam-dredging Co. (Ltd.) ..	29/8/90	9,000	8,366	2,000	10,500	1 0 0	..	113	8	8,869	34,138	36,934	5,240	285
First Chance Dredging Co. (Ltd.)	23/6/02	3,500	3,500	3,500	7,000	1 0 0	..	153	8	2,825	9,944	11,066	3,150	572
Garden Gully Dredging Co. (Ltd.)	14/8/03	2,600	2,600	..	2,600	1 0 0	..	32	8	1,350	5,239	7,437	130	219
Golden Bed Dredging Co. (Ltd.)	5/5/99	11,000	10,694	2,000	12,794	1 0 0	..	198	8	6,271	24,307	22,870	2,218	64
Golden Crescent Sluicing Co. (Ltd.)	26/11/98	3,500	3,500	..	3,500	1 0 0	..	27	8	3,760	14,576	11,373	6,300	64
Golden Gate Dredging Co. (Ltd.)	13/3/95	2,500	2,500	..	2,500	1 0 0	..	54	7	13,049	50,250	28,236	23,250	118
Golden Run Dredging Co. (Ltd.)	29/6/91	9,000	9,414	1,600	11,000	1 0 0	..	133	13	16,983	65,384	61,127	13,719	303
Golden Treasure Dredging Co. (Ltd.)	11/7/93	1,500	1,384	1,500	3,000	1 0 0	..	41	8	12,616	48,570	33,498	17,831	207
Gordon Gold-dredging Co. (Ltd.)	27/2/03	14	14	1,000	1,014	1 0 0	..	7	7	911	3,910	4,686	..	..
Hartley and Riley Beach Dredging Co. (Ltd.) ..	14/7/97	6,500	6,300	200	6,500	1 0 0	..	339	9	27,564	106,626	30,933	79,625	175
Hessey's Gold-dredging Co. (Ltd.)	22/7/02	5,000	3,700	1,300	5,000	1 0 0	..	80	10	3,135	12,347	11,643	4,000	..
Hit or Miss Water-race Co. (Reg.)	19/6/67	..	..	..	301	20 0 0	..	3	..	..	..	..	..	..
Hydraulic Motor-dredging Co. (Ltd.)	—/2/04	300	300	..	300	1 0 0	..	7	5	358	1,376	1,309	..	261
Inchdale Gold-dredging Co. (Ltd.)	8/2/00	5,500	5,023	1,500	7,000	1 0 0	..	86	7	2,982	11,201	13,400	803	12
Island Block Gold-dredging and Sluicing Co. (Ltd.)	26/2/00	24,030	12,030	12,000	25,000	1 0 0	..	102	14	6,231	24,291	27,444	2,403	356
Jewett's Gully Gold-mining Co. (Ltd.)	2/5/05	1,675	1,462	..	1,675	1 0 0	..	26	4	31	121	1,845	..	286
Junction Electric Gold-dredging Co. (Ltd.) ..	2/9/99	26,000	..	26,000	26,000	1 0 0	..	310	29	16,469	63,754	41,184	22,750	1,441
Jutland Hydraulic Dredging Co. (No Liability) ..	28/6/01	5,000	4,100	900	5,000	1 0 0	..	8	7	2,440	9,334	12,688	1,125	394
Kelso Dredging Syndicate (Ltd.)	22/8/05	1,200	1,200	300	1,500	1 0 0	59	10	..	..	..	728	..	127
Kia Ora Victoria Gold-dredging Co. (Ltd.) ..	10/8/01	9,100	5,915	..	9,100	0 13 0	..	35	16	8,823	35,759	30,551	10,920	..
Kura Gold-dredging Co. (Ltd.)	24/8/00	4,600	1,744	..	4,600	..	37	30	..	..	..	1,196	..	..
Lady Annie Gold-dredging Co. (Ltd.)	29/11/04	4,200	14	4,186	4,200	1 0 0	..	20	8	1,683	6,682	4,124	2,520	141

STATEMENT of AFFAIRS of MINING COMPANIES, as published in accordance with the Mining Companies Acts, 1891, 1894, and 1900—*continued*.

Name of Company.	Date of Registration.	Subscribed Capital.	Amount of Capital actually paid up.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares allotted.	Amount paid up per Share.	Arrears of Calls.	Number of Shareholders at present.	Number of Men employed.	Quantity and Value of Gold or Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid.	Amount of Debts owing by Company.
										Quantity.	Value.			
OTAGO DISTRICT (INCLUDING SOUTHLAND)—*continued*.														
		£	£	£		£ s. d.	£			Oz.	£	£	£	£
Lady Roxburgh Gold-dredging Co. (Ltd.) ..	3/3/00	11,000	4,586	2,000	11,000	0 13 0	..	123	8	3,114	11,985	13,533	2,795	305
Ladysmith Gold-dredging Co. (Ltd.)	19/4/00	12,000	3,964	3,000	14,500	0 10 0	..	81	9	3,292	12,675	13,177	3,474	142
Last Chance Hydraulic Sluicing, Elevating, and Dredging Co. (Ltd.)	27/7/99	9,950	4,655	3,300	9,950	0 14 0	..	103	11	1,692	6,506	8,654	993	..
Livingstone Creek Gold-dredging Co. (Ltd.) ..	21/12/02	3,500	3,500	..	3,500	1 0 0	..	24	8	1,999	7,431	10,925	90	400
Local Industry Gold-mining Co. (Ltd.) ..	21/10/91	1,500	1,300	..	1,500	0 17 4	..	13	4	4,295	16,534	16,463	2,287	240
Loch Lomond Gold-dredging Co. (Ltd.) ..	20/2/03	2,475	1,975	500	2,475	1 0 0	..	69	7	1,001	3,860	6,033	..	84
Lone Star Dredging Co. (Ltd.)	15/3/02	720	600	..	720	0 16 8	..	15	10	2,501	9,791	9,968	540	248
Luggate Mining Co. (Ltd.)	17/12/04	1,200	65	..	24	..	..	9	..	10	39	329	..	264
Majestic Gold-mining Co. (Ltd.)	31/7/99	6,500	5,700	800	6,500	1 0 0	..	100	7	3,686	14,244	18,866	1,300	266
Manuherikia Gold-dredging Co. (Ltd.).. ..	1/8/99	12,000	6,000	6,000	12,000	1 0 0	..	182	8	11,939	45,568	23,836	26,700	45
Manuka Mining Co. (Ltd.)	26/5/04	200	200	..	200	1 0 0	..	7	5	217	846	1,354	..	227
Masterton Gold-dredging Co. (Ltd.)	6/1/04	5,000	3,500	1,500	5,000	1 0 0	..	68	8	2,810	11,015	7,494	6,500	..
Matakanui Gold-mining Co. (Ltd.)	22/1/02	7,000	7,000	7,000	7,000	1 0 0	..	8	7	2,025	7,725	7,400	1,399	..
Matau Dredging Co. (Ltd.)	16/10/97	6,200	6,200	800	7,000	1 0 0	..	123	8	9,461	36,438	25,218	15,225	140
Mill Creek Freehold (Ltd.)	27/11/03	4,000	4,000	..	80	50 0 0	..	29	7	1,151	4,476	8,537	..	7
Molyneux Hydraulic Dredging Co. (Ltd.) ..	25/5/00	5,896	5,896	..	5,896	1 0 0	..	85	7	8,298	31,876	37,485	5,602	177
Molyneux Kohinoor Dredging Co. (Ltd.) ..	27/1/00	7,325	6,116	1,805	9,130	20/ & 16/6	41	168	2	2,313	8,947	12,605	2,054	100
Morning Light Gold-dredging Co. (Ltd.) ..	10/11/05	1,850	739	300	1,880	0 12 0	209	35	8	..	..	746	..	141
Mount Aurum Quartz-mining Co. (Ltd.) ..	31/8/04	9,453	3,458	6,000	9,458	1 0 0	..	12	15	15	51	4,972	..	190
Mount Morgan Sluicing Co. (Ltd.)	2/7/02	800	800	2,000	2,800	1 0 0	..	7	4	737	2,838	3,546	..	34
Muddy Creek Co. (Ltd.)	2/11/01	1,120	1,120	725	1,845	1 0 0	..	25	9	4,205	16,450	15,008	2,030	..
Mystery Flat Gold-dredging Co. (Ltd.) ..	16/7/00	5,512	4,512	1,000	5,512	1 0 0	..	107	8	4,862	19,100	17,309	5,788	..
Naseby Dredging and Hydraulic Sluicing Co. (Limited)	16/10/97	5,000	2,288	2,000	5,000	0 15 3	..	24	5	3,298	12,692	14,115	2,500	94
New Alpine Consols Dredging Co. (Ltd.) ..	3/7/02	3,750	3,750	3,750	7,500	0 10 0	..	129	8	2,421	9,294	9,623	2,052	79
New Fourteen-mile Beach Gold-dredging Co. (Ltd.)	17/3/04	4,194	4,194	..	4,793	0 17 6	..	94	8	3,111	12,060	8,035	5,991	216
New Maori Point Gold-dredging Co. (Ltd.) ..	22/8/04	1,750	1,579	115	1,750	1 0 0	56	38	7	1,204	4,923	5,325	686	221
New Monte Christo Dredging Co. (Ltd.) ..	21/7/04	1,500	977	..	1,500	1 0 0	..	35	1	307	1,122	2,296	..	23
New Perseverance Gold-dredging Co. (Ltd.) ..	21/4/04	14,000	..	14,000	14,000	1 0 0	..	124	21	4,107	15,862	16,026	2,100	232
New Roxburgh Jubilee Dredging Co. (Ltd.) ..	22/1/02	2,500	1,563	5,000	7,500	0 12 6	..	167	8	7,793	30,274	14,095	17,241	350
New Skipper's Sluicing Co. (Ltd.)	16/9/02	3,414	811	811	3,414	1 0 0	..	24	6	657	2,504	5,053	..	176
New Trafalgar Dredging Co. (Ltd.)	13/4/04	6,500	2,500	2,000	6,500	1 0 0	..	108	9	586	2,291	8,308	325	226
Nokomai Hydraulic Sluicing Co. (Ltd.) ..	26/3/98	24,000	7,000	17,000	2,400	10 0 0	..	45	42	13,167	50,243	40,075	17,784	237
O'Brien's Patent Hydraulic Gold-dredging Co. (Ltd.)	18/3/00	750	750	250	1,000	1 0 0	..	7	..	148	568	2,057	200	24
Olrig Dredging Co. (Ltd.)	13/3/99	6,955	5,955	1,000	6,955	1 0 0	..	67	7	5,119	19,902	21,691	4,173	105
Ophir Mining Co. (Ltd.)	20/2/05	4,250	1,275	8,750	13,000	0 4 0	..	14	3	..	..	950	..	..
Otago Gold-dredging Co. (Ltd.)	20/5/95	5,000	2,000	3,000	5,000	1 0 0	..	68	13	12,533	48,357	41,308	10,375	1,205
Ourawera Gold-mining Co. (Ltd.)	23/5/95	3,000	3,000	..	3,000	1 0 0	..	17	11	7,842	31,101	23,627	10,915	..
Paterson's Freehold Gold-mining Co. (Ltd.) ..	15/7/99	8,000	8,000	4,000	12,000	1 0 0	..	26	16	7,108	28,197	36,000	4,800	1,178
Phœnix Dredging Co. (Ltd.)	27/9/02	1,500	1,500	..	30	50 0 0	..	15	7	2,375	9,500	9,672	3,300	114
Phœnix Water-race Co. (Ltd.), (Reg.)	12/10/67	1,500	1,500	..	1,000	1 10 0	..	18	1	..	..	971	7,619	18

STATEMENT of AFFAIRS of MINING COMPANIES, as published in accordance with the Mining Companies Acts, 1891, 1894, and 1900—*continued*.

Name of Company.	Date of Registration.	Subscribed Capital.	Amount of Capital actually paid up.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares allotted.	Amount paid up per Share.	Arrears of Calls.	Number of Shareholders at present.	Number of Men employed.	Quantity and Value of Gold or Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid.	Amount of Debts owing by Company.
										Quantity.	Value.			
OTAGO DISTRICT (INCLUDING SOUTHLAND)—*continued*.														
		£	£	£		£ s. d.	£			Oz.	£	£	£	£
Punt Gold-dredging Co. (Ltd.)	10/11/04	3,000	1,750	1,250	100,000	0 0 9	..	241	2	..	..	1,771	..	11
Revival Gold-dredging Co. (Ltd.)	27/8/03	2,600	1,800	600	2,600	0 18 0	..	18	8	1,615	6,283	7,228	650	50
Riley's Beach Gold-dredging Co. (Ltd.) ..	22/2/01	9,000	7,311	4,875	9,000	1 15 0	..	139	8	3,229	12,463	19,706	3,460	282
Rise and Shine Gold-dredging Co. (Ltd.) ..	24/2/00	10,000	9,746	2,000	12,000	1 0 0	254	184	19	8,934	34,374	44,473	2,100	768
Rising Sun Gold-dredging Co. (Ltd.)	16/2/01	8,000	5,500	2,500	8,000	1 0 0	..	81	10	3,545	13,667	20,169	1,200	199
Round Hill Mining Co. (Ltd.)	30/7/02	28,245	6,753	21,492	5,649	5 0 0	..	180	35	22,307	88,988	99,791	847	227
Roxburgh Amalgamated Mining and Sluicing Co. (Ltd.)	2/3/89	29,153	13,121	15,000	29,152	0 18 6	..	160	18	21,025	81,679	73,442	22,227	130
Royal Waimumu Gold-dredging Co. (Ltd.) ..	6/10/00	5,500	5,330	..	5,500	1 0 0	..	44	10	4,288	17,205	17,863	4,336	82
Sailor's Bend Dredging Co. (Ltd.)	1/9/99	8,000	6,500	1,500	8,000	1 0 0	..	173	8	2,908	11,239	14,798	2,791	336
Sailor's Gully (Waitahuna) Gold-mining Co. (Ltd.)	3/6/96	2,000	100	1,800	2,000	0 10 0	..	11	4	2,271	8,449	6,435	2,150	88
Sandy Point Gold-dredging Co. (Ltd.)	20/2/03	8,000	8,000	..	8,000	1 0 0	..	55	9	4,748	18,468	20,596	5,200	376
Scandinavian Water-race Co. (Ltd.), (Reg.) ..	1868	12,000	12,000	..	240	50 0 0	..	23	12	..	..	..	15,660	5,610
Shotover Quartz-mining Co. (No Liability) ..	6/3/98	7,245	5,745	1,500	28,980	0 5 0	..	43	12	1,966	7,513	14,946	..	1,334
Smith Gold-mining Co. (Ltd.)	19/10/98	1,700	1,700	300	2,000	1 0 0	..	18	4	1,093	4,318	6,068	..	22
Tallaburn Hydraulic Sluicing Co. (Ltd.) ..	3/12/04	1,200	1,200	..	12	100 0 0	..	7	6	682	2,627	2,605	1,200	..
Taniwha Gold-dredging Co. (Ltd.)	19/12/02	700	700	..	700	1 0 0	..	9	7	2,188	8,424	7,321	1,960	180
Tinker's Gold-mining Co. (Ltd.)	10/6/02	15,000	15,000	15,000	15,000	1 0 0	..	16	8	2,824	10,872	10,698	5,438	132
Tuohy's Creek Dredging Co. (Ltd.)	24/7/05	700	516	..	700	0 15 0	28	25	7	13	49	545	..	933
Undaunted Gold-mining Co. (Ltd.)	1/3/98	15,000	15,000	..	1,500	10 0 0	..	33	9	7,669	29,820	16,953	11,250	279
United M. and E. Water-race Co. (Reg.) ..	23/4/72	7,600	7,600	..	152	50 0 0	..	7	9	13,514	52,030	60,091	3,078	1,605
Upper Waipori Alluvial Gold-dredging Co. (Ltd.)	3/9/89	4,000	2,333	1,667	4,800	0 16 8	..	76	8	17,427	66,813	52,541	15,720	304
Vinegar Hill Hydraulic Sluicing Co. (Ltd.) ..	23/9/00	6,000	6,000	..	6,000	1 0 0	..	13	7	..	6,076	5,269	600	100
Waikaia Gold-dredging Co. (Ltd.)	20/10/03	3,500	1,750	1,750	3,500	1 0 0	..	33	9	1,362	5,380	8,203	1,575	219
Waikaia Kia Ora Gold-dredging Co. (Ltd.) ..	10/7/03	5,000	..	..	5,000	..	..	15	7	866	3,490	33,852	..	54
Waikaka Gold-dredging Co. (Ltd.)	9/5/00	4,900	4,628	1,600	6,500	1 0 0	..	59	8	3,912	15,744	16,530	3,719	43
Waikaka Syndicate (Ltd.)	20/12/01	7,000	3,000	4,000	7,000	1 0 0	..	18	8	3,756	14,800	17,751	2,800	3,000
Waikaka Queen Gold-dredging Co. (Ltd.) ..	6/7/99	5,510	5,495	1,050	5,510	1 0 0	..	103	8	3,763	15,447	20,573	1,119	465
Waikaka United Gold-dredging Co. (Ltd.) ..	11/2/99	4,700	4,700	6,500	11,200	1 0 0	..	26	16	9,573	37,574	41,954	10,920	478
Waimumu Gold-dredging Co. (Ltd.)	29/11/97	6,000	6,000	1,000	7,000	1 0 0	..	77	8	6,351	24,703	26,343	3,410	937
Waimumu Queen Gold-dredging Co. (Ltd.) ..	21/6/99	5,200	5,175	1,800	7,000	1 0 0	25	79	8	4,384	17,049	20,750	2,625	116
Waitahuna Dredging Co. (Ltd.)	22/2/02	1,380	1,380	..	1,380	1 0 0	..	23	..	605	2,330	3,920	621	..
Waitahuna Hydraulic Sluicing Co. (Ltd.) ..	10/11/04	2,000	1,200	..	2,000	0 12 0	..	7	7	291	1,121	2,222	100	40
Waipori Consolidated Gold Dredges (No Liability)	22/3/99	2,500	2,275	225	2,500	1 0 0	..	7	7	3,448	13,347	14,112	1,938	386
Totals	..	751,370	468,703	353,117	871,304	..	1,086	7,861	1,020	589,226	2,291,873	2,054,357	726,921	38,628
Grand totals	..	1,793,681	878,931	575,975	6,048,666	..	8,563	17,068	1,797	864,934	3,564,723	3,368,426	1,141,935	65,695

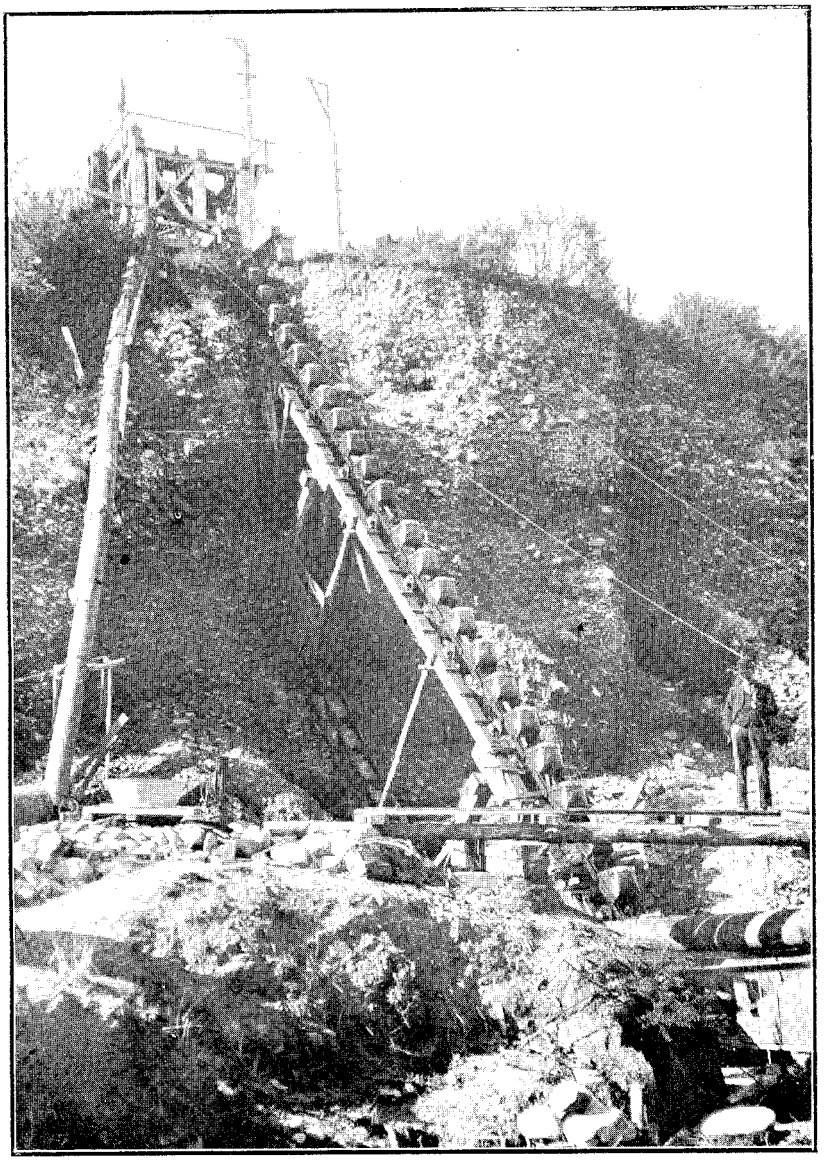
STATEMENT of AFFAIRS of MINING COMPANIES, as defined by Section 2 of "The Mining Companies Acts Amendment Act, 1897," and published in accordance with "The Mining Companies Acts Amendment Act, 1897."

Name of Company.	Date of Registration of Office in Colony.	Subscribed Capital.	Amount of Capital actually paid up in Colony.	Value of Scrip given to Shareholders on which no Cash paid.	Number of Shares on Colonial Register.	Amount paid up per share: Colonial Register.	Arrears of Calls: Colonial Register.	Number of Shareholders on Colonial Register.	Number of Men employed in Colony.	Quantity and Value of Gold or Silver produced since Registration.		Total Expenditure since Registration.	Total Amount of Dividends paid in Colony.	Amount of Debts owing by Company.
										Quantity.	Value.			
AUCKLAND DISTRICT.														
		£	£	£		£ s. d.	£ s. d.			Oz.	£	£	£	£
Arrindell Syndicate (Ltd.)	10/12/03	5,000	..	12,000	2,250	1 0 0	..	3	10	36	104	4,000	..	750
Komata Reefs Gold-mining Co. (Ltd.)	16/10/06	200,000	..	85,000	157,050	0 5 0	..	351	140	191,420	150,603	124,949	..	1,808
New Zealand Crown Mines Co. (Ltd.)	27/6/96	200,000	..	100,000	54,027	1 0 0	1 0 0	131	129	227,284	543,846	514,826	12,224	1,693
Talisman Consolidated (Ltd.)	12/8/04	270,000	..	..	57,028	0 18 0	..	200	225	211,183	85,602	66,553	..	..
Waihi Grand Junction Gold Co. (Ltd.)	22/12/97	240,000	4,408	112,500	5,362	1 0 0	..	38	174	..	..	140,655	..	..
Waihi Gold-mining Co. (Ltd.)	7/12/87	495,907	19,212	53,333	32,495	1 0 0	..	358	1,460	4,687,751	4,573,701	2,628,785	79,780	26,590
Waitaia Gold-mines (Ltd.)	16/7/96	76,207	..	20,000	20,181	1 0 0	..	121	18	7,074	21,169	27,403	..	..
Kuranui Caledonian (Ltd.)	11/1/05	14,400	4,364	7,164	103,304	6d., 1/, 2/	102 0 0	354	13	414	1,117	3,786	..	..
Totals	..	1,501,514	27,984	389,997	431,697	..	103 0 0	1,556	2,169	5,325,162	5,376,142	3,510,967	92,004	30,841
NELSON DISTRICT.														
Taitapu Gold Estates (Ltd.)	2/3/03	149,276	..	..	..	..	..	..	11	2,652	10,215	16,569	..	..
Totals	..	149,276	..	..	..	..	..	..	11	2,652	10,215	16,569	..	..
OTAGO DISTRICT.														
Blue Spur and Gabriel's Gully Consolidated Gold Co. (Ltd.)	1/2/88	91,266	..	48,268	130,000	..	..	..	28	44,618	169,334	38,532	..	94
Totals	..	91,266	..	48,268	130,000	..	..	..	28	44,618	169,334	38,532	..	94
Grand Totals	..	1,742,056	27,984	438,265	561,697	..	103 0 0	1,556	2,208	5,372,432	5,555,691	3,566,068	92,004	30,935

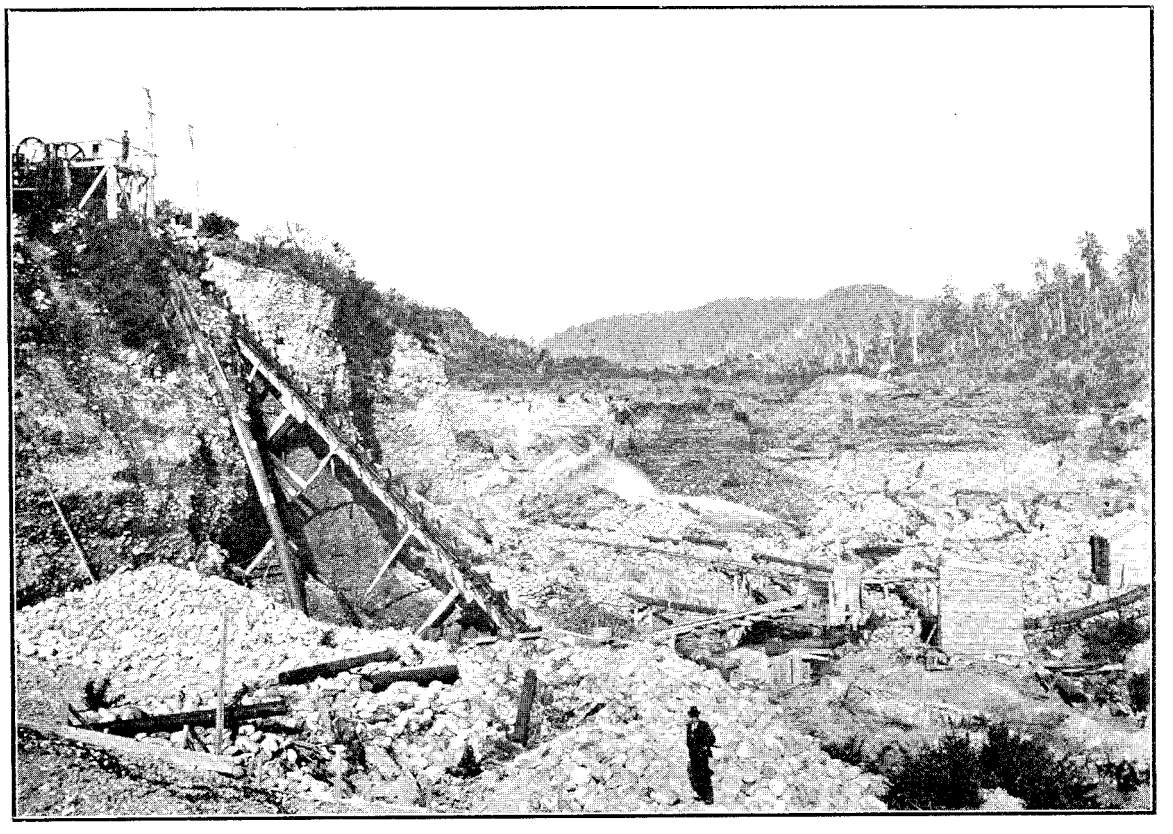
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Bucket Elevator, Wheel of Fortune Claim, Stafford (Kumara District.)

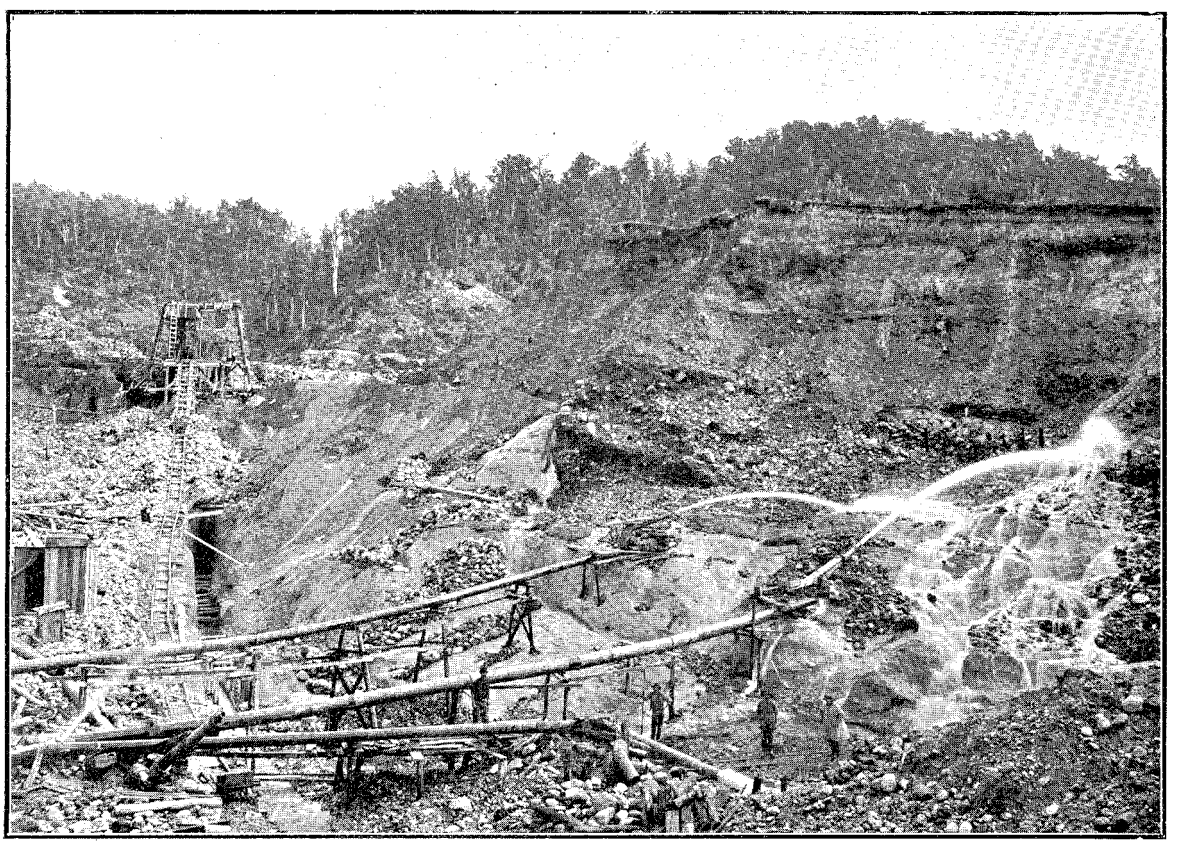


Wheel of Fortune Claim, Stafford (Kumara District).

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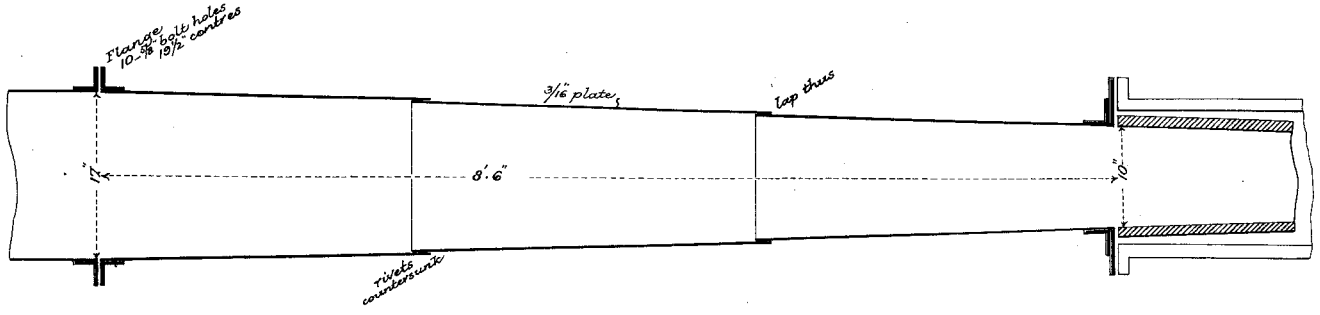
Government Dam, Middle Branch, Kumara Water-race.

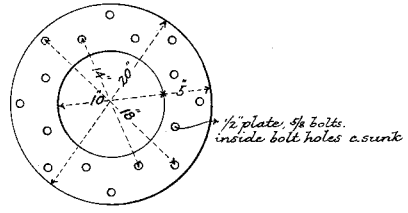


Manzoni and Party's Claim, Callaghan's, Kumara.

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IMPROVED HYDRAULIC-ELEVATOR LINERS.

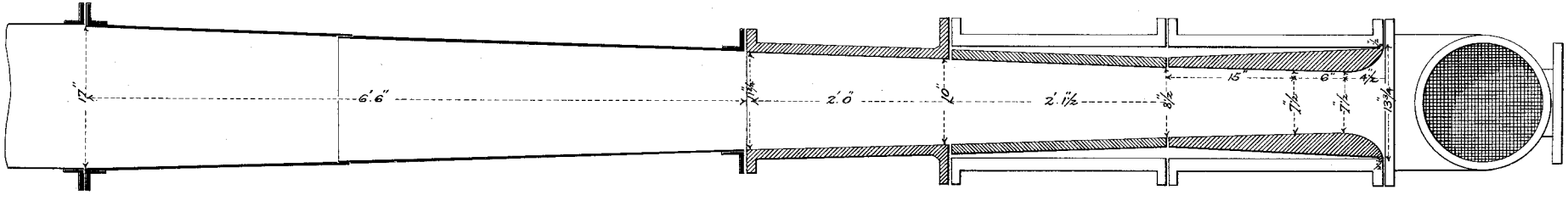




The Blue Spur & Gabriel's Gully
Consolidated Gold Company. Limited.
Lawrence. Otago.

Scale of Feet.

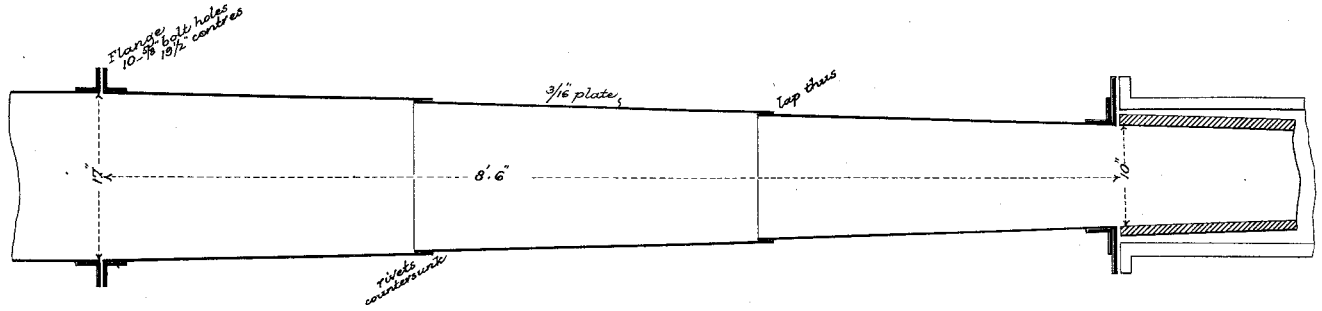


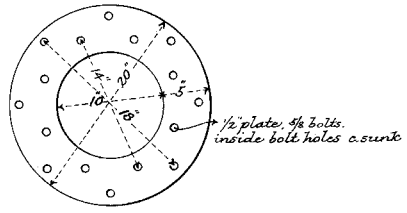


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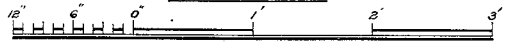
IMPROVED HYDRAULIC-ELEVATOR LINERS.

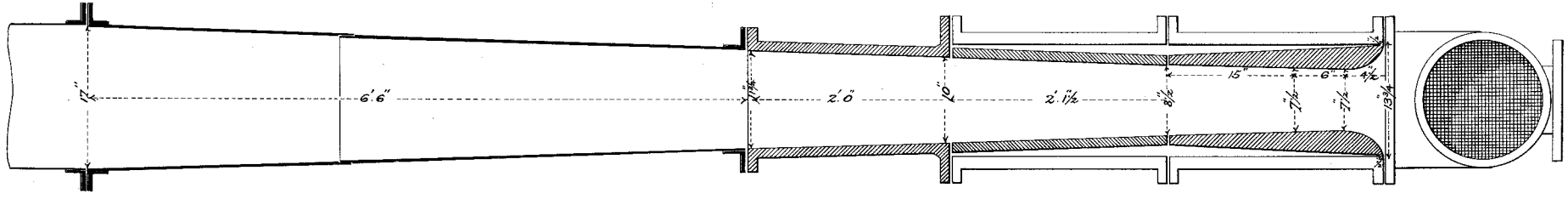




The Blue Spur & Gabriel's Gully
Consolidated Gold Company. Limited.
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Scale of Feet.





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