

1892.
NEW ZEALAND.

GOLDFIELDS AND WATER-RACES

(REPORTS ON, BY WARDENS, INSPECTORS OF MINES, AND WATER-RACE MANAGERS).

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

No. 1.

Mr. Warden BISHOP to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Whangarei, 11th May, 1892.

I have the honour to report that very little work of a practical nature has been done in the Puhipuhi Mining District during the last year, and the results, so far, have been of a most disappointing kind. Various experiments have been made by the Prospectors' Company with a view to extracting silver in payable quantity, but unsuccessfully, and the ore has been found to be of a lower grade than was expected. At the present time experiments are being carried on under the direction of Mr. Hartmann, a silver mineralogist of considerable attainments, and he is very sanguine that he will ultimately succeed in discovering some mode of treatment which will prove an entire success. It is greatly to be hoped that he will do so, for the whole field is languishing and must necessarily soon be closed unless a spurt takes place. Owing to want of funds, very little prospecting has been done, and this is much to be regretted, for there is very promising scope for any practical prospector in the large tract of very likely-looking country between here and Cape Brett. There seems to be a general consensus of opinion amongst experts that large deposits of various minerals will be found all over the North. There is already undoubted evidence that gold, silver, cinnabar, antimony, and manganese are to be found in several parts of the district.

I enclose Mr. Inspector Wilson's annual report upon the field.

I have, &c.,

H. W. BISHOP, Warden.

The Under-Secretary, Mines Department, Wellington.

No. 2.

Mr. G. WILSON, Inspector of Mines, to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Whangarei, 11th May, 1892.

I have the honour to forward the following report on mining in the Puhipuhi Mining District for the year ending the 31st March last:—

Prospectors' Mine.—The chief work carried on during the year was completing the construction of the crushing-mill, water-race, dam, tramway, and calcining-kilns mentioned in my report of last year, extending the drive to the northward on No. 3 reef, at No. 1 level, 500ft., stoping the block between No. 1 level and the surface, and sinking a winze about 50ft. on the Elsie reef. The drive on No. 3 reef, being near the surface, does not appear to have led to any discovery of value, and only the best-looking quartz was sent to the mill. A large quantity of quartz was conveyed to the kilns and calcined, but as the pulverising-machinery was not satisfactorily adjusted at first, only a limited quantity was reduced to a condition fit for amalgamation. The scarcity of water hindered crushing operations after the month of September. The total quantity of quartz crushed and passed through the pans was about 100 tons, for a yield of 1,220oz. of melted silver, valued at 3s. per ounce. The total yield from the mine, including some test parcels, is 1,330oz. The yield per ton did not realise expectations, and operations were carried on in a desultory manner for the last six months of the year. Experiments have, however, been made with a view to the better reduction of the quartz. The pulveriser has been fitted with screens of $\frac{1}{4}$ -in. mesh, and a pneumatic separator is now used to separate the fine dust from the rougher particles of the crushed quartz, the coarser portion being again conveyed to and passed through the pulveriser. Experiments are also being made by a Swiss expert named E. E. Hartmann for the extraction of gold and silver by an adaptation of the cyanogen process, which may lead to the adoption of the method instead of

amalgamation, as a large percentage of the actual value of the ore is recovered. The mine for the greater portion of the year was under the management of Mr. George Kerr, and the number of men employed varied from two to forty; average number employed for the year, fifteen. Notwithstanding their disappointments, which are of a like nature to those frequently experienced in new mining ventures, the Prospectors' Company have still a large amount of faith in the ultimate value of their mine, and are by no means discouraged, efforts being made to obtain further capital to enable them to develop the reefs in the ground. Although no rich veins have so far been found there is every probability that more extensive deposits may be discovered if the reefs are systematically opened up.

In all the other mines which were occupied in the Puhipuhi Forest very little work was carried on during the year, and no fresh discovery made, with the exception of a reef discovered and driven on for 80ft. in the Waipu Mine. A parcel of the quartz, about one ton, was taken to the Thames and treated at the School of Mines for a return of 46oz. of bullion, valued at 3s. 9d. per ounce. This reef, which is from 3ft. to 6ft. in thickness, contains quartz of a likely appearance, and further operations are being carried on, two men being employed. The average number of miners employed on the field was twenty-five.

Cinnabar.—A discovery of cinnabar was made on two small branches of the Wairiki Stream. The cinnabar was obtained in the wash and under boulders, and about 2oz. of cinnabar from the size of mustard-seed to that of maize could be washed from a dish of gravel. Further prospecting may lead to a heavier deposit being found, but so far the discovery has not been of such value as to pay for working.

Antimony.—A reef containing considerable quantities of antimony was discovered at Waikare, about nine miles from Russell, in the Bay of Islands District. The discovery was made in land adjoining McAllister's private land. The reef is from 1ft. to 1ft. 6in. in thickness, but the quantity of antimony is not enough to pay for working.

Manganese.—Manganese is found and worked at Parua Bay, Mangapai, and several other parts of the district around Whangarei, and a considerable tonnage is annually exported.

I have, &c.,

GEORGE WILSON, Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

No. 3.

Mr. Warden NORTHCROFT to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Thames, 19th May, 1892.

I have the honour to forward herewith statistical returns for the Hauraki Mining District for the year ending 31st March last, and also the following report on the mining industry in this locality:—

The mining operations throughout the district for the year have, with the exception of those carried on in the Ohinemuri portion, been very discouraging, and, though the quantity of gold produced shows an increase of 16,821oz. 7dwt. 6grs., there are very few mines giving good returns for working; this, no doubt, is partly attributable to the fact that nearly the whole of the mining operations are confined to the parts of the field that have been worked for over twenty years. All the richest and most easily got at patches have been worked out to the depths mining is carried on, and I do not see any brighter future for such parts till strong companies with large capital and the best and most modern appliances at their disposal are formed to work at greater depths. Endeavours have been made to form such companies, but so far without success, in many instances no doubt partly from the unreasonable terms demanded by the promoters.

There are fortunately, however, some English companies, such as the Waihi and Crown, in the upper portion of the district, that appear to have a bright future before them, and there are numbers of legitimate mining ventures throughout the district only awaiting the advent of capital to turn them into equally profitable investments. One of the greatest difficulties perhaps we have to deal with in this district is the reluctance the young and able-bodied men have to go into the unprospected parts to seek for fresh finds. They, unlike the pioneers of the field, congregate near the townships, and prefer taking work when they can get it to going into the ranges where they would have to rough it for a while, though if successful the reward would be great. For instance, the new discovery at the Komata: the owners, after months of prospecting, discovered a reef from which the results obtained from a hundred tons of ore were of so satisfactory a nature that overtures were made to them by Mr. T. H. Russell for the purchase of the property; eventually the sale was concluded, and the property transferred to him for the sum of £3,000. The ore is somewhat refractory, and access to the place at present difficult, but as Mr. Russell possesses both means and energy there is little doubt those obstacles will be overcome. The mines that are being worked with the most vigour belong to English companies, the only exception perhaps being the Sylvia, in the Tararu Valley, which possesses a very complete plant. None, however, of the mines throughout the district have so far given promise of the prosperous future that the Waihi Company appears to have.

The Mining Inspector has in his report so fully entered into the details and progress made by the various mines of the district that it will be unnecessary for me to more than allude generally to the operations carried on by them for the year.

TE PUIA, MAHAKIRAU, AND MOEWAI.

Very little mining is being carried on at each of these places. The inaccessible nature of the country, distance from roads, and want of capital has prevented much being done, but there is little doubt that eventually a thriving mining industry will spring up in these localities.

KUAOTUNU.

The principal mines have been worked energetically during the year, the Try Fluke Mine having produced 3,247oz. 10dwt. of gold. But it is to be deplored that the Kuaotunu mines only saved about 50 per cent. of the gold, owing to its extreme lightness. The slimes and the richest part of their tailings are carried into the river, and in most cases lost to the colony for ever. It has been found by experiment that, when ore is ground wet and run into settling-tanks, there collects on the surface a considerable quantity of light froth, which when collected, dried, and assayed, is found to contain a much larger proportion of gold than the ore under treatment. For instance, the froth produced from an ore containing 15dwt. of gold contained over 2oz., and the slime produced from the same ore contained about 3dwt. more than the coarser portion. It appears to me a grave question whether the colony, the ultimate loser, ought not by legislation to take some steps whereby battery or crushing-plant owners would be obliged to so construct their tailing-pits that all slimes and tailings should be saved, and so prevent this great waste. The Great Mercury Company, whose holding is situated on the same spur as the Try Fluke, have lately had this matter under review, with a view to considering what method they can adopt to prevent this waste. I believe they now contemplate trying dry crushing, but by what after process they will treat their ore I am not aware.

A good deal of work has been done on the Carbine, Kapai, Otama, Red Mercury, Waitaia, and Just in Time Mines, and if they could save more of their gold and could obtain water-power to crush by, I do not think there is a doubt they would yield a large amount of gold for years to come. There is a fact worth noticing in passing: the last-mentioned mine was worked and fairly opened up by the company without any very satisfactory results. The shareholders got tired of paying calls, so it was decided to let it on tribute, with the usual result—the tributers got on gold almost at once, and in a very short time were rewarded with 393oz. Instances similar to this are continually occurring on this field, and are in many cases difficult to explain. Since my last report, acting under instructions from the Hon. the Native Minister and the Mines Department, I have obtained the signatures of the majority of the owners of Kuaotunu No. 3 Block, containing an area of 4,916 acres, ceding to the Crown the right to mine over it; but unfortunately two Natives who have yet to sign are very obstinate and unreasonable, demanding a guarantee from the Government that, should they sign, they shall have half the claim discovered by some prospectors on this block; this, together with the Kauri Company having a lease with the right to remove the timber, will, I am afraid, bar the opening for mining for a considerable time.

KAURI TIMBER COMPANY'S LAND.

There are two leases working on this property, Lanigan's and the Oweria. The former has produced 80oz. of gold out of 400 tons of dirt. The latter is erecting a ten-stamp mill, which when finished will be very complete. The mine at present shows every indication of being a good one, but the arbitrary and exacting regulations under which the company offer their land have prevented the miners taking up leases.

COROMANDEL.

This part of the field will never produce much more gold than at the present until an entirely different system to that in vogue is adopted. At present there is only one small custom plant working, where the miners have to pay a much higher price to have their quartz crushed and treated than at the Thames, in consequence of which all low-grade ore is thrown over the tips, whereas, if a good plant were working on the east side of the Tokatea divide, driven by water, the whole of the mines that are now barely existing would yield handsome profits. This is proved by the fact that for some time past men have been engaged in picking over the old tips and sorting the stone, and, after carrying it to the mill before mentioned, they make from 10s. to 15s. a day. The Kapanga, an English company's mine, is being worked with the usual vigour. At present they are erecting the machinery that was on the Coromandel Company's mine to enable them to sink to a much greater depth, where they expect to find some rich patches of gold under the worked-out levels. Scotty's, the adjoining property, which is owned by a Sydney syndicate, have opened up the surface-portion of the mine, but so far with anything but satisfactory results. They now propose to work from an old abandoned shaft in the Kapanga Mine, whence they will be able to cross-cut at greater depth, and so get under where the former runs of gold were found. The Try Again Mine, three men's ground, have obtained 474oz. of gold. The reef is small, and the country very hard, but where the reef makes gold it is found in very rich patches or pockets; and, though it pays the owners who work it themselves, would never pay a company, the management and other expenses of which would absorb all the proceeds. This is found to be the case in many of our mines where the reefs or leaders are small. Very little has been done at Cabbage Bay since my last report, and I do not expect any great improvement in this locality till a small plant is erected to enable the miners to crush their ore. At Kopukaitahi McDonald found a reef that so far is very encouraging, gold showing freely in the stone. Four claims have been taken up, but the country is very inaccessible, and, as it has only recently been discovered, very little work has been done—too little for me to say anything about its permanency.

TIKI, MATAWAI, AND MANAIA.

These places are abandoned, except the last mentioned, where there is one prospecting party. All the old claims have been given up, the expense of carting the quartz for more than seventeen miles over a very bad road being too great; and, though there are many nice-looking reefs, I do not anticipate any brighter future for this part of the field until some enterprising person erects a battery on one of the fine streams or the main river that flows through the Manaia Valley.

TAPU AND WAIOMO.

A few mines are still being worked at Tapu. Sheridan's is the principal. He has worked his claim continuously for many years with varying success, but just at present appears to have got on a good run of gold. As he has not yet crushed his stone, which is mostly picked from the new run, it will not appear in this year's return.

As I stated in my last report, seven licensed holdings had again been taken up at Waiomo, and Mr. Peter Hansen, with several other gentlemen, have erected a small experimental plant, consisting of a stone-breaker, four McKay grinding-pans, and two settlers worked by water-power; but so far the shareholders are not altogether satisfied with their experiments, for, though the ore is rich, it is of a very complex nature, and they now think that by forcing steam through their pulp they will obtain much better results. The two holdings they own are the Gem and the Monowai. At the former they have 300 tons of quartz to grass, and 200 at their plant awaiting treatment. At the latter mine they have 70 tons to grass, and 80 at the plant. They are only attempting at present to treat the surface portions of the reefs where the ore is oxidized, these reefs as they go down being known to be mineral lodes. The large lode has been cross-cut to 40ft. without meeting with the wall. This reef, as far as it has been ascertained by assay, goes from £1 to £10 per ton; the other reef is 18ft. wide, and averages from £4 10s. to £29. These gentlemen deserve to succeed, for they, unlike the Paroquet Company, have well opened up their mine, and now know what their mines can produce as soon as they have a payable process to treat it. It is thought the mineral portions of the reefs will have to be concentrated. On the Mount Zeehan licensed holding, which chiefly belongs to some Napier gentleman, very little has been done. It has been slightly opened up in three places. There are two reefs, one about 6ft. and another from 1ft. to 3ft. wide of complex ore—copper, lead, and zinc forming a large percentage. The shareholders have been very unfortunate, having exercised too little supervision; in consequence a very large sum of money has been spent with nothing to show for it. A small plant was erected where the water-power was very inefficient, whereas a good water-power could have been obtained within a reasonable distance of the mine, and thus saved the heavy expense now paid for cartage (£2 5s). The company now, however, intend to proceed on more business-like principles by placing a reliable man in charge of the mine, and have appointed Mr. James Napier to superintend the operations to be carried on in connection with the treatment of the ore at the plant, which I understand will be the Cassell process. If successful they will then erect a plant nearer to the mine.

THAMES.

The prospects of this portion of the district looked somewhat encouraging in the early part of the year, as a large amount of work was in progress in several of the mines, and it was anticipated that, at any rate, some discoveries would have resulted; I regret to say, however, that these expectations have not been realised, and the year has been one of exceptional dullness. In the Moanataiari Company's mine a large staff of men has been employed in various works, the principal being the prospecting of the Golden Age and other reefs. The reef mentioned is of large size, being in places about 20ft. in width, and throughout averages some 5dwt. to the load, with occasional richer patches. The returns on the whole have been encouraging, as the company has been enabled to liquidate an overdraft of several thousand pounds, and at the same time materially improve their crushing-plant.

The result of operations in the Saxon Mine has been disappointing in the extreme, the returns towards the end of December having become so small as to necessitate soon afterwards the suspension of work at Nos. 5 and 6 levels. This was the only mine working at a depth requiring pumping operations to be carried on by the Big Pump below the 400ft. level, and upon their ceasing work at the levels mentioned it was decided by the Drainage Board to in future only fork out the water from the 400ft. level. The number of men employed on the mine has been reduced from about one hundred to twenty, and it is feared that a further reduction will shortly take place.

The Waiotahi still continues to maintain its reputation as one of our most regular gold-producers, and occasionally the shareholders are rewarded with a dividend. About forty men are continuously employed in this mine. The operations in the Cambria Mine have been carried on to a certain extent successfully, although the balance to credit has not been sufficient to pay a dividend. The quartz crushed during the year has averaged about 1½oz. to the load. Early in the year great expectations were formed regarding the May Queen Mine, particularly with reference to the new No. 2 level. Some good returns were obtained, and the prospects in the drive east looked well until a change of country took place, since which returns have been very moderate. The operations for the year have, however, been remunerative. Of the mines on the Una Hill, the Pride of Karaka was for a short time very promising, but for the last month or two the yield has shown a falling-off. The Occidental is now being worked mainly on tribute. In the Magnolia a large amount of valuable prospecting work has been carried on, and a low-level tunnel put in several hundred feet, but the returns so far have not justified anticipations. A winding- and pumping-plant has been erected over the Consol Gold-mining Company's shaft at the Hape Creek, and the mine thoroughly opened up, but up to the present the company has been unsuccessful in obtaining satisfactory returns. In the Karaka Creek work has been carried on in the Lone Hand and Adelaide licensed holdings, but with indifferent results. Further up the creek several small parties of miners are working claims under miners' rights, and are doing fairly well. In the direction of the Kuranui Hill, the outlook for the Hazelbank, which has lately absorbed the once-famous Caldonian, is very encouraging. Comer's and Hansen's licensed holdings are still working away on low-grade dirt, and as a yield of 1dwt. or 2dwt. per ton is remunerative, ore of even the poorest quality is made to pay. In the Moanataiari Creek and Punga Flat the Fame and Fortune Mine is now being solely worked by tributers with varying success. The Calliope, Alburnia, Flying Cloud, Freedom, Junction, and Orlando have done a good deal of work, but have not added

very largely to the gold returns for the year. The Whau, however, which is a private claim, is producing handsome returns to its four owners. Among the other mines at work are the Victoria (which has absorbed the Prince Imperial), the Trenton, New Manukau, Dives, and Alfred. In the Tararu district a large amount of work has been done, particularly on the Sylvia Mine, which has succeeded in treating the large quantities of concentrates which had been stored, awaiting the completion of the Cassell plant, which has been added to the already extensive machinery described in previous reports. Work in the mine is at present principally confined to the low level just recently commenced, and which will have to be constructed for a distance of about half a mile. It is confidently expected that, when this extensive work is completed, the mine will produce large yields of bullion. Dixon's Extended Company, who have a crushing-plant of their own, are at present working their mine on a system of tribute with successful results. The Norfolk have done a large amount of work, but the results have not been as satisfactory as they might owing to the impossibility of treating the refractory ores with their present plant. A little prospecting has been done in other parts of the district, particularly in the upper portion of the creek.

MAROTOTO AND WHANGAMATA.

This part of the field is not altogether abandoned. There are still a few who have faith in its ultimately coming to the front, and continue prospecting the different creeks and ridges; and it would not surprise me to hear any day of a good payable reef being struck. The Goldwater is still being worked at Whangamata, and though there are a great many nice-looking reefs, they are all more or less of a complex nature; this, coupled with the fact that the Thames is the nearest place at which ore can be treated, is sufficient in itself to prevent the place developing much further at present.

KARANGAHAKE, OWHAROA, WAITEKAURI, AND KOMATA.

Karangahake at present is a very busy place owing to the extensive operations being carried on at the Crown Company's mine on tramway, water-race, and excavations for their new plant. The water for the race is taken from the Ohinemuri River, and carried 85 chains in the ordinary fluming to the plant. It will be a very complete and capable race, and has taken over 180,000ft. of kauri timber in construction. The tramway is 80 chains in length, running from the Crown Mine to the site of their reduction-works, and has been a difficult and trying undertaking, a great deal of the cutting being the face of the Waitawheta Gorge cliff, but it can now at any time be extended up the valley; and, as the company intend to crush and treat for the public as well as their own mines, it will be of great advantage to the whole district. The Crown Mine is well opened up, and, so far as one can judge, should be a good paying mine. Their lode is a strong one, and so far, improves as it goes down. They certainly deserve to succeed, for they have done more to advance and open up this district than was ever before attempted. They have not confined themselves to opening and developing quartz-lodes, but have built a tramway and water-race, and are erecting a plant and constructing works of a magnitude never before undertaken in this district. The other mines in this part of the district are waiting till the Crown plant is finished, when they hope, by using the Cassell process, to save the largest percentage of the precious minerals contained in their ores. Should this process be able to do all that is claimed for it there will be a large increase in mining in this locality before my next annual report.

The only mine that may be said to be working at Owharoa is the Smile of Fortune, which is entirely worked by tributers, who do fairly well.

At Waitekauri, Mr. T. H. Russell's mine and battery have of late been idle, the ore not paying. This is a great pity, as Mr. Russell has expended a very large sum of money on both.

The Jubilee Special Claim, belonging to Mr. Kersey Cooper, is being well opened up, and at present there are all the evidences of vigorous vitality. A tramway over 70 chains in length, between the mine and the battery, is being constructed, and as soon as it is finished crushing will commence. It is anticipated that the mine will more than keep the battery going when they once start, but Mr. Cooper, to guard against unforeseen contingencies, has a reserve of over 500 tons of ore.

The Komata new find. These reefs were discovered by a prospector named William D. Tilsley last June, who, with his mates, marked out and had granted to them the Te-ao-Marama licensed holding. This they have since sold to Mr. T. H. Russell, who is now connecting the mine by tramway with his Waitekauri battery. The tramway is in an advanced stage, the track cut, and most of the sleepers on the ground.

WAIHI

The principal work here is carried on by the Waihi Company, their almost inexhaustable reef in the Martha Special Claim—the largest in New Zealand—employing a great number of men. The tons and tons of ore that have been shot out of this magnificent reef, trucked to and treated in their splendid plant, have hardly as yet made any appreciable difference to its vast resources; but with all this ore in sight the future is being cared for. A new level is being opened up by a very complete tunnel, similar to the Moanataiari, 5ft. 10in. at top, 7ft. at bottom in width, and 7ft. in height, to allow of a double line of rails. It has now been driven about 500ft. in soft, heavy country, and has yet about 900ft. to go, but the ground is very good and standing well, the cost only being 8s. 3d. per foot. This new level will give about 50ft. of backs below their present workings, and the reef being from 20ft. to 50ft. wide, the quantity of ore can better be imagined than calculated. This alone not satisfying the company, they have opened a new level in the Union shaft, about 50ft. down, and cut the reef with very promising results, the reef being from 2ft. to 4ft. thick, of a good class of ore, and showing gold freely. So satisfied are the company with it that they now intend to open another level 80ft. deeper. Since my last report this company have adopted a wet process for treating a portion of their ore in addition to their dry process. The building containing the tanks for their wet or reticulation process is 110ft. by 60ft., the tanks occupying about 100ft. of

this space. There are seven large wooden tanks, capable of holding about 800 tons of sand and pulp—four for the pulp, and the others for the sand. The crushed ore or pulp is taken direct from the front of the stamper-boxes and elevated by a wheel 26ft. in diameter, which works automatically with buckets on the inside of the circumference, which delivers the crushed ore or pulp to flumes running into the different tanks. Water, crushed ore, or pulp—everything that goes through the stamper-boxes—is passed through these wooden tanks, and the water, after running through the last one, is then carried back into the stamper-boxes to pass round again. It would seem almost impossible for any mineral capable of amalgamation to escape. This company are further extending their buildings to allow of a trial being made with the Bohm process, which is akin to the Cassell, the agent used for extraction being cyanide of potassium.

The Silverton Company have renovated and reconstructed a portion of the old Martha battery, which they are fitting up with all the latest appliances, and, as their mine has the appearance of being a very good one, they should have a very bright future before them. There are several other holdings here, but as yet none of them have cut any reefs worth noticing; but as they are sinking, and the country appears pretty deep, they may at any time open out on something good. If so, and it is proved that the Martha, Union, and the Silverton lodes go down, this part of the field has a prosperous future before it; as it is, the population has increased very largely, the township that was laid off by the Government surveyor proving too small already; houses are going up, and this is a general test of the progress of any district.

TE AROHA.

During the past year very little mining has been carried on here. Mr. H. H. Adams, who bought the large reduction-works at Waiorongomai, has at different times had some men employed, and, with one or two other parties and a few tributers, constitute all the men mining in this locality. This is little doubt that a few small parties will be able to make a good living for a considerable time, and in fossocking about something good may yet be found; otherwise mining here, on anything but a small scale, is over so far as we at present can see. The Tui Company has plenty of ore, but no method that they can treat it by, as it contains a very large percentage of zinc-blende.

APPLICATIONS GRANTED.

Coromandel.—Special claims, 2; licensed holdings, 29; ordinary quartz claims, 71; occupation licenses, 11; machine sites, 2; residence sites, 57; business sites, 8; water-races, 3. (Licensed holdings forfeited, 47.)

Thames.—Special claims, 4; licensed holdings, 45; ordinary quartz claims, 20; occupation licenses, 64; machine sites, 4; residence sites, 70; dams and water-races, 27; other applications (tunnels, &c.), 20; licensed holdings forfeited, 44.

Miners' rights issued: Coromandel, 373; Thames, 431.

I have, &c.,

H. W. NORTHCROFT, Warden.

The Under-Secretary, Mines Department, Wellington.

No. 4.

Mr. G. WILSON, Inspector of Mines, to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Inspector of Mines Office, Thames, 14th May, 1892.

I have the honour to forward the following Report on mines in the Hauraki Mining District for the year ending 31st March, 1892.

There is a considerable increase in the value of returns of gold and bullion, compared with that of last year, chiefly due to the yield of the Kuaotunu and Waihi Districts.

COROMANDEL COUNTY.

Tokatea Range (Coromandel).

Tokatea Mine, 30 acres (Tokatea Gold-mining Company, Limited, owner; Mr. John Benny, manager).—Working in this has been carried on by thirteen tributers, chiefly on the surface veins, and eight tons of quartz crushed yielded 114oz. 10dwt. of gold. This mine was well opened up in the past, and, as the different levels are in hard rock, it may be said that they are available for use at any time at little expense. There are seven main tunnels, varying from 500ft. to 3,000ft. in length, the lowest level being 860ft. below the surface of the top of the hill where the chief work is now being carried on. There are four main reefs and dozens of smaller leaders. A fifteen-stamp mill, with 10-horse power steam-engine, is situated at the entrance to the low level, but they are out of repair, and have not been used for about ten years. There is little doubt but that many thousands of tons of payable quartz could be obtained from this mine if only cheap crushing was available, and the only hope for success for mining in the Tokatea Range is in constructing water-races for water power on the eastern side of the range.

Queen of the North Mine, 3 acres (Mr. Carlo Blasch, owner).—One ton of quartz was crushed for a return of 18oz. 10dwt. of gold from workings on surface-veins.

Royal Oak Mine, 30 acres (Mr. William Home, manager; Royal Oak Gold-mining Company, Limited, and J. H. Witheford, owners).—Three tributers were employed, and 126oz. of gold obtained from one ton of quartz.

Bismarck Mine, 12 acres (Dunn and party, owners).—Mr. Benjamin Dunn has worked the mine on tribute. Four men were employed, and two tons of quartz crushed yielded 134oz. of gold.

Harbour View Mine, 30 acres (Harbour View Gold-mining Company, Limited, owner).—Two tributers only were employed, and two tons of quartz were crushed for a moderate yield of 19oz. 8dwt. of gold.

Rob Roy Mine, 3 acres (Mr. John Mayne, owner).—Three men were employed, and twenty tons of quartz were crushed for a yield of 129oz. of gold.

Try Again Mine, 6 acres (Messrs. James and Parkin, owners).—An excellent return of gold has been obtained; 1 ton 14cwt. and 20lb. of quartz being crushed yielded 463oz. of gold. Two men were employed. This mine is on the same ground as was formerly known as the Success, and from which very much stone was obtained. The present owners have opened up on a leader, which was not much worked on in the past, and very rich specimens were broken out. The leader is small and the country rock very hard, but there is every indication of a continuance of the run of gold.

Kapanga Mine (Kapanga Gold-mining Company, Limited, owner; Mr. W. H. Argall, manager).—This mine is in three sections. The Kapanga proper section comprises the Kapanga Special Claim of 39 acres 3 roods 25 perches and a licensed holding, formerly known as the South Kapanga, 8 acres 2 roods 38 perches; the Coromandel Mine section, 39 acres 2 roods 10 perches; and the Blagrove section (freehold), 127 acres 2 roods 27 perches. In the Kapanga section, in the old Kapanga Mine, the chief work was carried on in the intermediate level, and a cross-cut was driven from Scotty's reefs to the Kapanga reef, on which valuable stone was found, and 704 fathoms of reefs and leaders stoped out; 792 tons of quartz were crushed for 1,634oz. 8dwt. of gold. Forty-eight men were employed. In the Blagrove section of the mine a considerable amount of work was done in prospecting, and it has been decided to erect winding and pumping machinery, and sink a shaft in the Coromandel section; an average of five tributaries were employed, and 10 tons 10cwt. of quartz crushed for a yield of 61oz. 18dwt. of gold. Pumping operations were suspended, and the engine was removed to the Kapanga section to take the place of the engine used there; the water has therefore risen to the adit-level. Sinking will be commenced in the Kapanga shaft, the present depth of which is 572ft., as soon as the machinery is erected. The working-plant of this company consists of ten heads of stampers in the Kapanga battery, and fifteen in the Coromandel Mine section battery, known as the Telephone; two berdans in the Kapanga battery and one in the Coromandel Mine section battery. There are also seven steam-engines—namely, one 40in. cylinder direct-action Cornish beam pumping-engine with 9ft. stroke, which is now being erected at the Kapanga proper, to take the place of the present, which is a Cornish beam engine, only much smaller, being a 24in. cylinder and rotary motion, with 9ft. stroke in the cylinder and 5ft. 10in. in the shaft. One single 18in. cylinder horizontal engine, with 3ft. 10in. stroke in the cylinder; this engine will be erected in the Blagrove section for pumping at the new shaft—namely, Blagrove's shaft. One single 12in. cylinder horizontal engine at present in the Telephone battery. One single 13in. cylinder horizontal engine in the Kapanga battery. One double 8in. cylinder horizontal portable engine at the Coromandel Mine section; and one 10in. single cylinder horizontal portable engine, used for winding at the Kapanga proper, representing in all a total of 285-horse power nominal.

Scotty's Mine, 20 acres (Scotty's Syndicate, owner; Mr. John Benney, manager).—Operations in this mine were confined to clearing out old tunnels and driving on reefs at the adit-level. Eleven men were employed, and 40 tons of quartz crushed, yielding 84oz. 9dwts. of gold. It is intended to open up a deeper level by utilising an old shaft in the Kapanga Mine.

Mint Mine, 6 acres (Coromandel Mint Gold-mining Company, Limited, owner; Mr. J. D. Colebrook, manager).—This mine is situated on the foreshore, next the Coromandel Mine. A shaft has been sunk and is now 120ft. in depth, 50ft. of which was sunk during the year. A 12-horse power steam-engine is used for pumping and winding.

Premier Mine, 5 acres.—This mine is situated on private property, near the Coromandel Mine. A party of five tributaries worked on the small veins near the surface, and obtained 31oz. 18dwts. of gold from 12 tons of quartz.

CABBAGE BAY DISTRICT.

Vizard's Mine, 10 acres.—This mine, which is worked and owned by Vizard and party, is known as the Prospectors' Claim. A parcel of quartz—4 tons 10cwt.—was crushed for 49oz. 10dwt. of gold. The quartz crushed was from an irregular vein near the surface, and also from a low-level drive 60ft. deeper. Gold is distributed through the quartz and country rock, and the owners are about to purchase a small crushing-plant, to be erected on the ground, when they expect to obtain a considerable quantity of payable stuff. This will enable them to thoroughly test the value of the reefs in the district. Small parties were prospecting in the vicinity for three or four months, but outside of Vizard's nothing of any consequence has been found.

KOPUKAITAHI DISTRICT.

This is a new district, lying to the eastward of the Waikoromiko. A party of prospectors crushed 20lb. of quartz for 4oz. 5dwt. of gold, but no further trial-crushings have been made, although several other parties are prospecting in the neighbourhood.

OPITONUI DISTRICT.

Lanigan's Mine, 20 acres (Hilda Gold-mining Company, Limited, owner; Mr. John Williams, manager).—A considerable amount of work has been done in this mine. The reef is about 3ft. in thickness, and 40 fathoms have been stoped out, and 400 tons of quartz have been crushed for a yield of 80oz. of gold. Six men were employed. A horse-tramway, 25 chains in length, has been constructed to connect the mine with the mill, which consists of a stone-breaker, ten head of stamps, and two berdans, driven by two Pelton-wheels. This mine now includes the Hilda Mine. No other parties are working in this district.

OWERA DISTRICT.

Owera Mine, 10 acres (Owera Gold-mining Company, Limited, owner; Mr. John Brennan, manager).—Eight men were employed, and 30 tons of quartz crushed for 80oz. of gold. This mine

is well opened by three levels, giving a depth on the reef of about 250ft. The reef is from 2ft. to 4ft. in thickness, and the prospects are so favourable that the owners have determined to erect a ten-stamp mill, to be driven by water-power. A large reservoir has been constructed to store water for motive-power. This dam has an area of about 7 acres, and the depth of the water stored will be 5ft. A large water-race has been constructed from the creek to the reservoir, which will be capable of carrying a large quantity of water during freshes. The water will be conveyed to the mill by an open race and in pipes. A horse-tramway, 50 chains in length, is being constructed from the mine to the mill.

WAIKOROMIKO DISTRICT.

Lillis's Claim, 10 acres.—Mr. John Lillis and party have been very successful during the year. Three tons of quartz yielded 250oz. 2dwt. of gold. The reef is about 18in. in thickness, but only the best quality of quartz is saved, as it is expensive to get it to the battery.

Several prospectors occasionally work in the district, but I have not learnt of any further discoveries.

MOEWAI DISTRICT.

The party of Natives who were at work here last year have again been prospecting in the district. Two tons of quartz crushed yielded 8oz. of gold.

PUIA DISTRICT (BOAT HARBOUR).

Several parties have been prospecting in this district, and Hornibrooke's party had a parcel of 14 tons of quartz conveyed to Kuaotunu, which was crushed for 8oz. 12dwt. of gold.

MAHAKIRAU DISTRICT.

Mahakirau Claim.—A small parcel of quartz was crushed for a yield of 11oz. 16dwt. of gold. Several parties have been engaged prospecting in the district, and an endeavour has been made to obtain a crushing-plant.

KUAOTUNU DISTRICT.

Try Fluke Mine, 18 acres 2 roods (Try Fluke Gold-mining Company, Limited, owner; Mr. John Goldsworthy, manager).—Twenty men have been employed in the mine and eleven in the battery, and 5,032 tons of quartz were crushed for 3,172oz. 10dwt. of gold. A large amount of work has been done on the No. 1 reef, which varies from 2ft. to 12ft. in thickness, both at the No. 2 and also the No. 3 level. The drive on the No. 2 reef was carried up to the boundary of the Kuaotunu Mine. This reef varies in size from 1ft. to 6ft. in thickness. Four hundred and sixty-six fathoms of reef were stoped out at the different workings. The quartz is of a loose nature, and great care has to be taken in keeping the roof safe. This work is well done, and the stopes are well filled up. The ground tramway, 1,200ft. in length, has been completed from No. 3 level to the battery, and the wire tramway is also used. The battery consists of eleven stamps, two pans, and three berdans driven by two portable steam-engines, 30-horse power. The manager reports during the year, "We have kept the mine well opened up, and have paid to the shareholders £3,750 in dividends after paying all other expenses." The want of cheap power is very much against this field. There are a number of claims that would pay well had they water or some other cheap crushing-power. I am also of opinion that large quantities of quartz at Kuaotunu would pay if the charges for crushing were the same as at the Thames.

Carbine Mine, 5 acres (Carbine Gold-mining Company, Limited, owner; Mr. John A. Dobson, manager).—Nine men have been employed in this mine, and 387 tons of quartz crushed for 620oz. 10dwts. of gold. Work has been carried on upon the large reef 6ft. thick, as well as on the smaller vein 4in. in thickness. The roof is the same as in the Try Fluke Mine, requiring great care in securing it. The work is well done, and the stoping well filled. A wire tramway, 6 chains in length, has been constructed to carry the quartz from the mine to the main road.

Kuaotunu Mine, 12 acres (Kuaotunu Gold-mining Company, Limited, owner).—This mine is situated next the Try Fluke, and further up the hill. The parcel of quartz broken out last year was crushed, and 100 tons yielded 45oz. 5dwts. of gold. The only work carried on during the year was driving through the Try Fluke ground in conjunction with that mine. Two men were employed.

Red Mercury Mine, 14 acres (Red Mercury Gold-mining Company, Limited, owner; Mr. Thomas Blair, manager).—Twenty-five men were employed, and 1,249 tons of quartz crushed for 1,826oz. 10dwt. of gold. The chief workings were driving on the reef from the low level, and stoping the blocks towards the surface. The rock on both sides of the reef is hard, and all requires blasting, so that no difficulty is experienced in securing the ground. Five hundred and fifty feet of driving on the reef has been done, and 480 fathoms stoped out. A wire tramway 1,150ft. in length, has been constructed to convey the quartz to the main road.

Great Mercury Mine, 28 acres 12 perches (Great Mercury Gold-mining Company, Limited, owner; Mr. H. B. Hornibrooke, manager).—Twenty-five men have been employed in this mine and nine in the battery, and 2,693 tons of quartz crushed yielded 1,469oz. 3dwt. of gold. The chief workings have been driving and stoping on the Red Mercury reef on the eastern side of the spur, and stoping on several small leaders on the surface. The ground is well secured, and 598 fathoms of reef have been stoped out. There are 2,100ft. of tramway used in conveying quartz to the battery. The battery consists of ten heads of stamps, two Price's pans and two John Fraser's pans, and one berdan. This is driven by a steam-engine, 40-horse power; a small steam-pump is also used to supply water to the battery, which is 60ft. above the level of the creek. The manager reports: "The battery is now undergoing an alteration for the purpose of settling the slimes and using the water over and over again; also amalgamating incharges with the present pans (settles being added). The gold generally being very fine, the water carries away a very large percentage. The Cassell process would be the best for saving surface gold. All the reefs and leaders in the mine carry gold,

more or less, and would prove payable if a process of saving the gold cheaply were adopted. It is to be hoped that the alteration by using the water over and over again may prove a good plan. The continuous overflow-pans that have been in use are not adapted for saving fine gold, which is held in suspension by the water."

Just in Time Mine, 9 acres (Just in Time Gold-mining Company, owner; Mr. A. H. Richards, manager).—Six tributers and three wages-men have been employed. The owners crushed 128 tons of quartz for 103oz. 4dwt. of gold, and the tributers 344 tons for 373oz. 16dwt. of gold. The workings were stoping out the blocks of reefs opened from the low level to the surface, a depth of 89ft. The rock is of a hard nature, and the workings are easily secured. A short tramway conveys the quartz from the mine to the new road made by the County Council.

Kapai Mine, 11 acres (Kapai Gold-mining Company, Limited, owner; Mr. James R. S. Wilson, manager).—Four men have been employed, and 120 tons of quartz crushed for 103oz. of gold. The chief work has been done in the low level on the reef, which is from 3ft. to 6ft. in thickness, and is a continuation of the Try Fluke reef, and resembles it in appearance. It is the intention of the owners to amalgamate with the Vermont licensed holding, and continue the drive on the reef to the southward. They have also been negotiating for the purchase of a battery, as the quartz is not rich enough to be profitably worked while paying the present crushing charges.

Mariposa Mine, 4 acres 2 roods 6 perches (Mariposa Gold-mining Company, Limited, owner; Mr. John Primrose, manager).—Four men have been employed, and 380 tons of quartz crushed for 239oz. of gold. The reef, which is from 3ft. to 6ft. in thickness, is well opened up. A self-acting ground tramway 500ft. in length, conveys the quartz from the mine to the main road. The owners have resolved to erect a crushing-mill of their own at an early date.

John Bull Mine, 5 acres (John Bull Gold-mining Company, Limited, owner).—Two men have been employed driving a low-level cross-cut 90ft. One hundred and five tons of quartz yielded 20oz. 2dwt. of gold.

Irene Mine, 10 acres (Irene Gold-mining Company, Limited, owner; Mr. C. McDonald, manager).—Five men have been employed, and 389 tons 10 cwt. of quartz crushed yielded 234oz. of gold. The workings have been chiefly on the reef, which is from 2ft. to 4ft. in thickness. The rock is of average hardness, and is easily secured. The company have ceased operations on their own account, and have let the mine on tribute.

Otama Mine, 10 acres (Otama Gold-mining Company, Limited, owner; Mr. James McGregor, Jun., manager).—Twenty-two tons of quartz crushed yielded 214oz. 16dwt. of gold. The chief work done has been stoping out on the leaders, which are of small size.

Black Jack Mine, 10 acres (Black Jack proprietary, owners; Mr. Henry T. Rowe, manager).—Two men were employed. This mine, which is situated near the beach, has only lately been occupied. Seventy-six tons of quartz from near the surface yielded 60oz. 16dwt. of gold.

Waitara Mine, 25 acres (Waitara Gold-mining Company, Limited, owner; Mr. C. H. Bennett, manager).—This mine is situated on private property (Comer's). Four men have been employed, and 158 tons of quartz crushed for 1,993oz. 16dwt. of gold. The chief work carried on was stoping out 240 fathoms on a reef about 1ft. in thickness, and driving a low-level cross-cut 310ft.

A considerable amount of prospecting and work has been carried on in various claims and licensed holdings—namely, Mary Ann, Invicta, Iona, Vermont, Brilliant, Surplus, Secret, Pride of the Hills, Napier, Lucky Hit, Maori Dream, Golden Gate, and Hidden Treasure, and parcels of gold have been obtained from small crushings.

THAMES COUNTY.

TAPU DISTRICT.

Sheridan's Mine, 20 acres 3 roods 4 perches (D. Sheridan, owner).—Five men were employed, and 23 tons of quartz was crushed for a yield of 185oz. of gold. The chief work was stoping on the reef, which varies from 2in. to 1ft. in thickness. The rock is hard, and the workings easily secured.

Broken Hills Mine, 98 acres and 15 perches (Bull and party, owners).—Two men have been employed, and 50 tons of quartz crushed yielded 34oz. 12dwt. of gold.

Kelly's Claim, The Centennial, and Marquis of Hastings Claims have all been worked for moderate results.

WAIOMO DISTRICT.

Golden Gem Mine, 20 acres (Hansen and party, owners; Mr. P. C. Hansen, manager).—Two men have been employed. A considerable amount of work has been done in prospecting the various reefs, and a large paddock of quartz has been got ready for the mill. The ores require special treatment.

Monowai Mine, 28 acres (Hansen and party, owners; Mr. P. C. Hansen, manager).—Two men have been employed. A large reef from 6ft. to 16ft. in thickness has been worked on, and three levels have been driven. The mine is now well opened, and a large paddock of quartz stacked in readiness for the mill. The ore in the mine is of a refractory nature. The owners of this and the Golden Gem Mine have erected a crushing-mill, consisting of a stone-breaker, four McKay pans, two settlers, and one berdan. It is intended to reduce the quartz by the stone-breaker to a size fit for grinding in the pans. The method of treating the ground quartz will be by amalgamation—Cassell's process or other process. No crushing has yet been done on account of scarcity of water, the plant being driven by a Pelton wheel. As rich assays have been obtained from the Golden Gem and Monowai reefs, good returns may be expected next year from these mines.

Mount Zeehan Mine, 29 acres (Joshua Jackson and party, owners).—This mine is situated on the northward side of the range, about half a mile from the Monowai. A large reef was opened up, and good assays of gold and silver were obtained. The owners leased a small three-stamp mill, situated at the Bonemill Creek, on the Tararu-Waiomo Road. This mill was fitted to crush dry, and solution or percolating tanks have been constructed for the purpose of treating the ore by the cyanogen process,

arrangements having been made with the Cassell Company for the use of that process. A parcel of 15 tons of ore was taken to the mill, and a portion of it treated, but the results have not been ascertained.

Several other licensed holdings have been taken up in this district, but very little work has been done.

PURU DISTRICT.

Montgomery and party have been occasionally prospecting near the head of the Puru Creek, but no crushing has taken place.

TARARU DISTRICT.

Norfolk Mine, 30 acres (Norfolk Gold-mining Company, Limited, owner; Mr. James McLean, manager).—Six men have been employed. The chief work was driving the low level. The reef has been cut and driven on for a considerable distance, and ore obtained resembling that worked on in the Sylvia Mine; the reefs are probably one and the same. Twenty tons were crushed for 8oz. of gold.

Sylvia Mine, 180 acres (Sylvia Gold- and Silver-mining Company, no liability, owner; Dr. A. Schiedel, general manager; Mr. Edward Quinn, mine manager).—Fifty men have been employed, and 3,480 tons 9cwt. of quartz crushed for 1,152oz. 12dwt. of gold; and 334 tons 18cwt. of concentrates collected, which yielded, when treated by the cyanogen process, 9,864oz. 7dwt. of bullion. The chief work during the year has been driving and stoping at No. 2 and No. 3 levels, and driving a low-level cross-cut to give about 200ft. backs. An addition has been made to the plant by adding three agitating-vats and filters required for the Cassell process, which has been adopted for the extraction of the bullion from the concentrates. The value of the total yield of gold and concentrates was £12,075 12s. 10d.

Several prospecting parties have occasionally worked in Upper Tararu District, and Stackpole and party obtained 19oz. 1dwt. from 2 tons of quartz.

SHELLBACK DISTRICT.

The Nordenfeldt, Waitemata, and Mountain Flower licensed holdings have been worked with moderate results, and six men were employed in the district.

KURANUI DISTRICT.

Hansen's Kuranui No. 3 Mine, 4 acres 3 roods 10 perches (Hansen and party, owners; Mr. P. C. Hansen, manager).—Thirteen wages-men have been employed, and an average of four tributers. The owners crushed 8,561 tons of mullock and stringers for 416oz. 15dwt. of gold; and the tributers 35 tons of quartz and 40lb. of specimens for 62oz. 1dwt. of gold. The workings were chiefly from an open cutting to obtain the mullock, and driving and stoping on Berry's Reef and Hunt's Reef, and several small leaders. The mill consists of twenty heads of stamps and ten berdans, driven by water-power.

Comer's Kuranui No. 2 Mine, 13 acres 1 rood 37 perches (Mr. R. Comer, owner and manager).—Sixteen wages-men and ten tributers were employed, and 13,091 tons of mullock crushed for the owner yielded 753oz. 10dwt. of gold, averaging 1dwt. 3·6gr. per ton; and the tributers crushed 228 tons of quartz for 319oz. 5dwt. of gold. The owner's workings were chiefly from an open cutting near the All Nations shaft, and the tributers' workings were on reefs and leaders in different parts of the mine. The battery consists of twenty stamps and five berdans, driven by water-power.

Hazelbank Mine, 7 acres 2 roods 2 perches (Hazelbank Gold-mining Company, Limited, owner; Mr. James Coutts, manager).—Twenty-two wages-men and four tributers were employed. The quartz crushed for the company was 2,197 tons for 2,049oz. 15dwt. of gold; and for the tributers, 375 tons for 163oz. 11dwt. of gold. The chief workings have been from No. 1 level of the Caledonian shaft, 203ft. from the surface, and on No. 3 level, 347ft. from the surface. The workings at No. 1 level are 750ft. from the shaft, and an intermediate level has been driven from the workings 50ft. below No. 1 level. The cross reef (from 6in. to 30in. in thickness), Turtle's leader, and Footwall leader (from 6in. to 8in. thick) have been worked on, and 350ft. of driving on reefs and leaders has been done, and 2,300ft. of reef stoped out. The workings of the mine are well ventilated and safe.

Moanataiari Mine, 94 acres 3 roods 26 perches (Moanataiari Gold-mining Company, Limited, owner; Mr. G. S. Clark, manager).—The number of wages-men employed in the mine is sixty, and there are also fifty-five tributers. The Company crushed 9,985 tons of quartz for 4,493oz. 5dwt. of gold; and the tributers, 1,252 tons for 638oz. 12dwt. of gold. The workings were chiefly in the Point Russell section of the mine, where there are eight different lodes, averaging from 6ft. to 22ft. in thickness. One thousand and ninety feet of driving, and 430ft. of sinking and rising, has been done, and 1,960 fathoms of reef stoped out. The workings of the mine are well ventilated and safe, the stopes being well filled up. The tributers' workings extend over reefs and leaders in different portions of the surface of the mine, and are supervised by the manager.

Alfred Mine, 10 acres 5 roods 3 perches.—This mine was owned by the Alfred Gold-mining Company, Limited, for about half the year, when it was purchased by D. Conway and party, who have since worked with fair results. The owners crushed 121 tons for 92oz. of gold; and tributers 41 tons, for 100oz. 12dwt. of gold. Four wages-men and two tributers were employed.

Freedom Mine, 6 acres 1 rood 10 perches (Freedom Gold-mining Company, Limited, owner).—Three men, on the average, were employed on the mine as tributers, and 97 tons of quartz crushed yielded 48oz. 17dwt. of gold.

Orlando Mine, 15 acres (Orlando Gold-mining Company, Limited, owner; Mr. C. D. Wark, manager).—Six wages-men were employed, and 350 tons of quartz was crushed for 471oz. of gold. The workings were chiefly stoping out on the reef over the low-level. Five hundred fathoms of reef were stoped out.

Calliope Mine, 8 acres (Calliope Gold-mining Company, Limited, owner; Mr. C. D. Waite, manager).—Six wages-men were employed, and 127 tons of quartz was crushed for 168oz. 19dwt. of gold. The workings are from the Orlando low-level, and 300ft. of driving was done on the reef and 62 fathoms stoped out.

Flying Cloud Mine, 10 acres 2 roods 30 perches (Flying Cloud Gold-mining Company, Limited, owner).—Three wages-men were employed, and 82 tons of quartz crushed yielded 39oz. 10dwt. of gold. Work was not carried on with much vigour during the latter part of the year.

New Alburnia Mine, 15 acres 1 rood (New Alburnia Gold-mining Company, Limited, owner; Mr. Archelaus Thomas, manager).—Twelve wages-men and ten tributers were employed. The company crushed 300 tons for 270oz.; and the tributers 212 tons, for 132oz. of gold. The company's workings are chiefly on Dixon's reef, about 2ft. in thickness. The quartz contains quantities of arsenical pyrites with ruby silver, and is difficult to treat. Work has also been carried on on other leaders where the quartz contains very little mineral. The tributers' workings were on reefs and leaders in different parts of the mine.

New Whau Mine, 3 acres 2 roods 8 perches (Lucas and party, owners).—Four wages-men and six tributers were employed. The owners crushed 40 tons for 16oz. of gold, and the tributers 42 tons for 656oz. of gold. The workings were on two leaders of brown quartz, about 4in. in thickness.

Dixon's Extended, 3 acres 2 roods 18 perches (Darrow and party, tributers).—Twelve men were employed, and 4,142 tons of quartz and mullock crushed yielded 999oz. 11dwt. of gold. The workings were confined to clearing out old stopes on the Dixon reef and branches.

New Chum Claim, 5 acres.—Harms and party crushed 134lb. of stone for 83oz. 10dwt. of gold. Two men were employed.

GRAHAMSTOWN DISTRICT.

Victoria, formerly New Prince Imperial and Deep Level Cross Mines (41 acres 3 roods 10 perches; Victoria Gold-mining Company, Limited, owner; Mr. Thomas A. Dunlop, manager).—Six wages-men and six tributers were employed. The tributers crushed 570 tons for 228oz. of gold. The company's workings were driving a cross-cut from the No. 3 level of the New Prince Imperial shaft. This was driven 815ft. The tributers' workings were on leaders at No. 3 level in this shaft, and also on leaders on the old Tookey section, and workings will be conducted in that portion of the mine. The winding-engine, a double portable cylinder, fixed, 18-horse power, is being erected there.

Saxon Mine, 17 acres 1 rood 21 perches (Saxon Gold-mining Company, Limited, owner; Mr. Thomas A. Dunlop, manager).—Ninety-two men have been employed in this mine, and 11,079 tons of quartz was crushed for a yield of 4,764oz. 17dwt. of gold. The workings were chiefly on the reefs over No. 6 level. It was found necessary for the drainage to complete connection with the New Prince Imperial Mine, by continuing the drive to the Saxon workings at No. 6 level. Several reefs have been driven on to the extent of 1,157ft., and 197ft. of winzes sunk, and 4,170 fathoms stoped out. The mine is well ventilated, and the workings are secure. The battery consists of thirty-five stamps, three pans, eight berdans, and is driven by two Pelton wheels; a small Pelton wheel drives a dynamo for electric light at the battery. At the mine there is one 30-horse power steam-engine for winding, and a Pelton for driving the air-compressor used for working a rock-drill.

Caledonian Mine, 8 acres 3 roods 12 perches (Caledonian Gold-mining Company, Limited, owner; Mr. James Coutts, manager).—Eleven wages-men were employed, and 243 tons of quartz crushed yielded 157oz. 19dwt. of gold. The workings were on the Turtle's leader, near the Hazelbank Mine boundary, at the No. 1 level in the shaft. The winding-gear is driven by a 12-horse power steam-engine.

WAIOTAHU DISTRICT.

Waiotahi Mine, 19 acres 3 roods 15 perches (Waiotahi Gold-mining Company, Limited, owner; Mr. J. E. Smith, manager).—Thirty-six wages-men were employed, and 2,262 tons of quartz was crushed for 2,859oz. 5dwt. of gold. The workings are of the same description as last year, from the levels of the Waiotahi and Mary Ann shafts, on reefs and leaders varying $\frac{1}{2}$ in. to 4ft. Nine hundred fathoms of reefs have been stoped, and a large amount of driving done. The mine is well worked and ventilated. There are three steam-engines—two 14-horse power, and one 18-horse power—two for winding, and the other for driving the crushing-mill, which consists of twenty-one stamps and five berdans.

New Manukau Mine, 3 acres and 15 perches (New Manukau Gold-mining Company, Limited, owner; Mr. J. E. Smith, manager).—Six wages-men are employed, and 55 tons of quartz crushed which yielded 39oz. 10dwts. of gold. The workings are from Nos. 3 and 4 levels of the Waiotahi shaft, and are of the same description.

Cambria Mine, 15 acres 2 roods 15 perches (Cambria Gold-mining Company Limited, owner; Mr. William Baker, manager).—Thirty-three wages-men are employed, and 1,900 tons of quartz crushed for 1,504oz. 19dwt. of gold. The workings are at Nos. 2, 3, and 4 levels; 432ft. have been driven on leaders and 198ft. in winzes, and 374 fathoms stoped out. The mine is well worked and ventilated. A 15-horse power steam-engine is used for winding, and the battery, which consists of twenty-one stamps, one Frazer pan, and thirteen berdans, is driven by a Pelton wheel.

Trenton Mine, 22 acres 1 rood 16 perches.—Trenton Gold-mining Company, Limited, owner; Mr. John G. Vivian, manager).—Ten wages-men were employed, and 127 tons of quartz crushed yielded 197oz. 13dwt. of gold. The workings have been chiefly about the No. 3 level and upward. It is reported that work will soon be discontinued in this mine.

Fame and Fortune Mine, 55 acres and 11 perches (E. K. Cooper and party, owners; Mr. Henry Willetts, manager).—Thirty wages-men and tributers were employed. The owners crushed 1,927 tons of quartz for 981oz. 12dwt. of gold, and the tributers crushed 43 tons for 54oz. 14dwt. of gold. The workings were chiefly in the upper levels, on different reefs and leaders. For the greater part of the year the owners worked the mine, but latterly the whole has been let on tribute. The battery, which consists of twenty-one stamps and sixteen berdans, is driven by a Pelton wheel.

McCurdy's Claim, in which two men were employed, has crushed 18 tons of quartz for 77oz. of gold; and *Berry's Claim* crushed 9 tons for 57oz. 9dwt. of gold.

There are several small claims working in the district, but the returns have not amounted to much.

WAIOKARAKA DISTRICT.

May Queen Mine, 29 acres 2 roods 27 perches (May Queen Gold-mining Company, Limited, owner; Mr. H. W. Moore was manager until the 1st March, when Mr. T. B. Hicks succeeded him).—Twenty-five men were employed, and 2,482 tons of quartz crushed for a yield of 2,068oz. 9dwt. of gold. The workings were chiefly at No. 2 level, 394ft. from the surface. The shaft has been sunk 100ft. and the run of gold in the No. 4 reef stoped out. A large winze has also been sunk on the reef 80ft., and another level is to be opened up, and a connection made with the old Queen of the May shaft for the purpose of drainage. A 9-horse power engine is used for winding. It is contemplated amalgamating the Trenton and May Queen mines, and to move the winding engine from the Trenton ground and erect it on the old Queen of the May shaft. This work would be a saving, inasmuch as the May Queen shaft need not be sunk deeper for the present.

Crawford's Special Claim has not been worked during the year, and the work carried on in the *Hauraki Mine* has not led to any favourable results.

KARAKA DISTRICT.

The Adelaide Mine (owned by Mr. G. W. Bull and party), has been worked by seven tributers, who crushed 157 tons of quartz for 131oz. of gold. Workings were on the main reef, which is about 2ft. in thickness.

Lone Hand Mine, 26 acres 3 roods 35 perches (Lone Hand Gold-mining Company, Limited, owners; Mr. Thomas Moyle, manager).—Four wages-men and eight tributers were employed; 283 tons of quartz yielded 467oz. 19dwt. of gold.

Claremont Mine, 1 acre (Mr. George Bryant, owner and sole workman).—Crushed 3 tons of quartz for 154oz. 13dwt. of gold. The quartz is from small leaders and flinty junctions.

E. and M. Mine, 1 acre 3 roods 10 perches (Messrs. Fieney and Johnson, owners).—One hundred and seventy-two pounds of quartz were crushed for a yield of 131oz. 3dwt. of gold. The quartz is of the same nature as the Claremont.

Hokianga Mine, 2 acres and 36 perches (Jenkins and party, owners).—Three men have been employed, and 65 tons of quartz was crushed for 175oz. 7dwts. of gold. The quartz is of the same nature as before mentioned, only the veins are larger.

Karaka Mine, 10 acres (F. White and party, owners).—Three owners and one wages-man were employed, and 215 tons of quartz crushed for 123oz. gold. The workings have been on a large reef, chiefly at the surface. A drive was put in on the reef 70ft. and a portion stoped out. There are several other reefs and leaders in the ground, which was formerly known as the Halcyon Claim. The party purchased the old Halcyon battery of five stamps and two berdans, and have added a Watson and Denny pan. They have made a water-race 29 chains in length, and have 137ft. pressure on the Pelton-wheel which drives the battery; there is, however, very little water in the upper Karaka Creek during the summer months, and the battery could not be worked lately.

Several small claims have been worked near the old Lucky Hit and Auckland, but the returns have been only moderate.

UNA HILL AND TE PAPA DISTRICT.

Dives Mine, 20 acres 3 roods 21 perches (Dives Gold-mining Company, Limited, owner; Mr. John Ross, manager).—Twelve wages-men have been employed, and 480 tons of quartz was crushed for 720oz. of gold.

Occidental Mine, 21 acres and 9 perches (Occidental Gold-mining Company, Limited, owner; Mr. Thomas Black was succeeded by Joseph Govan as manager lately).—Twelve wages-men were employed, and 439 tons of quartz crushed yielded 662oz. of gold. About 600ft. of drives has been done, and 150 fathoms of reefs stoped out. The natural ventilation was effected by making another outlet to the mine.

Pride of Karaka Mine, 20 acres (Pride of Karaka Gold-mining Company, Limited, owner; Mr. J. E. Hardman, manager).—Eight wages-men were employed, and 160 tons of quartz crushed for 267oz. 10dwt. of gold. The low level was continued through hard rock and the reef cut at 400ft., and a winze sunk, connecting with the surface-workings, 104ft. The reef, which is about 1ft. in thickness, has proved payable.

Magnolia Mine, 17 acres (Magnolia Gold-mining Company, Limited, owner; Mr. Henry Rabe, manager).—Eight wages-men were employed, and 240 tons of quartz crushed for 199oz. 14dwt. of gold. About 100ft. was driven on the reef, and 25 fathoms stoped out. Ventilation was completed by connecting the low level with the upper workings.

North Star Mine, 30 acres (North Star Gold-mining Company, Limited, owner; Mr. R. McDonald, manager).—This mine was chiefly worked on tribute, nine men being employed, and two wages-men were driving a low-level cross-cut. The tributers crushed 101 tons of quartz for 217oz. 18dwt. of gold.

Boyle's Claim.—One man crushed 8 tons for 41oz. 6dwt. The Welcome Claim crushed 78 tons for 51oz. 19dwt. Just in Time Claim, two men, crushed 133 tons for 29oz. of gold.

HAPE CREEK DISTRICT.

Consols Mine, 29 acres 3 roods 31 perches (Consols Gold-mining Company, owner; Mr. John F. Carter, manager).—Seventeen wages-men and ten tributers were employed. The owners crushed 100 tons for 100oz. 16dwt., and the tributers 220 tons for 207oz. 19dwt. of gold. Winding and pumping gear was erected and the shaft pumped out, and a considerable amount of work was done. The winding gear and pump are driven by a 40-horse power steam-engine.

Souvenir Mine.—There was 52 tons of quartz crushed for 24oz. 7dwt. of gold. Several other small claims have been worked for small returns.

OTUNUI DISTRICT.

There has been no return from this district, although occasionally parties visit the ground.

PURIRI DISTRICT.

Puriri Claim (Four men's ground).—One hundred and forty tons of quartz crushed yielded 47oz. of gold. There is a small battery of six stamps and two berdans at this mine.

Puriri Prospectors' Mine (Thomas Gillan, owner).—A considerable amount of work was done by the present owner, three men being employed, and 121 tons of quartz was crushed for a yield of 173oz. 16dwt. of gold. A battery of sixteen stamps and four berdans, driven by a Pelton-wheel, is situated about a mile from the mine.

TAIRUA DISTRICT.

Bonnie Scotland Mine, 5 acres (Mr. Finlay McLiver, owner and manager).—Three men were employed, and 124 tons of quartz crushed yielded 91oz. 19dwt. of gold. About 100ft. have been driven on the reef, and 40 fathoms stoped out. There is a battery of ten stamps and four berdans driven by water-power at this mine.

OHINEMURI COUNTY.

MARATOTO DISTRICT.

Maratoto Mine, owned by a Sydney company, was worked by three men up to the end of November last year, afterwards no work was done. The mine, crushing-plant, and machine site and water-race have since been sold to Mr. Judd of the Thames, who intends working the mine. The total quantity of quartz crushed was 135 tons for 625oz. of bullion.

Two or three small parties have been occasionally prospecting the district, but so far with meagre results.

KARANGAHAKE DISTRICT.

Ivanhoe and Truro Mines, 42 acres (Mr. C. P. Cox, owner; Mr. John McCombie, manager).—Six men were employed, and 136 tons of ore were treated for a return of 119oz. of gold. The reef worked on was about 3ft. in thickness. Two prospecting cross-cuts were driven a distance of 230ft. and 112ft. respectively, and a considerable amount of surface trenching done. The battery consists of four heads of stamps, two pans, and one settler driven by a Pelton-wheel. Provision is made to allow the slimes to settle, and use the water over again.

Woodstock United Mine, 30 acres (Woodstock United Gold-mining Company, owner; Mr. John McCombie, manager).—The average number of men employed during the year has been six. About 200ft. of driving has been done on the lode at two or three different points, and the quantity of ore broken out and dealt with was 149 tons. Of this lode 51 tons were sold at a figure ranging from 50 per cent. to 72½ per cent. on its assay-value, which proved it to be worth £2,431; and the purchaser shipped it to Freiberg for treatment there. A parcel of 98 tons was reduced by battery and pan amalgamation for a return of 280oz. of gold, and this result was slightly over 50 per cent. on the assay-value. The lode from which this stuff was obtained averages 18in. in thickness, and there are now to grass about 20 tons of ore, ranging from £15 to £50 per ton in value, as the result of the stoping operations upon it.

Crown Mines, 116 acres (New Zealand Crown Mines Company, owner; Mr. John McConnell, general manager; and Mr. G. McGregor, mine manager).—Fifty-five men on the average have been employed. Two hundred and two tons of quartz and three tons of tailings were treated by the Cassell process for a return of 1,186oz. 10dwt. of bullion, value £1 14s. 11d. per oz. The quartz was obtained from the low levels opened on the reef on either side of the Waitawheta Stream. This reef averages from 4ft. to 7ft. in thickness. The depth of the lowest level from the county road is 600ft.; and 378ft of driving on the reef, 80ft. of rising, and 61 fathoms of stoping have been done. The quartz from the low level is conveyed to the battery with great difficulty. It has to be hauled across the Waitawheta Stream on a wire tramway, run along a ground tramway, and then hauled by a wire tram again across the stream up to the mill.

The company have decided to construct a tramway and erect a new crushing-plant on the left bank of the Ohinemuri River, about 80 chains from the mine. The excavation for a ground tramway is nearly completed, only one bridge over the Waitawheta River being required.

The particulars of the new crushing and treatment plant are given in the description, by Mr. McConnell, attached. The plant at present in use consists of three Lamberton mills, a stone-breaker, furnaces, and fifteen agitating vats, ten solution-pumps, three Felton presses, three solution-tanks, and six towers, &c.

The following is a rough description of the new plant being erected by the New Zealand Crown Mines Company, Limited:—

Water-power: By means of a 4in. by 2in. fluming, the water will be taken from a point in the Ohinemuri River, above Karangahake, and conveyed to the battery, a distance of 80 chains, giving a fall there of 70ft., by which, with two Pelton-wheels, 140-horse power will be obtained. The Peltons are 7ft. in diameter overall, and the water-column 44in. by 150ft. in length.

Crushing Machinery: One Lamberton stone-breaker, capable of reducing 70 tons of ore per day, fine enough for feeding into stamps. Twenty head of dry stamps, 9cwt. each, which will reduce 30 tons of ore per day sufficiently fine to pass through a 60-mesh screen (3,600 holes to the square inch). The crushed ore will be conveyed from the stamps by means of a revolving tube, and deposited in the store-hoppers, either in connection with the percolation, or agitation-plant.

Percolation-plant: This plant will consist of thirty or more tanks, each capable of holding a charge, according to their size, of from 6 to 20 tons of finely-pulverised ore. The bottoms of these tanks will be covered with a sand-and-gravel filter. The method of treatment is roughly as follows: The finely-pulverised ore is trucked from the store-hoppers and tipped into the tanks. A dilute cyanide solution is run on to the top, and allowed or assisted to percolate through the body of the ore. As fast as it percolates it is carried away from underneath the filters on the bottoms of the tanks by means of iron pipes, and allowed to run through a series of boxes filled with zinc turnings. The cyanide in solution having a much stronger affinity for gold and silver than the baser metals, dissolves these precious metals in its course through the ore, and again deposits them in the form of a black slime on to the zinc turnings. This bullion, in the form of black slime, is easily collected and melted down into bars. Treatment by percolation requires no power and little labour.

Agitation-plant: This plant will consist of twelve or sixteen wooden tubs fitted with revolving paddles, and capable of holding a charge of three tons of ore each; also three filter-presses, with force-pumps connected, for filtering ore after treatment. This method of treatment is simply agitating the ore and cyanide solution together in tubs or other vessels by means of revolving-paddles or otherwise, until the gold and silver is dissolved. The solution is then filtered, and the bullion deposited on the zinc turnings as already described. For some time operations have been delayed at the present plant through the bursting of the dam, but since repairs have been made and crushing resumed, they have crushed and treated 240 tons of Crown ore by the McArthur-Forrest process, and recovered 92 per cent of the average value.

Adeline Amalgamated Mine has been worked by tributers, and 21 tons of quartz crushed yielded 77oz. 13dwt. of gold. An average of three men were employed.

Several other licensed holdings have been worked, but no great returns have been obtained.

OWHAROA DISTRICT.

Smile of Fortune Mine, 12 acres 3 roods 2 perches (Mr. John Abbott, owner).—This mine was worked by Farmer and party, tributers. Six men were employed, and 341 tons of quartz crushed, yielded 333oz. 15dwt. of gold. The workings were a continuation of the surface block on which they were engaged last year, and extending the low-level drive 314ft.

WAITEKAURI DISTRICT.

Waitekauri Mine, 9 acres 2 roods 23 perches (Mr. Thomas Henry Russell, owner; Mr. William Hollis, manager).—Twenty wages-men were employed, and 1,500 tons of poor quartz crushed for a return of 131oz. 11dwt. of gold. About 1,500ft. of old drives were cleaned up and repaired, and 200ft. driven on the hanging-wall of the main reef, the foot-wall portion having been taken out in former days. The quartz obtained was too poor to pay, and further works are to be carried on in opening up blocks of the reef which are intact. The battery, which now consists of one stone-breaker, thirty stamps, six pans (Howell's amalgamating), and three settlers, is driven by a 38ft. overshot wheel, the fall of water being 36ft. The tailings from the stamps are raised by an elevator and run into a series of settling-tanks, which enables the slimes to settle and the water to be again used in crushing, thus preventing loss in float-gold. The slimes and sand are drawn from the tanks and conveyed in trucks to the amalgamating-pans. The owner, Mr. Russell, is satisfied that by this mode of treatment a large percentage of gold is saved. The tramway from the mine to the mill is 83 chains long and in good working order.

Jubilee Mine, 108 acres (Mr. E. K. Cooper, owner; Mr. H. Baker, manager).—Twelve wages-men have been employed. The chief workings in the mine have been in opening up an intermediate level 400ft. above the Horne level. A considerable amount of quartz has been obtained, and a parcel of 10 tons forwarded to England; value, about £150. A tramway 58 chains in length is being constructed to convey the quartz from the level to the battery, which was erected several years ago to crush surface-quartz. The battery, which consists of ten stamps, one settler, one agitator, and five berdans driven by steam, has lately been overhauled and will soon be again ready. A large pad-dock of quartz is ready for crushing as soon as the tramway is finished.

Very little work has been done in the other holdings in this district.

KOMATA DISTRICT.

New Find Mine, 27 acres (Mr. Thomas Henry Russell, owner).—A discovery of gold was made in this mine about the month of June last year, and a considerable amount of prospecting work was done by Tilsley, Worth, and party, the first owners. A cross-cut 30ft. in length was put in and two reefs cut through, the first reef being about 7ft. and the second about 12ft. in thickness, the distance between the reefs being about 15ft. Excellent prospects of gold were obtained, and a ton of quartz crushed at the School of Mines, Thames, yielded twenty-one pounds' worth of bullion. Mr. T. H. Russell, the present owner, entered into negotiations for the purchase of the mine, and took in hand the work of further opening up and testing the value of the reefs. He then caused a drive of 70ft. to be put in on the second reef, and he says "good milling-ore was found throughout;" he also put in a cross-cut 30ft. below, and cut the second reef at a distance, in the tunnel, of 50ft. The first reef was here 10ft. and the second about 12ft. in thickness, the distance between them being only 5ft.; this shows a tendency of the two reefs to close in and perhaps become one underneath. Both the first and second reefs are worth 30 per cent. more per ton than they are above in the upper level. Mr. Russell has had 100 tons of the quartz taken from the both levels, packed, and sledged to the Waitekauri Battery, a distance of about three miles, and treated there. The bullion obtained was worth £700. A substantial wooden tramway is now in course of construction from the mine to the Waitekauri Battery, and as soon as it is completed the battery will be started on the ore from this mine. An average of ten men were employed during the year.

Several other licensed holdings and claims have been taken up in the locality, and prospecting is being carried on; but, on account of the inaccessible nature of the country, and distance from the mill, time will be required to develop the district.

WAIHI DISTRICT.

Waihi Mine, 294 acres (Waihi Gold-mining Company, Limited, owner; Mr. Henry Dale, general manager, and Mr. Thomas Gilmour, mine-manager).—One hundred and sixty wages-men were employed, and the quantity of quartz crushed was 11,319 tons, which yielded 18,407oz. of bullion. The chief work in the mine has been in the Martha section. The smithy level has been extended to the westward, and is now in a distance on the reef of 475ft., and on the intermediate level the drive in the reef is in a distance of 100ft. The surface part of the reef is now being worked in an open cutting, and it is from this part and the stopes over the smithy level that the principal quantity of quartz crushed has been obtained. The main drives on the reef are well timbered with heavy sets; the stopes are kept well filled up and secure: 580 fathoms of the reef have been taken out of the open cuttings and stopes. The thickness of the reef worked is upwards of 20ft. The tramway from the Martha reef workings is about 40 chains in length, and a wooden tramway about two miles and a half in length is used for conveying timber from the bush. Another cross-cut level for a main adit is now being driven to cut the Martha reef about 50ft. under the smithy level. The drive will be about 1,500ft. in length, and is in a distance of 510ft. The dimensions of the drive within timbers are: 7ft. high, 5ft. 10in. at top, and 7ft. wide at the bottom. The timbers are from 10in. to 14in. through, and the sets have to be placed within a few inches of each other to support the pressure, the ground already driven through being near the surface and of the consistency of soft mud for a considerable distance.

In the Union section of the mine a cross-cut 334ft. in length has been driven from the shaft, and the reef cut from 2ft. to 4ft. in thickness, giving rich prospects. This part of the mine promises to yield good returns.

The battery has been largely added to during the year; thirty new stamps have been erected, and twenty of these are being used for wet-crushing, the other ten being used with the first thirty stamps erected in crushing dry. The wet-crushed ore is run in a flume to an elevating-wheel 26ft. in diameter, and the sand and slimes raised and run into settling-tanks. These tanks are seven in number, and have a capacity of 110ft. by 16ft. by 14ft. in depth. The sand and slimes settle satisfactorily, the water running back to the stamps very clear. The sand and slimes are drawn from the tanks into trucks, which are elevated by hydraulic appliance and conveyed to the pans on a tramway.

Another gold-saving process is to be adopted in connection with this mine, namely, the Bohm Company's, which is an adaptation of the cyanide process. The respective merits of the dry- and wet-crushing are being fairly ascertained at the works of this mine. Sufficient time, however, has not elapsed to enable the manager to determine which is the most profitable, but he expresses an opinion that, as far as can be seen, calcining the ore is an advantage whether the wet or dry process is used.

Silverton Mine, 70 acres (Silverton Gold-mining Company, Limited, owner; Mr. John McCombie, manager).—The average number of men employed at the mine and in the erection of the mill has been ten. No driving has been done during the year, but about 300 tons of ore have been broken out from the main reef, averaging 8ft. in thickness, and the stuff is now being carted to the mill, where crushing operations will be started upon it next month. The mill comprises fifteen heads of stamps, two of Stevenson's amalgamating pans, one settler, one agitator, and one berdan, driven by a 35-horse power Leffel turbine. The excavations are now in progress up to the starting-point of the low-level tunnel, which will be 1,700ft. in length, and will afford nearly 60ft. of backs beneath the lowest level of the present workings.

Gladstone Mine, 30 acres (Wood and party, owners).—The prospecting drive, which was in 500ft. at the end of last year, has been extended 90ft., and a reef cut 7ft. in thickness, the value of which has not been ascertained. Two men have been employed.

Attempts have been made to sink shafts by the owners of the Waitete on the south-west end, and the Grand Junction on the north-east end, of the Martha section, but from the quantity of water found it will be necessary to provide pumping-appliances in both shafts.

PIAKO COUNTY.

WAIORONGOMAI DISTRICT.

Te Aroha Mines, 26 acres 2 roods 32 perches (H. H. Adams, owner and manager).—An average of ten men were employed. Work was carried on in the New Find section and the Warrior (late Colonial) section, and 640 tons of quartz were crushed for 331oz. 8dwt. of gold.

Ferguson's Special Claim Mine, 66 acres (Ferguson's Syndicate, owners).—This mine has been worked by Newsham and party, and Ferguson and party, tributers. Two men were employed, and 806 tons of quartz were crushed for 251oz. 7dwt. of gold.

Werahiko Mine, 4 acres 2 roods 4 perches.—Two tributers were employed, and 22 tons of quartz crushed for 12oz. 17dwts. of gold.

Warrior Mine, 10 acres 1 rood 16 perches (Mr. Thomas Gavan, owner).—Two tributers were employed, and 89 tons of quartz crushed yielded 40oz. 19dwt. of gold.

Several other parties have taken up claims recently.

The crushing-plant at Waiorongomai, which consists of fifty stamps, furnaces, pans and berdans, is being dismantled, twenty stamps and thirty berdans only are to be retained by Mr. Adams.

The Ferguson's crushing-plant has been sold and removed.

TUI DISTRICT.

The Champion Mine has virtually been closed during the year. There is a large quantity of low-grade ore which cannot at present be worked.

DRAINAGE.

Big Pump (The Thames Drainage Board, owners; Mr. W. H. Phillips, manager).—Pumping operations have been carried on during the year, and the water kept to the 500ft. level; but in March last it was resolved to allow the water to rise to the 400ft. level. The total cost for the year of working the pump, including coal, maintenance, and wages (£1,265 7s.) was £3,874. The consumption of coal during the year was 2,645 tons. Six men were continuously employed.

ACCIDENTS.

One fatal accident occurred during the year. A man named James Tagart, who had charge of the Cassell's plant at Karangahake, fell into a vat containing solution of cyanide of potassium; he was quickly taken out, but died in about five minutes after his immersion.

EXPLOSIVES.

The chief explosives used are: blasting-powder loose in ordinary grains, compressed powder in pellets, gelignite, dynamite, and rackarock. The compressed powder constitutes about two-thirds of the explosives used at the Thames, ordinary grain powder, gelignite, and rackarock being the other third. Gelignite and dynamite are chiefly used at Kuaotunu, Ohinemuri, and Te Aroha.

I have, &c.,

The Under-Secretary of Mines, Wellington.

GEO. WILSON, Inspector of Mines.

No. 5.

Mr. Warden ALLEN to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Blenheim, 30th April, 1892.

I have the honour to forward you the usual annual report *re* the goldfields under my charge for the year ended 31st March, 1892.

WAKAMARINA.

There is nothing to report *re* this district, excepting that a license has been granted Mr. Hunter Brown for a river-claim, and he intends working the said claim by dredges. He has been at work for some preparing for dredging operations, but the actual work of dredging has not yet commenced. Several small holdings have been let that I believe will prove a benefit to this district.

CULLENSVILLE.

Nothing new to report either from the creek or the flat. The work of the various claims has been steadily carried on, and, in many cases, with good results. I do not think that the total quantity of gold found has decreased during the past year.

DUNCAN'S VALLEY.

A small rush took place in this district, but the ground has not yet been properly tried. During the year now under consideration sufficient work has not been done to prove whether this valley will be found payable or not. Indications, so far, are good.

As to all other alluvial districts in Marlborough there is nothing new to report.

QUARTZ CLAIMS.

There are only two quartz companies that require notice—namely, the Southern Cross Company and the Ravenscliff Company, both of Waikakaho.

The Ravenscliff Company, under the management of Messrs. Turner and Logan, have done a great deal of work during the past year preparatory to commencing crushing. A very complete plant and buildings have been erected, a lengthy tramway and water-race constructed, but up to the end of this year now under report no work has been done in the way of crushing to enable me to give any results.

The Southern Cross Company have had a few men at work for some months doing good work towards prospecting their claims, but at present nothing more than prospecting has been done. This company appears to be satisfied with the result of their work.

There is no doubt about the value of this Marlborough District as a mineral district; but, as I have reported before, it is simply a question of time as to when this large extent of mineral country will be profitably worked.

I have, &c.,

The Under-Secretary of Mines, Wellington.

J. ALLEN, Warden.

No. 6.

Mr. Warden HEAP to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Nelson, 6th April, 1892.

I have the honour to forward herewith the annual mining returns for the Nelson and Motueka portion of the Karamea Mining District:—

As the returns show, there has been little doing in mining matters in this district during the past year; and as I have not had an opportunity of visiting the Wangapeka, Motupiko, Baton, or Mount Arthur districts during the year, I have little to report. I may, however, mention that some three years ago a road was made up the Wangapeka River, with the intention of continuing it through to the Mokihinui, but this was not done. The portion of the road constructed, however, let the miners into a new district, and the consequence is a number of men are now profitably employed, and some of them very much so, if accounts of them are to be credited. The fact is not widely

known, or no doubt more men would make their way to the district. The Crow River, a tributary of the Karamea, also appears to have been tapped by the same road, or at least made more accessible, and some six parties are more or less profitably engaged there. The gold in both these places is said to be of a coarse water-worn nature, the largest nugget heard of being about 9oz. in weight. There seems to be little doubt but that if the connecting road between Wangapeka and Mokihinui was made, more gold-bearing country would be made available, and, not unlikely, some rich discoveries made.

The old districts of Tadmor, Sherry, Baton, and Mount Arthur table-land continue to yield a little gold. Farmers in their slack times turn gold-diggers on their farms, and so add appreciably to their incomes.

The Customs returns show 387oz. 7dwt. of gold as the declared produce of Waimea County during the last financial year, as against 92oz. 7dwt. for the previous year. But I have no doubt a portion of the apparently large increase of last year was made up of gold held back from the previous year to avoid payment of the duty which was abolished on the 31st March, 1891.

I have, &c.,

The Under-Secretary of Mines, Wellington.

WILSON HEAP, Warden.

No. 7.

Mr. Warden GREENFIELD to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Westport, 21st May, 1892.

I forward herewith statistical returns for the Karamea Mining District for the year ended 31st of March, 1892, and I have the honour to report on the mining industry in the various localities of the district as follows, namely:—

ADDISON'S.

All the old-established claims in this locality are still steadily at work, and apparently yielding payable returns. For more than twenty-five years Addison's has been the principal gold-producing field in the Buller District, and, from present appearances, it may safely be predicted that considerable quantities of gold will be obtained in this locality for many years to come. The principal difficulties to be overcome in extending operations are want of water for sluicing purposes, and the necessity for a main sludge-channel to get rid of the enormous accumulation of tailings, which materially hamper the operations of mines.

The Fair Maid Gold-mining Company succumbed after a short career, and the property has been purchased by a party of miners, who will probably make the claim pay, as they will save expensive management and have the advantage of local personal control.

Several new claims have been taken up in this locality during the year. The Venture Gold-mining Company now in operation is a local company now carrying on work successfully. This company has started crushing black sand cement, a revival of an old industry, and it is to be remarked that, although the workings at present are to a certain extent on cement thrown aside as hopperings in early times, the returns are satisfactory.

The claims on Wilson's lead now in operation are giving fair results—namely, Mace and Basset, Murray and party, and Minogue and party. The material overlying the wash-dirt is of a stony nature, rather difficult to deal with, and the wash-dirt itself is more or less cemented together, so that much of the gold is probably lost in the hopperings. The northern end of the lead (Minogue's claim) appears to be more easily worked than the others.

On Bradshaw's Terrace there are two new claims now at work (Rogers and party and Sangwell and party). McKay and party are also bringing on water, and expect to begin sluicing in two or three months. The ground is rather poor, but, being on a terrace of a sandy nature and adjacent to a creek, facilities are afforded for working economically.

CHARLESTON.

There has not been much change in this district during the past year. Two new batteries have been erected, and two others are to be erected shortly, and it is thought that when the Four-mile Water-race is completed it will be the means of giving an impetus to mining and constant employment to several parties of miners who, for want of water during the past year, have been frequently idle.

A syndicate has been formed in Melbourne to work the special claims held at Brown's Terrace, and it is expected that operations will be commenced at an early date.

MOKIHINUI.

For many years past quartz mining has been carried on in this district, occasionally with encouraging prospects, but as a rule the returns obtained have not been remunerative. At the present time work has entirely ceased, and only two claims are now held—namely, the South Pacific Company and the Red Queen Company. There has been some work done on these claims during the year, but not very much.

WAIMANGAROA.

The Baconsfield Company crushed a small parcel of stone recently, which yielded a fair return, but as the stone had to be taken by pack-horses to the Great Republic battery, four miles, the operation could scarcely be expected to yield a profit. At present mining operations are suspended apparently for want of capital.

The Great Republic Company, after struggling for many years with varying success, collapsed for want of funds, and the grant has been cancelled.

NORTH BEACH.

Individual miners, or "hatters," to the number of thirty or forty, are at work on this beach, but as a rule they only make a bare existence.

The New Era Company, Limited, of Dunedin, has been dredging in the lagoons at the back of the beach, and, after spending several thousand pounds in plant, suspended operations owing to the unremunerative returns obtained. The result of my inquiries indicate that an insufficient spread of tables for washing the sand lifted is one of the main factors to which want of success may be attributed. It is thought probable that with a larger expanse of tables on shore, instead of afloat, as at present, a fair measure of success might be achieved.

OLD DIGGINGS.

This field derives its name from the fact that gold was obtained there in the very early days, when Mr. John Rochfort first penetrated the wilds of the Buller Valley on an exploring expedition from Nelson to the West Coast. The Old Diggings are situated on the north bank of the Buller River, about twenty miles from Westport. Ever since that time gold has been obtained sufficient to encourage a good many miners to continue operations there, and with payable results.

The White Cliffs Company put a dredge on the Buller River in this locality, at the cost of several thousand pounds, but unfortunately it turned out a disastrous failure. After working a short time the dredge became a total wreck during a flood in the river, presumably for want of proper care and vigilance, the company went into liquidation, and the dredge was sold for £40. What the purchaser intends doing with it is not yet known.

LYELL.

Nothing of any great importance has occurred in this locality during the year. The United Alpine Mine has been kept steadily at work, and given employment to a large number of men. Most of the necessary dead work involved in opening up and securing the mine is now completed, and the work of taking out the stone has been let by contract, which will reduce the company's expenditure, and it is believed will allow a good margin for profit. The battery has been kept continuously employed, and as a result the sum of £5,600 has been distributed amongst the shareholders. From the latter end of 1891 until the last month the stone treated was of rather poor quality, and there was in consequence a break in the monthly dividends. The existence of sufficient stone to keep the battery going for several years has been proved, and as the mine is now in thorough working order, the shareholders have every reason, should the stone only keep at its present quality, to expect regular monthly dividends for a long time to come.

In the Croesus Mine a few hands were employed prospecting, and a trial crushing was taken by them out of a block of stone which had been left underfoot when the company ceased working. The result, 5oz. from 20 tons of stone, was not very encouraging, and operations were again suspended, and I believe it is the intention of the shareholders to wind up the company.

From the Tyrconnell and United Italy Companies' claims good crushings were obtained during the past year, the former yielding 13oz. to the ton, and the latter over 3oz. Very good stone is still being met with in the Tyrconnell, but the United Italy leader has run out, and the tributers are now engaged prospecting.

In the Lyell Creek Extended Company's claim the tunnel is being driven by wages-men.

MURCHISON.

The Matakītaki, Maruia and Glenroy Valleys, and Blue Duck Creek still support a considerable population, including a large number of Chinese. Two large steam dredges have been constructed, one being placed on the Matakītaki River and the other on the Buller River at Fern Flat; but, so far as I can learn at present, their operations have not been successful, owing chiefly to the rough character of the river-bed, and consequently the frequent breakage of the machinery.

Mining at the Owen has completely collapsed, and every mining lease, &c., has been cancelled.

COLLINGWOOD.

The only companies in this district are the Johnston's United and the Red Hill. The former company have continued to work throughout the year and paid in dividends the sum of £1,621 5s. 3d., and they crushed during the year 5,227 tons of quartz, and the capital paid up is £12,409 5s. 11d. The mine has been put into thorough working order, but I regret to say the stone crushed recently did not come up to expectations.

The Red Hill Company, with a paid-up capital of £22,370, including £4,895 debenture capital, have done very little work during the year owing to want of further capital, which they are unable to raise, and the property of the company was transferred to trustees for the debenture-holders. The property consists of five gold-mining leases, containing an area of 64 acres 2 roods 14 perches, and two mineral leases of 571 acres and 30 perches and 640 acres, also numerous water-rights, &c. This property is about to be sold, and it is stated another company is being formed in England to purchase it; but this statement requires confirmation. As nothing whatever has been done on the mineral leaseholds, I have suggested to the Land Board that those leases should be cancelled.

The area held under licensed holdings, special claims, and gold-mining leases in this district on the 31st March, 1891, was 516 acres and 20 perches, and on the 31st March, 1892, 295 acres 3 roods 10 perches. This reduction may be accounted for by the supposed discovery of a silver lode at Anakaka, which was disappointing, and the surrender of licenses in consequence, and also to the abandonment of the river-dredging project. The approximate area held under miners' rights in 1891 was 40 acres, and in 1892 46 acres. No new discoveries have been reported.

LIST of CALLS made, DIVIDENDS declared, &c.—continued.

Name of Company.	Calls made.			Dividends declared.			Stone crushed.	Yield.	Value.		
	£	s.	d.	£	s.	d.	Tons.	Oz.	£	s.	d.
A1	300	0	0	...	...	...	...	...	...	...	...
Golden Point	100	0	0	...	...	...	3½	36	144	8	0
Cumberland	1,800	0	0	3,000	0	0	3,021	2,808	11,373	19	3
Durham	600	0	0	...	...	...	...	...	...	...	...
Kapai	500	0	0	...	...	...	...	...	...	...	...
Success	100	0	0	...	...	...	...	...	...	...	...
St. George	200	0	0	...	...	...	...	...	...	...	...
Prima Donna	400	0	0	...	...	...	...	...	...	...	...
Inkerman	1,000	0	0	...	...	...	1,088	894	3,291	0	0
Exchange	1,000	0	0	...	...	...	...	...	...	...	...
Inangahua Low-level Tunnel	400	0	0	...	...	...	...	...	...	...	...
Resolution	100	0	0	...	...	...	...	...	...	...	...
Walhalla	100	0	0	...	...	...	...	...	...	...	...
Wealth of Nations	1,625	0	0	...	...	...	609	216	862	9	3
Wealth of Nations	...	...	...	...	...	...	Tailings	130	520	6	3
United Devonshire	183	6	8	...	...	...	...	...	...	...	...
Globe	...	...	...	7,200	0	0	8,980	4,536	18,370	0	0
Keep It Dark	...	...	...	500	0	0	2,738	906	3,624	0	0
No. 2 South Keep It Dark	...	...	...	4,200	0	0	4,295	2,482	9,928	0	0
General Gordon	500	0	0	...	...	...	...	...	...	...	...
Supreme	316	0	0	...	...	...	...	...	...	...	...
Queen	50	0	0	...	...	...	...	...	...	...	...
Scotia	700	0	0	...	...	...	...	...	...	...	...
Energy	...	...	...	...	...	...	780	460	1,834	11	9
Mammon	...	...	...	...	...	...	15	15	60	0	0
	£25,956	10	0	30,743	0	0	35,562½	23,390	93,885	5	1
Aluvial gold	...	...	...	...	...	...	...	4,329	16,884	2	8
	...	...	...	...	...	...	...	27,719	110,769	9	9

* In this case the tonnage is only given approximately.

I submit a short account of the work done in some of the mines in the district during the year.

MURRAY CREEK AND CRUSHINGTON.

Wealth of Nations.—In this mine the work carried on for some time past has been principally prospecting. Owing to the quartz discovered on the 200ft. level being too poor to be worked profitably a winze was sunk on the reef below this level to a depth of 160ft. on the underlay, or 120ft. perpendicular. An opening has been made on the reef at this depth, and a few tons of quartz have been taken out and crushed, with, as yet, poor results. The winze is now being sunk to reach a depth of 150ft. on the perpendicular. A branch winding-shaft is now being sunk, and is nearly completed, to the same depth. This shaft is about 300ft. south from the winze, and, when connected with the winze, this, the lowest level, which is about 300ft. below the Inangahua River, will be thoroughly prospected.

Keep It Dark.—Since the last report the inside shaft has been sunk 120ft., making a total depth of 240ft., or 720ft. from the brace on the surface and 900ft. from the outcrop. A drive was put in from the bottom of this shaft a distance of 40ft., where the block of stone sunk on from No. 4 level was intersected. The drive was continued to the west, and the western reef was struck. This block proved to be 45ft. in length, and averaged 5ft. in width. The stone was of the same quality as on No. 4 level. A tunnel was then put in at right angles in a northerly direction, and a block of stone was met with which went 16dwt. to the ton. A winze was sunk on this stone to a depth of 37ft., when it ran out. This tunnel is now being extended in order to strike the north block, which should be got in 40ft. or 50ft. of driving. Stone is now being stoped between Nos. 5 and 4 levels. There is an immense body of stone, but unfortunately it is of poor quality. During the year 2,738 tons of stone were crushed, yielding 906oz. of gold, valued at £3,624. Shareholders have received £500 in dividends. The total output of the mine has been 110,644 tons of quartz, from which 59,126oz. of gold were obtained, valued at £230,130, out of which £108,083 was distributed in dividends.

No. 2 South Keep It Dark.—The main reef has been stoped up 200ft. over No. 2 level, leaving about 100ft. to the surface. Some little time ago the stone was broken and poor, but recently a new make of stone was met with in the south end. This stone has now been driven on 60ft., and has the appearance of extending, which is encouraging, as it is unprospected ground. For the last 30ft. of driving the stone has been left strong under foot. No. 2 level was extended north 77ft., and a block of quartz was met with about 45ft. in length and about 3ft. 6in. in width. This stone is now being stoped, and between 60ft. and 70ft. in height remains before the intermediate level is reached. A winze has been sunk from No. 2 level 170ft. from the northern boundary, and has attained a depth of 90ft., and the work of opening a new level is now proceeding, a drive being

carried in from the No. 6 level of the Hercules Mine. For the year £4,200 has been disbursed in dividends, the quantity of stone crushed being 4,295 tons, gold to the amount of 2,482oz., of the value of £9,928, being obtained therefrom.

Venus.—On the No. 1 level being worked out to the surface a cross-cut to the west was started on the No. 2 level. After driving 70ft. the reef was struck, about 150ft. south of the old workings. The reef has been driven on for 70ft., and has an average thickness of 15in., showing good gold. After driving another 80ft. connection will be made with the old workings, when the work of stopping will be commenced.

Royal.—This claim is situated broadside on to the Venus, and end on to the Golden Fleece. When this company first started 500ft. had been driven by the previous owners—the Result Company. This company, after driving a further distance of 850ft., struck the reef, which was small. The reef has been driven on about 110ft., and a rise is now being put up to connect with the upper workings. The rise is now up about 75ft., leaving another 175ft. before a connection is made. The stone is of good quality, a small crushing during the year of 120 tons having given 100oz. of gold. This reef is supposed to be a continuation of the old Golden Fleece and Ajax lodes, from which splendid returns were obtained in the early days of the district.

BOATMAN'S.

Fiery Cross.—This claim has given fair results for some time past. Winzes have been sunk on the reef, and a winding-shaft carried down to a depth of 360ft. below the 600ft. level. Levels have been opened and the quartz worked to this depth, the block ranging from 100ft. to 200ft. in length and varying very much in value at different levels. In the lowest level at present the ground has shelved away flat to the north, making a break in the lode. The level is now being driven in that direction, with a view of again intersecting it. Dividends to the extent of £5,643 have been paid during the year. The total output from this mine has been 26,469 tons of stone, the yield of gold being 29,662oz., representing a value of £116,568, from which £32,268 has been paid in dividends.

Welcome and other Claims.—The amalgamation of the Welcome, Homeward Bound, Specimen Hill, and Eureka, or some of them, mooted two or three years ago, is again being talked of, and, should it eventuate and work be vigorously proceeded with, it would tend greatly to impart fresh life to mining in the Boatman's district, which has been languishing for some time past. Some exceedingly good stone has been taken from the Homeward Bound during the year.

DEVIL'S CREEK.

Globe.—During the year stone has been stoped between Nos. 4 and 3 levels. On the No. 4 level the reef has been rather broken, and poor in quality. A winze was sunk to a depth of 120ft. below No. 4 level, and at a depth of 70ft. a cross-cut was put in, proving the reef to be about 12ft. in width. From the appearance of the reef in this winze the stone seems to be solid and of good quality. Work was resumed on the eastern reef on No. 1 level, which has been driven on over 200ft., having an average width of 6ft. A winze has been sunk on the reef, and is now down about 70ft. from No. 1 level. The reef has been driven on 70ft. in No. 2 level, where the stone averages the same width as in No. 1. Driving for this same reef has been started on No. 3 level, and it is expected the reef will be got in about 120ft. It will be seen from this that the company have a very large body of stone to operate upon; and, in order to keep the mine thoroughly well opened up, a contract has been let to sink the main shaft to No. 5 level, which it is anticipated will be opened up in about nine months' time. During the year 8,980 tons of stone have been raised and crushed, the yield being 4,536oz. of gold, valued at £18,370, from which shareholders have received £7,200. From the date of the opening of the mine 50,736 tons of stone have been obtained, the gold produced being 26,826oz., of the value of £106,106, out of which dividends have been paid to the extent of £37,300.

Progress.—During the past twelve months a main shaft has been sunk from the No. 2 level a depth of 140ft., at the bottom of which a chamber has been constructed, and from it a drive has been extended to the reef, which was intersected at a distance of 75ft. From this level a connection has been made with the winze which during the past year had been sunk from No. 2 level. This completes a thorough system of ventilation. This No. 3 level has now been driven on over 240ft., the stone being of the average thickness of about 9ft., and of payable quality. A drive from the chamber already referred to is now in progress, with the view of intersecting the reef known as Smith's Reef, which may be met with any moment. A complete winding plant has been erected in No. 2 level, for the purpose of hoisting from the deeper workings, the motive-power being compressed air. Six additional berdans have been erected for the treatment of tailings, and have been found to save a considerable quantity of gold that would otherwise have been lost. About 4,750 tons of stone have been crushed during the last twelve months, the yield being 1,901oz. gold, of the value of £7,719. The total output of the mine has been 26,350 tons of quartz; yield, 11,700oz. gold; value, £46,537; dividends, £7,200.

BIG RIVER.

Big River.—The stone found in sinking the main shaft, and which was struck in the level after driving 65ft., has been operated upon during the year, and has been worked up to the shaft. The length of the block was about 60ft. Stoping was discontinued when the stone was worked up to the shaft, but from that point to the surface will be taken in hand after the mine is opened up. The old block of stone did not extend very far in the level. The main shaft was sunk a further depth of 120ft. A winze on the north end has been sunk on the new reef to a depth of 86ft., of which 40ft. was on stone. A cross-cut was put in from the winze at a depth of 60ft., and the reef was again struck, and showed good gold. A winze has been sunk on the old block to a depth of 52ft., and the reef appears to be about 2ft. wide, carrying good gold. Levels will have to be opened from the bottom of the shaft by tunnels, which will have to be driven 150ft. to reach each block. It is ex-

pected this work will be completed in about three months. The new block of stone is undoubtedly of very good quality, 1,652 tons crushed during the year having returned 3,704oz. of gold, valued at £14,807 9s., out of which £9,600 has been paid in dividends.

Golden Hill.—This claim is situated about one mile and a half from the Big River Claim. After prospecting for a short time stone was found, which has been driven on for about 180ft., although at a shallow level, the average thickness of the stone being about 18in. A winze is now being sunk on the stone. A track is being surveyed from the claim to the Big River Battery, where, I believe, a small crushing of stone will be had.

St. George.—Prospecting has been carried on for some time, with fair prospects, several outcrops of stone having been met with carrying gold. A tunnel 100ft. in length is now being driven to intersect the reef at a depth of about 50ft. from the surface.

MERRIJIGS.

Cumberland.—Stone was driven on for a distance of 250ft., and has been stoped out from No. 1 level to the surface. The work of opening No. 2 level was then commenced, and a tunnel was driven 350ft. north, but not striking the reef, a rise was put up to No. 1 level and an intermediate level west of the winze was opened out at a depth of 30ft. from No. 1 level. Stone has been driven on in this intermediate level for 90ft., the reef averaging a width of 3ft. 6in. A tunnel has been driven on this level 120ft. east from the winze, and a reef was intersected, from which stone is now being taken. The company has erected a fifteen-head battery, which is driven by steam, and connected with the mine by means of an aerial tramway. During the year 3,021 tons of stone have been crushed, yielding 2,808oz. gold, value £11,373, out of which £3,000 has been given in dividends. A cross-cut to the west has been driven over 200ft. on the bottom level.

Sir Francis Drake.—This claim was taken up between four and five years ago. A large amount of work was done to prove the permanent character of the reef discovered on the surface, and the company erected a fifteen-head battery, which has proved of great service to that portion of the district. The gold was found to be very fine, the ordinary appliances not being sufficient to save it. In the hope of the stone proving of better quality at a lower level, a shaft during the last six months has been sunk to a depth of 230ft., the work being performed by manual labour. A winding-engine is now in course of erection, and on its completion the work of driving for the reef will be commenced, which it is expected will be reached in about 300ft. A winze has been sunk on the stone to a depth of 190ft.

Golden Lead.—The erection of the battery being completed crushing was commenced, but it was found that it would not pay to put the whole body of stuff (sandstone intermixed with quartz veins) through; attention was therefore directed to some quartz leaders, which, on the level, carried a fair quantity of gold, but got poorer towards the surface. A large amount of work and prospecting has been done on the level. A tunnel has been driven 400ft. to open a new level at a depth of 60ft. below the present workings. The ground is very wet, rendering sinking impossible without the aid of pumping machinery; the workings, however, being at a high elevation, drainage can be effected by tunnelling at a low level. Should this company be successful in making the ground pay it would be the means of opening up a large district.

Inkerman.—The main shaft has been sunk to a depth of 338ft. from the surface; at 318ft. a chamber was cut out. After driving 72ft. north-east from the chamber the reef was struck. This was driven on 30ft. south and 50ft. north when the reef pinched out. A rise was put up 52ft. from No. 3 level to connect with the winze sunk from No. 2 level. An intermediate level was opened 45ft. down the winze, the stone averaging about 3ft. in width. In the intermediate level the stone was driven on 62ft. south, and 45ft. north, at 24ft. higher level, and the stone stoped up to No. 2 level. A winze was sunk 58ft. below No. 3 level, the stone being small and in blocks. A considerable amount of prospecting has been done. In the Lady Louisa, or Eastern Mine, a rise was put up 102ft., and a tunnel driven 100ft. in length from the top of the rise. The reef is 8ft. wide, but of poor quality, averaging only about 4½dwt. per ton.

GENERAL.

A large amount of work has been done in a number of other claims in various parts of the district, which, however, I have not specially mentioned, nothing worthy of note having occurred in them. The calls for the year have been very heavy, and being borne to a very large extent by the people of the district, but little capital coming into the place, has had a marked effect; and so much has the prevailing depression been felt, that in a number of cases much difficulty was experienced in getting in calls sufficient to pay the rent on some holdings. During the year the Mining Registrar applied for the cancellation of fifty-four leases and licensed holdings for non-payment of rent. The hearing of some of these was adjourned from time to time in order to give the holders every opportunity of paying the rent, with the result that a considerable number paid, thirty-one leases and licensed holdings being cancelled.

In conclusion, I have to thank managers of companies and others for information kindly supplied.

I have, &c.,

JACKSON KEDDELL, Warden.

The Under-Secretary, Mines Department, Wellington.

No. 9.

Mr. N. D. COCHRANE, Inspector of Mines, to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Office of Inspector of Mines, Westport, 31st March, 1892.

I have the honour to report as follows on the gold-mines in the Marlborough, Nelson, and Westland Districts:—

MAHAKIPAWA.

Southern Cross Quartz-mine.—(20/7/91): This is supposed to be the same line of reef as the Ravenscliff Company's, and is being opened up from a cross-cut, which struck the reef at 292ft. It has been driven on for 80ft., and runs from 18in. to 3ft. in thickness, with 150ft. of backs to the surface, where I am informed it has been traced for 10 chains. The country is very hard, requiring little timber. At present only four men are employed.

Ravenscliff Company's Quartz-mines.—(20/7/91): No. 2 adit strikes the reef at 195ft. The thickness of stone runs from 2ft. to 8ft., and little timber is needed, as the country stands well. Only four men are employed, driving to north-west to connect with No. 1 level, and putting up an uprise, which at present has 80ft. to go before connecting with that level, which is 155ft. higher than No. 2. This is the only work being done at present, pending completion of aerial tram and erection of battery. No. 1 level is in 360ft., on the reef all the way, the stone varying in thickness from a few inches up to 6ft.

Kapai Quartz-mine is about 290ft. higher than No. 1 level. The work done consists of one level driven along the reef some 160ft. from the outcrop. The quartz, which in all these drives has been very blue in colour, is whiter at first in this one, where it has shown very good gold.

Mahakipawa Quartz-mine.—Not working, as the men are preparing the battery-site. I am informed that a winze has been sunk some 40ft., and a cross-cut driven, which is not yet in far enough to strike the line of reef.

WAKAMARINA.

Golden Bar Quartz-mine.—(22/7/91): This mine is not working, and is protected for four months, from the 6th May. Mr. Coffey, the manager, and two men are starting work in the Golden Spur Quartz-mine, No. 2 level, where there is about 250ft. of cross-cut, and then about 60ft. driven to westward on the reef and a few feet to the east. Thickness of stone, 4ft. at west face, and 6ft. at east. No. 1 level is about 100ft. higher up, and nothing is being done in it at present.

Federation Quartz-mine.—(22/7/91): No work being done at present. An adit has been driven 280ft., in country all the way, which at first is soft, but properly timbered. The timber has evidently been in for some time, but is still moderately good.

COLLINGWOOD.

Johnston's United Quartz-mine.—(28/7/91): This reef lies very flat, with a variable underlie. The average thickness is about 3ft., and the roof or hanging wall stands well. I requested Mr. Johnston to renew some of the sets of timbering in the dip drive, and this he will attend to. Two shifts of ten men each are working, and the total number employed is thirty. Plan not at mine, but tracing dated this month.

REEFTON.

Progress Quartz-mine.—(23/2/91): This mine employs thirty-six men in all, principally engaged in stoping. The lode, which runs from 6ft. to 16ft. in width, has pinched in No. 2 level, which for the last 100ft. has only been following the track of the reef. Air good; timbering right; filling-in going on. I visited this mine again on the 15th June, to inquire into an accident which happened on the 12th June to a miner named Conrod Haub. He had been stoping above No. 2 level when a flake of the wall-rock fell off and struck him on the ankle, breaking the small bone. This accident ought to have been avoided if he had taken sufficient care. (17/10/91): The only work now being done is sinking the main shaft from No. 2 level. It is down 145ft., and it is intended to open out directly. 4in. pipes are being led in level for compressed air to work winding machinery at shaft. No report, but one will be kept. Plan not at mine. (9/3/92): The shaft from No. 2 level has now been completed, and a second outlet is afforded by a winze with ladders in good condition. A second reef has been met with 110ft. from the shaft, from which the main reef is distant 180ft. The block of stone is 220ft. in No. 2, and the south reef 70ft., but the lengths are not yet determined in No. 3. There should be plenty of stone for a year or eighteen months' work. Manager's name not posted, but will be seen to. Safety-catches will be provided when men start to ride up in the cage. A survey has recently been made, but plan not yet returned.

Globe Quartz-mine.—(23/2/91): The cross-cut from the shaft at a depth of 500ft. had only recently cut the reef, which is 5ft. wide and not yet properly opened up, but the stone has been payable all the way in the winze, which is down 112ft. from No. 3 level. Plan not at mine; no detaching-hook, safety-catch, nor indicator. Forty men in all are employed, chiefly in stoping and filling-in. On the 11th August a miner named John Prentice was accidentally killed in the ladder-way of the filling-in pass by a rush of stuff through an opening in the centre pieces, which had been made to allow the prizing-down of the mullock. The evidence at the inquest went to show that this opening had been properly secured. There was nothing to indicate whether or not it had been interfered with in levering down the stuff. (17/10/91): Principally stoping between Nos. 3 and 4 levels. Plan up to date, but indicator not yet provided. (10/3/92): The air in No. 1 level, which is rather dull, will be better shortly when stope is broken through. The reef, which is thin at the east end of the east block, will average 7ft. in this level. Stoping is going on between Nos. 3 and 4 levels, and from the latter a winze is being sunk to prove the reef before sinking the main shaft. The dynamite in No. 3 is kept in old drive, and in No. 2 it is on roadside, but a short drive is to be made for it. Thirty-eight men in all are employed.

Wealth of Nations Quartz-mine.—(24/2/91): The battery-level is at present only following the walls of the reef, the block of quartz having given out. In the lower level the stone will average 12ft. in thickness. Some stoping is being done and filling-in is going on. Air sufficient. Safety-catch, but no detaching-hook. No report kept. (14/10/91): Battery-level not working, face fallen. Ladders in pass to No. 1 right. A winze is being sunk from No. 1 level, and a start is being made to sink a vertical shaft. Gelignite and caps together on roadside. This is to be altered. Report now kept, and plan up to date. Fourteen men in all employed. (8/3/92): The present work is

sinking a winze, which is down 150ft. on the underlie, and a branch winding-shaft, down 100ft., from the lower or No. 1 level. The average thickness of stone will be about 5ft., but it runs only 5dwt. or 6dwt. Plan, section, and report up to date, and mine in good order. Seventeen men in all employed, including three at battery.

Keep It Dark Quartz-mine.—(24/2/91): Twenty men in all are employed, eight of whom are stoping in the battery-level. From the No. 3 level, at 500ft. deep, a blind shaft is sunk for 120ft.; up this the quartz is hauled by winding rope running along cross-cut. There is also a pass with ladders in good condition. Another blind shaft is sunk a further 110ft., which, at 70ft., follows the underlie; the quartz is hauled up this by windlass. The total depth is 730ft. Safety-catches and folding cover on cage. No crossbars at main shaft. No copy of Act. Plan and report behind. These will be seen to. (14/10/91): Report kept. Copy of Act at mine. Signals posted. Detaching-hook on hand, but not fitted up, as water-wheel has already enough to lift. Plan to be made next week. Six men are employed sinking a winze from No. 3 to No. 4 level, and six men are stoping. I drew Mr. Fitzmaurice's attention to the vertical ladders to No. 5, and sloping ones are to be provided to the point where level is to be broken off; also some slight repairs to timbering are to be seen to. (11/3/92): A man named Charles Anderson got his hand hurt in this mine on the 1st December last by the explosion of a detonator which he was examining to see that it was free from dirt. Report kept. Manager's name posted, and new Act at mine. Two or three rungs in ladders requiring renewal, but will be seen to. In the north end of No. 5 level a winze is started to be sunk, but the quartz has pinched out in the level-face adjoining. Nineteen men in all are employed.

Hercules Quartz-mine.—(24/2/91): The last crushing at this mine was not payable, so only two men and the manager are employed, and are at present following course of reef as the stone has pinched out. The air is sufficient and timbering right, but no safety-catch, detaching-hook, nor cover on cage. (14/10/91): In No. 7 level a block of quartz has been struck recently. Directed Mr. McEwin's attention to flaky condition of hanging-wall, also to dynamite on roadside. These will be attended to. It is intended to break through to the No. 2 South Keep It Dark Mine, and a second outlet will thus be provided. I called on the legal manager regarding this, as a part of the shaft is without ladders, and was informed it would be pushed on. (11/3/92): Not working, but revisited, as I had received a complaint that this company were not availing themselves of the opportunity of connecting with the No. 2 South Keep It Dark workings. I also called again on Mr. Lee, the legal manager, and informed him if there were no objections to communication in regard to carrying on the workings, the Act would be strictly enforced if so good an opportunity of providing escape and ventilation were neglected.

No. 2 South Keep-it-Dark Quartz-mine.—(24/2/91): This mine is worked from a shaft in which the Pandora and South Wealth of Nations Companies have a share. Safety-cage being made. Eighteen men in all employed. The stone of late has yielded 1oz. 2dwt. per ton. The reef averages about 3ft. 6in. wide, although at the level face only 18in., but it is expected to widen out the same as above where men are stoping. Plan up to August, but not at mine. (14/10/91): Chambers being prepared to sink to lower level. Mr. Treloar in charge, as Mr. Lawn had his leg hurt. Eight men stoping above No. 2 level in day-shift, and six in back-shift. Twenty-two men employed in all. Air and timbering good. (11/3/92): In addition to stoping above No. 2 level, some stoping is going on from a winze which runs up to the surface. The No. 2 level is extended to within 28ft. of the Hercules boundary, and 170ft. south of the boundary a winze is sunk 90ft., and a further 20ft. would take it to the level of the Hercules No. 7 level. Plan posted. Manager's name up. Copy of new Act at mine.

Pandora Quartz-mine.—(11/3/92): This is worked from the same shaft as the No. 2 South Keep It Dark, it having been jointly sunk by these companies. Two men are driving a level, which is only following the course of the reef to the south, as the quartz is irregular and buncy; and two men are stoping a short way back above the level, where the stone is about 20in. in thickness. No copy of Act, and no plan. Detonators on roadside, but these will be seen to.

Cumberland Quartz-mine.—(28/2/91): Manager absent at examination for certificate. This mine started about eight months ago. The reef averages about 4ft. in thickness. The stone throughout is red in colour, of a sugary nature, and carries good gold. The reef near the surface has been worked out, and a tunnel 100ft. long has struck it at a lower level. (16/10/91): The reef is lying much flatter than formerly, and a second tunnel has been driven 133ft. below No. 1 level, and has cut the line of reef, but a block of quartz has not yet been met with. No report, and dynamite loose. A paddock has been made for the quartz, and a line cleared for an aerial tram to where the battery is to be erected. (10/3/92): No. 2 level has been driven 140ft. on line of reef, but as yet no stone has been found. No. 1 level, at the west face, has no stone, and at the east end it is only 2ft. thick, but an intermediate level is working on a block of quartz 13ft. in thickness, which has much improved the prospects of this mine. A miner named Thomas Williams had his leg broken by a piece of the wall-rock falling out on the 25th of January; he had previously been told to secure it by the manager, and it was when doing so the accident occurred. Plan up to date, and copy of new Act of mine. Seventeen men in all employed, exclusive of battery and aerial tram, which is now getting into working order.

Golden Lead Quartz-mine.—(25/2/91): This is not a reef, but an altered sandstone, both the joints and laminations of which are filled with quartz leaders or veins from 4in. downwards in thickness. In the tunnel the timber is light, but heavy sets are to be put in. Only four men employed, but this number is to be increased. (16/10/91): Now employing sixteen men stoping and following the line of one leader, which is believed to contain the most of the gold. No report, and plan not up to date, but Mr. Sutherland will attend to these. A low level is now being driven 50ft. below the old tunnel. (10/3/92): Stoping on leader, which is somewhat irregular. Low level stopped till a winze, which is sinking, shows if they are on the right line. Air right. Copy of Act in office. Manager's name posted. Eighteen men employed, exclusive of battery.

Exchange Quartz-mine.—(16/10/91): This mine adjoins the Cumberland, and at present employs six men. An adit has been driven, which cuts the reef at 450ft. The country is soft at places, but it is well timbered. The thickness of stone is variable, from 6in. to 2ft., and the prospects are at this date undecided. (10/3/92): The workings are carried on from two levels, 60ft. apart, in which six men are employed. The stone in No. 1 is payable, but in No. 2 is rather poor. Average thickness about 3ft. 6in. No crushing has yet been done, and the prospects are still undecided. A winze connects the two levels, providing sufficient air. No copy of new Act.

Durham Quartz-mine.—Not visited, as nothing is doing at present (16/10/91) pending the letting of a contract.

Rise and Shine Quartz-mine.—(16/10/91): Only two men are working, driving an adit, which is 190ft. in, and still in the country. Timber was needed, so I requested Mr. McVicar, who was in charge, to see to it, and as the work was on contract, I also wrote the legal manager, Mr. Lee, who subsequently informed me that he had put on a man, and had it properly secured.

AI Quartz-mine.—(16/10/91): A winze has been sunk 50ft. on a leader from $\frac{1}{2}$ in. to 1in. in thickness, from which, however, the returns were high—10oz. to 20oz. to the ton. Two men are working in the level, which is in about 140ft. Detonators on roadside, but will be attended to.

Kapai Quartz-mine.—(16/10/91): This is a prospecting drive about 160ft. to the face. Country stony, standing well. Two men working.

Happy Valley Quartz-mine.—(16/10/91): Only a tunnel, with sides flaking, and face in country. Caps and dynamite on roadside. No one about, and evidently not working for a few days. (31/10/91): Two men driving on track of reef. Walls attended to, and no dynamite to be seen. 10/3/92: This mine is stopped at present, as they were uncertain if they were on the right line of reef.

Sir Francis Drake Quartz-mine.—(16/10/91): The only work doing is sinking a shaft, which is down 57ft. The reef is expected to be cut at 100ft., and it is intended to sink the shaft a further depth of 120ft. Nine men in all are employed, on contract.

Gallant Quartz-mine.—(16/10/91): A little stoping is being done above the level, the stone under foot having been taken out. As the workings are ahead of the air, a winze is to be sunk for ventilation. Dynamite and caps on roadside are to be shifted into old level. An outcrop has recently been found at a higher level, which may improve the prospects of this mine.

Scotia Quartz-mine.—(16/10/91): Only two men employed driving a cross-cut to prove a line of reef which has been found on the surface.

Hard to Find Quartz-mine.—(31/10/91): Two shifts of two men each are stoping above the level. The stone will run 1ft. 3in. in thickness, and is payable, but pinches out at the face. An old winze was put down 70ft., but the stone did not live down. Timber in level good, but a few rungs of ladder to be renewed.

Inkerman Quartz-mine.—(25/2/91): Stoping is going on from the No. 2 level, the stone running from 2ft. 6in. to 3ft., but both to north and south it has pinched, so the main shaft is being sunk to a depth of 340ft. At present it is down 260ft. The vertical ladders used in sinking will be replaced when it is down the full depth. On the 1st May, in sinking the shaft, Patrick Moloney, a contractor, and Robert Goode, having fired a shot which did its work, started drilling in or near the position of the old hole, when a slight explosion occurred, blowing some dirt into the former's eye, and burning Goode slightly on the arm. (16/10/91): Eighteen men in all working in three shifts. Ladders right, and air sufficient. Plan in town office for survey to be endorsed. I requested Mr. McCallum to get cover on cage, and provide cross-bar at No. 2 level. The latter will be done, and a new cage is to be made.

General Gordon Quartz-mine.—(31/10/91): A level is driven in on the reef about 50ft., thence there is an uprise to the surface. The stone is dark blue in colour, showing gold pretty freely, and runs from 1ft. 6in. to 2ft. 6in. in thickness. A long tunnel at a lower level did not strike the reef, as it was driven too far to the south. Some sets of timber in level have moved, and dynamite on roadside, but Mr. Naysmith will attend to them.

Empress Quartz-mine.—(31/10/91): Only one man working in an open cut on same line of reef as General Gordon. He informed me that two tunnels had been driven, over 500ft. long, at a lower level, but the reef there, which is not the same as where he is working, held out no inducements to go on.

Big River Quartz-mine.—(26/2/91): No. 1 level is an adit connecting with the shaft at a depth of 220ft., from this the shaft is sunk another 200ft., and thence two cross-cuts are being driven. This is all the work doing at present, employing ten men underground, and fourteen in all. 15/10/91: A total of twenty-nine men now employed in three shifts. Stoping is being carried on from No. 2 level. No filling in, the wall rock being shot down. Requested Mr. Black to have pump protected and bar at No. 1 level brace. Safety-catches, but no detaching hook, as 220ft. from pulley to level. Two men were working in the old tunnel. Air good. Two much open under foot for ordinary working, but this will be finished when one more stope is taken out. The level will still be kept open for air.

Lord Edward Quartz-mine.—(15/10/91): This mine is worked from the Big River Company's workings, and is also under charge of Mr. Black. The only work doing is driving. No timber needed as country hard. Air not too strong.

National Quartz-mine.—(15/10/91): There is 150ft. of a cross-cut, and a similar distance has been driven on the reef, which is very thin, only a few inches, but carrying good gold. Air very good, as a winze has been sunk before driving. Only two men are at present employed, opening up a chamber.

Triumph Quartz-mine.—I did not remain to inspect this mine, as the men were said to have gone into town.

Inglewood Extended Quartz-mine.—(2/3/91): Worked by a party of seven tributers in three shifts. At present they are driving from a winze 50ft. below the low level. Plan at Mr. Collings

office. Air right. (13/10/91): Still on tribute. Stopping below low level, but blocks of quartz very irregular. No filling in shaft, as enough is got in the working. Dynamite on roadside, but Mr. Rogers has promised to have it removed, although at first he was disinclined to do so.

Golden Treasure Quartz-mine.—(2/3/91): Copy of Act hung up, and report kept. Air sufficient, but some of the timber in the level requiring removal, to which I directed Mr. Martin's attention. This lode also contains antimony, but the yield of gold is rather poor. A winze is being sunk at present down 30ft. and 80ft. to go to No. 3 level. (19/6/91): Two shifts of two men driving a level. Five men in all, including manager. An accident of which I was notified occurred to William Rivers when putting in a set of timber, a piece of the wall rock having struck him on the leg, breaking the small bone. The small antimony lode has been driven on for 160ft., when it joins the main reef. Mr. Martin gave the average thickness of the antimony as 2ft., but where I saw it, at the south end, it consisted of irregular bunches on both foot- and hanging-walls. All work was stopped when I revisited the mine on the 13th October.

Mammon Quartz-mine.—(13/10/91): No one about; but some sinking has been done recently. Reef said to be barren.

Royal Quartz-mine.—(2/3/91): Two shifts of two men each driving on line of reef with only occasional blocks of quartz. Air dull; drawn by furnace through pipes. No copy of Act. (21/10/91): Only one man working to-day, putting up an uprise. Ladders right. The levels previously worked have been stopped. The other men are working outside at the tramway.

Venus Extended Quartz-mine.—(2/3/91): Only the manager and one man working, opening up on the level where an outcrop has been found. This block of quartz will be proved before anything is done at a lower level. The stone is about 2ft. thick, and an uprise, where work is going on, is up on it 22ft. Air good. Copy of Act at office. Plan at mine up to date. (21/10/91): A party of eight tributers are now stoping from the No. 3 level, and two men are working on higher level. Average thickness from 18in. to 2ft. Manager absent at battery.

Energy Quartz-mine.—(3/3/91): This is a private party, who are working out those parts of the blocks of quartz which have been left by the old company. At present they are working in three different places. Copy of Act at mine. No report. As there are only six men in all, the Energy seems somewhat latent. (8/3/92): Seven men now working in what is known as the "Snowball Reef," which sometimes is only parted by pug from the main reef, but is often separated from it by a few feet of the hanging-wall. All the men are at present in No. 1 level, and are starting to sink on the stone towards No. 2. A few laths are to be renewed. The mine is in better order than when the old workings were being searched for the quartz left.

Golden Fleece Quartz-mine.—(21/10/91): A new rope was being put on, so I could not get down the shaft, which is 600ft. deep. The second outlet by the winzes and level has not yet been repaired, but will be seen to. The only work is repairing No. 5 level, employing four men in all.

Sir Charles Russell Quartz-mine.—(18/6/91): A little stone has been taken out for a trial-crushing, and a winze is now being sunk, which is to be driven to from a low-level tunnel. The depth from the level is at present 85ft., and three shifts of two men each are employed—seven in all.

BOATMAN'S.

Welcome Quartz-mine.—(27/2/91): Work until lately only baling and retimbering shaft between Nos. 8 and 9 levels. Now opening up No. 9 level and retimbering chamber. At present in bad ground, but Mr. Rooney will take every care. Winze in level to be provided with crossbar. No safety appliances. (20/10/91): Pass from No. 9 to intermediate level in bad condition, but will only be used a week and then filled in; another outlet exists. In lower intermediate level two men are repairing old road up stopes; bad ground, and air dull, but will be through on No. 8 level in a few days, when the air will be improved. Cross-bar to be provided at blind shaft. No report, but one will in future be kept.

Homeward Bound Quartz-mine.—(20/10/91): Mr. Rooney has also charge of this mine, which is worked from a continuation of the Welcome intermediate level. A winze being sunk; is down 25ft., and is to be connected with an uprise from No. 9 level, which is also extended from the Welcome into the Homeward Bound ground. I requested Mr. Rooney to renew some of the lining in the winze, which he agreed to do at once. Sixteen men in all are employed in the two mines.

Fiery Cross Quartz-mine.—(27/2/91): Fifteen men were employed at this date. Safety appliance on cage. Signals posted. A communication for air exists with the Just in Time Mine. Ladders in main shaft being repaired. (20/10/91): Report kept, but not up to date. Plan posted up. I requested the manager to provide bars at some of the landings, and to renew some of the rungs of the ladders, which he agreed to do. The men in one of the shifts have to climb up the ladders in the blind shaft, and then up those in the main shaft; in all between 700ft. and 800ft. I spoke to the manager, Mr. Henry Lawn, about this, but he stated that the engine-driver not being allowed to work over eight hours, he was not prepared to employ a driver only to wind the men. Seven miners were employed—twelve men in all.

Specimen Hill United Quartz-mine.—(19/10/91): A contract has lately been let for the repair and retimbering of this mine. I went in the low-level tunnel about half a mile, as far as the chamber, where the candle would scarcely burn. This in the Homeward Bound ground. Some of the timber bad, and sides flaking. No one about, the contractors being in the bush for timber.

Lyell.

United Alpine Quartz-mine.—(5/3/91): In the No. 7 level the block of quartz is 152ft. long, 3ft. thick at the south, and 8ft. at the north end. Eight men are stoping above this level. Good current of air, and timbering all right. It is from the intermediate level between Nos. 6 and 7 that the principal stoping is going on, employing twenty-seven men. The total number of men is forty-eight. I revisited this mine on the 1st September on account of a fatal accident on the 30th August to a

miner named Timothy Davis, who had been employed at the filling-in shaft. It appeared from the evidence at the inquest that the filling had been allowed to get low in the funnel-shaped mouth round the shaft, and Davis and another man, on returning from a smoke, had gone under some earth which was undermined, when it came away and carried the former into the shaft. There were no logs across, as the system adopted had been to keep the funnel-mouth full, so that the top of the shaft was never seen. In view of this, and of the men having let the filling get low, also that Mr. Harris had only been some two weeks in charge, and had had no opportunity of seeing the actual top of the shaft, it was undesirable to prosecute for its not being fenced. I notified Mr. Harris that it must be fenced or covered, and an easy means of escape provided. I also requested some retimbering to be done, and a second outlet to be made from the stoping under No. 6 level, as some of the sets in the latter had moved. I was unable to inspect these stopes at this visit as the filling-in had blocked up the level, and I had declined to allow filling-in to go on after the accident until I had inspected. Mr. Harris showed himself careful in the management of the mine and anxious to comply with my instructions. (16/12/91): A new manager, Mr. J. Wilcox, was now in charge. The place in No. 6 level previously mentioned had collapsed, but a cut had been made in the hanging wall, and the timber was being reset. Other outlets had been provided. The north block of stone in the lower intermediate level has been worked out, and stoping is now going on in the south block, where the reef is not so thick. Report and stoping-plan up to date. Filling-in shaft covered with mullock, so could not see bars, which manager informs me have been laid across. New cut made in embankment, so that escape is easy. Revisited on the 22nd March, 1892, in response to an anonymous complaint about the air in No. 7 level. I found the air-pipe within 26ft. of the drill-hole at face, and a good current blowing, though the diameter of the pipes was small, only 3in., and doubtless the recent rain had improved the blast. As the reef is fully 15ft. thick, there is likely to be a good deal of blasting, with accompanying smoke; but the manager explains that, as the men retire to the cross-cut until it clears, the loss is the company's. I found arrangements had been completed to have larger pipes with stronger blast fitted up within one or two days.

United Italy Quartz-mine.—(6/3/91): Only four men working, and these on tribute, stoping from the No. 2 level. The walls are clearly defined, but the quartz is only a thin vein or leader from 1in. to 4in. thick. The yield per ton is high; so that there are good prospects of continued working. (16/12/91): As the stoping is finished, No. 2 level is not working now, but four men are to start shortly extending it. Another level (No. 3) is working lower down on a very thin leader, at places only $\frac{1}{2}$ in. thick. Two shifts of two men are working; and the prospects of this level are uncertain.

Tyrconnel Quartz-mine.—(6/3/91): This is a private party of two men, working a thin leader, which gives high returns per ton. It is a different one to that worked by the Italy, but the same as was formerly worked by the old Break of Day Company. Walls well defined and strong. Air good, as level No. 5 connects with the old Maruia workings. (16/12/91): Working outside at present. The leader in the south end only about 1in. thick, but the last crushing of 15 tons yielded 195oz. gold. The workings are about 4ft. between the walls, so that more stuff is got than can be used for filling-in. This was formerly raised by a windlass direct, but now an endless rope, with back-balance and an arrangement for tipping into truck at level, has been fitted up very ingeniously, considerably increasing the amount which a man can raise.

Cresus Quartz-mine.—(16/12/91): Work had ceased for the day when I reached this mine, and no one was about. An adit runs in a northerly direction over 600ft. to chamber where shaft is being sunk. Dynamite on roadside.

WESTPORT.

Beaconsfield Quartz-mine.—(16/3/91): Shaft 118ft. deep, with inclined ladders, in good order. From the chamber there is a cross-cut of 100ft. before striking the reef, which is thin at first, but gradually increases to an average of about 18in. thick. An uprise has lately connected with the old level on the south side of the river. The timber here is not very good, but the manager will attend to it if the workings are continued. Dynamite on roadside, but the provisions of the Act will in future be observed. Eleven men in all were employed. (7/10/91): Only pumping, no quartz being taken out for want of a battery.

Red Queen Quartz-mine.—(7/4/91): Four men in two shifts driving on reef in No. 2 level, where stone is thin and rather irregular. Country very hard. Dynamite on roadside, and no copy of the Act. The latter will be obtained, and the dynamite will be attended to. Two men above No. 1 level are driving on course of reef. Eight men in all are employed. I have since been informed that work has been suspended.

GENERAL.

The provisions of the Act regarding dynamite and detonators have in almost every case been neglected. I have thought it wiser not to prosecute until the managers have been cautioned, but I consider it necessary that the rules as to this should, in future, be enforced. I have found the managers in general anxious to comply with the Act as far as lay in their power.

ALLUVIAL MINES.

MAHAKIPAWA.

Alice Fell Claim.—(18/7/91): This is worked by a private party of six men, and is only prospecting. No payable gold has yet been found, and the water has been heavy.

Hibernian Extended Claim.—(18/7/91): This claim has also to pump constantly, 8in. pipes, and have just bottomed a second shaft, and connected with No 1. Ten men in all are employed, in three shifts. They have been getting good returns, and the future prospects are good. The gold lies on the bed-rock.

King Solomon Claim.—(18/7/91): A second shaft is sinking to cope with the heavy water at flood times; at present they are pumping with 9in. pipes. The main drive extends 140ft. along the gutter, showing clearly the water-worn channel cut in the bed-rock. This company have had good returns, and are at present employing eleven men.

GENERAL.

The gold in this field is coarse, and some of the claims are doing remarkably well. The drawbacks are heavy water to contend with, and the narrowness of the lead. The sinking runs from 40ft. to 120ft. I also inspected the Lucky Hit, Nelson and party's, Te Ore Ore, Pride of Creek, Wairarapa, Just-in-Time, Long Time, and Never Surrender claims, which are worked by private parties, and do not call for special mention.

Seddon's Terrace, Back Creek.

I visited this to inquire into a fatal accident in

O'Leary and Party's Claim.—(15/8/91): On the 4th August William Mohr and Donald McDonald were working in the face of their drive, and had undermined a large stone which was not propped in any way. Mohr had gone underneath it when it came away, killing him instantly. This class of accident must be expected as long as men will not exercise sufficient caution.

The following claims were also inspected when I was in the district:—

Beattie and Party's Claim.—(15/8/91): Worked by drive 500ft. long, 3ft. 6in. wide, and standing well. At present blocking out, with building well up. Washdirt about 6ft. 6in., lying on false bottom.

Silcock and Party.—(17/8/91): Tunnel 600ft. long. Very little blocking-out done, as not payable ground, but after driving a further 100ft. will connect with shaft, which is 76ft. deep, and where the drift is payable.

Ferguson and Party.—(17/8/91): This is a party of four men, working from tunnel and shaft similar to preceding claim.

Herd and Party.—(17/8/91): Drive is in about 300ft., and they are just starting blocking-out. Timber pretty high, as drift is fully 6ft. 6in., but plenty is put in. The claim is said to be payable, but not very good.

Halahan and Party.—(17/8/91): Three men, have tunnel 400ft. long connected with shaft 100ft. deep. Some blocking-out has been done, but has not proved payable.

Dean and Party.—(17/8/91): Shaft struck the washdirt at 67ft., but was continued to 80ft., and opened out there. Blocking-out principally on west side of drive. Ground payable. Air dull.

Twinnam and Party.—(17/8/91): Four men working. Shaft 50ft. deep, to which a tunnel is being driven, at present about 230ft. in. Sand roof, bad, especially at S.S.W. face, but well timbered.

Weir and Party.—(17/8/91): Four men driving for shaft. At present on Brighton bottom, showing a few colours, but as yet unpayable. Seventeen feet under the other drift.

Webster and Party.—(17/8/91): Tunnel in about 500ft., and have about 40ft. to go to strike shaft. Roof good, and ground payable.

Sargison and Party.—(17/8/91): Tunnel 460ft., and 80ft of sinking. Four men starting to take out first paddocks, so cannot say whether payable or not.

HOKITIKA.

Craig's Freehold.—(18/8/91): Dip drive worked by water-balance, and thence a level, in all 1,017ft. A thin layer of washdirt was struck at 440ft., but has not yet been worked. The second lead was struck at 900ft., and has been worked to the south some 270ft. To the north the workings extended about 500ft., but the most of this has been blocked out. Air good, an air-shaft having been sunk 110ft. deep. Average thickness of drift about 3ft., and it has paid throughout. Ten men in all working.

Stenhouse and Party.—(18/8/91): Tunnel runs in about 500ft., and is close-timbered where ground is bad, but at face standing well without timber. As there is a second tunnel the air is good. There are two layers of payable drift; the lower is the one that has been worked; it averages about 1ft. thick, and lies on the Brighton bottom.

J. Holly's Mine.—(18/8/91): This tunnel was about 360ft., but they are now blocking back, and are about 150ft. from mine-mouth. Nine feet of the drift is auriferous, but only 4ft. is taken out. Well timbered.

WESTPORT.

Hollows and Party.—(7/10/91): This is a drive from the side of the Waimangaroa River, and is not in very good condition, as it is going through old ground. The men are experienced miners, and will take sufficient care.

Gould and Party's, Milligan and Party's, Fair Maid, and Basset and Mace's claims, at Addison's, have also been visited. In the latter a hydraulic elevator is used. The main pipes are 18in., the uptake 15in., and the washdirt is elevated 18ft. Mr. Basset informs me that the head is 75ft.

Nielson and Party's Claim.—(15/9/91): This is worked from a tunnel about 800ft. long at Caledonian Terrace, and is rather poor ground. It was inspected when I was out at the adjoining claim of Corepb and Party, Mr. Nielson having complained that the latter was not being worked, while he was willing and anxious to work the ground. As no work had been done, I applied in the Warden's Court, Westport, on the 28th October, for the cancellation of the claim. Application granted.

ACCIDENTS.

The following accidents occurred in sluicing claims during 1891-92. None of them were notified to me, and would therefore not appear if I had not heard of them unofficially:—

1. Fillipo Pantina was struck by a fall in his claim, near Waimea, on the 11th February, 1891, and received injuries, from which he died on the 14th February.
2. David Dixon, when lowering blocks for his claim, at Kumara, on the 13th February, 1891, had his leg broken by one of the runaway blocks, through the rope breaking.
3. Joseph Connolly, working in a claim at Kumara, was struck on the ankle, on the 14th February, 1891, by a falling piece of pug, which so injured his leg that it had to be amputated.
4. Joseph Kennedy was killed by a large surface-slip in his claim, Upper Blackball, on the 23rd October.
5. Patrick Donovan was killed in his claim, at Croninville, on the 18th December. He had crawled under a recent fall of the blue reef to recover a pick when it came away further, and crushed him.

I have, &c.,

N. D. COCHRANE,

Inspector of Mines.

The Under-Secretary, Mines Department, Wellington.

No. 10.

Mr. Warden KEDDELL to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Greymouth, 19th May, 1892.

I have the honour to forward the usual statistical information required by the department for the past year ending the 31st March, 1892, and to furnish the following general report of mining matters for the same period in the district under my supervision. I forward the returns and report relating to the Inangahua district separately.

There has been no noteworthy occurrence in the Greymouth district during the year, and I much regret to say that I am not able to refer with satisfaction to any of the new ventures mentioned in my last report. The stagnation which is so universally complained of in all branches of commerce and industry throughout the district seems to have extended to mining. Whatever has been undertaken during the year has been originated and supported by local funds only, and the few capitalists are very shy of mining ventures of late. I have reason to believe, however, that, though I have no brilliant instances of success to chronicle, the yield of gold has remained about the same.

Blackball.—The Minerva Company has to ascertain extent justified the anticipations of its promoters. Their ten-stamper battery has been erected at great cost and trouble, being removed from Ross to the claim, which is situated about seven miles up the Blackball Creek, over a very rough track from Blackball Ferry, and crushing has been continued with very fair results, interrupted for some little time in consequence of a heavy fall of earth, the machine-house having a very narrow escape. The reef they are at present crushing from is of very great thickness, and the gold well distributed, so that all of it is believed to be payable for crushing, but the returns are small. The company relies chiefly on the reef which they hope to find across the creek, and to reach which they are putting in a tunnel of 156ft. This will be through in about two or three months, and if the reef keeps its present size, and the gold is equal to the prospects obtained in the winze they have sunk, the Minerva Company will prove the best investment in mines in the colony. The manager and shareholders are confident of success, and so far everything looks well. On their good or bad fortune depends the fate of another claim recently taken up on adjacent ground, and the issue is of importance to the mining community, since, if successful, public attention will be attracted to a portion of the district which has always been a land of promise to the miners, and has only been neglected from the difficulties attending occupation of it, the chief obstacle being the want of roads. Transport of every kind of machinery is well nigh impossible, and can only be effected by pack-horses, either from Brunnerton, or from the Midland Railway at Ngahere across the Grey River by the ferry. This is felt to be the greatest drawback to the development of some new ground taken up during the past year up the right- and left-hand branches of the Blackball. The land is covered with huge boulders, and these can only be disposed of by powerful machinery such as hydraulic cranes, &c.; under present circumstances it is impossible to place such in position.

Moonlight.—Heavy nuggets are still occasionally found in Garden Gully, and the special claims and other holdings which were taken up last year have been doing a great deal of dead-work, tunnel tail-races, &c., by means of which the holders hope to discover the lost lead, which is supposed to contain rich deposits of this class of gold.

In the Waipuna Riding, at Orwell Creek, Noble's, Duffers', Half-ounce, and Mosquito Creek, about 150 men find steady employment on the old workings, as they have with little change for years past.

At *Duffers'*, a company has been floated to work land at Duffers' Creek on a large scale. They propose to bring on a larger quantity of water than would be within the means of any ordinary party of miners. The company was incorporated last September, and it has acquired an amalgamated claim of 30 acres. The object of the company is the working of the deep ground in Duffers', which is believed to be highly auriferous, and which has been left unworked because sufficient fall could not be obtained. The company has purchased some five miles of water-races, with the rights, and these are concentrated in a head-race about one mile in length, running partly through a substantial fluming, and a considerable length of tunnel; this will supply the necessary water for their elevators and washing the dirt. A drainage-tunnel of 34 chains will drain the ground; this, with other works in progress, will be completed in about three months' time, and the claim then should be in full working-order. As the ground has been thoroughly prospected, and found payable so far as the

usual means adopted can satisfy one, there is every reason to believe this undertaking will show satisfactory results.

At *Nelson Creek*, mining matters have been very quiet. At the lower end of the Try Again Terrace there are only three or four sluicing-claims at work, and the two principal ones have been the subject of litigation ever since November, and a suit is now pending between their owners, to be heard at the next sittings of the District Court.

The New Bendigo Company, of which much was expected, and many thousand pounds spent on, has exhausted its capital, and is, I learn, about to be reconstructed, but the mode of working has not yet been definitely settled. The Midland, another company formed to work part of Try Again by means of elevators, was formed some months since, and may deserve mention in the next report.

Dredging-claims.—It is a melancholy fact that dredging-claims have one and all proved a failure in Westland. It appears that the making a dredging-machine that can simultaneously cope with fine sand and stones, or small boulders, is an impossibility, or at any rate has hitherto been found an insuperable difficulty. There is good reason to believe in the existence of rich auriferous deposits in the beaches above and between high- and low-water mark, and no doubt if the fine sand in which the gold is generally to be found existed in large quantities it would be an easy matter to construct a machine that would lift and put through many tons in a day, and give large profits to the investor; but I do not think that in any part of this coast there is to be found any depth or extent of sand, nor that in any part it is possible to take out a cubic yard of sand without disturbing boulders, varying in size, but all large enough to impede the working, if not injure any machine constructed to dredge sand only. The Greymouth Dredging Company's machine has been completed some time, and, allowing a very wide margin for the delays attending the starting of newly-invented machinery, it ought to have shown some returns ere this. Captain Parker, its late energetic manager, has given way to a Mr. Simpson, who arrived lately from England, and who has taken charge. If unceasing industry and indomitable pluck could have insured success, Captain Parker's efforts should have been successful. There are many in Greymouth who are sanguine yet of its future, but with the majority it is a case of "hope deferred."

At *Kumara*, very little change has taken place. One thing it is desirable to mention: that is, the formation of an association amongst the miners for the purpose of prospecting for a deeper lead below the large extent of worked ground which exists. For this purpose this body sank a shaft, but had to abandon the work for a time in consequence of meeting with water in large quantities. They are now engaged in driving a tunnel, which will have the effect of draining the shaft and allowing them to proceed. Should their efforts be rewarded by the discovery of a new lead, it will give a wonderful impetus to mining here. It will be some little time, however, before the result is definitely known. Such prospecting should be thorough and exhaustive, and the existence of a lower level, or otherwise, ascertained. Mining matters have gone on very steadily, and very few disputes of importance have been brought to the Court. There is no perceptible decrease in the population, and, so far as I can learn, mining operations have been fairly successful.

At *Greenstone* there is no alteration. Miners there continue quietly as they have for years past.

Waimea Valley.—To judge from the amount of business done in the Warden's Court and Office, I think mining has continued unchanged during the year. Kelly's Terrace is lying unworked at present, the miners declining to give the percentage asked from the tributers. Recently, rich gold has been found on the boundaries of this claim and the Wheel of Fortune Special Claim. This may lead to the resumption of work in Kelly's Terrace. Mr Batchelor, the present owner of the Wheel of Fortune, is erecting machinery (elevators) to raise and wash the auriferous dirt. But he has lost some time in the Warden's Court prosecuting ill-prepared applications for dams, &c., which were opposed by his neighbours. I learn he has spent considerable sums of money on this claim, and, up to the present, with poor results. A great many of the special claims and licensed holdings that were granted a few years ago are now relinquished or cancelled.

Paroa and South Beach.—All the beach-claims that were taken up so hopefully three years ago are now virtually abandoned. The older claims between Greymouth and Marsden are still occupied, and give steady employment.

Dunganville and Arnold.—Judging from the applications from these places, little change has taken place.

The Under-Secretary, Mines Department, Wellington.

I have, &c.,

JACKSON KEDDELL, Warden

No. 11.

Mr. Warden MACFARLANE to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Hokitika, 23rd May, 1892.

I have the honour to forward herewith the statistical returns for the year ending 31st March, 1892, together with annual report on mining matters, in the district under my charge.

HOKITIKA.

The ordinary gold-workings on the Arahura, Bluespur, and Hauhau present no new features of interest. About the same number of men are employed, and, as far as I can learn, their returns have been up to the average. In hydraulic mining the returns from the Humphrey's Gully Company have been steadily improving. The returns of gold for the twelve months ending 31st March—437oz. 18dwt. 9gr., value £1,708—show that the wash is improving as the work is carried into the terrace; but the uncertain and intermittent supply of water the company have at command at present still bars the way to the payment of dividends: however, I am informed that arrangements are all but concluded whereby the company will be enabled to complete their original

intention of bringing water from the Arahura River. Given such a supply as can be obtained from the above source, and the success of this company would be assured. The Kanieri Lake Hydraulic Goldmining Company have recently leased their claim and water to a party of miners for a term of two years. Although possessed of a magnificent supply of water, this company has had considerable difficulties to contend with in working their claim. They have been sued for damages caused by their tailings accumulating in the bed of the Kanieri River, and they are further threatened with other suits by parties, who allege that their properties are being injuriously affected by the operations of the company. If mining, and especially hydraulic mining, is to be handicapped by ruinous suits, instituted by holders of property who in most cases place a fancy value on their holdings, it would be well that the Government should reconsider the advisability of proclaiming the whole of the rivers in south Westland. The removal of the present hindrances to large hydraulic mining operations on the Coast points to a large extension of our fields of operation, and a proportionately large increase in the output of gold. On the other hand, their non-removal means the withdrawal of both capital and labour, and a rapid decline of the mining industry. This is a matter requiring prompt and serious consideration by the Government. The return of gold from the Kanieri Company's claim is valued at £2,000. This includes the period from the 1st January, 1891, to 31st March, 1892.

The workings on Back Creek are being actively carried on, most of the claims being worked by long tunnels. In many of the claims the returns are said to be exceptionally good, and a great many are finding steady employment at fair wages. The auriferous drifts on this field are very rough and irregular, and it is a most difficult matter at times to distinguish between what is wash-dirt and what is mullock. Immense quantities of boulders, large and small, are met with in the drifts, often requiring the use of dynamite for their removal. Owing to the irregularity of the runs of gold and the depth and magnitude of the auriferous drifts on this field, nothing short of hydraulicking the whole terrace away will enable the miner to get more than half the gold therein contained. Here we have an immense field for hydraulic operations, but we lack the means of utilising it to the best advantage, owing to our inability to bring the water on to the ground in sufficient quantity. If this were done we would have one of the largest and most remunerative goldfields in the colony within three miles of Hokitika. What is known as Craig's Freehold has been and is giving grand returns. This claim is worked on tribute, the owner getting $33\frac{1}{3}$ per cent. of the gross proceeds. I understand he has already netted close on £2,000 for his share in the short time they have been at work. This claim is one of many on the outer edge of the continuation of the Back Creek, Rimu, and Brighton Terraces towards the sea. In some of the claims the wash is cemented, and a small battery has been erected to crush this cement; and from a trial-crushing of 7 tons gold at the rate of $\frac{1}{2}$ oz. to the ton was obtained. Further prospecting along this face will—when the sandstone bottom is reached, where the river and the sea have at one time been operating, both north and south of the mouth of the Hokitika River—very likely disclose auriferous drifts of equal value to those now being worked in Craig's Freehold. The prospecting association at Rimu is doing good work as far as their means will allow. They have assisted in sinking a number of shafts on Back Creek and elsewhere, and they are now about to put down a series of bores on the beach block between Lake Mahinapua and the present sea-beach. There is every likelihood that valuable leads exist in this block. What is known as the Shanghai Lead—an old beach-lead formed by the sea breaking against the old morainic wall that skirts the western shore of the lake—is now from 60 to 80 chains from the present shore-line, where a valuable lead was worked many years ago. Between the points indicated are a series of sand-ridges, evidently the markings of built-up beaches, but now covered with a dense forest. This block the association propose to prospect by an inexpensive method of boring until water-level is reached. The natural inferences to be drawn from the observed facts in this case are that in this mile of built-up beaches we may reasonably expect to find numerous gold-bearing leads equal in value to those already worked.

As showing the variety and value of our mineral deposits, and as pointing to their existence in the back ranges, I have to report the presence of Oriental rubies in the auriferous drifts at Back Creek and Woodstock. The specimens found at Back Creek were submitted to Professor Ulrich who pronounced them true Oriental rubies. The gems are small, full of flaws, and cemented together in masses, set in a light-green, soft matrix, but they appear to be too much fractured and broken to be of much value. Similar specimens were found about seventeen years ago in the gold-workings at Woodstock. Specimens of the rare metals osmium and iridium have also been found by the miners of Back Creek in their sluice-boxes. They were taken to Dunedin by Mr. Goodlet, and were examined and verified by Professor Black.

Dredging.—This branch of the mining industry, introduced to the Coast some three or four years ago, and that promised to revolutionise the workings on our rivers and sea-beaches, has, with the exception of the Kanieri dredge, now at work on the Hokitika River, completely failed to redeem the promises then made. The Kanieri dredge—an ordinary bucket dredge—commenced dredging in November, 1891, and has been running with occasional stoppages ever since. The amount of gold won for the five months ending the 16th April, 1892, has been 282oz. 1dwt. 17gr., value £1,106 6s. 2d. Owing to the heavy nature of the wash in the river-bed, difficulties have been met with in the shape of immense boulders, that necessitated the building of a punt, with gear to lift and remove such boulders as the dredge could not deal with, and also the employment of an experienced diver to work with same. For lifting the ordinary river-drift and shingle this dredge is admirably adapted, as is shown by the steady stream of buckets discharging from 60 to 70 tons of stuff per hour into the boxes; but when dealing with the indurated wash underneath, in which are imbedded boulders weighing up to 3 and 4 tons, the amount brought up is very small in comparison. This tight drift is very rich in gold, and is lying on a soft sandstone bottom dipping at a sharp angle into the bed or centre of the river. What the mean depth or extent of this wash is no one can tell, the dredge having made little more than an opening into it. One thing is clear—no dredge can deal with the work in this river without first removing the large boulders as they show in the face when the dredge is at work; but I believe the diver and punt will answer the purpose.

Possibly, as they work into the centre of the river and towards the south side the boulders may be fewer, and the wash less difficult to deal with; however, under the careful and intelligent management of Mr. Durward, the engineer in charge of the work, the many unforeseen difficulties met with are being successfully overcome, and I hope soon to be able to report this as a dividend-paying claim. From the richness of the washdirt much larger returns were reasonably enough expected, and such expectations would have been largely realised but for the boulder difficulty.

Ross Sub-district.

There is very little change in mining matters in this district since last year: no new discoveries have been made public, and very few wages-men are now employed. The following extracts from the annual report of the Ross Unlimited Gold-mining Company will show what they have been doing during the past year: Statement of accounts for the financial year ending the 26th January, 1892, show that "the gold obtained during the year under review has been 1,335oz. 11dw. 12gr., as against 1,632oz. 5dw. 8gr. for the preceding year: 843oz. 12dw. 10gr. come from the Ross, 358oz. 18dw. 5gr. from the Donoghue's elevators, and the remainder from sundry small tributes paying from 5 per cent. to 12½ per cent. Since the date of closing the books 131oz. 2dw. 16gr. of gold have been taken from the elevators, making the total yield for the year 1,466oz. 14dw. 4gr. This, of course, could not be included in the year's returns, not having at the time been realised. The falling-off in the returns is owing to the reluctance of the miners to take up ground within the area of the company's holding (which is practically as open to them as Crown lands are, any miner having the right to mark off any portion of the company's area, and to work it, subject to the payment of tribute, the amount of which may be arranged mutually), as they find that, above the level of the drainage-adit constructed by the company, they are unable to make wages." More capital is required to put this company on a profitable working basis: this, I am told, there is a prospect of doing at an early date.

The Mont d'Or Sluicing Company shows, as the results of the year's operation, a gross return of 1,331oz. 16dw. 15gr. of gold. This is a dividend-paying claim, and shows what can be done with a fair supply of water, even in poor ground. In Ross, as elsewhere, the tailings question is year by year becoming a greater hindrance and difficulty to miners. I understand the Mikonui Race is being handed over to the Borough of Ross, with a view to getting this important work completed.

Of the many special claims applied for, I know of only one—the Kohinoor Gold-mining Company, at Redman's—that is showing any signs of activity. Tenders are now being called for repairing and increasing the size of the old race now owned by this company, with a view to using the water in working their claim. A prospecting-tunnel is being driven from a low level in Donnelly's Creek, to find out whether certain quartz leaders, showing good prospects, make into a solid reef. This party is slightly subsidised by Government. A prospecting-tunnel on similar lines is about being undertaken in the neighbourhood of the Swiss Republic and William Tell Claims, Cedar Creek. Prospecting is still being carried on by the Rangitoto Company. Some time ago a quantity of stone was taken out by two Christchurch gentlemen, and forwarded to England, with the view of substantiating the numerous tests already made on the claim, and in various parts of the colonies. Returns have not yet been received; but, as recent tests made here are even more favourable than the former ones, it is anticipated that a favourable reply will result. If so, active and extensive operations in this mine will not be much longer delayed. The successful utilisation of the Mount Rangitoto stone means a great deal to Westland, and, in fact, to the whole colony, as the company have a mountain to operate upon.

Okarito Sub-district.

In ordinary mining there is nothing new to report from this district. Good gold is being found on the Salt-water Beach, and the population is on the increase. Government is giving a much-needed assistance to the miners on this beach by cutting a track from the Main South Road on Mount Hercules direct to the beach. It is desirable that the Government should further supplement the present small vote, so as to enable packhorses to get down with their loads to the beach. Gillespie's and other beaches carry about the same number of miners. On the Waiho a considerable addition has been made to the population, a strong party being employed bringing in water from the Glacier Branch, to sluice what is known as Hospital Point. Good prospects are said to have been obtained. Dredging in this district has completely collapsed, the latest failure being the Von Schmidt dredge on Gillespie's Beach. After months of vain effort to raise the sand, and an expenditure of over £5,000, work was stopped, and the company is now in liquidation, and the plant and claim has been sold to the highest bidder. All this expenditure, and not a ton of sand put over the tables! The introduction of sand-pump dredges to the Coast has been most disastrous in its results not only to the unfortunate shareholders, but to the mining interests generally. Their inability to do what they promised will inevitably retard the working of our beaches for years. After the failure of the Ball dredge, now lying sunk in the Five-mile Lagoon, the Welman's, in a similar position on the Salt-water, and a large machine of the same type on the Three-mile, with the pump broken and useless, the failure of the Gillespie's Beach directors to realise the want of adaptability of such machine to the requirements of our beaches and rivers is, to say the least of it, to be regretted; for, with the knowledge of the failure of this type of dredge before them, the directors cannot be said to have shown either business capacity or mining knowledge when they put their own and the shareholders' money into the present undertaking. Had the directors been satisfied with an ordinary bucket-dredge, the shareholders would have had a good prospect of getting their money returned to them, with a handsome profit; as it is, this last venture has been an utter failure, the money is all spent, and the beach and its golden treasures is as much a matter of speculation to them to-day as it was before they spent a penny on the plant that has proved such a signal failure. In the way of exploration, something is being done that will add to the topogra-

phical knowledge of the great central chain. About a couple of months ago Mr. Pringle and another crossed over the Godley Glacier, and came down the Wataroa River, on the western slope, to the Main South Road, about nine miles from the sea, in three days, returning in the same time. Very few difficulties were experienced on the journey. To the south of Mount Cook Mr. C. E. Douglas has been engaged in exploring the Copland and other branches of the Karangarua River, for a tourist track through to the Hermitage. All that is at present known of his doings is that he has seen, between La Perouse and Cook, the most magnificent scenery in New Zealand. It is to be hoped he will find a pass through which a tourist-track can be constructed to the Hermitage.

Jackson's Bay Sub-district.

There is nothing of note to report in this district. The usual number of men find a living on the beaches and the Bullock Creek and Blue River Ranges. The country south of the Cascade River, which will shortly be opened up and made more easily accessible to miners by the road now being constructed to Barn Bay, connecting with the Main South Road, presents features of great promise. On the western watershed of the Hope Range, covering a large area, which is again overlain by a sheet of morainic drift, we have the auriferous drifts, resting near the sea on a blue-pug bottom, containing mussel and other shells, and further back in the range on a soft slate, dipping at a high angle to the west, and again on the Maitai slates and sandstones, out of which the pug on which the drifts rest lower down has been ground out. Through this formation several large streams have cut their way to the sea—notably Callery's and the Fork and Spoon Creeks, which both discharge on what is known as Brown's Refuge Beach. In Callery and the Fork and Spoon there is a clearly-defined section of the overlying formation shown, and from the sea to their source they contain gold and awaruite. In the wash underlying the morainic covering gold can be got in every dish from top to bottom. Water is plentiful, and easily obtainable; and this promising sluicing-ground is practically untouched. All that has been done in the way of mining has been by beach-combers, who have occasionally made rises on this beach when travelling up and down the coast. The Gorge River, and the Hacket to the south of this, and the ranges towards Big Bay, are all gold-bearing; and, taking into consideration the rising importance of nickel in its connection with the manufacture of steel, and its various other economic uses, the awaruite deposits found in this neighbourhood may very soon command more than a passing notice. The completion of the road opening up this block will do away with the necessity for boating, by which so many lives have been lost. The only other matter calling for attention is the unfinished state of the Main South Road, establishing through communication with the head of Lake Wakatipu, and the Haast Pass Track to Otago. Horses and cattle can be taken over this road, but not over the other. His Excellency the Governor and the Hon. the Minister of Mines and Public Works travelled down the coast and over the Haast Pass in January. Since that date many of the tracks have become almost impassable, and the approaches to the river in many places are extremely dangerous. The discharge of all the ferrymen and roadmen has rendered travelling in the south all but impossible. It is to be hoped the County Council will see their way to reinstate them, otherwise loss of life, besides inconvenience, is sure to result from their suspension. There are five miners at Big Bay said to be earning small wages.

I have, &c.,

The Under-Secretary, Mines Department, Wellington.

D. MACFARLANE, Warden.

No. 12.

Mr. Warden STRATFORD to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Oamaru, 26th April, 1892.

I have the honour to forward herewith the statistical returns, also summary of business done and revenue, and to report upon the district under my charge, for the year ending the 31st of March, 1892.

During the past year there has not been any marked advance in this field as a mining centre, but the proclamation of the Maerewhenua River as a tailings- and *débris*-channel has removed a great obstacle to enterprise. It has relieved the minds of the claimholders as to the permanency of their holdings, and will lead to the introduction of a much larger water-supply, so beneficial to the progress of the shallow alluvial workings, and without which neither increase nor permanency of population can be maintained.

The families, who are for the most part old residents are comfortably settled, and divide their time between mining, grazing, and farming. The unmarried men are somewhat nomadic in their habits—mining for a portion of the year, and during certain seasons following labouring, harvesting, and other pursuits. The Maerewhenua may be properly termed a poor man's diggings, the average return per man not exceeding £1 10s. a week.

The claims are generally extended-sluicing, and worked by parties of two, three, or four men at most. On the east side of the river are only a very few claims in full swing, to be accounted for by the scarcity of water, and owing to a heavy disastrous flood in February last, which caused incalculable damage to the head-races, which are flumed and cut through very steep sidelings. Notwithstanding these checks, now that the Maerewhenua is a sludge-channel the miners are cheerfully hopeful for the future of the field.

The roads formed in this district by the Government last summer are of little benefit to the miners, but they have opened up some valuable land for settlement. The road, when completed, to Kyeburn will facilitate communication between Maniatoto, Naseby, and the sea-board. The great obstacle to goldmining having been removed by the Maerewhenua River being declared a channel for the deposit of tailings, the extent of sluicing-country and its gold-producing capabilities will be in a great measure dependent on the quantity of water that can be obtained from neighbouring streams, and the cost of bringing it on to the terraces. The probability of a water-supply in the

near future will be the forerunner of a large increase of population in such a healthy pleasant locality. It may not be out of place at this juncture to describe the workings. They consist of three distinct formations, the most important and extensive of which is the greensand, which extends many miles towards Oamaru, and nearly as far as Georgetown, and is also found north of the Waitaki River. On account of the greensand workings being on the side of steep spurs, and there being no gold in the top stuff, only comparatively a narrow strip of ground can be profitably worked, the gold being confined almost entirely to the bottom, rising 5ft. The second formation is the most remunerative. Some miners have made as much as 3oz. a week for months together while working this formation. Being of necessity of a much lower elevation more pressure can be brought to bear on the dirt, and as there is a little gold all through it, the results are more favourable. The working is more interesting also, on account of the fossil remains found therein. *Inter alia*, a great many moa bones, some of immense size, while thousand of pieces of moa egg-shells lie freely distributed through the dirt. The formation is composed entirely of the scouring from and denudation of this marine deposit. In the greensand millions of fishes' teeth are seen, from the size of cats' teeth to 3in. in length, the most remarkable feature being their perfect state of preservation, the enamel being quite sound and polished. The third formation is found on the west side of the Maerewhenua, and is composed of river-wash lying immediately on the top of the greensand deposit, in some places worked in conjunction with, and others without, the greensand when it is too low to work.

The marine formations on both sides of the river are identical in their nature, with the exception of one particular, that while on the Livingstone side there is no gold in the top stuff, on the west side it is found from the surface downwards. For this reason, and the ground being more extensive, the west side of the Maerewhenua is the most valuable part of the field. If a large water-supply were brought on to it at a good elevation, a much larger population would be maintained by remunerative employment. The non-auriferous land suitable for occupation licenses is scarce, and I have been obliged to limit the grants to about 25 acres for each licensee. Notwithstanding the uncertain tenure, this system of settlement was popular until the residential qualification was introduced, which, I believe, will reduce the number of applicants, as few men will incur the expenditure of erecting homesteads on land that can be taken from them without compensation at three months' notice.

SUMMARY OF BUSINESS AND REVENUE.

Maerewhenua.—Complaints heard, 8; applications heard, 100; objection cases, 20; occupation licenses applied for, 8; occupation licenses granted, 1; occupation licenses refused, 2; occupation licenses otherwise dealt with, 5; miners' rights issued, 83; race licenses issued at 5s., 4; race licenses issued at 2s. 6d., 44; general registrations, 120; total revenue, £90.

I have, &c.,

H. A. STRATFORD, Warden.

The Under-Secretary, Mines Department, Wellington.

No. 13.

Mr. Warden WOOD to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Lawrence, 3rd May, 1892.

I have the honour to forward the annual report for the mining districts of Tuapeka, Tapanui, and Waikaia, which have been under my charge temporarily owing to the illness of Mr. Warden Revell. The statistical returns have already been forwarded.

Although the number of mining applications received has not been so great as in the previous year, yet there is no reason to suppose that the yield of gold in the aggregate has fallen off.

The Bluespur and Gabriel's Gully Consolidated Company are steadily at work at their special claim at Bluespur. This company's holding comprises the various properties formerly held by the Bluespur claimholders under gold-mining leases, and the special claim of the Tailings Company in Gabriel's Gully. All these are now amalgamated, and held as one claim of 66 acres. They have now about forty-five men employed, all of whom are at work in the Blue-spur cement, that in the tailings having been temporarily abandoned. Crushing machinery has been erected, but is not at present being used. The mine is now lit by electricity. It is estimated that the company have during the year turned over 230,000 tons of tailings, and 105,000 tons of cement, from which the yield of gold is 3,187oz.

A new company, called the Local Industry Company, was formed a short time ago for the purpose of working by hydraulic-sluicing, a portion of the tailings in Gabriel's Gully south of the special claim of the Bluespur Company. The shareholders in this company are all local residents who, having faith in the tailings, have taken up a claim of 8 acres. The capital of the company is £1,500, in shares of £1 each. They have erected pipes and machinery at a cost of about £1,200.

In Munro's Gully Kitto and party have been working their claim with fair success for the last twenty years or more by ground-sluicing. As they were nearing the head of Munro's Gully they found the water-pressure from their races was insufficient. They therefore altered the mode of working to hydraulic-sluicing. They have arranged with Mr. J. Howard Jackson, manager of the Bluespur Company, for a supply of surplus water from the Bluespur, and have erected about 44 chains of piping to connect with the water-supply. They are now putting through a large body of stuff with, it is understood, satisfactory results.

With a view to testing further the deep ground at Weatherston, Messrs. Fulton and others arranged to form a small party to sink on the flat on the ground formerly held by the Weatherston Gold-mining Company. This company carried on work for a number of years, and obtained a considerable quantity of gold from the cement underlying the flat. A sum of £100 was subscribed, and a number of men agreed to sink a shaft at a nominal rate of pay, but having an interest in the company equal to that of the subscribers. The work of sinking was carried on until a depth of

200ft. was reached, and several drives were made, when the work ceased, the funds subscribed being exhausted. It is not proposed to abandon the undertaking, as an effort will be made to obtain assistance under the provisions of Part XV. of the Mining Regulations.

WAIPORI.

In some of the larger claims in this part of the district work is being actively carried on, as also in the other classes of claims. The number of miners employed is estimated at 180, of whom 60 are Chinese. The Upper Waipori Gold-dredging Company with their two dredges have realised 965oz. of gold, having turned over 358,000 tons of stuff. The Zetland Flat Company, since the commencement of their operations in September last, have dredged about 170,000 tons of stuff, with a return of 503oz. of gold. The Amalgamated Deep Lead Company, who have recently erected a large dam which, enabling them to store more water, gives them a more regular supply, after having to contend with many difficulties, have succeeded in obtaining during the year 512oz.

There are a number of extended claims at Waipori which are being worked with fair success in most cases. Two large areas—one of 99 acres, and the other of 61 acres—were cancelled during the year; these were taken up with the object of working them by companies which were not floated.

There is now very little doing with the quartz reefs which abound in the neighbourhood. Messrs. Stewart and Gare have a claim of 46 acres. They have a battery on the ground, and are steadily working. They have a large body of stone which is expected to turn out 14dwt. or 15dwt. to the ton. They have had a number of crushings with good results. They have been engaged for some time in driving a tunnel so as to intercept the reef at a lower level. This tunnel was through hard rock, and cost a good deal of money. There are four other quartz claims held, but these are mostly being prospected.

A good deal of interest has been taken in the Lammerlaw Antimony Company. This company held a lease of 60 acres in the Lammerlaw Ranges—about eight miles from Waipori, and fourteen miles from Lawrence. A new shaft was lately sunk in the claim, a drive was put in to tap the lode at 60ft. when an excellent body of ore was struck; the lode being from 2ft. to 5ft. thick, and will give 70 or 80 per cent. of antimony. Altogether, the prospects of the company are of a very high character.

At Weatherston, Munro's Gully, Tuapeka Flat, and along the Tuapeka River to the Tuapeka mouth, the number of claims being worked remain about the same. There are no accurate returns of results in these localities, but most of the miners appear to be doing fairly well. Four special claims, comprising 254 acres, which had been taken up at the Beaumont, have been surrendered, the necessary capital not being forthcoming to enable the persons to proceed with the work.

WAITAHUNA.

The total number of persons engaged in mining at Waitahuna are: Europeans, 60; Chinese, 40. These are mostly engaged in working along the banks of the Waitahuna River and on the adjoining flats. The principal claims in Waitahuna Gully are those of Thompson and party, Callanan and party, Ferris and party; these are all alluvial claims. The only quartz claim—that of the Waitahuna quartz—is not now being worked. This company, after having spent a large sum of money in erecting machinery, &c., are now in liquidation.

At Manuka Creek, Adam's Flat, and Glenore, about fifty men are employed, including Chinese. Most of them at times engage themselves in other pursuits. A little excitement was caused at Canada Reef some time ago about the quartz reefs there. Messrs. Kerr and party, who took a claim of 16 acres as a licensed holding, after working some time, abandoned the enterprise.

Mining in the Waikaia district is not improving. The Waikaia Dredging Company some few months ago purchased the Talisman Company's dredge on Tucker Beach, Shotover, in the Wakatipu District, and moved it to Gow's Creek, about twelve miles above the Waikaia Township. They only started work last week, but I think they ought to be amongst the dividend-paying mining ventures of Otago. The water-race—fourteen miles long—of the Waikaia Water-race Company should be completed by the middle of June next, and should be a success if faithfully constructed.

I have, &c.,

The Under-Secretary of Mines, Wellington.

J. NUGENT WOOD, Warden.

RETURN of REVENUE collected during the Twelve Months ending 31st March, 1892.

	Lawrence.			Waikaia.			Tapanui.			Totals.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Warden's department	1,218	18	6	141	18	6	12	4	0	1,373	1	0
Deferred-payment rents	223	11	7	...	...	...	...	...	...	223	11	7
Resident Magistrate's Courts (gold-fields	186	6	0	56	12	0	75	4	0	318	2	0
Resident Magistrate's Courts (outside goldfields)	...	...	...	...	...	...	...	...	...	530	15	8
Totals	1,628	16	1	198	10	6	87	8	0	2,445	10	3

RETURN of CASES heard in the RESIDENT MAGISTRATE'S and WARDEN'S COURTS, and REVENUE collected during the Year ending 31st March, 1892.

—				Civil.	Criminal.	Warden's.	Totals.	Revenue received, including Licensing Fees.		
								£	s.	d.
Lawrence	...	...	...	94	78	22	194	186	6	0
Waikaia	...	...	...	28	25	6	59	56	12	0
Tapanui	...	...	...	23	59	...	82	75	4	0
Outside goldfields—										
Milton	...	...	...	77	49	...	126	177	14	2
Balclutha	...	...	...	31	80	...	111	49	13	6
Kaitangata	...	...	...	24	27	...	51	28	2	0
Clinton	...	...	...	52	43	...	95	26	18	0
Gore	...	...	...	117	104	...	221	248	8	0
Totals	...	...	...	446	465	28	939	848	17	8

RETURN OF MINERS' RIGHTS, WATER LICENSES, REGISTRATIONS, &c., issued during the Twelve Months ending the 31st March, 1892.

Nature of Right issued.				Lawrence.	Waikaia.	Tapanui.
Miners' rights	...	...	...	492	176	11
" consolidated	...	...	...	4	1	2
Business licenses, at £3 yearly	...	...	...	1	2	...
" £1 10s. half-yearly	...	...	...	...	...	...
Water-race licenses, at 5s.	...	...	...	22	17	1
" 2s. 6d.	...	...	...	91	27	...
Registrations, at £1	...	...	...	1	...	...
" 10s.	...	...	...	2	...	...
" 5s.	...	...	...	19	1	...
" 1s.	...	...	...	271	154	13
Applications for special claims	...	...	...	...	...	...
Special claims granted	...	...	...	...	...	...
Applications for river holdings	...	...	...	...	...	...
Licensed holdings granted	...	...	...	...	...	...
Applications for mineral licenses	...	...	...	...	...	...
Mineral licenses granted	...	...	...	...	...	...
Applications for occupation licenses	...	...	...	63	1	...
Occupation licenses granted	...	...	...	25	1	...
Mining applications	...	...	...	136	196	9
Applications for agricultural leases	...	...	...	...	1	...
Agricultural leases granted	...	...	...	...	...	...

The population in the district is estimated at 25,979, and are located as follows: Lawrence Borough—1,026 Europeans; Tuapeka District—2,171 Europeans, 360 Chinese; Waipori—374 Europeans, 80 Chinese; Waitahuna—1,180 Europeans, 45 Chinese; Milton—4,290 Europeans, 10 Chinese; Balclutha—4,134 Europeans; Kaitangata—2,882 Europeans; Tapanui—2,545 Europeans, 64 Chinese; Clinton—1,952 Europeans; Gore—3,400 Europeans, 20 Chinese; Waikaia—1,319 Europeans, 127 Chinese: total—25,273 Europeans, 706 Chinese.

No. 14.

Mr. Warden DALGLEISH to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Naseby, 21st April, 1892.

I have the honour to submit for your information the following report on the Mount Ida District for the year ending the 31st March, 1892; also to give such facts as I have been enabled to obtain with regard to that portion of the Dunstan District of which I have been in temporary charge for some months:—

Generally speaking, I may say that the year just closed has been marked by a gratifying change with regard to the weather, contrasting most favourably with several seasons immediately preceding. There has been a good supply of water almost throughout the whole district, and as a natural consequence the miners have been more continuously at work. They are still taking advantage in most places of the good supply, and keeping their sluicing operations in full swing, so that the actual results of the better season are not yet in the hands of the miners; but the general impression is that the yield of gold for the district will be very favourable, in contrast to the results of the last year or two, when the final washings-up take place,

I deem it not out of place here to say that the agriculturalists have harvested most bounteous crops, and at almost every homestead may be seen substantial proofs of the good season in the shape of goodly stacks of grain; and I am informed that as a rule the root-crops have been very good. Very large areas of land have been opened during the year for selection under the various systems of the Land Act, all of which has, practically, been taken up with avidity. Still larger tracts of land have been or are now being surveyed, and it is believed that when definitely opened for selection there will be found plenty of applicants for the sections. The numerous applications made during the year under the occupation-license system, many of which I have been compelled reluctantly to refuse, warrants the conclusion that among the miners and present holders of small areas there are still a large number of persons who are most anxious to obtain land on which to settle permanently.

The collapse of Nenthorn, to which I alluded in my last annual report, has, as I predicted, had an unmistakably depressing influence on the district so far as mining is concerned; but I have every hope that the feeling of insecurity in mining ventures will wear off as more legitimate undertakings are carried out than was so frequently and unfortunately the case at Nenthorn.

NASEBY AND KYEBURN.

Nothing calling for special comment has taken place during the year; no new discoveries have been reported, and but little alteration has taken place in the general workings or population. The greatly improved supply of water has, I am glad to say, been most beneficially felt by almost all of the miners, who are still diligently taking advantage of the continued supply, and there is every reason to believe that the results will be fairly remunerative. The claims at Mount Burster, I understand, have again given most satisfactory returns. The question of assisting the supply of water for the district by means of the proposed dam at Eweburn has not been so prominent during the past year, no doubt owing to the natural supply having fortunately been so much better; but the question is undoubtedly one of much gravity to the future prosperity of the district, and it is hoped that the acquisition of the Surprise Water-race by the Government may be looked upon as an earnest of assistance being given in the near future towards the satisfactory completion of this important matter.

HAMILTON'S AND SOWBURN.

I have no change of any importance to report from these localities. My remarks with regard to the better supply of water are applicable, and some fairly good washings have already been made. The population of both of these places has not altered materially during the year.

MACRAE'S, HYDE, HIGHLAY, AND NENTHORN.

In alluvial mining the only item calling for special remark is the find which was made in the vicinity of Deep Dell Station, on the high ground overlooking the old workings on what used to be known as Horse Flat. A considerable amount of prospecting has been done, and several of the claims have given very satisfactory results, more particularly Hay and party and Gately and party, who are reported to have obtained very handsome yields. The sinking is described as varying from 15ft. to 60ft., and the washdirt up to 3ft. in thickness. The run of gold appears to be very patchy. Prospects are said to have been obtained as high as 6dwt. to 8dwt. to the dish. A good deal of water has to be contended with, and from appearances the ground available is very limited. On the old flat at Macraes some half a dozen parties have been making small wages, until the heavy rains in February increased the water to such an extent that renders it most difficult to make the ground pay.

In quartz-mining the Bonanza Company has done a good deal of work during the year, but not to the same extent as in previous years, the returns from the stone operated upon still showing a small margin of profit after paying all expenses. About fourteen men have been kept employed. A grinding- and amalgamating-pan has been erected. The future prospects are looked upon as satisfactory, but a much larger plant is greatly wanted.

Mount Highlay.—Owing to the scarcity of water for most part of the year, but a small amount of stone was crushed, and the yield from that, I regret to say, hardly covered expenses, the result being looked upon as so disheartening that the company has been placed in liquidation, and the property has passed into the hands of a private party, who secured it at the apparently small cost of £400—the cost to the original shareholders is said to have been some £6,000. The yield from the stone is undoubtedly small, requiring both the strictest economy in the management and the best machinery.

Golden Point.—During the year about 400 tons of stone have been treated, with fair results when using steam-power; but the proprietors, Messrs. Donaldson, not being satisfied with the engine, which is an old one requiring much coal, have relinquished the use of it, and for the last six months they have been constructing a water-race and erecting a Pelton wheel. This is a considerable undertaking. The ground through which the race will run is rocky and unfavourable for the construction, necessitating a good deal of fluming and iron piping. The pressure at the battery will be 120ft., and the cost will be about £500. The work is expected to be finished in a few weeks. Messrs. Kitchener and Donaldson during the year forwarded a trial shipment of 6½ tons of sheelite to London. The result showed a small profit. It is quite possible that further shipments may follow.

NENTHORN.

At *Nenthorn* mining has not, I regret to say, improved in any way since my last annual report. The place is now comparatively abandoned, there being, so far as I am aware, only three claims now being worked—namely, the *Croesus*, the *Eureka*, and the *Surprise*. The first named has been worked by a small private company, with fair results up to the present time; but I am not in a position to hazard an opinion as to the probabilities of the future of the mine. The

Eureka has crushed a small quantity of stone, but I am given to understand that the yield obtained did not show a sufficiently good margin of profit, and the mine has been, I believe, let on tribute to the late manager. The Surprise is also now being worked by a small private party, the average yield from the stone operated upon running up to about 2oz. to the ton; the reef, however, being small, even this average does not show a large profit. The confidence of the public has, naturally enough, been completely shaken in anything like speculation or investment at Nenthorn, so that a number of the quartz veins which were partially prospected, many of them showing most favourably, are now lying idle, although experienced reefers think that some of them are capable of being worked to profit.

CLYDE AND ALEXANDRA.

In these localities, also, there has been an improved supply of water, and consequently mining generally has assumed a more healthy appearance. There are possibly no more miners engaged, but those who have been working have undoubtedly been doing better. The Golden Gate Company, which is now practically reduced to four or five working-men, has, after a long uphill struggle, commenced to give some return to its few shareholders. There is a considerable area of payable auriferous ground on the terraces on the Dunstan Commonage yet to be worked, but, as this company holds the chief supply of water, it must remain unworked for some time. There are a few other parties doing fairly well in this locality. On the west bank of the Molyneux, below Clyde, there are some thirty men engaged sluicing the banks of the river, using water from Earnscleugh or Fraser River. The old system of sluicing is still adopted here, necessitating the bottom seams being left for future operations. Despite this, however, very fair wages are obtained by all, and as most of them are owners of water-races, and in possession of a few acres of land around their homes, they form a very fairly prosperous community. At Spring Vale, and the faces running down towards the Manuherikia, Allan and party, and some few others, are doing very well, the former having made considerable additions to his mining plant during the year. The Molyneux Hydraulic Company lately purchased water-rights and plant of the Commissioners Flat Company (in liquidation) for £1,200, and are now calling for tenders for laying down pipes from the present termination of the race to their special claim near the bridge at Alexandra. This will require a good deal of new material, but it is thought that in a few months sluicing will be commenced. Dredging: A pneumatic dredge has been constructed, at a cost of some £3,000, by a Melbourne syndicate, and placed on the river in the gorge below Alexandra. I believe it has been at work for four or five months, but with what results I am not informed. I fear the continued silence on the subject does not indicate a large amount of success. The bed of the river at this point is thought by many to be too rough to obtain profitable results by dredging. There are two dredges above Alexandra still doing very well. One of them has been converted from a current wheeler into a steam-dredge, enabling the party to work with greater regularity.

Bald Hill Flat.—I am glad to be able to report that the mining population at this locality is increasing steadily every year. It is, I think, a most suitable place for miners of small means to turn their attention to, not only for prospecting, but there is almost a constant demand for a few good sluicing-men on wages. Every available drop of water is being used; in some cases twice over. There are four races now in course of construction, which, when completed, will supply about fifteen more heads of water, and no doubt largely enhance the yield of gold. Carroll and Lynch's party, after spending about thirteen years in bringing up their tail-race, are at last enabled to work their claim. This party has displayed great perseverance, and, having a fair supply of water, should soon recoup themselves for their past labours—a consummation they richly deserve. Hesson and party are reported to be doing well in their new venture. The elevating plant recently placed on the ground at a cost of about £3,000 has been giving great satisfaction. McClosky and party, holding a claim in the vicinity of the Teviot Road, are also reported to be obtaining payable results. I also hear favourable accounts from Wilkinson's claim; and Mitchell and party, after three years' work in bringing up a tail-race, expect very shortly to reach their claim. The Bald Hill Sluicing Company has, with its limited supply of water, disposed of a large area of Butler's freehold during the year, and I am informed with more satisfactory results than for former seasons. This company is constructing a water-race from Gorge Creek at a much lower level than the one they have hitherto used, which is above the snow-line, and if, as I believe it is intended, the right to ten heads which has recently been granted to them from Shingle and Chasun Creeks is at once brought in to Ball Hill, the company will next season, in all likelihood, be in a position to pay dividends. Simmonds and party, and, I believe, some others, recently purchased for about £600 the Commissioners Flat water, and have taken up claims on the flat. They have called for tenders for the race to bring the water on to the ground, and every hope is entertained that by this time next year this will be adding to the already satisfactory number of claims in full work.

Old Man Range.—White's reef is now being worked with very good results by Messrs. Symes Brothers, the system of working and management adopted by them contrasting most favourably with that carried out in this ground formerly. It is reported that a considerable part of the ground has been leased to a party from Invercargill, and it is their intention to put in a tunnel at much lower level to strike the reef. The same party are stated to have leased a claim at Butcher's Spur, which has been lying idle for the last two years through water. A deep level tunnel could be put in here at a reasonable cost, which would fairly test the value of the ground. There are several other claims in work on side of the range—among others, Crossan's, Baker's, Prosser's. In all of these sluicing is adopted as the method for working, the quartz seams being of a particularly soft and friable character, and it is believed that quite 90 per cent. of the gold is saved. Altogether the prospects of this part of the field are more promising than they have been for a considerable time, and I have little doubt that when the work in connection with the increased supply of water is concluded there will be a further vitality shown in the mining industry than has been exhibited for a long time.

CROMWELL, ETC.

The past year has been a comparatively moist one, and has had a good effect on mining generally throughout this portion of the Dunstan District. During the winter the Clutha River was at a very low level, and a very considerable amount of gold was obtained from the beaches, principally by Chinese miners. The river is again low for the time of year, and it is predicted that during the incoming winter it will again be in a most favourable condition for beach-working.

Bannockburn.—Mining has been brisker here during the past year than the preceding one. The Carrick Company has completed their new race up to the second creek, by which they have greatly augmented their supply of water, enabling many miners, who previously could only work occasionally for a few hours, to now work nearly full time. The work has not been completed sufficiently long yet for any visible improvement in the yield of gold, but the autumn washings-up are anticipated to be very good.

Carrick.—Matters here show little or no change since last report. There are a few parties scattered about the various gullies apparently doing fairly well. Nothing new has been reported. Several new quartz claims have been taken up, some of which have been yielding fairly well. Messrs. Lawrence Brothers, L. J. Hubert, and A. Blue being, I am informed, all in a fair way, with reasonably good prospects.

Nevis.—There is a slight improvement here during the past year. Adie and party have got their hydraulic plant at work; also one or two other parties; and I am informed they are all getting payable returns for their outlay. At the Upper Nevis the Pactolus Syndicate have bought out Norris and party's rights, and have acquired control of a large area of ground, as well as an immense water-power, and are reported to be making preparations for hydraulic sluicing on a very extensive scale. One of the party recently visited England, and was successful in raising the necessary capital for the undertaking. No doubt a large amount of work will be undertaken by the company during the coming year.

Roaring Meg, or Kirtle Burn.—There are about the same number of men working in this locality, mostly Chinese. They are believed to be doing moderately well. One party on the hill are known to be doing more than moderately well.

Fraser River.—A good deal of work has been got through by the few parties in this neighbourhood during the year. Some of them have, I understand, obtained fair results.

Quartz-reef Point and Five-mile.—At the former place a small rush has occurred, and a considerable area of ground taken up, several claims proving payable, notably Tillman and party and Murrell and party. There are still a considerable number of men on the ground. Most of them are believed to be making good wages. No change has taken place at Five-mile. The few parties at work are not believed to be doing anything at all out of the ordinary way.

Bendigo.—The Cromwell Company are still working, but with a diminished number of hands. The expectations entertained last year regarding this mine have not been realised, and, as a result, the company has been reluctantly compelled to discharge many of their hands, pending proposals made to the English shareholders with regard to raising sufficient capital to sink the main shaft to the depth originally proposed—namely, 600ft. The men now at work (some twelve to fifteen) are employed taking out the blocks left in the old workings from the days when the claim was giving such grand returns. At the Rise and Shine, work is, and has been, fairly prosecuted. Crushing is now being carried on, but with what result or prospect I have not been informed.

CRIFFEL.

During the past year the miners who have been enabled to get water have again been successful in getting very good returns, more particularly Fox's party, Barker's, Halliday's and Hawthorne, all of whom are reported to have done exceptionally well. If a larger supply of water could be brought on to this place a vast extent of payable ground would be opened up.

OPHIR AND IDA VALLEY.

I cannot report any improvement at either of these localities for the past year. There appears to be about the same number of miners at work, making, I fear, but indifferent wages, eaked out by some of them by rabbiting and station-work.

There is little doubt that this neighbourhood suffers perhaps more than any other mining centre in Otago from a deficient water-supply; but I somewhat question whether very much of the ground is of a very payable nature, unless, indeed, water was particularly plentiful and moderate in price.

MATAKANUI (TINKER'S).

The past season has been a favourable one for water, and the principal companies are still running without washing up this year's work. The Sugar-pot Company did so at Christmas time, obtaining, it is said, 480oz. for about five months' run. The Mountain Race Company at about the same time got 450oz. Simes and Morgan also cleaned up, but the result has not transpired. Ewing and McConnochie had a washing of 320oz., a fourth of which was secured by using a set of gold-saving tables at the tail end of the race. The Undaunted Company are stated to have obtained the very satisfactory return of 1,200oz. for the season, and the Matakaniui Company 600oz. All of these companies are now engaged in cleaning down, and expect to have the results of this last year secured within a few weeks, and the yields are anticipated to be as follows: Undaunted, 1,200oz.; Matakaniui, 800oz.; Ewing and McConnochie, 800oz. The latter company have already obtained for this run over 200oz. off their tables. These figures speak volumes as to the remarkable richness of some of the claims in this locality, and there is little, if any, doubt of a continuance of these splendid results. The Matakaniui Company is on exceedingly good gold now; but it has to be elevated, and is very stony. Their progress is therefore necessarily somewhat slow. The ground held by the Undaunted Company is without doubt the richest at Tinker's. They have many difficulties to contend with, notwithstanding which, however, the fortunate shareholders year after year obtain

exceptionally large quantities of gold. Recently they have added to their water-rights, already about the best in the district, by the purchase of four additional heads from Shepherd's Creek, at a cost of £1,250. Ewing and McConnochie are still working the old drift-formation, and have dealt with an enormous quantity during the year. As they anticipated, on working and cutting into the seams of fine gravel and clay, and removing them from the face, the mass settles, the hillsides above the workings showing cracks in all directions up to a height of 300ft., and to the Undaunted Water-race, which has had to be piped for some distance. Before the greater portion of this old drift-formation can be worked satisfactorily provision will have to be made for the water-races which now cross it.

Simes and Morgan are now opening out in the old drift-formation at a point half a mile (in a southerly direction) beyond the old workings, or where anything payable was thought to exist. The Sugar-pot Company have had enormous quantities of stones to contend with; but, in spite of this, owing to the great richness of the ground, very large dividends have been declared for years past. It is now leaving the most stony part of the ground and setting into the ground formerly held by the Deep Lead Company, with which this company has amalgamated. If the ground now to be operated upon turns out as anticipated their returns in the future should eclipse any obtained hitherto, even in this place, so favoured in the past with brilliant yields of the precious metal.

ST. BATHAN'S.

Mr. John Ewing continues to be the chief producer in this locality, and, from the great skill and energy he displays in the prosecution of his many large undertakings, it is to be hoped success may follow his exertions. From his Kildare Hill Mine he is stated to have obtained 900oz. during the past year, and this only from a partial washing up. He is now elevating 75ft. in two lifts, and in spring he purposes putting down another elevator to lift 90ft. The large returns he has secured during the last two years have been from low levels, necessitating a large outlay in plant, &c.; but now it is in splendid working-order, and can be worked very cheaply, five or six men being sufficient to keep it going by night and day.

The Scandinavian Company are now engaged in washing-up, and expect about 400oz. The United M. and E. Company has had a good season for water; their Blue Gully property, which they purchased from Falty and Co., has not turned out well, but large returns are anticipated from the lower levels to be opened up by the St. Bathān's main channel, now being constructed. The latter company has made satisfactory progress during the year, having been enabled to work without intermission since the month of September. The company is now working on a new run, the existence of which was revealed by their own operations on the terrace north of Main Gully, below Graveyard Gully. The company has only partially cleaned up, and obtained 140oz. during the year; 70oz. of this was secured off the gold-saving tables. The company expects a return of 400oz. when washing-up in the spring. Tiernan's claim is said to have given satisfactory returns for the past year.

VINEGAR HILL, CAMBRIANS.

Nothing new has been reported from this place; little or no alteration has taken place in the population. The claim of Mr. John Ewing is being worked in the same extensive and vigorous manner. No cleaning-up has taken place, but from boxes at the tail of races and the remains of last year's work, recleaning bottoms, &c., about 200oz. have been got, and in the spring a yield of 600oz. is expected from a large paddock now stripped. Watson and party are believed to be doing well. Hughes and Morgan have completed a tail-race to tap the good ground formerly worked by them. Excell and party are driving in Hughes and Morgan's old ground, and making up to £4 per week.

At Six-mile Hill some parties of Chinese miners are said to have been doing very well for a considerable time past, and it would not at all surprise me if a very extensive area of payable ground were proved to exist in this neighbourhood.

BLACKSTONE HILL.

I regret to say that the quartz-reefs at this place (Rough Ridge) are still idle; there are a few parties and individual miners working about this locality, and have been doing a little better during the past year through the better water-supply. The company, cutting a water-race in from the Manuherikia to ground at the base of Blackstone Hill, are stated to have discovered payable ground at Dunsmuir's Flat, near the line of their race, and are said to be taking steps towards prosecuting work at the place. I have not been informed of the value of the prospects obtained.

The yield of gold for the whole of the localities I have alluded to has been no doubt a considerable increase on that of the last year or two; and, so far as the information given enables me to judge, will amount approximately to 30,000oz. for the year, bearing out what I said in my last report that an increased supply of water was all that was required to largely augment the yield of gold and prove Otago Central to be a district deserving the attention and consideration of all interested in the mining industry.

The revenue has kept up fairly well, and I may say in conclusion that if the water-supply keeps up, of which, from present indications, I have every hope, I entertain the strongest conviction that an era of greater prosperity awaits the district in the future.

I enclose for your information the usual annual returns of statistics.

I have, &c.,

S. MEAD DALGLIESH, Warden.

The Under Secretary, Mines Department, Wellington.

MEMORANDUM of business transacted in the Warden's Courts and offices in the Mount Ida and part of the Dunstan Districts, year ending 31st March, 1892: Miners' rights issued, 1,418; water-race licenses, 422; registrations, 1,285; mining applications, 1,088: total revenue collected, including rents, fees, fines, &c., £2,897 11s. 4d.

No. 15.

Mr. Warden Wood to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Clyde, 19th May, 1892.

I have the honour to enclose herewith annual statistics and report for the Wakatipu and Roxburgh divisions of the goldfield under my supervision.

WAKATIPU GOLDFIELDS.

My report for this portion of my district is not of such a cheering nature as I could wish, owing to the almost total collapse of the dredging boom. At the time of writing my last year's report there were either in actual working order or nearing completion twelve dredges to work as many dredging-claims; now, however, there are only four at work on two claims—the others either sold and removed to places outside the district, or about to be so dealt with, and upwards of forty dredging-claims have been cancelled. However, I am glad to be able to report that the miners as a body throughout the Wakatipu district are doing fairly well, and, although there are no sensational finds, the average yield is much better than has been the case for some years past. The revenue, too, has kept up well, and is a long way above the average.

Head of Lake Wakatipu.

Quartz.—There is only one quartz claim in this locality, owned by the Rees Valley Quartz-mining Company, Limited. The company are still prospecting, and with favourable indications, but their operations are much retarded by a heavy influx of water.

Alluvial.—About thirty miners are at work scattered about in the various gullies and streams running into the Rees River. The Dart River still remains practically unprospected and neglected, and will be so until there are greater facilities in the shape of tracks enabling the miners to move freely about.

Dredging.—Nil, every claim being cancelled.

Moke, Twelve-, Seven-, and Five-mile Creeks.

It is all alluvial mining in these localities, carried on principally by Chinese. There is nothing further to report than that the average earnings, although not very large, are satisfactory to the individuals concerned.

Upper Shotover.

Quartz.—The number of quartz mines in this locality remain at the same figure as last year—namely, two. The Phoenix Mine (owned privately) has had a good season, and an immense amount of work has been got through. 4,835 tons of quartz were crushed for 3,197oz. of gold, the yield per ton varying from 8dwts. to 1oz. The whole of the machinery has been overhauled, and the timber work of the battery renewed and prospecting vigorously carried on, proving the mine to be both a payable and lasting one. The senior manager is now in England engaged in floating a company to provide means to still further develop the mine, and for erecting more powerful machinery. The Gallant Tipperary Quartz-mining Company, Limited, has not such a good record as the Phoenix, but it is, without doubt, a valuable property if judiciously managed. 1,700 tons were put through the mill, yielding 424oz. of gold.

Alluvial.—The year's operations have been much better than for some seasons past, although water was not so plentiful as could be wished. The Londonderry Terrace Sluicing Company, No Liability, have pushed on their workings vigorously, and are now in full swing, their large water-race working satisfactorily, and with the great hydraulic power at their command are doing an immense amount of work presumably with satisfactory results. The other large sluicing ventures, Davis Brothers and R. Johnson, have each had a good season, but with what success pecuniarily is only known to themselves.

Dredging.—All the dredging-claims, with the exception of two, have been cancelled, and one dredge only is at work. The Sandhills Gold-mining Company, Limited: this dredge is worked by electricity, and is a dividend-paying concern.

Arthur's Point.

Dredging has been steadily pushed on here by the Sew Hoy Big Beach Gold-dredging Company, Limited, who have three dredges at work. This company is in the enviable position of being out of debt and dividend-paying. They are now averaging 100oz. per week.

Lower Shotover, Upper Kawarau.

Dredging-claims in this locality last year numbered nine; these are all cancelled, and the dredges sold and removed.

ARROW SUBDIVISION.

Arrow Junction, Kawarau, and Gibbston.

Alluvial.—There is nothing of interest to report upon in this locality.

Dredging.—Here, again, all the special claims have been cancelled.

Arrowtown.

Alluvial.—The Arrow Tunnel Sluicing Company (no liability) have pushed on their work, and have now nearly completed their necessary preliminary works, and hope soon to be able to test their claim. It is to be hoped the anticipations of a highly payable claim may be fulfilled. The land on the Crown Terrace lately resumed for mining purposes has not yet turned out to be the El Dorado that the miners thought it was. Payable gold has only been obtained in one or two claims, and the lead, if any, has not yet been defined.

Dredging.—Nil—all claims cancelled.

Macetown.

Quartz.—There is very little of interest to report on. The anticipations held out of the value of the Sunrise Lease Company's claim have not been realised: 214 tons of quartz have been crushed, yielding 170oz. of gold. The Tipperary Gold-mining Company (Limited) have done no work at all on their claim. The Premier Consolidated Gold Company (Limited) have opened up their mine, and have a large number of men employed. The mine is now in thorough working-order, and it is to be hoped that the investors may get value for their money: 650 tons have been crushed, yielding 230oz. Two other large quartz claims have been taken up, and the licensee is now on his way to London to try and raise the necessary capital to work them.

Alluvial.—The amount of the precious metal won from the ground is about the same amount as for some seasons past, and the number of men at work keeps at about the same level as heretofore.

Cardrona.

Alluvial.—This is the most thriving locality in the Wakatipu Goldfields, and the yield of gold well up to its former level. Fresh finds have been made on the Criffel Face, which no doubt will lead to further discoveries. The Hydraulic Sluicing Company (Limited) have now about got their claim into going-order, and the prospects are more than encouraging. More will be heard of this locality.

Dredging.—Here, again, the holders have all thrown up their claims, many without attempting anything in the way of prospecting.

Roxburgh.

During the past year the mining industry here has maintained a healthy and prosperous condition. Large sums of money have been, and are now being, spent in improved machinery and plant, and there is a marked increase in the number of persons employed. It is difficult, if not impossible, to obtain anything like a fair estimate of the quantity of gold obtained, but of this I am certain: The yield is considerably above the average of a few years back, and there is every prospect of a further increase.

Hydraulic Sluicing.—In the Roxburgh Amalgamated Company's claim two elevators, under the management of Mr. William Peters, are in work when the supply of water will permit, and the fortnightly washings-up seem to give regular and satisfactory returns. During the year ended 31st March last 1,886oz. of gold were obtained, which enabled the directors to declare a dividend of 3d. per 60,000th share. I understand that final arrangements have at last been completed between this and the two Hercules Companies for increasing the conserving-capacity of the reservoir at Dismal Swamp. It is proposed to raise the wall to a height of 30ft., which, it is believed, will create a lake some miles in extent. The work will be commenced in the spring, and when finished I am of opinion that the right out of the Teviot Stream will be a very inferior one, if short of its full supply any time during the year. The company employs between twenty-five and thirty men. The ground already worked, as compared with the area yet to be operated upon, represents a mere hole in the ground, and, given a full and regular supply of water, now that all the initiatory expenses are over, the directors should have no difficulty in presenting the shareholders with monthly dividends.

The returns from the United Hercules Company's claim up to within the last month or two—when a change for the better set in—have not been as good as in its earlier history. Some poor ground, however, had to be disposed of in order to properly open up the claim, which accounts for the diminished yield. A good run of wash-dirt has again come in sight, which it is hoped will lead into the flat, and the manager is very confident of shortly being able to again place the company upon the dividend-paying list. About twenty-five men are employed.

The Hercules No. 2 Company is still getting gold, although not in sensational quantities. The future prospects are very encouraging. Shortness of water in the past has been a great drawback, and, coupled with this, a seam of very heavy stones has had to be manipulated, nearly all of which being too large for the elevator necessitated the labour of handling. Fortunately this seam has about run out, and there are indications, with a dipping reef to the flat, of better wash-dirt setting in. The last year's returns amounted to 1,068oz. of gold, which considerably more than paid working-expenses, although the surplus was not sufficient to warrant the declaration of a dividend. Twenty men are employed in and about the claim, which number no doubt will be augmented when the Dismal Swamp Reservoir has been constructed.

The Island Block Gold-mining Company is an English company, whose operations are confined to freehold land, and very little information can be obtained as to its well-being or doings. Now and again the local newspaper reports the company as having struck very rich wash; but from other sources I am led to believe that the receipts just now are not more than sufficient to cover working-expenses. A great many men are employed, and quite a small village has sprung up about the workings.

The Island Block Extended Gold Company shows signs of shortly becoming a dividend-paying one. For some considerable time liquidation seemed inevitable, and this almost before sluicing operations had been commenced; but since Mr. Weir has been intrusted with the management a better state of things has arisen. Like many other similar properties where large quantities of water are required, shortness of supply has been the chief obstacle. This, however, has now to a great extent been remedied by the construction of a series of dams, the result of which is a steady supply of water, and consequent increased returns of the precious metal. Mr. Perry has just returned from England, bringing with him machinery for working his claim at the junction of the Benger Creek with the Clutha. Already two engines are upon the ground, one of which, I believe, is to be used for lifting the wash-dirt into boxes or a sluice, by means of a large spoon or scoop, while the other is to pump the necessary water for sluicing purposes. The ground to be operated upon, although reported to be good, is perhaps no better than many other spots on the banks of the Clutha from Miller's Flat to Cromwell, and the result of this method of working will be anxiously watched.

by many, as, should success follow the undertaking, not a few claims will be worked which, from want of water on the surface, are at present lying idle.

Since my last report the Commissioners' Flat Company has had to engage the services of a liquidator, and this unfortunately before the shareholders had been given the satisfaction of knowing whether their claim was payable or not. It seems to me that in a great many instances directors do not exercise a wise discretion in the selection of managers. Local influences, no doubt, have something to do with appointments occasionally, and the interests of shareholders too often sink in favour of individual profit and friendly sympathies. Whether this be the case or not, experience goes to show that many promising and valuable properties are often abandoned as non-payable, and companies thrown into liquidation, through the want of experience and utter incapacity of the managers.

An extensive plant was erected by this company, including a substantial bridge to conduct the water by means of pipes over the Clutha, and, although many thousands of pounds were expended in the work, the liquidator only succeeded in realising £1,200 for the property, which included rights for forty heads of water from Shingle Creek, the Molyneux Hydraulic Company, at Alexandra, being the purchaser.

There are several parties sluicing on the banks of the river on both sides, from Coal Creek to the Island Block, nearly all of whom are owners of water-rights. The old system of sluicing in all instances is the method adopted for extracting the precious metal; and, although this seems a slow process after experiencing the wholesale demolitions of the hydraulic companies, the operators themselves seem quite satisfied with the results of their individual efforts, and so long as fair wages are obtainable have no inclination to forego the certainty for the precarious percolations from the coffers of a company directory.

Dredging.—Since October last, and up to within two or three weeks ago, the Dunedin Gold-dredging Company's dredge has been laid up for the purpose of having some necessary alterations effected. These have now been completed, and dredging has recommenced. The hull is 80ft. long, by a width of 15ft., and a depth of 16ft.; the pontoon is the same length as the dredge, by a width of 64½ft., and a depth of 4ft.; while the ladder, which hitherto was too short to get at the deep ground, is now 60ft. long, has thirty-three buckets, each having a holding-capacity of 3 cubic feet, and is capable of dredging to a depth of 39ft. from the water-line.

This company has a good claim, as may be judged from the following return: Between the 1st August and the 5th October last year, when the dredge was laid up for alterations, the washing-up resulted in a yield of 1,035oz. of gold for fifty-three days' dredging, out of which the company was enabled to pay £3,600 in dividends, or 8s. per share.

This company has, I understand, purchased the small dredge which has been for some time working unsuccessfully at McCunn's Beach, and it is now being removed to Coal Creek, where it will be occupied in prospecting.

The returns of the Ettrick Gold Steam-dredging Company have not been quite as good as was first expected. That company commenced operations in September last in the Clutha, near Ettrick; but, owing to faulty machinery, much delay has been incurred. Despite all drawbacks, however, the yield of gold has averaged about 12oz. a week, which leaves a fairly good surplus after paying working-expenses, amounting to about £100 per month.

The Miller's Creek Dredging Company has had considerable difficulty with its tailings for some time past, but this trouble is gradually being overcome as the dredge works into the bend. The returns up to now, although not sensational, are still large enough to leave a balance after paying working-expenses.

The Golden Run Dredging Company have just completed a new steam-dredge, at a cost of £2,000. The hull is of timber, the frame being blue-gum, while the planking is of kauri. The company's claim is in the Clutha, at the upper end of the Island Block, and it is expected that dredging will be commenced in a week or two. The Roxburgh Gold Steam-dredging Company have recently let the contract for the machinery of their new dredge to Mr. McQueen, of Dunedin. The company's claim is in the Clutha, opposite the Hercules Company's claim, and is known to be a good one. It is expected that everything will be ready to commence work about the beginning of July next.

There are six or seven more dredges on the river, all of which are in the hands of private parties, and returning wages to the owners. During the year Messrs. Pringle and others, Brazie and party, and Bennett and others, have dispensed with their current-wheels in favour of steam, and there now remain only two dredges depending upon the current for motive-power.

Agricultural.—The rainfall during the year having been considerably above the average of the past three seasons throughout the goldfields portion of my district, has given a healthy impetus to this interest, as well as that of mining. The crops all round were good, and well harvested, while grass-feed, both natural and artificial, is more plentiful than has been the case for years past at this season, the result of which is that sheep and cattle are realising much more satisfactory prices, and land of all descriptions in great demand.

The Under-Secretary, Mines Department, Wellington.

I have, &c.,

J. NUGENT WOOD, Warden.

No. 16.

Mr. Warden CAREW to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Dunedin, 14th May, 1892.

I have the honour to forward the annual returns for the Hindon District for the twelve months ended 31st March last. In doing so I may remind you, as I did last year, that these returns include privileges granted at Dunedin for other places than what is generally known as

Hindon. I mentioned in my last year's report that I had, for the reasons then given, exercised, somewhat reluctantly, jurisdiction in respect of the new field at Preservation Inlet, and suggested that provision should be made whereby some particular Court might alone have jurisdiction over a division of a goldfield; but, so far as I know, nothing has been done in that direction. During the last year the privileges at Coal Island and Preservation Inlet granted at Dunedin have been but few, although a good number of miners' rights for that locality have been taken out here. It is reported that the workings on the mainland have been further extended, and that good yields have been obtained, some parties making as much as £1 to £3 per day per man when working. Doubtless the Warden at Riverton will be able to report more fully on this field than I am in a position to do.

The expectations of last year with regard to the quartz-mines at Hindon have not been realised, the operations of Messrs. Begg and party having turned out, comparatively speaking, a failure. A large quantity of stone was put through their mill; but, owing to the amalgam having got mixed with some foreign metal, the extraction of the gold was rendered abortive, so that the yield cannot be stated. It is proposed, I am given to understand, to make further trial of the mine at an early date. The quartz is found to be highly pyritiferous in character, requiring special and economical treatment. Messrs. Sheppard and party have been working on what is known as the Gladstone Reef, and have crushed, at the small battery in Machine Creek, a considerable quantity of stone yielding from 6dwt. to 11dwt. per ton. I am unable to state the exact quantity crushed by them. They have also crushed small quantities with similar results for one or two other parties.

On the Hindon alluvial deposits there are probably now not more than a score of miners working, with varying success.

With regard to the Barewood quartz reefs, a number of the holdings first taken up have either lapsed or been surrendered and abandoned; but operations at the two places where the reef has been opened out have been actively carried on during the year by Messrs. Porter and Hocking, as tributers of the Barewood Company, in the one case, and by Messrs. Wolters and party in the other. The former of these parties have followed the reef to a depth of 100ft., where it is well defined and 5ft. in thickness, yielding from 7dwt. to 15dwt. per ton. They have crushed during the year upwards of 500 tons, with a total yield of 280oz. of gold. Until recently they had to send the stone to Saddle Hill to be crushed, but are now crushing at a newly-erected ten-head battery of their own, within easy distance of the mine. Wolters and party are working on the same line of reef, at a distance of nearly a mile further south, where, at a depth of 40ft., the reef is between 4ft. and 5ft. thick, showing good prospects of gold. They have lately erected a five-head battery at the Flat Stream, about a mile and a half from the workings, to which, of course, the quartz has to be carted. At this mill they have put through about 540 tons of stone, yielding from 5dwt. to 15dwt. to the ton, or, all through, a little over 10dwt. From present appearances there is every reason to believe that the development of the Barewood Reefs will be much more pronounced during the ensuing year than it has been in the past. As at Hindon, so at Barewood, the quartz is largely impregnated with pyrites, and the pyritous concentrates saved at the several batteries yield on treatment a considerable percentage of gold. They are at present sent to Victoria for treatment, which is very expensive. A local establishment for the extraction of the gold from these concentrates would be a boon to the mining community generally.

The special claims taken up for dredging at Deep Stream and in the Taieri River have been abandoned.

The Under-Secretary, Mines Department, Wellington.

I have, &c.,

E. H. CAREW, Warden.

No. 17.

Mr. Warden RAWSON to the UNDER-SECRETARY of MINES, Wellington.

SIR,—

Warden's Office, Invercargill, 7th May, 1892.

I have the honour to forward herewith the annual returns, and to submit the following report on mining matters in the sub-districts under my charge for the year ending the 31st March, 1892:—

LONGWOOD.

The Longwood Sluicing Company (Limited) have done a considerable amount of work during the last twelve months in continuing to bring up a deep tail-race to their special claim. Progress is now and again retarded by heavy landslips. It is reported that as the tail-race proceeds the indications of payable gold are more encouraging.

OREPUKI.

There is nothing new to report with regard to the workings in the immediate neighbourhood of Orepuki, but I have ascertained that many miners from this part of the district have been for a few months working on the beach between the Waiau River and Coal Island, and that some of them have met with fair success.

COAL ISLAND, PRESERVATION INLET.

I have no reliable data as to the number of miners working in this part of the country, but there are probably over a hundred. Mining is now prosecuted upon the mainland as well as upon the island itself. When I was in Preservation Inlet in January last several miners visited the steamship "Tarawera," and expressed themselves to me as satisfied with the amount of gold they had already obtained, and looked forward hopefully to still greater success, notwithstanding that the country is very rough and the climate exceptionally moist.

ROUNDHILL.

The manager of the Roundhill Syndicate (Limited) is energetically pushing on the operations of the company, and a very large amount of work has been done, and a great number of men are employed. One elevator has been working on the company's special claim of 20 acres since last November, and up to date about 6 acres of ground have been sluiced away, with, it is said, paying results. The main line of pipes is 90 chains in length, and the pipes are 13in. in diameter. The elevator is worked with a little over six Government heads of water, with a 5½in. throat, and has a lift of over 50ft. The syndicate have completed the survey of a new water-race thirty miles long from the Pourokino River to the Roundhill. With reference to the sludge-channel, the bush is now cleared from the beach to the railway-crossing, being a length of about 40 chains, and the pile-driving, &c., in connection with the channel has been completed for a distance of 9 chains from low-water mark. A good many miners have recently left the Roundhill alluvial diggings to prospect the country west of the Waiau. Most of the surface-gold, as far as the present fall will allow, has been worked out at the Roundhill; and until the company previously mentioned create an artificial fall, there is very little ground left that individual miners can work profitably, as the natural fall of the country is sludged up. Thus, not only are the Europeans leaving, but some of the Chinese miners also.

WAIAPAPA.

There is nothing special to report, excepting that the Brunton Gold-dredging Company (Limited), not finding the portion of the beach which they occupy payable, have ceased operations and wound up the company.

The Under-Secretary, Mines Department, Wellington.

I have, &c.,

C. E. RAWSON, Warden.

No. 18.

Mr. J. Gow, Inspector of Mines, to the UNDER-SECRETARY OF MINES, Wellington.

SIR,—

Dunedin, 19th May, 1892.

I have the honour to forward my annual report on the alluvial and quartz mines visited during the year.

Commissioners' Flat Gold-mining Company, Clutha River (22nd January, 1891).—I learn from the manager, Mr. R. W. Smith, that he made the survey and levelled the head-race, which is about five miles long, 5ft. wide, and 22in. deep, with a fall of 11ft. to the mile. The terminal end of the ditching is on the top of a ridge near Coal Creek, where it discharges the water into a reservoir, from which the pipes, 128 chains in length, convey the water to the claim. The first 20 chains of pipes are 18in. diameter, 15 chains of 17in., and 93 chains of 16in. At the time of my visit there were 120ft. of 3½ft.-wide sluice-boxes laid in position, with a fall of 3in. to the 12ft. The tail box was only a few feet above the level of the river, which stream, it was hoped, would scour so much that very little extension of the tail boxes would be necessary. The head box was then within 50ft. of virgin ground. A large quantity of surface had been some time ago roughly sluiced off to a certain gradient to expedite the opening of the claim when the hydraulic plant would be in working-order, which was nearly so at the time of my visit. The outlay by the company at that time was about £8,000.

Island Block Extended Gold-mining Company, Clutha River (23rd January, 1891).—Some little time previous to my visit this company had made a start to open this claim close to the water-level of the river, and on bank side of the shingle-beach. After having sluiced out a paddock about 1 chain square to a point supposed to be near the bottom, all works were suspended for the want of funds, and owing to some disagreement between the directors, manager, and shareholders. The pipes are laid from the head-race to the claim, equal to 78 chains, with a head of 810ft. This head, with the plant on the ground, is capable of doing splendid work in the material in view. The paddock, though not washed to the bottom, yielded 50oz. of gold. Should the yield continue the same throughout the flat, the claim should prove a fairly payable one. The shareholders should not, however, expect dividends for some months after a proper start is made. There is much yet to be done to get the claim in good working-order. I think some of the nozzles and pipes are rather small to do the work speedily. It appeared to me that the claim should have been opened out lower down the river to get it in good working-order quickly. I saw the claim in full work in August last, and learned that it had been working four or five months. It was then more than ever clear to me that the claim was opened out at the wrong place. The whole place was hampered with tailings, and the river-bed filled to near the opposite bank, which placed the workings in a bad position in case of a flood. I have not heard how the claim is paying.

Blue Spur Amalgamated Gold-mining Company (24th January, 1891).—I visited this claim for the first time to-day. The formation where the gold is found is a remarkable deposit, and has the appearance of having been at some remote period of time a river-bed filled in to a great depth (200ft.), since which time great changes have taken place on the surface. The old river-bed or channel has been cut away entirely on the north side of Munro's Gully, and can be traced only a short distance in a southerly direction. Munro's and Gabriel's Gullies have scoured through the old river-bed crosswise and deposited the gold there from down the several gullies in that locality. Some of the gravel in the old river-channel is very hard, similar to conglomerate rock, and through which there is a small quantity of fine gold scattered. This hard compact gravel will have to be crushed up in some economical way in order to sluice it away. Mr. Jackson, the manager, is now perfecting a crushing plant, consisting of rollers, to do this work. I think, however, it will take time to perfect a plant capable of doing a large quantity of the material quickly, and chiefly so as to leave a small margin of profit at the end of the year. The present system of washing away the old tailings is perfect. No other system in mining known to me could do the work so well under the circumstances.

There is a clean sweep up of everything in the shape of *débris*, and I have the greatest confidence in the gold-saving appliances in the sluice-boxes. I think the loss of gold must be very small indeed. The whole of the work so far is well done, and for the efficient working of the claim in the future nothing has been left undone from the start. I again visited the claim in August, and found that a tunnel had been driven from the level of the jets through the saddle into the deep ground near the high face, and a large body of water drawn off, but not to the bottom by many feet. The sluicing is now gradually approaching the high face, consisting of more or less cemented layers of fine gravel. I do not think a jet of water with the pressure available will disintegrate this cement sufficiently to free the gold; therefore, quick crushing in some simple way will have to be tried with a view of getting all, or practically all, the gold from the *débris* when sluiced after leaving the crusher. I am of opinion it will take time to perfect a plant capable of doing all required and make it pay.

J. Ewing's St. Bathans Sluicing Claim (28th April, 1891).—Mr. Ewing was not in St. Bathans on the day of my visit; I was therefore unable to get any detailed information about the mine. I walked over the ground to see the workings and the fall in tail-race, &c. There appeared to me a considerable waste of fall between the discharge-pipe and the creek-bed, some considerable distance below the claim, which, if taken advantage of, should very much reduce the height of jet-pipe at the workings. There appears to be any quantity of good plant on the ground, and other indications of a thorough miner at the head of affairs. Mr. Ewing has since kindly promised to show me over the works when I again visit the locality, a treat I am now looking forward to.

J. Ewing's Claim at Tinker's (29th April, 1891).—I learned here that Mr. Ewing was at Black's for the day. I looked over the claim and plant, also workshop and appliances for making pipes, &c. The same thorough go-ahead system so noticeable in St. Bathans is also to be seen here on and about the claim. All the work done by Ewing on this claim appears to me to be comparatively recent, as if he had not long been in possession; nevertheless, everything was in thorough-going order, and two nozzles doing good work in the face. The great difficulty to be overcome in working these kind of claims at deep levels is a plentiful supply of water at a high level. Query: Where is it to be got from? I looked over some of the claims close to Ewing's, where a very large block of ground has been sluiced away. There was some talk of three companies—Matakanui, Reid's, and Deep Lead—amalgamating in order to work to a greater depth by the combined volume of water available from the two claims first named. I was told that a shaft had been sunk in the ground of the Deep Lead Company to a depth of 200ft., and cross-cuts put in through the gold-bearing layers, which were found to be equal to the surface for gold. This indicates a long life to this and the adjoining claims, if there be sufficient gold to pay for the extra appliances that will be required to lift the *débris* from greater depths than the present water-supply is capable of doing.

Black's, Ryan's Reef (30th April, 1891).—I visited the spot where the reef is said to exist. The shaft, said to be 45ft. deep, was nearly filled with water at the time of my visit. There were several surface-trenches cut a few feet deep close the shaft, but I did not see any reef in any of them; all the work I saw seemed to be confined to prospecting.

Bendigo Quartz-mine, Cromwell (4th May, 1891).—Accompanied by the manager, Mr. Hosking, I went down the shaft to the 520ft. level, where a cross-cut is being driven south, and now in a distance of 197ft., where the country is very hard and wet overhead. In this cross-cut, at 132ft. from the shaft, a small leader was met with, and has now been driven on to the west 51ft., where the stone is from 12in. to 18in. thick, and gold bearing. The workings here are also very wet overhead and underfoot. The pump is a 9in. Colam. The first lift is 250ft., the next 214ft., and 68ft. drawing-lift. The main rods are heart of kauri, 9in. square. The pump has to be kept constantly going to keep the water below the floor of tunnel. The air is good and the Act well observed. The average number of men employed, twenty-two. There was one man, William Campbell, killed in this mine on the 28th March last; this was investigated by me, and my report thereon sent in on the 8th April.

Sew Hoy, Big Beach, Company (8th May, 1891).—Three of the four dredges were working at the time of my visit, and I am sorry to say it does seem to me a blind way of working ground. It is, however, giving employment to many men directly and indirectly, and circulating money in the district, but I fear the cost of fuel (£1 11s. per ton), and other expenses inseparably attached to heavy plant worked by steam, is very much against the scheme proving a paying one to shareholders in the end. These remarks apply to all the steam-dredges I saw in the district.

Phoenix Quartz-mine in Skipper's Creek (13th May, 1891).—The workings are 150ft. from the surface, where the stone is 10ft. thick. A winze is sunk 100ft. below these workings, in good stone all the way. The workings are quite dry. There are twelve men getting stone, four in the winze, eight driving a prospecting level, and thirty-six otherwise employed: making, in all, sixty men in or about the claim. During the past ten months 3,200 tons of stone were crushed, which yielded an average of 15dwt. per ton. The battery is kept going night and day. The mine is well timbered, and the very heavy roof necessitates plenty of it to keep the mine open. The winding is done by an engine driven by compressed air supplied by the dynamo. The reef runs east and west. This reef should pay well with a less number of men and the same output of stone, which, I think, could be easily done.

Sandhills Dredge, Shotover River (13th May, 1891).—This plant raises 60 tons per hour, and is working continuously night and day. The dynamos are driven by a Pelton water-wheel, which has a head of 500ft., and is said to be equal to fifty-horse power. The dredging is being done 16ft. deep, and on the bottom. The machinery works very smoothly and steadily. It is certainly the neatest plant of its kind I have yet seen, and the cost of working it must be very much below the cost of the steam-dredges. The yield of gold per week at the time of my visit was from 40oz. to 50oz.

Gallant Tip Quartz-mine (13th May, 1891, and 20th April, 1892).—There are two faces getting stone, at about 100ft. above the adit-level. The block now being stoped out is about 70ft.

long, and from 7ft. to 8ft. thick, and yields about 5dw. to the ton. There are two shifts of four men each, and they manage to keep the battery of twelve stampers going full time. There are in all fifteen men employed in and about the mine and battery. I found the workings in fairly good order, and the air good. The mining timber is a costly item in the working of the mine; it has all to be packed on horses a distance of about four miles over a very uneven and, in places, dangerous, track. The mine is worked all the year round, but the battery is generally idle about three months in the year. The old turbine water-wheel has been removed and a Pelton put up in its stead. The whole of the battery plant has had a general overhaul, and is reported to be now in good order. The quantity of stone crushed runs from 60 to 70 tons per week. There is stone in the face of the main-level tunnel, which is driven nearly 1,000ft., and I understand it is intended shortly to further extend this tunnel to prospect the back country in line of reef.

The Frankton Beach Dredge (9th May, 1891).—Up to the time of my visit this dredge has worked about 200 yards up the stream by 50ft. wide from the starting-point, and the yield so far was satisfactory—namely, £800 in three months. The dredge was not working on the day of my visit, owing to the breakage of a valve-spindle, but it is expected to be in working-order in a few days. The manager states that the plant has worked most satisfactorily since the first day of starting, and that 50 tons of sand is lifted every hour. The actual dredging is equal to twenty hours in the twenty-four, and the consumption of coal for the same time is equal to about 3 tons.

Six-mile Beach Dredge, Waikawa District (9th July, 1891).—This dredge is 60ft. by 40ft., with 32ft. washing-tables on each side. The engine is one of Davey and Paxman's compound twenty-five-horse power. The centrifugal pump (Williams's) has 3½ft. runners, and the casing is 6ft. high from the bed-plate. The discharge-pipe is 15in. in diameter, and the suction-pipe 13in., capable of discharging ten Government heads of water. The pump weighs 7 tons, and is driven by two belts. Some very large stones are sometimes carried through the pump. I saw one myself which weighed 78lb., and I think from its shape must have nearly fitted the pipe. This is a proof of what these pumps are capable of doing where there is heavy wash. At the time of my visit the pump was lifting the wash from a depth of 14ft. from the surface of the water; this depth was slightly below the sea low-tide level. The dredge is capable of lifting and washing 40 tons per hour, and uses a little over one cord of wood per shift. It is nearly all rata wood used. There are ten men employed on and about the mine, divided into three shifts. There are four wood-cutters, and one carter, but these are not fully employed, as they could cut and deliver more than the engine could consume. There is a dynamo in the dredge, but it was not used at the time of my visit. The company constructed a large reservoir within 5 chains of where the dredge is now working, which is capable of holding three months' water without any inflow. The bottom of the reservoir is high enough to discharge its water into the dredge-pond, which is above high-water mark, and keeps her up to the required level. The stripping is all fine sand, and the bottom is paved with heavy water-worn stones, which are firmly lying on a bed of peat. No gold is supposed to be below the peat-bed. This plant is the most complete of its kind in Otago. Mr. Welman was at the claim at the time of my visit, and very kindly explained in detail all the working-parts of his pump and crane. Attached to the latter is an ingenious piece of mechanism which works a sleeve, to which is attached some strong iron tines. This sleeve is made to revolve at will, and loosen the hard packed gravel at bottom. It tears the hard peat bottom to pieces, the pump at the same time sending it up to be washed. Mr. Welman intends to make some alterations in the condenser, with a view to saving fuel. Mr. Duncan Dundan, the manager, takes a lively interest in all the mechanical improvements being made by Mr. Welman, and appears to be familiar with machinery. The pump travels 250 revolutions per minute, the engine 112 revolutions, and the amalgamating-engine from 300 to 400 revolutions per minute while pumping. The dredge started work in April last. The gold is so fine that it has been carefully estimated to require ten thousand specks to weigh a grain.

Waipapa Dredge Company (10th August, 1891).—This claim is on the sea-beach, a few miles west of the Six-mile Company, and only a few chains from high-water mark. At the time of my visit all work was suspended, awaiting the arrival of a larger pump, which is on the way out from England, and will arrive shortly. This plant started operations in February, 1889, and during the first six months' work obtained only 60oz. of gold, but between that time and the following September the yield was 1,000oz. Work was then stopped till the arrival of the new pump. The ground to be worked is parallel to the beach, and from 5 to 6 chains from the sea. The engine is one of David Paxman's, and twenty-horse power. The gold-saving tables are lengthwise with the dredge, and 12ft. wide on each side. The plant all through is very similar to that at the Six-mile. It is calculated to have the plant in full work on the 1st September. Mr. Brunton is the manager.

Lake Brunton Dredging Company (10th August, 1891).—This plant is a fac-simile of the Six-mile plant. The washing-tables, however, are laid lengthwise with the dredge, and the *débris* is being emptied from behind and at the sides in open boxes to a convenient distance away. The depth dredged is about 8ft. from the surface of the water on which the dredge is floating, and the bottom, I imagine, is about the level of low tide. The bottom on which the gold-bearing wash rests is also a hard peat, and the wash is heavy; stones of 60lb. are thrown on the washing-tables. The sea is not more than 3 chains from the dredge. The dredge-pond is kept full by a flow of water from Lake Brunton, which is not more than 10 chains from the work. In winter-time the men work one shift of ten hours, and in summer two shifts of eight hours each. The fine quality of the gold is similar to that got on the Six-mile Claim. All the plant appears to do its work well.

Otara Dredging Company (10th August, 1891).—The dredge is about completed, and the engine, boiler, and pumps are being fixed in position. This plant differs very much from the others visited in this district. The boiler is multitubular without a carriage. The pump is one of Gwynn's centrifugals, of 3ft. runner, and about 2in. wide. The engine is also Gwynn's make. I do not think the boiler will generate enough steam to do the work required of it, and I am almost certain the pump will prove a failure. The pump and its appliances are not likely to continue working more than

an hour at a time without a stoppage to remove small stones, sticks, &c., from the mouth of the pipe. I think it a great pity that good money should be so wasted, as it appears to me to be in this case. The dredge is not near long enough to allow the strokes to get opposite the furnace. I will be much surprised if this company pays expenses.

Bushey Point Dredging Company (11th August, 1891).—This dredge was nearly completed at the time of my visit. It is fitted up much the same as the Otara in the matter of pumps, and will therefore, in my opinion, prove a certain failure.

Kirkpatrick and Eddy's Sluicing Claim, Clutha River (19th August, 1891).—This claim is situated in a gorge of the Clutha, a short distance below the Island Block Claim, and on the west side of the river. The water is obtained from the east side, and conveyed by a race to a convenient spot opposite the claim, from where it is then carried in pipes down the side of the hill to certain level, and from thence to the opposite side of the river and claim. The pipes are suspended on wire ropes, and is a neat and substantial piece of engineering. The pipes appear to be about 11 in. diameter, and nozzles 6 in. There are two sets of tail-boxes stretching from the claim to the river—the one set appears to have about 4 in. fall to the 12 ft., and the other about 6 in. fall to the 12 ft. The average depth of stuff washed away is about 20 ft., but will now average nearly 40 ft. deep. I think it will take from eight to ten years to work the claim out. The quantity of water used is sixteen Government heads. There was no one on the claim at the time of my visit. The head-race at the top of the pipes was carried away, and the men were then doing repairs.

Island Block, Clutha River (19th August, 1891).—There were at the time of my visit two open faces worked by jets in each. The one face may be called the old face, or a continuation of the original workings from near the river. This face was said to be now very much poorer than it used to be, and that the good run of gold had "cut out" near the hillside. Several paddocks more in the flat had been sluiced, in the hope of picking up the lead again, but the returns were not satisfactory. It is, however, intended to go on with the work, in the hope of getting good ground further ahead. The second face and jet is at a sharp bend in the flat, where an open cut is being sluiced across the flat with a view to find the supposed lead. I am of opinion that the lead exists, but may be broken where the cut is being sluiced. I feel confident that good ground will be found in the straight run of the flat going upward. The wire bridge over the Clutha River is being strengthened to carry a second lot of supply pipes, with a view to push the works ahead more rapidly. The plant is the largest and best of its kind in the colonies.

Roxburgh Amalgamated (31st August, 1891).—This claim is making splendid progress lately. The working-faces are now back some distance from the river, and the tailings are being deposited in the worked-out ground. There are now two jets working close up to separate faces, and appear to be doing a great amount of work. I rather like the general look of the bottom-wash in this mine. It looks as if it had not been disturbed much after it was finally deposited as the river-bed ages ago. The stripping is very deep, but easily run off.

Hercules No. 1 Gold-mining Company (31st August, 1891).—This company has worked out the ground close to the edge of the river, and the plant is now being shifted back towards the terrace, which will enable the manager to reduce the height of his discharge-pipe and sluice into the worked-out ground. I believe the ground was very rich at the brink of the river, but am told it is not nearly so good in the terrace. There may, however, be good ground in a second lead, if there be one. It will take some time to test the large flats in some of the claims.

Hercules No. 2 (31st August, 1891).—This claim is in full swing, and is using about sixteen Government sluice-heads of water. A considerable strip of ground has been sluiced along the side of the river below Hercules No. 1, but I have not heard anything about the yield of gold. The manager expects in five months' time to be enabled to shift his plant so as to sluice into the ground now being worked out. This will be comforting to the dredgers lower down the river, who have been complaining of the extra depth of tailings now to be dredged to get to the level of the old river-bed.

Longwood Sluicing Company (15th September, 1891).—This claim is situated north of Riverton, about twelve miles on what is known as Gorge Creek, which empties into Puripurikina Creek. This company commenced in 1889 to sluice out a tail-race in a gully to the ground, where some rich finds of gold were got some years ago, and work is still being continued steadily. As the work proceeds the ground gets considerably deeper, and, at the same time, very much wider at the top. The sides make their own slope, which is probably nearly two to one of a batter; the open cut is therefore nearly 200 ft. wide at top. This width carries a large quantity of timber, which has to be removed to some little distance from the side of the cutting. It is the intention of this company to extend the tail-race a considerable distance yet. The little gold obtained from the washings is angular and sharp, and would lead one to suppose it has not travelled far. There is a six-mile race capable of carrying four heads of water, and a dam capable of storing four heads for eight hours. If this company finds payable ground there is room for many more claims in the same locality; but before more claims could be opened out a plentiful supply of water would have to be brought a long way, probably from Mount Linton.

Round Hill Gold-mining Company (17th September, 1891).—From about the centre of the old mining operations at Round Hill to the sea is about $3\frac{1}{2}$ miles by following the valley of the Orawera Creek. This creek-bed and the low-lying flats on each side, several chains in width, are filled with tailings, sand, and silt to a depth of from 12 ft. to 20 ft. all the way to the sea. Mr. Evans, the company's manager, after having carefully tested samples of this sand and silt taken from many places in this valley of mud, came to the conclusion it would pay to sluice on a large scale the whole of this valley of silt and tailings into the sea. He found very fine gold wherever he tried, and has estimated it to be payable provided the gold can be saved when sluiced on a large scale. Mr. Evans then secured a large claim at the old workings, and the right to construct a tail-race from the sea to the centre of mining operations. Mr. Evans then went to London and floated a company to furnish the necessary capital to do the work under his supervision. Since his return

the necessary surveys have been made and levels taken for the tail-race. Plans and sections of same have been prepared, and at the time of my visit a few chains of excavations in the sandhills near the sea were nearly completed to the proper level, and many piles were driven by a pile-driver far out beyond high-water level. There are two rows of piles, between which the tail-box or channel is to be built and firmly bolted thereto, so as to prevent the sea washing it away. The floor of the channel will be nearly at low-tide level—too low, I fear. It is to be 13ft. wide, divided into two channels of nearly 6½ft. each, and of a depth of 4½ft. The planting will be 2in. thick, with inch lining-boards throughout; flooring-joists, 12in. by 6in.; and side straps, 4in. by 4in. The quantity of timber required to complete the work is estimated at 3,000,000ft. The channel is to have a fall of only 2in. to the chain throughout (it appears a greater fall cannot be obtained). It is intended to make all necessary preparations to save gold when the first 50 chains of channel have been constructed. Mr. Evans estimates the quantity of water to work the channel at fifty heads. I presume he intends to work only half of the channel at one time. I understood him to say that he had purchased all the water-rights on the field, which, as far as I was able to judge, after rambling over the field, would not amount to more than twenty-five heads. However, if enough money is available, I have no doubt more water can be brought in by constructing a thirty-mile race. A survey is at the present time being made in the Longwood District, with a view to finding twenty heads of water at a certain level. While the channel-work is proceeding it is intended to carry on mining operations on the claim, and tail into the flat as others are doing. Preparations for an early start were well advanced at the time of my visit. The main line of pipes, 13in. diameter, were being laid from the race to the claim. The branch pipes are 10in. diameter, and the pressure will be about 350ft. It is intended to work two jets till the channel is completed—probably two years from date. I found six men employed at the channel, four men cutting a distribution race, and five men laying pipes. The channel, when completed, will be open to the miners to tail into on a weekly payment of 3s. per man; and when the company has a plentiful supply of water, the miners will be supplied at 15s. per head of 10in. per week. This quantity of water—a Round Hill head—is equal to a quarter of a Government head.

Premier Quartz-mine (23rd April, 1892).—I inspected all the workings. The adit is in all 1,400ft. long. At 600ft. from the mouth there is a shaft 200ft. deep, at which level the reef has been followed to the west for a distance of 354ft., and from the bottom of the shaft to the east a drive has been put in 364ft. to meet an adit on the same level, which has been driven a distance of 406ft. from the surface, leaving about 300ft. to be driven to complete the low adit-level, which can be extended by a tramway in the open direct to the battery. This most necessary work has lately been stopped for some unexplained reason, therefore the stone is being hoisted up the 200ft. shaft to the top adit, and then carted down hill to the battery, as if it is intended to make the working of the mine as costly as possible. All the timber used in the mine has to be dragged by horses, or packed on their backs, up this 200ft., to be lowered down again in the working-adit. The present method of supplying the mine with a good current of air is inadequate, and could be entirely dispensed with if the low-level adit was completed. I had to call the manager's attention to the very sluggish state of the air-current in the lower workings. He at once instructed one of the men to examine the joints of the air-pipes to see if the air was getting away anywhere. The man suggested the possibility of one of the pipes being filled with water, which would account for the small supply from the pipe. I fear the air-pipes leading to the mine are a long way too small to do what is required at all times, and in all weathers, and think it will be wise to again visit the mine at an early date to see if there be any improvement. I found an open shaft uncovered at the side of the footway in the adit leading to the work, and requested the manager to cover it at once in order to prevent an accident. The average thickness of reef is from 18in. to 24in., and the average number of men employed in getting stone is twenty—sometimes three, but oftener two shifts in the twenty-four hours. The timber for the mine is a costly item, as it comes all the way from the head of the lake, a total distance of about seventy miles. The old water-wheel has been pulled down and a 6ft. Pelton fixed in its stead, which was working very nicely at the time of my visit.

Arrow Tunnel Company, Arrow River (23rd April, 1892).—At a very narrow part of the Arrow River, about four miles above Arrowtown, known as the Falls, at some remote period of time past an immense land-slip has occurred, carrying very large blocks of rock, which permanently filled up the river-bed to a great depth; and, notwithstanding all the wear by stream and *débris* during a great length of time, the gorge remains filled in above its original bed to a supposed depth of between 80ft. and 90ft. From the Falls upwards for a length of between one and two miles it is said the bed-rock of the river has never been reached by the miners, and is supposed to be as rich as other parts of the river-bed worked in the palmy days of gold-mining in the Arrow. Therefore, in order to get at this supposed rich river-bed, a tunnel tail-race of 1,000ft. in length, 9ft. wide, and 7ft. high, with a fall of 6in. to the 12ft., has lately been completed from a convenient part of the low side of fall—making due allowance for the large body of tailings to be sluiced there from fully two miles of river-bed—to a spot a little above the fall, which is supposed to be clear of the toe of the body of large blocks of rock showing in the stream. The top end of the tail-race tunnel is about 108ft. below flood-level of the river and top frame of a shaft lately sunk to the tunnel, which shaft is a remarkably strong piece of work, consisting of massive beams of squared timber, well fitted and bolted together and to the solid rock at 56ft. down from the top frame. The rock foundation slopes considerably to the east from the shaft. A second shaft, not far from the first, is now being sunk to the same level, and is down 36ft. When this is completed, and the strong iron gates fixed in position at the head of the tunnel, the head-works may be said to be ready for a start at sluicing-operations on a large scale, as it must be clearly understood that very soon after a start is made the whole of the Arrow River must continue to flow through the tunnel till shut off by the gates from time to time to wash up, or do repairs, &c. The tunnel is driven in the solid rock on the west side of the gorge. The floor of the tunnel is brought to an even gradient by fastening large trans-

verse beams of timber to the rock floor with iron bolts. On these beams the planking is to be fastened to the full width of the tunnel (9ft.), the sides of the tunnel are to act as sides for the tail-race, and the whole of the floor is then to be closely covered with railway-rails laid transversely, which will act as ripples. The cost of the tunnel excavation was £3 per foot, and the rails, delivered on the ground, £8 per ton. The cost of shafts is stated to be £3 per foot, and the total expenditure on these works to date at £6,000, to which will have to be added another thousand pounds before gold-bearing wash is reached. In course of time, after the bottom of the river has been reached, and a long—a very long—opening has been made, it is more than likely that it will be found necessary to bring water to the claim at a high level, and use giant nozzles to do the work quickly. Having this in view, the company intend constructing a head-race about two miles long, from Boxing Billie Creek, to be 500ft. high at or near the present operations, and to carry twenty Government heads. It is intended to erect a 10-ton crane to lift the large stones out of the paddock and throw them to one side out of the way.

Sunrise Lease Quartz-mine (25th April, 1892).—I inspected the high-level adit, and instructed the manager to cover an open shaft at the side of the footway. Went down a shaft to a 50ft. level, where a little stone was being got, and some prospecting-work going on. The lower adit is 930ft. long, and 150ft. below the top level. There appears to be very little work doing. There are, on an average, about five men employed. The air was good.

There has been but one fatal accident in the gold-mines brought under my notice during the year: William Campbell was killed in the Bendigo Mine on the 28th March.

I have, &c.,
J. Gow, Inspector of Mines

The Under-Secretary, Mines Department, Wellington.

No. 19.

Mr. A. AITKEN, Manager, Waimea-Kumara Water-race, to the UNDER-SECRETARY of MINES,
Wellington.

SIR,—

Kumara, 24th May, 1892.

I have the honour to submit the following report on the Waimea-Kumara Water-races for the year ending 31st March, 1892:—

WAIMEA RACE.

The total sales of water from this race for the year amount to £1,121 16s. 2d., and the total expenditure on maintenance for the same period, £784 13s. 10d., leaving a credit of £337 2s. 4d. on the year's transactions. The average number of miners supplied with water from the race was seventy-six, and the approximate quantity of gold obtained was 2,590oz., valued at £10,100 17s.

The sales of water are £267 1s. 3d. less than for the preceding year, and the yield of gold 482oz. less. The expenditure for maintenance is less than for the previous year by £148 9s. 5d. Besides the sales of water above referred to, four claims were supplied with free water to the value of £96 19s. The parties supplied with free water have all been paying for water from the race for many years, and in each case inquiries as to the amount of gold being obtained were made by me, showing that the parties could not afford to pay for the whole of the water used and make a living.

During the holidays at Christmas time the usual repairs to the tunnels, trestlework, and fluming were effected, and the whole of the race is in a fair state of repair, taking into consideration the length of time since the timber structures were erected.

There appears to be a gradual decline in the number of miners using water from the race and in the quantity of gold being obtained, but still there are a few paying claims which will not be worked out for some years to come.

In the district there are a considerable number of miners making a fair living, and in some instances more than that, in claims that the water of the race does not command.

Branch to Callaghan's.

During the year I examined the country in the vicinity of Callaghan's, Italians', and to the northward of the Waimea Creek, and reported to the department the result of my examination. Since that time a survey for a branch race to Callaghan's has been made. The branch will start from the lower end of the pipe-line on the Waimea Race, along the eastern slopes of the range by Akeroa and Duffers' Creeks, crossing the main Kumara-Hokitika road at its summit-level near Greeks' No. 1 Gully, and thence to Italians' and Callaghan's. The recent survey takes the race-line into Callaghan's 52ft. higher than the former survey, and the distance is proportionately less. This branch race will pass through gold-bearing country throughout its entire length, and will not only supply water to the country it passes through but will also supply the middle branch of the Waimea Creek, where considerable areas of auriferous ground are still unworked.

KUMARA RACE.

The total sales of water from this race during the year amounted to £6,645 11s., and the expenditure was £1,584 10s. 11d., leaving a credit balance of £5,061 0s. 1d. on the year's transactions. The average number of miners supplied with water from the race was 172, and the approximate quantity of gold obtained by parties using the race-water was 10,239oz., having a value of £39,932 2s.

Besides the sales of water above referred to, water to the value of £413 3s. 4d. was supplied to parties as subsidies on the cost of deviations of race, which, in all instances, consisted of the substitution of steel and iron piping for portions of race in open cutting and high fluming. Free water to the value of £339 17s. 3d. was supplied to assist in opening up new claims, and claims

The Under-Secretary, Mines Department, Wellington.

WM. GUFFIE, Chairman.

W. GUFFIE,
N. P. HJORRING,
JAMES MITCHELL. } Members of the Mount Ida
Water-race Trust,

APPENDICES TO WARDENS' REPORTS.

No. 1.

STATEMENT showing the REVENUE of the GOLDFIELDS collected in the several DISTRICTS, and the GOLD DUTY of the COLONY of NEW ZEALAND, for the Period from the 1st January to the 31st December, 1891.

District.	Miners' Rights.	Business Licenses, Machine and Residence Sites.	Water-races, Sluices, &c.	Gold-mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous.	Totals.
AUCKLAND.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Coromandel ..	177 5 0	56 0 0	..	311 0 0	2 2 0	9 2 0	46 8 6	601 17 6
Te Aroha ..	28 15 0	25 0 0	..	987 15 0	4 14 0	11 14 0	7 12 6	1,065 10 6
Thames and Ohinemuri ..	232 10 0	171 5 0	23 10 0	1,742 7 1	19 16 0	26 1 3	334 9 0	2,549 18 4
Puhipuhi ..	31 10 0	9 0 0	0 5 0	454 10 0	10 10 0	1 13 0	2 17 6	510 5 6
Totals ..	470 0 0	261 5 0	23 15 0	3,495 12 1	37 2 0	48 10 3	391 7 6	4,727 11 10
NELSON.								
Collingwood ..	47 10 0	1 0 0	6 15 0	268 5 0	9 10 0	0 11 0	14 8 6	347 19 6
Westport ..	131 10 0	6 9 0	15 13 0	388 16 0	8 15 0	7 7 0	174 2 6	732 12 6
Charleston ..	88 5 0	..	15 12 6	184 16 6	13 16 0	2 13 0	5 17 0	311 0 0
Ahaura ..	296 0 0	1 5 0	25 5 0	144 4 0	42 13 0	10 8 0	23 8 0	543 3 0
Reefton ..	187 5 0	13 10 0	15 10 0	1,944 12 9	7 14 0	10 9 0	258 2 3	2,437 3 0
Wangapeka ..	13 5 0	..	0 10 0	..	0 7 0	..	0 15 6	14 17 6
Lyell ..	33 5 0	..	3 15 0	203 10 0	1 11 0	3 19 0	17 19 6	263 19 6
Motueka ..	5 5 0	..	0 15 0	..	0 4 0	..	..	6 4 0
Murchison and Owen's ..	92 10 0	3 0 0	11 12 6	..	4 11 0	0 12 0	3 8 0	115 13 6
Totals ..	894 15 0	25 4 0	95 8 0	3,134 4 3	89 1 0	35 19 0	493 1 3	4,772 12 6
MARLBOROUGH.								
Havelock ..	99 10 0	..	2 5 0	206 9 8	10 3 0	11 9 0	0 4 6	330 1 2
Picton ..	..	..	..	..	..	..	..	..
Totals ..	99 10 0	..	2 5 0	206 9 8	10 3 0	11 9 0	0 4 6	330 1 2
WESTLAND.								
Hokitika and Kaniere ..	218 0 0	19 10 0	12 15 0	94 1 0	15 17 0	8 6 0	7 14 8	376 3 8
Greymouth ..	310 5 0	10 0 0	34 5 0	191 3 0	29 0 0	1 11 0	18 4 0	594 8 0
Ross ..	59 0 0	2 10 0	9 5 0	577 10 0	8 5 0	0 9 0	24 15 6	681 14 6
Stafford ..	75 10 0	..	7 15 0	143 5 0	6 6 0	4 15 0	0 10 0	238 1 0
Kumara ..	304 10 0	12 0 0	5 0 0	132 17 6	21 13 0	..	2 7 6	478 8 0
Jackson's Bay ..	4 10 0	..	0 15 0	..	0 4 0	..	1 0 0	6 9 0
Goldsborough ..	66 0 0	..	18 2 6	..	13 5 0	2 13 0	1 10 0	101 10 6
Okarito ..	37 10 0	9 10 0	3 7 0	92 6 8	2 18 0	..	0 4 0	145 15 8
Totals ..	1,075 5 0	53 10 0	91 4 6	1,231 3 2	97 8 0	17 14 0	56 5 8	2,622 10 4
OTAGO.								
Black's ..	61 15 0	13 12 6	12 7 6	226 0 3	7 0 0	4 13 0	17 7 6	342 15 9
Tapanui ..	5 5 0	..	0 15 0	..	0 13 0	..	6 0 0	12 13 0
Hindon ..	49 16 0	1 15 0	1 17 6	189 9 0	1 3 0	..	13 0 5	257 0 11
Naseby ..	258 1 0	23 10 0	44 12 6	578 3 0	21 13 0	22 12 0	2 14 0	951 5 6
Roxburgh ..	117 0 0	0 5 0	10 0 0	482 2 0	9 2 0	16 4 0	16 12 6	651 5 6
Alexandra ..	94 5 0	..	7 12 6	133 7 0	7 1 0	9 6 0	31 9 4	283 0 10
Clyde ..	41 5 0	9 0 0	4 17 6	84 3 9	2 2 0	2 17 6	0 5 0	144 10 9
Pembroke ..	18 10 0	..	0 10 0	2 15 0	0 3 0	..	0 1 0	21 19 0
Cromwell ..	258 15 0	16 5 0	19 5 0	271 13 3	28 13 0	9 3 0	1 0 0	604 14 3
Queenstown ..	141 10 0	19 15 0	20 2 6	987 14 0	19 2 0	10 13 0	270 10 11	1,469 7 5
Arrowtown ..	134 15 0	1 10 0	13 5 0	619 10 2	17 11 0	17 19 10	262 17 6	1,067 8 6
Lawrence ..	250 15 0	8 5 0	18 0 0	873 12 10	16 15 0	12 19 0	52 11 2	1,232 18 0
Waikaia ..	85 10 0	6 0 0	7 17 6	37 10 0	9 2 0	9 5 6	0 3 0	155 8 0
Orepuki, Longwood and Riverton ..	131 2 0	16 15 0	15 2 6	137 15 0	10 7 0	8 12 0	1 2 0	320 15 6
Maerewhenua ..	39 10 0	..	5 15 0	38 8 0	7 4 0	7 8 0	0 12 0	98 17 0
Wynham ..	15 15 0	..	1 5 0	114 10 0	2 4 0	..	10 2 6	143 16 6
Invercargill ..	11 6 0	..	..	..	..	..	..	11 6 0
Totals ..	1,714 15 0	116 12 6	183 5 0	4,776 13 3	159 15 0	131 12 10	686 8 10	7,769 2 5
Grand Totals ..	4,254 5 0	456 11 6	397 17 6	12,844 2 5	393 9 0	245 5 1	1,632 7 9	20,221 13 3

No. 2.

STATEMENT showing the REVENUE of the GOLDFIELDS collected in the several DISTRICTS, and the GOLD DUTY of the COLONY of NEW ZEALAND, for the Period from 1st January to 31st March, 1892.

District.	Miners' Rights.	Business Licenses, Machine and Residence Sites.	Water-races, Sluices, &c.	Gold-mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
AUCKLAND.								
Coromandel ..	32 10 0	4 0 0	..	..	0 4 0	0 11 0	..	37 5 0
Te Aroha ..	4 0 0	..	..	172 16 0	1 11 0	..	..	178 7 0
Thames ..	62 15 0	40 0 0	17 15 0	598 16 9	4 7 0	1 15 0	51 6 0	776 14 9
Puhipuhi ..	3 0 0	4 5 0	..	..	0 16 0	0 16 0	..	8 17 0
Totals ..	102 5 0	48 5 0	17 15 0	771 12 9	6 18 0	3 2 0	51 6 0	1,001 3 9
NELSON.								
Motueka ..	2 10 0	..	0 5 0	..	0 2 0	..	..	2 17 0
Collingwood ..	25 0 0	..	3 0 0	103 15 0	3 19 0	0 3 0	4 1 0	139 18 0
Westport ..	52 0 0	1 10 0	5 7 6	55 9 0	5 12 0	8 3 0	12 13 0	140 14 6
Charleston ..	42 0 0	..	3 7 6	21 2 6	3 15 0	..	3 6 8	73 11 8
Ahaura ..	70 0 0	..	5 2 6	135 10 0	7 8 0	5 12 0	40 15 0	264 7 6
Reefton ..	69 10 0	1 5 0	2 2 6	473 5 0	1 16 0	2 2 6	5 6 0	555 7 0
Wangapeka ..	5 0 0	..	0 10 0	..	0 3 0	..	0 11 6	6 4 6
Lyell ..	9 10 0	..	0 17 6	1 5 0	0 12 0	0 10 6	0 9 0	13 4 0
Murchison ..	19 10 0	..	1 10 0	..	1 4 0	0 6 0	0 12 0	23 2 0
Totals ..	295 0 0	2 15 0	22 2 6	796 6 6	24 11 0	16 17 0	67 14 2	1,219 6 2
MARLBOROUGH.								
Havelock ..	44 11 0	..	2 0 0	128 3 0	2 13 0	..	0 1 0	177 8 0
Picton ..	..	..	..	..	..	..	..	..
Totals ..	44 11 0	..	2 0 0	128 3 0	2 13 0	..	0 1 0	177 8 0
WESTLAND.								
Hokitika and Kaniere ..	73 10 0	6 0 0	3 5 0	57 10 0	2 13 0	0 12 0	1 1 0	144 11 0
Greymouth ..	100 0 0	3 10 0	7 0 0	73 12 0	6 19 0	..	11 17 6	202 18 6
Ross ..	9 0 0	..	0 15 0	143 0 0	1 3 0	..	0 1 0	153 19 0
Stafford ..	23 10 0	..	2 7 6	..	0 14 0	2 1 0	0 15 0	29 7 6
Okarito ..	6 10 0	3 0 0	0 10 0	..	0 5 0	..	14 3 11	24 8 11
Kumara ..	77 10 0	1 10 0	0 10 0	5 5 0	4 7 0	..	0 5 0	89 7 0
Goldsborough ..	23 10 0	..	3 2 6	..	1 15 0	0 10 0	1 4 6	30 2 0
Jackson's Bay ..	..	..	..	..	..	..	..	..
Totals ..	313 10 0	14 0 0	17 10 0	279 7 0	17 16 0	3 3 0	29 7 11	674 13 11
OTAGO.								
Black's ..	12 0 0	..	0 17 6	155 4 0	2 6 0	2 15 0	..	173 2 6
Tapanui ..	1 10 0	..	..	..	0 5 0	..	..	1 15 0
Hindon ..	24 5 0	1 5 0	0 5 0	15 0 0	0 6 0	..	8 16 6	49 17 6
Naseby ..	66 0 0	1 0 0	9 10 0	286 13 4	5 3 0	2 18 0	0 6 0	371 10 4
Alexandra } Clyde ..	22 10 0	..	1 7 6	53 14 0	2 13 0	3 10 0	3 7 6	87 2 0
Roxburgh ..	20 0 0	..	1 10 0	173 13 6	2 2 0	2 3 0	56 11 0	255 19 6
Cromwell ..	63 0 0	1 0 0	4 7 6	45 14 0	6 9 0	1 6 0	..	121 16 6
Queenstown ..	28 0 0	13 5 0	1 2 6	312 11 8	1 13 0	2 10 0	6 5 0	365 7 2
Arrowtown ..	43 10 0	1 10 0	2 7 6	220 5 6	4 10 0	3 11 0	1 14 0	277 18 0
Lawrence ..	48 10 0	2 0 0	2 10 0	53 8 0	2 10 0	3 3 0	73 13 0	190 14 0
Orepuki and Longwood ..	37 3 0	4 10 0	3 15 0	33 0 0	2 9 0	6 10 0	1 12 0	88 19 0
Pembroke ..	5 0 0	..	..	1 0 0	0 1 0	..	..	6 1 0
Maerewhenua ..	6 10 0	..	1 12 6	10 6 0	0 15 0	..	0 4 0	19 7 6
Waikaia ..	26 10 0	..	1 15 0	18 0 0	2 0 0	0 9 0	..	48 14 0
Wyndham ..	3 10 0	..	..	5 10 0	0 5 0	..	..	9 5 0
Invercargill ..	6 10 0	..	..	..	..	..	..	6 10 0
Totals ..	414 18 0	24 10 0	31 0 0	1,384 0 0	33 7 0	28 15 0	157 9 0	2,073 19 0
Grand Totals ..	1,170 4 0	89 10 0	90 17 6	3,353 9 3	85 5 0	51 17 0	305 18 1	5,146 10 10

No. 3.

COMPARATIVE RETURN of REVENUE derived from the GOLDFIELDS in the several DISTRICTS of NEW ZEALAND during the Years 1890 and 1891, showing INCREASE or DECREASE under each Head of Revenue.

District.	Miners' Rights	Business Licenses, &c.	Water-races, Sluices, &c.	Gold-mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Miscellaneous.	Gold Duty.	Totals.
AUCKLAND—									
Year 1890	534	344	52	2,630	25	25	179	3,175	6,964
Year 1891	470	261	24	3,496	37	49	391	4,541	9,269
<i>Increase</i>	..	..	..	866	12	24	212	1,366	2,305
<i>Decrease</i>	64	83	28	..	..	..	..	..	..
WELLINGTON—									
Year 1890	..	..	..	..	..	..	..	..	..
Year 1891	..	..	..	..	..	..	..	..	..
<i>Increase</i>	..	..	..	..	..	..	..	..	..
<i>Decrease</i>	..	..	..	..	..	..	..	..	..
NELSON—									
Year 1890	838	91	105	2,668	92	22	898	291	5,005
Year 1891	895	25	95	3,134	89	36	498	16	4,788
<i>Increase</i>	57	..	..	466	..	14	..	..	..
<i>Decrease</i>	..	66	10	..	3	..	400	275	217
MARLBOROUGH—									
Year 1890	123	..	4	120	9	15	2	612	885
Year 1891	100	..	2	206	10	11	..	..	329
<i>Increase</i>	..	..	..	86	1	..	..	..	..
<i>Decrease</i>	23	..	2	..	..	4	2	612	556
WESTLAND—									
Year 1890	910	47	104	1,009	97	32	145	8,947	11,291
Year 1891	1,075	54	91	1,231	97	18	56	2,009	4,631
<i>Increase</i>	165	7	..	222	..	..	..	..	..
<i>Decrease</i>	..	..	13	..	..	14	89	6,938	6,660
OTAGO—									
Year 1890	1,280	165	214	4,894	157	170	1,092	6,300	14,272
Year 1891	1,715	117	183	4,777	160	132	686	7	7,777
<i>Increase</i>	435	..	..	..	3	..	..	..	..
<i>Decrease</i>	..	48	31	117	..	38	406	6,293	6,495
<i>Total Increase</i>	570	..	..	1,523	13	..	..	..	..
<i>Total Decrease</i>	..	190	84	..	..	18	685	12,752	11,623

NOTE.—The gold duty was abolished in the South Island on 31st March, 1891, by "The Gold Duty Abolition Act, 1890."

No. 4.

COMPARATIVE RETURN of the TOTAL AMOUNTS of GOLDFIELDS REVENUE (exclusive of Gold Duty) collected in the several Districts during the Years 1890 and 1891, and the Quarters ending 31st March, 1891 and 1892 respectively, showing the INCREASE or DECREASE in respect of each District.

District.	Years 1890 and 1891.				Quarters ending 31st March, 1891, and 31st March, 1892.			
	1890.	1891.	Increase.	Decrease.	1891.	1892.	Increase.	Decrease.
AUCKLAND.								
Coromandel	£ 794	£ 602	£ ..	£ 192	£ 209	£ 37	£ ..	£ 172
Te Aroha	810	1,066	256	..	286	178	..	108
Thames	2,185	2,550	365	..	577	777	200	..
Puhipuhi	..	510	510	..	..	9	9	..
NELSON.								
Motueka	4	6	2	..	2	3	1	..
Collingwood	450	348	..	102	100	140	40	..
Westport	766	733	..	33	196	141	..	55
Charleston	201	311	110	..	68	74	6	..
Ahaura	658	543	..	115	127	264	137	..
Reefton	2,110	2,437	327	..	419	555	136	..
Wangapeka	62	15	..	47	20	6	..	14
Lyell	239	264	25	..	36	13	..	23
Murchison and Owen's ..	223	116	..	107	29	23	..	6
MARLBOROUGH.								
Havelock	272	330	58	..	168	177	9	..
WESTLAND.								
Hokitika	263	376	113	..	102	145	43	..
Kanieri	..	..	..	..	..	..	..	..
Greymouth	704	594	..	110	157	203	46	..
Ross	452	682	230	..	312	154	..	158
Stafford	219	238	19	..	22	29	7	..
Okarito	107	146	39	..	63	24	..	39
Kumara	515	478	..	37	154	89	..	65
Jackson's Bay	5	6	1	..	2	..	..	2
Goldsborough	79	102	23	..	19	30	11	..
OTAGO.								
Hindon	150	257	107	..	183	50	..	133
Naseby and Black's ..	1,133	1,294	161	..	472	545	73	..
Alexandra	258	283	25	..	97	87	..	10
Clyde	..	..	..	..	..	..	..	..
Roxburgh	688	651	13	..	194	256	62	..
Cromwell	731	604	..	127	94	122	28	..
Arrowtown	1,117	1,067	..	50	252	278	26	..
Queenstown	1,757	1,469	..	288	285	365	80	..
Pembroke	20	22	2	..	7	6	..	1
Lawrence	1,533	1,233	..	300	205	191	..	14
Waikaia	166	155	..	11	25	49	24	..
Tapanui	8	18	5	..	2	2	..	..
Orepuki and Longwood ..	871	821	..	50	88	89	1	..
Maerewhenua	89	99	10	..	28	19	..	9
Wyndham	..	144	144	..	..	9	9	..
Invercargill	..	11	11	..	..	7	7	..
WELLINGTON.								
Wellington	..	..	..	..	..	..	..	..
CANTERBURY.								
Christchurch	..	..	..	..	..	..	..	..
Totals	19,089	20,076	2,556	1,569	5,000	5,146	955	809
Net increase	..	..	987	..	..	..	146	..

No. 5.

RETURN of GOLD DUTY credited to LOCAL BODIES for the Year ended 31st December, 1891,
and Quarter ended 31st March, 1892.

Local Body.					For the Year ended 31st December, 1891.	For the Quarter ended 31st March, 1892.
COUNTIES—					£ s. d.	£ s. d.
Buller ..	..	..	..	..	319 16 1	..
Collingwood ..	..	..	..	..	13 7 10	..
Coromandel ..	..	..	..	..	678 6 3	416 8 7
Fiord ..	..	..	..	..	13 0 0	..
Grey ..	..	..	..	..	578 4 8	..
Inangahua ..	..	..	..	..	267 4 6	..
Lake ..	..	..	..	..	1 8 6	..
Maniototo ..	..	..	..	..	0 5 0	..
Ohinemuri ..	..	..	..	..	835 7 7	252 5 6
Piako ..	..	..	..	..	72 2 4	25 7 8
Southland ..	..	..	..	..	3 14 0	..
Taieri ..	..	..	..	..	3 3 0	..
Thames ..	..	..	..	..	1,288 17 5	216 6 3
Tuapeka ..	..	..	..	..	99 6 0	..
Vincent ..	..	..	..	..	4 4 0	..
Waikouaiti ..	..	..	..	..	1 18 6	..
Waimea ..	..	..	..	..	2 16 0	..
Waitaki ..	..	..	..	..	46 4 0	..
Wallace ..	..	..	..	..	0 1 0	..
Westland ..	..	..	..	..	696 4 4	..
Whangarei ..	..	..	..	..	0 2 0	..
BOROUGHS—						
Bruhnerton ..	..	..	..	..	0 12 0	..
Hokitika ..	..	..	..	..	4 19 6	..
Kumara ..	..	..	..	..	44 15 11	..
Ross ..	..	..	..	..	97 9 0	..
Thames ..	..	..	..	..	1,017 8 11	188 0 3
Totals ..	..	..	..	..	6,090 18 4	1,098 8 3

Treasury, 14th June, 1892.

ROBERT J. COLLINS,
Accountant to the Treasury.

No. 6.

RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY* for EXPORTATION from NEW ZEALAND, from 1st April, 1857, to 31st DECEMBER, 1891.

PRODUCE OF THE GOLDFIELDS IN		DURING THE QUARTER ENDED 31st DECEMBER, 1891.		ENTERED FOR EXPORTATION TO THE 30th SEPTEMBER, 1891.		TOTAL ENTERED FOR EXPORTATION FROM NEW ZEALAND TO THE 31st DECEMBER, 1891.	
County or Borough.	District.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		Oz.	£	Oz.	£	Oz.	£
County of Coromandel	Auckland	4,215	16,772				
" Thames ..		4,940	19,759				
" Ohinemuri ..		2,206	9,045				
" Piako ..		702	2,747				
Borough of Thames ..		2,182	8,780				
		14,245	57,053	1,670,504	6,246,605	1,684,749	6,303,658
County of Hutt ..	Wellington ..	..	..	188	706	188	706
County of Marlborough	Marlborough ..	575	2,300	72,009	279,362	72,584	281,662
County of Waimea ..	Nelson	87	349				
Collingwood		401	1,594				
		488	1,943	1,658,006	6,576,391	1,658,494	6,578,334
County of Buller ..	West Coast	2,709	10,886				
" Inangahua ..		3,831	15,326				
" Grey ..		3,577	14,305				
" Westland ..		7,348	29,392				
Borough of Kumara ..		1,268	5,073				
" Hokitika ..		520	2,078				
" Ross ..		1,082	4,323				
		20,335	81,333	3,762,609	14,950,599	3,782,944	15,031,932
	Canterbury ..	..	..	24	96	24	96
County of Taieri ..	Otago	87	348				
" Tuapeka ..		5,701	22,721				
" Vincent ..		2,371	9,452				
" Maniototo ..		1,116	4,441				
" Waihemo ..		491	1,897				
" Waikouaiti ..		427	1,709				
" Waitaki ..		698	2,863				
" Lake ..		3,324	13,144				
" Wallace ..		1,303	5,277				
" Fiord ..		125	505				
" Southland ..		1,340	5,340				
		16,983	67,697	4,854,181	19,168,754	4,871,164	19,236,451
	Unknown ..	..	..	70	278	70	278
Totals ..	..	52,626	210,326	12,017,591	47,222,791	12,070,217	47,433,117

* Gold duty abolished in the South Island on the 31st March, 1891, by "The Gold Duty Abolition Act, 1890."

Department of Trade and Customs,
Wellington, 16th January, 1892.

W. T. GLASGOW,
Secretary and Inspector.

No. 7.

COMPARATIVE RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY* for EXPORTATION from NEW ZEALAND for the YEARS ended 31st DECEMBER, 1891 and 1890.

PRODUCE OF THE GOLDFIELDS IN THE DISTRICT OF	DURING THE QUARTER ENDED—				TOTALS FOR YEAR 1891.		TOTALS FOR YEAR 1890.	
	31st March, 1891.	30th June, 1891.	30th September, 1891.	31st December, 1891.	Quantity.	Value.	Quantity.	Value.
	Oz.	Oz.	Oz.	Oz.	Oz.	£	Oz.	£
Auckland ..	16,591	6,867	7,689	14,245	45,392	181,185	31,745	125,760
Marlborough ..	..	36	5,038	575	5,649	22,576	6,073	24,285
Nelson ..	80	2,305	1,572	488	4,445	16,896	2,856	11,049
West Coast ..	20,092	43,137	25,704	20,335	109,268	437,126	89,096	356,368
Otago ..	64	47,302	22,860	16,983	87,209	349,573	63,410	255,926
Unknown ..	..	20	13	..	33	132	13	50
Totals for 1891	36,827	99,667	62,876	52,626	251,996	1,007,488	..	..
Totals for 1890	58,940	49,741	51,377	33,135	..	..	193,193	773,438

* Gold duty abolished in the South Island on the 31st March, 1891, by "The Gold Duty Abolition Act, 1890."

Department of Trade and Customs,
Wellington, 16th January, 1892.

W. T. GLASGOW,
For Secretary and Inspector.

No. 8.

RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY* for EXPORTATION from NEW ZEALAND, from 1st APRIL, 1857, to 31st MARCH, 1892.

PRODUCE OF THE GOLDFIELDS IN		DURING THE QUARTER ENDED 31st MARCH, 1892.		ENTERED FOR EXPORTATION TO THE 31st DECEMBER, 1891.		TOTAL ENTERED FOR EXPORTATION FROM NEW ZEALAND TO THE 31st MARCH, 1892.	
County or Borough	District.	Qu'ntity	Value.	Quantity.	Value.	Quantity.	Value.
		Oz.	£	Oz.	£	Oz.	£
County of Coromandel ..	Auckland	1,823	7,280				
" Thames ..		5,255	20,699				
" Ohinemuri ..		2,349	9,924				
" Piako ..		141	562				
Borough of Thames ..		2,156	8,561				
		11,724	47,026	1,684,749	6,303,658	1,696,473	6,350,684
County of Hutt ..	Wellington ..	..	..	188	706	188	706
County of Marlborough ..	Marlborough ..	1,371	5,450	72,584	281,662	73,955	287,112
County of Collingwood ..	Nelson	822	3,187				
" Waimea ..		114	429				
		936	3,616	1,658,494	6,578,334	1,659,430	6,581,950
County of Buller ..	West Coast	3,244	12,964				
" Inangahua ..		9,936	39,743				
" Grey ..		7,850	31,399				
" Westland ..		6,554	26,213				
Borough of Kumara ..		188	750				
" Hokitika ..		184	735				
" Ross ..		1,026	4,104				
		28,982	115,908	3,782,944	15,031,932	3,811,926	15,147,840
	Canterbury ..	..	..	24	96	24	96
County of Taieri ..	Otago	102	417				
" Tuapeka ..		4,324	17,542				
" Vincent ..		3,993	16,120				
" Maniototo ..		2,649	10,849				
" Waihemo ..		460	1,696				
" Waikouaiti ..		386	1,511				
" Waitaki ..		443	1,817				
" Lake ..		3,604	14,480				
" Wallace ..		1,245	5,030				
" Fiord ..		64	260				
" Southland ..		1,051	4,226				
		18,321	73,948	4,871,164	19,236,451	4,889,485	19,310,399
	Unknown ..	32	126	70	278	102	404
Totals		61,366	246,074	12,070,217	47,433,117	12,131,583	47,679,191

* Gold duty abolished in the South Island on the 31st March, 1891, by "The Gold Duty Abolition Act, 1890."

Department of Trade and Customs,
Wellington, 19th April, 1892.

H. S. McKELLAR,
Secretary and Inspector.

No. 9.

COMPARATIVE RETURN of the QUANTITY and VALUE of GOLD ENTERED for DUTY* for EXPORTATION from NEW ZEALAND for the QUARTERS ended 31st March, 1892, and 31st March, 1891.

District of				Quarter ended 31st March, 1892.		Quarter ended 31st March, 1891.	
				Quantity.	Value.	Quantity.	Value.
				Oz.	£	Oz.	£
Auckland	..	..	..	11,724	47,026	16,591	65,451
Marlborough ..	..	..	..	1,371	5,450	..	..
Nelson	..	..	..	936	3,616	80	320
West Coast ..	..	..	..	28,982	115,908	20,092	80,362
Otago	..	..	..	18,321	73,948	64	252
Unknown	..	..	..	32	126	..	..
Totals	..	..	..	61,366	246,074	36,827	146,385

* Gold duty abolished in the South Island on the 31st March, 1891, by "The Gold Duty Abolition Act, 1890."

Department of Trade and Customs,
Wellington, 19th April, 1892.

H. S. McKELLAR,
Secretary and Inspector.

No. 10.

STATEMENT showing the PRICE of GOLD per OUNCE, PRICE charged per TON for CRUSHING QUARTZ or CEMENT, and PRICES charged for WATER per SLUICE-HEAD per WEEK, during the Year ending 31st March, 1892.

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.
	£ s. d.			
AUCKLAND—North Hauraki	£2 2s. to £3 1s.	8s. to 14s.	£3	..
South Hauraki	£2 10s. to £2 17s. 6d.	5s. to 7s. 6d.	£3	40in.
Ohinemuri	£2 10s. to £2 17s. 6d.	5s. to 7s. 6d.	£3	40in.
Te Aroha	2 16 0	4s.	..	..
MARLBORO—Pelorus and Wairau ..	3 16 0	..	..	..
NELSON—Wangapeka	£3 14s. to £3 16s.	..	..	..
Motueka	£3 12s. to £3 15s.	..	..	..
Charleston	3 17 6	..	£2 15s.	40in.
Inangahua	£3 18s. to £4 1s.	8s. to 10s.	..	..
Collingwood	3 15 0	..	..	..
Westport	3 19 0	..	..	..
Murchison	3 17 0	..	..	..
Lyell	£3 17s. to £4	£1	..	..
WESTLAND—Hokitika and Kanieri)	3 18 0	..	£3	40in.
Waimea	3 18 0	..	£1 10s.	40in.
Totara and Ross	3 16 6	12s.	£1 10s.	40in.
Stafford	3 18 0	..	£1 15s.	40in.
Greymouth	3 18 0	..	£2	40in.
Kumara	3 18 0	..	£1 10s.	40in.
Ahaura	3 18 0	..	..	..
Okarito	3 18 0	..	..	..
Jackson's Bay	3 18 0	..	..	..
OTAGO—Hindon	3 17 6	16s.	..	..
Tuapeka	3 17 0	..	£1 4s. to £1 10s.	For 8 hours.
Dunstan	..	..	..	..
Longwood	3 10 6	..	£1	..
Orepuki and Roundhill ..	3 18 6	..	£1	40in. by 1in.
Arrow (Wakatipu Goldfield) and Queenstown	3 17 6	12s. 6d. to 15s.	..	20in. by 2in.
Mount Ida	3 17 0	..	£1	16in. by 1in.
Macrae's, Hyde	..	..	..	..
Hamilton, Serpentine ..	..	..	..	..
Maerewhenua	3 15 0	..	£1 6s. 8d.	..
Cromwell	3 17 6	12s.	£1 10s.	40in.
Waikaia	£3 10s. to £3 17s. 6d.	..	10s.	60in.
Tapanui	3 16 0	..	..	..
Wyndham	£3 10s. to £3 17s. 6d.	..	..	..
Roxburgh	3 17 0	..	..	..
Clyde and Alexandra ..	3 17 0	12s.	£2	60in.
Black's	3 17 0	12s.	£2	60in.

RETURN showing the AVERAGE PRICES of PROVISIONS and LIVE STOCK for the Year ending 31st March, 1892.

Mining District.	LIVE STOCK.										MEAT.			Rice.	Salt.	Sugar.	Tea.	Tobacco.	Wine.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
	Beer.	Brandy.	Bread—Wheaten.	Butter—Fresh.	Butter—Salt.	Cheese.	Coffee.	Flour.	Grain—Wheat.	Cattle—Horned.	Goats.	Horses.	Sheep.							Swine.	Beef.	Mutton.	Pork.	Milk.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
																									Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.

No. 12.
TABLE showing the AVERAGE RATE of WAGES per WEEK for the Year ending 31st March, 1892.

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. £5 to £10 £8 to £12	£ s. d. £1 to £2 1 0 0	£ s. d. £3 to £6 £3 to £6 3 10 0 3 10 0	£ s. d. £3 to £4 £3 to £4 3 12 0 3 12 0	£ s. d. 2 8 0 3 0 0	£ s. d. 2 8 0 2 9 0 2 8 0 2 8 0	£ s. d. 2 8 0 2 14 0 3 0 0 3 12 0	£ s. d. 2 8 0 2 14 0 3 0 0 3 12 0	£ s. d. 2 8 0 2 5 0 2 8 0 2 8 0	£ s. d. 2 0 0 1 16 0 2 2 0 2 2 0	£ s. d. .. 10/ to 30/ 1 0 0 ..	£ s. d.	£ s. d. 2 0 0 1 16 0 1 10 0 1 10 0	8/ to 15/ 7/ to 10/ 7/ to 10/ 10/
MARLBOROUGH—	..	1 0 0	3 15 0	..	..	..	3 0 0	3 12 0	2 16 0	2 2 0	0 10 0	..	1 5 0	8/ to 12/
NELSON—	4 10 0 £5 to £6	1 0 0 £1 to £3	4 10 0 £5 to £6 4 10 0	3 10 0 £5 to £6 ..	2 14 0 3 10 0 ..	2 8 0 ..	2 14 0 4 0 0 3 0 0	2 14 0 4 0 0 3 0 0	£22/ to £25/ 3 0 0 3 0 0	2 2 0 3 0 0 2 0 0	.. 30/ to 50/ 1 0 0	..	£1 to £1 10/ 1 10 0 1 0 0	8/ to 15/ 20/ 10/
Collingwood	..	..	..	..	3 10 0	3 0 0	3 10 0	3 10 0	3 0 0	3 0 0	15/ to 30/	1 10 0	£2 to £2 10/ 1 5 0	10/ to 20/ 15/
Inangahua	..	1 0 0	6 0 0	..	..	..	4 15 0	4 4 0	3 3 0	3 0 0	2 10 0	1 15 0	1 5 0	15/
Charleston	..	10/ to £3	..	..	..	..	3 12 0	3 12 0	3 0 0	£15/ to £3	0 15 0	1 15 0	1 10 0	10/
Westport	..	..	5 0 0	3 6 0	3 0 0	3 0 0	3 0 0	3 12 0	3 0 0	3 0 0	30/ to 40/	1 0 0	1 10 0	8/ to 12/
Lyell	..	1 10 0	..	..	..	..	3 0 0	2 2 0	2 16 0	1 10 0	0 15 0	..	1 0 0	8/
Albion	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Murchison	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wangapeka	..	..	..	..	..	..	..	..	..	..	..	..	..	..
WESTLAND—	..	3 0 0	2 10 0	..	..	..	4 0 0	4 0 0	3 0 0	2 10 0	1 0 0	2 10 0	2 10 0	20/
Waimea and Stafford	..	1 0 0	£4 to £5	5 0 0	3 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	10/ to 15/
Hokitika and Kanieri	..	1 1 0	5 0 0	4 5 0	3 10 0	..	4 0 0	3 12 0	3 0 0	3 0 0	30/ to 40/	£1 10/ to £2	..	15/
Ross	..	1 10 0	4 10 0	..	4 0 0	..	4 0 0	4 10 0	3 0 0	3 0 0	1 10 0	1 5 0	1 10 0	8/ to 20/
Kumara	..	1 10 0	£4 to £6	£4 to £5	3 0 0	2 5 0	£3 to £3 10/	£3 to £4 4/	£2 10/ to £3	£22/ to £2 14/	10/ to 12/	£1 to £1 10/	£1 10/ to £2	7/ to 15/
Greymouth	..	1 0 0	4 0 0	4 0 0	3 0 0	2 10 0	£3 to £3 10/	£3 to £4 4/	£2 10/ to £3	3 0 0	15/ to 20/	3 0 0	£1 10/ to £2	8/ to 15/
Okarito & Jackson's Bay	..	4 0 0	4 0 0	4 0 0	3 0 0	..	3 10 0	3 10 0	2 8 0	2 0 0	1 0 0	..	£40 to £50*	£30 to £35*
OTAGO—	4 0 0 £3 to £6	£1 5/ to £2 10/	£3 to £5	£3 to £3 10/	2 10 0	£1 15/ to £2	2 5 0	£2 8/ to £3	2 8 0	£116/ to £2 2/	0 10 0	£1 to £1 10/	15/ to £1	10/ to 12/6
Hindon	..	..	..	..	3 0 0	..	2 8 0	3 0 0	2 8 0	2 0 0	0 10 0	15/ to £1	1 0 0	8/ to 10/
Tuapeka	..	0 10 0	4 0 0	3 10 0	3 0 0	2 10 0	2 10 0	3 0 0	2 15 0	2 0 0	0 10 0	1 5 0	1 0 0	10/
Tapanui	..	..	..	..	3 0 0	..	2 10 0	3 0 0	2 16 0	2 2 0	0 10 0	1 10 0	1 0 0	7/6 to 15/
Cromwell	..	..	..	..	3 0 0	..	2 10 0	3 0 0	2 16 0	2 2 0	0 10 0	1 10 0	1 0 0	10/
Glyde	..	..	..	..	3 0 0	..	2 10 0	3 0 0	2 16 0	2 2 0	0 10 0	1 10 0	1 0 0	10/
Alexandra	..	12/6 to 21/	4 0 0	3 0 0	2 18 0	2 2 0	3 10 0	3 10 0	2 16 0	2 2 0	0 10 0	1 10 0	1 0 0	7/6 to 15/
Black's	..	..	..	..	2 8 0	..	3 10 0	3 10 0	2 16 0	2 2 0	0 10 0	1 10 0	1 0 0	7/6 to 15/
Roxburgh	..	12/6 to 21/	4 0 0	3 0 0	2 8 0	2 3 0	3 10 0	3 10 0	2 16 0	2 2 0	0 10 0	1 10 0	1 0 0	10/
Waikaka	..	..	4 0 0	3 0 0	..	..	2 10 0	2 10 0	2 0 0	2 0 0	0 7 0	1 10 0	1 0 0	10/
Orepuki and Longwood	..	£40 p. ann.	3 0 0	..	2 10 0	..	..	4 0 0	2 2 0	1 16 0	0 4 0	1 10 0	1 0 0	10/
Arrow	..	1 0 0	5 0 0	4 0 0	3 0 0	2 10 0	3 0 0	4 0 0	3 0 0	2 8 0	10/ to £1	£1 to £1 10/	£1 to £1 5/	10/ to 15/
Queenstown	..	1 0 0	5 0 0	4 0 0	3 0 0	2 10 0	3 0 0	4 0 0	3 0 0	2 8 0	10/ to £1	£1 to £1 10/	£1 to £1 5/	10/ to 15/
Mount Ida	..	..	£3 10/ to £4	..	..	..	3 0 0	£3 to £3 12/	£2 8/ to £3 14/	2 2 0	0 15 0	2 8 0	1 0 0	10/ to 15/
Maerawhenua	..	..	3 0 0	2 10 0	..	..	2 14 0	2 2 0	2 0 0	2 0 0	..	..	1 0 0	8/
Wyndham	..	..	3 10 0	2 10 0	8/ a day	3 10 0	2 14 0	2 2 0	2 2 0	..	..	..	1 0 0	8/ to 12/

* Per annum.

No. 13.

NUMBER of MACHINES employed in ALLUVIAL and QUARTZ-MINING, and the VALUE thereof, for the Year ending 31st March, 1892.

Mining District.	Machinery employed in Alluvial Mining.												Machinery employed in Quartz-mining.										Approximate Value of all Mining Plant included in this Return.		
	Steam-engines employed winding, crushing, &c.		Puddling Machines.	Whims.	Whips or Pulleys.	Sluices, Toms, and Snice-boxes.	Water-wheels.	Hydraulic Hose.	Pumps.	Dredges.	Quicksilver and Compound Cradles.	Derricks.	Stamp-heads crushing Cement.	Boring Machines.	Steam-engines employed winding, crushing, &c.		Crushing Machines.	Stamp-heads.	Water-wheels.	Whims.	Whips or Pulleys.	Derricks.		Bordans.	
	No.	Aggregate h.p.													No.	Aggregate h.p.									
AUCKLAND—																								£	
North Hauraki ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	200	10	86	3	..	..	..	..	30,000
South Hauraki ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15	510	33	380	40	..	..	302	91,000	
Te Aroha ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	20	3	..	..	..	5,000	
Puhipuhi ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2,000	
Totals ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	23	710	45	486	47	..	..	336	128,000	
MARLBOROUGH—																									
Wakamarina ..	..	1	16	..	..	18	3	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	250	
Cullen's Creek ..	..	..	..	..	..	75	25	..	5	..	..	..	..	..	..	..	..	1	..	..	..	..	..	800	
Waikakaho ..	..	..	..	..	..	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10,000	
Other places ..	..	..	..	..	..	50	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	200	
Totals ..	..	1	16	..	..	153	28	..	15	..	..	..	..	..	..	..	..	1	..	..	..	..	..	11,250	
NELSON—																									
Sherry and Tadmor ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Baton ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Wangapeka ..	..	..	..	..	..	120	1	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	
Collingwood ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	17	2	20	..	..	..	..	2,500	
Inangahua ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	19	388	21	340	17	2	3	65	147,530	
Charleston ..	..	..	..	..	..	80	6	70	..	..	50	..	27	..	..	..	..	..	..	..	..	..	..	3,000	
Lyell ..	..	..	..	..	..	40	..	20	..	..	..	..	..	..	..	..	..	6	63	2	..	..	..	16,000	
Murchison ..	..	..	..	..	..	280	2	14	1	2	3	..	..	..	..	..	..	..	..	..	..	..	..	8,500	
Westport ..	..	2	..	..	7	65	1	30	2	2	..	..	..	..	..	..	..	3	25	3	..	..	..	10,000	
Ahaura ..	..	..	..	..	..	1,520	3	500	..	..	..	..	..	..	..	..	..	1	10	1	..	..	..	4,000	
Totals ..	..	2	..	..	7	2,105	13	635	3	4	53	..	27	..	20	405	33	458	24	2	3	..	65	191,520	
WESTLAND—																									
Stafford ..	..	..	..	..	1	2	600	5	500	3	..	..	..	..	..	..	..	..	..	..	..	..	..	10,000	
Ross ..	..	..	..	..	2	..	60	4	40	..	2	..	..	..	..	1	5	1	..	..	..	..	..	14,000	
Hokitika and Kanieri ..	..	..	..	..	25	..	95	..	53	..	1	..	5	..	..	..	..	..	..	..	..	..	..	8,000	
Greymouth ..	..	2	39	..	..	2,500	2	900	30	1	30	..	10	..	..	..	..	..	..	..	..	..	..	15,000	
Kumara ..	..	..	..	..	6	20	150	6	90	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3,000	
Okarito ..	..	2	135	..	..	..	2	1	12	2	20	..	2	..	..	..	..	..	..	..	..	..	..	7,500	
Totals ..	..	4	174	..	7	49	3,405	19	1,584	45	6	50	..	5	12	1	5	1	..	..	..	..	..	57,500	
OTAGO—																									
Tapanui ..	..	..	..	..	..	20	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	20	
Hindon ..	..	..	..	..	..	25	..	2	..	..	..	..	..	..	..	4	80	6	35	2	..	..	..	10,000	
Tuapeka ..	..	..	..	..	..	550	15	11	30	4	..	..	..	..	..	..	..	3	25	1	..	..	..	9,500	
Cromwell ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	20	6	23	2	..	..	..	12,000	
Clyde and Alexandra ..	..	..	..	1	2	300	34	miles	2	3	..	..	..	..	..	..	..	3	18	1	1	1	..	26,500	
Roxburgh ..	..	2	25	..	1	650	38	miles	5	13	..	1	..	..	..	..	..	..	..	..	..	..	..	68,500	
Black's ..	..	..	..	1	1	750	25	miles	3	..	..	..	..	..	..	..	..	2	14	1	1	..	..	30,000	
Orepuki and Longwood ..	..	2	30	..	..	500	1	150	..	..	..	..	..	..	..	..	..	1	2	1	..	..	..	3,000	
Waikaia (Switzer's) ..	..	2	29	..	..	460	4	50	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	4,500	
Arrow ..	..	..	..	..	..	300	..	60	..	6	..	..	..	..	..	1	4	4	10	3	..	..	..	16,000	
Queenstown ..	..	..	..	..	..	400	..	50	..	..	..	..	..	..	..	..	..	5	70	..	..	..	..	80,000	
Naseby ..	..	..	..	..	..	250	..	85	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,000	
Kyeburn and Clarke's ..	..	..	..	..	..	70	..	50	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3,400	
Hamilton's and Sowburn ..	..	..	..	..	..	65	..	25	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	450	
Hyde and Fullerton's ..	..	..	..	..	..	15	..	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	200	
Macrae's, Strath-Taieri, and Shag Valley ..	..	..	..	..	..	70	..	15	..	..	..	..	..	..	..	..	..	3	15	..	..	..	..	1,680	
Maerewhenua ..	..	..	..	..	..	140	..	40	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	600	
Serpentine ..	..	..	..	..	..	20	..	5	..	..	..	..	..	..	..	..	..	1	5	1	..	..	..	1,000	
St. Bathans, Ida Valley, and other localities ..	..	..	..	..	..	120	..	80	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3,250	
Wyndham ..	..	4	80	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..	..	..	12,000	
Totals ..	..	10	164	..	2	4	4,705	28	650	43	31	..	1	..	..	8	112	34	217	12	2	1	..	284,600	

SUMMARY.

Auckland ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	23	710	45	486	47	..	..	..	336	128,000
Marlborough ..	..	..	1	16	..	..	153	28	..	15	..	..	..	..	..	..	..	1	..	..	..	..	..	..	11,250
Nelson ..	..	2	..	..	7	..	2,105	13	635	3	4	53	..	27	..	20	405	33	458	24	2	3	..	65	191,520
Westland ..	..	4	174	..	7	49	3,405	19	1,584	45	6	50	..	5	12	1	5	1	..	..	..	..	..	..	57,500
Otago ..	..	10	164	..	2	4	4,705	28	650	43	31	..	1	..	..	8	112	34	217	12	2	1	..	..	284,600
Totals	..	16	339	16	16	53	10,368	88	2,869	106	41	103	1	32	12	52	1,242	114	1,161	83	4	4	..	401	672,870

No. 14.

TABLE showing approximately the NUMBER, DESCRIPTION, and VALUE of the WATER-RACES, TAIL-RACES, DAMS, RESERVOIRS, and GROUND-SLUICES in Operation during the Year ending 31st March, 1892.

Mining District.	Water-races.				Tail-races.		Dams.		Reservoirs.		Ground-sluices.		Approximate Total Cost.
	No.	Length in Miles.	No. of Sluice-heads.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	No.	Approximate Cost.	
AUCKLAND—													
Hauraki North ..	11	4½	20	£ 1,150	1	£ 70	2	£ 135	..	£ ..	..	£ ..	1,355
Hauraki South ..	20	18½	115	20,000	4	2	6	120	..	..	..	..	20,122
Te Aroha ..	4	4½	16	6,200	..	..	..	..	..	..	..	..	6,200
Puhipuhi ..	1	½	1	500	..	..	1	200	..	..	..	..	700
Totals ..	36	28	152	27,850	5	72	9	455	..	..	..	..	28,377
MARLBOROUGH—													
Pelorus ..	91	64	150	7,000	64	3,500	20	200	..	..	12	250	10,950
NELSON—													
Wangapeka ..	8	8	43½	300	22	160	10	..	..	..	..	..	460
Collingwood ..	54	76	391	72,715	121	1,115	29	2,130	..	..	..	..	75,960
Inangahua ..	201	166	1,649	45,002	411	22,641	462	17,239	..	..	..	..	84,882
Charleston ..	200	100	200	20,000	220	8,500	450	11,000	1	3,000	80	3,000	45,500
Westport ..	169	236	1,070	30,720	88	9,173	154	5,110	..	..	..	..	45,003
Lyell ..	44	30	163	4,763	11	378	21	1,254	..	..	..	..	6,395
Murchison ..	112	100½	322	6,035	47	1,604	40	1,134	..	..	..	..	8,773
Ahaura ..	612	590	2,100	104,120	632	64,000	645	20,100	..	..	..	..	188,220
Motueka ..	2	2	2	10	..	..	..	..	..	..	..	..	10
Totals ..	1,402	1,308½	5,937½	283,665	1,552	107,571	1,809	57,967	1	3,000	80	3,000	455,203
WESTLAND—													
Hokitika & Kanieri ..	250	125	335	14,000	190	1,500	180	1,500	..	..	..	..	17,000
Ross ..	100	75	203	23,000	160	1,700	60	1,400	..	..	50	620	26,720
Kumara ..	190	100	350	2,300	180	14,000	60	4,500	11	7,000	50	800	28,600
Greymouth ..	912	750	2,030	50,000	670	8,500	841	7,620	..	..	30	840	66,960
Jackson's Bay ..	6	6½	16	800	3	350	..	..	..	..	..	..	1,150
Okarito ..	43	41	249	2,270	21	120	12	240	..	..	1	60	2,690
Stafford ..	250	250	500	13,000	300	9,000	200	4,000	20	1,000	500	4,000	31,000
Totals ..	1,751	1,347½	3,683	105,370	1,524	35,170	1,353	19,260	31	8,000	631	6,320	174,120
OTAGO—													
Hindon ..	50	65	154	6,750	18	850	36	1,025	..	..	50	200	8,825
Tuapeka ..	290	767	1,726	15,340	362	5,920	256	5,120	..	..	..	..	26,880
Tapanui ..	5	7	25	125	2	40	2	20	..	..	..	..	185
Clyde & Alexandra ..	140	605	533	24,000	98	7,000	60	3,000	..	..	..	..	34,000
Black's ..	95	420	397	35,000	97	5,000	83	8,000	..	..	..	..	48,000
Arrow ..	100	200	250	15,000	200	5,000	30	1,500	30	..	..	..	21,500
Roxburgh ..	135	379	933	26,700	93	9,000	62	4,000	1	1,200	20	1,600	42,500
Cromwell ..	339	951	1,149	66,570	174	8,700	110	7,700	..	..	..	..	82,970
Waikaia ..	106	245	325	10,000	201	2,000	123	2,130	..	..	30	180	14,310
Orepuki and Longwood ..	260	300	570	17,000	120	6,000	130	1,600	..	..	120	2,300	26,900
Wyndham ..	35	42	194	6,840	6	80	15	250	..	..	..	..	7,170
Queenstown ..	110	175	500	50,000	150	5,000	40	1,700	30	..	..	..	56,700
Naseby ..	65	290	208	46,000	..	..	..	..	..	..	..	..	46,000
Kyeburn & Clarke's ..	85	300	315	10,300	..	..	..	..	..	..	..	..	10,300
Hamilton's and Sowburn ..	32	116	20	7,300	..	..	..	..	..	..	..	..	7,300
Hyde & Fullerton's ..	18	90	64	10,150	..	..	..	..	..	..	..	..	10,150
Macrae's, Strath-Taieri, and Shag Valley ..	30	48	55	4,100	..	..	..	..	..	..	..	..	4,150
Nenthorn ..	..	..	..	..	..	..	..	..	..	..	..	..	..
Serpentine ..	36	88	93	5,000	..	..	..	..	..	..	..	..	5,000
Maerewhenua ..	21	175	49	15,500	40	1,000	30	1,000	..	..	..	..	17,500
St. Bathans and Ida Valley ..	96	320	350	32,400	..	..	..	..	..	..	..	..	32,400
Totals ..	2,048	5,483	7,910	404,075	1,561	55,590	977	37,045	61	1,200	220	4,280	502,190

SUMMARY.

Auckland ..	36	27	152	27,850	5	72	9	455	..	..	..	..	28,377
Marlborough ..	91	64	150	7,000	64	3,500	20	200	..	3,000	12	250	10,950
Nelson ..	1,402	8½	5,937½	283,665	1,552	107,571	1,809	57,967	1	..	80	8,000	455,203
Westland ..	1,751	1,347½	3,683	105,270	1,524	35,170	1,353	19,260	31	8,000	631	6,320	174,120
Otago ..	2,048	5,483	7,910	404,075	1,561	55,590	977	37,045	61	1,200	220	4,280	502,190
Totals ..	5,328	6,930	17,832½	827,960	4,706	201,903	4,168	114,927	93	12,200	943	18,850	1,170,840

No. 15.

RETURN of CASES in the WARDENS' COURTS, and COSTS AWARDED, for the Year ending 31st March, 1892.

Mining District.	Number of Mining Disputes adjudicated on.	Aggregate Amount of Value.		Amount of Costs Awarded.	Cases wherein Judgment has decreed Specific Performance.
		Claimed.	Recovered.		
AUCKLAND—		£ s. d.	£ s. d.	£ s. d.	
North Hauraki	78	55 1 0	25 14 0	43 9 0	..
South Haraki	94	20 5 0	20 5 0	22 5 0	..
Te Aroha	1	135 2 0	100 0 0	12 0 0	..
Puhipuhi	22	35 14 0	20 17 0	10 17 0	1
MARLBOROUGH	18	£339 6 9	87 8 3	16 3 0	..
NELSON—					
Collingwood	..	..	..	..	..
Inangahua	11	358 18 0	358 18 0	36 13 0	..
Lyell	3	..	..	..	..
Westport	10	107 10 0	22 10 0	16 14 0	..
Charleston	2	..	..	2 0 0	..
Ahaura	17	218 15 0	49 9 0	89 5 0	4
Murchison	2	5 0 0	..	1 1 0	..
WESTLAND—					
Kumara	19	47 13 0	..	51 19 0	1
Greymouth	12	160 0 0	..	26 3 0	..
Hokitika and Kanieri	9	10 0 0	0 5 0	8 17 0	..
Waimea) Stafford }	16	359 9 0	298 6 0	32 12 0	..
Jackson's Bay	..	..	..	..	..
Ross	11	22 15 0	13 0 0	16 11 0	..
Okarito	..	..	..	..	..
OTAGO—					
Tapanui	..	..	..	..	..
Hindon	..	..	..	..	..
Tuapeka	22	70 0 0	..	23 16 0	..
Cromwell	20	..	..	8 13 0	1
Roxburgh	17	770 18 8	153 17 1	59 16 0	..
Black's	10	..	..	20 4 0	1
Clyde and Alexandra	10	10 0 0	5 0 0	37 10 0	..
Waikaia	5	190 0 0	0 1 0	6 13 0	..
Orepuki and Longwood	27	76 2 6	50 4 6	20 0 0	1
Arrow (Wakatipu Goldfield)	16	187 10 0	23 10 0	21 2 0	..
Queenstown	15	229 10 0	219 10 0	9 12 0	..
Mount Ida	51	655 7 1	167 2 1	84 12 0	4
Maerewhenua	8	..	..	5 0 0	..
Wyndham	..	..	..	..	..
Totals	526	4,064 17 0	1,615 16 11	683 7 0	—

No. 16.

RETURN of the NUMBER of MINING LEASES or LICENSES and AGRICULTURAL LEASES in Force on the 31st March, 1891, the EXTENT of GROUND LEASED or held under LICENSE, and RENTAL per ANNUM.

Mining Leases.				Agricultural Leases.			
Mining District.	No.	Gross Acreage.	Rental per Annum.	No.	Gross Acreage.	Rental per Annum.	
		A R. P.	£ s. d.		A. R. P.	£ s. d.	
AUCKLAND—							
Hauraki North	41	820 0 38	410 0 0				
Hauraki South	144	2,538 0 30	1,419 5 0	37	1,775 2 27	129 18 6	
Te Aroha	5	144 3 12	93 0 0				
Puhipuhi	45	1,162 0 0	581 10 0				
MARLBOROUGH—							
Wairau and Pelorus	37	1,418 0 5	465 10 0	2	72 3 8	3 13 0	
NELSON—							
Collingwood	5	64 2 18	66 0 0				
Inangahua	46	639 0 22	670 0 0	1	38 1 25	3 18 0	
Charleston	6	39 0 16	41 0 0	3	35 0 31	3 15 0	
Ahaura	4	81 0 10	50 0 0	2	149 0 5	15 0 0	
Westport	5	55 3 2	53 0 0	5	381 0 12	40 8 6	
Lyell	8	222 2 20	165 5 0	3	50 1 24	5 2 0	
Murchison							
Owen's							
WESTLAND—							
Jackson's Bay							
Okarito	3	251 0 0	87 0 0				
Hokitika and Kanieri	7	277 0 20	146 10 0	6	242 0 3	14 16 0	
Kumara	12	239 0 39	121 5 0				
Stafford	12	450 0 0	204 0 0				
Greymouth							
Ross	36	1,437 0 0	727 10 0				
OTAGO—							
Waikaia	7	202 2 0	102 0 0				
Cromwell				18	2,328 3 1	292 2 6	
Hindon							
Tuapeka	6	26 3 2	29 0 0				
Black's				28	487 0 0	29 9 0	
Clyde and Alexandra	27	687 0 0	364 0 0	7	907 0 0	112 17 6	
Roxburgh	36	1,237 0 0	577 5 0	2	420 0 0	52 10 0	
Naseby							
Arrow (Wakatipu Goldfield)				3	166 0 24	20 17 6	
Queenstown				18	255 0 15	32 8 9	
Maerewhenua							
Tapanui							
Mount Ida	66	1,253 0 0	730 5 0	33	2,919 0 0	261 5 6	
Totals	560	13,246 0 34	7,103 5 0	168	9,327 2 15	1,018 0 3	

H. J. H. ELLIOTT,
Under-Secretary of Mines.

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