

1884.
NEW ZEALAND.

THE GOLD FIELDS OF NEW ZEALAND

(REPORT ON).

Return to an Order of the House of Representatives, dated 3rd day of August, 1869.

"That it is desirable that the Government should cause to be laid upon the table of this House, during each session, a report embodying a general account of the present condition of the gold fields of the colony, their advancement or otherwise during the preceding year, and their probable prospects; together with particulars showing the average price of provisions during the year on each gold field, the rate of wages, estimated population, and such other information as would afford a comprehensive idea of the general condition of the mining interests in the colony: and that His Excellency be requested to forward a copy of such report to Her Majesty's Secretary of State for the Colonies."—(*Mr. W. H. Harrison.*)

Secretary for Gold Fields' Office,
Wellington, 7th June, 1884.

SIR,—

I have the honour to forward the general and detailed reports and returns of the gold fields of New Zealand for the twelve months ended the 31st March, 1884.

I have, &c.,

JAMES MCKERROW,
Secretary for Gold Fields.

The Hon. W. Rolleston, Minister of Mines.

REPORT.

In this, as in former annual reports on the gold fields of New Zealand, the details of the several districts are given in the reports of their respective Wardens; and whatever relates to more improved modes of working, and the introduction of labour-saving machinery, is treated at length in the report of Mr. H. A. Gordon, the Inspecting Engineer. In the same report will also be found particulars of the contributions from the State funds in aid of public works on the gold fields. The reports of the Managers of Water-races deal with the water-supply, and the tables in the Appendix give the statistical information of the gold fields, arranged in the same manner as in former years.

In taking a general view of the state of the gold fields, it may be said that there never has been more skill and enterprise brought to bear on the workings, whether of quartz or alluvial mining, than at the present time. The digger phase of scratching the surface, and using the hand-cradle, has been almost entirely superseded by the systematic operations of mining engineering and scientific processes brought to bear in saving the finer gold.

In quartz-mining, the rock-drill, driven by compressed air—the advantages of using which were prominently urged in a former report—has been extensively introduced during the year. In the Reefton and Lyell Districts alone the cost of introducing new machinery, and its application to the opening-out of the mines, may be stated at about £70,000. In alluvial mining, the tailings difficulty has been solved for many auriferous areas by the adoption of Perry's hydraulic method of raising stuff, as described in last year's report. Wherever there is a sufficient head of water, ground can be worked on this system that would have been considered impracticable a few years ago. It is now adopted in several of

the principal alluvial workings of Otago, and is being introduced on the West Coast, and ground is now being worked, yielding from £1,000 to £3,000 an acre, which, for want of fall, would otherwise have had to be left untouched.

YIELD OF GOLD.

The statement to follow shows the export of gold for the year ending the 31st March, 1884, to be of a value of £35,421 less than for the previous year, ending on the 31st March, 1883. The value of the gold exported from New Zealand has kept off and on about a million sterling for many years, and it is not likely to vary much for some time, as the alluvial workings, which contribute nearly two-thirds of the amount, are regulated in a considerable measure by the water-supply, which is a pretty constant quantity; and the quartz-mining, although increasing, does so very gradually. The total value of gold exported from New Zealand up to the 31st March, 1884, was £40,707,074. Of the gold exported for the twelve months before the 31st March, 1884, the West Coast and Nelson contributed 49 per cent.; Otago, 35 per cent.; and Auckland, 16 per cent.: or very nearly one-half, one-third, and one-sixth respectively of the total yield.

YIELD of GOLD during Year ending 31st March, 1883, and 31st March, 1884.

—		Quantity.	Value.	—		Quantity.	Value.
1882.		Oz.	£	1883.		Oz.	£
June quarter ...	...	40,944	164,253	June quarter ...	...	52,401	210,205
September quarter ...	...	74,776	298,445	September quarter ...	...	59,113	236,422
December quarter ...	...	62,175	248,060	December quarter ...	...	65,893	262,928
1883.				1884.			
March quarter ...	...	70,967	283,797	March quarter ...	...	62,281	249,579
		248,862	994,555			239,688	959,134

MINING POPULATION AND ITS EARNINGS.

The return of miners (Table No. 9) gives a total of 12,206 employed on the gold fields on the 31st March, 1884. The number returned for the previous twelve months was 14,523. The average number for the year may therefore be stated at 13,364. Taking the value of gold exported at £959,134, the average earnings per man will be £71 16s., an increase of £2 6s. on the earnings per man of last year.

QUARTZ WORKINGS.

TABLE showing the Comparison of the YIELD of QUARTZ WORKINGS in the Years ending 31st March, 1883, and 31st March, 1884.

Name of District.	1882-83.		1883-84.	
	Quartz crushed.	Gold.	Quartz crushed.	Gold.
	Tons.	Oz.	Tons.	Oz.
Coromandel ...	2,907	7,577	1,042	4,018
Thames ...	25,867	43,311	36,228	54,865
Te Aroha ...	...	...	4,316	4,547
Reefton ...	18,928	19,194	23,433	16,547
Lyell ...	7,277	3,949	2,980	1,455
Arrow and Queenstown ...	6,503	4,996	5,500	4,623
Cromwell ...	2,900	2,400	848	850
Lawrence—	64,382	81,427	74,347	86,905
Quartz ...	...	...	...	700
Cement ...	...	6,371	...	6,150
	64,382	87,798	74,347	93,755
Increase 1883-84 ...	...	...	9,965	5,957

The increase in the Thames District is due to large returns from the Prince Imperial Mine, and the returns from Te Aroha are encouraging as the first-fruits of a field which promises to be both extensive and lasting. The decrease in yield in the Reefton and Lyell Districts is mainly due to the Welcome Company, who own one of the largest gold-producing mines in the district, having been engaged for the greater portion of the year in erecting winding and air-compressing machinery in their underground chamber; and at the Lyell to the principal gold-producing claim, belonging to the United Alpine Company, having been engaged during the last twelve months putting in a low level, the upper levels being worked out, and as a consequence neither of these companies has crushed much quartz during the year, hence the diminished returns.

In Otago the principal centre of quartz-mining is at Macetown, near the head of the Arrow River. There are numerous gold-bearing reefs in this district; but hitherto, from the great difficulty of access, the expense of opening a mine has been very great, every prop and piece of machinery having had to be packed for twelve or fifteen miles over a mountain range. The formation of a dray-road at a cost of £8,000 up the gorge of the Arrow River, and which was opened a few days ago for traffic, will very materially assist in the further development of this field. The quartz reefs at Skipper's and Upper Shotover have been and still are very heavily weighted also from the difficulties of access. Although a good deal has been done in road-formation during the year, much remains yet to be done before the pack-horse can be replaced by the wagon, and stone yielding under an ounce per ton made payable. On the other side of the main range from Shotover, a reef known as the Invincible has been opened out in the Rees Valley. The natural access to this mine by dray-road from the head of Lake Wakatipu is easy, and timber is procurable at small cost: there is a large body of stone, and, although it only yields about 8dwt. to the ton, the mine is paying, and promises to be a valuable property.

OUTLAY ON GOLD FIELDS.

The amount of money contributed by Government during the last two years, together with the amount that is still due on works in progress, to assist to open up and develop the gold fields of the colony is about £92,752; and the amount of gold that the colony has produced during the same period, as far as can be ascertained, has been 488,550oz., showing, therefore, that the Government has assisted to develop the gold fields to the extent of about three shillings and ninepence halfpenny for every ounce of gold that has been produced. But much of this expenditure, such as the Macetown Road already referred to, the tramway at Te Aroha, and the roads and tracks on the West Coast, are of the nature of permanent works, and their total cost to the country is not fairly chargeable against the yield of gold during their construction. They have to be looked on rather as an investment, to be repaid by the future and further development of the gold fields. It would be well to continue the opening-out of more country by the clearing and formation of roads and tracks. A little assistance in this way is often a great aid, and the opening of a track in new country is undoubtedly the most effective means of having it thoroughly prospected.

REVENUE FROM GOLD FIELDS.

From Returns Nos. 1 and 2 in Appendix, it will be seen that for the twelve months ended the 31st March, 1884, the export-duty on gold realized £23,969 0s. 4d., and the miners' rights, business licenses, rents of leases, and other mining privileges produced £28,139 5s. 4d., or, in all, a sum of £52,108 5s. 8d., which was paid over to the counties without deduction, the cost of collection and other expenses of administration on the gold fields being a charge on the consolidated revenue.

DEPARTMENTAL.

The department lost the valuable services of its Under-Secretary, the late Mr. Oliver Wakefield, through the sad accident at Dunedin on the 20th March last, which deprived him of life and the public service of a most honourable and

upright man, conscientious in the discharge of duty, with a kindness and courtesy of manner that endeared him most to those who knew him best. I greatly regret the loss of an official associate I held in such high personal respect and esteem.

The Government, having had to consider new arrangements, decided to amalgamate the Gold Fields Department with that of Crown Lands, Mr. H. J. H. Elliott being Under-Secretary of both departments.

I have to acknowledge, with thanks, returns of revenue, and of gold exported, received from the Secretary to the Treasury, Mr. Gavin, and the Secretary of Customs, Mr. Seed.

J. McKERROW.

APPENDIX.

REPORT ON GOLD FIELDS, ETC., VISITED, AND WORKS IN PROGRESS ON GOLD FIELDS.

Mr. H. A. GORDON, Inspecting Engineer, to the UNDER-SECRETARY, Mines Department, Wellington.

SIR,—

Mines Department, Wellington, 20th May, 1884.

I have the honour to forward you annual report on the gold fields that I have visited during the year, and on the various works, either subsidized or wholly constructed by Government, that are in progress for the development of the mines throughout the colony.

NORTH ISLAND.

TE AROHA.—This field may be said to be only opening, for, although claims have been held and worked for nearly two years, there was no quartz crushed from any of them until November last, when the completion of the tramway (which was constructed by the County Council, with subsidies from the Mines Department, at a cost of about £18,000, including rolling-stock, of which sum the Government contributed £9,000, and the use of 156 tons of 40lb. iron rails) enabled the quartz to be brought from the principal mines to the crushing battery at Waiorongomai Township, which was erected by Messrs. Firth and Clark, of Auckland, as a crushing plant for the field. The returns from some of the mines on this gold field are very encouraging, especially the New-Find and Colonist Mines, which have averaged about 1½oz. of gold per ton since they have been opened; and, when the thickness of the quartz lodes in these mines is taken into consideration—viz., from 4ft. to 6ft., and in some places 8ft.—it must be extremely gratifying to all those who have invested capital in them, and likewise to those who have an interest in the welfare of the district. Not only are they getting this percentage of gold out of the quartz from the crushing battery, but the tailings are giving an equal percentage after being treated in the berdans. When I visited this gold field in December last quartz from five of the principal mines at that time was tested at the battery—viz., the New-Find, Colonist, Premier, Werahiko, and Waitoki. Out of these the Waitoki was the only mine that did not prove payable for working, the quartz from that mine only averaging 5dw. per ton; but since then the Premier and Werahiko have not turned out so well as was at first anticipated. Mines like the New-Find and Colonist, which have a large body of stone, will pay with a much smaller percentage of gold than they are averaging at present. There were other mines, which had not then had an opportunity of being tested, that showed gold pretty freely. There are thirty registered companies on this field, besides private-claim holdings. The registered capital of these companies represents in the aggregate £637,000, of which about £20,317 have been called up; and, from the present appearance of these companies' mines, there will only be a small percentage of them compared with those on other quartz fields that will not pay for working. Some of the lodes are very small, but the quartz is rich. The character of the gold is extremely fine, and averages about £2 16s. per ounce: it is diffused in bands through the stone, the same as though the gold had been ground to the finest flour, and peppered into the quartz when they were in a plastic state. The crushing battery and gold-saving appliances that Messrs. Firth and Clark have erected is one of the most complete plants there is in the colony: they have spared no expense to render it effective; but the fine character of the gold, and the way in which it is diffused through the stone, requires special manipulation to extract it. Therefore, although every credit is due to those gentlemen, who have erected a plant which is reputed to have cost about £20,000, and has been the means of proving this field, there is something still wanting to extract more of the gold before it leaves the tables to run into the tailing-pits, there to undergo a second process; and until this is done the crushing machinery cannot be said to be anything like perfect. More attention has been devoted to this subject in America than in the colonies; but this is no doubt owing to it being an older field, where more experience has been gained in extracting and separating the various minerals that are mixed with the gold and quartz. In addition to the present crushing plant, which consists of 41 head of stamps and 12 berdans, Messrs. Firth and Clark are erecting a large tailing-plant of 64 berdans, 3ft. 6in. in diameter, 35 of which are at present in position. These are covered over by a large building 80ft. long and 40ft. wide, having 14ft. walls, and a double roof covered with corrugated iron, and the floor of this building is about 22ft. below the level of the end of the tables of the crushing battery. Alongside the berdans there is a series of pits to serve as receptacles for tailings from the crushing battery, and these pits are connected with boxes or shoots from the different battery tables, so that any company using five or ten heads of stamps, their tailings flow directly into the pits alongside the berdans that are treating them. After the berdans have done their work, and reduced the tailings into a pulp, the sludge flows from them into a common channel, at the end of which there is a table covered with electro-plate, 8ft. by 4ft., where everything must travel over before it gets finally away, and to each side of this electro-plate there is a wire connected from an electric battery, to pass a current of electricity through the plate, so as to keep the quicksilver lively and active. The whole of this plant is to be driven with a Pelton hurdy-gurdy water-wheel, 4ft. in diameter. These wheels are now coming into use at the Thames, and will be described when mentioning the different machinery on that field. It is placed in a pit outside the building, the bottom of which is 16ft. under the level of the floor, and the same water that is used for driving the crushing plant is brought down on a flume into a vertical pipe 2ft. 6in. in diameter and 37ft. long,

having a bell-mouth of 4ft. 6in. at the top; at the bottom of the pipe or column is fixed a nozzle 3 $\frac{3}{4}$ in. in diameter, to drive the hurdy-gurdy wheel. The manner in which the several mines on the field are connected with the battery are deserving of notice. It is by a series of self-acting inclines and tramways, following a contour line along the side of the range. The first incline is about 15 chains in length, and at the upper end it is connected with points and crossings with a single line of tramway, which follows alongside of the range for about 68 chains. On this portion of the tramway it is intended to use a locomotive engine, which has been specially constructed for the purpose, and is now lying at the side of the Thames River; but the sharp curves, and short distance that the locomotive could be worked on, will debar it working more economically than the present method, which is with horses; besides, the sharp curves would render it liable to have more accidents. From the end of this tramway is another incline 25 chains in length, and thence another tramway along the side of the range for about a mile, thence another incline for 18 chains, and thence another tramway alongside of range in a northerly direction as far as the Premier Mine, and in a southerly direction for about 12 chains. The reason of the tramway being brought on the several levels is to have it well under the quartz workings, and adjacent to the principal mines that were taken up when it was first laid out. These mines are now connected to it with shoots and hoppers. The whole of the inclines and tramways are constructed with iron rails. The inclines, at the time of my visit, were not working so satisfactorily as they might have been: the brakes and gearing were so placed that it required two men to work each incline, whereas they ought to be so fixed that one man is sufficient. The charge for conveying the quartz from the mines to the battery was at first 2s. 6d. per ton, but this has been raised since to 4s. 6d.; and the charge for crushing 10s. per ton: making the total cost of 14s. 6d. per ton after the quartz is placed in the hopper—the value of about 5 $\frac{1}{4}$ dwt. of gold. The construction of this tramway by the Piako County Council and Mines Department, and likewise the enterprising manner in which Messrs. Firth and Clark have erected crushing machinery, has given this field such a start as no other field in the colony ever had, and it is now gratifying to find that it has the appearance of proving a good field for mining ventures; but it will yet have to be further developed, and the reefs tested to a much greater depth, before its permanence can be established. The total quantity of quartz crushed from all the mines on this field up to the 31st March last (as taken from the Mining Inspector's report) is 4,316 tons, yielding 4,546oz. 11dwt. 12gr. of gold; and the number of quartz miners employed is 160. There are 585 acres held by the different companies and private-claim holders, at a yearly rental of £1,847.

KARANGAHAKE.—Very little work has been done on this field since my last visit. There are no new claims at work, and in those that are opened there is scarcely any work done, with the exception of the Hauraki Company's mine. There seems to be a great apathy displayed in prospecting, and probably may continue so until the various mines at Te Aroha are thoroughly tested. The claims on this field are badly held, so to speak. A large amount of money is required to develop the mines, and they are mostly held by working men, who have not sufficient capital to open them out properly, and they place too high a value on their shares to induce men of capital to join and assist them. It seems to be a country where quartz-reefs are likely to be found all the way along the range to Te Aroha; but it is questionable if the reefs here are a continuation of the Te Aroha reefs, although they are in the same line of country: both the quartz and the gold seem to be of slightly different character, and I did not observe the hard flinty substance in the Te Aroha reefs that is found alongside the quartz lode in the Hauraki Company's mine. This mine is connected by a wire tramway with the crushing battery at the junction of the Ohinemuri River and the Waitawheta Creek, but the quartz yet obtained is of a poor quality. The Golden Crown Company have done very little work in their mine during the year: the stone is of a payable nature on the outcrop near the surface, and some very rich specimens have been found; but following their reef into the hill it gets more broken, and has the appearance of a slip from the main range, and until further prospecting is done and the reef traced into a solid country it cannot be said to have a permanent appearance. There is a quartz-lode extending from the Hauraki Company's mine, across the top of the mountain near the trig. station, and can be traced for a considerable distance; but no prospecting is done here beyond what has been done by the Dubbo Company, which is very little. The County Council has constructed a road, with subsidy from the Mines Department, from the crushing battery at Waitawheta Creek to the Martha Claim, a distance of about two and a half miles; it is 8 feet wide in the solid, and formed with grades not steeper than 1 in 10 up to the Hauraki Company's mine, and thence along the face of the range on a grade of 1 in 19. This will give facilities to the several claims to have their quartz tested at the battery, but, when once they are proved to be payable, a crushing battery will have to be erected further up the Waitawheta Creek before the mines can be economically worked. The continuation of the road from the Martha Claim towards Te Aroha is now in course of construction, being likewise subsidized by the Mines Department. It was thought most advisable to construct this portion 4 feet wide in the solid on easy grades, so that it could be widened into a dray-road at a future time if required. By constructing a narrow horse-track it will afford facilities to get the whole of the field prospected, as provisions and tools, &c., can be easily brought on the ground.*

OWHARO.—The mines here continue to be profitably worked: the facilities there are for getting out the stone and crushing makes a small percentage of gold pay. The claims and crushing battery are alongside the main road that leads up the Ohinemuri River.

WAIHI.—This field was first opened in 1879, and several claims have been worked; but at the present time there are only two claims on the field, one of which—the Martha Extended Company—is paying fair dividends. There is a large body of stone which is worked in an open face, and has

* Mr. Atkin has kindly forwarded me information that a fresh discovery of gold has been made in the Ohinemuri District, at Ratakuhu, by Mr. Hunt, the discoverer of the famous Shotover Claim at the Thames. It was supposed to be 4oz. to 5oz. stone, but on crushing five tons of it the yield was a little over 1oz. per ton. The quartz-lode varies from 1ft. to 3ft. in thickness, and, as it is in a very rough and broken country, no idea can yet be formed of its extent or real value.

the appearance more of a quarry than a quartz lode. The mines are situate about two miles from the Ohinemuri River, where a crushing battery of 30 head of stamps and 4 berdans are erected, driven by a turbine water-wheel, and the battery is connected with the mines by a horse-tramway. There are good roads, and every facility for working the mines, on this field. The manager informed me that quartz containing gold to the value of 10s. per ton pays all expenses for getting out and crushing.

WAITEKAURI.—There is very little doing on this field. Some patches of good stone are occasionally got, but not sufficient to keep the crushing battery fully employed. The principal workings are in the Waitekauri Company's mine. This company has a crushing battery of 30 heads of stamps and 12 berdans, situated about two miles from the mines, and is connected with a series of incline tramways, which at the present time are in a bad state of repair, and show that they are not much used. The County Council, being subsidized by the Mines Department, have improved the road from Katikati to Waitekauri, and made it passable for drays to get to the crushing battery, which is all that is required. The present prospects of this field do not warrant any large expenditure being made.

THAMES.—The quartz reefs on this field have far exceeded those in any other part of the colony for richness, when it is borne in mind that one of the mines a few years ago produced gold to that extent that the company declared over £600,000 in dividends. This, together with the numerous mines that have been and are now profitably worked, extending over a large tract of country, shows that it is a field deserving attention, and likewise one that may still be expected to be a large gold-producer. Among the mines that are at present working, the Prince Imperial may be said to take the lead as a dividend-paying mine. A little over two years ago this mine was supposed to be worked out, and when put up to auction was sold, with winding machinery, for about £250. The fortunate purchasers had scarcely concluded the bargain when they struck the reef at a few feet deeper level, and have since received £52,000 in dividends. This company has connected its workings by a winze from the tunnel, leading from the bottom of the big-pump shaft at the 640ft. level, and is still continuing to pay good dividends. How far the reef continues to go down and contains gold of a payable nature remains yet to be proved. On the 640ft. level, where the winze goes up from the tunnel, the reef is very narrow. It may only be termed a vein of quartz, which is not of a payable nature. Still, the reef may make again going down; but the expense of sinking the big-pump shaft, and opening out again at lower levels, will entail enormous outlay, and, unless rich stone is found going down below the present level of the tunnel, either by sinking a winze or by boring with the aid of a diamond drill, there is little chance of the company incurring so large an expenditure. The crushing machinery on this field is far more complete than it is on any field in the Middle Island, but the mining plants are greatly inferior. They have, however, recently commenced working with a rock drill in the Caledonian Low-level Mine, the use of which has enabled the company to drive their tunnel at the rate of 33 feet per week, at the cost of £1 13s. per foot, including rails, sleepers, and air-boxes; whereas the lowest contract that was ever carried out in similar ground at the low levels was £2 9s. 6d. per foot. This shows clearly that there is a great saving to be effected in driving tunnels with improved mining machinery. Not only is the rate per foot less, but it enables the tunnel to be constructed twice as fast as it could be done by hand labour; and to any company that has to contend with a large body of water or pay for drainage, the same as the Caledonian Low-level Company has, viz., £65 per month, it becomes a matter of great importance to get the work done as rapidly as possible. There is a new description of water-wheel, recently erected by G. W. Bull at Hape Creek, known as the Pelton water-wheel, which is causing quite a sensation as regards a motive-power for working machinery. It is termed "a hurdy-gurdy water-wheel," and is 6ft. in diameter over all, with 12½ in. breast. A wood-cut of this wheel appeared in the "California Scientific Press" at the beginning of September last, on account of it having given the highest tests at a public competition made by the Idaho Mining Company with the view of determining the best description and most effective motive-power, combining cheapness, simplicity, and economy. Mr. Bull was so thoroughly satisfied with the description of the experiments that were made with this wheel that he had one constructed, which now drives his crushing battery at Hape Creek, consisting of 13 heads of stamps, 500lb. each, and 6 berdans. The stamps make seventy blows per minute, and have 10 inches drop. The quantity of water used is 216 cubic feet per minute, and has a head of 34ft., therefore giving about 81 per cent. of the power of the water. In conjunction with Mr. Aitken, the County Engineer at the Thames, I conducted some experiments to get the power of the different water-wheels at the Thames, that being a place where the exact head of water is known at the various wheels, and where there is a gauge-box placed to measure the quantity of water they use; and the result was, that this wheel gave about 12 per cent. more power than the best constructed Leffel turbine, the tangent wheel giving the next highest percentage. The extreme simplicity of these, as well as the tangent wheels, together with their cheapness of construction, not being liable to go out of repair, and the high percentage that they give, will always recommend them in preference to overshot or turbine wheels, more especially as they do not cost more than one-third the cost of the latter. The only difference from the tangent wheel is, that the buckets are bolted on the outside of the rim, and throw the water on each side. The water coming from the nozzle strikes the bucket, which has a vein in the centre that divides the water, and, by means of a parabolic curve, turns it outwards on each side. The County Council, with subsidy from the Mines Department, has constructed and improved the road up Waiatohi Creek to the Bright Smile Mine, which enables the quartz to be brought down from all the mines in this neighbourhood to the crushing batteries on the flat at Grahamstown. The Council has likewise improved the road up Karaka Creek to Lucky-hit Company's mine, which enables all the companies in this locality to get ample communication with their mines. The road from the Otanui mines to the crushing battery at Mangakerikeri Creek is now in course of construction, and, when completed, will afford ample facility to get the quartz from all the mines in this neighbourhood to the battery. A subsidy has likewise been authorized to construct a track up Mangakerikeri Creek from the battery, to

enable the miners to get supplies when prospecting the country, and a subsidy has also been authorized for metalling Kaueranga Valley Road to Otanui Creek, and a road from Tapu battery to the mines. The former is to enable heavy machinery to be taken up to the mines, and the latter to connect the mines with the present crushing battery erected at Tapu Creek.

COROMANDEL.—This field at present is not in a flourishing condition. A great many of the principal mines are merely prospecting. The Kapanga Company, which is entirely held by English capitalists, have expended a large sum of money in trying to develop their mine, without so far being successful. Occasionally they get a small reef containing payable gold, but the amount of the proceeds is not sufficient to pay working expenses. This in some measure is due to the class of machinery they employ, especially the pumping engine, which is one of the very old type of beam engines, and requires a large amount of fuel to work it: and there is no improved mining machinery used in the mine. Where so large an amount of prospecting and cross-cutting is being carried on, the rock and underground diamond drills could be employed to good advantage. Not only could the tunnels be driven at a cheaper rate per foot, but they would likewise be constructed at least twice as fast as by ordinary hand labour; and therefore a considerable saving would be made on the surface expenditure, as it has to be the same whether carried on slowly or quickly. The gold is likewise very patchy, as it is in the whole of this district, and may be termed more as a specimen reef. The manager, Captain Thomas, showed me a specimen that he obtained from the mine that would average 2oz. of gold to every pound of quartz; but, unfortunately, these are not got in large quantities. There is a deal of metallic arsenic in this mine, which has gold regularly diffused through it. They are now collecting it, and intend sending it to England to be treated, as they have hitherto failed at the mine to extract the gold from this substance. Some good specimen stone was being obtained in the Just-in-Time Mine, at the time of my visit, but the reef here is likewise very narrow. The most prosperous part of the district seemed to be at Matawai, where Vaughan's Claim is situate: the reef in this mine was from 2ft. to 3ft. thick, and very rich specimens were obtained from it, and, after picking out all the specimen stone, the balance was expected to average 2oz. to the ton. However, this reef was only lately opened out, and the stone is near the surface; whether it will continue to go down is a question which has yet to be solved. The County Council, with subsidy from Government, has constructed during the year several roads and tracks to assist in developing the mines in the district. These are as follow:—

Dray-road to Kapanga Mine.—The upper portion of this was formerly a very narrow dray-road, and the amount of traffic between the township and the mine cut the road up to such an extent that in winter-time it became almost impassable, and the Kapanga Company had great difficulty in conveying a sufficient quantity of coal to keep their pumping and winding engines at work, together with other supplies, which amounted in all to about 150 tons per month. This road is now widened into a 14ft. dray-road, and metalled, at a cost of £132.

Extension of Vaughan and Vizard's Track.—This track is in course of construction: it is carried on almost a contour line along the side of the range, and when completed will enable the different claim-holders to get the quartz from their mines in this locality taken to the crushing battery at Matawai Creek. £150 has now been spent on this work in progress payments: the total cost when completed is estimated to be £300.

Dray-road to Iona and Just-in-Time Mines.—This road was previously formed, but not metalled, and the soft nature of the material that was used in the formation would not allow drays to be used except in very dry weather. The road is now improved and metalled, and with ordinary maintenance can be kept in good repair. The cost of doing the work was £200.

Making and Improving Track from Tokatea towards Kennedy Bay.—This was formerly a narrow horse-track, which was not fit to work sledges on satisfactorily, to convey the quartz from Tokatea Saddle to the Tokatea Company's battery. This track has now been widened, and the grades reduced, so that a dray with narrow-gauge wheels can be used. During the construction of this road a very heavy flood occurred in the district, which caused numerous slips from the side of the range, making the construction of the track more costly than was first estimated. It has now cost £320, and will require a further sum of £50 to complete it.

Continuation of Track from Success Company's Mine to Top of Range.—This work is now completed, and has cost £80. It gives a direct line of communication from the upper township to the opposite side of the range, and enables supplies to be more readily taken to the mines.

Improving Track from Tokatea Saddle to Waikoromiko.—This is a track which was formerly made on a contour line along the side of the range, but numerous slips had taken place from time to time and rendered the track impassable for horse-traffic. Claims are being worked here and there along the side of the range, and this track is the only means of communication with them. It is now repaired, and widened in places, and will be a great benefit to the community residing in this neighbourhood. The cost of the work has been £50.

King's Bridge to Kapanga Road.—This is a work which had to be taken in hand owing to the heavy floods that occurred in the district in July last. The quantity of *débris* that the flood-water brought down the creek filled its bed up to near a level with the ordinary surface of the ground, and the creek, where it came close to the Kapanga Road, formed a horseshoe bend, so that in time of floods the water flowed over and cut away the bank at this level, and was rapidly washing away the road. A new channel for the creek has been constructed, cutting off the horseshoe bend, and the road repaired at a cost of £150.

Subsidies on several other works have likewise been authorized during the year, but there is no work done on them yet. They will appear in the schedule of works appended hereto. When the whole of the works authorized are completed a fair line of communication will be established for opening up and developing the field, which no doubt has hitherto been greatly retarded by having no means of getting supplies brought into the country to prospect it.

TERAWHITI.—This field is almost at a standstill at present. The Success and Golden Crown Companies are driving a low-level tunnel to try and cut the reef, but they have not succeeded yet

in finding any quartz lode that is payable. The whole of the country is very broken, and the different strata of rock are turned and twisted in every direction: so that very little reliance can be placed in finding the reef at a low level, as the quartz lode that was found near the surface in the Golden Crown Company's ground may have been a slip or slide from the top of the range. On my last visit to this field, in December last, I went through all the workings of the Golden Crown Mine, and the appearance of the quartz-lode then was entirely different to what it was at the time of my former visit. The vein or lode does not appear to be continuous for any length; but it is more like blocks of quartz thrown up here and there, giving it all the appearance of a slip. The present tunnel is scarcely at a low enough level to test the hill thoroughly, and even if it cut a quartz lode containing gold it has a fair chance of being almost equally as broken as it is near the surface.

MIDDLE ISLAND.

WESTLAND: TOTARA.—The principal gold-workings in this district are at Ross, Donaghue's, and Woodstock. On my former visit the Ross Extended Gold-Mining Company had commenced to sink their shaft below the level of the drainage tail-race, which is 90ft. under the level of the surface. This tail-race is constructed at as low a level as will drain the water to high-water mark on the sea-beach: it is about a mile in length, and the upper portion of it is a tunnel, constructed 3ft. 6in. wide and 6ft. high in the clear, having props and caps placed 4ft. apart from centre to centre, and close-lathed throughout. The main shaft is now 312ft. deep, below the original surface, and is 12ft. by 8ft. in the clear, having three compartments, viz., two for winding, and one compartment for the pumps. At the level of the tail-race there is a large chamber constructed, in which are erected two hydraulic engines with cylinders each 18½in. in diameter and 9ft. stroke, under a head of water of 314ft. At the time of my former visit there was only one engine erected; but when the shaft was sunk to a depth of 165ft. below the level of the tail-race the quantity of water there was to contend with was too much for the single engine to raise. The two engines are about 116 horse-power, and are working four sets of pumps 14½in. in diameter, and it requires them to be worked at their maximum speed to keep down the water. There are likewise a double-cylinder hydraulic engine for raising and lowering the pump-rods and columns, and at present the drift from the sinking of the shaft is hauled up in buckets by a reversible overshot water-wheel, 30ft. in diameter; but as soon as the sinking of the shaft is completed cages will be used and a reversible turbine water-wheel for winding. This reversible turbine-wheel is erected and ready for use: it is of special construction, patented by Camille Malfroy, of Ross, the mining manager for the company, and the only reversible turbine-wheel there is in the colonies. It is simple in its construction, easily set in motion, very compact, perfectly under control, and can be stopped almost instantaneously, as far as can be done without causing a sudden jerk on the teeth of the gearing wheels. The dimensions of this turbine-wheel are as follow: Diameter, 3ft.; depth or width of wheel, 13in.; depth of orifice, 3½in.; and number of orifices, 16. It is a wheel specially adapted for winding purposes, and reflects credit on its inventor for the ingenuity displayed in its construction. This company, with having so large a quantity of water to contend with, have experienced great difficulty in sinking their shaft, and in getting men to work in it: they have had to pay 12s. per day of six-hour shifts to each man employed, and a bonus per foot in addition. As this is the only deep shaft in alluvial workings in New Zealand which is sunk through a peculiar formation, a description of it may be interesting, showing the different strata gone through. For the first 20ft. below the surface the formation is a heavy drift gravel, then a layer of loose drift about 3ft. thick containing a good deal of water, thence a gold-bearing stratum about 4ft. 6in. thick, thence 50ft. of very tight heavy gravel, thence another gold-bearing stratum about 6ft. thick, thence 40ft. through five distinct strata of mullocky clay and loose drift containing a heavy body of water, thence another gold-bearing stratum about 6ft. thick, thence for the next 52ft. through three layers of clay and stones, two layers of conglomerate, one layer of loose watery drift, and three thick layers of heavy gravel and boulders containing a little gold, thence another gold-bearing stratum about 5ft. 6in. thick, thence for the next 90ft. through three heavy layers of gravel containing a little gold, two layers of clay, and one layer of conglomerate, thence another gold-bearing stratum about 4ft. in thickness, thence through 7ft. of gravel containing a little gold, thence another gold-bearing stratum 5ft. thick, thence for the next 37ft. through one layer of mullocky clay, one thin layer of terrace or Maori bottom, and two layers of gravel containing a little gold, thence another gold-bearing stratum 4ft. thick, thence coming on the gravel, and are still sinking. They have therefore gone through seven different beds or strata containing gold that is supposed to be payable for working on a wholesale cheap method. The depth of their shaft is now about 212ft. under sea-level, and no sign of any properly-defined bottom, such as slate or sandstone, has yet been met with. A sketch-plan of this company's hydraulic pumping engines, and section of shaft, showing the various strata gone through, was kindly forwarded to me by Mr. Camille Malfroy, copies of which are hereto attached. A description of these hydraulic pumping engines is as follows: The supply-pipe is made of wrought-iron 22in. in diameter and 1,400ft. long, to the distributing chamber or cylindrical tank, which is made of boiler-plate half an inch thick, and rivetted together the same as a steam-boiler; this chamber is placed on the surface near the mouth of the shaft, and from it a cast-iron pipe 12in. in diameter is led down the shaft to the chamber where the engines are placed, where it is reduced in branches to 7½in. in diameter. The balance or differential piston-valves, which represent the slide-valves, to admit and discharge the water to and from the main cylinder, are 7½in. and 10in. in diameter respectively: these pistons are worked by another small piston in a cylinder forming a portion of what is termed the "octopus," on account of its numerous branches. The motion is given to the engines by a sliding crank motion connected to the plunger-pole (marked L), and by a second crank (marked M), which is connected to the piston-rod in the cylinder of the "octopus" (marked C). This turns a small quantity of water on the large end of the differential-piston (B), driving it down until the smaller end of the piston is below the aperture connecting the main cylinder (A) with the supply-pipe (E); the pressure of water then causes the piston in the

main cylinder (A) to rise to the top, lifting the plunger-pole, to which are attached the necessary connections to work the lift-pumps. As the plunger-pole moves upwards, the crank motion connecting with it and the piston that works in the octopus (C) closes the supply, and opens the exhaust on the top of the differential-piston (B), which allows it to rise and close the supply-pipe (E) of the main cylinder, and open the exhaust-pipe (F). The weight of the plunger-pole then brings down the main piston, and the same motion again takes place. There are likewise two cocks in the supply and exhaust-pipe from the balance-valve or piston working in the octopus (C), by which the motion of the differential-piston (B) can either be accelerated or retarded, as may be required, without causing scarcely any concussion. The pumps that this engine works are fixed at different depths, as will be seen on section of shaft where the tanks are placed. The cost of working this machinery is very trifling in comparison with what it cost formerly to pump the water out of this flat about twelve years ago, when a steam-engine working at about 90 horse-power was employed. The weekly expenditure then was from £100 to £120; whereas this machinery can be worked with four sluice-heads of water at say £3 per head per week, or £12, and the other expenses, when the sinking of the shaft is completed, will be about £4 10s. per week: making the total cost of working £16 10s. per week. This company has let some portions of the upper levels or gold-bearing layers to parties to work on tribute, but the results from working them has so far not been successful. In addition to 100 acres which they hold as a mining lease, they have purchased several claims and leases from small mining companies, and are now the holders of almost the whole of Ross Flat. They intend working the upper levels that are above the level of their underground tail-race by hydraulic-slucing it in a face into a pit, and to erect elevators, to work on the principle of a dredge, to lift the tailings from this pit to the surface, allowing only muddy water from the sluice to get into the tail-race. There are two hydraulic sluicing companies on this field, which are conducting sluicing operations on a large scale; but the quantity of water they have at their command is not nearly sufficient to carry away the *débris* and mullock from the great depth of ground they are working. These companies are the "Greenland" and "Mount D'Or." The former is working with a new hydraulic nozzle, which was imported from California, constructed with universal joints in the ordinary manner, and likewise a joint on the mouth-piece of the nozzle, so that the water can be directed, by the aid of a small lever, to whatever portion of the face it is required to strike without moving the main portion of the nozzle. It is certainly a great improvement on the ordinary method, which requires an unwieldy pipe to be continually handled about. The Mount D'Or Company is making provision for an electric light, so that the men can work continually, day and night: at present they only work during daylight, as their face is a great height, and the space where the stuff rolls down is in a narrow gully, where the stones have to be broken up before the quantity of water at the company's command can wash them away. This company has rented the portion of the Mikonui Water-race that is constructed, until such time as it is required, for £100 per annum.

DONAGHUE'S.—A large company has taken up the old working ground in Donaghue's Flat, and has brought up a tail-race from the sea-beach about three-quarters of a mile in length, and commenced to sluice all the ground from the level of the tail-race, and to lift the tailings with elevators which are fixed on an endless-link chain, on the same principle as a dredging plant. It may be termed a dredge working on a stationary frame, having one end placed at the tailings-pit, and set up at an angle of forty-five degrees to the surface, and fixed to a frame or trestle-work at the top to carry the dredging appliance some distance above the surface, so as to lift the tailings high enough to get trucks under the shoot where the buckets empty, and run away and stack the tailings on the ground. The buckets are placed about 2ft. 6in. apart, and hold about 7 cubic feet each. The lip or mouth-piece of each bucket has a steel lip or band round it to prevent it wearing away quickly. The company estimates that the dredging plant is capable of lifting about a hundred tons per hour. The dredge is worked by a turbine water-wheel of thirty horse-power, constructed on the Whitlaw principle. The whole of the plant was constructed by Messrs. McQueen and Co., of Dunedin. There is another large company between Ross and Donaghue's, bringing up a tail-race from the sea-beach to work the ground in a similar manner near Swiper's Gully. If these companies are successful with their dredging appliances, and are able to get clear of the sludge which will necessarily lodge to a great extent in the tail-races, it will be the means of a great deal of ground being worked in this neighbourhood.

WOODSTOCK.—There is still a considerable number of miners working on this field, but a great number of the claims are worked out, and the population is not so large as it was last year; but some of those that are working are making fair wages. There is very little water on the field: the wash-dirt is driven out, hauled up shafts to the surface by the aid of horse-whims, stacked in paddocks, and when there is water it is box-slucied.

WAIMEA.—The whole of the workings on this field are principally confined to hydraulic sluicing. The miners in this district chiefly get water from the Government water-race, which enables them to earn small wages. This water-race, although paying but merely nominal interest on the cost of construction, is the means of maintaining a steady population in the district. The best of the ground has no doubt been worked out, but there is a large area of auriferous country yet left, which, although poor, is expected to pay small wages for working. It was to enable this district to be worked that the Government constructed the Waimea Water-race: its construction up to the present time, not including any branches leading towards the Kumara Gold Field, has cost about £118,575 15s. 2d.; and the revenue accruing from sales of water, after deducting the expenses of maintenance for the year, is £1,076 3s. 7d., or nearly 1 per cent. on the capital invested; while the population, including the families supported by the mines that it maintains, is about 600. There is about a mile of fluming across two low valleys between the Kawhaka Creek and the Christchurch Road, which is beginning to show considerable signs of decay. A good number of the trestle-legs and bracing will shortly have to be replaced. There are four different descriptions of timber used in the trestle-work here, viz., totara, kawhaka, silver pine, and rata. The decay is

wholly confined to the two former: the totara round legs in almost every instance are considerably decayed; the kawhaka seems to stand a little better than the totara, but where nails and bolts go through it the wood is in a decayed state, and in some instances the heads of the nails can be, with ease, drawn through the timber. The silver pine and rata trestles are as sound as on the day they were constructed. This shows that, wherever the two latter kinds of timber can be obtained at a moderate cost, they are the most economical to use. The other bridges and flumes along the line of race appear to be in fair condition.

KUMARA.—This field is confined entirely to hydraulic sluicing, and is worked by water from the Kumara Water-race and the Okuku Company's race. The Kumara Water-race was originally commenced by a private company, but was purchased by Government in 1877, who completed its construction, and afterwards enlarged its dimensions, in order to bring a larger supply of water on to the field. Recently a reservoir has been constructed in the Kapitia Valley above the loop-line road to store water, so that the supply can be kept up in dry weather. It is capable of supplying 100 heads of water for twelve hours per day for about three weeks, but in very dry weather the supply of water available is not equal to the present demand. The cost of this water-race up to the present time has been about £37,367 4s. In conjunction with this water-race the Government constructed the Kumara Sludge-channel as a tail-race, to enable a large area of flat ground to be worked: it was originally 85 chains in length, constructed in a tunnel. The lower 40 chains of it is 10ft. wide and 5ft. high above the top of the channel, and the upper 45 chains 7ft. wide and the same height. But since the workings commenced the tailings from the channel have filled up a large valley between the mouth of the tunnel and the Teremakau River to such an extent that the boxing of the channel has been carried out for a further distance of about 30 chains, and very soon will be at the edge of the Teremakau River. The cost of constructing this sludge-channel up to the present time has been £17,200 12s. 6d. The cost of maintaining the channel has been very heavy, and has far exceeded all estimates that were ever made. It was originally paved with wooden blocks set on end, 8in. deep; but the cost of replacing them was so great that stone paving was tried, and in order to get paving of a greater depth the sides of the channel have been raised, and 14-in. paving-stones used. About 2 chains of cast-iron blocks have likewise been used, and the result of the cost of the different classes of paving, from careful observations of the manager during the last twelve months for the lower 70 chains of the channel, where the wear and tear are the greatest (in the upper portion of the channel the wear is not nearly so great), is shown in the following table:—

Class of Paving.	Cost per Chain placed in Position.	Number of Weeks that Paving lasts.	Cost per Week per Chain of Paving.	Cost per Annum for Maintaining the Pavement in lower 70 Chains of Channel.
	£ s. d.		£ s. d.	£ s. d.
Wooden blocks 14in. deep	14 10 0	7	2 1 5	7540 0 0
Stone blocks 14in. deep	38 10 0	34	1 2 10	4121 15 4
Iron blocks 3in. deep	184 16 0	91	2 0 7	7392 0 0

The last item is calculated on the basis that cast-iron blocks are to be of hematite iron, and can be placed in position in the channel at £16 per ton, which would probably be done at this rate for a large quantity. The cast-iron blocks at present in use cost about £18 10s. per ton. The above table shows the cost of stone paving to be much less than any other. The cost of different classes of paving has been taken in the channel near the mouth of the tunnel; therefore the wear is all under the same conditions. The stone paving no doubt reduces the carrying capacity of the channel to some extent; but the manager, who has had every opportunity of making careful observations, states that the difference in the carrying capacity of the channel between the stone and wood paving would be not more than one party each shift, and, as there are three shifts working in the channel, and seven parties each shift, if it were wholly paved with wooden blocks, instead of accommodating twenty-one parties each day, it would enable twenty-four parties to work. Therefore, taking this as the basis to work on, the total revenue derived from parties using the channel last year amounted to £2,128 18s. 3d.; and, if one-eighth more parties had been able to use it, the revenue would have been increased by £266 2s. 3d., and the wear and tear of the blocks would also be increased in equal proportion. The cost of maintenance for the year was £6,405 10s. 8d.: this would be increased by £800 13s. 10d., showing a still greater loss on working. However, the water-race and sludge-channel have to be taken together, and the conjoint result of the workings shows a profit of £1,886 17s. 1d., or nearly 3½ per cent. on the capital invested, the total cost of construction being £54,564 16s. 6d. This field will take a number of years to work out, but the limited space that there is for tailings will soon become a question that will demand attention, as they will be carried into the Teremakau River, and will gradually fill up its bed, and cause the flood-water to damage the property along its banks, for which compensation will no doubt be required.

Humphrey's Gully.—There are large works in course of construction here to enable the whole of the drift terraces in the neighbourhood to be sluiced away in a wholesale manner into the valley of the Arahura River. These works are being constructed by the Humphrey's Gully Company, which is formed with a capital of £150,000. They have constructed an open ditch for a distance of about five miles, capable of carrying about one hundred heads of water, and near Milltown there is about three-quarters of a mile in length of a ponderous aqueduct, which resembles more a canal than a water-race, very substantially constructed; and they are at the present time constructing a reservoir to store water, and tunnelling through the range to get the water on to the mining leases. When these works are complete, and a tail-race constructed, a commencement will be made to work their

ground; but it is still a question whether the present supply of water will be sufficient to carry on their extensive operations, and if not the water-race will have to be extended to the several creeks that are on a level with the race line, and possibly may have to be taken into the Arahura River before a large permanent supply in dry weather can be obtained. They have a great depth of wash-drift, with a little fine gold distributed all through it, and there does not appear to be, so far as yet discovered, any permanent bottom. If the quantity of water anticipated is available, very poor ground will pay for working, as the quantity of dirt that can be washed will be enormous. Great credit is due to Mr. P. Comisky, of Auckland, who has been the means of two large and influential companies constructing works of great magnitude, involving an immense expenditure, to develop the resources of this and the Ross district. The Westland County Council, being subsidized by Government, is constructing the following roads and tracks:—

Track from Duffer's Creek, Bowen and Okarito Road, to the Sea-beach.—A contract has been let for the construction of this track, and the work is now being proceeded with: when completed it will afford facilities for getting between the inland road and the ocean beach. This is the only point for fifteen miles on either side where there is any line of communication with the beach, except in the beds of the Wanganui and Waitaha Rivers, and when these are flooded they are very dangerous rivers to cross.

Track, Ross Borough Boundary to Mount Greenland.—There have been two surveys made of this track: the first one showed, when the plans were completed, that the grades were one in three in some places. When shown to the Chief Surveyor of Westland for approval, he very wisely condemned it, and another survey has been made, and a track laid out with better grades. Plans are being prepared, and the work will very soon be ready for contract.

Continuation of Track from Back Creek to Eel Creek.—Two sections of this track have been let by contract, and at the time I went over it the contractor represented the work as being completed; but it was so totally differently constructed from what was shown on the plans and specifications, that the County Engineer, who accompanied me, would not pass any portion of it. The county, it seems, has two responsible overseers—the County Engineer, who selects and lays out lines of road all over the county, and looks after the construction of the roads on the north side of the Hokitika and Kanieri Rivers; and an overseer who looks after the construction of all roads on the south side, and reports directly to the Council. This track, being on the south side of these rivers, was under the overseer's control; the grades, drains, culverts, and width of track shown on plans and specified in specification were totally disregarded, and a foot-track substituted, following the inclination of the surface of the ground.

Improvement and Construction of Track up Gentle Annie Terrace.—This work is in course of construction, and ought by this time to be completed, or nearly so.

Road from Duffer's Creek, Greenstone Road, to Fifteen-mile Peg, Christchurch Road.—This road is in course of construction; the portion of it that is nearly completed shows that the work has been carefully laid out, and plans and specifications adhered to. It was originally intended for a horse-track, but a portion of it is widened into a dray-road, which will give greater facilities to get materials to the pipe-line on the Waimea Water-race, in case of any repairs being required, and enable supplies to be brought to the miners who are working in the several gullies along the line of road.

Grey.—The principal mining centres in this district are in the vicinity of Westbrook, Cameron's, Cape Terrace, Barrytown, No-town, Nelson Creek, Orwell Creek, and Granville. At Westbrook the gold-workings are chiefly confined to hydraulic sluicing; at Cameron's and Cape Terrace, to sinking and tunnelling. At Barrytown a great many of the tunnelling claims are worked out, and those parties who have water-races and a small supply of water are commencing to sluice the terraces, which have a little gold distributed all through the drift. There are thirty miners employed in the different terraces between Barrytown and Deadman's, who are reported to be making small wages; but they have a very limited supply of water. At No-town there is very little water available for hydraulic sluicing, and the workings are chiefly confined to tunnelling. There is a large area of ground and heavy deposit of drift in this neighbourhood that is reputed to be payable for working if a large supply of water were available; but there is no source in the vicinity of the field where this can be obtained, unless at an enormous expense. At Nelson Creek the workings are wholly confined to hydraulic sluicing. The miners are supplied with water from the Nelson Creek water-race, which was constructed, and is wholly maintained, by Government. The cost of this water-race up to the present time has been £89,833 19s. 7d., and the revenue derived from sales of water during the year, after deducting the cost of maintenance, was £491 10s. 8d., or a little over a half per cent. on the capital invested. The bridges and flumes on this race are showing considerable signs of decay, especially wherever red-pine timber has been used: even the heart-wood of this timber is not all that can be desired, for there are some portions of a spar or boom, that is apparently all of the same class of heart-wood, intermixed with red-rosin seams, showing decay in small pieces here and there, while other portions of it are equally as sound as when it was put into the structure. A considerable amount of repairs have been effected by the manager, and a number of the bridges strengthened; but the state of the timber generally is such that it will have to be replaced from time to time, so long as it can be done in the ordinary course of maintenance. The known auriferous terraces that this water-race commands are getting gradually worked out, and, unless some fresh ground is opened, the receipts from this water-race will be rapidly decreasing. An enterprising gentleman on this field, Mr. M. Roche, a storekeeper, has commenced, with a party of miners, to work the Nelson Creek flat, where there is no fall for hydraulic sluicing, with the same appliance as that used by Mr. Perry in Gabriel's Gully, and if they are successful in their effort it will be the commencement of a new era in gold-mining on this field, as there is a large area of flat ground in the valley of Nelson Creek that can be worked on this principle, by water from the Nelson Creek race. Mr. Roche, on seeing a description of this appliance in the Gold Fields Report last year, sent one of his party to see Mr. Perry's appliances in Gabriel's Gully, and he was so pleased with

the satisfactory manner it worked and the quantity of material it lifted that he has commenced to erect a similar plant at Nelson Creek, to test the ground in the flats and creek-bed, where very little working has ever been done. There is another water-race in course of construction, to bring water on to the ground on the west or opposite side of Nelson Creek to where the Government race is constructed. This work is undertaken by the Band of Hope Water-race and Gold Mining Company (Limited). They are lifting the water from the right branch of Nelson Creek, about two miles above its junction with the left branch. The size of the race is 4ft. wide in the bottom, and 2ft. deep, and is constructed with a fall of 8ft. per mile, which will be capable of carrying about twenty sluiceheads of water. The total length of race, when complete, will be about $4\frac{1}{2}$ miles; and the cost of construction is estimated to be about £2,600. This company hold a mining lease of thirty acres, in what is known in this locality as the Deep Lead, which they intend to work, and, if they have any surplus water which they cannot use, they intend selling it to the miners. At Orwell Creek and Granville the principal workings are hydraulic sluicing, but there is very little water in this locality. The company that applied for a special claim of 200 acres, and got the same granted, on condition of bringing in a large water-supply to Orwell Creek, has either become defunct, or neglected to take up the lease, which has been returned by the Warden and cancelled.

INANGAHUA.—The quartz reefs in this district extend over a very large area of country. Some of them are profitably worked, while others have proved too poor for working at present. Among the principal dividend-paying mines in this district are the Welcome and Keep-it-Dark. The former mine has only lately been opened out on the first level below the main tunnel, or what the company terms No. 6 level. The quartz lode here is about 2ft. 6in. wide and averages from 1oz. to 2oz. of gold per ton. This company has gone to a great outlay in erecting underground steam-winding and compressed-air machinery. There is a tunnel driven into the hill for 2,600ft., at the end of which there is a chamber cut out, and poppet heads, winding, and compressed-air machinery erected. From this chamber there is a shaft or air-way to the surface, some 800ft. in length. The timbering in this chamber has been executed with considerable skill: the walls are vertical for about 15ft., and then it has a Gothic arch, having the timber adzed and fitted to the exact curve of the roof. A shaft has been sunk for 150ft. below the level of this chamber, and divided into three compartments, viz., two winding-shafts and one ladder-way. Then winzes and tunnels are constructed, with the aid of the compressed-air rock-drills, and the manager, Mr. Rooney, states that in driving all winzes and tunnels the rock-drills are a great saving in cost; but when the reef is narrow they are not worked much more profitably than by taking out the stone by the ordinary hand labour, but they assist materially in ventilating the mine. This company have erected a plant for crushing tailings, consisting of fifteen berdans, and a force-pump for lifting the tailings from the pit into boxes or shoots, which are placed above the level of the berdans. Two of these boxes are alongside each other, so that when the tailings-pump is filling one the other is being emptied into the berdans by a self-feeding apparatus. All the principal companies in this district have now compressed-air machinery erected for working their mines, and certainly have superior mining plants to any other portion of the colony. The underground diamond-drill belonging to the Golden Fleece Company, mentioned in my last report, has been erected and is at work in the 740ft. level. The Globe Company have erected a crushing battery of twenty heads of stamps, and constructed an aerial tramway to connect the hoppers for holding the quartz near the mine with the battery. This tramway is about 96 chains in length, and has to go over two ranges of hills in that distance. It consists of an endless-wire rope, kept about 10ft. apart horizontally by trestles and pulleys fixed up at certain distances along its length. At each end there is an inclined round shaft about 10ft. long, on the upper end of which is placed a grooved pulley about 10ft. in diameter, having the groove large enough to admit of bucket-clips on the wire-rope; and about 3ft. from the bottom of the shaft there is a brake-pulley from 4ft. to 5ft. in diameter, around which there is a brake band of iron worked with the necessary lever to regulate the speed and stop the motion of the tramway when required. These shafts and pulleys are fixed to wooden framing, and the shafts are set at about right angles to the inclination of the endless rope. The framing supporting these shafts is made so that it does not project quite as far as the large-grooved pulley which is overhead, in order that the buckets that are placed on the endless rope can work round these grooved pulleys clear of the framing. Trestles are erected about from 4 to 6 chains apart along the line of tramway, having small grooved pulleys, about 16in. in diameter, placed at each end of the trestle to carry the weight of the endless rope and buckets that are placed on it. These trestles are placed at a slightly higher level than the straight line of inclination of the rope, in order to make sure of there always being sufficient weight on the pulleys to prevent the endless rope swinging off by any jerking motion. There are sixty-six buckets, each capable of holding 2cwt. of quartz, suspended from the endless rope at equal distances. These are fixed to the rope by a suspension-rod with a square knee on the upper end sufficiently long, in the portion at right angles with the vertical rod, to have a semi-round clip to receive the endless rope on the upper side and work over the top of the grooved pulley on the lower side, and to have two holes at each side of the clip. On the top of this clip there is a cap-piece, likewise made in the form of a semi-round clip, which is bolted to the lower clip, having the rope between them with two screw-bolts: this holds the suspension-rods or bucket-carriers firmly to the rope. The lower ends of the suspension-rods are double-formed in shape of a bow, so as to come on each side of the buckets for carrying the quartz; each bucket is hinged to the bow, and held upright by a catch; but when emptying it the catch is knocked off, and the bucket turns over automatically. The tramway is constructed so that the perpendicular height and incline of the gradient at the end where the crushing battery is placed has a sufficient number of full buckets always going down to keep the endless rope in motion with the empty buckets going up, and the full ones on the ascending grade on the other side; or it can be worked by machinery at one end by gearing from the incline shaft on which the large grooved pulley is placed. There is an ingenious arrangement at the end where the hopper is placed, near the mine, by which the buckets that are fixed stationary on the endless rope can be filled when they are in motion. This consists of a frame, which stands on a level with

the wire tramway, and has an iron bar bent round in the form of a somewhat oval link, being flat in the middle portion; from this iron bar is suspended a small iron hopper, which travels on the bar by aid of a small pulley round the link, made so that it can shoot the quartz into the stationary buckets on the endless rope. This hopper is brought round on the iron bar until it gets under the shoot of the hopper where the quartz is emptied from the mine, and when filled is brought round to the other side of the link where the wire tramway is fixed, and as the bucket passes, this iron hopper fits in between the bow for holding the bucket; a trap-door is then raised and the quartz shot into the bucket, the hopper travelling with the bucket along the flat portion of the link, and thence round the end to the side where the quartz-hopper is placed, and filled the same as before. This tramway is capable of carrying about fifty tons of quartz to the battery in ten hours. There is an immense number of quartz reefs all over the district containing a little gold, but generally very poor, and, unless there is a large body of a lode, they do not pay for working. There is another peculiarity in all the reefs in this district, as well as those in every part of the colony, and that is, that the quartz lodes do not run continuous for any great distance: they cut out in some places in a wedge-shape, leaving only a small vein of quartz as a trace of the line of reef, and in other places they are cut straight off by a slide, leaving no trace whatever: hence they appear like isolated blocks of quartz here and there in certain belts of country. Sometimes these blocks are found running at right angles with the different strata, but generally in this district they follow the same line as the strata. The County Council, being subsidized by the Government, has constructed various roads and tracks all over the district to enable machinery to be brought to the mines, and to open up the country for prospecting. A dray-road has been constructed from Soldiers' Creek to Devil's Creek up to the Oriental Company's battery, for the purpose of getting machinery to the Globe and Oriental Companies' mines. A dray-road has also been constructed from the Inangahua River up Rainy Creek to the Inkermann reef, where the Inkermann Company are at present engaged in erecting a crushing battery of thirty heads of stamps, which will be driven by steam-power. This battery and steam machinery were constructed by J. Anderson, of Christchurch, who is now engaged in erecting it. A dray-road is likewise constructed from Black's Point up Murray Creek to the Inglewood and Phoenix Companies' mines: the former company have just completed the erection of a crushing battery and steam-engine, constructed by Messrs. McQueen and Co., Dunedin, and are now ready to commence crushing. This road enables all the mining companies in the vicinity to get machinery and mining timber on to their claims, and likewise coal for fuel. A dray-road is likewise constructed from the Westport Road to the Inangahua River for the purpose of getting mining timber; a dray-road is also been constructed from Caplestown up Boatman's Main Creek, for the purpose of getting machinery and mining timber to the Welcome, Just-in-Time, Imperial, Fiery Cross, and Eureka Companies' mines; a dray-road has also been constructed up Little Boatman's Creek to enable machinery to be brought to the Specimen Hill Companies' mine and Boatman's Low-level Tunnel, where compressed-air machinery has recently been erected. The Specimen Hill Company has recently erected a crushing battery of fifteen heads of stamps, which is driven by an overshot water-wheel constructed by Messrs. McQueen and Co., of Dunedin, with iron buckets of a new pattern. A horse-track has likewise been constructed from Caplestown to join the track leading from the Westport Road to the Waitahu River. A horse-track is also constructed from the road leading up Little Boatman's Creek to the Caledonian Company's mine at Larry's Creek: this track will give facilities to a number of miners working in alluvial claims and prospecting for quartz-reefs in this neighbourhood. [Mr. P. Q. Caples, of Reefton, who has spent many years in prospecting the mineral lodes of the colony, has kindly forwarded me information that he has found argentiferous galena, particles of stream tin, and zinc-blende in the mineral belts in this locality.] A horse-track is likewise constructed from Cariboo Creek to the Big River to enable the miners to get supplies to prospect this district. A horse-track is also constructed up the Big River, and the County Council is now constructing a track to join this track with the dray-road at the Oriental Company's battery, which, when completed, will open a line of communication between Reefton and the Big River, a distance of about twelve miles. Some good quartz reefs have lately been found in the Big River District: a company is working a mine in this neighbourhood and stacking the quartz until they have facilities for taking crushing machinery on to the ground. The whole of the country in the Inangahua District where quartz reefs are found is very broken and mountainous, and excepting near the bed or valley of the Inangahua River, it is very difficult to open up; but the roads and tracks that have recently been constructed, and that are in course of construction, ought to do a great deal towards developing the quartz reefs throughout the district.

LYELL.—The principal work in the quartz reefs in this district has been confined during the year to prospecting. The principal companies that have been at work are the United Alpine and United Italy. The former company have completed the construction of their tunnel at No. 6 level, and are now beginning to stoop out the quartz. The United Italy Company have been driving in the reef, but their present crushing plant is almost useless to crush the quartz from their mine: they intend erecting better machinery as soon as the construction of the dray-road is completed from the Lyell Road to their claim. About two miles of this road have lately been constructed by the Government, and the remaining portion of it, nearly two miles, is in course of construction. It is formed 8ft. wide in the solid, and is metalled throughout, having no worse grades than one in fifteen, and, when completed, will be a serviceable road, and afford facilities to a number of mining companies in the vicinity of the Eight-Mile Creek to work their claims.

CHARLESTON.—The gold-workings in this neighbourhood are almost entirely confined to hydraulic sluicing. The gold is distributed in black sand leads, and in some places turns into beds of cement. There are several water-races on this field, the largest of which is the Argyle Race, the property of the Government. The cost of this water-race up to the present time is £12,663 Os. 2d. During the last year several deviations of this race have been constructed in order to avoid replacing high fluming in

the several gullies that the water had previously been carried over, the fluming in every instance being in such a decayed state that it was impossible to repair it. The deviations that have been made shorten the length of race and avoid most of the deep gullies, but where these occur iron syphons have been placed instead of fluming. There are two of these syphons, one at Butcher's Gully and another at Micky Free's Gully; the former is about 304ft. in length, 2ft. 6in. in diameter, and made of 12-gauge iron; latter is 154ft. long, 2ft. 2in. in diameter, and made of 14 gauge iron. The ground this water-race at present commands is getting gradually worked out, and until a syphon is constructed from Argyle Terrace to Ballarat Terrace, capable of carrying about 10 heads of water, there is little prospect of this water-race giving fair returns. The dam at the head of the race has been enlarged, and when full now covers an area of about 400 acres. The working of this race during last year resulted in a loss of £47 3s. This is due in a great measure to the works that were in progress, and not being able to supply water continually; but now the works are all new (with the exception of the syphon from Argyle Terrace to Ballarat Terrace alluded to above) and of a substantial character, so that the cost of maintenance will be very small in future. There is no large permanent supply of water in this district: almost the whole of it is collected by catch-water drains and dams. The Buller County Council, with subsidy from Government, has constructed the following roads and tracks:—

Road from Candlelight Flat to Deep Creek.—This road is constructed with easy gradients, but is too narrow for dray traffic, which is a great inconvenience to those parties who require sawn timber, &c., from Charleston to the top of the hill near Deep Creek, as it necessitates the timber being unloaded at Candlelight, and brought up the remainder of the distance by sleighs.

Road, Orawaiti Lagoon to North Terrace.—This piece of road has done away with a long stretch of bridging which was formerly across the Orawaiti Lagoon, and gives a good line of communication with the North Terraces.

Track, Razorback to Paparua Range.—This is merely a prospecting track, with the bush felled and cleared to enable the miners to get on to the back ranges to prospect during the summer months.

Track from Seatonville to Larrikins'.—This track commences at the end of the present constructed track on the south side of the Mokihinui River, and follows the sideling through the gorge up the Mokihinui River to Specimen Creek. A bush line from that point is likewise cleared for about one mile further up the river towards Larrikins'. This is the only track in the country that has not been fairly constructed, which may be accounted for by the great anxiety to rush the track through quickly, in order to keep the miners in this district that came from other places to the rush that took place in December last at Larrikins' Creek. However, the track as it is at present is not even a good foot-track, and certainly would be a dangerous one to travel on for an extremely nervous man carrying a swag: still it is a great saving of time and labour to be able to go through this gorge at all, as the high and precipitous range that formerly had to be gone over occupied about half a day.

The Government have constructed a good horse-track from Coal Creek to the Mokihinui reefs at Seatonville, which will be a great advantage to the miners and mining companies that are at work in this locality, and will enable them to get machinery and supplies to their claims. This district has the same appearance as the Lyell District, and the same hard slate occurs where the quartz lodes are found. Some very rich specimens of gold in quartz are got in the Red Queen Company's mine, but the lode is narrow, from 6in. to 15in. in width, and, though well defined, the hard nature of the walls leads one to suspect that the lode will cut out as it goes down. However, the company has got a quantity of apparently good stone stacked ready to send to the battery as soon as a wire-tramway has been constructed across the Mokihinui River. This company and the Mokihinui Company have repaired and refitted up an old battery that was used here some years ago. It has ten heads of stamps, and will be driven by an overshot water-wheel. When this plant is completed it will give an opportunity to three additional mining companies—the Guiding Star, the Comet, and the Golden Crown—to have their quartz properly tested. The quartz that is being got near the surface may pay for crushing, but, until such time as the lodes are followed into the hill and found at a considerably deeper level, it is not wise to incur a large expenditure in erecting crushing machinery to work them.

WAKAMARINA.—The alluvial gold-workings are principally in the bed of the Wakamarina River, and in the several creeks and gullies leading into the same: and the quartz-workings in the range on the eastern side of the river near Deadhorse Creek. The principal river-workings are the Gorge Company and an English company. The former has been engaged for about two years in cutting a channel and turning the river, to enable them to work its original bed, in a gorge directly below the junction with Deep Creek. They have a 12 horse-power steam-engine and pumping gear for working ordinary common lift-pumps; but they have so far been unable to contend with the water, and have never yet got to the bottom. They have recently contracted with a party of miners to pump out the water in the gorge, which is confined between two dams, and to keep the water down for three days afterwards, for £400, in order to enable them to test whether there is a sufficient quantity of gold to pay for working. The English company have taken up a portion of the river-bed below Deadhorse Gully, and have erected an undershot water-wheel to drive two Californian pumps to drain the ground. The machinery and appliances were all completed at the time of my visit, but the water-wheel was not working satisfactorily. The quartz-workings are confined principally to the Golden Bar Company's mine; they have driven on the reef for about 200ft., and the width of the lode is about 8ft. This company has over 200 tons of quartz stacked ready for crushing, which the mine manager informed me would average about 7dwt. of gold per ton. I brought away samples of quartz from this mine from different places in the drive along the lode, four of which were brought to Wellington, and tested by Dr. Hector, and the result was 2dwt. 4gr. per ton from one sample, and 1dwt. 3gr. per ton from another, while there was no gold in two of the samples. I tested, likewise, a stone at Havelock, taken promiscuously from the paddock where

the quartz is stacked, which gave about 10dwt. per ton: the stone has every appearance of gold-bearing quartz, and possibly when the reef is prospected at a deeper level the lode may be found to contain more gold.

OTAGO.—The Government has just completed the construction of a dray-road from near Arthur's Point, on the Shotover River, to the top of the saddle, for a distance of nearly four miles on the road leading to Maori Point and Skipper's. It is constructed with 12ft. formation, and with grades of not worse than one in ten. This will enable goods and machinery to be taken to the top of the saddle with drays, instead of packhorses, sleighs, and trollies, as formerly; but from there they will have to be conveyed by the means of locomotion now used. There is still a very bad hill to get over, known as the "Zigzag," near Stapleton's Beach, which is really the worse part of the whole road, and the most difficult portion to use sleighs or trollies on to transport heavy machinery to the quartz reefs at Skipper's and the Upper Shotover, the present track being narrow, extremely steep, and very sharp bends, almost in every instance being acute angles, so that horses cannot pull any vehicle round the bends, but they have to be unyoked and the sleigh or trolley hauled up to the bend with blocks and tackle. If a deviation were made here and a road constructed it would enable heavy goods and machinery to be taken up to the quartz reefs at a considerably less cost, and therefore enable them to be worked more cheaply. There is likewise a dray-road in course of construction from Arrowtown to Macetown for a distance of about six miles through the gorge of the Arrow River, and is now near completion: it is constructed with 12ft. formation, and is metalled, and, with the exception of two short pinches which could not be avoided unless at a great cost, has very good grades. This will afford great facilities for working the quartz reefs, which are numerous in the vicinity of Macetown. The mining timber and goods have heretofore been either packed on horses, or taken with trollies over a very steep hill, nearly 3,000ft. above the level of the river, and is for several months in midwinter covered with snow, and impassable. The quartz reefs, except where rich stone was got, could not be profitably worked owing to the high price paid for the transit of mining timber. This road will allow wagons to be taken up to the mines, and therefore will enable quartz claims to be worked that heretofore would not pay for working, and get heavy improved machinery taken on to the ground. The heavy parts of the crushing machinery that is erected at present had to be made in small pieces, which made it more costly to construct.

The total value of works on gold fields constructed during the last two years wholly by the Mines Department, or by means of subsidies to County Councils or local bodies, and the amount of expenditure and liability on the same, are as follow, viz.:—

	Total Cost of Construction.			Expenditure by way of Subsidy or otherwise.			Amount of Liabilities on Works in Progress.		
	£	s.	d.	£	s.	d.	£	s.	d.
Water-races	29,261	11	0	21,670	9	10	7,591	1	2
Roads on gold fields	21,437	11	2	13,089	16	0	8,347	15	2
Roads undertaken by County Councils, and subsidized by Mines Department	52,841	17	0	21,844	16	7	10,207	15	9
Works undertaken by prospecting associations, and subsidized by Mines Department	13,216	13	4	3,350	0	0	3,400	0	0
Construction of sludge-channels, subsidized by Mines Department	5,750	0	0	2,468	15	4	781	4	8
Total	122,507	12	6	62,423	17	9	30,327	16	9

Deducting the value of works constructed and in progress during the year ending the 31st March, 1883, it leaves £31,946 16s. 10d. for new works undertaken during last year, of which sum the Government contribution amounts to £25,480 5s. 2d.

The roads and tracks that have been constructed to assist in developing the gold fields of the colony have been carefully laid out with such grades that almost the smallest track can be widened into a dray-road if required.

In subsidized roads and tracks plans and specifications have been approved before the works were authorized, and copies of same filed for reference. Some of the local bodies considered it a hardship at first to have to forward plans of works they proposed to construct, but it will be seen that this method is essentially necessary to guard against money being spent on works which, although they might serve for a time, would be ultimately of no value. There are still a great many districts, especially where quartz reefs abound, that will require to be opened up by roads and tracks: as a rule quartz reefs are generally found in very rough, broken country, and difficult of access, and before they can be properly tested heavy machinery has to be brought on the ground, which necessitates the construction of dray-roads.

The alluvial gold fields still continue to support a large population, but the yield of gold from them may be expected to diminish yearly, while the yield from the quartz reefs ought to be increasing, as the latter are the only permanent gold mines: it is a branch of industry that requires to be fostered, as it will be the means of supporting a large population, and gradually developing the mineral wealth of the colony.

Annexed is a list—taken from the departmental records—of works that have been constructed and are in progress to assist in developing the gold fields, and likewise plans of pumping machinery, Ross Flat, and section of the Ross Extended Gold-Mining Company's shaft at Ross, showing the various strata gone through.

I have, &c.,

HENRY GORDON,
Inspecting Engineer.

The Under-Secretary for Gold Fields, Wellington.

LIST of WORKS on GOLD FIELDS undertaken wholly by the Mines Department, or by Subsidies to County Councils, Local Bodies, and Prospecting Associations, either constructed or in progress on the 31st March, 1884.

Locality and Nature of Work.	Total Cost.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
	£ s. d.	£ s. d.	£ s. d.
<i>Coromandel County.</i>			
Improving road to Iona and Just-in-Time Companies' mines and crushing battery	200 0 0	133 6 8	..
Making and repairing track from Kapanga Mine to Paul's Creek ..	290 0 0	..	193 6 8
Making and improving track from Tokatea towards Kennedy Bay ..	320 0 0	213 6 8	..
Making and improving track from Golden Belt to Tiki ..	245 0 0	..	163 6 8
Extension, Vaughan and Vizard's Track ..	300 0 0	100 0 0	100 0 0
Extension of track, Tiernan's to Castle Rock ..	150 0 0	..	100 0 0
Making road to Kapanga Mine ..	132 0 0	88 0 0	..
Temporary track from Tokatea Saddle to Waikoromiki ..	50 0 0	33 6 8	..
Temporary road from Ring's bridge to Kapanga Road ..	150 0 0	..	100 0 0
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
Road from cutting, Lynch's paddock, to Matawai battery ..	180 0 0	..	120 0 0
Widening road from Emily Battery to Rocky Creek ..	291 0 0	..	194 0 0
Widening road from Matawai Valley to Vaughan's Claim ..	192 0 0	..	128 0 0
Road deviation, Fraser's saw-mill to Tiki Saddle ..	300 0 0	..	200 0 0
Prospecting track to connect Tokatea and Tiki ..	300 0 0	..	200 0 0
Widening and extending road to Harbour View ..	100 0 0	..	66 13 4
Improving track, Mercury Bay to Waitai. ..	100 0 0	..	66 13 4
Widening and extending road to Harbour View mines ..	150 0 0	..	100 0 0
Continuation and improving Waikoromiko Track ..	150 0 0	..	100 0 0
	3,730 0 0	621 6 8	1,865 6 8
<i>Thames County.</i>			
Making new road from Ohinemuri River to Karangahake quartz mines	650 0 0	433 6 8	..
Dray-road to connect Otanui mines with crushing battery at Mangawherawhera Creek	710 0 0	164 4 0	309 2 8
Improving road from Waitekauri Road to Katikati Road ..	250 0 0	100 6 8	66 6 8
Improving road up Karaka Creek to Lucky-hit Company's mine ..	300 0 0	175 7 4	24 12 8
Improving road to upper mines, Waitahi ..	320 0 0	172 12 7	40 14 1
Prospecting track to open up Karangahake Gold Field, extending towards Te Aroha	1,600 0 0	..	1,066 13 4
Track up Mangakerikeri Creek ..	100 0 0	..	66 13 4
Metalling road, Kaueranga Valley to Otanui Creek ..	650 0 0	..	433 6 8
Road from Tapu battery to mines ..	160 0 0	..	106 13 4
	4,740 0 0	1,045 17 3	2,114 2 9
<i>Thames County, Miscellaneous.</i>			
Purchase of diamond-drill by Thames County Council ..	1,500 0 0	..	1,000 0 0
<i>Piako County.</i>			
Extension and completion of tramway ..	18,000 0 0	9,000 0 0	..
<i>Hutt County.</i>			
Road to connect Oteronga Bay with Albion Company's battery; and likewise to connect Terawhiti quartz mines with battery	509 16 6	210 17 0	83 6 8
Golden Crown and Success Quartz Mining Companies: Construction of Terawhiti low-level tunnel	750 0 0	..	150 0 0
	1,259 16 6	210 17 0	233 6 8
<i>Tuapeka County.</i>			
Improving road from Lawrence and Waipori Road to antimony mine, Waipori	200 0 0	..	133 6 8
Making road from top of terrace to Waipori Bush ..	300 0 0	200 0 0	..
Improving road from Waipori Township to antimony mine, Lammerlaw Ranges	200 0 0	133 6 8	..
Improving road from Waitahuna River to top of terraces on road to Waipori copper mine	200 0 0	..	133 6 8
Making bridle-track from Roxburgh Road near Shingle Creek to Campbell's and Pomohaka Creeks	450 0 0	..	300 0 0
Waipori Township to Waipori Bush ..	200 0 0	..	133 6 8
	1,550 0 0	333 6 8	700 0 0
<i>Tuapeka County, Miscellaneous.</i>			
Drainage channel, Lawrence; undertaken by the Borough Council (approximate)	3,000 0 0	2,000 0 0	..
Tuapeka Prospecting Association ..	600 0 0	300 0 0	..
	3,600 0 0	2,300 0 0	..
<i>Vincent County, Miscellaneous.</i>			
Completion of sludge-channel, Smith's Gully, Bannockburn ..	2,000 0 0	251 1 0	598 19 0
Completion of sludge-channel, Pipe-clay Gully, Bannockburn ..	750 0 0	217 14 4	182 5 8
	2,750 0 0	468 15 4	781 4 8

LIST OF WORKS ON GOLD FIELDS, &c.—continued.

Locality and Nature of Work.	Total Cost.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
	£ s. d.	£ s. d.	£ s. d.
<i>Lake County, Miscellaneous.</i>			
Completion of road from Arthur's Point to Skipper's (approximate) ..	2,467 13 8	1,795 6 11	672 6 9
Completion of road from Arrowtown to Macetown (approximate) ..	8,000 0 0	5,543 14 10	2,456 5 2
Cardrona Prospecting Association	400 0 0	200 0 0	..
	10,867 13 8	7,539 1 9	3,106 18 3
<i>Southland County.</i>			
Improving road through Waikaia Bush	150 0 0	..	100 0 0
Improving road through Mataura to Nokomai	75 0 0	50 0 0	..
Improving road from Waikaka to Leitham, leading to Whitcombe ..	150 0 0	100 0 0	..
Improving road from Waikaka Township to Leitham 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 from Waipapa to Waikawa ..	150 0 0	100 0 0	..
	705 0 0	370 0 0	100 0 0
<i>Tairi County.</i>			
Road from Mulloky Gully to Silver Peak	600 0 0	..	400 0 0
<i>Westland County.</i>			
Road from Duffer's Creek, Greenstone Road, to fifteen-mile peg, Christchurch Road	1,000 0 0	..	666 13 4
Continuation of track, Back Creek to Eel Creek	600 0 0	..	400 0 0
Bridle-track from Ross Town boundary to Mount Greenland ..	1,440 0 0	..	960 0 0
Bridle-track, Duffer's Creek, Bowen, and Okarito Road to sea-beach ..	360 0 0	..	240 0 0
Improving track, Boucher's Creek to Gentle Annie Terrace ..	120 0 0	..	80 0 0
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 Bluff	437 5 0	218 12 6	..
	4,845 5 0	662 2 6	2,346 13 4
<i>Westland County, Miscellaneous.</i>			
Road to open up Woodstock Gold Field	1,000 0 0	1,000 0 0	..
Construction of Mikonui Water-race	11,357 0 10	4,965 19 8	6,391 1 2
Completion of Waimea-Kumara Water-race (approximate) ..	10,545 14 10	10,445 14 10	100 0 0
	22,902 15 8	16,411 14 6	6,491 1 2
<i>Maniototo County, Miscellaneous.</i>			
Deep-Lead Prospecting Association, Naseby	1,066 13 4	300 0 0	350 0 0
Mount Ida Water-race Trust, extension of water-race to Spec Gully ..	1,000 0 0	..	1,000 0 0
Road from Ida Valley to Serpentine Diggings	150 0 0	..	100 0 0
Mount Ida Water-race Trust, repairs to water-race	250 0 0	250 0 0	..
	2,466 13 4	550 0 0	1,450 0 0
<i>Grey County.</i>			
Road from No-town to Deep Creek	1,100 0 0	550 0 0	..
Road from Langdon's to Moonlight	1,600 0 0	345 7 0	454 13 0
Contribution from Gold Fields vote towards main road ..	2,296 6 6	2,296 6 6	..
Road from Mackley's station to Clarke's River	1,200 0 0	..	800 0 0
	6,196 6 6	3,191 13 6	1,254 13 0
<i>Grey County, Miscellaneous.</i>			
Nelson Creek Water-race, cost of reconnaissance survey	69 5 6	69 5 6	..
Road, Cobden to Seventeen-Mile Diggings	1,800 0 0	58 8 6	1741 11 6
	1,869 5 6	127 14 0	1,741 11 6
<i>Inangahua County.</i>			
Dray-road from Soldier's Creek to Devil's Creek	647 0 0	431 6 8	..
Dray-road from Inangahua River to Rainy Creek battery	909 10 0	218 0 0	388 6 8
Dray-road from Caplestown up Little Boatman's Creek	379 0 0	252 13 4	..
Dray-road from Caplestown 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 Caplestown	358 0 0	238 13 4	..
Survey and expenses	250 0 0	166 13 4	..
Track from Carriboo to Big River	728 0 0	364 0 0	..
Dray-road up Murray Creek to United Inglewood Claim	3,472 6 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 Caplestown to Larry's Creek	640 0 0	..	426 13 4
	10,145 10 6	5,725 0 8	815 0 0
<i>Inangahua County, Miscellaneous.</i>			
Diamond-drill purchased by Inangahua County Council	2,000 0 0	1,000 0 0	..
Deep-level Tunnel Company, Reefton, towards construction of tunnel, Black Point to Waitahu River	6,900 0 0	1,550 0 0	1,900 0 0
	8,900 0 0	2,550 0 0	1,900 0 0

LIST of WORKS on GOLD FIELDS, &c.—continued.

Locality and Nature of Work.	Total Cost.	Amount of Contribution paid by Mines Department.	Amount due by Mines Department on Works still in Progress.
	£ s. d.	£ s. d.	£ s. d.
<i>Buller County.</i>			
Deviation of road from Candlelight Flat to Deep Creek, Charleston ..	413 0 0	246 13 4	28 13 4
Road from Orawaiti 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 Larrikins'	600 0 0	..	400 0 0
	1,369 18 6	484 12 4	428 13 4
<i>Buller County, Miscellaneous.</i>			
Road from Zalatown track, in Lyell Road, to United Italy Company's mining lease, Eight-Mile Creek, Lyell	2,899 17 6	1,494 17 6	1,405 0 0
Reconnaissance survey of road from United Italy Company's mining lease to Mokihinui	300 0 0	..	300 0 0
Survey of road, Brighton to Seventeen-Mile Diggings	1,350 0 0	585 19 8	764 0 4
Road from Coal Creek to Mokihinui reefs and Karamea	3,600 0 0	2,611 8 7	988 11 5
Argyle Water-race (construction)	5,615 0 0	5,515 0 0	100 0 0
	13,764 17 6	10,207 5 9	3,557 12 9
<i>Miscellaneous Works.</i>			
Collingwood Road to West Wanganui	300 0 0	200 0 0	..
Contingencies, water-races	157 6 8	157 6 8	..
Deep Creek, Wakamarina, to reefs.. .. .	20 0 0	..	20 0 0
	477 6 8	357 6 8	20 0 0

SUMMARY OF WORKS.

	£ s. d.	£ s. d.	£ s. d.
<i>Water-races.</i>			
Construction:			
Mikonui Water-race	11,357 0 10	4,965 19 8	6,391 1 2
Waimea-Kumara Water-race	10,545 14 10	10,445 14 10	100 0 0
Nelson Creek Water-race	69 5 6	69 5 6	..
Argyle Water-race	5,615 0 0	5,515 0 0	100 0 0
Mount Ida Water-race	1,250 0 0	250 0 0	1,000 0 0
Contingencies	424 9 10	424 9 10	..
	29,261 11 0	21,670 9 10	7,591 1 2
<i>Roads on Gold Fields.</i>			
Arthur's Point towards Skipper's	2,467 13 8	1,795 6 11	672 6 9
Arrowtown to Macetown	8,000 0 0	5,543 14 10	2,456 5 2
To open up Woodstock Gold Field	1,000 0 0	1,000 0 0	..
Lyell to United Italy Company's Mining Lease, Eight-Mile	2,899 17 6	1,494 17 6	1,405 0 0
Lyell to Mikonui (reconnaissance survey)	300 0 0	..	300 0 0
Brighton to Seventeen-Mile Diggings	1,350 0 0	585 19 8	764 0 4
Cobden to Seventeen-Mile Diggings	1,800 0 0	58 8 6	1,741 11 6
Coal Creek to Mokihinui reefs and Karamea	3,600 0 0	2,611 8 7	988 11 5
Deep Creek, Wakamarina, to reefs	20 0 0	..	20 0 0
	21,437 11 2	13,089 16 0	8,347 15 2
<i>Subsidies to County Councils.</i>			
Coromandel County	3,730 0 0	621 6 8	1,865 6 8
Thames County	4,740 0 0	1,045 17 3	2,114 2 9
Piako County	18,000 0 0	9,000 0 0	..
Hutt County.. .. .	509 16 6	210 17 0	83 6 8
Tuapeka County	1,550 0 0	333 6 8	700 0 0
Southland County	705 0 0	370 0 0	100 0 0
Westland County	4,845 5 0	662 2 6	2,346 13 4
Grey County	6,196 6 6	3,191 13 6	1,254 13 0
Inangahua County	10,145 10 6	5,725 0 8	815 0 0
Buller County	1,369 18 6	484 12 4	428 13 4
Collingwood Road Board	300 0 0	200 0 0	..
Taieri County Council	600 0 0	..	400 0 0
Maniototo County Council	150 0 0	..	100 0 0
	52,841 17 0	21,844 16 7	10,207 15 9
<i>Subsidies for Prospecting.</i>			
Tuapeka Prospecting Association	600 0 0	300 0 0	..
Cardrona Prospecting Association	400 0 0	200 0 0	..
Naseby Deep-Lead Prospecting Association	1,066 13 4	300 0 0	350 0 0
Inangahua County Council, diamond drill	2,000 0 0	1,000 0 0	..
Thames County Council, diamond drill	1,500 0 0	..	1,000 0 0
Deep-level Tunnel, Reefton	6,900 0 0	1,550 0 0	1,900 0 0
Low-level Tunnel, Terawhiti	750 0 0	..	150 0 0
	13,216 13 4	3,350 0 0	3,400 0 0
<i>Subsidies to Sludge and Drainage Channels.</i>			
Smith Gully, Bannockburn	2,000 0 0	251 1 0	598 19 0
Pipe-clay Gully, Bannockburn	750 0 0	217 14 4	182 5 8
Lawrence Borough	3,000 0 0	2,000 0 0	..
	5,750 0 0	2,468 15 4	781 4 8
Total expenditure	122,507 12 6	62,423 17 9	30,327 16 9

RETURN showing the REVENUE and EXPENDITURE on, and Collateral Advantages derived by the working of, the Water-races constructed and maintained by Government during the Year ending the 31st March, 1884.

Name of Water-race.	Revenues.	Maintenance.	Profit or Loss.	Cost of Construction.	Total Cost of Construction.	Percentage on Capital Invested.	Number of Men employed.	Approximate Amount of Gold obtained.	Value of Gold obtained.	Average Weekly Earnings of Men, after deducting Sales of Water.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.			oz.	£ s. d.	£ s. d.
Waimea	2,097 11 6	1,021 7 11	*1,076 3 7	...	118,575 15 2	1 nearly	142	4,428	16,917 13 6	2 0 0
Kumara	8,316 14 11	2,153 5 5	*6,163 9 6	37,367 4 0	54,567 16 6	3½ nearly	243	12,882	49,273 13 0	3 1 5
Kumara Sludge-channel ...	2,137 18 3	6,405 10 8	+4,277 12 5	17,200 12 6	...	...	44	2,356	9,011 14 0	3 5 3
Nelson Creek	1,594 15 10	1,103 5 2	*491 10 8	...	89,833 19 7	¾ full	12	600	2,295 0 0	3 3 2
Argyle	324 7 0	371 10 0	+47 3 0	...	12,663 0 2	¾ loss nly	...	...	...	...
Total for all water-races	14,461 7 6	11,054 19 2	3,408 8 4	...	275,640 11 5	1½ ...	441	20,261	77,498 6 6	2 15 0

* Profit.

† Loss.

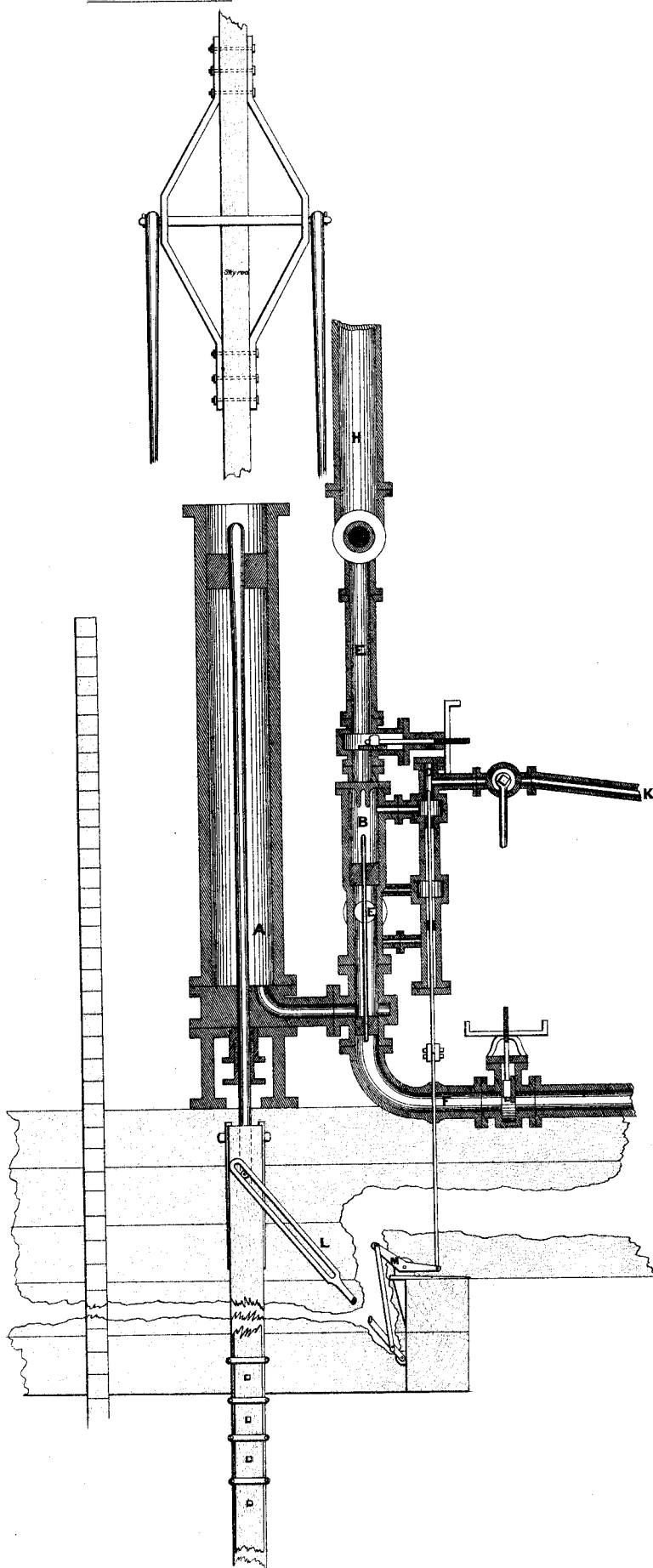
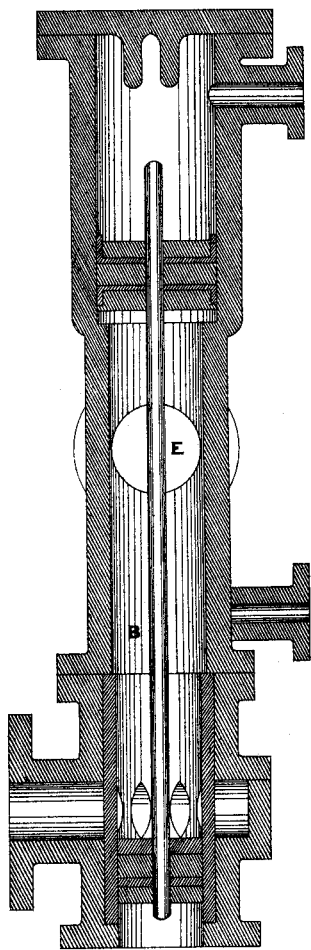
SKETCH PLAN AND SECTION
OF
PUMPING ENGINE
ROSS UNITED GOLD MINING COMPANY

Designed by and constructed under the supervision of

C. Maltroy, Mechanical & Hydraulic Engineer,

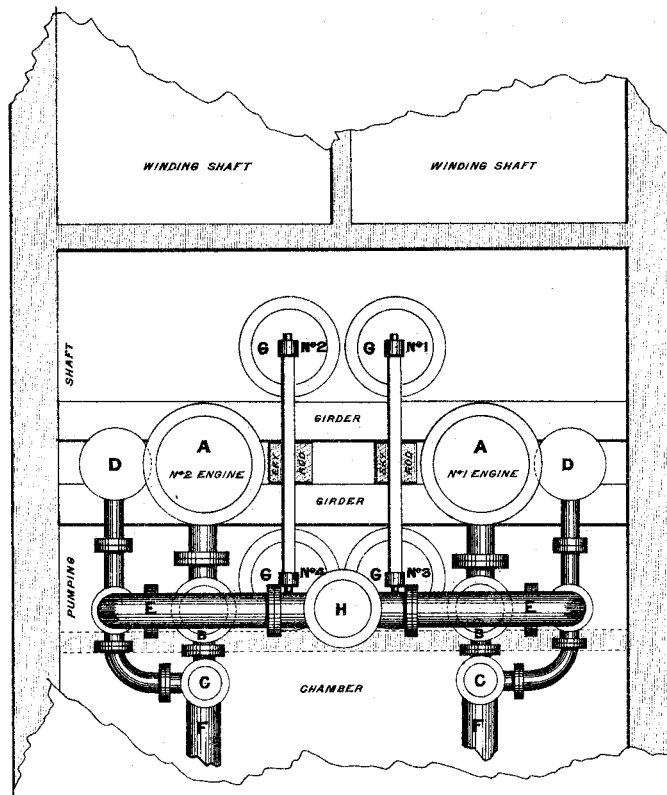
Ross, May 10th 1884

ENLARGED CROSS SECTION OF DIFFERENTIAL PISTON "B"

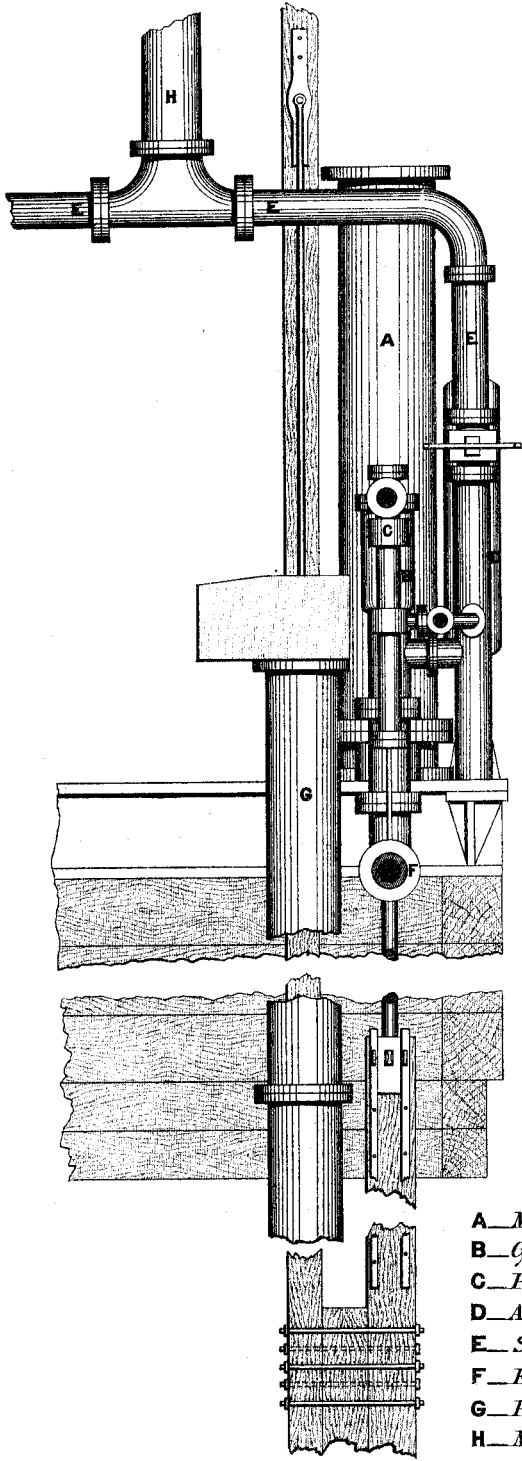


Drawn by G.E. Wilson, May 1884.

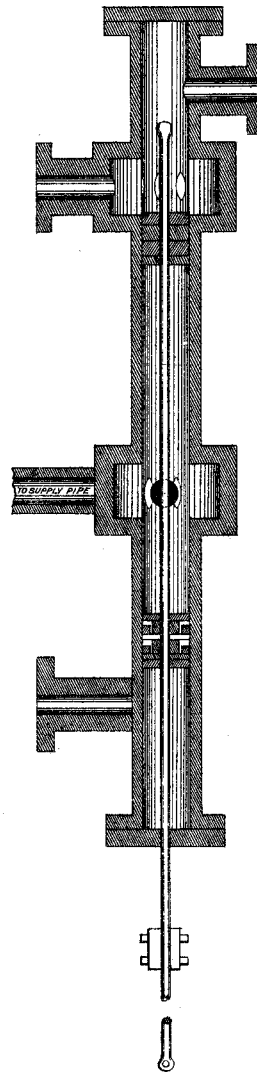
CROSS SECTION



PLAN



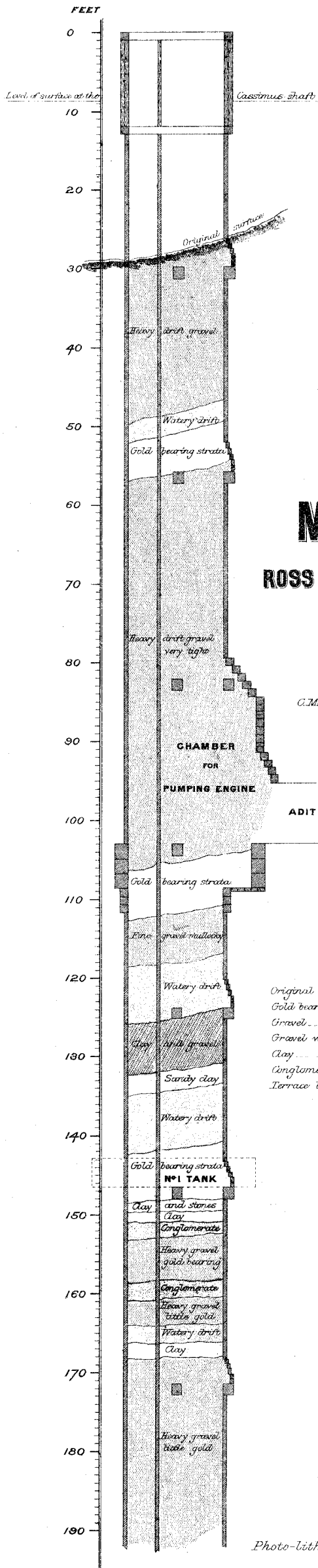
FRONT VIEW



ENLARGED CROSS SECTION OF OCTOPUS "C"

Reference

- A—Main cylinder
- B—Cylinder of differential piston
- C—Piston or balance valve in octopus
- D—Air vessels
- E—Supply pipe to main cylinder
- F—Exhaust pipe from main cylinder
- G—Pumps
- H—Main supply pipe from distributing chamber
- K—Exhaust pipe from differential cylinder
- L—Sliding crank } for regulating and keeping
- M—Secondary crank } machinery in motion



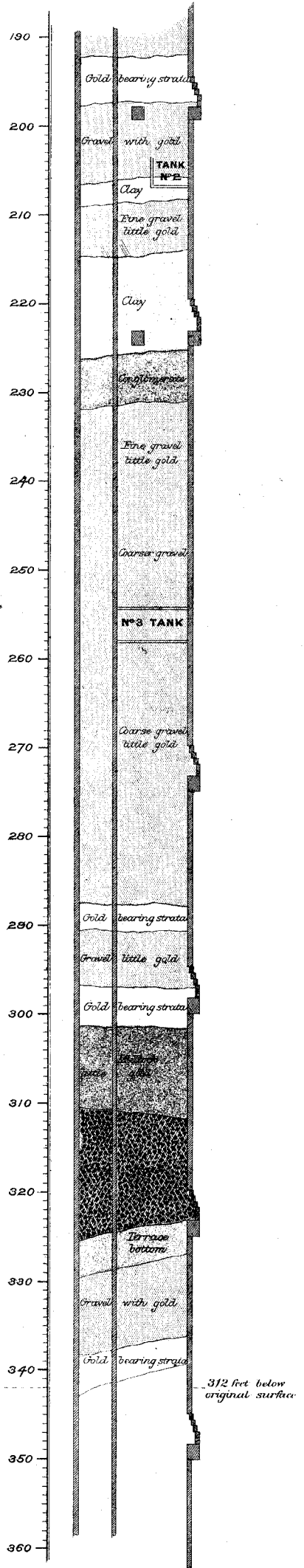
SECTION OF
MAIN SHAFT
 ROSS UNITED GOLD MINING COY.
ROSS

Scale $\frac{1}{2}$ inch = one foot

C. Maltroy, Mining Manager, Ross, May 10th 1884.

Note

- Original surface shown thus
- Gold bearing strata
- Gravel
- Gravel with water
- Clay
- Conglomerate or Mullock
- Terrace bottom



Drawn by G.E. Wilson.

WARDENS' AND WATER-RACE REPORTS.

AUCKLAND GOLD FIELDS.

No. 1.

Mr. Warden KENRICK to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Coromandel, 29th April, 1884.

I have the honour to report that mining has been very dull in this portion of the Hauraki Gold-Mining District during the year ended the 31st March, 1884, a condition traceable to various causes. In many claims the gold appears to exist only in the surface levels: work at a lower depth has not proved remunerative, and prospecting has not been pushed deep enough to prove whether or not a lower payable strata exists. Another cause of depression arose through the great flood of July last, which completely stopped mining operations in most of the holdings for some months. During the last two months a decided change for the better has set in on one part of the field, viz., in the Tiki District. This is mainly owing to a claim called the Matawai, situated on a creek of that name. The owners of this claim, after years of profitless labour, uncovered a reef which has within the last six months yielded upwards of three hundred ounces of gold. A low-level has been driven for upwards of one hundred feet on a reef varying from 4ft. to 9ft. in thickness: this work has been done in order to get below the point on the surface where the gold was first found. Gold has been seen, and found payable, for a distance of 50ft. on this level, and it is expected that the remaining distance of 30ft. will also carry gold, making a shot of at least 80ft. Ninety tons of quartz from this claim produced 323oz. of melted gold, and there is a further quantity of eighty tons, awaiting the completion of the road to the battery, of a quality quite equal to the ninety tons already crushed. A number of new claims have been taken up in the immediate neighbourhood, and some of them have already struck gold, the prospects of all being good. There is a battery of ten stamps situate in the creek just below this cluster of claims: it is driven by water-power.

The claims known as "Blackmore's" and "Home Rule," which have been idle for some considerable period, have amalgamated, the ground comprised in both holdings being now called the Mariebel. The manager has succeeded in obtaining a fair show of gold, and is engaged in cleaning out the old workings and putting things in order, with the intention of commencing operations on the reef at once: the ground can easily be worked, and, as the company's battery is situated at the mouth of their main tunnel, even low-grade quartz should pay.

Vizard's holding, the Castle-Rock, has turned out only fifty-four tons of crushing stuff for the year, yielding at the rate of 3oz. of gold to the ton: a quantity of quartz is on hand, but, owing to the want of a road, cannot be crushed. In the Homeward Bound the tributers have a small leader in hand, comparatively rich, but so small as to be barely payable; they intend to test a large reef lately discovered in this ground.

New Union Beach: Some time ago this company attempted to test their ground below the 180ft. level by sinking a large winze therefrom, and placing a Tange pump therein. They succeeded in sinking 70ft. and opened out on a leader at that depth; but, nothing payable being obtained, the enterprise was abandoned, principally for want of proper appliances with which to keep the water under: the deeper ground in this locality is therefore still untried.

The New United, Just-in-Time, and Iona Claims in this locality have all been unsuccessful in their operations during the year.

The New Zealand Kapanga Mine, which has been almost continuously worked since 1862, with varying success, have, during the year carried out extensive underground operations, at depths of 300ft. and 425ft. from surface. Five hundred tons of quartz were crushed, yielding 685oz. of gold, worth £1,918 14s. 2d., this result being obtained at an expenditure of over £6,000. The English shareholders by whom this mine is owned appear still sanguine of ultimate success: they most certainly deserve it. As an instance of the rich leaders occasionally found in this ground, I may mention that one piece of stone, weighing five pounds troy, on being crushed yielded 35oz. of melted gold.

The New Corby have not been successful in their operations for the year.

The Tokatea Gold-Mining Company have, with the exception of about three months' delay occasioned by the flood in July last, been occupied in pushing forward the low level, and stoping out the block of ground previously opened out. The country in the low level has been very hard, a series of flint belts of a most stubborn character occurring every two or three feet, so tough and hard that progress could only be made at the rate of 24ft. a month, with full shifts. This level is 2,600ft. in from the mouth, and 890ft. below the crown of the range. The company expect to cut the big reef in about 150ft. from the present face of the tunnel. Should it realize the hopes entertained of it and prove payable, it will open up an immense extent of country, and give employment to a large number of miners. The upper portion of the ground in this mine is being worked on tribute with moderate success.

The Royal Oak have been engaged in driving their low-level tunnel during the year, working the upper portion of the claim on tribute.

The Success: This is without doubt the most remarkable mine on the gold field: the leader, if such it may be called, is simply a fissure cutting clean through very hard rock: the fissure is followed,

and here and there at intervals are found patches of nearly pure gold, mixed with a small quantity of soft mullock easily washed away in a dish. Occasionally quartz is met with, and some very rich specimens have been obtained; but the great bulk of the gold is washed out as described above. The gold is found in combination with lime (carbonate of lime), a somewhat unusual occurrence, I believe. This mine has been constantly worked for the last four years, turning out some thousands of pounds' worth of gold, yet a recent crushing of four tons of quartz, yielding 70oz. to the ton, is the first crushing that has taken place since the opening of the mine.

There are several claims now being worked in this neighbourhood, but as yet without success. A party of miners have for some months past been engaged in prospecting the Manaia District, some nine miles from the township (Kapanga). They have taken up one claim of thirty men's ground, but are very reticent as to the result of their prospecting.

The following are the statistics for the year: Warden's cases disposed of, 63; Resident Magistrate's cases—civil, 239; criminal, 42. Claims marked out 51; claims registered, 14; miners' rights issued, 125; quartz-crushing licenses issued, 10; gold-mining licenses issued, 4. The quantity of quartz crushed was 1,042 tons, for a yield of 4017oz. 19dwt. of gold, as against 2,907 tons and 7,010oz. for last year.

I have, &c.,

HARRY KENRICK,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 2.

Mr. Warden KENRICK to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Thames, 18th May, 1884.

The principal feature of the year's work at the Thames proper has been the prospecting of the low levels in several of the mines, commenced and continued in consequence of the encouraging returns from the Prince Imperial Mine, obtained mainly from the rich shot in the 400-ft. level, a run of gold that it was believed would continue a greater depth. When reporting last year I referred to this find, which had then (31st March, 1883) given nearly 5,000oz. of gold. At the close of the present year (March, 1884) over 26,000oz. have been obtained from the year's crushing: the large lode in the ground known as the Mariner's Reef having yielded excellent returns, has helped to swell the total. The result of the year's work in this mine has therefore done much to inspire confidence, leading to the practical result of a very large expenditure on dead work in prospecting the lower levels of various mines.

The Prince Imperial have crushed, during the year ended the 31st March, 1884, 12,172 tons of stone for a yield of 21,125oz. 15dwt. of gold. This splendid return, added to the previous yield of 9,700oz., has enabled the company, after paying large sums away for labour, &c., to form a respectable reserve fund to cover the expense of further prospecting, in addition to dividing the sum of £52,200 amongst the shareholders. As showing the uncertainty of gold-mining it may not be uninteresting to call attention to the fact that at the end of 1881 the ground comprising the property of this company was sold by public auction, together with all the winding-gear, machinery, &c., for the sum of £250, a shaft to the depth of 400ft., in good working order, being on the claim. With some difficulty a company was formed, with a nominal capital of £18,000, to work the ground, many of the most experienced men here declining to have anything to do with it. One call only, of 6d. per share, was made; whilst gold to the value of £73,295 has been won, and dividends to the amount of £2 18s. per share have been paid up to the date of the 31st March, 1884. The rich run of gold has so far run out, though there is a strong probability of its being picked up again at a lower level; but, as the present workings on the Mariner's Reef are more than payable, the prevalent belief is that the company will be enabled to pay dividends for some time, even if the specimen leader should not be picked up again.

The adjoining claims—Mariner, London, Queen of England, &c.—have done a considerable amount of dead work during the year in the erection of machinery and underground work in prospecting, but so far without success. They cannot be said to have explored their ground as yet, and most certainly, with the example of the Prince Imperial before them, have no grounds for discouragement.

In the Deep Level Cross, at the 640ft. level, the gratifying discovery of a gold-bearing leader has been made, thus proving that the gold descends to a much lower level than any in which it had before this discovery been found. The company are still working at this level. Foul air in this and other mines retarded operations considerably during the year.

A new venture, called the Caledonian Low-level Company, has been formed to work on tribute the low levels of various mines—Caledonian, Golden Crown, and others. Operations have been commenced at the 640-ft. level of the Deep Level Cross. A discovery in any of these mines would be of great importance to the future of this district. I need not refer more in detail to the various mines, the Mining Inspector's report furnishing full information; but, generally, I regret to report that the result of the year's operations has (apart from the returns of the Prince Imperial) not been so satisfactory as could have been wished, or perhaps might have been expected from the expenditure on new work. The year's yield of gold, it will be seen, is nearly 11,500oz. in excess of the previous year—54,865oz. 3dwt. 8gr., as against 43,310oz. 12dwt. 4gr. for the preceding year; but if we deduct the yield from the Mariner's Reef (21,125oz. 15dwt.) the total yield would be some 10,000oz. less than the year before.

Some new claims have been taken up, which promise good results, viz., Darwin, Cambria, and recently the Belcher at Kanaka Creek. The Rocky Point and Adelaide Claims are approaching the time when they hope for some return for the large amount of time, money, and labour they have expended in their long tunnel.

In the northern part of the district—Tapu, Waioma, and Tararu—but little work has been done during the year. At Waioma prospecting for silver has been carried on, a few men being employed on the lease granted, but with no tangible result as yet. At Tararu the workings on the Sunbeam Claim are still being carried on, with a view to test the value of the large lode of poor grade quartz in the ground, but so far with but poor results.

At Otanui, for want of a road to the battery, a few small parcels only have been crushed, with fair returns. There has been little work done during the past year.

At Karangahake, in spite of the promising aspect of the reefs, but little work has been carried on in many of the claims. A great deal of shepherding has been done, and the Mining Inspector has had to step in and forfeit a large number of claims for non-working. Six hundred and twenty tons of quartz have been crushed for the poor yield of 277oz. gold. The battery was stopped for some three months repairing damages caused by the floods. I am still of opinion that this locality will in the future form an important portion of the gold field, yielding considerable returns of gold. But work will require to be carried on in a somewhat different manner than at present.

At Rotokuhu, on the Karangahake Range, a find has recently been made that may yet prove both important and valuable. Many claims have been taken up in the locality, but too little work has been done to enable a reliable opinion to be given of the prospects. In the Prospector's Claim the country seems to be somewhat disturbed and broken, a clay slide at first cutting off the reef upon which the men were driving, but which was picked up again a few feet further on.

At Waihi steady work has been carried on during the year: 4,750 tons have been crushed, yielding 1,631oz. of melted gold, the first gold obtained from this portion of the district. The yield, though poor, is payable, the lode being of great size, easily worked and crushed. The companies own the battery, and have a good water-power. I anticipate that this district will continue to yield steady payable returns for some years to come.

The prospects of the future of the field generally will depend mainly upon the result of the work at present being carried on by the Deep-level Cross, Caledonian Low-level, Queen of Beauty, and Prince Imperial Mines. Should payable gold be opened up in their low-level workings a new impetus to mining will be given throughout the district. The outlying districts have, as yet, not appreciably added to the gold returns, but if fair work is carried on much may be expected from the Waihi and Karangahake now that the first rough work of prospecting has been overcome.

The total yield of gold for the year is 54,865oz. 3dwt. 8gr., obtained from 36,228 tons. For the preceding year the yield was 43,310oz. 12dwt. 4gr.

The following are the statistics for the year: Warden's Court—Cases commenced, 167; heard, 44; discontinued, 78. Resident Magistrate's Court: Civil cases commenced, 389; amount sued for, £29,936; amount recovered, £13,178; criminal cases disposed of, 344. At Paeroa 66 civil and 24 criminal cases were heard. Miners' rights issued, 604; claims notified marked out, 190; licensed holdings granted, 35; agricultural leases, 35; water-races, 2; machine sites, 2; residence sites applied for, 13, granted, 1; registration, 468.

I have, &c.,

HARRY KENRICK,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 3.

Mr. Warden KENRICK to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Te Aroha, 19th April, 1884,

Until the completion of the tramway and battery, and the starting of the latter in November, 1883, the work on the various mines in this district was confined to surface prospecting in the majority, and the erection of shoots and hoppers in connection with the tramway by those claims who had arranged to be the first to send stone to the mill.

In November the battery started crushing on stone from the Premier, New-Find, Colonist, Werahiko, and Waitoki Claims, and, with occasional short stoppages for alterations, &c., continued crushing until the Christmas holidays. Work was not resumed after Christmas until the end of January, the miners having refused to accept a reduction of wages from 9s. to 8s. a day made by the companies. Eventually the majority gave way, returning to work at the reduced scale. Crushing was then resumed, and continued, with a few stoppages, until the end of March last, with the result that 4,316 tons of quartz were crushed, for a return of 4,546oz. 11dwt. 12gr. of gold: thus placing beyond a doubt the payable nature of the large reefs, from which nearly all the stone was taken. Experience thus far has shown that, in consequence of the fineness of the gold and, possibly, the presence of base metals, an unusually large percentage passes away in the tailings: these are being saved, and a careful test of some tons shows that from 1oz. to 1½oz. of gold may be saved from the ton of tailings, even then leaving a large quantity of gold to be accounted for: this, with the gold-saving appliances at present in use at the Aroha, it is to be feared must be considered as lost.

The Battery Company have just completed the erection of a very large and complete tailing plant for the purpose of treating the tailings. This being now at work should add materially to the yield of gold for the current year. It is estimated that some 2,000oz. of gold will be obtained from the tailings at present on hand. Particulars of this plant will be found in the Mining Inspector's report attached hereto. Since the end of the year (March) the battery has continued steadily at work, principally on stone from the New-Find and Colonist Claims, the yield being quite up to the average of the previous crushings, the result of which I have given. But it is quite evident that more crushing power is even now required, and as the various claims open up the lower levels the necessity will be urgent. An attempt, as yet unsuccessful, to float a new battery company is now being made. Though experience has shown that the tramway might have been more economically

constructed, yet the large expenditure of public and private money on both tramway and battery appears to have been justified by the result, and will, I believe, as time passes on and the reefs are better developed, be fully so.

With the usual uncertainty attached to mining the claims most highly thought of before crushing, viz., Premier, Waitoki, and Werahiko, have not proved payable as yet. On the other hand the New-Find and Colonist have proved to be most valuable properties. The result of the crushing from these claims proves beyond doubt the main line of reef from which the stone was taken to be more than payable. The New-Find have already divided £2,000 and the Colonist £500 amongst the shareholders, as the result of the first three months' crushing, after paying some very large sums away for work and plant in opening the mines. The stone crushed from the Premier and other mines that did not prove payable was taken from cross-lodes; but, as the large expenditure in this district was incurred in the belief that the immense body of stone contained in the main line of reef, traced through so many claims, would prove to be both payable and permanent, it is more than satisfactory to find that, whilst the crushings have proved the payable nature of the reef, the permanency of the lode itself is daily more assured as the workings on the lower levels of the New-Find and Colonist progress, and so far gold has been carried to the lowest level as yet touched, with gold showing freely in the stone underfoot. A recent find (in March) of some very rich stone in the Waiorongomai and Wellington Claims, coupled with the yield from the crushing of some small parcels of stone from claims in the same locality—viz., Inverness, 5 tons 21oz. 15dwt.; Welcome, 2 tons 113oz.—leads to the hope and belief that rich leaders leading into or from the main reef will yet be discovered as the ground gets more systematically worked and the lower levels opened up. So far specimen stone has only been found on or close to the surface throughout the district.

The Mining Inspector's report herewith will show more in detail the work being done in the various claims. But sufficient has been done to show that payable stone is not confined to the two claims who at present practically keep the battery employed, and that the progress of the district may be said to depend upon the two wants, cheap carriage and cheap crushing, being soon supplied. In any event that progress will certainly be steady, though possibly slow, both from the nature of the reefs and the consequent large expenditure required in the erection of machinery to develop them; but events so far justify me in repeating the opinion I have always expressed, that in the Aroha a payable and permanent gold field has been opened valuable in itself, still more valuable from its position in the centre of a large agricultural district, to which in the future it must be the market—a district that will furnish, I believe, remunerative employment for a large amount of both capital and labour.

During the year, in the Warden's Court, 75 cases, and in the Resident Magistrate's Court, 276 civil cases and 62 criminal cases, have been disposed of. Two hundred and thirty-one miners' rights have been issued, 102 fresh claims marked out; 43 licensed holdings (leases), 66 business sites, 77 residence sites, 1 water-race, and 1 machine site granted; and 619 general registrations effected.

Total amount of quartz crushed, and yield of gold, for year ending the 31st March, 1884: 4,316 tons, yielding 4,546oz. 11dwt. 12gr. of gold. (Return furnished by Mining Inspector.)

I have, &c.,

HARRY KENRICK,

Warden.

The Under-Secretary for Gold Fields, Wellington.

SIR,—

Warden's Office, Te Aroha, 8th April, 1884.

I beg to forward the following particulars respecting mining matters, and the works which are in progress in this district:—

In the early part of the year there was a great deal of want of energy in mining, chiefly on account of the slow progress in the formation of the tramway. This was not completed until the 1st November.

About the month of June a demand for claims at Te Aroha began to set in, and about forty licensed holdings were applied for before the close of 1883, but, as the greater number of those claims were occupied for speculative purposes, very little prospecting has been done, and there is no fresh find to report outside of the claims previously proved.

A large reef was opened up on the western slope of the mountain, and a considerable amount of prospecting carried on in that part, but so far the result has been that nothing payable has been found.

The following particulars of work done and returns of quartz crushed from several of the mines at Waiorongomai will show that the estimates formed of the value of the claims will be fully borne out by the results:—

New-Find.—This mine is well opened up: the reef at the low level, under where gold was first discovered in the claim, is driven on for 90ft. on a strong body of quartz from 4ft. to 6ft. in thickness, and, as there are nearly 100ft. of backs, a large block of payable ground is ready for stoping. Another reef or branch near the southern boundary has also turned out well: about 100ft. has been driven on the lode at a depth of 50ft. from the outcrop, and a winze sunk in the floor to a depth of 25ft.: a low-level crosscut has been commenced which will cut the reef under where the winze is being sunk. When this connection is made another extensive block of payable quartz will be opened. Eighty fathoms of reef have been stoped out on this reef, which is known as No. 2 reef, forty fathoms have been stoped out on No. 1 reef; and the total quantity of quartz sent to the mill is 1,501 tons, which has yielded 2,296oz. 12dwt. of gold. The reefs appear to be as rich or even better on the floor of the drives than where worked on near the surface. A ground tramway 800ft. and an iron shoot 380ft. in length are used for conveying the quartz from the mine to

the main tram. The future prospects of this mine are very good, and dividends amounting to £2,000 have already been paid.

Colonist.—The reef opened in this mine has been driven on 227ft. at the surface level, and 302ft. at the present lower level. Two winzes have been sunk to connect the levels. There have been 113½ fathoms of reef stoped out from the surface block, and thirty-two fathoms from the block over the low level. The quartz crushed amounts to 1,415 tons, which yielded 1,141oz. 4dwt. of gold. A cross-cut is being driven to cut the reef 70ft. deeper, and the show of gold on the floor of the present low level warrants the belief that the next block opened will pay handsomely. A dividend of 6d. per share has been paid, amounting to £500.

Premier.—Driving and stoping on both reefs has been carried on, and a quantity of payable quartz stoped out over the smithey level on No. 1 reef, and towards the surface on No. 2 reef. Ninety-eight fathoms of reef have been broken out and 800 tons of quartz crushed, yielding 672oz. 8dwt. of gold. The mine is now well opened, and driving is being carried on towards the junction with the main reef.

Vulcan.—The yield of gold from this mine did not come up to expectations, sixty-four tons of quartz producing only 28oz. 3dwt. 12gr. of gold.

Hero.—A trial crushing from this mine yielded 12½oz. of gold from 26 tons of quartz. A level is being driven to prove the value of the reef at a greater depth.

Canadian.—This company, although carrying on a considerable amount of prospecting, have not been successful in finding payable quartz. There is, however, a much better show since they commenced to drive on the Colonist surface level, and gold is frequently seen in the reef, which is from 4ft. to 5ft. thick.

Diamond Gully.—No quartz has yet been crushed from this mine, and the manager is now engaged driving on the New-Find No. 2 reef.

Eureka.—This mine is now well opened, and the company are engaged in the erection of a wire-tramway to convey quartz from the low level to the main tramway. Upwards of 400ft. of driving has been done in this claim, and 130ft. of a winze connects the surface with the low level. The show of gold in the stone is quite as good at the low level as where it was first found, and payable returns are anticipated as soon as the wire-tramway is completed.

Werahiko.—This mine is well opened up: 326 tons of quartz yielded 307oz. 8dwt. of gold.

Waitoki.—A crushing of 123 tons of quartz yielded 36oz. of gold.

Welcome.—A crushing of two tons of quartz yielded 113oz. of gold. The quartz was broken out from the surface workings. A winze has been sunk on the leader to connect with the low level, but no further crushing has yet been made.

Inverness.—A low level has been driven to cut the No. 1 reef, and a rise is being put up to drain the reef. Five tons of quartz yielded 21oz. 15dwt. of gold. Another reef with a fair show of gold in the quartz has been found, and there is no doubt that this will prove a payable mine.

Phania.—A drive has been put in on a leader about 10in. to 12in. in thickness, and gold is freely seen at each breaking down of quartz, but no trial crushing has yet taken place.

A considerable amount of prospecting has been done on Moa No. 1, Moa No. 2, Army, Chance, Vermont, Waitoki Extended, Alphabet, May Queen, Lucky-hit, Virginia City, Leo, Wellington, Young Caledonian, Arizona, Coquette, Smile of Fortune, and Stanley Claims, and in all cases gold, more or less, has been discovered, sometimes in large reefs, and at other times in smaller veins. In the Provincial Extended some very rich pieces of stone were washed from the mullock near a reef about 18in. in thickness, and large blotches of gold are seen in several stones broken from the solid reef, but there has not been enough work done to prove the value of the find.

The arrangements made by the Waiorongomai Company for the erection of a battery fell through, and, although several offers have since been made to erect another battery on the Waiorongomai Creek, no definite action has been taken in the matter. This is to be much regretted, as there is a good opening for another battery, the present crushing plant being inadequate to crush for all the mines. On account of the fineness of the gold a large percentage escapes in the tailings, in some cases as much as 1½oz. per load.

The battery company have lately added a grinding plant to their battery. A large building capable of holding sixty-four berdans has been erected about ten chains from the main building. The water from the turbines is conveyed in a flume to the new building and, with a pressure of 37ft. 5in., is made to drive one of Pelton's hurdy-gurdy wheels, which has sufficient power to work the thirty-four berdans already fixed. The tailings from each ten head of stamps are conveyed in separate flumes direct to pits in the grinding building, and the berdans will be fed by hand. The tailings, after being ground and the gold extracted, will be raised by hydraulic pressure and stacked.

The tramway is in good working order, and is capable of conveying a hundred trucks of quartz to the mill daily. The trucks contain each 1¼ tons, and the cost of haulage is 4s. 6d. per truck from any part of the line.

The prospects of the field generally look healthy, and public confidence is such that a population of from eighteen hundred to two thousand souls is located at Te Aroha and Waiorongomai Townships, and at the camps on the hill at Waiorongomai. There are a hundred houses erected in the Waiorongomai Township, and upwards of two hundred houses at Te Aroha.

The return of gold from those claims that have been occupying the mill shows that no doubt need be entertained that the reefs here will pay for working, and take years to work them out.

I have, &c.,

GEO. WILSON,

Mining Inspector.

The Warden, Te Aroha.

No. 4.

Mr. Mining Inspector McLAREN to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Mining Inspector's Office, Thames, 10th May, 1884.

I have the honour to forward mining report for the Hauraki Gold-Mining Districts for year ending the 31st March, 1884.

HAURAKI NORTH.—COROMANDEL.

It is to be regretted that the operations carried out in this district during the year have not—except in a few instances—proved payable, the gold returns being only about one-half of the previous year. Last year there were great expectations that the operations carried on at deep levels by the companies working on the flat would prove payable, but this has not been so, and the works in most of these have been stopped.

Union Beach Gold-Mining Company.—The works mentioned in last year's report as being in progress were completed by sinking the winze and opening out levels, which did not prove remunerative. Altogether 1,400ft. of driving, besides rising, and sinking, and other prospecting work, has been done. Occasionally good specimens have come to hand, which encourage further prospecting.

Iona and Just-in-Time Gold-Mining Companies both carried on operations with vigour in the early part of the year, but, being unsuccessful, are now in progress of being wound up.

Kapanga Gold-Mining Company.—Under the management of Captain James Thomas extensive underground workings have been carried on during the year, principally at the 300ft. and 425ft. levels, giving employment on the average to forty-five men. There have been 500 tons of quartz crushed, for a return of 685oz. of gold, valued at £1,918 14s. 2d. Against this the expenditure has been over £6,000. The reef in the ground recently operated on has been found to be greatly disturbed, which may account for the high expectations in regard to gold returns not being fully realized. In order to get into good country it would appear necessary either to sink the shaft, say, another 150ft., or drive southward on the reef at the lower levels, as the ground to the south appears to be less disturbed than towards the north.

Corby Gold-Mining Company.—The operations in the deep levels on Scotty's Reef have not turned out payable, though encouraging prospects have been obtained. The present operations are confined to the surface level, in the vicinity of where rich stone was obtained some four or five years ago.

TOKATEA DISTRICT.

Queen of the North Mine.—The principal work carried out in this mine has been sinking a winze, and driving from it towards the slide; but progress has been very much retarded by a heavy inflow of water. The last small crushing of 2 tons gave 20oz. of gold.

Tokatea, Bismark, Royal Oak, and Pride of Tokatea.—There is nothing very particular to record in the works of these companies during the year, these being principally carried out by small tribute parties. The Tokatea Company, however, purpose extending their low-level tunnel so as to cut right through the main reef and prospect the leaders on its western wall.

Pita's Block (Orient).—This ground has so far been worked successfully; the future prospects are also good.

Success.—A rise has been completed from the low to the upper level, which gives good ventilation, and now allows the mine to be safely worked.

TIKI DISTRICT.

This district has remained idle till within the last month, when work was resumed in the Home Rule and Blackmore's Claims, under the management of Mr. Hutchison, a company having been formed to work both claims jointly under the name of the Mariebel Gold-Mining Company.

MATAWAI DISTRICT.

This district at present looks to be the most promising one in Coromandel: through the improved prospect of Vaughan's Mine a number of other claims have recently been pegged out, the working of which may lead to other valuable discoveries.

Vaughan's Mine.—Three separate runs of gold have been found in the reef in this mine: the width of Nos. 1 and 2 have not as yet been proved, they having only been sunk into; but No. 3 has been proved to extend for a distance of 80ft. along the reef, and is going downwards at an angle of about 25°: the distance apart of these runs is—Nos. 1 and 2, 20ft., and Nos. 2 and 3, 60ft. From appearances on the surface a fourth run may be expected in the low-level tunnel, which is now being extended to test this. Ninety-two tons of quartz crushed yielded over 3½oz. to the ton, the return being 322oz. 11dwt. melted gold: there is now about eighty tons of quartz to grass ready for conveyance to the mill.

Castlerock Claim.—This still remains the most southerly mine in Coromandel, but the owner has not displayed much vigour in working it, though the crushing obtained was more than payable.

The quartz crushed for the Coromandel District for the year was 1,042 tons 12cwt. 95½lb., for a return of 4,017oz. 19dwt. 2gr.

HAURAKI SOUTH.—THAMES AND OHINEMURI.

Prince Imperial.—Under the management of Mr. George Clark, very extensive works have been carried out in this mine, with good results to the shareholders. The number of men's ground held by this company is 22, but the average number of men employed would be from 120 to 130. The work carried out has been 2,125ft. of driving, being 1,575ft. on reefs and 550ft. of cross-cutting; 240ft. of winzes have been sunk on the reef for ventilation and working purposes. The principal

work at present in progress is the further sinking of the main shaft, for the purpose of opening up a new level on the rich run of gold. There will be 85ft. of backs by 600ft. on the line of reef in this block. Should this block turn out anything like as valuable as the ones above, being at such a depth (500ft.) below sea level, it should greatly assist in establishing the gold field. There is a large extent of payable ground opened out in other parts of this mine, that will give work for years to come to a large number of men. During the twelve months there have been 16,193 tons of quartz raised and crushed, from the stopes and drives in the various levels, for a return of 26,230oz. 4dwt. of melted gold, valued at £72,960 5s. 2d., of which £40,950 was received by the shareholders in dividends.

Deep Level Cross.—This mine is under the management of Mr. James Coutts, and a very large amount of work has been done. The most important was the extending of the 640ft. level from the Big Pump to the Prince Imperial reef: to effect this a distance of 400ft. was driven, and a rise made 230ft. to connect with the 430ft. level. Other important works are now being carried out to open out the mine. There have been 4,176 tons of quartz crushed, for a yield of 5,086oz. of melted gold.

Golden Crown.—The older portions of this ground are nearly exhausted, and, as the quartz now being crushed is low in quality, it has taken Mr. Thomas Dunlop, the manager, hard uphill work during the year to make it pay. He is therefore directing his attention to the Mary Ann portion of his ground, which adjoins that held by the Caledonian, Waiotahi, and Darwin Companies, which would likely be expensive to open out, but would, it is hoped, give profitable returns for years. The returns of work done during the year are—446ft. of cross-cut driving, 515ft. driving on line of reef, 126ft. winzes sunk, 350 fathoms reef stoped on various reefs and leaders, and 1,600 tons quartz crushed, valued at £3,240, being an average of $\frac{3}{4}$ oz. to the ton.

Waiotahi.—There are no new features in this mine, which still continues a dividend-paying one. The old levels are still being worked, but Mr. Smith, the manager, is preparing to further sink the shaft to open out another block, and for this purpose has had a large new steam-boiler erected on the surface.

Mariner, London, and Queen of England.—The operations of these companies to get payable gold not having succeeded, they have ceased operations; but an effort is being made to get them to re-start and sink their shaft from 100ft. to 150ft. deeper.

Moanataiari Mine.—The principal work has been done and gold obtained in Heldt's section of the mine by wages-men. Driving and stoping is also being carried on in the Morning Star section. A rise is at present being put up from the tunnel level on No. 1 reef, with very encouraging prospects. A cross-cut is also being driven towards the Waiotahi at the Nonpariel 215ft. level, for the purpose of testing a large reef found there in a shaft in the earlier days of the field: about 200ft. remains to be driven before this reef will be cut. During the year 1,244 tons of quartz have been crushed for 1,624oz. 14dwt. melted gold.

Queen of Beauty.—Work has been steadily carried on in this mine during the year; but the gold returns have not been sufficient to make it payable. The work done has been—1,242ft. cross-cutting; 839ft. driving on reef; 240ft. winzes sunk; 643 fathoms reef stoped; 1,574 tons quartz crushed, for 1,701oz. melted gold. A long cross-cut is at present being driven at No. 8 or 500ft. level, for the purpose of cutting the Vanguard reef, near the Karaka—a reef about 13ft. thick, which went about $\frac{1}{2}$ oz. to the ton where tested at other places.

WAIOTAHU DISTRICT.

A new claim called the Darwin was taken up: in sinking their shaft a reef showing good gold was struck. In conjunction with a neighbouring claim machinery for winding, &c., has been erected, and the sinking of the shaft, and also a winze on the reef, is now in progress. Another claim, called the Moanataiari Extended, is also erecting machinery to test this reef, and have sunk their shaft to a depth of 138ft. Other claims, such as the Bright Smile, West Coast, Pinafore, still continue working in this district, for payable returns.

KARAKA DISTRICT.

The Adelaide, City of Manchester, Little Lizzie, and Lonehand still continue working steadily, and have all paid well. The Rocky Point has completed the long tunnel it put in in conjunction with the Adelaide. As gold was seen whenever the reef was cut the owners of both claims should have good prospects before them.

HAFU DISTRICT.

Dart Mine.—The sinking of the shaft was completed to No. 3 or 252ft. level, also the erection of new machinery. Operations have since been carried on from No. 3 level on No. 2 reef, from which 1,149 tons of quartz has been crushed, for a return of 1,378oz. of melted gold. The shaft is now being further sunk for the purpose of opening another level.

OTANUI DISTRICT.

New Eureka Mine.—The owners of this mine have erected a battery at the junction of the Otanui and Mangakirikiri Creeks at considerable cost, but, owing to not having a suitable road, have only had one small crushing. The stone crushed was good, yielding from $1\frac{1}{2}$ oz. to 2oz. to the ton. The driving and stoping done is about 700ft.: this includes 375ft. of a low-level tunnel, driven through very hard ground: this tunnel has still to be driven a considerable distance before the reef is cut. About 100 tons of quartz is to grass waiting conveyance to the mill.

Oriental Mine.—The lodes in this mine are more of a specimen class, and have yielded rich returns. A cross-cut has been driven for a distance of 180ft., but the leaders cut here did not prove payable. The amount of driving done is about 600ft. The gold return was £108 from 40lb. of stone. About 25 tons of quartz are in the paddock awaiting crushing: this is expected to give about 60oz. of gold.

Comet.—This claim has put in two cross-cuts, but, though getting good-looking stone, it has not as yet proved remunerative.

Anglo-Maori.—This small claim, two men's ground, has proved very good, going over an ounce to the ton.

OHINEMURI—OWHAROA DISTRICT.

This district has not flourished during the year, owing to the principal mine, the *Smile of Fortune*, only returning 507oz. of gold for the year, while the previous year it gave 2,124oz. This mine has, however, met with considerable mishaps this year both to its battery and its workings through the late floods, and has also done a large quantity of dead work in putting in a low level to intersect the workings of No. 3. From the appearance of the quartz now coming to hand the owners are sanguine as to the future success of the mine. One dividend has been paid during the year, amounting to £500.

Radical.—This claim has been worked by tributers, but the returns have not given wages: as has also been the case with the *Lucky-hit* and other claims in the district.

WAITEKAURI DISTRICT.

The Waitekauri, Waitekauri No. 3, and Welcome Extended are still being worked by tributers. In the latter a party of tributers won 86oz. 13dwt. melted gold from 2 tons of quartz, and expected they had got the flat run of gold of the Young New Zealand, but since the beginning of the year they seem to have lost it again.

WAIHI DISTRICT.

The new American turbine, which I mentioned in my last report as coming from America, has been erected and has now been working for the last ten months, and has crushed during that time 4,750 tons of quartz, for 1,631oz. of melted gold.

The following is a return of quartz, crushed and melted gold obtained for the year ending 31st March, 1884, for Hauraki South and North:—

District.	Month.		Quartz crushed.	Tailings treated.	Yield of Gold.
			Tons cwt. lb.	Tons cwt. lb.	Oz. dwt. gr.
Hauraki South	April,	1883	2,641 14 38	313 0 0	2,479 6 0
"	May,	"	2,042 4 5	535 0 0	2,697 17 12
"	June,	"	2,618 16 22	806 10 0	5,874 17 6
"	July,	"	3,476 12 22	610 5 0	4,430 10 0
"	August,	"	3,155 18 51	999 0 0	6,422 3 18
"	September,	"	3,063 0 67	712 0 0	6,383 12 12
"	October,	"	3,038 14 82	580 5 0	2,045 4 0
"	November,	"	3,091 0 98	593 1 0	4,190 18 12
"	December,	"	3,045 6 97	499 0 0	8,257 2 2
"	January,	1884	2,638 0 26	501 10 0	840 17 6
"	February,	"	2,437 1 18	350 0 17	6,536 8 18
"	March,	"	2,979 10 75	333 2 0	4,714 16 18
			34,228 0 41	6,832 13 17	54,873 14 8
Hauraki North	12 months	...	1,042 12 95	...	4,017 19 2
	Totals	...	35,270 13 24	6,832 13 17	58,891 13 10

I should have mentioned that very little work has been done in the Karangahake portion of the Ohinemuri Gold Field, but in one of the mines there (the Sir Walter Scott) very encouraging returns have recently been obtained from a small crushing. The ground in the neighbourhood is now being energetically prospected.

I have, &c.,

JAMES M. McLAREN,
Mining Inspector.

The Under-Secretary for Gold Fields, Wellington.

MARLBOROUGH GOLD FIELDS.

No. 5.

Mr. Warden ALLEN to the UNDER-SECRETARY for GOLD FIELDS.

Picton, 24th April, 1884.

SIR,—

I have the honour to hand you my report on gold fields under my charge for the year ended the 31st March, 1884.

QUEEN CHARLOTTE SOUND.

Closed at present.

WAIRAU VALLEY.

Very little to report concerning this district. Most of the miners from upper portion of the valley are at the present time away seeking more profitable employment. It is usual for a number of them to return to this field during the winter months. There are a few miners working alluvial claims in one or two of the gullies: they can only be described as earning a living.

In the Onamalutu Valley there are a few miners at work. They have to contend with great difficulties, viz., want of a road, and too much water on the low-lying claims.

The reefing claims are at a standstill. There is nothing to report on this subject.

PELORUS GOLD-MINING DISTRICT.—WAKAMARINA.

Alluvial and River Claims.—Miners working ordinary alluvial claims may generally be described as earning a living. Parties or companies working the larger claims have not found the past year a very profitable one. Floods, freshes, imperfect machinery, and mismanagement have in some cases tried the pockets and faith of the shareholders. Others have done and are now doing very creditable work, but not sufficiently advanced for any result to be reported at present.

In river claims the Caledonian and Go-Ahead Claims are the furthest advanced, and will most likely be the first to fairly test the value of the Wakamarina river-bed as payable ground.

Reefing Claims.—There is only one claim that can furnish matter for report, the Golden Bar Claim. The manager reports as follows: Length of tunnel to strike reef, 150ft.; length driven on reef, 220ft.; quartz to grass, about 300 tons. This company has expended a fair amount of capital on their claim, and still it may be described as not much more than surface or very shallow workings. I am informed that the stone will show about 15dwt. to the ton. If this is correct it should induce the company to vigorously push on the work.

In conclusion, I can only repeat an opinion formerly given, viz., that there is very little doubt about payable gold reefs being found in the dividing ranges between the Wakamarina, and Wairau, and Kaituna Valleys. It is simply a question of time, capital, and perseverance.

I have, &c.,

J. ALLEN,

Warden

The Under-Secretary for Gold Fields, Wellington.

NELSON GOLD FIELDS.

No. 6.

Mr. Warden GIBBS to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Cellingwood, 10th April, 1884.

I have the honour herewith to forward statistics relating to this gold field, and to report on the general condition of mining matters during the past year, and so far as relates to the nine months ending the 31st December, 1883, might almost repeat *verbatim* the report I made last year. Since then, however, there seems to be a general movement, indicating a revival of confidence in this field. The very excellent stuff reported by the manager of the Johnson's United Company to be found in the drives of this old claim, and the change of proprietary of the Red-hill leasehold, has caused quite a number of applications for leases and licenses to be made for ground in this locality. There is also an indication of increased activity on the part of leaseholders in the Anatori District, as also by those still holding leases in the Mount Arthur District, there being also several new applications for leases in this last-named place, amongst others one for constructing a capacious race or flume for bringing a large body of water from Lake Peel, with a view to hydraulic sluicing. There is said to be a large area of ground in this locality that would pay well if worked by that method. Hitherto the men working on sluicing claims have not had the capital to develop the real value of the ground by such a system of water-supply. If this company carry out their scheme it will not only enable them to work such ground as may be granted to them, but their surplus water will no doubt assist others to work their claims more profitably.

The want of some necessary road-making, and a water-supply, is still the great want here. There has been nothing whatever done in these matters during the past year. The moneys which Parliament has so repeatedly voted for road-making are still unexpended. Those I refer to are roads to Karamea, road to the Heaphy *via* Gouland Downs, road to Mount Arthur *via* Takaka and *via* Motueka. Some of these roads would open country available both to the miner and grazier. The only road-work done during the year out of money granted by Government is the expenditure of a small sum at West Wanganui, viz., the sum of £200 granted as a subsidy to the local body, being £2 to £1 for the improvement of the road to the reefs. This work I had the honour to report upon to you in August last. The local body spent nearly an equal amount to that granted to them. The road, however, although improved, is only just passable, and it would be very difficult to transport machinery over it. There have been some explorations (not completed) with the view of finding an available dray-road to Mount Arthur, without which it would be almost impossible to get machinery to these reefs.

Coal.—The mine known as the Cellingwood Coal Mine is turning out a regular and increasing quantity of coal: added to which a new company is about starting to work another part of the same field, with the intention of providing wharfage accommodation for shipping the coal in large sea-going vessels.

I have, &c.,

WILLIAM GIBBS,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 7.

Mr. Warden REVELL to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Westport, April, 1884.

I have the honour to forward herewith the statistical returns for the twelve months ending the 31st March, 1884, and to furnish the following general report upon the district, viz.:—

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WESTPORT SUB-DISTRICT.

In alluvial mining there is little to report upon, mining having been carried on much the same as last year.

During the past three months, owing to the extremely fine weather, the general supply of water for mining purposes has been greatly reduced, so much so that many of the claims are standing idle. The owners are taking advantage of the fine weather to repair their dams and water-races where necessary, and in several instances parties have set in to work the river beaches where available through the low state of the water.

In January last a prospecting claim was applied for, and granted to Messrs. Trahey, Carson, Hansen, and Masse, at Larrikins' Creek, about twenty-five miles up the Mokihinui River. This party had been out for some months prospecting in that locality. They produced about 17oz. of gold, consisting of large nuggets and very coarse gold. They reported that the country was exceedingly rough and almost inaccessible. A small rush set in, but many returned, and others took work on the track that was being made from the Mokihinui reefs at Seatonville up to the forks of the Mokihinui River, to enable persons going to the rush to get provisions up. The ground was tried afterwards, but the men have since left in consequence of the rough nature of the country and the difficulties they had to contend with in opening up the ground (which is full of enormous boulders and stones), and the patchy nature of the wash-dirt. The miners are not favourably impressed with the locality: it will be deserted until next summer.

In quartz-mining there are only a few companies doing any work.

The Great Republic Company surrendered their four leases, and have been granted a special claim of 99 acres over the same ground. This company have been engaged prospecting the ground, and sinking shafts and driving tunnels on the different levels. No. 1 level has been driven in 114ft., No. 2 level 100ft., both showing good gold-bearing stone. No. 3 level has been put in about 230ft. but will have to be continued for some distance yet before striking the reef. A large shoot and tramway has also been constructed. The general prospects of the company are considered very favourable, and it is expected that machinery will shortly be placed on the ground.

The Try-Again Company have men prospecting on the lease, but nothing definite has as yet been discovered.

At Mokihinui the *Mokihinui Gold-Mining Company* have seven hands engaged repairing the battery and water-wheel, and have expended £800 on the repairs of their dam and water-race.

The Red Queen Company have driven a tunnel in the low level a distance of 243ft., and one 200ft. in the upper level. Both levels are connected by a winze 125ft. in depth. The reef averages about 15in. in thickness, and shows very good gold throughout. This company will crush first at the Mokihinui Company's battery, to which they have paid a portion of the cost of the repairs. The stone will be conveyed by a tramway 37 chains long to the river, and then across the river by a wire rope to a shoot 300ft. in length at the battery.

The Guiding Star Company have driven in a tunnel from the Mokihinui Company's lease, towards their own lease for a distance of 245ft., and another tunnel on the upper level 146ft. along the line of reef, showing good gold the whole distance. They have also sunk a winze 90ft., and are now engaged driving the lower tunnel to meet the winze, and when completed it will be used to run the quartz from both levels to the battery of the Mokihinui Company, where they have arranged to crush.

The Golden Crown Company have men employed driving a tunnel from the eastward to cut the reef. This tunnel is in about 200ft., and the men expect to strike the reef shortly.

During the year 9 gold-mining leases and special claims were applied for at the Warden's office, Westport; 24 leases were executed; 19 leases were cancelled after execution, whilst 19 were forfeited for non-execution; 3 leases remain on hand for execution.

CHARLESTON SUB-DISTRICT.

Mining operations, which are all of an alluvial nature in this portion of the Buller District, have been steadily pursued during the past year, so far as the limited water-supply would admit.

The Government race, heading from the Argyle Dam at Deep Creek, has been extended during the above period to Argyle Terrace, and commands in its course some fairly remunerative ground, which, however, to enable the miners to work the same to advantage, will require the use of a large quantity of water for sluicing. The further extension of this race along the line of terraces ending at the Nile River is much needed, as some valuable ground is known to exist in that direction, and gold-mining leases have been held for years thereon in view of the completion of the race thus far. The extensive water-rights held by Mr James Butterworth, on the Four-Mile Flat and in Whisky Creek neighbourhood, have been largely used by the miners; and this race, standing as it does at a higher level than the Government race, commands a greater area for working.

With the exception of one party on Candlelight, who have erected a water-power machine for crushing cement, the whole of the claims in that locality have been worked during the year by sluicing, no alterations of any importance or value having been made during the said period. The same may be said of the Black Lead, and of the workings on the flats around Charleston.

At Croninville some twenty men are engaged sluicing, the greater part of their water-supply being obtained from the Totara River, from whence it is conveyed to the several claims by two races several miles in length, which have been constructed by the miners at considerable trouble and expense. The men engaged in this locality are comfortably housed, and express themselves well satisfied with the quality of their ground, which is held by them in extended claims. The great drawback to the profitable working of these claims is the number of large stones and boulders met with, which have to be stacked; and considerable expense is involved in the putting in of long tunnels to convey the tailings, &c., into the Totara River.

The miners working at the Four-Mile, Six-Mile, and Brighton are earning fair average wages.

The beach claims, from the Nine-Mile Beach north to Brighton south, have, as usual, been covered up with grey sand during some portions of the year, and at other times have been fairly remunerative. These claims are best adapted to men who have residence areas to employ themselves upon when their claims are unworkable, and notably so on the Nine-Mile Beach, where the privilege of a holding of an acre of land has been taken full advantage of, and the ground neatly fenced in and brought under cultivation.

The Creek claims in this sub-district, of which there are a great number, and in which the owners have inserted tables for catching the finer particles of gold coming down from the terrace workings, are considered good property; but their proprietors have not been remunerated during the past year as well as usual, owing to the very small rainfall, and the small number of claims in work on the terraces above.

During the past year this locality was visited by some thirty Chinese miners from the Inangahua District, who spread themselves over the old workings and did a certain amount of prospecting. A party of them started to prospect the valley of the Four-Mile River, but returned almost immediately to town disheartened, the weather having changed, and heavy rain making it impossible for them to camp out in the bush. Though expressing themselves dissatisfied with the fine gold around Charleston, they intimated their intention of returning at some future time to prospect the Four-Mile Valley, in which gold of a coarse nature has been found in several places, but hitherto not in payable quantities.

The survey of the new road from Brighton to the Seventeen-Mile Beach is drawing rapidly towards completion, and when the road is constructed there is no doubt it will prove of great benefit to the public, as it passes through a tract of country now being occupied under agricultural leases and pastoral licenses. The County Council have also partly completed a prospecting track in the locality leading from the sea-beach to the Paparoa Range, and it is conjectured that ere long this portion of the Charleston Sub-District will be found to be highly auriferous.

Owing to the absence of a constant water-supply at a fair price sufficient for the requirements of the miners, the Charleston Sub-District has undoubtedly declined during the year, both in population and prosperity, the men being compelled to leave the locality to search for employment elsewhere.

With a view to restore the former state of prosperity and to induce miners to visit the district, the townspeople have offered to assist a party of men to go out and prospect the back country, which, in the opinion of many practical miners, will be found to possess not only gold but other minerals.

LYELL SUB-DISTRICT.

During the last twelve months alluvial and quartz-mining matters have not been so flourishing as was anticipated in the last report. There are only two or three parties now working in the Lyell Creek, and another party ground-slucing on the banks thereof, who average fair wages. On the banks of the Buller River there are about one hundred miners steadily employed ground-slucing, but their labours have not been very remunerative owing to the scarcity of water, more particularly during the last two months.

The party of men referred to in my last report as having lost their dredge in the Buller River, have now constructed a new one, and are working the same with very favourable results.

On the Matakītiki there are still about a hundred men employed working the beaches of the river and its tributaries, but the returns for the past twelve months from this quarter have not been up to the usual average.

The construction of the horse-track from Murchison to Glenroy is now complete, and has proved a great boon to the miners and settlers in that locality.

QUARTZ-MINING.

There are fifty gold-mining leases and special claims held in this part of the district. During the past year transactions in mining stock have been very limited, in consequence of some of the mines not realizing according to expectations, although prospecting has been steadily pursued in some of the mines.

The *United Alpine Company* have been reorganized, and have increased their capital from £32,000 to £48,000. They have driven their No. 6 level a distance of 1,466ft., and struck the reef, which they have followed up for a distance of 150ft., the stone from which is now being crushed. To the end of the present week 160 tons have been crushed, yielding 267oz. of amalgam from the plates only, which return is considered highly satisfactory. They have let their No. 5 level to a party on tribute, who have had one crushing, which did not pay more than working expenses. This was owing to the amount of dead work they had to perform before they could arrive at the block of stone from which they will have their future crushing, which, according to present prospects, will be remunerative. This mine is now employing about sixty men.

The *Craesus Company* have now had three crushings from their mine, which were not considered payable, and the directors have decided to let the mine on tribute for twelve months.

The *United Italy Company* is now crushing stone taken from the cross-cut on the south side of the Eight-Mile Creek. The returns so far are poor, and have little more than paid working expenses: they employ about six men.

The *Victor Emanuel Company* during the past twelve months have done a considerable amount of work: they have driven two levels, and have sunk a winze from No. 2 level a distance of 140ft. upon the reef, and have driven from the winze some 50ft. more. They propose driving another level some 650ft. to connect the bottom of the winze, which will make it very convenient for the transit of stone from the mine to a battery which they contemplate erecting. The non-completion of the road has been a great drawback to the progress of the company.

The United Victory Company.—Operations in this mine, both as regards work inside and crushing, have been somewhat limited during the last twelve months, and at present all operations have been discontinued: the reef has been wrought from the intermediate up to the surface, and the result has not been a payable one. Since crushing operations were discontinued the company has been prospecting in No. 2 level south, with the object of ascertaining if the reef lined in that direction. So far nothing beyond a track has been found, but a better estimate may perhaps be formed when some cross-cutting has been done; for the present, operations are likely to be confined to prospecting.

Lyell Creek Extended Company.—This company's ground has been lying unworked for the greater part of the last year. A contract for driving the main level 250ft. farther is now in progress, and at the present time the full distance driven into the range is close upon 800ft. The nature of the ground is very hard, rendering progress difficult.

Tyr-Connell Company.—The ground held by the company comprises the greater portion of that formerly occupied and worked by the Break o' Day Company at Eight-Mile some few years ago. The present company recommenced operations some two months ago, and the work now in progress is that of extending No. 5 level with the view of striking the stone which was worked overhead, and some of which gave a highly remunerative return to the shareholders.

The construction of the road from the junction of the Lyell Creek Road to the Eight-Mile will be completed in about two months, and will greatly facilitate the mining operations in that vicinity.

Owen Reefs.—There were nine leases transferred from Nelson Office to Murchison in September, 1883, from the Owen District. Of these, five have had certificates of occupation granted to them, and the balance are awaiting survey. At the present time there is only one of these leases being worked by a party of four men, and, according to their prospects, the inducement, I believe, is not sufficient to warrant the other lessees to do any prospecting; whilst four or five applications are standing over until the surveys can be effected.

The following table shows the amount of calls made, dividends declared, and quantity of quartz crushed, and yield of gold therefrom:—

TABLE showing AMOUNT of CALLS made, &c., in the Buller District from the 1st April, 1883, to 31st March, 1884.

Name of Company.	Calls made.			Quartz crushed.		Yield.		
	£	s.	d.	Tons.	lb.	Oz.	dwt.	gr.
<i>Westport District.</i>								
Try-Again Gold-Mining Company (Limited) ...	312	10	0	...	...	...	...	...
South Pacific Extended Gold-Mining Company (Limited)	225	0	0	...	...	...	...	...
Reefton Gold-Mining Company, No. 1, (Limited)	75	0	0	...	...	...	...	...
Great Republic Gold-Mining Company (Limited)	1,841	13	4	...	...	...	...	...
Mokihinui Gold-Mining Company (Limited) ...	1,150	0	0	...	...	...	...	...
Guiding Star Gold-Mining Company (Limited)...	1,800	0	0	...	...	...	...	...
Red Queen Quartz-Mining Company (Limited)...	2,700	0	0	...	...	...	...	...
Golden Crown Gold-Mining Company (Limited)...	600	0	0	...	...	...	...	...
Mokihinui Morning Star Quartz-Mining Company (Limited)	300	0	0	...	...	...	...	...
Buller Gold-Mining Company (Limited) ...	...	...	...	...	...	...	...	...
Christmas Eve Gold-Mining Company (Limited)	...	...	...	...	...	...	...	...
<i>Lyell Sub-District.</i>								
United Alpine Quartz-Mining Company (Limited)	4,533	6	8	1,250	0	509	0	0
Cresus Quartz-Mining Company (Limited) ...	2,625	0	0	1,200	0	577	0	0
United Italy Quartz-Mining Company (Limited)	1,200	0	0	150	0	84	0	0
Victor Emanuel Quartz-Mining Co. (Limited)	450	0	0	...	...	...	...	...
Day-star Quartz-Mining Company (Limited) ...	200	0	0	...	...	...	...	...
Time-will-Tell Quartz-Mining Company (Limited)	184	7	6	...	...	...	...	...
Cosmopolitan Quartz-Mining Company (Limited)	25	0	0	...	...	...	...	...
Bendigo Quartz-Mining Company (Limited) ...	83	6	8	...	...	...	...	...
Auburn Quartz-Mining Company (Limited) ...	50	0	0	...	...	...	...	...
United New South Wales Quartz-Mining Company (Limited)	170	0	0	...	...	...	...	...
Great Wonder Quartz-Mining Company (Limited)	100	0	0	...	...	...	...	...
Ballarat Quartz-Mining Company (Limited) ...	233	6	8	...	...	...	...	...
Republic Quartz-Mining Company (Limited) ...	200	0	0	...	...	...	...	...
No. 2 Alpine Gold-Mining Company (Limited) ...	33	6	8	...	...	...	...	...
South British Quartz-Mining Company (Limited)	166	13	4	...	...	...	...	...
Capra Quartz-Mining Company (Limited) ...	87	10	0	...	...	...	...	...
Sydney Quartz-Mining Company (Limited) ...	166	13	4	...	...	...	...	...
Tyr-Connell Quartz-Mining Company (Limited)	200	0	0	...	...	...	...	...
United Victory Quartz-Mining Company (Limited)	2,100	0	0	380	0	285	0	0
	21,812	14	2	2,980	0	1,455	0	0

The statistical returns show that there are 490 water-races, of an aggregate length of 379½ miles, registered to carry 1,307½ heads of water, valued at £41,075; 250 tail-races at £13,248; 550 dams and reservoirs at £18,030; and 135 ground-slucies at £7,500. These, taken together with the mining plant and machinery, estimated at £17,000, show the total value of mining property in the district to be £96,853 sterling.

Sittings of the Courts have been held regularly every three weeks at Westport, Charleston, and Lyell, and every six weeks the Court is appointed to sit at Murchison, but if there is no business to transact the Court is adjourned by the Receiver of Gold Revenue, who attends regularly every three weeks to transact business with the miners from the Matakitaiki, Owen, and other portions of the district in that locality.

I attach herewith return showing the total population, the cases disposed of in the Resident Magistrate's and Warden's Courts, the number of miners' rights, licenses, and registrations, &c., issued, the revenue collected at each office, and the estimated yield of gold.

The following is the return of cases in the Resident Magistrate's and Warden's Courts for the twelve months ending 31st March, 1884:—

—	Resident Magistrate's Court.		Warden's Court.	Totals.
	Civil.	Criminal.		
Westport	155	131	5	291
Charleston	12	12	11	35
Lyell	83	19	7	109
Murchison	13	2	1	16
Totals	263	164	24	451

The following is the return of revenue for the twelve months ending 31st March, 1884:—

—	Westport.		Charleston.		Lyell.		Totals.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.
Warden's Department, Gold Fields ...	1,201	14 3	563	10 3	956	1 3	2,721	5 9
Ditto, Colliery Reserve ...	505	15 0	...	...	...	...	505	15 0
Resident Magistrate's Department ...	177	7 6	7	0 0	72	11 0	256	18 6
Totals	1,884	16 9	570	10 3	1,028	12 3	3,483	19 3

The following is the return of miners' rights, licenses, registrations, &c., issued during the twelve months ending 31st March, 1884:—

—	Westport.	Charleston.	Lyell.	Totals.
	Miners' rights	188	275	166	629
Business licenses, £5	1	...	2	3
Business licenses, £3	2	...	5	7
Water-race licenses, 5s. ... ..	...	3	...	3
Water-race licenses, 2s. 6d.	71	202	89	362
Registrations, 10s.	10	3	11	24
Registrations, 1s.	95	610	47	752
Mining applications	49	217	80	346
Applications for gold-mining leases ...	9	2	1	12
Gold-mining leases granted	12	1	3	16

The following is the estimated yield of gold: Westport, 4,123oz. 13dwt. 4gr.; Charleston, 4,752oz.; Lyell, 3,400oz.: total, 12,275oz. 13dwt. 4gr.

The following is the estimated population: Westport, 2,832 Europeans; 11 Chinese: total, 2,843. Charleston, 831 Europeans. Lyell, 550 Europeans; 11 Chinese: total, 561. Murchison, 400 Europeans. Total population, 4,613 Europeans; 22 Chinese: total, 4,635.

I have, &c.,

W. H. REVELL,
Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 8.

Mr. Warden REVELL to the UNDER-SECRETARY for GOLD FIELDS.

Sir,—

Warden's Office, Reefton, 12th May, 1884.

I have the honour to forward herewith statistical returns for year ended 31st March last, and to report on the Inangahua District during same period.

The past year was in many respects the worst this district has experienced for a very long time. This may in a great measure be attributed to the rash speculations two years ago, the very heavy calls made during the last two years (amounting to no less a sum than £110,801), the non-success of some of the new undertakings, and depression in mining circles. The yield of gold shows, unfortunately, a decrease compared with the previous year: the reason for this, however, is given further on in the detailed accounts of the mines. There has been a great amount of work done in all parts of the field in and about the several mines in prospecting, in opening them up properly, and in the erection and completion of machinery of different kinds, the whole involving the expenditure of large sums of money.

During the year a great number of goldmining occupation certificates and leases, applied for during the previous two years, have been cancelled, and I cannot deprecate too strongly the taking up of leases for purely speculative purposes, for it is in this way large sums of money greatly required for the proper development of the district are diverted.

I will now pass on and say a few words with reference to the mines, commencing in the Boatman's District.

Welcome Company.—The erection of winding gear and plant connected with the rock-borer has been completed. The machinery has been placed inside the mine in a chamber to which I made reference in my last report. From the engine inside the mine a flue 800ft. in length has been constructed through the old workings, which carries off the smoke, and at the same time serves to ventilate the mine. This claim has been for some years past one of the chief gold-producing mines in this district. During the past year, however, crushing operations have not been continuous, and consequently the yield of gold has not quite come up to former returns. Since the completion of the machinery, No. 7 level has been properly opened up, and very good stone is being obtained. At the machine-house a patent-lift tailings-pump has been erected. This pump lifts the tailings direct from the tables to the berdans, and thus effects a considerable saving of labour. Everything here is now in perfect order, consequently good returns and dividends may be expected for some time.

Fiery Cross.—This company, after performing a lot of uphill work, has sent a quantity of good stone to the battery, and from this have been enabled to clear off all liabilities, and declare dividends to the amount of £3,000. Crushing operations are being continued, and the company has good prospects.

Hopeful.—The work has not been productive of beneficial results. Small crushings have been had from time to time; the yield, however, has not, owing to the cost of raising the stone, been sufficient to encourage the company to do any further work for the present. The workings have been let on tribute, and the tributers are now waiting to have a crushing at the Just-in-Time and Fiery Cross Battery.

Eureka.—This company is still employed in driving the incline tunnel to strike the Welcome reef, and have attained a distance of 1,084ft. The average driving with the rock-borer is, according to the nature of the ground, from 70ft. to 80ft. per month.

Just-in-Time has been working, in conjunction with the Imperial (now part owners of the shaft and winding-gear erected here), in driving a cross-cut 260ft. east from the bottom of the shaft along the boundary of the two claims. The *Just-in-Time* is driving north from the cross-cut, and have reached a distance of about 340ft., 240ft. requiring yet to be driven to reach the surveyed position of the eastern reef.

Imperial has driven south from cross-cut just mentioned to a point near where the lode should have been in that level had the reef had an easterly underlay, as is usual in this locality. The present work consists of sinking on the reef from the upper levels, where the reef had turned over to the west. The reef is somewhat broken, but it is thought it will make stronger when it assumes the proper underlay.

Walhalla has been prospecting for the old western reef of the *Just-in-Time* Company by rising, on what was thought by some as the track of the reef, from the Boatman's Creek level. Work has now been temporarily suspended.

In the Larry's Creek District work has been confined to the Caledonian Company, which has been prospecting with an uprise from the lowest level, and is now driving south on the track of a reef and getting well under the old No. 2 South Larry's Creek workings.

In Italian Gully a party of miners have taken the Golden Arch Claim on tribute.

The Low-level Tunnel Company at Boatman's has completed the erection of rock-boring machinery.

In the Murray Creek District I would first refer to the Black's Point Low-level Tunnel Company. Work is still being carried on here, but, as hand-labour only is employed, progress is naturally slow. Rock-boring machinery could be used to great advantage: the company, however, is unable to obtain such machinery, as the cost would be too great when it is taken into consideration that calls are limited to one penny per month.

Englewood.—This company has, in conjunction with the Phoenix, completed the erection of a 10-head battery driven by steam. Crushing was started at the battery on stone from this mine, but was discontinued after about ten days for want of water for the tables, the season having been an unusually dry one. In order to meet this difficulty and to economize the water, a pulsometer has been erected, which has, I believe, been found to answer the purpose for which it was required. Work has been going on, off and on, in this mine for some years past, and stone from time to time

crushed at the Golden Treasure battery, some considerable distance away from the mine. It is anticipated that, if the average of past yields is maintained, this mine should prove dividend-paying, as the company, having a half-share in a battery which is close to the mine, will make a considerable saving in the cost of carriage and crushing. The mine is well opened up, and a large body of stone exposed, sufficient to warrant the belief that it will keep the battery employed for a long time.

Phoenix.—Crushings have at various times been had from this mine in past years at the Golden Treasure battery, from which payable results have been obtained. The work during the past year has been the connecting of the upper with the lower levels, and placing the mine in a position to get out stone by contract.

Golden Fleece Extended.—The work in this mine during the year has been confined chiefly to prospecting in the lower levels by extending No. 5 level north and sinking from this and No. 6 levels. The lowest workings have now attained a depth of 860ft. from the outcrop of the lode. The ground is being worked by rock-borers, driven by compressed air. Very great enterprise has been shown by this company.

Wealth of Nations.—A low-level tunnel is now being driven to intersect blocks of stone formerly worked, and from which such excellent results were obtained. The distance to be driven is 800ft.

Keep-it-Dark—Has now opened up the low level and proved the reef to be going down of the same payable character as in the upper levels. The existence of stone is now proved sufficient to keep the battery employed for years. The yield of gold and the dividends for the year did not quite come up to the previous year, as the battery was idle for a considerable time, during which it received a complete overhaul, and the course of the race was altered and deepened at great expense. Dividends are now being regularly declared, and there is every indication that this will continue to be done for a long time.

Golden Treasure.—At the machine-house great changes have been effected by the removal of some of the old and light stampers, which have been replaced by heavier ones.

In the Rainy Creek District the erection of a thirty-head battery for the Inkermann Company is nearing completion. This battery, which will be driven by steam, is a very complete one, and the most powerful on this field. It will be able to reduce over 300 tons of stone per week. In the mine the reef is of large dimensions, in fact the largest in the district. Some three or four years ago this company crushed some 2,000 tons of stone at the Rainy Creek battery, which proved to be worth a little under £1 per ton. Should future yields be of the same quality this claim should prove a payable one.

In the Devil's Creek District is situated the Globe Mine. The erection of the battery and aerial tramway in connection with this mine have been completed. Crushing has been going on for the last six months, and has proved that, although the stone is not quite so good as was expected, it is still of a payable character, and would have enabled the company to declare small dividends if it had started crushing free of liabilities. The aerial tramway has worked fairly well, and answers expectations.

Golden Point.—This company has during the year spent over £2,000 in working the mine, viz., £1,100 by calls, and £1,000 by gold produced. The development of this line of reef has not been profitable. Some seven or eight new quartz veins were discovered, varying from a few inches to 4ft. in thickness; none, however, proved payable. This is one of the unsuccessful new ventures. The others are the Lankey's Creek at Lankey's Creek, the Oriental at Devil's Creek, and Specimen Hill at Boatman's. The Oriental apparently requires additional crushing power to make it payable. The crushing operations of the Specimen Hill have not so far been attended with beneficial results, but it may yet come to the front after further prospecting.

The following is a summary of the revenue collected and business transacted:—

Miners' rights issued, 577; business licenses at £5, 18; business licenses at £3, 69; water-races at 5s., 3; water-races at 2s. 6d., 148; registrations at 10s., 11; registrations at 1s., 285; mining applications, 216; applications for gold-mining leases, 10; gold-mining leases granted, 95, refused, 12.

Revenue: Warden's department, £4,489 8s. 2d; Resident Magistrate's department, £250 15s.; local Land Office department, £920 14s. 3d. (the two latter showing an increase); and fees, Licensing Courts, £21 11s.

Return of Cases: Civil, 430; criminal, 136; Warden's, 59.

I estimate the population as follows: Reefton, 1,235 Europeans, 23 Chinese; Murray Creek, Black's Point, and Crusington, 620 Europeans and 4 Chinese; Boatman's, Italians, Due North, Redman's Landing, and Cronadun, 550 Europeans and 85 Chinese; Maori Gully, Devi's Creek, Slab-hut, and Merrygigs, 60 Europeans and 180 Chinese: total, 2,465 Europeans and 292 Chinese.

The yield of gold for the year is—Alluvial, 6,307oz., of the value of £23,966 12s.; gold from mines, 16,547oz., of the value of £64,456 7s. 5d.: total value, £88,422 19s. 5d.

A number of roads and tracks have been made by the County Council during the year, thus opening up the country and rendering the carriage of machinery easier and consequently far less costly. The following roads have been made, viz., up Rainy Creek, Murray Creek, Caple's Creek, and Little Boatman's Creek, as far as Low-level Tunnel. From Devil's Creek to the Big River there has been one mile of dray-road and six and a half miles of track constructed. A track has also been made from Boatman's to Larry's Creek. Another very important piece of work has now been undertaken by the Council, viz., the construction of a reservoir for fire-preventive purposes.

The current year I have every reason to believe will be much more prosperous, as many of the companies have now got over the dead work that is necessary in every mine, and are now crushing or about to do so.

I append a table showing calls made, dividends declared, &c., during the year.

TABLE showing the AMOUNT of CALLS made, DIVIDENDS declared, &c., in the INANGAHUA DISTRICT, from the 1st April, 1883, to the 31st March, 1884.

Name of Company.	Calls made.		Dividends declared.		Quantity of Quartz crushed in Tons.		Yield in Ounces.
	£	s. d.	£	s. d.	Tons.	Oz.	
Keep-it-Dark Quartz-Mining Company ...	...	...	12,000	0 0	7,373	5,510	
Golden Treasure Gold-Mining Company ...	3,600	0 0	...	...	...	11	
Result Gold-Mining Company ...	400	0 0	...	...	...	...
No. 2 Welcome Gold-Mining Company ...	400	0 0	...	...	...	...
No. 2 South Keep-it-Dark Gold-Mining Comp'y.	100	0 0	...	...	...	...
Energetic Extended Quartz-Mining Company ...	600	0 0	...	...	280	70	
Golden Fleece Extended Quartz-Mining Comp'y.	4,400	0 0	...	...	697	477	
Golden Fleece United Quartz-Mining Company	1,200	0 0	...	...	...	...
Fiery Cross Extended Quartz-Mining Company	600	0 0	3,000	0 0	2,108	2,811	
Royal Quartz-Mining Company ...	50	0 0	...	...	...	...
Inglewood Extended Quartz-Mining Company...	2,050	0 0	...	...	...	...
Balaklava Quartz-Mining Company ...	166	13 4	...	...	...	...
Caledonian Extended Quartz-Mining Company...	1,416	13 4	...	...	...	...
Imperial Quartz-Mining Company ...	2,250	0 0	...	...	...	...
Inangahua Low-level Tunnel Company	400	0 0	...	...	...	...
Just-in-Time Gold-Mining Company ...	700	0 0	...	...	...	...
South Hopeful Quartz-Mining Company	266	13 4	...	...	...	...
Walhalla Extended Quartz-Mining Company ...	550	0 0	...	...	...	...
Globe Gold-Mining Company ...	4,050	0 0	...	...	4,000	1,312	
Lankey's Creek Gold-Mining Company ...	2,100	0 0	...	...	680	73	
Rainy Creek Extended Quartz-Mining Company	500	0 0	...	...	...	...
Eureka Extended Quartz-Mining Company ...	1,900	0 0	...	...	...	...
Advance Gold-Mining Company ...	100	0 0	...	...	...	...
Welcome Gold-Mining Company ...	...	...	1,500	0 0	2,842	4,247	
Specimen Hill Extended Quartz-Mining Comp'y.	5,791	13 4	...	...	940	319	
Phoenix Extended Quartz-Mining Company ...	1,066	13 4	...	...	...	...
Oriental Gold-Mining Company ...	1,900	0 0	...	...	2,580	746	
Junction Gold-Mining Company ...	50	0 0	...	...	...	...
Occidental Gold-Mining Company ...	250	0 0	...	...	...	...
Big River Extended Gold-Mining Company ...	600	0 0	...	...	...	...
Southern Cross Gold-Mining Company ...	300	0 0	...	...	...	...
Hopeful Extended Gold-Mining Company ...	1,031	5 0	...	...	853	578	
North Specimen Hill Gold-Mining Company ...	50	0 0	...	...	...	...
Comstock Extended Gold-Mining Company ...	300	0 0	...	...	...	...
North Cleopatra Gold-Mining Company ...	250	0 0	...	...	...	...
Golden Arch Gold-Mining Company ...	200	0 0	...	...	...	...
Shotover Gold-Mining Company ...	50	0 0	...	...	...	...
Ophir Gold-Mining Company ...	100	0 0	...	...	...	...
Lord Edward Gold-Mining Company...	100	0 0	...	...	...	...
Wealth of Nations Extended Quartz-Mining Co.	3,250	0 0	...	...	80	122	
Golden Point Gold-Mining Company ...	1,100	0 0	...	...	1,000	271	
Inkermann Quartz-Mining Company ...	3,583	6 8	...	...	...	...
Nil Desperandum Quartz-Mining Company ...	383	6 8	...	...	...	...
Homeward Bound Extended Gold-Mining Co. ...	300	0 0	...	...	...	...
Venus Gold-Mining Company ...	500	0 0	...	...	...	...
Great Eastern Quartz-Mining Company ...	400	0 0	...	...	...	...
Brutus Quartz-Mining Company ...	50	0 0	...	...	...	...
Eclipse Quartz-Mining Company ...	50	0 0	...	...	...	...
Alluvial gold ...	49,456	5 0	16,500	0 0	23,433	16,547	
Total yield in ounces ...	...	...	...	...	...	22,854	

Sittings of the Resident Magistrate's and Warden's Courts have been held regularly every three weeks in conjunction with those of Westport, Charleston, and Lyell, the Justices of the Peace sitting, when required, to dispose of police or criminal business which may arise between the regular sittings.

I have, &c.,

W. H. REVELL,
Warden.

The Under-Secretary for Gold Fields, Wellington.

WESTLAND GOLD FIELDS.

(Including part of Nelson South-West Mining District.)

No. 9.

Mr. Warden STRATFORD to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Greymouth, 1st May, 1884.

I have the honour to forward herewith the statistical returns of the mining districts under my charge, and to add a general report for the year ending the 31st March, 1884.

Barrytown.—The mining population between Cobden and Barrytown is gradually decreasing, the present findings having been pretty well exhausted. The total number of miners between Cobden and Razorback is about 120. Most of them are ground-slucing. The average earnings are from £3 to £4 a week per man. There are a few miners working on the beach, but their earnings are not more than £2 10s. to £3 a week. There is sufficient ground to maintain the present population for several years, but unless new ground is discovered I do not think the number is likely to increase. A contract has been let for the construction of a bridge over the Grey River, which when completed will be a great boon to the residents between Cobden, Barrytown, and Greymouth, also to the farmers of Coal Creek.

Brunnerton and Langdon's.—There are still a few miners scattered about between Brunnerton and Langdon's. Their earnings during the past year have been rather small.

South Beach.—Between Greymouth and Teremakau Rivers there are about sixty miners employed, engaged in sluicing operations. A large portion of old ground is being worked again by means of tail-races carried into the sea, and is paying very well.

Cameron's Terrace.—Most of the miners have abandoned their claims in this locality owing to the poor nature of the ground and the difficulties of working. At present there are not more than twenty employed.

Rutherglen.—Manuka Flat and Rutherglen find employment for about eighty Europeans and sixty Chinese. The return of gold from this locality has been larger than usual during the past twelve months, in consequence of the great rainfall. The difficulty of bringing water on to the ground prevents a large portion of it being worked, the principal water rights being held by a few parties. Those who have a constant supply are doing very well.

Welshman's.—The population of this locality is about the same as last year. The scarcity of water is much felt: there is a large area of ground which would pay well for sluicing if a permanent supply of water could be brought on to it.

Marsden.—No change worthy of note has taken place in this portion of the district since the date of my last report. I think the number of Chinese has slightly increased during the past year. Chinese often work ground left by Europeans, they being quite satisfied as long as they can earn as much as £2 a week, but Europeans do not care to work for anything under £3 a week per man.

Greenstone.—The mining population is about two hundred, nearly half this number being Chinese. Most of the Chinese are working in the bed of the Greenstone Creek, and, judging from the expensive wing-dams and tail-races they have constructed, I think they will have constant work for many years. The Erin-go-Bragh Water-race Company have extended their race from Hayes' Terrace to Payne's Gully, and it is probable that some parties may set in to work in that locality, as gold was found there several years ago, and some few miners have been working recently and obtaining fair wages. Hitherto the want of water has been a great drawback, but since the extension of the Erin-go-Bragh Race they will have a constant supply. Generally miners are doing fairly well in this locality. The parties working in the bed of the Greenstone Creek have great difficulties to contend with in wet weather: the creek very often rises to such a height as to flood their claims out, and the holders are thereby put to considerable trouble and expense to get them into working order again; but, with all these obstacles, they appear to be satisfied with their earnings.

No-town.—No new find of any magnitude has taken place during the past twelve months. The population remains about the same as it was at the date of my last report. The old claims are yielding average returns. The miners are earning from £2 to £3 a week per man. The population is very much scattered.

Dunganville.—I have nothing of importance to report about this portion of the district. All the miners in the locality appear to be well employed. Some of the claims are paying very well, yielding from £8 to £12 a week per man.

Arnold.—The population has slightly decreased during the past twelve months, many of the old claims being worked out. There is one matter worthy of note, viz.: A company have applied for a lease of ten acres of land in the bed of Maori Gully Creek, which they intend to work by a method in which a tail-race is not required. The creek referred to runs into a narrow gorge of sandstone reef. This gorge was originally about forty-five feet deep, but has become almost filled up with tailings by miners sluicing into it, and the object of the company is to lift these tailings by means of dredges, and sluice them over again. Should the venture prove a success it will cause quite a stir in mining matters in this and other parts of the district, as there are numerous creeks that have been filled up in the same manner, and remain unworked in consequence of there not being sufficient fall for tailings if worked in the ordinary way. The creek-bed deposits are said to be highly auriferous.

Ahaura.—At Moonlight, including Baxter and Caledonian Creeks, the European population is about twenty-six, and about forty Chinese. The average wages of the former are about £2 10s. a week: those of the latter I have not ascertained; they display a remarkable reticence respecting the amount of their earnings. All work is carried on by sluicing.

Slaty Creek.—There are about twelve Chinese and the same number of Europeans, the earnings being nearly the same as at Moonlight.

Nelson Creek.—The water-supply has considerably increased during the past twelve months, and consequently ground sluicing is now being carried on to a large extent. The return of gold from this locality is steadily increasing. Several new claims of large area have recently been granted, and I therefore anticipate a larger return of gold during the ensuing year than has hitherto been obtained.

Blackball Creek.—The European population is about twelve, while the Chinese, including those at Ford's Creek, number about thirty. Owing to the great difficulties of carriage, the prices of provisions are much higher than in other parts of the district. The workings are principally in creek-beds, and also on terraces where water is available. The quartz reefs in this locality are being steadily prospected, but the huge seams of coal that meet the eye continually as the track is followed up remain untouched.

Noble's Creek.—The population is thirty, all European. Nearly all the residents have been settled there many years, and have made comfortable homes: most of them appear to be satisfied with the result of their labours.

Granville.—The population is about sixty Europeans. Work is being carried on by sluicing and tunnelling. The average rate of wages is about £3 a week per man.

During the past year there have been 286 civil and 299 criminal cases heard in the Resident Magistrate's Court, and in the Warden's Court 100 cases on complaints, 104 mining disputes on objections, and 882 applications. The total amount of revenue, exclusive of gold duty, has been £3,755 11s. 4d. This does not include revenue paid to borough or county accounts.

I have, &c.,

H. A. STRATFORD,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 10.

Mr. Warden GILES to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Hokitika, 22nd April, 1884.

I send herewith the usual statistical forms for my district. In addition to the information contained in them, the following general remarks may be offered:—

Kumara.—There is nothing specially requiring notice in the condition of this part of the district during the past year, except the difficulties which have occurred in connection with the main tail-race, commonly but, as I conceive, erroneously called "sludge-channel." These difficulties and their history are so well known to the Government, and have so recently formed the subject of a report by myself in another capacity, that it cannot be necessary to discuss the matter at any length on the present occasion. But, for the purpose of preserving some continuity in the yearly reports on the state of the district, the general state of the question may be briefly sketched. It was very soon found that the sludge-channel was not capable of accommodating the number of claims which had been permitted to open into it. The wooden blocks wore out so rapidly that the work of repairing was almost constant, and the stoppages, owing to this cause as well as to the frequent choking of the channel, caused much hindrance to work and much dissatisfaction amongst the miners. In consequence of the rapid wear of the wooden blocks, stone paving was afterwards tried, and this, whilst it proved more lasting, at the same time was found to cause more friction, and thus to some extent still further to diminish the carrying power of the channel. An inquiry was held with reference to the management and working of the sludge-channel in January last by Mr. Gordon and myself, a report of which was made to the Government in due course. Some time prior to this a new set of conditions for the use of the sludge-channel was put forth by the Government, but its operation was suspended until further inquiries could be made, inasmuch as the miners considered some of the conditions unnecessarily restrictive, and were also rather taken by surprise by the proposed mode of dealing with the question between the earlier and later right-holders. A fresh code of conditions has since been framed, and application has been made by the manager of the channel to myself for approval, in compliance with the mining regulations relating to main tail-races. This matter is not yet dealt with, a certain time having been given for claim-holders connected with the channel to make objections to any clauses which they may think unfair, but it is probable that this part of the business will very shortly be disposed of. It will be seen from the above outline that the state of things connected with the sludge-channel is not so satisfactory as could be wished, and that the difficulties are to a large degree of a physical character, and not likely to be wholly surmounted. Nevertheless the channel is the means of enabling a good deal of work to be done, and it may be hoped that, when once general principles and legal questions have been definitely settled, things will go more smoothly, and difficulties be reduced to the minimum that the nature of the case permits. A good deal of fairly satisfactory work may yet be expected if the discharge of tailings is not hindered by the blocking of the river-bed. Grave fears of this contingency have been felt and expressed, and it seems very desirable that some skilled opinion should be obtained upon this subject, with the view of determining whether any reasonable outlay upon any part of the river bank would have the effect of preserving the tailing site. There are of course many claims on the Kumara diggings not connected with the sludge-channel, but taking water from the Government race, and others are supplied by Mr. Holmes's race. To all those which are supplied with Government water the increase in the supply by the enlargement of the race, and by the formation of a new dam, will prove a valuable acquisition, since it is considered that a month's supply will now be available, and it is not often that rain falls for a longer period than that.

Waimea.—The old digging townships of Stafford and Goldsbrough and the mining claims scattered around them show no very great change from year to year. In my last report I mentioned the grant of a special claim of fifty acres upon Kelly's Terrace. The progress of these things is necessarily slow, especially when ample capital is not forthcoming to enable work to be pushed on with vigour. But this undertaking is not abandoned: a company has been formed, a right has been obtained to a head-race six miles long and carrying twenty heads of water, a dam site has been obtained, and the drainage tunnel is now in course of construction. The success of this enterprise would have a very beneficial effect upon that part of the district. The main road between Stafford and Goldsbrough has during the past year been deviated at Tunnel Terrace for about a mile and a quarter. The old road, which used to be a great source of trouble to the miners by reason of the necessity they were under of fluming their tail-races and tramways over it, has now been given up to them, and is fast becoming covered with tailings; whilst the new one takes a more elevated course, well out of the way of the tail-races.

Hokitika.—The Humphrey's Gully Company, with its large water-race, occupies the largest share of public attention in gold-mining matters in this part of the district. This undertaking has been delayed by difficulties of various kinds, the principal of which appears to have been caused by the "pug," as it is familiarly called in these parts, which was met with in driving the tunnel destined to carry the large quantity of water which the company hope to bring in. For a long time this "pug" seemed to present an insuperable obstacle to the work, thus causing an interval during which calls had to be paid without any apparent progress being made towards any satisfactory result. But at last, owing partly to the adoption of a mechanical device suggested by Mr. Blair, and partly perhaps to the progressive drainage of the ground through the open drive, the difficulty was overcome, and the work is now progressing satisfactorily. This company holds a right from the Warden's Court to a part of the head-race; whilst the other, which goes through the Harbour Board reserve, is granted by that body. The same is the case with another large water-right held by Mr. John Maher, and the matter is further complicated by the circumstance that one of these parties has the superior right to that portion of his race which is within and the other to that which is without the Harbour Reserve. How far this complication, together with the perhaps rather dangerous closeness to each other of these large races, may hereafter cause difficulties will be seen when Mr. Maher has succeeded in forming a company and proceeds to construct his race. In the meantime attention may be confined to the company's race, which is of a truly remarkable size and capacity. The timber-work that carries the race for about three-quarters of a mile across the valley must strike every one as a very fine and substantial structure, and almost suggestive of a railway viaduct rather than an aqueduct. Some doubts have been expressed whether this company will be able to obtain an adequate supply of water at the level at which they propose to tap the tributaries and sources in the Arahura Watershed. The directors, however, express themselves as perfectly satisfied with the reports they have obtained as the result of repeated inspections by skilled persons, and they do not entertain a doubt of having an abundant supply of water in the driest weather. If these expectations are fulfilled I should suppose that the success of this great undertaking is assured, and its success must be attended with very beneficial results to the district by reason of the large amount of auriferous ground ready to be sluiced.

Kanieri.—The Rimu diggings are very quiet at present, the majority of the claims paying moderate wages, and nothing new having been lately discovered. This field cannot be considered a lasting one, unless a new lead or an extension of the old one can be traced. There are some parties prospecting in the neighbourhood, but hitherto without any decided results. There is nothing else in this part of the district requiring particular attention, unless it be the discovery of coal in the neighbourhood of the Kanieri River. A lease has been applied for to the Land Board, but sufficient is not yet known of the extent and dip of the seam to justify any very sanguine expectations.

Totara.—A great impetus has been imparted by recent mining speculation to business enterprise in the little town of Ross. New and substantial houses and business places have been erected, and high expectations are indulged with regard to the future of the place. But the actual success of the important mining works undertaken remains still a matter of expectation, and all that is possible is to show how much good work has been done to warrant the reasonableness of the expectations formed. The Ross United Gold-Mining Company, which replaces the Ross Gold-Mining Company, with a capital enlarged from £30,000 to £150,000, have purchased the special claims of two other large companies, and now hold an area of over two hundred acres of land. Their main shaft on the Ross Flat is sunk to a depth of considerably over 300ft., and they hope soon to reach the bottom known as the Cassius level, where a very rich layer of gold was formerly met with. This company's plant seems now to be in excellent working order: the pumps are proving equal to all requirements, and the hydraulic winding machinery is also in position and ready for use when the shaft is bottomed. The drainage tunnel has been extended to the old turbine claim on Jones's Fat, and drains the ground in that direction to a much greater depth than was the case with the old workings. At that place the company are erecting elevator machinery, consisting of a turbine capable of being driven up to sixty horse-power, geared to drive the elevator belt with sixty buckets of a capacity of seven cubic feet each, capable of lifting 180 tons of *débris* per hour. The mode of working will be to sluice the dirt into a pit, from which the elevators will scoop out the gravel and sediment, the water used for sluicing being carried away through the drainage tunnel. The gold will be saved before it reaches the pit where the elevators work by means of ordinary sluice-boxes. The gravel raised by the elevators will be discharged on a grating, all the stones rolling into trucks, and the fine gravel falling into boxes where it will be sluiced, thus saving all gold that may have escaped the first boxes. This company have also constructed a drainage tail-race from the ocean beach at Donoghue's to the south-west of that portion of the claim known as Hansberry's Lease, 35 chains in length, and another section of 15 chains will bring it to Clear Creek, where it is intended to erect a second set of elevators. It is supposed that this company, when in full working order, will give employment to from two hundred to three hundred miners, a consideration which makes its success a matter of legitimate desire.

The next company to notice is the Prince of Wales Gold-Mining Company at Donoghue's, who are working by a similar process to the elevators to be erected on Jones's Flat. This claim is in working order, and only now waiting for a constant supply of water. They have also a drainage tunnel to their claim from the ocean beach 31 chains in length, and draining the ground to a depth of 50ft. at the place where the elevators are erected. The head-race is now constructed for a distance of nearly four miles, and is getting its supply from numerous small streams on the western slope of the Greenland Range. The race, so far as it is constructed, consists of tunnelling and open cutting, and will carry forty Government heads of water. The race is now within one and a half miles of the Mikonui River, from which it will obtain an unfailing supply of water. This company's claim is considered by many likely to prove the best-paying claim in the district.

Of the other large companies the old-established ones known as the Mount Greenland and Mount D'or Companies are foremost. The latter have lately obtained a special claim of fifty acres, and are making a considerable extension of their head-race. The Donnelly's Creek Gold-Mining Company have been greatly delayed by "pug" in the construction of the drainage tail-race tunnel, and the contractors were at length obliged to throw up the contract. The company have again let the unconstructed portion of the tunnel, and it is hoped that the new contractors will be more successful.

The Ross No. 2 Gold-Mining Company purchased a "Tifin borer" for the purpose of testing their ground before sinking a main shaft, but it proved useless and was sent back again to Melbourne. This company have done nothing since.

The holders of other large special claims are doing nothing at present, if I except the "Ross United," who are prospecting the ground in different directions, and have sunk shafts to the depth of 200ft.; but water proves a great impediment to prospecting in all deep ground in the district.

Three large special claims have been declared vacant in consequence of the failure of the applicants to take them up, and the same course will probably have to be followed with others.

The above particulars will show how much the future of the Totara District depends on the success of the large mining undertakings which have been mentioned. So far as can at present be judged it may fairly be hoped that this success will shortly be assured, and that the expenditure of so much capital, energy, and skill will not long go without its reward.

Since writing the above I have seen, on a visit to Ross, some specimens of auriferous quartz brought in by Mr. John Gagliardi from Cedar Creek, about seven or eight miles from Ross. The stone, when inspected by means of an ordinary lens, appears to be richly auriferous, and, if there is really a reef of similar quality, I should think a valuable discovery has been made. Mr. Gagliardi has applied for a lease, and I believe several other persons have marked out ground in the vicinity.

I have, &c.,

J. GILES,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 11.

Mr. Warden BIRD to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Otranto, 29th March, 1884.

I have the honour to forward herewith enclosed statistical returns for the year ending the 31st March, 1884. I am sending them rather earlier than usual, as I leave to-day for Greymouth to release Mr. Warden Stratford, absent on leave. As regards mining matters generally I have nothing of importance to communicate, and I am sorry to add there has been no improvement, rather the reverse, during the last twelve months. By the aid of local subscriptions and a small subsidy from the County Council several localities have been partially prospected, but up to the present time without any good results. The Paringa and Haast Road is at last completed, so that the whole of the southern portion of the district is accessible for prospecting, which may in time lead to the discovery of a payable gold field.

I have, &c.,

FRANK BIRD,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 12.

Mr. Warden KEDDELL to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Clyde, 16th May, 1884.

I have the honour, in forwarding the several returns asked for in your circular letter of the 18th February last, to submit the following general report on the position and prospects of the several mining sub-districts under my supervision:—

In alluvial mining there have occurred no events worthy of record, and I am led to believe that the yield of gold will be found to have fallen off from last year's amount. The population has, however, suffered no diminution, and the same amount of activity has been shown, to judge of which I am guided as well by the applications for mining privileges, &c., as from observation.

At Tinker's and Drybread, in the Blacks Division, the yield of gold has certainly been less than last year. A good deal of dead work has been done, the fruits of which, I trust, will show favourably in future reports. Some important amalgamations have been made: Mellor and Martin, who held a gold-mining lease, little of which has been worked, but which is known to be valuable, have joined the Undaunted Company, bringing also into the new property a two-fifth share of the XL water-race. They have the same run of gold in all these claims here, the best, it is believed, being where the ground is dipping away towards Thomson's Creek. The miners here are petition-

ing, in order to work this portion of Tinker's, that the pastoral lessees of Matahanui Station may be induced to surrender their pre-emptive right of ninety acres, which has been granted across Thomson's Creek, by the offer of a larger area of ground elsewhere on the run, so as to enable the miners to have an outlet for their tailings from this deep ground. Unfortunately, the creek itself cannot be used as a channel, for there are other Crown-granted lands lower down; but, failing such assistance as requested—*i.e.*, some site for the deposit of their tailings without the risk of infringing on private rights, and so risking litigation—the workings at Tinker's will be very much narrowed, and it will be shortly impossible to work them at all in the direction now being followed. The pre-emptive right has been occupied hitherto as a homestead, but the new lessees have moved from this to another more convenient part of their property, the buildings are old, and the pre-emptive right of no great value for any other purposes. The Mountain Race Company, which yielded such handsome dividends last year, are still working their ground by lifting their wash-dirt through the elevator system as at Lawrence, though on a smaller scale. The water-race from Drybread, which will bring additional power to work the Tinker's claims, is not yet finished. There are hereabout one hundred acres untouched: this land must all be worked by means of the proposed new channel and the use of the site of the homestead pre-emptive right referred to. Some years ago the miners here were in conflict with the pastoral tenant owing to injury done this land by tailings, and on that occasion compensation was paid by the Government (Provincial) in the case of Glassford *versus* Reid, in the Supreme Court, to the amount of £500 or so.

At Clyde and Alexandra nothing is noticeable beyond the fact that the dredges have been on good deposits, and one working between Clyde and Alexandra Townships has of late turned out handsome dividends. This machine, manufactured by Messrs. McQueen, of Dunedin, has in its construction the benefit of former experiments, and is at a favourable depth of water in the river, able to put through a very great quantity of stuff in the twenty-four hours; the mechanical arrangements are very perfect, and it is worked at as little cost of labour as possible. The prospects for the coming season up to the present are very good: the Molyneux is unusually low for this time of year, and if we have seasonable frosty weather, and the snow is kept on the large tract of mountainous country which is drained into the lakes, and are in turn drained by the Kawarau and Clutha, I look for very substantial returns from these machines during the coming winter. This dredge in particular has a large patch of auriferous deposit to work on; but the Molyneux is supposed, with reason, to be one whose current is not confined to its surface, but runs from top to bottom with great force, and each fresh affects its bed, and this patch might after a slight fresh be covered with deep shingle or boulders. The returns now average 50oz. a week, and obtained at a cost of about £50.

Alluvial mining has been at a standstill, or if any change has taken place it is of a retrograde order.

In the Cromwell Sub-District the same remarks apply; the inquiry for claims and privileges has been about the average. At Bannockburn the prospects are the same, but the pipeclay sludge-channel has not yet reached the country in the deeper ground where the claims lie that are protected, awaiting the assistance it will afford. This undertaking was subsidized to a small extent by Government. The work is a very heavy and expensive one, and when completed will open up a large extent of land known and proved to be highly auriferous. The other channel, which was also subsidized, and in a greater degree, in Smith's Gully, has collapsed. Of Long Gully, on the Hawea, nothing is heard now; but one claim remains occupied, the survivor of the rush of 1880. In the Shotover and Arrow Districts alluvial mining is still pursued, with little change in numbers of miners or results. No discoveries have been reported, or any notable circumstance, during the year.

QUARTZ.

There has been a marked improvement in the prospects of the whole district in this class of gold-mining. At the Obelisk Range—nearest Clyde and Alexandra offices—there have been for some time one or two claims working on reefs, *i.e.*, sluicing the loose gold which was found in their casings, &c.; and upwards of a year since a gold-mining lease was applied for by a miner named White: but his faith in a payable reef was not generally shared by the public until the spring of last year, when inquiries were made and many persons visited the locality, and the lease was acquired by a company which bears the prospector's name, and the shares were subscribed for readily. Since then seventeen gold-mining leases have been applied for, sixteen of which have been granted. The country at this part of the range, I have no hesitation in stating, contains a large proportion of auriferous quartz, which can be easily and economically worked when the Waikaia Bush, no great distance off, is available for the supply of the necessary timber. The road from this bush to Clyde and Teviot, which has been the subject of various reports, and has been under the consideration of the Government for some time, will pass through this country. The site of the present workings at White's reef, and indeed the whole of the leases, has been, at some remote period of time, thrown down from the higher part of the range, and on the surface (though auriferous quartz exists in great quantities, and excellent prospects of loose gold can be found in every dish that is worked from the reef) the quartz is detached and broken, and no defined reef had been found when I visited the spot. Some time must elapse before this locality is thoroughly tested. There is no battery of any kind at hand, or nearer than ten miles, at Conroy's Gully. Some half-ton has been tried from one of the newly-taken-up reefs, and yielded at the rate of nearly 10oz. to the ton. But these experiments made at a distance are very misleading: miners cannot help sending only picked stuff, when the expense of carriage is considered; whereas with a battery close at hand they are more likely to crush from the reef as it comes, and ascertain a more impartial average. Labour is expensive, timber is essential, and has to be brought now from Tupanui. The precise position of the reef in the pioneer claim is to my mind by no means ascertained, but the presence of the free gold which it is believed has been shed from these reefs during the process of upheaval

that this portion of the country has evidently been subjected to, encourages the owners of these new claims to prospect, and I trust they will not be daunted by little reverses, feeling satisfied that the indications justify a thorough search, and point to success. Unfortunately just now the capitalists of Otago do not incline to mining investments, and quartz-mining cannot be undertaken without capital. I believe that a great deal of the first work in this neighbourhood will be by sluicing, and a large water-race is in course of construction bringing water from the Gorge Creek, some six miles. By this means the surface of the reefs will be exposed, and some assistance given towards finding their course. There is a large portion of this land which will yield good returns for sluicing without reference to quartz, and the only drawback is the narrow outlet through which the *débris* and tailings must pass in the fair way, of which a special claim was granted some eight years ago, and this has been occupied by two men ever since, who have worked it as they pleased, and have been satisfied with small and sure returns. The leases I have referred to are mostly above the ordinary snow-line in winter, and I do not expect any vigorous work will be done until next spring. The ground has been taken up and shares subscribed for the greater part by local people, and their belief in the future is the result of observation, and is not due to any illegitimate influence.

Macetown.—I regret I cannot write very hopefully of the reefs here, nor report satisfactorily of the year's transactions. Work is still being carried on in the principal mines; in others calls are pressed for, and a general depression prevails amongst stockholders. The Macetown Road has not yet been of any use to this portion of the district, but I understand it is now nearly completed, and then cheaper material may, by decreasing expenses, stimulate the proprietors of the mines to more vigorous work.

Upper Skippers.—The Phoenix leased property has been considerably increased: four additional leases have been added. Work has been continued the whole year, but chiefly of a preparatory nature, and the manager expects before long to have one hundred men employed on the ground, and has good reason for believing that the returns from the mine will soon yield dividends—an improvement on being merely paying expenses, as at present. It is stated that this property is under offer to English capitalists, and this will be determined on the report of their representative, who is expected shortly to visit and inspect. The mine has contributed very little gold to this year's total. The Cornish and Nugget and the Mount Aurum are combining under the style of "The Gallant Tipperary," and together will be a valuable property; they are both well represented in the gold return. Head of the Lake Wakatipu.—"The Invincible": This claim has fulfilled the opinion I expressed in my last year's report, and has, by dint of steady work and expenditure of much money, sufficiently prospected and developed the property to put beyond a doubt the fact of its being a successful undertaking. They (the company) have crushed from first to last, *i.e.*, from December, 1882, when their ten head of stamps first started, about 5,000 tons, and for this have obtained 2,045oz. retorted gold. The stuff was put through just as it came, for there are no specimens, and the gold is not visible in the stone. I do not think their crushings hitherto are a fair criterion. They have now a reef about 12ft. wide, and no doubt their crushings in future will be confined to it. The gold obtained will nearly recoup the company their expenditure: their battery and water-races, and the making of roads, &c., and wages amount to about £8,000. A very great deal of work has been done, and their energetic efforts and the result have encouraged others to enter on similar ventures. Some of the adjoining land has been taken up, and a number of miners propose prospecting the neighbourhood. The country is new, and has been very little explored of late years for gold, and in the early days of the field little attention was given to quartz. I believe next year's report will have more and satisfactory news to give of the reefs on the Rees, at the head of Lake Wakatipu. I have not been able to ascertain the amount of gold obtained, as some of the banks decline to give it. The quartz returns are as follow: Wakatipu Division: Arrow and Queenstown, 4,623oz.; Dunstan (Cromwell), 850oz.; and the average given me as nearly (with the exception of the Invincible, which is a little less) one ounce to the ton of quartz. The Cromwell Company's mine, which some time since gave such a splendid return, has not done much this year, and the shareholders appear to be somewhat discouraged, but I am informed by those who should know that their prospects are fair.

I have, &c.,

JACKSON KEDDELL,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 13.

Mr. Warden HICKSON to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Naseby, 21st April, 1884.

I have the honour to forward herewith the annual report and statistics for the Mount Ida Gold Field. There is nothing of importance to mention, the district generally having made no perceptible progress. There has been no fresh discovery. The year has been an exceptionally good one for the miners: the winter was fairly good, and very little interruption to mining operations occurred through frost. Water has been plentiful, the season having been unusually wet, and on the 24th February there was a heavy fall of snow, a most unusual occurrence at that season.

At Naseby mining matters remain as they were last year, except that the Mount Ida Deep-lead Association has collapsed, and the timber in their shaft sold.

At Kyeburn and the Buster (or Clarke's) the gold-miners have done well, and the coal mines, of which there are three in full working order, are taking out large quantities of lignite of a very good quality.

At Hyde and Macrae's the miners have been doing better than in the previous year, and at Strath-Taieri a gold-mining lease has been applied for, the value of which is at present unknown.

At Hamilton and Lowburn work is carried on very steadily, and in some cases very profitably.

The Serpentine is at a standstill, very little being done to develop the quartz reefs there, sufficient capital not being available.

At St. Bathans and Vinegar Hill work is being carried on energetically and on a large scale. Several new mining leases and special claims have been granted during the year containing large areas of ground.

At Blackstone Hill nothing further has been done on the reefs: good stone has been found, but no application yet made for a mining lease. Settlement on the land open for selection still goes on, and every day some new farm is fenced and broken up. Heavy crops have been anticipated from the unusual moisture of the season, but fears are now entertained that they will not prove so good, the wet weather continuing far into the season. Prices for farm produce have not ruled quite so high as last year.

The new agricultural leases taken up during the year represent an area of 3,157 acres 3 roods, and the deferred-payment selections during the same period amount to 3,568 acres 1 rood 2 perches. Some 1,825 acres 3 roods 21 perches held under agricultural lease have been converted into freehold, and four leases have been exchanged for deferred-payment licenses. The total area held at the 31st March under agricultural lease is 7,771 acres 1 rood 27 perches, and on deferred-payments 31,350 acres 3 roods 24 perches, exclusive of pastoral deferred-payment lands. The yield of gold for the year is estimated at 14,600oz., of the value of £54,750, a goodly increase on last year's yield. The total revenue from all sources has been as follows: Gold revenue, including rents on mining and agricultural leases, £2,109 19s. 6d.; rents on deferred-payment, £2,653 6s. 11d. This shows a decrease as compared with last year. In addition to the cases in the Warden's Court, there have been heard 346 applications for mining privileges, 13 applications for gold-mining leases, and 16 for agricultural leases: of these 42 were opposed, and the objections as usual were in many cases very lengthy.

I have, &c.,

JOHN S. HICKSON,
Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 14.

Mr. Warden WOOD to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Lawrence, 22nd May, 1884.

I have the honour to forward herewith report and statistics of the Tuapeka Division of the Otago Gold Field, for the period ending the 31st March last.

There is absolutely nothing new to report upon for the past year, but it is satisfactory to note that the yield of gold is within a few ounces of last year's estimate.

The cement-workings at Bluespur and Weatherston's still continue, with fair success.

The Tuapeka Prospecting Company have struck the cement in their lease at Weatherston's, which is doubtless the same run as that being worked by the Weatherston's Cement Company.

The Gabriel's Gully Sluicing Company continue working, with improved prospects as they get higher up the gully and nearer their solid ground: though I understand they have not paid a dividend, they have made a substantial reduction in their overdraft.

At Waitahuna there is nothing to report of interest. The Chinese seem to be the most successful workers. A few of the residents have started a prospecting company, and have taken up old cement leases, but have not had time to develop their ground.

At Waipori there is no change. The "Modern Maori," "Little Maud," and "Cosmopolitan" Companies are at work and looking well, employing about thirty men. The "Victory" Company have ceased working for the present. About fifty Europeans and a hundred Chinese are working alluvial ground. The copper and antimony mines are not at work.

The yield of gold for the year ending the 31st March, 1884, is estimated at 19,000oz., being nearly up to last year's estimate, and may be roughly described as follows: Alluvial, 12,150oz.; cement, 6,150oz.; quartz, 700oz.

There are two dredges at work on the Clutha River, near the Beaumont, that have been yielding good wages. During the year 116 acres have been taken up as extended claims. Settlement is steadily advancing in the district. Under the various regulations relating to the granting of agricultural leases, commencing with the ten-acre system, there have been taken up about 68,000 acres. After deducting, say, 9,000 acres, the leases of which have been cancelled from time to time, and the 3,600 acres representing the leases now existing, about 50,900 acres have been made freehold; the balance, 4,500 acres, remaining is represented by deferred-payment exchange licenses. The success of the deferred-payment system is demonstrated by the fact that about 37,000 acres have been taken up as ordinary deferred payments, and about an equal area as pastoral deferred payments. About 3,600 acres of the latter have been cancelled for non-fulfilment of conditions. Of the ordinary deferred payments, thirty-nine lessees, with an area of 6,244 acres, have capitalized their holdings under "The Land Act, 1882."

At Waikaia mining is almost an industry of the past, except amongst the Chinese, who have command of most of the available water. Settlement is, however, progressing, the Commissioners of Education Reserves having thrown open land under the deferred-payment and perpetual-lease systems, and about 10,000 acres have been taken up and are being settled on; but, as a large area is included in the Waimea Plains Railway District, I fear settlement will be retarded by the heavy rate struck of 3s. 4d. on the annual value.

I have, &c.,

J. NUGENT WOOD,
Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 15.

Mr. Warden ROBINSON to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's Office, Oamaru, 5th April, 1884.

I have the honour to forward herewith the usual statistical returns in respect of the district under my charge as Warden for the year ending 31st March, 1884.

The past year has been singularly uneventful as regards mining in the Maerewhenua District. There have been no new discoveries, and no extraordinary yields of gold. Still I am happy to be able to say that the few miners who work constantly at the Maerewhenua and its vicinity have as a rule been doing fairly well, better, probably, on the average, than at some places where there is more stir and excitement. The work being mainly sluicing, miners are largely dependent on the character of the seasons for their success. This year there has been generally a good supply of water, and the benefit has been felt in the working of the claims.

It is not easy to estimate the yield of gold, as there is no bank at Livingstone, and consequently no escort. I think, however, it will be safe to set the total at about 600oz., which, at £3 15s. per ounce, would come to £2,250, or about £65 per man. This does not perhaps seem much, but it is to be borne in mind that, though these men are miners, they do not exclusively occupy themselves with mining. Most of them own a few cattle or horses, and have gardens, &c., to occupy their spare time. Most of the regular miners have been in the same localities for several years, and seem quite settled in the district.

Though in my return I show no agricultural leases, it is not to be supposed there is no cultivation. On the contrary, besides large freeholds, some of which are being farmed on a very extensive scale, there are in the neighbourhood of the diggings a number of smaller farms, some of which are held on deferred payment.

I have, &c.,

H. W. ROBINSON,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 16.

Mr. Warden MAITLAND to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Warden's, Office, Dunedin, 30th April, 1884.

I have the honour to forward herewith the annual returns of particulars relating to the Hindon Mining District for the year ending the 31st March, 1884.

Beyond what has been stated in previous reports as to the necessity for a water-supply, and the desirability of testing the many well-defined quartz lodes by boring, the present position and prospects of the district do not call for any special remark.

It is to be regretted that operations during the past year, both in alluvial and quartz workings, have been almost at a standstill, and that in the meantime there is little or nothing to induce the belief that a great deal will be done during the ensuing twelve months.

As indicated in my last annual report a number of gold-mining leases have had to be cancelled for non-payment of rent, there being not more than three now in force.

No stone has been crushed during the year.

As regards settlement, which may be said to be steadily progressing, several additional areas have been taken up during the year under both the deferred-payment and perpetual-leasing systems.

The population of the district, which includes settlers, miners, and workmen on the Otago Central Railway, is estimated at about the same as last year, viz., 300, for, although there are fewer miners at the present time, there are more settlers and railway workmen.

I have, &c.,

J. P. MAITLAND,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 17.

Mr. Warden McCULLOCH to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Invercargill, 30th April, 1884.

I have the honour to forward herewith the annual statistical returns for the Orepuki and Longwood District for the year ending the 31st March, 1884, and to report that no changes have occurred in the prospects of the district of sufficient importance to call for further remark, mining matters remaining as nearly as possible in the same position as at the date of my last annual report.

I have, &c.,

HENRY McCULLOCH,

Warden.

The Under-Secretary for Gold Fields, Wellington.

No. 18.

Mr J. DAND, Manager, Nelson Creek Water-race, to the UNDER-SECRETARY for GOLD FIELDS.

SIR,—

Office, Nelson Creek Water-race, Hatters' Terrace, 1st April, 1884.

I have the honour to submit annual report on the transactions connected with the working of the Nelson Creek Water-race during the year ending the 31st March, 1884.

The revenue derived from sales of water has been £1,594 15s. 10d., and the expenditure on maintenance, £1,103 5s. 2d.; thus leaving a balance of £491 10s. 8d. profit on the working of the race.

The approximate amount of gold obtained during the year by the miners who were using water from the race has been 2,356oz., representing the value of £9,011 14s.; and the average number of miners employed has been forty-four. After deducting sales of water from the value of gold obtained, it leaves £7,416 18s. 2d. as the total earnings of the miners employed; being £168 11s. 4d. each per annum, or £3 4s. 10d. per week.

The works included in maintenance during the year has consisted of considerable repairs to bridges and flumes, retimbering a large portion of the tunnels, and the other ordinary work of maintenance.

There has been no great extent of payable ground discovered during the year, the most of it having proved to be only small patches situated on steep sidelings or on the points of spurs, where there is plenty of fall, requiring very little water, and is easily worked out. Still, however, there is a large area of ground in the vicinity of Owen's Look-out, on the left-hand branch of Nelson Creek, that has not been sufficiently prospected, and may yet prove payable for working. There are several parties who are about to thoroughly test the ground in this locality: there is likewise a party formed to work the ground in Brian Boru Gully; but in the first place they will have to construct a branch race to convey water from the main Nelson Creek Race, and, as it is a work of considerable magnitude, it will take about nine months before they are ready to use water for sluicing purposes; so that it will be the latter end of the ensuing financial year before this would have any beneficial effect on the revenue.

With regard to the cost of maintenance, the rough nature of the country through which the race is constructed, and the decayed state of the bridges and flumes (which require almost constant repair) will always necessitate a certain number of maintenance men to get material and effect repairs.

As the revenue for the present year shows a considerable decrease on previous year, and as most of the available ground on Try-Again Terrace and German Gully is worked out, a still further reduction in the revenue for the ensuing year may be anticipated.

I have, &c.,

JAMES DAND,
Manager.

The Under-Secretary for Gold Fields, Wellington.

NELSON CREEK WATER-RACE.

STATEMENT OF RECEIPTS AND EXPENDITURE for the Year ending 31st March, 1884.

<i>Receipts.</i>			£	s.	d.	<i>Expenditure.</i>			£	s.	d.
1883—April	...	...	128	2	1	1883—April	...	...	95	16	8
May	...	...	126	0	0	May	...	...	96	0	0
June	...	...	88	8	4	June	...	...	80	13	4
July	...	...	122	10	0	July	...	...	82	1	4
August	...	...	157	18	4	August	...	...	86	5	0
September	...	...	185	8	4	September	...	...	86	16	8
October	...	...	148	15	10	October	...	...	89	0	0
November	...	...	198	19	2	November	...	...	84	3	4
December	...	...	90	5	0	December	...	...	88	10	10
1884—January	...	...	104	19	7	1884—January	...	...	138	0	0
February	...	...	134	1	3	February	...	...	82	16	8
March	...	...	109	7	11	March	...	...	93	1	4
									£1,103	5	2
						Balance to credit	...	...	491	10	8
									£1,594	0	
			<u>£1,594 15 1</u>								

The following table shows the approximate amount of gold obtained by persons using water from the above race, and their average earnings, during the year ending the 31st March, 1884:—

	Number of Men employed.	Approximate Amount of Gold obtained in Ounces.
1883—April	49	192
May	45	183
June	41	113
July	40	202
August	42	222
September	43	233
October	41	222
November	46	259
December	47	195
1884—January	45	147
February	45	221
March	41	167
	<u>525</u>	<u>2,356</u>

Value of gold per ounce, £3 16s. 6d.

Total value of gold	£9,011 14 0
Deduct sales of water	1,594 15 10
	<u>£7,416 18 2</u>

Average number of men employed, $\frac{525}{12}$ = 44; average earnings per man per annum, after deducting money paid for water, £168 11s. 4d.

JAMES DAND,
Manager.

No. 19.

Mr. J. Gow, Manager of the Waimea-Kumara Water-race and Sludge-channel, to the UNDER-SECRETARY for GOLD FIELDS.

SIR,— Waimea-Kumara Races, Manager's Office, 12th April, 1884.

I have the honour to report steady progress in sluicing operations in connection with the Waimea-Kumara Races and Kumara Sludge-channel for the year ending the 31st March, 1884.

Waimea Race.—During the year many of the old original claims have been completely worked out, and a somewhat less number of new claims opened, consequently the sales of water do not now equal the sales of the corresponding month of last year. I am of opinion, however, that the present sales will be maintained for some time, and that the race will keep employed from 130 to 140 miners for the ensuing year at average earnings on the coast. Some of the timber in the high flumes near the Kawhaka is showing decay, especially the legs and tracing, and the decay is almost wholly confined to the totara; there are only a few Kawhaka spars really bad: the silver-pine and rata spars are in excellent condition. Many of the old legs will have to be replaced with new ones at an early date, the cost of which is included in the estimated expenditure for the incoming financial year.

Kumara Race.—This race and its branches are in excellent condition, and their carrying capacity has been much increased since my last annual report, in which I stated that the main race was being enlarged. It is now about 8ft. wide by 3ft. deep, with a fall of 0.25ft. per chain; and the principal branch leading to the sludge-channel is 5ft. wide by 4ft. deep, with a fall of 0.30ft. per chain. The daily water-supply may be estimated at a little over 100 Government heads for twelve hours, equal to 4,320,000 cubic feet. I could dispose of more water if I had a better supply. The storing capacity of the dams has proved unequal to the steady requirements of this gold field; the winter rains may, however, keep up a full supply for some months to come, by which time a little work at the Loopline Dam could be done, which would increase its storing capacity considerably.

Many of the claims have lately lost much time for the want of water.

There are now thirteen sluicing parties taking water from the Government race who do not use the sludge-channel, and each of them takes from six to ten heads. If an unlimited supply was always available they would take more. The thirty sluicing claims making use of the sludge-channel use from six to eight heads each, and many of them are continually asking for more; but, as a much larger quantity to each would to a certainty reduce the number of parties in the channel each shift, I have given over six heads only to those who have small fall. I hope to be able in a short time to give them all seven heads each. Amongst the forty-three claims now taking water from the Government race there are twenty-seven giant-nozzles in use, and there is every probability of many more being procured when the back-number claims are more fully opened out. Nearly all of the forty-three claims may now be considered as fairly opened and in a good style of working, most of them having plenty of room at hand to stow away stones on the ground worked out, and handy appliances for that purpose, consisting of fifteen water-balances, eight horse-whims, and five water-wheels. The shareholders generally are well pleased with the result of their washings. Some of the claims have yielded remarkably good returns, and are likely to do so for some time to come; while others, as might be expected in so large a sluicing field, have yielded very small returns indeed, and I fear that a few of these, with even a reduction of one-third in the present price for water, would never pay even small wages; and this is the opinion of many of the miners who had previously driven out parts of the ground now being sluiced. There are all over this field strips of ground running nearly east and west which are generally termed here "duffer bars," and I have no doubt that some of these poor claims have opened out in these poor strips, and when these are passed through better returns may be reasonably expected.

The result of the past year's working has, financially, placed the miners in a much better position: each party of miners shows less indebtedness for water and channel, and speak hopefully of soon being out of debt. I also learn from storekeepers and others that their outstanding accounts are being gradually reduced, and that money is more plentiful, especially within the last six months.

Sludge-channel.—This is my great trouble, and I fear it will continue to be a trouble to the manager and others till the field is worked out. There is however some comfort to be expected if the new regulations are agreed to, and when the majority of the claims have permits under them, which is likely to be the case early in June. At the time of writing my last annual report there were only twenty parties using the sludge-channel; since then the other ten parties have opened their claims or nearly so, three only not having washed up yet. These thirty claims are represented by or employing 181 miners. Although the channel is still being used three shifts each day, I am unable to accommodate all. I can serve only twenty parties each day. As some of these have the first right to the use of the channel, but do not avail themselves of its use every day, I am enabled to give the back numbers a turn; and to help them still more I have for some time back taken one day every week from each of the eight parties whose original permits have expired. This plan has enabled the outside numbers to make use of the channel from one to three shifts in the week.

Blocking or Paving.—I have now about 33 chains of the channel paved with 14-inch stone-paving, which appears to answer the purpose very well. It is not and never will be as smooth as the wooden blocks, but I do not think the stone-paving will reduce the carrying capacity of the channel more than one party each shift. I have now less difficulty in getting suitable stone-paving: there are more men at the work, and experience is enabling them to turn out more shapely stones. In time I hope to get a stock on hand ready to replace others as they are worn out. I think the paving will last about eight months.

The Tailing Site.—The tailing site is fast filling up of late, and, at the present rate of extension of the channel, will reach the river-bed in less time than twelve months, as stated by me at the Sludge Channel inquiry. The tail end of the channel was at that time nearly 8 chains from the river-

bed; since then the extension of the channel is averaging 2 chains per month. As yet the tailings run into the river by the channel have not been moved by the floods.

Kapitea and Loopline Dams.—The dams are in good order, and with ordinary "West Coast" weather we should not lose a great deal of time for the want of water.

Electric Light.—The advantages of a light of this kind throughout the length of the channel would be very great both by day and by night. It would save the heavy cost of candles, as there is great waste on account of the continuous draught. Each man uses two candles, but they do not give enough light to enable him to do his work quickly. With the electric light overhead the men could see what they were doing without having to continually take a candle in hand to examine their work, or to search for every tool required. As it is at present a nail cannot be driven unless a candle is placed in a position very close to see it. A good light from end to end of the channel while it is in use by the miners would enable the man in charge to see at once when it was choking, and facilitate his movements in giving the signals quickly, thus saving much valuable time to the miners.

I have, &c.,
Herewith please find tables showing the revenue and expenditure on account of the Waimea-Kumara Races and Sludge-channel, maintained by the Government from the 1st April, 1883, to the 31st March, 1884. Also the number of men employed by the races, their average earnings (approximately), and quantity of gold obtained by them, after deducting water-charges.

The Under-Secretary for Gold Fields, Wellington.

J. Gow,
Manager.

No. 20.

Mr. D. DOYLE, Manager of the Argyle Water-race, to the UNDER-SECRETARY FOR GOLD FIELDS.
SIR,—

Charleston, 10th April, 1884.

I have the honour to forward report for the year ending the 31st March, 1884, on the working and maintenance of the Argyle Water-race.

The receipts are not so satisfactory as anticipated at the beginning of the year, owing chiefly to alterations being carried out along the principal part of old race, whereby the supply of water was limited to a couple of parties whom alterations did not interfere with. Another cause of falling off in revenue was the loss of three parties, who left taking water from Argyle Race, and commenced taking water from Butterworth, at a reduced price per head of water: those three parties leaving caused a loss of about £250.

The ensuing year will give a good improvement in revenue from sales of water, as there are new claims being taken up along the course of the race, and a good supply of water is in reservoir. I anticipate a larger increase in reservoir if the proposed extension to Back Lead is carried out, as there is a large extent of auriferous ground which race would command—over one hundred acres. This ground cannot be worked without the Argyle Race is extended to Back Lead. At the present time I am supplying three-quarters of a head of water there by means of allowing the night water to flow into two small dams, and from thence down a gully, where it is picked up into a private race and carried along to Back Lead, about three-quarters of a mile in length. The party working with this water are getting very fair returns for their labour—about £4 per week per man, after expenses of water. There would be a large quantity of ground taken up in this locality if water was available. The expenditure for the ensuing year will not be so heavy for maintenance as I do the greater portion of repairs myself. By this means I keep down the expenditure as much as possible, employing labour only when absolutely necessary.

As the gold-working on this field differs from any other in the colony, the men work in small parties to economize water, and gold being so very fine it is collected on tables, covered over with lighter plush or baize, erected in the course of the gullies or creeks. These cloths are washed into a tub every day, and when this tub is filled the sand is run over a small table again. By this process they separate the greater portion of the sand from the gold before amalgamating with quicksilver. There are a number of claims of this sort down the Darkie's Creek which make a good thing of it by passing the tail-water and tailings over their tables in the same manner. These parties, although benefited to a large extent by the tail-water from Argyle Race, pay nothing for water, and when Argyle Race is stopped they must also stop, as they will have no water to work with.

In my last report I mentioned that Sections 5 and 6 were in progress of working, and those were finished by the end of May, 1883. Tenders were invited for sections from 7 to 11, which would terminate at end of Argyle Race. Those tenders were called for in July, but the contracts were not completed until the end of January, 1884. The cause of the long delay over contract time was owing to delay in getting ironwork from foundry in Wellington. During the progress of work on those contracts for enlarging old race the water was stopped, but as little as possible. The conduit and flumes are now capable of carrying a large quantity of water, and will require but very little repairs for years, except clearing landslips out of conduit.

The outside supply-races are now capable of carrying a large supply of water in rainy weather into the reservoir, but it wants constantly watching, as the nature of the ground is very porous, chiefly limestone formation, and after heavy rains there are always some repairs to be done.

The raising of the dam-wall three feet has given a great holding capacity for water. I consider the three feet of water on top is equal to two-thirds the quantity of water that the old dam was capable of holding. I have a good supply of water in reservoir yet, after all this dry season. I may say every dam in the Charleston District is dry at the present time, and no sign of rain, so that all the men are nearly idle for the want of water. We have had no rain since Christmas, with the exception of some slight showers.

Herewith please find statement showing the revenue and expenditure on account of the Argyle Water-race from the 1st April, 1883, to the 31st March, 1884; also number of men employed by the race, and average earnings after deducting working expenses.

STATEMENT of Receipts and Expenditure for the year ending the 31st March, 1884.

	£	s.	d.
Amount of revenue obtained by sales of water	324	7	0
Expenditure on maintenance of race	371	10	0
Average earnings per man per week after deducting expenses for working	3	0	0
Number of men employed			12
Number of ounces of gold obtained			600

I have, &c.,

DENIS DOYLE,
Manager.

The Under-Secretary for Gold Fields, Wellington.

No. 21.

The CHAIRMAN, Mount Ida Water-race Trust, to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Office of Mount Ida Water-race Trust, Naseby, 20th May, 1884.

I have the honour to forward the annual report of the proceedings of the Mount Ida Water-race Trust, in accordance with section 25 of "The Mount Ida Water-race Act, 1878," together with statement of receipts and expenditure for the twelve months ending the 31st December, 1883.

The income for the year ending the 31st December last amounted to £1,545 5s. 11d., showing a decrease (compared with last year) of £232 9s. 3d. This falling-off in the revenue is attributable to the ground which the race commands, situated principally on the west side of Main Gully, becoming poorer each year, and the demand for water being proportionately less. The expenditure for the same period amounted to £1,877 4s. 2d., being a reduction, compared with last year, of £25 18s. 2d. The outstanding accounts for water sold, brought up to date, amount to £1,280 5s. 7d., as against £1,364 13s. 8d. for last year. During the year the payments for sales of water have in almost every instance been met, and no fresh losses of any consequence have been made. The greater portion of the sum above mentioned (£1,280 5s. 7d.) was for water supplied to parties in opening up and prospecting for new ground shortly after the works were opened, which in many instances proved failures, and where the yield of gold was insufficient to pay for tools bought for the purpose.

It will be seen by the above figures that the expenditure of the Trust has now reached that point which cannot admit of much further reduction if the present efficiency and safety of the works are to be maintained.

The survey of the race extension to Spec Gully is nearly completed. A shorter route than that by the line hitherto suggested has been discovered, and the cost of cutting through the spur will be less than by the longer route.

Regarding the maintenance of the works, experience has shown that a certain amount of damage has been sustained each year from floods. The great length of the head-race (nearly 70 miles), and crossing as it does about twenty creeks, is in itself sufficient to show that it is impossible to provide against damage caused by floods. A continuance of wet weather, or a sudden thaw, converts some of these creeks into mountain torrents, which discharge enormous boulders and large quantities of *débris* into the race, breaking the sides and doing other damage. Last season the race suffered considerably from floods, which were not only more frequent, but also caused greater damage to the works, than hitherto.

Through the accumulation of tailings in Wet Gully, across which the head-race runs, caused by the discharge from claims higher up, the rights for which existed prior to the cutting of the Government race, it has been found necessary to come to an arrangement with the claimholders to convey the water of the race across the gully in pipes, they agreeing to pay half of the cost, which is estimated altogether at about £120. This arrangement will obviate any further expense by either party in keeping the race clear.

The following is an accurate return of the quantity of gold produced within the County of Maniototo for the four years ending 31st March, 1884:—

Twelve months ending 31st March, 1881	...	...	9,640oz.
Twelve months ending 31st March, 1882	...	...	10,410oz.
Twelve months ending 31st March, 1883	...	...	8,920oz.
Twelve months ending 31st March, 1884	...	...	8,980oz.

It will thus be seen that the yield of gold in the district has been steady, and that last year's return shows an increase. The exact quantity of gold the works have been instrumental in producing cannot be correctly stated, but from the value of water sold during the year (£1,545 5s. 11d.) it is evident they have contributed a large share of the total quantity produced. These works are also the means of giving employment to a large number of men, who contribute no inconsiderable amount of indirect revenue in the shape of gold duty, miners' rights, and fees for other privileges.

I have, &c.,

WM. GUFFIE,
Chairman.

The Hon. the Minister for Public Works, Wellington.

MOUNT IDA WATER-RACE TRUST.—BALANCE-SHEET for the Year ending 31st December, 1883.

1883.	<i>Receipts.</i>	£	s.	d.
Dec. 31.	To Balance in bank ...	143	6	10
	Cash received for water and channel fees ...	1,545	5	11
	Cash received from Government ...	250	0	0

£1,938	12	9
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<i>Assets.</i>	£	s.	d.
To Balance in bank ...	61	8	7
Accounts owing for water sold and chan- nel fees ...	1,280	5	7
	£1,341	14	2

1883.	<i>Disbursements.</i>	£	s.	d.
Dec. 31.	By Maintenance, head-race	487	2	0
	Maintenance, channel	250	16	9
	General management	471	12	8
	Extra labour ...	330	8	0
	Office rent ...	21	13	4
	Timber ...	49	0	2
	Printing ...	5	10	6
	Tools ...	2	1	6
	Law expenses ...	2	4	6
	Protective works ...	10	12	0
	Flood damages ...	234	18	2
	Secretary's salary ...	11	5	0
	Balance in bank ...	61	8	7

£1,938	12	9
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<i>Liabilities</i> ...	Nil.
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By Balance, credit ...	1,341	14	2
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£1,341	14	2
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WILLIAM GUFFIE, Chairman.
 N. P. HJORRING, } Members of Trust.
 E. A. WITHERS, }

I hereby certify that I have examined the books and vouchers of the Mount Ida Trust, and compared the several accounts with the ledger balances, as at 31st December, 1883, and that the same are a correct statement of the Trust's affairs.

Naseby, 14th January, 1884.

JOHN F. GARVEY,
Auditor.

No. 1.

STATEMENT showing the REVENUE of the GOLD FIELDS collected in the several DISTRICTS, and the GOLD DUTY of the COLONY of NEW ZEALAND, for the Period from the 1st January to the 29th December, 1883.

District.	Miners' Rights.	Business Licenses.	Water-races, Sluices, &c.	Gold-Mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous.	Totals.
AUCKLAND.								
Coromandel ..	£ s. d. 128 0 0	£ s. d. ..	£ s. ..	£ s. d. 503 16 3	£ s. d. 1 2 6	£ s. d. 21 0 0	£ s. d. 47 16 0	£ s. d. 701 14 9
Thames..	405 0 0	..	..	2,967 10 2	44 14 6	25 18 0	5,527 0 0	8,970 2 8
Te Aroha ..	243 0 0	5 0 0	..	2,916 0 0	92 0 0	35 16 0	139 18 0	3,431 14 0
Totals ..	776 0 0	5 0 0	..	6,387 6 5	137 17 0	82 14 0	5,714 14 0	13,103 11 5
NELSON.								
Collingwood ..	86 17 0	..	4 10 0	56 7 6	13 7 6	2 4 0	..	163 6 0
Westport and Charleston	358 1 0	8 0 0	33 10 0	596 1 8	40 2 0	27 1 0	3 0 0	1,065 15 8
Ahaura ..	370 9 0	59 0 0	14 17 6	163 12 0	25 18 0	16 9 6	1 10 0	651 16 0
Reefton ..	555 2 0	343 10 0	18 12 6	1,362 11 8	19 10 0	49 5 0	7 0 0	2,355 11 2
Wangapeka ..	6 0 0	..	0 7 6	21 6 8	0 5 0	..	..	27 19 2
West Wanganui	8 19 0	..	0 5 0	61 16 6	0 8 6	..	..	71 9 0
Lyller ..	157 13 0	28 5 0	12 15 0	311 15 0	8 17 0	12 1 0	10 5 6	541 11 6
No-town ..	185 0 0	5 0 0	8 2 6	10 5 0	8 0 0	3 5 0	..	219 12 6
Totals ..	1,728 1 0	443 15 0	93 0 0	2,583 16 0	116 8 0	110 5 6	21 15 6	5,097 1 0
MARLBOROUGH.								
Havelock ..	130 0 0	26 0 0	3 0 0	316 4 2	7 10 0	10 19 0	..	493 13 2
CANTERBURY.								
Christchurch ..	..	..	..	37 15 0	..	..	39 0 0	76 15 0
WESTLAND.								
Hokitika ..	147 0 0	19 5 0	4 10 0	..	2 12 0	11 6 0	1 12 0	186 5 0
Kanieri ..	378 0 0	130 5 0	11 0 0	4 0 0	12 12 0	18 17 0	3 19 0	558 13 0
Greymouth ..	496 0 0	36 0 0	25 10 0	158 18 8	15 15 6	13 11 0	0 11 0	746 6 2
Ross ..	252 0 0	24 0 0	15 15 0	323 4 0	11 18 0	14 17 0	7 16 0	654 10 0
Stafford ..	191 1 0	3 0 0	15 10 0	25 10 0	11 12 0	5 3 0	6 3 0	257 19 0
Okarito ..	43 0 0	28 0 0	3 2 6	..	1 15 0	0 13 0	1 3 0	77 13 6
Greenstone ..	180 0 0	6 0 0	4 10 0	..	9 2 0	19 1 0	..	218 13 0
Maori Gully ..	102 0 0	..	8 10 0	..	4 1 0	1 8 0	..	115 19 0
Clifton..	248 0 0	5 0 0	16 7 6	16 0 0	10 10 6	4 10 0	0 14 0	301 2 0
Kumara ..	513 0 0	56 0 0	1 17 6	10 0 0	14 6 0	13 10 0	10 13 0	624 6 6
Jackson's Bay	22 0 0	..	1 0 0	..	1 0 0	..	..	24 0 0
Goldsborough ..	227 3 0	..	25 7 6	..	19 14 0	11 11 0	10 3 0	293 18 6
Totals ..	2,799 4 0	307 10 0	133 0 0	542 12 8	114 18 0	119 7 0	42 14 0	4,059 5 8
OTAGO.								
Dunedin ..	31 0 0	5 0 0	1 17 6	26 8 4	1 6 0	0 8 0	..	65 19 10
Naseby ..	549 2 0	26 0 0	51 0 0	235 3 4	22 1 0	32 8 6	2 0 0	967 14 10
Black's and St. Bathans	142 0 0	25 0 0	7 17 6	116 3 4	4 16 0	1 8 0	..	297 4 10
Manuherikia ..	142 0 0	5 0 0	5 12 6	26 10 0	2 9 0	2 4 0	..	183 15 6
Clyde ..	55 0 0	5 0 0	5 5 0	22 10 0	0 19 0	0 10 0	..	89 4 0
Mount Benger ..	152 0 0	..	7 7 6	..	2 16 0	2 3 0	..	164 6 6
Cromwell ..	404 0 0	54 0 0	18 5 0	68 13 4	16 4 0	19 1 0	0 15 0	580 18 4
Queenstown ..	185 0 0	5 0 0	13 7 6	316 1 3	3 17 0	21 16 0	0 10 0	545 11 9
Arrowtown ..	226 0 0	9 0 0	18 0 0	242 10 0	10 9 0	14 9 0	2 0 0	522 8 0
Lawrence ..	496 0 0	67 0 0	12 15 0	184 18 4	17 10 0	43 13 0	0 2 0	821 18 4
Switzers' ..	148 16 0	10 0 0	6 5 6	..	2 8 6	3 3 6	0 10 0	171 3 6
Orepuki ..	339 1 0	57 0 0	11 0 0	33 10 0	2 4 0	10 4 0	..	452 19 0
Totals ..	2,869 19 0	268 0 0	158 13 0	1,322 7 11	86 19 6	151 8 0	5 17 0	4,863 4 5

Gold duty received during the year in the under-mentioned provincial districts:—

	£	s.	d.		£	s.	d.
Auckland	4,129 2 9	Canterbury ..	..	..	0 5 8
Nelson	3,931 9 1	Westland ..	..	..	8,060 12 3
Marlborough	63 12 3	Otago ..	..	..	8,746 6 7

JAMES C. GAVIN, Receiver-General.

No. 2.

STATEMENT showing the REVENUE of the GOLD FIELDS collected in the several DISTRICTS, and the GOLD DUTY of the COLONY of NEW ZEALAND, for the Period from 1st January to 31st March, 1884.

District.	Miners' Rights.	Business Licenses.	Water-races, Sluices, &c.	Gold-mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous	Totals.
AUCKLAND.								
Coromandel ..	£ s. d. 87 0 0	£ s. d. ..	£ s. d. ..	£ s. d. 200 0 0	£ s. d. 0 7 6	£ s. d. 0 5 0	£ s. d. ..	£ s. d. 287 12 6
Te Aroha ..	38 0 0	..	..	545 0 0	7 9 6	2 2 0	6 9 0	599 0 6
Thames..	332 0 0	..	..	826 5 0	9 3 6	15 18 9	15 13 6	1,199 0 9
Totals ..	457 0 0	..	..	1,571 5 0	17 0 6	18 5 9	22 2 6	2,085 13 9
NELSON.								
Collingwood ..	22 19 6	..	0 17 6	8 0 0	2 7 0	0 3 0	..	34 7 0
Westport and Charleston	177 0 0	6 0 0	7 0 0	188 3 4	8 14 0	2 16 0	2 2 0	391 15 4
Ahaura ..	71 0 0	27 0 0	4 0 0	90 0 0	5 9 6	2 19 6	0 10 0	200 19 0
Reefton..	158 0 0	49 0 0	5 12 6	186 15 0	5 8 0	3 0 0	1 10 0	409 5 6
Wangapeka ..	12 0 0	..	..	..	..	..	..	12 0 0
West Wanganui ..	3 0 0	..	..	21 17 6	0 3 6	..	..	25 1 0
Lyell ..	56 0 0	..	2 5 0	80 16 6	1 0 0	1 16 0	1 3 6	143 1 0
No-town ..	24 0 0	..	2 12 6	5 0 0	1 12 0	1 4 0	..	34 8 6
Totals ..	523 19 6	82 0 0	22 7 6	580 12 4	24 14 0	11 18 6	5 5 6	1,250 17 4
MARLBOROUGH.								
Havelock ..	24 19 6	10 0 0	0 10 0	39 17 0	0 10 0	0 18 0	..	76 14 6
CANTERBURY.								
Christchurch ..	..	..	..	..	..	..	10 0 0	10 0 0
WESTLAND.								
Hokitika ..	67 0 0	8 0 0	0 12 6	..	0 18 0	0 18 0	0 5 0	77 13 6
Kanieri ..	51 0 0	5 0 0	3 2 6	..	4 3 0	1 1 0	1 5 0	65 11 6
Greymouth ..	151 0 0	5 0 0	5 7 6	30 15 4	3 7 0	5 2 0	0 10 0	201 1 10
Ross ..	55 0 0	8 0 0	3 17 6	85 18 6	4 2 0	0 5 0	12 15 0	169 18 0
Stafford..	66 3 0	..	3 10 0	..	2 8 0	2 7 0	1 8 0	75 16 0
Okarito ..	11 0 0	5 0 0	0 17 6	..	0 16 0	0 2 0	0 7 0	18 2 6
Greenstone ..	48 0 0	..	1 2 6	..	2 9 0	2 8 0	..	53 19 6
Maori Gully ..	19 0 0	..	1 12 6	..	1 1 0	0 10 0	..	22 3 6
Clifton ..	49 0 0	..	2 10 0	2 0 0	1 19 0	..	..	55 9 0
Kumara ..	110 0 0	16 0 0	0 17 6	5 0 0	2 11 0	5 3 0	0 13 0	140 4 6
Jackson's Bay ..	2 0 0	..	..	..	0 2 0	..	..	2 2 0
Goldsborough ..	74 0 0	..	6 17 6	..	4 10 0	0 16 0	2 15 0	88 18 6
Totals ..	703 3 0	47 0 0	30 7 6	123 13 10	28 6 0	18 12 0	19 18 0	971 0 4
OTAGO.								
Dunedin ..	9 0 0	5 0 0	0 12 6	8 10 0	0 5 0	..	..	23 7 6
Naseby ..	136 2 0	..	9 12 6	203 13 4	3 17 0	2 6 6	1 0 0	356 11 4
Black's and St. Bathans	43 0 0	5 0 0	11 14 2	41 5 0	2 4 0	..	..	103 3 2
Manuherikia ..	22 0 0	..	1 15 0	24 0 0	1 6 0	..	..	49 1 0
Clyde ..	11 0 0	..	0 7 6	34 17 0	1 5 0	..	..	47 9 6
Mount Benger ..	31 0 0	..	2 5 0	..	0 8 0	..	..	33 13 0
Cromwell ..	80 0 0	15 0 0	4 15 0	0 5 0	3 6 0	10 15 0	2 10 0	116 11 0
Queenstown ..	46 1 0	..	3 15 0	36 3 4	2 6 0	..	1 1 0	89 6 4
Arrowtown ..	64 0 0	..	2 5 0	37 6 8	0 15 0	0 16 0	0 10 0	105 12 8
Lawrence ..	96 0 0	3 0 0	2 7 6	71 16 8	2 16 0	8 17 0	0 0 3	184 17 5
Switzer's ..	43 6 6	..	2 15 0	..	0 4 0	0 18 0	..	47 3 6
Orepuki..	43 0 0	3 0 0	1 15 0	10 0 0	1 7 0	4 1 0	..	63 3 0
Totals ..	624 9 6	31 0 0	43 19 2	467 17 0	19 19 0	27 13 6	5 1 3	1,219 19 5

Gold duty received during the quarter in the under-mentioned provincial districts:—

Auckland ..	£ s. d. 675 4 5	Westland ..	£ s. d. 1,756 15 2
Wellington ..	10 1 7	Otago ..	2,706 10 1
Nelson ..	985 14 7		

JAMES C. GAVIN, Receiver-General.

No. 3.

COMPARATIVE RETURN of REVENUE derived from the GOLD FIELDS in the several DISTRICTS of NEW ZEALAND during the Years 1882 and 1883, showing INCREASE or DECREASE under each Head of Revenue.

District.	Miners' Rights.	Business Licenses.	Water-races, Sluices, &c.	Gold-mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous.	Gold Duty.	Total.
AUCKLAND—									
Year 1882 ..	£ 725	£ 355	£ 12	£ 7,099	£ 148	£ 135	£ 1,297	£ 3,233	£ 13,004
Year 1883 ..	776	5	..	6,387	137	82	5,714	4,129	17,230
Increase ..	51	..	..	..	..	..	4,417	..	*4,226
Decrease ..	..	350	12	712	11	53	..	..	..

* Net.

No. 3—continued.

COMPARATIVE RETURN of REVENUE derived from the GOLD FIELDS—continued.

District.	Miners' Rights.	Business Licenses.	Water-races, Sluices, &c.	Gold-Mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous.	Gold Duty.	Total.
HAWKE'S BAY—									
Year 1882	£	£	£	£	£	£	£	£	£
Year 1883 .. .. .	..	..	..	..	..	..	..	..	..
Increase .. .. .	..	..	..	..	..	..	..	..	..
Decrease .. .. .	..	..	..	..	..	..	..	..	..
WELLINGTON—									
Year 1882 .. .. .	..	..	..	..	..	..	2	2	4
Year 1883 .. .. .	..	..	..	..	..	..	..	..	..
Increase .. .. .	..	..	..	..	..	..	..	..	..
Decrease .. .. .	..	..	..	..	..	..	..	..	4
NELSON—									
Year 1882	1,738	576	101	3,690	131	64	6	4,997	11,203
Year 1883	1,728	443	93	2,583	116	110	21	3,931	9,025
Increase .. .. .	..	..	..	..	..	46	15	..	..
Decrease	10	133	8	1,107	15	..	..	..	*2,178
MARLBOROUGH—									
Year 1882	162	8	5	165	10	50	2	135	537
Year 1883	130	26	3	316	7	10	..	63	555
Increase .. .. .	..	18	..	151	..	..	..	..	*18
Decrease	32	..	2	..	3	40	2	..	..
Westland—									
Year 1882	3,261	561	133	800	143	151	40	8,436	13,525
Year 1883	2,799	307	133	542	114	119	42	8,060	12,116
Increase .. .. .	..	..	..	..	..	..	2	..	..
Decrease	462	254	..	258	29	32	..	..	*1,409
OTAGO—									
Year 1882	3,483	309	164	916	76	155	16	8,344	13,463
Year 1883	2,860	263	158	1,322	86	151	5	8,746	13,091
Increase .. .. .	..	..	..	406	10	..	..	..	*128
Decrease	623	46	6	..	..	4	11	..	..
CANTERBURY—									
Year 1882 .. .. .	..	..	..	..	..	..	..	1	1
Year 1883 .. .. .	..	..	..	76	..	..	..	5s. 8d.	76
Increase .. .. .	..	..	..	76	..	..	..	..	*75
Decrease .. .. .	..	..	..	..	..	..	..	14s. 4d.	..

* Net.

JAMES C. GARDNER, Receiver-General.

No. 4.

COMPARATIVE RETURN of the TOTAL AMOUNTS of GOLD FIELDS REVENUE (exclusive of Gold Duty) collected in the several Districts during the Years 1882 and 1883, and the Quarters ending 31st March, 1883 and 1884, showing the INCREASE or DECREASE in respect of each District.

District.	Years 1882 and 1883.				Quarter from 1st January to 31st March.				
	1882.	1883.	Increase.	Decrease.	1883.	1884.	Increase.	Decrease.	
AUCKLAND.									
Coromandel	£ 950	£ 701	..	£ 249	£ 144	£ 287	£ 143	..	
Te Aroha	3,377	3,431	54	..	360	599	239	..	
Thames	5,444	8,970	3,526	..	937	1,199	262	..	
NELSON.									
Collingwood	243	163	..	80	34	34	..	..
Westport and Charleston	1,128	1,065	..	63	319	391	72	..	
Ahaura	716	651	..	65	135	201	66	..	
Reefton	3,279	2,355	..	924	734	409	..	325	
Wangapeka	23	27	4	..	2	12	10	..	
West Wanganui	38	71	33	..	21	25	4	..	
Lyell	680	541	..	139	96	143	47	..	
No-town	200	219	19	..	53	34	..	19	
MARLBOROUGH.									
Havelock	399	493	94	..	129	76	..	53	
Blenheim	2	..	..	2	..	..	..	..
WESTLAND.									
Hokitika	558	186	..	372	56	77	21	..	
Kanieri	707	558	..	149	117	65	..	52	
Greymouth	1,208	746	..	462	246	201	..	45	
Ross	515	654	139	..	157	169	12	..	
Stafford	280	257	..	23	68	75	7	..	
Okarito	91	77	..	14	18	18	..	..
Greenstone	208	218	10	..	37	53	16	..	
Maori Gully	155	115	..	40	29	22	..	7	
Clifton	339	301	..	38	65	55	..	10	
Kumara	694	624	..	70	173	140	..	33	
Jackson's Bay	3	24	21	..	3	2	..	1	
Goldsborough	331	293	..	38	73	88	15	..	

No. 4—continued.

COMPARATIVE RETURN of the TOTAL AMOUNTS of GOLD FIELDS REVENUE—continued.

District.	Years 1882 and 1883.				Quarter from 1st January to 31st March.			
	1882.	1883.	Increase.	Decrease.	1883.	1884.	Increase.	Decrease.
OTAGO.								
Dunedin	£ 165	£ 65	..	£ 100	£ 14	£ 23	£ 9	£ ..
Naseby	1,025	967	..	58	254	356	102	..
Black's and St. Bathans..	207	297	90	..	123	103	..	20
Manuherikia	235	183	..	52	22	49	27	..
Clyde	115	89	..	26	24	47	23	..
Mount Benger	197	164	..	33	34	33	..	1
Cromwell	687	566	..	121	104	116	12	..
Queenstown	335	545	210	..	197	89	..	108
Arrowtown	472	522	50	..	74	105	31	..
Lawrence	962	821	..	141	185	184	..	1
Switzers'	273	171	..	102	21	47	26	..
Orepuki	443	452	9	..	92	63	..	29
SOUTHLAND.								
Stewart's Island	2	..	..	2	..	..	..	..
WELLINGTON.								
Wellington	2	..	..	2	..	..	..	..
HAWKE'S BAY.								
Napier	1	..	..	1	..	..	..	..
Totals	26,689	27,582	4,259	3,366	5,150	5,590	1,144	704
Total decrease .. .. .	..	..	3,366	..	..	..	704	..
Net increase .. .. .	..	..	893	..	..	..	448	..

JAMES C. GAVIN, Receiver-General.

No. 5.

RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY for EXPORTATION from NEW ZEALAND during the Year ended the 31st December, 1883.

Entered for Duty at	Produce of Gold Fields in the District of	Totals.	
		Quantity.	Value.
		Oz.	£
Auckland	Auckland	41,291	163,618
Wellington	Wellington .. .. .	..	..
Picton	Marlborough	636	2,524
Nelson		Nelson	2,064	7,724
Nelson	West Coast	116,905	467,152
Westport .. .. .		..	..
Greymouth .. .. .		..	..
Hokitika .. .. .		..	..
Wellington	Otago	87,478	352,334
Dunedin .. .. .		..	..
Invercargill .. .. .		..	..
Riverton .. .. .	..	..	..
Totals .. .. .	..	248,374	993,352

Department of Trade and Customs,
Wellington, 21st May, 1884.WILLIAM SEED,
Secretary and Inspector.

No. 6.

COMPARATIVE RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY for EXPORTATION from NEW ZEALAND, for Quarters ended 31st March, 1884, and 31st March, 1883.

District of	Quarter ended 31st March, 1884.		Quarter ended 31st March, 1883.	
	Quantity.	Value.	Quantity.	Value.
	Oz.	£	Oz.	£
Auckland	6,752	26,788	9,721	38,491
Wellington	101	360	..	..
Marlborough .. .. .	..	..	583	2,332
Nelson	902	3,338	833	3,095
West Coast	27,461	109,762	28,542	113,760
Otago	27,065	109,311	31,288	126,119
Totals	62,281	249,579	70,967	233,797

Department of Trade and Customs,
Wellington, 15th April, 1884.WILLIAM SEED,
Secretary and Inspector.

No. 7.

RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY for EXPORTATION from NEW ZEALAND, from 1st APRIL, 1857, to 31st MARCH, 1884.

Entered for Duty at	Produce of the Gold Fields in	During the Quarter ended 31st March, 1884.		Entered for Exportation to the 31st December, 1883.		Total entered for Exportation from New Zealand to the 31st March, 1884.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Auckland	Auckland	Oz. 6,752	£ 26,788	Oz. 1,401,690	£ 5,180,282	Oz. 1,408,442	£ 5,207,070
Wellington	Wellington	101	380	40	157	141	537
Picton	Marlborough .. ..	..	..	51,756	199,835	51,756	199,835
Nelson	Nelson	902	3,338	1,634,615	6,488,189	1,635,517	6,491,527
Nelson	West Coast	468	1,789	2,941,753	11,672,023	2,969,214	11,781,785
Westport		2,745	10,980				
Greymouth		16,071	64,286				
Hokitika		8,177	32,707				
		27,461	109,762				
Dunedin	Otago	24,492	99,066	4,292,479	16,917,009	4,319,544	17,026,320
Invercargill		2,486	9,908				
Riverton		87	337				
		27,065	109,311				
Totals		62,281	249,579	10,322,333	40,457,495	10,384,614	40,707,074

Department of Trade and Customs,
Wellington, 15th April, 1884.

WILLIAM SEED,
Secretary and Inspector.

No. 8.

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 March, 1884.

Mining 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.
AUCKLAND—North Hauraki	£ s. d. 2 10 0 to 3 1 6	8s. to 14s.	..	..
South Hauraki	2 12 6 to 3 2 6	8s. 6d. to 12s. 6d.	£3	40in. by 1in.
Te Aroha	2 8 0 to 3 7 0	10s.	..	40in.
MARLBOROUGH—Pelorus and Wairau	3 13 0	..	£1	2in. by 20in.
NELSON—Wangapeka	3 8 0 to 3 15 6	..	..	..
Charleston	3 15 0 to 3 17 6	£1	£2 10s.	40in.
Inangahua	3 17 6 to 3 18 3	10s. to 15s.	..	..
Collingwood	3 13 6	..	..	..
Westport	3 15 0 to	..	£2	40in.
Lyell	3 17 0	£1	10s.	41in.
WESTLAND—Hokitika and Kanieri				
Waimea	3 16 6	..	£3 to £4	40in.
Totara .. ..	..	..	..	..
Greymouth	3 16 0	..	£3	20in. by 2in.
Greenstone	3 16 6	..	£3	20in. by 2in.
Kumara	3 16 6	..	£3 to £4	40in.
Okarito	3 13 6	..	..	..
OTAGO—Hindon	3 15 0	..	..	..
Tuapeka	3 15 0	..	£2 10s. to £3	100in.
Dunstan	3 15 0	12s. 6d. to 18s.	£1 to £6	60in.
Longwood	3 8 6	..	£1	6in. by 1in.
Orepuki	3 16 6	..	£1	48in. by 1in.
Waikaia	3 8 0	..	..	..
Arrow, Wakatipu Gold Field	3 12 6 to 3 15 0	11s. 6d.	£1	..
Mount Ida	3 13 0	..	£1 to £1 10s.	16in. by 1in.
Macrae's, Hyde	..	..	..	..
Hamilton, Serpentine	3 15 0	..	£1 13s.	..
Maerewhenua	..	..	..	..
Queenstown	3 10 0 to 3 15 0	12s. 6d. to 15s.	..	..

No. 9.

NUMBER of MINERS EMPLOYED during the Year ending 31st March, 1884.

Mining District.	Alluvial Miners.		Quartz-miners.		Totals.		Grand Totals.
	European.	Chinese.	European.	Chinese.	European.	Chinese.	
AUCKLAND—							
North Hauraki .. .. .	..	..	150	..	150	..	150
South Hauraki .. .. .	..	..	720	..	720	..	720
Te Aroha .. .. .	..	..	160	..	160	..	160
MARLBOROUGH—							
Pelorus	200	..	8	..	208	..	208
Wairau	50	..	2	..	52	..	52
Queen Charlotte Sound .. .. .	..	..	..	..	..	..	..
NELSON—							
West Wanganui	9	..	15	..	24	..	24
Wangapeka	18	..	..	..	18	..	18
Collingwood and Takaka	198	..	13	..	211	..	211
Inangahua	120	280	380	..	500	280	780
Ahaura	280	140	..	..	280	140	420
Charleston	250	..	..	..	250	..	250
Westport, including Addison's, Northern Terraces, Waimangaroa, North Beach, Mokihinui, Kara- mea, and Lower Buller Valley	230	..	35	..	265	..	265
Lyell	80	4	120	..	200	4	204
Murchison	130	7	..	..	130	7	137
WESTLAND—							
Waimea and Stafford	550	250	..	..	550	250	800
Totara	415	99	..	..	415	99	514
Hokitika and Kanieri	735	119	..	..	735	119	854
Kumara	500	20	..	..	500	20	520
Greymouth	240	250	..	..	240	250	490
Arnold	470	268	..	..	470	268	738
Greenstone	100	100	..	..	100	100	200
Okarito	80	..	..	..	80	..	80
OTAGO—							
Hindon	36	4	6	..	42	4	46
Tuapeka	420	370	50	..	470	370	840
Clyde	40	25	..	..	40	25	65
Cromwell	220	150	40	..	260	150	410
Alexandra	140	130	20	..	160	130	290
Roxburgh	140	135	7	..	147	135	282
Black's	150	50	..	..	150	50	200
Waikaia, Upper Waikaia, Nokomai, Waikaka, and Waikawa	..	..	..	..	..	..	..
Orepuki and Longwood	95	350	6	..	101	350	451
Wakatipu Gold Field — Arrow, Macetown, Cardrona, Kawarau, Bracken's, and Motatapu	160	110	120	..	280	110	390
Queenstown	300	150	70	..	370	150	520
Naseby	165	95	..	..	165	95	260
Kyeburn and Clarke's	45	100	..	..	45	100	145
Hamilton, Sowburn, &c.	55	15	..	..	55	15	70
Hyde and Fullerton's	40	7	..	..	40	7	47
Macrae's, Strath-Taieri, and Shag Valley	55	85	..	..	55	85	140
Serpentine	15	10	30	..	45	10	55
Maerewhenua	35	..	..	..	35	..	35
St. Bathans and Ida Valley	135	20	10	..	145	20	165
SUMMARY.							
AUCKLAND .. .. .	..	..	1,030	..	1,030	..	1,030
MARLBOROUGH	250	..	10	..	260	..	260
NELSON	1,315	431	563	..	1,878	420	2,309
WESTLAND	3,090	1,106	..	..	3,090	1,117	4,196
OTAGO	2,246	1,806	359	..	2,605	1,806	4,411
TOTALS	6,901	3,343	1,962	..	8,863	3,343	12,206

No. 10. RETURN showing the AVERAGE PRICES of PROVISIONS and LIVE STOCK for the Year ending 31st March, 1884.

Mining District.	Beer.	Brandy.	Bread—	Butter—	Butter—	Butter—	Cheese.	Coffee.	Flour.	Grain—	Gattle—	Goats.	Horses.	Sheep.	Swine.	Beef.	Mutton.	Pork.	Milk.	Rice.	Salt.	Sugar.	Tea.	Tobacco.	Wine.	
	Per. hhd.	Per. gall.	Per. lb.	Per. lb.	Per. lb.	Per. lb.	Per. lb.	Per. lb.	Per. 100lb.	Per. 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 lb.	Per gallon.
AUCKLAND—																										
North Hauraki ..	105/	25/	d	1/6	1/	1/9	18/	6/	5-10	8/	5-40	5-40	5-40	8/	30/	7	5	6	d.	1 1/2	4	d.	2/	6/6	24/	
South Hauraki ..	88/-100/	24/	2 1/2	1/6	1/	1/9	18/	5/	5-10	8/	5-20	5-20	5-20	8/	15/-60/	7	5	6	d.	1 1/2	4	d.	2/	6/	16/-30/	
Te Aroha ..	100/	25/	2 1/2	1/6	1/3	1/10-2/	15/	9/	5-9	9/	5-40	5-40	5-40	8/	15/-35/	5	5	6	d.	2	4	d.	3/6	6/	16/-40/	
MARLBOROUGH—																										
Queen Charlotte Sound ..	..	..	4	1/3	1/3	2/	18/	..	6-8	13/	10/	10/	10-20	13/	..	6	6	6	d.	1 1/2	7	d.	3/6	7/	..
Pelorus ..	150/	..	4	1/	1/	2/	18/	..	6-8	..	..	..	..	..	..	5	4	4	d.	2	6	d.	3/	8/	..
Wairau ..	..	..	3	1/	1/	2/	16/	..	6-8	..	..	..	..	..	..	5	3 1/2	6	d.	2	6	d.	3/3	7/	..
NELSON—																										
Wangapeka ..	180/	36/	2	1/9	8/	1/9	16/	5/6	1-10	5/6	10-20	10-20	10-20	9/	15/	4	4	4	d.	5	2	d.	3/	6/	..	
Collingwood ..	100/	33/	5	1/	7/	2/	15/	5/6	7	5/6	12	12	12	9/	70/	5	4	6	d.	6	1	d.	3/	8/	20/	
Inangahua ..	150/	26/	3	1/9	1/6	2/	24/	9/	9	15/	15	15	15	17/	80/	8	10	6	d.	5	3	d.	3/6	6/	18/	
Lytell and Murchison ..	150/	23/	4	2/	1/6	2/	24/	14/	10	14/	15	15	15	16/	50/	7	7	9	d.	6	6	d.	3/6	6/	20/	
Westport ..	123/	23/	2	1/6	1/3	1/10	13/	5/6	11	5/6	25	25	25	15/	50/	7	7	7	d.	4	2	d.	3/	6/	15/	
Charleston ..	130/	25/	2	1/6	1/3	1/10	18/	5/6	9	5/6	15-30	15-30	15-30	16/	30/	7	5	6	d.	5	2	d.	3/	7/	16/	
Ahaura ..	150/	25/	2	1/3	1/	1/10	17/	6/	5-12	6/	5-60	5-60	5-60	17/	40/-100/	5	6	8	d.	4	6	d.	3/	6/	16/	
WESTLAND—																										
Waima ..	120/	27/	3	2/	1/3	2/	14/6	6/7	8-16	6/7	20-50	20-50	20-50	15/	22/	6	6	8	d.	6	2	d.	3/	7/	20/-30/	
Totara ..	110/	26/	..	2/	1/6	2/	16/	7/	15	7/	10	10	10	15/	60/	6	5	8	d.	4	2	d.	3/	7/	16/	
Hokitika and Kamieri ..	100/	25/	2	2/	1/6	2/	15/	20/	10	15/	15-25	15-25	15-25	15/	20/	8	8	6	d.	4	2	d.	3/	6/	24/	
Okarito ..	130/	26/	3	1/6	1/3	1/9	18/	22/	4-10	8/	4-10	4-10	4-10	20/	30/	6	6	9	d.	6	2	d.	2/9	6/	16/	
Kumara ..	120/	23/6	3	2/	1/9	1/6	19/	20/	10-15	6/	15-50	15-50	15-50	15/	20/	6	6	10	d.	4	3	d.	3/6	6/	16/	
Greymouth ..	100/-120/	24/	2	1/6	1/3	1/	16/	18/	8-12	6/	20-60	20-60	20-60	17/	60/-120/	6	6	8	d.	3	2	d.	3/6	6/	12/-50/	
Arnold ..	120/-140/	26/-28/	2 1/2	1/6	1/6	1/	21/	7/	7-11	7/	12-20	12-20	12-20	15/	20/	5	5	7-10	d.	4	2	d.	3/	6/	16/-20/	
OTAGO—																										
Hindon ..	100/	25/	2	1/3	1/3	1/10	15/	3/6	80/-150/	3/6	8-40	8-40	8-40	9/	20/-70/	5	4	6	d.	3	2	d.	3/	6/6	18/-35/	
Tuaspeka ..	100/-140/	26/	1 1/2	1/10-1/	1/10	1/6	10/6	4/9	80/-150/	4/9	7-45	7-45	7-45	6/-15/	20/-70/	3-6	2 1/2-5 1/4-5	5	d.	3 1/2	1	d.	..	5/6-8/	..	
Cromwell ..	120/	30/	2 1/2	1/6	1/6	1/10	16/	4/9	110/	4/9	5-28	5-28	5-28	4/-20/	40/	6	5	8	d.	5	3	d.	3/	6/-8/	22/	
Clyde
Alexandra
Black's
Roxburgh
Queenstown ..	110/	28/	2	1/6	1/3	1/9	15/	3/6	5-10	3/6	10-30	10-30	10-30	15/	15/-10/	7	6	10	d.	4	2	d.	3/6	6/	16/-30/	
Orepuki, Longwood ..	100/	25/	1 1/2	1/	1/10	1/8	12/6	3/9	4	3/9	11	11	11	40/	..	4 1/2	3 1/2	4 1/2	d.	1	1	d.	3/	6/	20/	
Arrow (Wakatipu Gold Field) ..	120/	30/	2	1/6	1/3	1/10	11/	3/6	5	3/6	15	15	15	14/	50/	5	3 1/2	6	d.	5	2	d.	3/	6/	22/	
Mount Ida ..	80/-120/	27/	2	1/6	1/3	1/11	14/	5/	3-9	5/	10-35	10-35	10-35	6/-10/	20/-80/	6	3 1/2	8 1/2	d.	5	2	d.	3/6	6/	16/	
Maerewhenua ..	100/	26/	1 1/2	1/10	1/10	1/9	13/	3/9	4	3/9	10-50	10-50	10-50	7/6	30/	5	4	7	d.	4 1/2	2	d.	2/9	6/	24/	

TABLE showing the AVERAGE RATE of WAGES per WEEK for the Year ending 31st March, 1884.

Mining 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.	£ s. d.
Te Aroha ..	£5 to £8	1 0 0	£4 to £6	£3 to £5	£2 10/ to £3	2 8 0	3 12 0	3 6 0	48/ to 54/	2 8 0	1 10 0	..	1 10 0	7/ to 10/
North Hauraki ..	£5 to £8	1 0 0	£4 to £6	£3 to £5	£2 10/ to £3	2 8 0	£2 10/ to £3	3 0 0	£2 2/ to £2 8/	2 0 0	15/ to 20/	..	2 8 0	8/ to 12/
South Hauraki ..	£5 to £8	1 0 0	£3 to £6	£3 to £5	£2 10/ to £3	2 10 0	£2 10/ to £3	60/ to 72/	£2 2/ to £2 8/	1 16 0	15/ to 20/	..	2 8 0	8/ to 12/
MARLBOROUGH—	£ 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.
Wairau ..	£200	..	..	6 0 0	3 0 0	..	3 0 0	..	3 0 0	2 8 0	10/ to 12/	..	..	..
Petorus ..	per annum	..	..	..	..	..	..	..	..	2 8 0	..	..	..	..
Queen Charlotte Sound ..	£250	..	£200	£200	..	..	..	..	..	2 8 0	..	..	..	..
NELSON—	per annum	£ s. d.	per annum	per annum	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Wangapeka ..	..	1 0 0	5 0 0	3 0	2 8 0	2 8 0	2 14 0	3 0 0	3 0 0	2 8 0	..	..	3 11 0	25/
Collingwood ..	..	£1 to £3	£5 to £6	£4 10/ to £5	3 10 0	3 0 0	90/ to 100/	30/ to 100/	48/ to 54/	48/	..	..	20/ to 30/	10/ to 12/
Inangahua ..	7 0 0	..	5 0 0	..	3 10 0	3 0 0	3 10 0	3 10 0	3 0 0	3 0 0	2 0 0	..	1 10 0*	20/
Charleston ..	..	..	4 10 0	3 15 0	3 0 0	4 4 0	3 10 0	4 4 0	3 0 0	£2 to £3	20/ to 40/	..	1 0 0*	10/ to 15/
Westport ..	..	1 0 0	4 10 0	6 0 0	..	..	5 0 0	3 10 0	3 10 0	3 0 0	5/ to 20/	..	25/ to 30/	10/ to 20/
Lyell and Murchison ..	6 0 0	1 10 0	6 0 0	6 0 0	..	..	3 10 0	3 10 0	3 10 0	3 10 0	2 10 0	..	2 0 0	10/ to 20/
Anaura ..	..	1 10 0	..	..	..	..	3 10 0	4 0 0	3 0 0	£2 8/ to £3	0 15 0	..	2 10 0	15/ to 20/
WESTLAND—	£ 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.
Waimea ..	8 0 0	1 10 0	5 0 0	5 0 0	..	..	4 10 0	4 10 0	£2 10/ to £3	3 0 0	1 0 0	30/ to 40/	3 0 0	15/ to 20/
Totara ..	4 0 0	1 5 0	4 0 0	5 0 0	4 0 0	..	4 0 0	4 0 0	3 0 0	3 0 0	2 0 0	2 0 0	3 0 0	25/
Hokitika and Kanieri ..	..	1 0 0	£4 to £5	5 0 0	4 0 0	3 0 0	£3 to £4	4 0 0	3 0 0	3 0 0	1 10 0	1 10 0	1 0 0*	12/ to 20/
Kumara ..	..	1 0 0	4 10 0	5 0 0	4 0 0	..	4 0 0	4 10 0	3 0 0	3 0 0	1 10 0	1 10 0	1 0 0*	10/ to 20/
Greymouth ..	..	1 0 0	6 0 0	5 0 0	3 10 0	3 0 0	4 0 0	4 10 0	3 0 0	£2 14/ to £3	15/ to 20/	1 10 0*	1 10 0*	10/ to 20/
Okarito ..	..	..	..	..	..	..	3 14 0	3 14 0	3 0 0	£3 to £3 12/	1 0 0	..	15/ to 30/	20/
Maori Gully (Arnold) ..	..	..	..	..	..	..	4 0 0	4 0 0	3 0 0	3 0 0	1 0 0	2 0 0	..	15/
Greenstone ..	..	..	5 0 0	..	..	..	..	4 16 0	3 0 0	3 0 0	1 0 0	..	..	20/
OTAGO—	£ 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.
Hindon ..	..	..	..	..	..	..	3 0 0	3 0 0	to 55	2 8 0	..	..	£45 to £50	£30 to £35
Tuapeka ..	£3 to £4	£1 to £2 10/	3 10 0	£3 to £3 5/	55/ to 63/	..	£3 to	£3 to £4	2 8 0	2 2 0	15/ to 30/	25/ to 30/	per annum	per annum
Cromwell ..	..	..	..	..	..	..	..	..	..	..	..	..	20/ to 25/	10/ to 12/
Clyde ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Alexandra ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Black's ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Roxburgh ..	6 0 0	5/ to £1	5 0 0	4 0 0	3 0 0	2 10 0	4 0 0	4 10 0	3 0 0	3 0 0	10/ to 15/	2 0 0	20/ to 25/	12/6 to 20/
Queenstown ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Orepuki and Longwood ..	3 10 0	1 0 0	3 10 0	..	..	..	3 10 0	4 0 0	3 0 0	2 10 0	1 0 0	1 15 0	1 10 0	12/
Arrow (Wakatipu Gold Field) ..	..	..	4 10 0	..	..	..	..	..	..	2 8 0	1 13 0	1 16 0	1 0 0	12/6
Mount Ida ..	..	..	£3 10/ to £4	..	..	..	£3 10/ to £4	£3 10/ to £4	3 0 0	£2 2/ to £2 8/	1 0 0	£2 2/ to £2 8/	£45 to £50	£30 to £50
Maerewhenua ..	..	..	..	..	..	..	3 0 0	3 0 0	2 8 0	1 0 0	10/ to 15/	..	1 0 0	per annum

* With board.

No. 12.

NUMBER of MACHINES employed in ALLUVIAL and QUARTZ-MINING for the Year ending 31st March, 1884.

Mining District.	Machinery employed in Alluvial Mining.											Machinery employed in Quartz-mining.							Approximate Value of all Mining Plant included in this Return.			
	Puddling Machines.	Whirrs.	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.	Whirrs.		Whips or Pulleys.	Buddles.	
													No.	Aggregate h.p.								
AUCKLAND—																						
North Hauraki	9	230		107	5	..	..	..	..	45,000
South Hauraki	36	860	33	482	25	..	..	..	..	132,000
Te Aroha	1	20	2	50	*4	..	..	..	†62	22,000
MARLBOROUGH—																						
Ravenscliffe and Queen Charlotte Sound
Pelorus & Wairau	130	2	1,000	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,545
NELSON—																						
Wangapeka	30	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	500
Collingwood	1	5	1	..	..	..	..	2,500
West Wanganui	2	10	2	..	..	..	..	5,000
Inangahua	114	..	68	..	..	..	..	..	..	12	202	17	255	13	2	3	47	..	115,830
Charleston	80	1	70	..	50	..	4	..	..	..	..	..	..	..	..	..	..	..	3,000
Lyell	20	..	10	..	..	..	..	..	..	..	..	4	45	4	..	..	..	..	10,000
Murchison	40	..	30	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,000
Westport	40	6	23	..	..	..	..	..	..	..	..	1	10	1	..	..	..	..	3,000
Ahaura	450	..	300	..	..	3	..	..	..	..	..	..	6	1	..	..	..	..	6,150
WESTLAND—																						
Waimea	1	925	2	220	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4,600
Totara	4	56	8	40	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14,000
Hokitika and Kanieri	..	2	50	70	..	30	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,500
Greymouth	1,800	1	250	10	..	50	..	3	..	..	..	..	..	..	..	..	..	..	5,200
Arnold	1	6	748	6	118	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5,900
Kumara	7	..	50	5	53	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5,000
Greenstone	1,500	2	20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,800
OTAGO—																						
Hindon	11	..	1	..	..	..	..	..	..	1	20	2	20	1	..	..	..	..	4,000
Tuapeka	1	..	500	15	10	30	2	..	130	..	..	..	..	3	25	4	1	..	..	..	12,000
Clyde, Alexandra, Cromwell, Roxburgh, Black's Orepuke and Longwood	..	4	2	647	9	4,060	14	8	44	5	..	..	1	12	5	39	2	2	..	..	..	60,130
Waikaia (Switzer's Arrow (Wakatipu Gold Field))	200	6	70	1	..	..	..	..	..	..	..	5	45	5	2	1	2	..	15,500
Naseby	150	..	70	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,500
Kyeburn and Clarke's	70	..	20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	500
Hamilton's, Sowburn	40	..	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	400
Hyde and Fullerton's	15	..	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	200
Macrae's, Strath-Taieri, and Shag Valley	50	..	12	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	150
Maerewhenua	20	..	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	150
Serpentine	20	..	5	..	..	..	..	..	..	..	..	1	5	1	..	..	..	..	600
St. Bathans, Ida Valley, and other localities	60	..	40	..	..	..	..	..	..	..	..	1	10	..	..	..	..	..	2,200
Queenstown	45	..	1	..	..	..	..	..	..	4	70	..	..	..	..	..	10,000
SUMMARY.																						
AUCKLAND	46	1,110	44	639	34	..	..	62	..	199,000
MARLBOROUGH	130	2	1,000	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,545
NELSON	774	7	501	..	50	3	4	..	..	12	202	27	331	22	2	3	47	..	147,080
WESTLAND	10	61	5,149	24	731	18	..	50	..	3	..	..	..	..	..	..	..	..	..	..	89,000
OTAGO	5	2	2,133	36	4,638	57	11	54	5	130	1	2	32	21	214	14	5	1	2	..	108,930
Total	..	15	63	8,186	69	6,870	77	11	154	8	134	4	60	1,344	92	1,184	70	7	4	111	..	495,555

* Turbines.

† Berrdans.

No. 13.

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 March, 1884.

Mining District.	Water-races.				Tail-races.		Dams.		Reservoirs.		Ground-sluices.	
	No.	Length in Miles.	No. of Sluice-heads.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.
AUCKLAND—				£		£		£		£		£
Hauraki North ..	15	10½	47	3,000	..	..	..	..	..	..	..	..
Hauraki South ..	26	20½	103	85,000	1	80	1	60	1	600	..	..
Te Aroha ..	3	2½	22	7,500	..	..	..	..	..	..	..	..
MARLBOROUGH—												
Pelorus ..	32	42	61	4,500	18	1,500	16	400	..	..	..	..
Wairau ..	7	7	36	700	2	100	2	50	..	..	..	..
West Wanganui ..	5	3½	20	200	1	35	2	240	..	..	..	..
NELSON—												
Takaka ..	14	7½	17	370	9	95	3	80	..	..	..	..
Wangapeka ..	2	3	3	250	14	500	7	100	..	..	..	..
Collingwood ..	44	51½	102	3,750	26	520	31	1,050	..	..	..	..
Inangahua ..	151	138	821	31,067	184	9,343	238	7,233	..	..	..	..
Charleston ..	205	129	265	19,646	170	5,468	392	11,979	..	..	80	3,000
Westport ..	193	174½	710½	11,887	53	5,950	108	3,378	..	..	..	..
Lyell ..	50	38½	220	5,902	19	1,584	36	2,058	..	..	15	1,500
Murchison ..	42	37½	112	3,640	8	246	14	615	..	..	40	3,000
Ahaura ..	54	25	222	3,354	38	4,335	31	764	..	..	..	..
WESTLAND—												
Waimaea ..	895	420	1,020	24,800	855	9,500	1,138	9,700	400	6,200	395	4,800
Totara ..	120	110	320	30,000	140	1,800	49	1,000	29	1,900	65	650
Hokitika and Kanieri	159	95	150	9,000	108	1,000	103	950	..	..	..	..
Kumara ..	112	80	240	15,500	133	15,000	23	2,500	11	700	20	200
Greymouth ..	320	150	510	25,150	180	7,560	350	10,210	..	..	75	2,800
Maori Gully (Arnold)	90	97½	123	3,531	71	2,841	62	2,012	..	..	126	6,097
Okarito ..	25	24	135	3,000	..	..	10	400	..	..	..	..
Greenstone ..	120	60	200	15,000	60	2,500	40	2,000	..	..	30	500
OTAGO—												
Hindon ..	10	15	25	750	21	450	18	750	..	..	11	78
Tuapeka ..	309	1,052	1,024	21,040	646	8,720	248	7,700	..	..	..	..
Clyde ..	22	106	62	6,750	20	550	27	609	..	..	..	..
Black's ..	65	572	159	23,700	80	16,000	55	17,000	..	..	..	..
Queenstown ..	205	228	583	5,120	387	3,860	41	1,700	11	550	..	..
Alexandra ..	30	104	75	8,800	29	960	34	605	..	..	..	..
Roxburgh ..	42	156	198	17,600	80	15,020	30	1,460	..	..	..	..
Cromwell ..	156	520	470	62,400	200	..	60	..	..	..	..	..
Waikata ..	..	..	..	..	..	..	..	..	..	..	..	..
Orepuki and Longwood	200	350	600	13,000	310	900	130	1,400	..	..	30	800
Arrow (Wakatipu Gold Field)	141	176	329	16,000	210	5,500	30	1,875	30	..	28	280
Naseby ..	44	150	132	25,000	120	10,000	68	7,000	..	..	..	..
Kyeburn and Clarke's	70	210	230	10,100	45	2,500	20	1,500	..	..	..	..
Hamilton's, Sowburn	31	106	80	5,500	25	2,000	15	1,000	..	..	..	..
Hyde and Fullerton's	18	90	64	10,150	15	3,000	10	500	..	..	..	..
Macrae's, Strath-Taieri, and Shag Valley	26	42	43	4,000	20	400	18	1,200	..	..	..	..
Serpentine ..	36	88	93	5,000	25	2,000	7	400	..	..	..	..
Maerewhenua ..	48	141	161	12,200	28	1,000	18	2,000	..	..	..	..
St. Bathans and Ida Valley	72	293	309	30,200	45	12,000	8	1,300	..	..	..	..

No. 14.

RETURN showing the REVENUE and EXPENDITURE on account of CONSTRUCTED WATER-RACES maintained by the Government, from 1st April to 30th September, 1883, and from 1st October to 31st March, 1884.

Name of Race.	1st April to 30th September, 1883.						1st October, 1883, to 31st March, 1884.						Balance Due on Water Account.
	Revenue.			Expenditure.	Revenue.			Expenditure.					
	Water sold.	Actual Receipts.			Water sold.	Actual Receipts.							
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.				
Nelson Creek ..	803 7 1	808 7 1	527 13 0	786 8 9	786 8 9	575 12 2	..	..	..	..	..
Waimea-Kumara ..	4,585 2 7	4,270 19 7	1,874 6 5	5,829 3 10	5,957 4 1	1,300 6 11	..	..	..	..	..
Kumara Sludge-chan.	890 3 8	..	2,444 10 2	1,237 14 7	..	3,961 0 6	..	..	..	..	2,437 3 9
Argyle ..	194 6 10	194 6 10	198 7 0	130 0 2	130 0 2	173 3 0	..	..	..	..	..

No. 15.

TABLE showing the NUMBER of GOLD-MINING COMPANIES REGISTERED under "The Mining Companies Limited Liability Act, 1865," and Amending Acts, the Joint-Stock Companies Act, and "The Mining Companies Act, 1872," upon 31st March, 1884.

Mining District.	Under "Mining Companies Limited Liability Act, 1865," and Amending Acts.			Under Joint-Stock Act.			Under "Mining Companies Act, 1872."		
	No.	Nominal Capital.	Paid-up Capital.	No.	Nominal Capital.	Paid-up Capital.	No.	Nominal Capital.	Paid-up Capital.
AUCKLAND—		£	£		£	£		£	£
North Hauraki* ..	..	..	..	..	..	..	..	..	..
South Hauraki† ..	..	..	..	..	..	..	..	..	..
Te Aroha ..	..	..	..	..	..	..	30	632,000	20,366
MARLBOROUGH—									
Pelorus ..	..	..	..	1	3,000	2,000	5	27,000	5,000
Queen Charlotte Sound ..	..	..	..	1	45,000	10,000	1	11,000	9,000
NELSON—									
Collingwood ..	..	..	..	..	..	..	4	88,000	21,238
West Wanganui ..	..	..	..	..	..	..	1	12,500	5,500
Westport ..	..	..	..	..	..	..	11	320,000	131,553
Inangahua ..	1	28,000	26,496	..	..	..	72	1,521,250	493,875
Lyell ..	..	..	..	..	..	..	20	571,000	306,505
WESTLAND—									
Hokitika ..	..	..	..	..	..	..	..	..	..
Greymouth ..	2	12,000	9,500	1	4,480	4,480	..	..	..
Totara‡ ...	1	180,000	136,450	..	..	..	7	44,000	49,000
Kumara ..	..	..	..	..	..	..	1	16,000	10,000
Greenstone ..	1	6,000	6,000	1	4,480	4,480	..	..	..
Waimea ..	..	..	..	..	..	..	1	15,000	8,000
OTAGO—									
Hindon ..	..	..	..	..	..	..	..	..	..
Tuapeka ..	11	40,975	18,602	..	..	..	8	80,200	40,000
Cromwell ..	2	24,000	6,000	..	..	..	1	60,000	30,000
Clyde, Black's, Alexandra, and Roxburgh ..	..	..	..	..	..	..	6	62,000	15,620
Orepuki and Longwood ..	..	..	..	..	..	..	1	1,080	900
Arrow (Wakatipu Gold Field)	..	..	..	..	..	..	24	308,150	150,247
Naseby (Mount Ida) ..	7	44,220	44,220	..	..	..	8	66,700	56,880
Queenstown ..	..	..	..	1	24,000	12,600	2	33,000	24,450
Totals ..	24	335,195	247,268	5	80,960	33,560	203	3,868,880	1,383,184

* No register kept. † No return. ‡ Under "The Mining Companies Act, 1862."

No. 16.

RETURN of the NUMBER of MINING LEASES and AGRICULTURAL LEASES in Force on the 31st March, 1884, the EXTENT of GROUND LEASED, and RENTAL per ANNUM.

MINING LEASES.				AGRICULTURAL LEASES.			
Mining District.	No.	Gross Acreage.	Rental per Annum.	Mining District.	No.	Gross Acreage.	Rental per Annum.
		A. R. P.	£ s. d.			A. R. P.	£ s. d.
AUCKLAND—				AUCKLAND—			
Hauraki North ..	..	..	..	Hauraki, Ohinemuri	91	45,763 0 4	225 0 0
MARLBOROUGH—				NELSON—			
Wairau and Pelorus	14	179 0 36	184 0 0	Nelson ..	1	46 0 0	6 15 0
Qn. Charlotte Sound	3	23 0 4	24 0 0	Collingwood	11	622 2 5	63 17 0
NELSON—				Inangahua	46	2,833 1 21	340 12 6
Collingwood ..	9	95 3 7	93 0 0	Charleston	20	507 2 0	41 19 0
West Wanganui ..	6	87 0 27	88 0 0	Westport ..	35	2,479 0 32	272 5 6
Inangahua ..	100	1,903 0 18	1,883 0 0	Lyell ..	36	1,761 2 12	205 2 0
Charleston ..	21	122 0 13	113 0 0	Ahaura ..	87	4,868 0 26	548 19 0
Ahaura ..	21	188 1 9	194 0 0	WESTLAND—			
Westport ..	38	424 0 25	440 10 0	Greymouth ..	11	903 0 4	81 2 0
Lyell ..	50	846 3 22	864 0 0	Arnold ..	20	889 0 7	102 15 6
Murchison ..	4	193 3 32	194 0 0	Greenstone ..	1	89 0 0	11 2 6
WESTLAND—				Totara ..	2	22 0 0	2 15 8
Kumara ..	1	10 0 0	10 0 0	Kumara ..	1	44 3 0	5 12 6
Totara ..	22	742 0 0	141 17 0	OTAGO—			
Greymouth ..	6	82 3 2	85 0 0	Waikaia ..	..	..	..
Arnold ..	3	18 0 0	16 0 0	Orepuki and Longwood ..	3	20 0 0	20 0 0
OTAGO—				Hindon ..	3	49 0 0	50 0 0
Waikaia ..	..	..	..	Tuapeka ..	41	287 2 5	258 0 0
Orepuki and Longwood ..	3	20 0 0	20 0 0	Cromwell ..	8	121 0 0	121 0 0
Hindon ..	3	49 0 0	50 0 0	Clyde, Alexandra, Black's, Roxburgh	22	184 3 13	190 0 0
Tuapeka ..	41	287 2 5	258 0 0	Naseby ..	50	369 0 4	376 0 0
Cromwell ..	8	121 0 0	121 0 0	Arrow (Wakatipu Gold Field)	49	358 1 39	379 0 0
Clyde, Alexandra, Black's, Roxburgh	22	184 3 13	190 0 0	Queenstown ..	37	278 2 12	275 0 0
Naseby ..	50	369 0 4	376 0 0	Totals ..	511	6,584 3 28	5,999 7 0
Arrow (Wakatipu Gold Field)	49	358 1 39	379 0 0				
Queenstown ..	37	278 2 12	275 0 0				
Totals ..	511	6,584 3 28	5,999 7 0				

No. 17.

RETURN of the NUMBER of LICENSES under "The Gold-Mining Districts Act, 1873," for the Year ending 31st March, 1884.

Mining District.					Number.	Gross Acreage.			Rental per Annum.		
						A.	B.	P.	£	s.	d.
AUCKLAND—											
North Hauraki	..	..	..	..	20	133	1	5	421	0	0
Grahamstown	..	..	..	..	106	9,581	2	0	2,873	0	0
Te Aroha..	..	..	..	..	132	585	0	0	1,847	0	0
Totals					258	10,299	3	5	5,141	0	0

No. 18.

RETURN of CASES in the WARDENS' COURTS, and COSTS AWARDED, for the Year ending 31st March, 1884.

Mining District.	Number of Mining Disputes adjudicated on.	Aggregate Amount of Value.		Amount of Costs awarded.	Cases wherein Judgment has been given in favour of the Plaintiff.										
		Claimed.	Recovered.												
		£	s.	d.	£	s.	d.	£	s.	d.					
AUCKLAND—															
North Hauraki	63	..	..	..	10	15	0				2	
South Hauraki	No return.														
Te Aroha	75	870	0	0	137	0	0	41	5	0	10				
MARLBOROUGH—															
Pelorus and Wairau	5	33	0	0	28	0	0	0	13	0	3				
NELSON—															
Collingwood	2	37	12	6	32	12	1	1	15	0	..				
Inangahua	52	872	0	10	177	13	4	61	13	0	..				
Lyell	7	528	3	0	153	9	0	25	10	0	..				
Westport	5	9	4	2	6	16	4	4	12	0	..				
Charleston	10	5	0	0	3	10	0	10	10	0	1				
Ahaura	25	149	7	3	10	5	0	28	4	6	..				
Murchison	1	16	10	0	1	0	0	1	12	0	..				
WESTLAND—															
Hokitika and Kanieri	21	46	0	0	5	10	0	22	2	0	..				
Waimea	35	78	12	0	1	12	0	24	11	0	..				
Totara	24	27	5	0	1	0	0	17	1	0	..				
Kumara	19	62	0	0	..	..	..	20	5	6	..	
Greymouth	28	106	11	9	67	6	9	27	0	6	3				
Arnold (Maori Gully)	17	127	7	7	..	..	..	8	5	0	..	
Greenstone	27	212	4	9	77	4	9	18	5	0	6				
OTAGO—															
Hindon	..	..	..	..	..	..	..	..	..	..	1
Tuapeka	6	31	0	0	4	0	0	3	16	0	..				
Cromwell	23	368	2	0	41	2	0	60	13	0	..				
Alexandra	6	..	..	..	..	..	..	3	4	0	..
Roxburgh		..	..	..	..	..	..	..	..	..	..
Black's		..	..	..	..	..	..	..	..	..	..
Clyde	9	100	0	0	0	0	0	19	0	0	..				
Orepuki and Longwood	10	84	0	3	84	0	3	21	19	0	3				
Arrow (Wakatipu Gold Fields)	1	..	..	..	..	..	..	..	..	..	..
Queenstown	36	4,444	14	3	4,357	14	4	15	1	0	..				
Naseby	1	47	0	0	..	..	..	3	14	0	..	
Maerewhenua	1	..	..	..	..	..	..	..	..	..	..
Totals					508	8,255	15	4	5,209	15	10	451	6	6	29

NOTE.—The Returns numbered 8 to 13, and 15 to 18, inclusive, are compiled from statistics supplied by Wardens.

H. J. H. ELLIOTT,
Under-Secretary for Gold Fields.

Mines Department, Wellington, 7th June, 1884.

By Authority: GEORGE DEDSBURY, Government Printer, Wellington.—1884.

