

## R E P O R T

ON THE

## GOLD FIELDS OF NEW ZEALAND.

*(Return to an Order of the House of Representatives, dated 3rd August, 1869.)*

‘That it is desirable that the Government should cause to be laid upon the Table of this House, during each Session, a Report embodying a general account of the present condition of the Gold Fields of the Colony, their advancement or otherwise during the preceding year, and their probable prospects; together with particulars showing the average price of provisions during the year on each Gold Field, the rate of wages, estimated population, and such other information as would afford a comprehensive idea of the general condition of the mining interest in the Colony; and that His Excellency be requested to forward a copy of such Report to Her Majesty’s Secretary of State for the Colonies.’

*(Mr. W. H. Harrison.)*

WELLINGTON.

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1872.



## REPORT ON THE GOLD FIELDS OF NEW ZEALAND.

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Mr. HAUGHTON to the Hon. the COLONIAL SECRETARY.

SIR,—

Wellington, July 16, 1872.

I have the honor, in accordance with your instructions, to forward a General Report upon the state and prospects of the Gold Fields, with Appendix containing Reports by the Wardens upon the Districts under their charge, and Statistical Tables.

I have, &c.,

C. E. HAUGHTON.

The Hon. the Colonial Secretary.

### REPORT.

In presenting the first General Report upon the Gold Fields of New Zealand, I must in the first place acknowledge that it is by no means of so satisfactory and exhaustive a character as the importance of the interest demands. The geographical and physical circumstances of the Colony, the scattered localities of the gold workings, the diversity of administration under the several Provincial Governments, all tend, in their degree, to render the collection of reliable statistics exceedingly difficult, and, in default of special machinery, in many instances impossible.

The mineral statistics of Victoria, published annually, owe a great deal of their value to the information freely afforded in that Colony to the Department of Mines, by the Banks, Mine Owners and Mining Managers; who, feeling assured that the figures furnished will only be used for public purposes and massed in general returns, give the fullest and most complete details of all their transactions, and thus enable most trustworthy conclusions to be drawn as to the relative importance of the various classes of mining; their respective benefit to the state by the profits of the yield over the cost of raising, and the present pecuniary status and future prospects of the mining community.

From the time at my disposal I have only been enabled to avail myself to a very limited extent of similar information. So far as regards the issuing of circulars, that has been done, and copies are hereto appended; I fear, however, that in the case of Mine Owners and Managers these are thrown aside or disregarded in the absence of the conviction—which cannot at once be forced upon their minds—that it is for the general good that the real position of our gold fields should be established by such data as can only be afforded by the confidential communication of what, must be admitted, are the secrets of their business. This is a matter of education, and I have no doubt that the example of Victoria, now specially pointed out, will induce in future such consideration for the interests of the Colony as may result in the furnishing of periodical returns affording a basis for statistics as complete, as in the nature of so special an industry, they can possibly be, and which will do much to establish the eminent position of New Zealand as a field for successful Colonization.

Having said so much as to what has not been done, and premised the defects which from the necessities of the case will be found in the statistics accompanying this Report, I would now state that in endeavouring to fulfil the wishes of Parliament and the instructions of Ministers, I have availed myself of such sources of official information as were open to me; having obtained returns from the Treasury and Customs Departments of the gold fields revenue and exports of precious metals; together with reports from the Wardens as to the several Mining Districts; which collectively afford a most comprehensive summary of the state of the gold fields. These reports in most cases are very ably written and will well repay attentive perusal. Within the last twelve months, dating from 31st March, 1872, I have personally visited every district with the exception of Switzer's, in Otago, and Okarito, in Westland, and I am therefore enabled from my own knowledge of the localities, to verify the expressed opinion of the Wardens, as to the present condition and future prospects of the respective portions of the gold fields under their charge. The reports are printed in full in the Appendix hereto, and obviate the necessity of my entering into detailed descriptions of the districts which the Officers resident in and familiar with, have, I am satisfied, been more competent to supply.

### GOLD.

Whilst it is impossible to state with accuracy, the total quantity of Gold produced in any one year, the following figures afford data upon which estimates may be founded.

Exported according to returns furnished by the Treasury and Customs Departments—1870, 544,880 ounces; 1871, 730,029 ounces; Quarter ending 31st March, 1872, 154,997 ounces. Distinguishing approximately the produce from quartz and alluvium, we find in 1870—Quartz, 87,534 ounces; alluvium, 457,346 ounces. 1871—quartz, 365,600 ounces; alluvium, 364,429 ounces. Quarter ending 31st March, 1872—quartz, 119,382 ounces; alluvium, 35,615 ounces. It is impossible to furnish this information accurately, in default of returns from the Banks and gold buyers, which they are not, it appears, at present in a position to furnish. This return probably does not represent the whole amount of gold raised within each particular period, as it may fairly be conjectured that a considerable

quantity is smuggled out of the Colony in order to evade the high duty; whilst amongst alluvial miners especially, a practice of hoarding their gold is very prevalent, with the idea, no doubt, in many cases, of shipping it quietly away without troubling H. M. Customs.

The tables appended, No. 1, No. 2, No. 2 A, and No. 2 B, show the revenue of the gold fields, and the gold duty collected in the several provinces for the years 1870 and 1871 and the first quarter of 1872, respectively; and also the revenue collected in the several mining districts for the same periods, as brought to charge in the Public Accounts. Nos. 3 and 4 form a comparative Return of the Revenue during the years 1870 and 1871, showing the increase or decrease under each head of revenue, and in respect of each district, respectively. These returns will be found exceedingly valuable in estimating not only the value of our gold fields to the State, but in the consideration of the elements of the special taxation at present levied upon the mining industry. This, inclusive of the gold duty, amounted in the year ending 31st December, 1871, to the gross sum of £153,577 16s. 10d., or about £5 12s. 6d. per head upon every working miner.

The slight falling off in the revenue and in the amount of gold raised in the Provinces of Otago and Nelson, and in the County of Westland, during the year 1871 as compared with 1870, may be accounted for by the exceptionally dry summer, which seriously impeded, from want of water, all sluicing operations for many months.

#### SILVER.

During the year 1871, 80,372 ounces of silver, valued at £23,145, were exported from Auckland; and during the March quarter of 1872, 18,683 ounces, valued at £4,900; making the total export of this metal from the Colony up to 31st March, 1872, 147,142 ozs. 2 dwts., valued at £42,418. This has been exclusively the produce of the Hauraki gold field (Thames), where the gold is found so heavily alloyed with silver as to render the latter, after separation, so considerable an item of export; as I have quoted.

#### MINING POPULATION.

The mean number of miners employed during the year ending 31st March, 1872, was 27,376; they may be classed as follows:—Alluvial—European, 16,847; Chinese, 3,701. Quartz—European, 6,828. *Vide* Tables 12 and 13. By the Census taken 27th February, 1871, the total population of the gold fields was, so far as can be ascertained by the enumeration according to Electoral Districts, 52,067, of this number 14,779 were females, thus leaving, exclusive of miners, 9,912 persons engaged in business, or male children.

The Chinese miners are nearly all at present located in the Province of Otago, and would appear by the Returns to confine themselves entirely to alluvial mining. They thoroughly understand the value of associated labor and capital, and have proved themselves able to work profitably ground which offered no inducement to European parties. The Colony, beyond the duty upon the gold which they may export through the Custom House, obtains little or no advantage from the sojourn upon the gold fields of these foreigners, who are essentially not colonists; who, without exception leave for their own country, when they have realised a competence, carrying with them the precious metal which they have raised under the protection of our laws, and at the expense of future generations.

Dividing the value of the total quantity of gold exported, amongst the mean number of miners employed in alluvial and quartz mining, it appears that in the year 1871, the average was per man £101 16s 5½d. This mode of estimating the productiveness of gold fields is, as Mr. Brough Smythe, Secretary of Mines in Victoria, remarks in a recent report for Parliament, obviously the only method which admits of a fair comparison of the productiveness of one gold field with another, and is now invariably adopted in the Pacific States of the American Republic. The result by no means pretends to afford anything approaching an average of the individual earnings of the miners, but simply indicates the measure of success which has attended mining operations generally; whether due to well applied labor and skill, or to the comparative richness of the deposits, cannot exactly be ascertained. Upon a similar calculation the average earnings per man upon the Victorian Gold Fields, where the miners employed during the year 1871, numbered 58,111, was £81 0s 6½d, leaving a balance in favor of New Zealand of £20 15s 1d.

#### WATER RACES, &c.

There are within the Colony 3,595 miles of Water Races, carrying 7,056 sluice heads, constructed at an estimated cost of £711,386; but even this seemingly large supply is not nearly sufficient to meet the pressing demands of the present workings, either alluvial or quartz. It will be seen by reference to the Wardens' reports that in many districts, in the Province of Otago and County of Westland, mining operations were entirely suspended for two or three months during the last summer, from the want of water. Table No. 16, shows approximately the number, description and value of the water races, tail races, dams, and reservoirs, within the gold fields, arranged according to the several mining districts.

#### MACHINERY.

The number of engines employed upon 31st March, 1872, in quartz mining was as follows:—

Number.	Horse-power.	Number of Stamp Heads.
127	2618	1170

Of these 86 are worked by steam, the remainder by water power; turbine wheels being extensively used. A very complete Table of all the quartz crushing machinery upon the Thames gold fields with sketch

plan showing the position of the batteries, will be found attached to "Further Papers relative to Water Supply, 1872." In alluvial mining, the number of steam engines employed was 10, and the aggregate horse-power 247. Thirteen dredging machines were employed during the year in working the new beds upon the Shotover, Molyneux, and Wakamarina Rivers. The fullest obtainable information respecting the number and description of machinery on the gold fields will be found in Tables Nos. 14 and 15.

#### MINING LEASES AND LICENSED HOLDINGS.

Six hundred and eight mining leases, covering a total area of 4,384a. Or. 19p. were in occupation upon 31st March, 1872; whilst in the newly opened reefing District of the Inangahua, one hundred and five applications, covering an approximate area of 1,000 acres were under consideration. Upon the Hauraki gold field, advantage has been taken within the last few months of the Gold Mining Districts Act 1871, and thirty-six Mining Leases have been exchanged for Licensed holdings under Section 118 of the said Act. When the present Leaseholders Miners Rights run out by fluxion of time, there is no doubt that most of the Companies upon the field will surrender their titles under the Gold Fields Acts for titles under the very liberal measure above referred to. Table No. 17 gives in detail the number and extent of Mining Leases in the several Districts.

#### AGRICULTURAL LEASES.

Thirteen hundred and thirty-eight Leases comprising an area of 50,119a. 2r. 5p. were in occupation upon 31st March, 1872. These are exclusively upon the gold fields of the Middle Island, and by no means represent the total extent of agricultural settlement; as full advantage has been taken by the settlers of Section 52 of the Golds Fields Act, 1866, which gives Leaseholders the right to purchase, subject to certain conditions, at the end of seven years from the date of their lease, and under which, especially in the Wakatipu and Tuapeka districts in the Province of Otago, very considerable areas have been converted into freehold. Table No. 18, gives the number and extent of agricultural leases within the several mining districts.

#### MINING COMPANIES.

From the official returns it appears there are 356 companies registered under the Mining Companies Limited Liability Acts, and forty-two under the Joint Stock Act; the former having a nominal capital of £4,839,771, and the latter of £804,025. Such particulars as I have been able to obtain relative to these companies will be found in Table 19, but there is little doubt that at least one-sixth of these possess no other entity than a name and registration certificate. A large number of companies registered under the Limited Liability Acts, have been wound up, or are now in the hands of the Official Agent in Auckland for that purpose. At present there is no information available with regard to them, but I understand that in future the Official Agents will be required to furnish the Government with periodical returns of the progress of their business.

#### RATE OF WAGES AND PRICES OF PROVISIONS.

The current rate of wages and average prices of provisions in the several mining districts will be found in Table 11. It will be observed that wages continue to rule exceedingly high, more especially in Otago and on the West Coast; £3 a week being about the average for the working miner. The price of provisions appears very slightly to affect this scale, and the curious anomaly is in most instances presented, of the ordinary labouring man receiving an amount for his week's work three times in excess of what it can possibly cost him for lodging and maintenance. I do not pretend to be able to solve this problem, but it is fast becoming a very serious consideration, how far the keeping up of what is essentially an artificial state of things in the labour market militates against the employment of capital in large mining operations.

Another point which naturally suggests itself upon examination of this Table, is that to some very important mining centres the communication with the ports must be very bad. The prices speak for themselves, and proclaim heavy rates of cartage and general difficulties of transport. In other cases, the enormous charges for the produce of the farm and dairy prove that agricultural settlement has been neglected, and consequently the opportunity allowed to pass by of fixing the miners to the soil by the inducement of homes and acres of their own.

The prices of live stock as returned by the Wardens and quoted in the table, run within such very wide margins as to be practically useless. These prices vary so much with supply and demand, and with the quantity of the great and small cattle, that nothing beyond a mere general indication of value is possible. Quotations of actual sales at various periods in the several districts would be the only possible reliable guide to a statistical result, and this I am not in a position to furnish at present.

#### EXPENDITURE UPON THE GOLD FIELDS.

I have previously called attention to the Tables appended hereto, which afford complete details of the gold fields revenue in the several mining districts, as brought to charge in the public accounts. This Revenue simply passes through the Colonial Treasury, and is at once paid over to the several Provinces in which it may have accrued, forming part of their general land fund, and available for expenditure by the Provincial Councils. This expenditure, therefore, forms no part of Colonial account; and no returns upon the subject, except such as may be furnished by the Provincial Governments, are available for the information of Parliament.

I have embodied in Table 20, hereto appended, an abstract of a return laid upon the table of the Provincial Council of Otago on the 20th May last, purporting to show the expenditure upon the

gold fields of that province for the years 1869, 1870 and 1871. This shows an expenditure for the three years respectively of £28,484 6s., £31,209 4s. 4d., and £27,015 17s. 3d. The appropriation for the present financial year for expenditure within the gold fields amounts, so far as I am able to ascertain from the printed estimates, to the sum of £18,227 10s., for departments of the Provincial Government, including the Wardens; £9,521, for roads and works; £6855, for new works to be paid for in land; making a total of £34,603 10s.

In the County of Westland the expenditure for the last financial year ending June 30th, 1872, was £51,555 11s. 4d., including £5000 repayment of deficiency bills. This whole sum may properly be considered as having been expended within the gold fields. I understand that the estimates are voted half-yearly, and I am, consequently, unable to give, even approximately, the amount proposed to be expended; but it may be presumed that it will not vary essentially from the votes of last year.

In the Province of Nelson I have absolutely no data upon which to base even an approximate estimate of the past or proposed expenditure upon the gold fields by the local Government.

In the Province of Auckland, it appears by the "Comparative Statement of Appropriation and Expenditure" for the year ending December 31, 1872, printed in the Journals of the Council for Session 28, that the sum of £15,739 18s. 3d. was expended within the gold fields; and in the estimates for the present financial year the total votes for gold fields expenditure amount to £24,156.

#### WATER SUPPLY.

Further papers relative to water supply upon the gold fields, in continuation of those laid before Parliament last session, will be presented, and include copies of the various documents and reports upon which it has been decided by the Government to undertake certain works for the supply of water under Part III of the "Public Works and Immigration Act, 1870." These works are as follows:—

1. In the Province of Auckland, upon the Hauraki gold field, a water race about eleven miles in length, heading from the Kauaeranga River, a little above the junction of the Hibi Creek; constructed to carry forty heads of water, with delivery in the Moanatairi Gully, at 133 feet above the sea level. The cost may be estimated at something under £40,000; and the probable revenue is calculated to more than meet the interest upon this sum, together with all expenses of management and maintenance.
2. In the Province of Nelson, south-west gold fields, a water race to head from Lake Hochstetter and terminate at Paddy's Look Out; length about sixteen miles; constructed to carry 100 heads of water. The approximate cost is estimated at £30,000, and the probable revenue at least £5000 a year.
3. In the Province of Otago, in the Mount Ida mining district, a water race from the Little Kyeburn to the workings above Naseby; the length will probably not exceed fifteen miles, and the cost is estimated by Mr. Warden Robinson at £200 a mile, or £3,000. A main flushing channel for the workings above and about Naseby, which it has been roughly calculated will cost about £8,000.

Full particulars with regard to these works will be found in the "Further Papers" referred to, and, without doubt, reports as to their progress will be presented by the Engineer-in-Chief.

The legislation of last session upon this subject resulted in the adoption in the "Public Works and Immigration Act, 1871" of the recommendation of the Gold Fields Committee expressed in their Interim Report No. 5, which was to the following effect:—

- "1. That this Committee is of opinion that, except in special cases, it is not expedient that the Government should itself undertake the construction and management of works for Water Supply on the gold fields.
- "2. That the amount devoted to the construction of works for Water Supply on the gold fields by 'The Public Works and Immigration Act, 1870,' would be more effectually and advantageously expended in association with private enterprise by advances of one-third of the capital necessary for works carefully considered and approved by the Board of Works, care being taken to protect the public from excessive charges or monopolies, and to secure the payment of interest and the repayment of the principal advanced."

As soon as possible after the session, steps were taken to carry the wishes of Parliament into effect, and a schedule of regulations prescribing the mode of making applications for advance of money to aid in the construction, extension, or improvement of works for the supply of water upon the gold fields, were issued by the Hon. the Minister for Public Works, on January 31, 1872, and in accordance with his instructions, published throughout the colony. A copy of these regulations is appended hereto, and it will be seen on reference to the Report of the Gold Fields Committee (Appendix 1871, H. No. 11), that they are, in the main, identical with those drawn up with the view of a suggestion to the Government by a Sub-Committee consisting of Messrs. Curtis, Harrison and Haughton, and unanimously approved and presented to the House by the Committee.

Up to the present date, so far as I am officially informed, applications for aid by way of subsidy under the regulations have been lodged with the gold fields Wardens' to the amount of £21,850; but I have been made aware that further applications to the amount of £24,000 are in course of preparation, and will, in all probability, be sent in within the present month. Only one advance has, at present, been sanctioned by the Government, viz., £1,533 to the Greenstone and Hohona Water Race Company.

Several applications forwarded by the Wardens' have had to be returned to those officers, in consequence of informality and neglect of compliance with the regulations of January 31, 1872, and the official instructions under Circular No. 43 (L & J 72-24), appended hereto.

It may not, perhaps, be out of place if I should here record my opinion as to the policy adopted in the "Public Works and Immigration Act, 1871" relative to the granting of subsidies to works for water supply; and I have no hesitation in saying that I believe it will prove a success. I use the word "will" advisedly, as I do not consider that sufficient time has yet elapsed to enable a decided judgment

upon the subject to be formed. The Regulations of January 31, 1872, are by no means attractive to the mere speculator, and appear to me to have been framed very judiciously, so as absolutely to shut out the possibility of the public money being wasted in visionary schemes, or in propping up "tin pot companies" called into existence simply for the spoils which may accrue to "professional" promoters. There has been in consequence a very determined "down" upon the Government scheme on the part of these gentry, who swarm upon the gold fields, and are not without their influence in the expression of public opinion through the press.

Although the Regulations referred to have been published in all the papers, and posted in every Court House, Telegraph Office, and Post Office throughout the gold fields, the greatest ignorance appears to have prevailed as to their provisions, and the grossest misrepresentations upon the subject have found their way into print; naturally tending to deter parties from further enquiry into the matter. I will cite one instance:—The *Mount Ida Chronicle*, published at Naseby, in the province of Otago, in a leading article informed its readers that "The Government claim a share in the profits of every enterprise assisted, in the proportion of the money lent to that expended, besides interest and repayment of capital." The fact that credit is given for the labour of the miner, and cash advances made in the proportion fixed by the Act upon the certificate of work actually executed, has been entirely ignored; and it has been represented that in order to obtain a loan of one-third of the cost of construction of any work, it is absolutely necessary that the other two-thirds of the capital should be subscribed. These misconceptions are being gradually removed, and I have no doubt that even within a few weeks the applications received will quite come up to, if not exceed, the amount placed by Parliament at the disposal of the Government for this purpose.

I would here point out that a very general opinion exists amongst the mining community that the limit of the advance to one-third of the total cost of construction of any work, might with general advantage be extended to one-half; and that Section 13 of the Regulations should be amended in the direction of leaving the repayment of the capital sum borrowed entirely an open question between the borrower and the Minister, to be settled according to the circumstances of each particular case. It has also been suggested that no interest should accrue until the completion of the works; and this seems very reasonable, as up to that time the projectors may fairly be assumed to have no income from the enterprise promoted by the Government assistance.

The section of the Act which renders it necessary that the approval of the Engineer-in-Chief or the Assistant Engineer-in-Chief, upon any proposed work, should be obtained before the Minister is authorised to sanction an advance, places certain technical difficulties in the way of applications being speedily dealt with. This, however, is in a fair way of being got over, owing to the arrangements made by Mr. Carruthers, who will consent to accept the surveys and reports of professional men accredited by the District Engineers, or other Engineers of the department of Public Works, who may be resident in or near the particular localities.

Upon the general subject of the expenditure of the sum of money devoted to water supply, I would desire to remark that the intention of the Legislature apparently was, that this amount should, so far as possible, be equally divided amongst the several gold fields; and that in districts where assistance by way of subsidy was known to be unsuited to the requirements of the mining population, works for the supply of water should be undertaken by the Government. There can be no doubt that water is the great desideratum, and the cry is almost universal from every mining district, "Water is required to develop our resources!" From my own personal knowledge of our gold fields, I unhesitatingly assert that the sum of £3,000,000, instead of the £300,000, judiciously expended upon water supply, would prove an expenditure directly remunerative, and indirectly productive of such an increase to the population of the colony as would confirm us in a position of unexampled prosperity.

#### EXISTING STATE OF THE LAW RELATING TO THE GOLD FIELDS, AND PROPOSED AMENDMENTS.

The affairs of the gold fields are at present administered under *literally* six "Gold Fields Acts" besides others having special significance or influence more or less direct. These may be enumerated:—

The Gold Fields Act, 1866.	Otago Hundreds Act, 1869.
Amendment Act, 1867.	Otago Hundreds Act, 1870.
Amendment Act, 1867 (2).	Westland Waste Lands Act, 1870.
Amendment Act, 1868.	Nelson Crown Lands Leasing Act Amendment
Amendment Act, 1869.	Act, 1870.
Amendment Act, 1870.	Mining Companies Act, 1865.
Gold Mining Claims Drainage Act, 1868.*	Amendment Act, 1869.
Gold Mines Drainage Act, 1871.†	Amendment Act, 1870.
Otago Waste Lands Act, 1866.	Gold Mining Districts Act, 1871.‡

The necessity for a consolidated Statute may fairly be assumed in the face of such an array of Acts, which, from the variety of circumstances connected with their constitution, renders it in many cases very difficult to ascertain the existing law, a fact which has naturally enough proved a fruitful source of litigation, in some important instances resulting either in no decision at all, or in such as has been satisfactory to neither party concerned.

Before considering the question of the direction in which I shall venture to suggest that amendments of the existing law should proceed, I would briefly refer to certain principles upon which it would appear to have been based, remarking, *en courrant*, where these appear to fail in accomplishing the object of settling a permanent population with capital and labour upon the gold fields.

\* In force by Proclamation in the District of Ross only.

† Not in force in the Middle Island; requires Proclamation.

‡ In force upon the Hauraki Gold Fields only.

Throughout the Golds Fields Acts passed at various times and at present in force, there runs one leading principle as to the tenure of mining property—the “miner’s right.” This is made an element of title, and the possession of this document is a necessary condition to even the application for those various privileges from the Crown which are essential to the pursuit of mining enterprise. In this, our legislation has followed strictly that of the Colony of Victoria;\* and, although strangely enough, the issue appears never to have been distinctly tried in the Law Courts of that colony, it is clear from the cases in which it has incidentally been alluded to, that the fact of a *lâche* in the continuous chain of miners’ rights under which property has been held, *de facto* invalidates the title. The very able paper by the District Judge of the Otago Gold Fields, Mr Wilson Gray, upon “The Miner’s Right as an Element of Title,” (Appendix 1871, A. No. 8) seems thoroughly to exhaust the subject as regards the present state of the law upon this point in New Zealand; and the case of “Harris v. Labes,” a report of which is attached to the document referred to, demonstrates very clearly the active dangers to which the tenure of mining property is exposed. By the Act of 1869, section 5, an attempt was evidently made of a remedial character in this respect; but the enactment was not sufficiently general, and it is very questionable whether it applies to other than the property of companies and corporations. It is worthy of observation, however, as showing that in the mind of the Legislature there existed the conviction that the tenure by virtue of miners’ rights was insecure, and required occasional legislation of a curative nature.

The embodiment in Statutes regulating the management of our gold fields, of legislation affecting pastoral tenancy and agricultural settlement is, I think, a very grave defect in the existing law. In the Australian Colonies these questions are kept carefully clear of the “Mining Statutes;” and it seems to me more essentially necessary that this should be the case in New Zealand, where the several political divisions of the country have each their own land laws, and where the necessities of the case seem fast tending in the direction of the settlement of the waste lands becoming the battlefield of contending political parties. The Otago Mining Commission, which reported in May last year, were very decided in their recommendation that “the new statute should be separated from some matters at present mixed up with gold fields legislation;” and they proceed to remark, “The first is that of pastoral tenancy and agricultural settlement upon the gold fields. Your Commissioners believe that it would be well to dissociate these from mining law; but at the same time, seeing that they involve large questions of policy and affect important public and private interests, they recommend that these parts of the existing Acts should not be repealed or altered unless or until the Legislature sees fit to enact a comprehensive measure upon the subject, at least equally favourable to the interests of settlement.”

Apart from questions of principle I would further remark that in the present Acts there are many technical errors, *e.g.* section 21, “Gold Fields Act, 1866,” which was intended to be the legislation upon the subject of water rights and races, is confined to races originating in and conducted through private lands, whilst, in strange incongruity, the subsections consist chiefly of a number of regulations taken from the Otago Rules and Regulations, which were drawn only in contemplation of races through Crown lands. It is unnecessary to quote further instances which, render a careful revision of the Acts now in force absolutely and immediately necessary. A most important part of mining law, if not the most important, is that relating to the “administration of justice.” I believe this to be in a very unsatisfactory condition. The jurisdiction of the Wardens and Wardens’ Courts especially requires to be more strictly defined. The whole question of appeal to the Superior Courts is open to grave consideration, the present system by no means working satisfactorily, and the general opinion of the miners being in favour of following the practice of the ordinary Courts of civil jurisdiction. Part IX., of the Act of 1866 provides for “Local Legislation.” This has never been carried into effect under this Act, except upon the Thames Gold Field, and the results have not been considered satisfactory either by the miners or the local Government. In the infancy of our modern gold fields, no doubt, mining Boards were to some extent a necessity, when the various forms of mining were little understood, and every field opened developed some novel integration of the precious metal with the rock or soil. Local regulations were indispensable in the absence of general knowledge, and in the absolute ignorance of the Governments and their officers of the circumstances and requirements of the mining industry. This difficulty no longer exists; the details of every kind of mining, necessary to guide legislation, are thoroughly well understood, and there exists no reason why a general code of Regulations should not be applicable to every gold field in New Zealand. Upon this subject I would desire to refer to the report of New South Wales Gold Mining Commission, 1871, p. 16—where the Commissioners summarise their arguments in the following words:—“We are unanimously of opinion that the argument as to differing local requirements is not sound, and therefore furnishes no good reason for instituting local legislative bodies.”

#### PROPOSED LEGISLATION.

I would desire now to offer, in as succinct a form as possible, practical suggestions as to the new Statute, following, for convenience of reference, the arrangement of matter adopted in “The Gold Fields Act, 1866.”

##### Part 1.

#### OCCUPATION OF GOLD FIELDS.

The “miner’s right” should cease to be an element of title; whilst it remains so, there is an insecurity in the tenure of mining property which repels capital and consequently obstructs the development of the gold fields. I am aware that this is a very difficult subject to deal with satisfactorily; on the one hand we have the expediency of security of title; on the other we are met by the necessity of providing against such absolute security opening the door to abuses by which the persistently idle and thriftless,

\* *Macfarlanes’s Digest of Mining in Victoria*, pp. 164–166; *Atkins’s Mining Statute*, p. 169 (a).



the loafing parasites of a gold field, may reap the benefit of the labour and capital of the enterprising and energetic. "The Gold Mining Districts Act, 1871," now in force in the Province of Auckland, in which the principle of title by occupation is adopted, the "miner's right" conferring no privileges except immunity from penalties, endeavours to provide against the occupation of ground for simply speculative purposes—what is commonly called "shepherding"—by strict "forfeiture" clauses, which can be put in force by an officer especially appointed for that purpose. Upon this question of the "miner's right," I would call attention to the opinion of the Otago Mining Commission of 1871, as expressed in page 1 of their printed Report laid before Parliament (Appendix 1871, G. No. 18).

It will be seen by reference to Part II. of "The Gold Mining Districts Act, 1871," that the recommendation of the Commission has been practically given effect to. The same principle should, I think, be adopted in any general Gold Fields Bill, great care being taken that the conditions under which claims and licensed holdings are occupied and held, be of the most stringent character, with regard to the insuring that mining operations are carried on therein in an efficient and workmanlike manner, and with such number of men as can be reasonably and advantageously employed. All rentals, fees, and charges to be fixed by the Statute, and in no case left to be dealt with by Regulations. Whilst thus decisive in my recommendation that the "miner's right" should cease to be an element of title, I think it has many important uses irrespective of a convenient machinery for revenue purposes. I would not, therefore, propose in any way to release the miner from the obligation of providing himself with this document, and I would make its possession a necessary antecedent to the making application for any privilege whatsoever under the Statute. The neglect in taking out a miner's right should further be attended with pecuniary penalties easily recoverable. Probably sections 107 and 108 of "The Gold Mining Districts Act, 1871," would sufficiently meet the case. I would further propose that in consideration of the rental to be fixed for Licensed Holdings, no person should be obliged to take out more than one miner's right, and that every miner's right should be current through the Colony. This, I believe, even under the existing Public Revenue Acts, can be arranged as a matter of account between the Provinces. It is hardly necessary to say that there are many details in connection with the occupation under the new tenure proposed, and with the changed accidents of the miner's right, which will require most careful consideration. The questions of registration, survey, and forfeiture must be dealt with in distinct enactments, and the variety of privileges now solely contingent upon the possession of a miner's right otherwise provided for; and I should further strongly recommend that the area of the various descriptions of claims should be also definitely settled. Nothing is so likely to tend to the speedy development of the gold fields as the granting of liberal areas, and there exists no reason why the working miner should be placed at a disadvantage in this respect, and confined to the occupation of so small an extent of ground as to necessitate that perpetual seeking of "pastures new," which is the great drawback to the establishment of mining as a settled industry. It will, of course, be necessary to fix the principle upon which these areas should be determined, and for this purpose I would divide the gold deposits into two classes:—

First, The shallow and easily worked alluvial deposits, for which the area at present adopted in Otago, 100 x 100 feet, may be considered sufficient.

Secondly, The deposits requiring mining in its true sense to work them with efficiency. For instance, quartz claims, sluicing claims, river and creek claims, hill-tunnelling claims, and alluvial claims presenting more than ordinary difficulties in working, whether from poverty of the ground, water, depth of sinking, or other causes. In claims of this class, I am of opinion that such an area should be granted as would form a mine capable of being worked, with due economy of time and labour, to the best advantage; it will necessarily be the interest of the proprietors to work it out in the shortest possible time, and this alone will be sufficient guarantee for the employment of as much labour as can profitably be employed. The occupation under business licenses, and the enactments relating thereto, may, I think, with advantage be based upon the provisions of the Victorian Mining Statute, 1865. Provision should, however, be made that persons occupying land under other tenures, *e.g.* agricultural leaseholders, should be exempt from the necessity of taking out the "business license," which should indeed be more strictly defined than at present, as a "License to occupy a certain area of Crown lands for the purpose of carrying on business." Again, the practice of trafficking in these business sites should, in the public interest, be carefully guarded against, and personal occupation distinctly insisted upon. In new townships, where many applications are made for the same site, the Warden should be authorised to dispose of the right of occupation by auction, and all transfers of such sites should pass through his hands. It is necessary that I should here direct attention to the fact that, under section 5 of "The Gold Fields Act, 1866," *any occupation whatsoever* upon the gold fields, except under lease, is limited arbitrarily to forty perches. The intention of the Act, no doubt was thus to limit *occupation under business licenses*. In order to remove doubts as to what has been done in contravention of the letter of this section, a validation clause will require to be enacted.

### Part 2.

#### COMPENSATION.

I have no remarks to make under this head, as I trust that the recommendation of the Otago Mining Commission, 1871, to separate all matters connected with pastoral tenancy or settlement of the land from the Mining Statute will be accepted by Parliament, and these subjects left to be dealt with either under a separate Act or under the Waste Lands Acts of the several provinces.

### Part 3.

#### WATER RACES DAMS AND RESERVOIRS.

The Act of 1866, section 21, having regard to water rights and races, is limited in its application to private lands. No doubt this was an accidental error in drafting the clause, and it seems extra-

ordinary that no attempt to remedy so very serious a defect has been made by subsequent legislation. I think I am justified in the assertion that the whole of the enactments having regard to water rights, are in a most unsatisfactory position. Practically, section 21 and its subsections have been a dead letter; and this most important subject has been dealt with under regulations issued by the several local Governments, in conformity with section 11 of the said Act. These regulations appear to have followed in the vein of the subsections referred to, and we may assume that the intentions of the Act have been, in most instances, fairly carried out, and that the legislation presumed to have been effected has been fairly tested. I believe it has been as universally condemned. Whilst rights are granted to divert and use water for mining purposes and to construct races, there is no absolute security of tenure, but a mere holding from year to year by licenses renewable under certain conditions. Again, subsection 10 of the said section 21, which enacts that "two sluice-heads of water shall be required at all times to run down the natural course of any stream for general use," is liable to be made the vehicle of great wrong, and, if the ruling that "general use" includes "mining" is correct, of actual robbery,—the taking, in fact, of one man's property, and giving it to another. Upon this subject I would again refer to the Report of the Otago Mining Commission, p. 2, (Appendix 1871, G. No. 18.) Another question of principle under the existing law which I think objectionable, is, that the annual licenses to use water are granted without fee or payment. Section 28 of the Act of 1866 provides that rent should be paid for water, and absolutely and very properly fixes the rate of fees; but by section 7 of the Act of 1869, the operation of this enactment was confined to "private lands only, and not to lands of the Crown, except such Crown lands shall be situate outside the limits of any proclaimed gold field." The Otago Mining Commission, composed almost exclusively of practical working miners, strongly recommended the imposition of a rental, as will be seen by reference to their Report.

My recommendations upon this subject may be briefly summarised:—1. That the principles embodied in "The Mining Districts Act, 1871," with regard to water rights, races, &c., be adopted, viz., That licenses be granted for a term of years upon an annual payment to be fixed by Statute. 2. That the provision for carrying races through private lands, which is now law under the Act of 1866, be retained. 3. That all details of management be left to be settled by Regulations instead of being inserted as subsections in the Act itself. Regulations have a great advantage in being more elastic and capable of alteration and amendment from time to time as emergencies may arise, or experience may dictate. I would further suggest that special provision will require to be made to meet the case of that very important branch of mining, namely, ground-sluicing, by rights being given under Statute to occupy to a reasonable extent waste lands of the Crown for the discharge of the *debris* arising from sluicing operations, and for exonerating miners from any legal consequences at common law for fouling streams or rivers in the necessary pursuit of their calling. The arguments used in a recent case in Dunedin, "Queen on the prosecution of Holmes v The Superintendent of Otago," upon an information for filling up a portion of the Dunedin harbour, seems to me to point to the fact that whilst sluicing is a most profitable form of mining, it is in most cases carried on in violation of the law as it stands.

#### Part 4.

#### GOLD MINING LEASES.

Should it be decided upon to place the occupation of ground within the gold fields, upon the same basis as under "The Gold Mining Districts Act, 1871," it will not be necessary to make provision for gold mining leases, further than to allow leaseholders, if they so desire, to exchange their present tenure for tenure under the new statute; or should they prefer to retain their leases, to relieve them generally of the oppressive fixed labour-conditions now attached, and to fix the maximum yearly rental. The "licensed holding" will give an absolute security of tenure without one-tenth of the expense, delay, and general botheration connected with the present system of mining leases. Upon this point I refer to sections 12 to 20 inclusive, and Schedule I. of "The Gold Mining Districts Act, 1871," and generally to sections 73 to 78 inclusive of the Report of the New South Wales Mining Commission, 1871, a copy of which has been presented to Parliament.

I may add that the recommendations of the Otago Mining Commission tend generally in the direction I have indicated, although not realising the possibility of leases being superseded by a more simple form of tenure.

#### Parts 5 and 6.

#### AGRICULTURAL LEASES AND PROVISIONS RELATING TO LEASES AND LICENSES.

Settlement under the agricultural lease system, with the right of purchase within a fixed time, is not now a matter of question or experiment, but has been proved an undoubted success; and I do not know that the present enactments, under which have been issued the very admirable regulations of the Province of Otago, admit of improvement. The difficulties which stand in the way of agricultural settlement upon a scale proportionate to the population of the gold fields, are not to be attributed to the legislation under which such settlement is provided for, but are to be referred to the obstructions in the way of obtaining suitable blocks to set aside for leasing purposes.

#### Part 7.

#### SALE OF LAND ON THE GOLD FIELDS.

This is a subject which, like agricultural leasing and questions affecting pastoral tenancy, should be dealt with separately from the Mining Statute. I would, however, point out that the Otago Acts referring to the waste lands of the Crown, passed simultaneously with or subsequent to "The Gold Fields Act, 1866," deal with the sale of land within gold fields, and therefore supersede in this respect,

the provisions of the said Act in this behalf. "The Westland Waste Lands Act, 1870," by section 83, is expressly made to apply to land within gold fields, which thus in that County is practically exempted from the said provisions. In Nelson and Marlborough, so far as I am able to ascertain from a perusal of the Waste Lands Acts of those Provinces, the enactments of the Act of 1866, with regard to sale of land on the gold fields, are in force. It will not, therefore, be advisable to repeal or amend the sections referring thereto, until some general measure providing for settlement on the gold fields shall have been approved by the Legislature.

Part 8.

REVENUE AND EXPENSES.

Upon this subject, as being purely political, I have no remarks to make, further than to state, that, under the existing laws relative thereto, the gold fields revenue and gold duties are for all purposes part and parcel of the land fund of each Province.

Part 9

LOCAL LEGISLATION.

The constitution of Central Mining Boards for Otago and the West Coast respectively,—would probably be the most popular plan with the miners, who have a general idea in favour of local self-government. In Otago, Boards or Commissions somewhat of this character have been twice called together, and have, in their consultations, evolved many valuable suggestions and practical recommendations. Their functions have, however, been limited to advising the Executive; they having not been invested with any legislative powers. Having referred to their Reports upon other points, I would direct attention to the fact that the Otago Mining Commission, in 1871, strongly recommended the institution of a Central Mining Board to frame regulations for the gold fields of that Province; and that the New South Wales Mining Commission, 1871, by a majority of one, decided to recommend that the regulations should be framed by a "Central Mining Board," consisting of four members elected by the miners themselves, and three nominated by the Government; and suggested that these nominees should be officers of the Mining Department, the separate constitution of which the Commissioners had, earlier in their Report, strongly recommended. My own opinion is expressed in a former part of this Report.

Part 10.

ADMINISTRATION OF JUSTICE.

Sections 62 to 74 inclusive of the Gold Fields Act of 1866 define the jurisdiction of the Warden's and of the District Courts, which jurisdictions are identical, and appear to be defined in a very unsatisfactory manner, and to have a much more limited scope than was the intention of the Legislature. It is absolutely necessary that the whole of this portion of the Act should undergo careful revision; that the jurisdiction of the Warden's and District Courts should be more clearly defined, and that such jurisdiction should include every kind of question likely to arise connected with mining matters, including encroachment and trespass cases, all breaches of the Act and regulations, all matters of contract or actionable wrong between shareholders in a claim, lease, or licensed holding—the amount of debt or damages in the Warden's Court to be limited to £100;—and all partnership questions of every kind, whether during the continuance of the partnership or after its dissolution. The Wardens also should have power to grant injunctions, to appoint Receivers and Managers, and to make all necessary orders for the working of claims and the appropriation of the proceeds, pending the final settlement of disputes. The provisions of section 73, Gold Mining Districts Act, 1871, to some extent meet the case, but they are hardly comprehensive enough, and may be improved upon with advantage in the direction of extension.

The subject of appeal is not by many persons on the gold fields considered to be satisfactorily dealt with under the Act of 1866. As the law stands, upon an appeal from the Warden's Court, the District Court takes up the case afresh, and goes into it *de novo* from the beginning to the end. It is, in fact, a new trial to all intents and purposes. The question being a purely legal one, I do not presume to offer an opinion as to the best course to pursue. If it is considered desirable to amend the law, the principle of section 216 of the Victorian Mining Statute, 1865, might with advantage be adopted; it runs as follows:—"Every appeal shall (unless an issue shall be directed, or the trial of any fact by assessors be required, as hereinafter mentioned) be heard and determined by the Judge alone, and no ground of appeal excepting those stated in the notice of appeal shall be entered upon unless the Judge shall allow, either before or at the hearing, other grounds to be added, upon such terms as to adjournment, costs, or otherwise, as he may think fit."

Part 11.

PENALTIES.

Should it be decided to adopt the principle of the Gold Mining Districts Act, 1871, with regard to the tenure of mining property, and the "miner's right" should consequently cease to be an element of title, the whole of the penalty clauses in this Part, connected therewith, will require recasting accordingly. Probably sections 107, 108, and 115 of "The Gold Mining Districts Act, 1871," would sufficiently meet the case, but section 107 is, in my opinion, too stringent; "imprisonment" should hardly be enacted except in default of payment of the fine.

## Part 12.

## GENERAL PROVISIONS.

Under this head many most important enactments are made in "The Gold Fields Act, 1866." Authority is given to the Governor to make regulations, and the delegation of this and other powers is provided for. With regard to the Rules and Regulations to be made, subject to the provisions of the new Statute, it will be desirable to follow the arrangement of the existing Acts—(section 11 of "The Gold Fields Act, 1866," and section 98 of "The Gold Mining Districts Act, 1871")—and define the specialities for which purposes these may be made. At the same time, it would be well to re-enact section 107 of "The Gold Fields Act, 1866," which gives general power to the Governor "from time to time, for the purpose of facilitating or more effectually carrying into execution any of the objects thereof, to make and prescribe all such rules and regulations touching any of the matters intended to be hereby provided . . . and to revoke the same."

A very serious question as to the tenure of mining property is raised by section 112 of "The Gold Fields Act, 1866," which is included under this Part. I have already alluded to this in dealing with the miner's right as an element of title, and have referred to the able minute of Mr. Wilson Gray, printed amongst the Parliamentary Papers of last Session (A. No. 8, 1871). Under any circumstances, as to the adoption or otherwise of new principles in the proposed Mining Statute, it should be essential to set at rest, by legislation, the very grave doubts upon the subject which exist under the present laws. The section referred to has been taken, irrespective of congruity with the rest of the Act, almost *verbatim* from section 246 of the Victorian Mining Statute, 1865.

I do not know that there are any further general provisions, under the existing law, which call for any special comment, beyond what I have noted. It is necessary, however, to remark that the enactment which decrees immunity from the necessity of shareholders in incorporated Companies taking out miners' rights, is not to be found in any of the Gold Fields Acts, but in "The Mining Companies Limited Liability Act Amendment Act, 1869," section 10. It will be advisable that this very important enactment should form one of the provisions of any new Mining Statute, and not be left to the chance of being overlooked in any Limited Liability Act which may be passed. Under this same head of "General Provisions," it is very desirable that authority should be given to the Governor to issue "Prospecting Licenses,"\* which shall authorize the persons to whom the same are issued, to prospect and search for gold on any Crown Land within the district specified in such license, such district being without the boundaries of any gold field. "The Crown Lands (Nelson) Leasing Act Amendment Act, 1870," enacts that the Waste Lands Board may grant protection, for a period not exceeding thirty days, to discoverers of auriferous lands outside any proclaimed gold field, and at the expiration of such period may, if they shall think fit, grant the prospector a lease for mining purposes of the area occupied, but not exceeding ten acres of alluvial ground or 400 yards by 200 yard upon a quartz reef. This is a very admirable provision, tending greatly to encourage mining enterprise, and I would recommend that it be included in the new Statute, having general application to the whole Colony.

The question of mining upon private property is very summarily dealt with under the present Gold Fields Acts, which simply enact certain penalties in the event of persons mining for gold upon private property without the consent of the owner (section 98, Gold Fields Act, 1866); and provide for the settlement of disputes between persons, so mining by consent, and the owner of the land, by the Warden's Court (section 64 Gold Fields Act, 1866). This subject requires to be dealt with upon a very different basis, and provisions made for compelling the owner of private land to permit mining thereon, with stringent enactments as to conditions and compensation. The present position of the freeholder with regard to the precious metals is one of great uncertainty, and it is evidently practicable for any owner in fee simple to play the "dog in the manger;" neither mining himself nor allowing others to do so. I would not deprive the proprietor of the soil of the power to make reasonable arrangements with the miners, but they should not be permitted absolutely to prevent mining upon their lands. This principle has already been recognised by the Parliament of New Zealand in "The Westland Waste Lands Act, 1870," which includes a provision that all suburban or rural lands sold under the provisions of the Act shall, for the period of fourteen years after sale, be open to entry by miners, for the purpose of mining for gold, subject to the provisions contained in the regulations set forth in the fourth Schedule of the Act. These regulations are of a very stringent character, and provide for settlement by arbitration, in the event of the owner of the land and the miner not being able to arrange between themselves the terms of the contract. I am not aware whether this enactment has ever practically been given effect to; but I am inclined to the opinion that the regulations referred to are practically prohibitory. In the Colony of Victoria, the Land Act of 1869 (33 Vict. CCCLV.), section 99, provides, "That all lands alienated under the provisions of this Act shall be liable to be resumed for mining purposes by Her Majesty, on paying full compensation to the licensee, lessee, or purchaser in fee-simple thereof for the value other than auriferous of the lands and improvements so resumed; such value, in case of disagreement, to be ascertained by arbitration; the terms, conditions, and events upon which such lands may be resumed, and the manner in which such arbitration shall be conducted, shall be determined by regulations in such manner as the Governor shall from time to time direct." The Otago Mining Commission, 1871, remarks upon this subject,—“Believing that the development of gold mining is of such importance to the Colony that it would justify the Legislature in sanctioning for that purpose an invasion of the stricter rights of private ownership, and seeing that in making such a recommendation they are supported by the precedents of the immemorial customs of the tin-producing portions of England and other European countries, and also by recent legislation in the Colony of Victoria, they recommend that the Legislature should take steps to enable gold mining to be carried on upon private as well as upon Crown lands, and that the miner should

\* Section 6 of "The Gold Fields Act Amendment Act, 1868," provides for the issue of "Prospecting Licenses," but the application is intended to be confined to "Native Lands."

have the authority or the protection of the law for this operation and rights over all Crown lands within the Colony, and not merely within portions proclaimed and set apart as gold fields.”

With regard to those other Acts now in force which deal with what may be designated specialities of mining interests, I have a few remarks to make.

“The Gold Mining Claims Drainage Act, 1868,” which is in force only I believe in the Ross District, Westland, is, I am informed, capable of considerable amendment; and it has been intimated to me that the present Board, through their Chairman, intend to address the Government upon the question. It would be advisable, I think to incorporate this Act, with such alteration as may upon consideration be deemed advisable, with the Mining Statute, should such a measure be introduced; and the same course should be taken with “The Gold Mines Drainage Act, 1871,” which has special reference to quartz workings. The constitution and management of Mining Companies upon the principle of limited liability, is now provided for under the Act of 1865, and Amendments Acts, 1868, 1869, 1870, and 1871. As the present law is universally acknowledged to be in a very unsatisfactory condition, it being found almost next to impossible to wind up companies or bring shareholders to account, I would very strongly recommend that advantage be taken of recent legislation in Victoria. “The Act for the Incorporation and Winding-up of Mining Companies,” passed by the Victorian Assembly, 23rd November, 1871, practically repeals all those former Statutes upon which our existing law is based; and I believe nothing could be done better in the matter than to adopt this Act, with such alterations as the condition of our Statute Book renders necessary.

In concluding this portion of my Report, I would desire to observe that, in the suggestions I have ventured to offer upon the amendments desirable in the laws affecting the gold fields, I have kept steadfastly in view the principles upon which I consider that all mining legislation should be based. First, that the unalienated lands of the Crown, and the precious metals within alienated lands, are the property of the entire community, and should be dealt with in furtherance of the general prosperity, and by no means for the exclusive or special benefit of any particular class. And secondly, that the laws relating to auriferous deposits should be so framed as to attract population to our gold fields, where the miners should find inducements for permanent settlement.

#### PROSPECTS OF THE GOLD FIELDS.

The Resolution of the House of Representatives requires that I should say a few words as to the future prospects of the gold fields. I believe that in every mining district, without exception, these are of the brightest character. The returns from the alluvial workings in Otago and Westland have been steadily on the increase for the last three years; new ground is being constantly opened, and the mining population are, as a community, prosperous, and fast becoming settled upon the soil. Large areas of ground known to be auriferous, only require water for successful working; and agricultural settlement is limited solely by the land disposable for the purpose. The West Coast, from Bruce Bay to far above the Buller, is one gigantic gold field, payable everywhere with water; and in Otago, I believe, the mines have yet to be developed, and that the millions of gold extracted up to this time have been chiefly from mere surface deposits.

In quartz mining, the marvellous yields upon the Thames gold field are now matters of history. From the character of the gold bearing strata, their infinite variety lay in formation and depth from the surface, form an epoch in the history of gold mining. The richest crushing, I believe, recorded, is that of ninety-seven ounces to the ton, from eighty tons of stone in the Caledonian mine, in the second quarter of 1871; but there are, unfortunately, no means of arriving at a general average of the yield from the quartz raised since the opening of the field; it may, however, be approximately estimated at from two to three ounces to the ton. The latest accounts are most encouraging; new mines are constantly being developed, auriferous veins struck at great depths, and, what is the most tangible argument of success, there is a considerable increase in the number of dividend paying companies. From the Coromandel sub-district the returns of gold have increased nearly threefold. In the June quarter of 1871, the total yield was only 2,754 ounces, but in the quarter ending 31st March, 1872, it was 6,825 ounces. Several successful crushings have lately taken place, and seem thoroughly to justify Mr. Warden Keddell's remarks that “the prospects of Coromandel at the present justify sanguine hopes of the future.” Upon the general subject of the Thames Gold Fields I would refer to the very exhaustive and valuable Reports by the Mining Inspectors appointed under “The Gold Mining Districts Act, 1871,” forwarded by His Honor the Superintendent of Auckland to the Government, which are in the Printer's hands, and will be presented as a Further Return to the Resolution of 1869.

In the Inangahua, Province of Nelson, the reefs may now be considered as proved. The two crushings from the Prospectors claim and the Westland Company having resulted in nearly two ounces to the ton upon over 1000 tons of stone. The gold is of a very fine quality, being worth £3 15s. an ounce, whilst at the Thames £2 15s. is about the average value. The Report of Mr. Warden Charles Broad, appended hereto, affords all the information possible at present with regard to this newly opened district, which presents without doubt, a field for mining enterprise, unequalled probably in the history of the world. The reefs extend and have been traced for miles, and it may fairly be assumed that they are auriferous throughout; whilst coal is ready to hand, and water (for the tables) in most localities easily obtainable. The difficulties of communication with the ports of Greymouth and Westport have, up to this time, rendered the necessities of life exceptionally high, but roads at present in a fair way of completion will afford easy access to Reefton, both by the Buller and the Grey, within a few weeks at the latest, should the weather prove at all favourable.

In Otago auriferous reefs have been developed in several parts of the Province within the last few years, and have been worked with varying success. The difficulty and expense of bringing machinery upon the ground and the broken character of the lodes necessitating large outlays of capital, have swamped many promising enterprises, and caused the abandonment from time to time of mines notably auriferous, and yielding quartz containing a very high per centage of gold to the ton. This has been the case at

Mount Ida, Wakatipu, and Tuapeka. In the two latter districts, renewed activity in the direction of quartz mining has taken place recently, and I am informed is likely to result in the successful establishment of this most important branch of mining industry. Reefs have also been discovered in the Teviot district. The Bendigo and Carrick range quartz mines, in the Dunstan district, have proved and are proving a considerable success (see Reports appended); recent crushings showing a very handsome average of gold to the ton. The exceptional severity of the present winter militates very much against the returns at this high elevation; the water freezes upon the tables, even if the companies are fortunate enough to get it upon their ground at all.

The reefs at Wangapeka, in the Province of Nelson, and at Pelorus, in the Province of Marlborough, have been for the time abandoned, although proved to be auriferous, the yield of gold not having proved sufficient to warrant the large expenditure, under present circumstances, entailed by the continuance of mining operations. That these reefs will be profitably worked I have little doubt, when, by the settlement of the country, access to the reefing districts becomes more easy, and the price of labor and provisions is reduced within the limits of moderate profits from the mines. In the immediate neighborhood of the town of Wellington indications of gold have been found; and, in the expectation of finding payable reefs, no less than twenty-six companies have been formed and registered. A Berdan crushing machine has been erected near Baker's Hill, to which locality the prospecting (by tunnelling and otherwise) has hitherto been chiefly confined. A few tons have been crushed at the Berdan, but with what general result I have not been able to ascertain; it is sufficient, however, to remark that as yet no valuable or well defined reef has been discovered.

#### GENERAL REMARKS.

The absence of comparative statements and returns renders statistical tables compiled upon any uniform system very imperfect; it is, however, a necessity in the case of a first compilation, which will be easily understood. I have already taken the opportunity, in an earlier part of this report, to remark upon the difficulty of obtaining essential information, owing to the scattered character of the gold workings, and the entire absence of any machinery for the purpose. In Victoria the Department of Mines have direct supervision of the gold fields official staff, including the Wardens, Mining Registrars, Mining Surveyors, and Engineers, all of whom report periodically, according to their several specialities, the minutest details regarding the district in which they are located. Forms, the construction of which have been based upon the experience of nearly twenty years, and which appear to be exhaustive of all valuable information, are furnished to the officers designated; an important part of whose duty would seem to be the seeing that these are filled up intelligently and with punctuality. The Banks and Mine Managers throughout the colony recognise the importance of trustworthy statistics, and do not hesitate, under the seal of individual privacy, to furnish the department with information of a most valuable character, when massed with figures, for the purposes of certain general conclusions. Under the Victorian Government, the advantages of organization are made the most of, and the result is such a report as the "Mineral Statistics of the Colony," annually presented to Parliament. It is hardly necessary for me to point out that in New Zealand things are very different; the Wardens are few in number; their jurisdiction extends over large districts sparsely and intermittingly populated; half their time is spent in the saddle—their most important work is in the field. Had they the taste or inclination, they have little time for collection of statistics, even did the nature of their duties place these in their way. I must here express my obligation to these officers, who, under such difficulties, which I have but hinted at, have been good enough to furnish the Reports appended hereto; which will be found almost historical as to the districts under their charge, and which, I have no hesitation from personal knowledge in asserting, convey most reliable and intelligent information.

The official status of the Mining Engineers and Surveyors differs in almost every province; but as in no instance are they in any way responsible to the Colonial Government, they could not with any show of reason be called upon to furnish returns, the compilation of which would be a work requiring daily attention, some expense, and considerable responsibility. With regard to the Banks, Mine Owners, and Managers, it is only very recently that they have been asked to afford specific information. The banks, without exception, have expressed their desire to meet the views of the Government, and have assented to furnish in future the required returns; and I have no doubt that, when the subject is fully understood, the Mine Owners and Managers will, to a man, take the same course. The approximate character of the present statistics will, I am justified in thinking, be superseded next year by tables constructed on an accurate basis, so far as the circumstances of the colony permit.

C. E. HAUGHTON.

July 16, 1872.

## APPENDIX TO REPORT ON THE GOLD FIELDS OF NEW ZEALAND.

## WARDENS REPORTS.

## AUCKLAND.

## No. 1.

Mr. Warden FRASER to UNDER-SECRETARY Gold Fields.

Warden's Office,

Grahamstown, 10th June, 1872.

SIR,—

I have the honor to forward herewith my general Report on the state of the Thames Gold Field for the year ending 31st March, 1872; also, schedule of mining companies registered in this office, together with the return of prices of provisions, &c., to 31st March.

The greater portion of the companies enumerated have been wound up, or have otherwise gone out of existence; but no provision having been made by the Mining Companies Act by which such information may be obtained from the official agent, or otherwise, the actual number of existing companies cannot be ascertained to a certainty. The list of Beere Brothers, herewith, gives as close an approximation as could be obtained under the circumstances, to which may be added those in bracket at end of schedule registered between November 1st, 1871, and March, 31st, 1872.

Requisition has been made to the Registrar of Companies under the Joint Stock Act, for the information necessary to fill up the table under that head; that information with the remaining forms, shall be forwarded as soon as they are completed.

The circulars received from you, with an additional number printed here, have been sent to the several offices of companies, with the note, a copy of which is appended; as yet but six have been returned.

I have, &amp;c.,

W. FRASER, Warden.

The Under-Secretary for Gold Fields.

The Report and returns would have been furnished you at a much earlier date but for my recent illness.

W. F.

## GENERAL REPORT on the state of the THAMES GOLD FIELD for the year ending 31st March, 1872.

At the beginning of the year over which this Report extends, the yield of gold has reached a higher amount than at any previous time since the opening of the field; chiefly owing to the working of the exceedingly rich shot of gold found in the mine of the Caledonian Gold Mining Company.

During the month of January, 1871, it was calculated that 6,832 tons of quartz had been crushed for a yield of 11,865 ounces of gold: while in February the returns were 7,074 tons giving a yield of 30,749 ounces. Of this latter yield the following were the crushings from the Caledonian mine:—80 tons yielding 5,096 ounces; 80 tons, 7,779 ounces; 75 tons, 453 ounces, and 115 tons, 69,566 ounces. In March, 879 tons were crushed by this company for a yield of 45,200 ounces.

The following are the estimated quantities crushed, and results for the whole field:—

						Ozs.
In April	6,700 tons for	...	...	...	...	37,200
„ May	10,500 „	...	...	...	...	63,200
„ June	6,900 „	...	...	...	...	34,166
„ July	6,500 „	...	...	...	...	28,527
„ August	7,000 „	...	...	...	...	28,700
„ September	7,200 „	...	...	...	...	18,085
„ October	8,080 „	...	...	...	...	15,200
„ November	7,884 „	...	...	...	...	20,900
„ December	8,528 „	...	...	...	...	18,000
1872.						
„ January	3,633 „	...	...	...	...	6,100
„ February	7,469 „	...	...	...	...	13,800
„ March	8,800 „	...	...	...	...	15,932

The very low return in January is accounted for by the Christmas and New Year holidays. The statistics hereinbefore quoted, are taken from the monthly reports of the *Thames Advertiser*. In these figures there is included the result of several rich crushings from mines in the Coromandel district. Within the last few months, however, but little gold or specimens have been brought from Coromandel to the Thames, as facilities are being obtained there for crushing, retorting, melting, &c.

An allowance of from 1,000 to 2,000 ounces is made each month for sundries from the different establishments on the field for the treatment of specimens and tailings, it being impossible to obtain precise returns as to the gold obtained from these sources.

I may here mention the principal facts in reference to the wonderful shot of gold which has yielded such large results in the Caledonian mine during the last year. This rich run skirts diagonally through the reef, which lies at an angle of about  $45^{\circ}$  from the horizon. It was first met with in the Manakau claim, about 200 feet above the level of the sea, and was worked by the shareholders of that claim as far as the point where it dipped in to the Golden Crown Company's mine. Its general average yield on this section may be estimated at about four ounces per ton.

The Golden Crown Company met this rich shot at a depth of about 100 feet from the top of the hill, or about 100 feet above high water mark. The first crushings taken out yielded an average of fifty-four ounces per ton. The run of gold in this mine assumed a more definite appearance, and the richest portion of the reef lay in a block of seventy feet in depth by about forty feet in width. The average yield of this portion would be about fifty ounces to the ton if it had been worked separately. At about fifty feet below high water mark this shot of gold broke, and all traces of it were lost for a time. Further development, however, discovered that the gold had not run out, but from some cause it had jumped forty feet to the northward. From this level it was followed on the underlie a further depth of forty-five feet to the boundary of the Caledonian Company, and carried gold throughout; the average at this point being from eleven to twelve ounces to the ton.

In the end of 1869, it was discovered in the Caledonian mine at a distance of about fifteen feet from the Golden Crown boundary, and at a greater depth of about thirty feet, or at a level of about eighty feet under high water mark. The first crushings were not so good as those which followed, although they were very rich, and the golden belt was only about fifteen feet in width. At about ninety feet below high water the shot widened out, and covered a face thirty feet in width, and it was here the richest golden ore ever known was found. At about 170 feet below the sea, the quartz again became poor, and all traces of the rich deposit which had been so long followed were lost. The greatest depth of the Caledonian Company's shaft at present is 300 feet from the surface, or about 210 feet below the level of the sea. It is not considered probable that the gold run will be again found in this level, but men of the greatest experience are satisfied that in the next level it will be met with, and past experience favors the idea that it will prove as rich as ever. The breaks in the run of gold have hitherto had the effect of increasing the richness of the shot when again discovered. All its breaks, hitherto, have thrown it in a northerly direction. The machinery of the Caledonian mine, consisting of a forty-five horse power pumping engine and a fourteen horse power winding engine, is ineffectual in keeping the water reduced so far as to permit of the shaft being sunk to a greater depth at present, even with the assistance rendered by the pumping engine of the Tookey Gold Mining Company. Effectual measures have, however, been adopted to drain this reef by the formation of a Pumping Association. The association consists of the Caledonian, Tookey, Imperial Crown, and Golden Crown Companies. The design was to sink the shaft of the Imperial Crown mine, as this would cut the reef at the greatest depth, and so draw off the water from the other mines. To pump off the water, a large and powerful steam engine is in course of erection, capable of being worked up to 300 horse power. It is a direct acting one, with a cylinder eighty-one and a half inches in diameter, and the pumps will be twenty-five inches in diameter. Massive stone foundations have been laid for this engine. The stone has been procured in large blocks from a valuable quarry discovered on the Hape Creek, within the gold field. The comparatively light machinery which had previously been erected and worked on this claim, has been found sufficient to sink the shaft to its present depth, 300 feet, or 292 feet below high water mark. The reef has not yet been cut, but there has been a great increase in the quantity of water, and the company are now proceeding to get the large pumps and pumping engine into working order as soon as possible.

The Albion Company, whose ground is immediately adjoining to the N.W., are sinking a shaft which will require to reach even a greater depth than that of the Imperial Crown before the reef is met with. This shaft is now down 194 feet, and the Company have erected in connection therewith a winding engine of forty horse power. It has been estimated that to work out the whole of the main reef which underlies into this Company's ground, the shaft must be sunk 800 feet below the level of the sea.

Another work of great importance is the Kuranui Hill main tunnel. This has been carried on for mutual advantage by a number of well known gold mining companies. The tunnel is of sufficient width to accommodate two lines of tramway, and is laid throughout with good plates. It extends in a straight line from the beach through the Long Drive, Junction, All Nations, Inverness, and Don Pedro mines, and has now reached to the ground of the Moanataiari Company. It has already proved of great advantage to all the claims through which it passes, affording deep levels on the reefs, and ready means of transit to the crushing mills. To the Moanataiari Company, who possess a very large area of ground, it will prove of particular advantage. This company purposes to erect a powerful crushing plant on the beach from 60 to 100 head of stampers. The Kuranui Hill tunnel opens this mine at a greater depth than has ever been reached before, and the number and extent of reefs thus developed would permit of even a greater and more powerful crushing plant than that just mentioned, being usefully and permanently employed. I may here mention that this mine has recently produced many rich returns. In the beginning of March a yield of 750 ounces was obtained from 626 tons of quartz, and since then 2,890 tons of stuff have been crushed for a total yield of 6,750 ounces of gold. It has been continuously worked since the opening of the field, and notwithstanding the constant expenditure and the purchase for cash of a great many of the adjoining mines, now amalgamated with the company's original property, no call has been made on the capital of the company. It is but recently they have commenced to pay dividends, but within a very short period £1 per scrip share has been paid on the 13,500 shares into which the company's stock has been divided.

At the Upper Tararu, about four miles from the beach, several reefs have been opened, which promise to pay well, but as it is impossible to bring quartz from thence to the lower part of the creek,



and will be very costly to take machinery to this locality, the claims have been but partially worked. The owners of the Vulcan mine have erected a battery of nine stampers, driven by a turbine; the returns have been payable, averaging from an ounce and a quarter to the ton. A road has lately been made to this district, which will materially assist its development. A road is also being formed from the beach near the mouth of the Puru Creek, about six miles beyond Tararu, to the machine site of the Celt Company's claim, the furthest north mine on the Thames Gold Field, with the exception of the comparatively isolated district of Tapu. Most of the original claims taken up at Tapu under miners' rights have been abandoned, but there is reason to believe that the district will yet become a valuable portion of the gold field. Messrs. Buckland & Rattray are conducting mining operations there in a systematic and permanent manner, each possessing machinery with ample crushing power, and I believe both are satisfied with their prospects in that locality.

It will be observed that the principal workings of the field are all near the beach, where the facilities for mining and crushing are much greater than further back. Notwithstanding the tramways (wire and rail) on each creek, it has been found that the batteries which have been erected towards the sources of these creeks could not be kept in constant work, partly owing to the scarcity of water, and partly to the fact that they could not crush so cheaply as to make payable anything but exceedingly rich quartz. A water supply at a high level, together with a lowering of the tramway rates for conveyance, would materially assist the claims on the upper or inland portion of the gold field. During the last six months much greater attention has been devoted to the Coromandel Gold Field than before, owing to the good returns from the Tokatea, and to the discovery of gold on the beach in the Green Harp and other claims; the effect on this field has been to diminish speculation at the Thames, and probably, to some extent, to prevent new ground being taken up.

The great demand for labor at Coromandel has also had the effect of taking men from this district, so that at the present time there is no scarcity of employment. Without entering into minute details of separate workings, I am able to report favorably of the progress made during the last year.

The large yield in the Caledonian mine had the effect of inducing a renewal of speculation. Ground was taken up which had been abandoned, and claims were worked with greater vigor. Several excellent reefs were found, and are now being profitably worked, in consequence of the renewed energy given to the field by the wonderful productiveness of the Caledonian Company's ground.

The system of mining adopted is of a permanent character, and the confidence of the public in the mineral wealth of the field is evinced by the readiness with which machinery of the best and most perfect character is erected. As a general rule, the class of mining machinery here will bear favorable comparison with that at work in any part of the world. The crushing machines are acknowledged by competent judges to be of the most perfect description that can be procured. The total crushing power of the field consists of 590 head of stampers, capable of reducing 600 or 700 tons of quartz daily when in full work. There have been two very large batteries erected recently—one of forty head of stampers for the Imperial Crown Company, and the other a similar power for the Caledonian Company. Several large crushing mills in the Tararu Creek, such as the Missouri of twenty head, Russell's thirty head, Flora Macdonald thirty head, and Tararu Battery of forty head, are partially driven by water power (in the two first instances entirely so).

In the case of the Tararu battery and the Flora Macdonald, the steam engines are supplemented by turbine water wheels of the most approved construction. I believe I am justified in stating that in no other district in the Colonies of a similar area is there such a large and splendid selection of machinery. The statistics furnished will show the produce of the field within the given period.

The rate of provisions here is very little in advance (if any) of the Auckland market. The average rate of wages is £2 2s. per week, but, as in most of the mines, work goes on without intermission for six days of the week, there are in reality three days work done every twenty-four hours.

The "Gold Mining Districts Act, 1871," came into operation on this field on the 22nd day of January last. As rights acquired under the Gold Fields Acts were preserved, and the Warden's Court empowered to adjudicate upon them, the change in the holdings is but gradually being made.

As yet it would be premature to express a decided opinion upon the merits of the Act, but so far as I can speak, I think it will work satisfactorily, giving ample security for title on the one side, and making provision that ground shall not be idle if there is any person willing to take it up.

I have, &c.,

W. FRASER, Warden.

Grahamstown, 8th May, 1872.

## No. 2.

Mr. Warden KEDDELL to UNDER-SECRETARY Gold Fields.

Warden's Office,

Coromandel, June 7, 1872.

SIR,— I have the honor to forward herewith the returns requested in your telegram and in letters from your office from time to time. I regret that owing to the circumstances of my having to undertake the duties of Resident Magistrate and Warden at Grahamstown, in addition to my ordinary duties at Coromandel, during the absence on sick leave of Captain Fraser, these returns have been delayed.

I have, &c.,

JACKSON KEDDELL, Warden.

The Under-Secretary for Gold Fields.

## REPORT ON THE GOLD FIELDS

GENERAL REPORT on the Northern portion of the HAURAKI GOLD MINING DISTRICT (COROMANDEL),  
Province of Auckland, for the year ended 31st March, 1872.

THE Coromandel Gold Field, although the first discovered in New Zealand, is in all probability the least prospected in the Colony. Although considerable sums of money have been lost in connection with the Mining Companies which have from time to time held auriferous ground in the District of Coromandel, very little of the money so lost has been expended in *bona fide* mining operations, and a large proportion of the little that has been so expended has been spent injudiciously, and with an utter want of system.

The district, even at the present time, is comparatively unprospected, yet the little that has been done is enough to convince any one who has an intimate knowledge of the gold producing districts of Australia and New Zealand that Coromandel will ultimately take a first-class place among them.

Gold was first discovered in Coromandel in 1851, and the alluvial deposits were worked to some extent with different degrees of success until 1854, when the field was almost abandoned as unprofitable. Gold was afterwards discovered in the lodes of the Driving Creek in 1862, and a considerable amount of gold obtained. In 1864, several of the small areas then worked as claims were united into one and taken up by the Kupanga Company, which Company continued to work the ground for about four years, obtaining during that period about £85,000 worth of gold. The insufficiency of the machinery employed, and the brilliant prospects at the Thames, where gold bearing quartz of great richness had been discovered, caused the Coromandel gold field to be again deserted, and the Company referred to was wound up.

A fresh impetus was given to gold mining in Coromandel by the discovery of a valuable reef on the Tokatea Range, 1869, since which time the field has been advancing slowly but surely with the aid of local capital only.

Fresh discoveries have recently been made in the low hills on the shore of Coromandel Harbour, in the township of Wynyardton, in the Tiki District, in the Courthouse Creek, and in the neighbourhood of the old Kupanga Claim, places widely apart from each other, and scattered over a very large extent of country. An English Company has taken up the old Kupanga Company's ground, and is importing powerful machinery from England for the purpose of working the ground systematically. The field is only in its infancy, and none of the mines are yet opened up for carrying on operations on an extensive scale. Coromandel is essentially a reefing district, and its progress will necessarily depend on its favour with the capitalists of this, the neighbouring Colonies, and London. A large amount of capital and labour will be necessary for its full development.

The prospects of Coromandel at the present justify sanguine hopes of the future, and public confidence in its permanent welfare is firm, being founded on the excellent prospects found in the reefs, and the high average yield of gold obtained from crushings. The machinery already erected on the field is, however, inadequate, and this circumstance, together with the fact that many Companies have been formed, more for the purpose of speculation, than from a determination to work the ground, may probably cause periods of depression such as have been frequently felt at the Thames and other quartz mining districts.

A large increase of population has taken place during the past twelve months, and a corresponding improvement in the different townships.

The statistical returns in the accompanying documents are in many instances of an approximate character, no returns having been supplied by the owners of crushing machines, and with regard to population I find it very difficult to form an estimate; the excitement consequent on the rich returns from the ground on the Tokatea Range, the Beach, and Wynyardton, having caused a constant flow of visitors from the Thames and Auckland, who remain some days and leave and again return; the distance between these two places and Coromandel being but from three to four hours by steam vessel. There is, however, a constant attendance of a large number of people interested in the result of the mines, who I should consider would be fairly added to the general population of the district, which I would estimate at about 3000.

In January of the present year the district was proclaimed under "The Gold Mining Districts Act, 1871," and all the new ground taken up has been applied for under its provisions,

The following is a return of quartz crushed, and its yield of gold for the year ending the 31st March, 1872:—

QUARTER ENDING.					TONS CRUSHED.		OUNCES.
1871.							
April, May, June	...	...	...	...	724	...	2,754
September	...	...	...	...	1,059	...	8,008
December	...	...	...	...	1,713	...	9,698
1872.							
March 31st	...	...	...	...	1,301	...	6,825
Total					4,797	...	27,285

thus averaging 5ozs. 13dwts. per ton.

Considerable quantities of rich specimens have been crushed in Grahamstown, from which gold to the value of about £3000 has been obtained, which would make the total upwards of 28,000oz.

JACKSON KEDDELL, Warden.

Warden's Office, Coromandel, June 6th, 1872.

## MARLBOROUGH.

## No. 3.

## REPORT ON WAIRAU GOLD FIELDS.

SIR,—

Warden's Office,

Havelock, 19th April, 1872.

In my report on this gold field in June last I remarked that it would be rash for me to hazard an opinion as to its future; several quartz reefs had been discovered, and very sanguine expectations were indulged in by the public. The Sutherland Gold Mining Company had then just erected machinery to commence crushing.

Since then a considerable quantity of stone has been crushed, but the result has been that the company has discontinued its operations, as the proceeds were not sufficient to pay expenses. Better stone is believed to exist at a different level, as the smaller original tests from that portion of the reef were considered payable.

The reef at Onamatutu has been recently tried, a small battery being erected there by the Marlborough Golden Crown Company, but the result has been very unsatisfactory indeed, *no gold* being obtained after crushing several tons of stone. It is not likely that any further trial will be made here.

Alluvial digging has been nearly abandoned, only a very few men being now at work; the gold has been found in isolated patches, in most uncertain positions, making the profits of the miners more than ordinarily precarious, so that nearly all have left.

Operations at and near Onamatutu have been principally on the hill sides, and the main valley (although believed generally to be gold-bearing) has been almost untouched, the ground being very wet and deep.

One party is just about to commence to try and bottom in one of the tributaries. They will erect a whim, and may by that means succeed where many have tried in the ordinary way and failed.

The future of this district is still very uncertain, neither of the main valleys draining the localities where gold has been found having been tried, being so wet.

W. WHITEHORN, Warden.

The Under-Secretary for Gold Fields.

## No. 4.

## REPORT ON PELORUS GOLD FIELD.

SIR,—

Warden's Office,

Havelock, 19th April, 1872.

This field has not very materially altered in its conditions since my report in June last. The population increased considerably during the summer months but has been reduced again to about 110. The average population for the past quarter I estimated at 150.

The gold produced from 1st July, 1871, to March, 31st, 1872, has been about 2000 ounces.

The larger terraces are still untried, and the future of this field seems to depend entirely on whether these can be made payable. A few parties have tried them slightly, and find gold; they are continuing their operations, and should they be moderately successful I think an attempt will be made to bring water on to them by forming a company and availing themselves of Government aid. I have lately been over the country, and, from a cursory view, I believe no engineering difficulty exists of such a nature as to render the work more than ordinarily expensive.

The road is very much improved; a really good pack road exists now up to the Forks, a distance of about thirteen miles from the junction of the Wakamarina with the Pelorus.

The workings are confined to the river and its eastern tributaries; there are streams coming in from the westward, but these have been but very slightly prospected, if at all.

The Wakamarina itself is for the most part worked out; several parties during the summer months have undertaken large workings in it, but were not in most cases adequately rewarded for their trouble, finding that parts of their claims had been worked before.

One terrace only, near the lower part of the river, has been yielding large returns, and from that not less than 100 ounces per man to a party of eight has been taken; it is still yielding well. I do not anticipate any further reduction in the population, as I believe under any circumstances the present number will find remunerative employment for some years, but the terraces, if found payable, would hold a very much larger population.

W. WHITEHORN, Warden.

The Under-Secretary for Gold Fields.

## NELSON.

## No. 5.

Mr. Warden CHARLES BROAD to the UNDER-SECRETARY Gold Fields, Wellington.  
Reefton, Province of Nelson,

SIR,—

31st May, 1872.

I have the honor to forward you a copy of my Report upon this district to the Provincial Council.

I have to add that since the date of that Report I have little to add, except that the place and population are rapidly increasing.

The various companies are busily engaged in obtaining machinery. Mace expects to finish his first crushing of 600 tons in about ten days time. I anticipate that it will yield about two ounces to the ton.

As the district is in such an unsettled state at present it is impossible to give reliable statistics.

The Under-Secretary for Gold Fields,  
I have, &c.,  
CHARLES BROAD.

MR. WARDEN CHARLES BROAD'S REPORT TO PROVINCIAL SECRETARY NELSON, ON REEFTON GOLD FIELDS.

SIR,—

Reefton, 23rd April, 1872.

In forwarding my annual Report for the information of the Provincial Council, I must premise that it must necessarily be of a meagre description for various reasons.

1st. Because I only took charge of the district at the commencement of February.

2nd. Because the district itself is in comparative infancy, each week making a considerable change in its progress, and the development of the reefs has yet to be effected, and their average yield ascertained. I propose, however, to notice the different lines of reef discovered, to state what has been done and is doing in connection with them, which I think will be sufficient to convince the Government of the importance of the district under my charge and the valuable nature of its mineral resources.

I find upon reference to the plan forwarded me that my supervision extends over the watersheds of the Inangahua and Upper Buller Rivers, embracing (commencing from the South at the Rainy Creek reefs, Murray Creek reefs, Liverpool Davy's, Painkiller Creek, Boatman's Creek, Larry's Creek, Mountain Creek, Flax Bush Creek, the Lyell and Matakaitiki.

Alluvial gold has been traced through the entire length of the district, a distance of some seventy miles, whilst the recent quartz reef discoveries connect in an almost unbroken line Rainy Creek with the Lyell, a distance of some forty miles.

Murray Creek was originally worked as alluvial ground by Murray, about the year 1867, and in the year 1870 a lease was applied for and granted for the purpose of crushing cement, of which Adam Smith was the proprietor. At about the same time several applications were made for leases by Christchurch people for the purpose of prospecting for quartz reefs, but the applications were withdrawn without survey. In the beginning of the year 1870 the first quartz claim was taken up by Westfield, but through some dispute a large portion of it fell to Kelly, from whose name the line of reef is called.

The prospecting claim on Kelly's line of reef is now called the "United Band of Hope Company." Shoots and tramways have been constructed, tunnels have been driven into the ground, and they have expended in labour and capital some £6000. The Murray Creek Cement Company's wheel has been hired to crush, and the party have applied for a lease in conjunction with Nos. 1, 2, and 3, South.

No. 1, North.—Kelly's claim, known as the Golden Hill Company. The reef has been struck in three distinct tunnels in this claim, as well as on the surface. They are assisting Nos 2 and 3, North, known as the Westland Company, in erecting machinery, for which services they are to have 600 tons crushed for them.

Nos. 2 and 3, North.—Westland Gold Mining Company, Registered, known as Rhody Ryan's, have steam machinery on the ground at a cost of something like £8,000. They have fifteen heads of stampers, have constructed shoots and tramways half a mile in length, driven tunnels 500 feet, have struck the reef in various places and cross drives, and will commence to crush in a few weeks. They obtain their water supply from Murray's Creek.

No. 4, North.—All Nations Gold Mining Company, Registered. These parties have put in a tunnel 600 feet, and are still engaged in tunnelling and prospecting for the reef, which has, however, not yet been struck.

Nos. 5 and 6, North.—Victoria Company, Registered, are busily engaged in constructing tramways and preparing for machinery; have struck the reef.

No. 7, North.—Phoenix Company, Registered, have struck the reef on surface, and are engaged in driving to prove the reef, being uncertain as to direction; about 100 feet tunnel put in, substantial huts erected, and permanently settled down to work.

Nos. 8 to 14, North.—Applied for as leases; reef found on surface in No. 8; in No. 9, reef diverges in another direction, and is called Kelly's Line, A.; here reef has been stripped for 200 feet, and shaft is now being sunk to test continuation; from 9 to 14 applied for as leases, but reef not struck at present, applicants engaged in prospecting. This carries the ground applied for to right hand branch of Inangahua River.

Nos. 1, 2, and 3, South have amalgamated with Prospectors No. 4, South. Dan O'Connell Company, Registered.—This has been granted as a lease in the name of John Trennery. A leader

has been struck, and is being prospected. This extends to Cement Town, where Kelly's line terminates.

Anderson's line of reef was the next struck, and was the first to be formed into a company, having amalgamated with No. 1, North.

The Prospectors have obtained a grant of a special claim; they have sunk a shaft 120 feet; have driven sixty feet north and south; have proved the reef; are engaged in driving a tunnel 800 feet; have cut two miles of a race, capable of conveying thirty heads of water; are erecting a water wheel at Black Point, and have sent for machinery to Melbourne. The development of this reef was retarded for some time by there being a great deal of litigation in connection with it. Some £9,000 has already been expended, and the indications would lead one to suppose that it is one of the richest claims in the district.

Nos. 1, 2, 3 and 4, South, Invincible Company, Registered, are amalgamated claims now applied for as a lease. They have been working from the commencement; drove a tunnel 600 feet in wrong direction; have now found reef on surface, and are sinking and driving on it; and are making arrangements for machine.

From 5 to 7, South.—Applied for as two leases. Two tunnels have been driven in Nos. 5 and 6; at a distance of 150 feet lead ran out; in No. 7 tunnel 100 feet put in; reef not struck at present.

Several applications for leases broadside on to 5 and 6 on both sides. No work doing in them at present.

Several claims were taken up north and abandoned; the ground is now applied for under some eight lease applications. Anderson's line was discovered in October, 1870.

Shiels' prospecting claim was discovered by Walsh in November, 1870, and from the prospects obtained attention was at once drawn to the Murray Creek reefs. Messrs. Mace and Trennery have gone in heart and soul to develop this reef; they have, with extraordinary difficulty, got steam machinery on the ground; have cut tracks; driven tunnels, and constructed dams and tramways at a cost of some £10,000. The result of the first crushing will very speedily be known, and the richness of the reef vindicated.

Nos. 1 and 2, South, Band of Hope Company, Registered.—These parties have driven two tunnels 300 feet each; prepared a machine site and made arrangements for machinery; have struck the reef and proved the continuation of Shiels' line right through the claim.

No. 3, South.—Golden Crown Company, Registered, have tunnelled, struck a leader, and got indications of reef; are still busily engaged in prospecting the claim. From this a large number of leases applied for, as continuation of line of reef and on both sides.

No. 1, North.—Pat Hunt's claim. Tunnels have been driven at various levels and reef struck in each; they have constructed a tramway to Mace's machine site, who are to crush 600 tons for them in consideration of their having helped them to get machinery on ground; they are now engaged in getting out stone.

Nos. 2 and 3, North.—North British Company, Registered. Ground applied for as a lease; shaft sunk and drives put in; reef not yet struck.

From these, some 20 leases are applied for to left hand branch of Inangahua; no work done at present.

Adam Smith's Line.—The prospector's claim is now known as the Wealth of Nations Company, Registered. Adam Smith was the original discoverer of the cement reef in Murray Creek. They have tunnelled and thoroughly proved the reef; have constructed tunnels and a tramway half a mile in length to machine site on the Inangahua River; they have also cut a race two miles long, and have sent to Melbourne for machinery to be worked by water power.

Nos. 1 and 2 North.—Energetic Company, Registered, have driven a tunnel, and proved the reef; have sunk a shaft and are driving tunnels at lower level; preparing machine site on Murray Creek, and have sent for machinery. They had a trial crushing of ten tons which yielded  $4\frac{1}{4}$  ounces to the ton.

Nos. 3 and 4, North.—Applied for under lease, as also broadside claims East and West; ground not yet tested.

No. 1, South.—Enterprise Company, Registered, ground applied for as a lease. Reef has been struck in tunnel; no machinery at present; making arrangements for crushing.

Nos. 2 and 3, South.—Have struck the reef in tunnel; ground applied for as a lease; preparing machine site on Inangahua River.

On the West of this line, several claims occupied under miners' rights—the reef has been struck and leases applied for.

On the East several leases have also been applied for, but no work has been done at present.

Sinamon's Line.—A reef was struck on the surface between Kelly's and Shiels' line; tunnels have been put in and payable quartz struck at a distance of 160 feet; they are now tunneling to prove whether an actual reef or not.

Nos. 1 to 4, North and South.—Applied for as leases; no work done at present.

German Jacks.—This claim, which is near to Shiels' line, is now held under a lease granted to Christopher Mace; the reef has been struck and it is now in process of development. The supposed continuation North and South are applied for as leases.

At Murray Creek a battery was erected in 1870 for crushing cement, it is now used for quartz crushing, and has six head of stampers driven by water power.

Rainy Creek is situated some eight miles south of Murray Creek. It was discovered by Adams as possessing payable reefs in February, 1872, although alluvial claims were being worked there three years since. Five or six claims north and south of the Prospectors' are now in full work, and numerous leases have also been applied for.

Liverpool Davy's is situated about half a mile from the township of Reefton, in a south-easterly direction. Several leaders have been discovered but no defined reef yet struck; the ground is applied for on lease.

Painkiller is about four miles north of Reefton. The reef was discovered on the 26th February, 1872. Several leases have been applied for over this ground.

Boatman's Creek.—About eight or nine miles north of Reefton. There are no less than four distinct lines of payable quartz reefs discovered, namely, Gaffney's, Thompson's, Byrne's, and Caple's; on all of which lines claims are taken up north and south, and many leases applied for. It is situated in a very difficult place to obtain machinery, but the richness of the reefs will fully warrant the outlay of capital to dispose of the difficulty. The discovery dates from the 15th January, 1872.

Larry's Creek.—This discovery, which is the most recent one, was made on the 1st March, 1872. It is situated some fifteen miles to the north of Murray Creek; the stone is exceptionally rich. The Prospector's and Nos. 1 and 2, South, are opening up the line of reef. It will, I think, yet be found that the reefs continue all the way to the Lyell. A large number of persons are now out prospecting between the two places. The gold found at Larry's Creek is of a much heavier description than that found in the reefs more to the southward.

Flax Bush Creek, and other creeks between the junction of the Buller an Inangahua rivers, are all being worked by detached parties of miners, and patches of very heavy waterworn gold found. In the former creek, a nugget was found a few days ago weighing nearly fifty ounces.

The Lyell.—This place is noted for the celebrated reef discovered by Antonio Zala and others, whose perseverance and energy for some years in developing the reef cannot be too highly praised. Many tunnels have been driven, roads and races made; and, in fact, the whole claim is in thorough working order; the machinery being erected some  $3\frac{1}{2}$  miles from the Lyell township to the north. There is also here a lease held by the Excelsior Company, who, after many drawbacks and difficulties, are getting into shape.

At and near the Matakītaki.—Some 120 scattered parties are engaged in obtaining alluvial gold.

Importance of district.—The above facts shew the numerous and valuable discoveries that are made through the entire length of the district, and if to this be added the large quantities of land available for agriculture, as instanced by no less than 4,533 acres being under application in small blocks for agricultural purposes; the fine water supply throughout the district; the fine timber available for building purposes, and clay for brickmaking, I know of no district more likely to assume a position of great importance.

The statistics I shall now append will show how rapidly the place has grown within the last three months, and also the amount of work that has devolved upon the officers of the Government to keep pace with it.

It will be necessary that suitable buildings should be at once erected for the proper administration of Justice, Gaol and Post Office accommodation.

#### STATISTICS.

The number of Warden's cases heard by me is 145; applications, 1,071; Resident Magistrate's cases, 38; Gold Mining Leases applied for, 105; Agricultural Leases applied for, 50, with an area of 4,533 acres; Coal Leases, 6. The whole amount of Warden's Revenue collected is £3,614 18s. 6d., whilst the large sum of £2,415 has been paid as deposits upon application for leases, &c.

The population I classify as under:—

Rainy Creek and North Inangahua	...	...	...	...	150
Murray Creek Reefs and Black's Point	...	...	...	...	800
Reefton and vicinity	...	...	...	...	1,000
Boatman's, Larry's, and Christy's	...	...	...	...	500
Lyell and neighbourhood	...	...	...	...	300
Matakītaki	...	...	...	...	120
Other places	...	...	...	...	400

Total ... .. 3,270

Number of wooden buildings in Reefton, 168, containing 462 rooms; and 73 tents. At Black's Point: Wooden buildings, 47, and 17 tents. Many of these buildings are of a pretentious appearance, and the township has nothing of the usual look of a new rush about it; there is an air of permanence about the place.

#### ROADS.

Rapid progress is now being made with the two roads connecting Reefton with Greymouth on the one side, and Westport on the other.

The road from Christy's to Westport is, however, very bad, and will require to be put speedily in order. This applies also to the first three miles from Christy's to the Lyell, and from the Lyell to Jacklan's, which will soon be almost impassable. A track is urgently required up Larry's and Boatman's Creeks, the difficulties of going up, which at present are very great, are from the large boulders in the bed of the creeks.

The punt over the Lyell works very well, and I have given every encouragement to parties placing boats at dangerous crossings of the different rivers, by granting them an Accommodation License.

The track to Black's Point, a distance of two miles from Reefton, is very bad, but I am glad to think this will be speedily remedied by the protection granted by the Government to Mr Courtenay for the construction of a tramway, which will afford an easy mode of communication between the town and the Murray Creek Reefs.

An application has been made for protection for a track from the Merry Jig Creek on the watershed of the Little Grey District to Rainy Creek, as the former is Mr. Warden Whitefoord's District, whilst the latter is my own District. I have communicated with him, and he concurs with me in the advisability of the grant being made, as affording an easy method of supplying provisions, hitherto

impossible during the winter months, and, from a Report I have obtained from Mr. Woolley, Mining Surveyor, likely to open up large auriferous alluvial tracts of land at present closed, merely from the absence of sufficient facilities for communication.

The floods which took place in February last rendered it advisable that a new site for a township should be surveyed on the terrace, which forms the continuation of the present township, and I would strongly advise that the land should be sold with as little delay as possible, by which much of the difficulties entailed by the sections being taken up under business licenses will be avoided.

The Leasing Question.—Some slight agitation took place with reference to the locking-up of the land by the numerous applications for gold-mining leases that were made, but the answer of the Government to the deputation who waited upon them with reference to it appears to have allayed any uneasiness that might have arisen. In connection with this question I might add that it appears to me desirable that the Gold Fields Act should be so amended as to make a preliminary enquiry by the Warden desirable before applications for leases should be received. At present under the 108th section of "The Gold Fields Act, 1866," parties have only to apply, and immediately the ground is protected (otherwise locked up) until the decision of the Government is known, which, even if refused, will occupy at the very least two months.

Inangahua Junction.—The gradual development of the reefs towards the Lyell render it most desirable that a township should be surveyed at Christy's as soon as possible, and I would also recommend that it be sold early, as several parties are waiting for ground to settle upon to erect blacksmith's shops, bakeries, &c.

Conclusion.—I have to bear my testimony to the promptitude and zeal which has distinguished the officers placed under me in this district.

Mr. Woolley's services as surveyor have been invaluable, and the amount of work got through something astonishing. Whilst with Messrs. Wakefield and Cooper, the clerks in my office, hours have been of no consequence, and almost from daylight to midnight they have steadily stuck to the work which, until my arrival, had of necessity fallen into arrear.

I have every confidence that the next Annual Report from this district will shew the opening up of a large tract of country, of which very little was known before, as having become the location of a large and prosperous community.

The Provincial Secretary, Nelson.

I have, &c.,

CHARLES BROAD, Warden.

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## No 6.

Mr. WARDEN GILES to UNDER-SECRETARY, for Gold Fields.

Warden's Office,

Westport, 13th May, 1872.

SIR,—

In compliance with your request I now have the honor to forward, in addition to the statistics already sent, some further particulars relating to the district under my charge.

My district extends from the Razorback, between the Grey and Brighton, to an indefinite distance along the coast north of Westport. In this area the diggings are of different kinds, being all alluvial. Ground sluicing is prevalent at Charleston and Brighton, and has latterly been coming more into use at Addison's Flat and the adjacent *Pakikis*,\* as well as on the terraces north of Westport, where the best ground has been now worked out. Untimbered flats,  
mostly swamp.

Cement crushing by means of batteries of stamp heads has been the distinguishing feature of the Charleston district, but this is a mode of working which has lately declined owing to the best ground being worked out, and ground sluicing of large areas is becoming the more common mode of working; underground excavation has been the usual mode of working at Addison's Flat and the terraces north of the Buller, near Mount Rochfort; at the latter place by means of tunnels and at the former by shafts; but ground sluicing is now becoming common at both these places. In addition to these methods of working, we have claims for washing tailings in the creeks and gullies and beach claims. The latter are now attracting a good deal of attention, and although the beach can only be worked when the tide recedes, and water has to be brought from some distance, yet these claims are expected to prove very remunerative.

I suppose the rate of wages may be considered as averaging about £4 a week throughout the district.

There are now no quartz diggings in this district; the Waimangaroa workings, the only place where quartz crushing machinery was erected, being now abandoned; yet the rich specimens of auriferous quartz which are met with in that locality justify the expectation that attention will again be directed to those workings, and that a connection will be traced between them and the more inland reefs.

I am not aware that there is any further information that I can supply in addition to the above remarks, and the statistics already furnished. But, I enclose, for your perusal, a printed copy of the Annual Report which I have recently made for the information of the Provincial Government of Nelson, and which, I hope will leave no point of material interest unnoticed.

I have, &c.,

JOSEPH GILES, Warden.

The Under-Secretary for Gold Fields.

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Mr. Warden GILES Report to PROVINCIAL SECRETARY, Nelson.

SIR,—

Westport, April 23, 1872.

I have the honor to furnish for the information of the Government and Provincial Council, my usual yearly report for that portion of the South-west Gold Fields under my charge as Warden.

*Inangahua.*—The principal feature in my last yearly Report was the rapid development and growth of the important quartz reefing district of the Inangahua. I took charge of that district in October, 1870, and the provisions made for its working were detailed in my last yearly Report; in which I also pointed out the strong probability that the district would very soon outgrow those provisions, or any others that might be made by a Warden residing at Westport. The rapidity with which this actually took place was not greater than was expected by those who, like myself, had watched from the commencement the growth of that remarkable district. Accordingly, it was found necessary early in the present year that there should be a resident Warden at Reefton; and after the court held there by me in the month of January, I handed over the charge of the district to Mr. Broad, and have not visited it since.

*Gold Mining Leases.*—At the time of my resigning the charge of the Inangahua district, a large number of applications for gold mining leases were waiting for hearing, and an agitation against the granting of such leases was set on foot at Reefton. It is not my present business to discuss a question the further progress of which is better known to the Government than to myself. But, in order to show the principles upon which I have always acted with regard to applications for leases at the Inangahua or elsewhere, I may be allowed to quote my own remarks on the subject in my last yearly Report:—

“The power to grant leases of ground for gold mining purposes, conferred by the Gold Fields Act, has proved very beneficial in the case of poor ground, and of ground requiring large works of any kind involving a heavy expense. I think it probable that it will prove equally beneficial in the case of quartz workings. The security of tenure conferred by a lease is the condition which capitalists desire to induce them to invest money in quartz mining, and I think that some of the existing quartz claims may with advantage be converted into leases, subject to proper conditions according to the special circumstances of each case. This appears to me a very different thing from the indiscriminate granting of leases at the beginning of a new rush, to the exclusion of the working miners who may be desirous of taking up the ground in ordinary claims according to the rules. Under such circumstances, I have always thought that leases are to be as distinctly discouraged as they are afterwards to be readily granted when it appears that their only effect will be to facilitate the working of the ground without prejudice to the miners, whose general right to take up ground under the rules, is, I think, except under very peculiar circumstances, always to be regarded as superior to the claims of any one else to a privilege the granting of which is entirely a matter of discretion with the Government.”

Upon this view of the subject I based such recommendations or refusals, as I had occasion to make whilst I had the charge of the Inangahua district, and I do not think that any difficulty is likely to arise in the application of these principles in practice. But I am quite sure that the experience and judgment of my successor will be well able to deal successfully with all questions that may arise in relation to the well working of the important district of which he has taken charge.

*Westport, Charleston, Brighton.*—From the time of my giving up the charge of the Inangahua, I have, at the request of the Provincial Government, undertaken the duties of the district of Charleston and Brighton, vacated by Mr. Broad. My present district is therefore rather an extensive one, reaching from the Razorback, on the south, to an indefinite distance along the coast north of Westport. So far as ordinary work, however, is concerned, the limits may be said to be Brighton on the one hand, and the terraces to the north of Westport on the other. I have found that the business of Brighton is so much diminished that a monthly Court is now all that is required. The business of Charleston is capable of being disposed of by means of a weekly Court, which, together with miscellaneous business requiring my attention, demands my presence in Charleston two or three days in each week. By this means the work of the whole district can be efficiently performed, provided that its present quantity is not increased, and that travelling is not frequently hindered by the weather. With reference to the latter point no important hindrance has yet taken place, but the experiment can scarcely be said to have been fully tried until the winter season has elapsed. But there is no doubt that any material increase in the amount of business would render it impossible for the work to be satisfactorily done by one Warden, whose time is already constantly occupied in attending to the two principal places of Westport and Charleston.

*Decline of Coast Diggings.*—The opening of the Inangahua reefs has not been without a marked effect upon the old diggings on the coast, where the mining population has experienced a considerable reduction. I shall append to this report some statistics which, although to a great extent conjectural, may yet assist in giving some notion of the present condition of the district. The falling off in the population has been very marked at the northern terraces, and at Addison's Flat. Charleston also has experienced its share of the decline, and at all these places I have no doubt that ground has been abandoned which is capable of paying fair wages, and which will be readily taken up again hereafter by men who are not able to realise all their expectations at the reefs. Beyond the fact that the mining population has diminished owing to the attractions of the reefs, there can be little to report in connection with this district.

*Peculiarities at Charleston.*—At Charleston it is true there may be matters which I have not yet had time or opportunity to observe. One of the principal peculiarities of that district appears to me to be the extreme complexity of the rights held by the miners to water and other privileges, owing to the crowding of the claims in and about the numerous creeks and water courses. Another difficulty is the mode of discharging tailings, which, owing to the extensive nature of the ground-slucing operations carried on, are of very great quantity, and which have already silted up the harbour to a great extent, and in another place have covered the main road, and threaten still further injury. I am not prepared at present, however, to make any suggestions for the removal of these difficulties.



*Beach Workings.*—The only feature of mining progress that I am able to specify upon the coast is the taking up of large numbers of claims upon the sea beach. It has long been known that the black sand on the sea beach would pay pretty good wages if water was at hand to wash it; but it was thought, I suppose, that it was not rich enough to pay for bringing in water from a distance. Further experience, however, appears to have produced the belief that the sand is worth the labor and expense of bring water to it, and a large number of claims have been taken up on the beach between Westport and Charleston. Several races are also in course of construction for the purpose of bringing water to the beach. It is supposed that these claims will pay from twenty to thirty shillings a day. In every instance double areas of ground have been given on the beach.

*Legal Doubts.*—In relation to these claims some doubts have been expressed how far the beach below high water mark comes within the jurisdiction of Wardens of gold fields, and how far mining claims can legally be held there at all. Without going minutely into this question of law, I may observe that, according to Blackstone, "Between the high water mark and the low water mark, where the sea ebbs and flows, the common law and the Admiralty have *divisum imperium*, an alternate jurisdiction; one upon the water when it is full sea, the other upon the land when it is an ebb." It would seem to follow from this that the sea beach at low water comes under the denomination of Crown Lands, and forms a part of the gold fields.

I have nothing more to add as to the general condition of this district, which, so far as relates to what is not strictly mining, is now well known to the Superintendent and the Government from their own personal observation. It is satisfactory also to know that the Premier of the colony has thought the West Coast gold fields worthy of a visit and a minute and careful inspection, which has enabled him adequately to appreciate the importance of the district.

*Roads.*—I shall conclude this part of my remarks by observing that the work of the amalgamated district of Westport, Charleston, and Brighton, would be very much facilitated by the completion of the unfinished road from Westport to Charleston *via* Addison's Flat; also, that the workings near Brighton would be much assisted, the chances of new ground being opened much increased, and the journey to Greymouth much facilitated by opening the coast track from Brighton to the Razorback.

*Pig and Cattle Nuisance.*—I beg to urge upon the Government the expediency of passing some short Ordinance during the sitting of the Provincial Council for the suppression of the nuisance, now become almost intolerable, caused by the number of pigs, goats, horses, &c., always wandering about the towns of Westport and Charleston. A brief addition to the Constabulary Ordinance, empowering the police to impound and take summary proceedings, might answer the purpose. Some provision should also be made against the practice of driving infuriated oxen through the streets, from which serious accidents have happened more than once.

*Licensing Act.*—It has been sometimes thought expedient that the Wardens of gold fields should, in their yearly reports, notice the Gold Fields Licensing Act, and make suggestions for its improvement. This may be useful where the suggestions relate to details in the working of the Act. I have, however, none to make, not because I believe the Act to be perfect, for I agree with the common opinion which regards it as very inefficient, but because I do not believe that it will ever be made efficient by alterations of detail. Suggestions in plenty are constantly being made from different quarters, which the legislature can of course consider, but there are few of these in which I can join, because they mostly involve a view of the subject in which I by no means acquiesce. But the great objection which appears to me to lie against the Licensing Act is that whilst it fails to suppress drinking and immorality, it produces a directly demoralising effect by containing enactments and prohibitions which constitute new offences, and which are not enforced once for a hundred times that they are notoriously violated. And thus the uneducated masses come to think that all laws may be treated with contempt provided detection and punishment do not follow. As a Magistrate, I am bound to say that the Licensing Act is simply a means of revenue, obtained for the most part at the cost of impairing in the public mind the sense of respect for law.

Approximate number of miners in district, 1,100.

*Westport.*—Miners rights issued for twelve months ending 31st March, 1872, 566; business licenses, (value £986), 286; summonses, 42; applications, 521; mining lesses applied for, 31; agricultural, 5.

Resident Magistrate's Court.—Criminal cases heard, 172; civil, 322.

Revenue.—From all sources received at the Warden's Office, Westport, £4,376 14s. 4d.; preceding twelve months, £5,596 16s. 1d.; amount of revenue (exclusive of the above) transmitted from Reefton and Inangahua to the receiver at Westport for the twelve months ending 31st March, 1872, £3,636 16s.

*Charleston and Brighton.*—Miner's rights issued for the twelve months ending 31st March, 1872, 792; business licenses, 291; summonses, 75; applications, 920.

Resident Magistrate's Court.—criminal cases, Charleston, 84; Brighton, 21; civil cases, Charleston, 245; Brighton, 35.

Revenue.—From all sources, £5,286 12s. 9d.; revenue for the preceding year, £5,406 2s. 6d.

*Gold Export.*—The total quantity of gold exported for the six months ending 31st March, amounted to 53,935ozs. 6dwts. 7grs.; representing a total value of £218,867 19s. 11d.; and the duty thereon amounted to £6,741 18s. 10d.

I have, &c.,

JOSEPH GILES,

R.M. and Warden.

To the Provincial Secretary, Nelson.

Mr. Warden LOWTHER BROAD to UNDER-SECRETARY for Gold Fields.

Warden's Office,

Nelson, 17th May, 1872.

SIR,—

I have the honor, in compliance with your directions, to submit the following Report of the state of my district up to 31st March, 1872.

The alluvial workings at the Matakītaki and Upper Buller have continued to yield payable returns to the miners; who, spite of the attractions of the neighboring quartz reefs at Inangahua, have not, I think, decreased in number.

The demand for agricultural land in these localities has continued steadily, and I beg to refer you to the statistics annexed to this report for detailed information.

The Upper Buller has, by a new arrangement, been taken out of my district and added to that of the Warden at Reefton. A tracing annexed hereto shews the boundaries of that part of the gold field now under my charge, and which is, in fact, all that part of the field on the eastern water shed of the province.

I regret to have to report that the efforts to develop payable quartz reefs at Wargapeka have hitherto proved abortive, none of the claims tested having anything like a payable return.

A prospecting party is, however, now being formed for the purpose of still further exploring the district for reefs.

The alluvial workings (marked yellow on the tracing sent herewith) you will observe are far apart, and extend with intervals from one end of the district to the other. The population is not more than 200, but all, I believe, are earning the highest rate of wages.

Attached hereto, are detailed returns of the amount received during the twelve months ending 31st March, 1872, for Miners' Rights, Business Licenses, Registrations, Rents, Publicans' Licenses, and the number of Mining and Agricultural Leases applied for.

I desire to place on record my firm conviction that there is no longer any necessity for the delegation of the powers under the Gold Fields Act to Superintendents. With the easy means of communication now in existence, with the whole local machinery of the gold fields in perfect working order under Wardens of considerable experience, there is nothing that a Superintendent is called upon to do which could not be done quite as easily from Wellington. And the advantages of this would be a uniform system for the whole Colony, and a Minister responsible to Parliament for the general administration of the gold fields as a whole. I feel sure this general system would be far more acceptable to the miners and others on the gold fields than the present one, provided some simple means be found by which the granting of mining and agricultural leases can be dealt with without delay. I would suggest that a Warden in each province should be called Chief Warden, and have the power to grant these leases. I should have hesitated to place my opinion on this subject on record were it not for the fact that during eleven years residence on the New Zealand gold fields I have never heard any one say a good word for the present system. The opinion of the residents on the gold fields, I firmly believe, has always been that the present divided responsibility was most vexatious and inconvenient, and that the powers ought to be vested solely either in the province or in the colony.

The Under-Secretary for Gold Fields.

I have, &amp;c.,

LOWTHER BROAD, Warden.

Mr. Warden TURNELL to UNDER-SECRETARY Gold Fields.

General Report and Statistical Tables of the Golden Bay Gold Fields, Collingwood.

SIR,—

March 31st, 1872.


*Present Condition.*—The present condition of this portion of the Nelson Gold Fields is that of a settled district without any marked appearance of progress, for whilst a considerable number of recent mining enterprises have failed, most of the earlier and now permanent works maintain a steady aspect, with every prospect of continuing remunerative. These workings are mostly alluvial claims, held under lease, and worked by hydraulic hose and ground sluices.

*Advancement or Otherwise.*—There has been little or no appearance of advancement during the past year, during which several companies have either suspended or ceased operations. The failure of the dredging machines on the Aorere River was a great disappointment to all interested in the advancement of the district; the suspension of operations at the Coal and Copper Mines, as well as the stopping of the battery at the Perseverance Companies Mine, are matters of regret; a considerable number of miners have been driven out of the rivers in consequence of the wet season having set in, but fortunately most of them have found employment in other parts of the field, many no doubt will return to their river claims when the dry season begins.

*Probable Prospect.*—The alluvial mining having long assumed the character of a settled industry, the discovery of auriferous quartz leaders in several localities, the existence of coal, copper, lead, plumbago, and iron stone in abundance, the future prospects of the district may be looked upon as encouraging.

*Population.*—A reference to the table attached (which has been carefully compiled) will show that at the present time there are 377 persons engaged in alluvial and thirty-five in quartz mining, making a total of 412 being distributed over an area of 600 square miles.

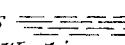
*Quartz Mining.*—On the discovery of rich stone in the Bedstead Mine in 1869, some leases for quartz mining were taken up, and a large sum of money has been expended in prospecting the several claims, but at the present time only two companies are carrying on mining operations, the Perseverance and the Decimal Co.'s, the former have suspended the crushing operations for some months past, having

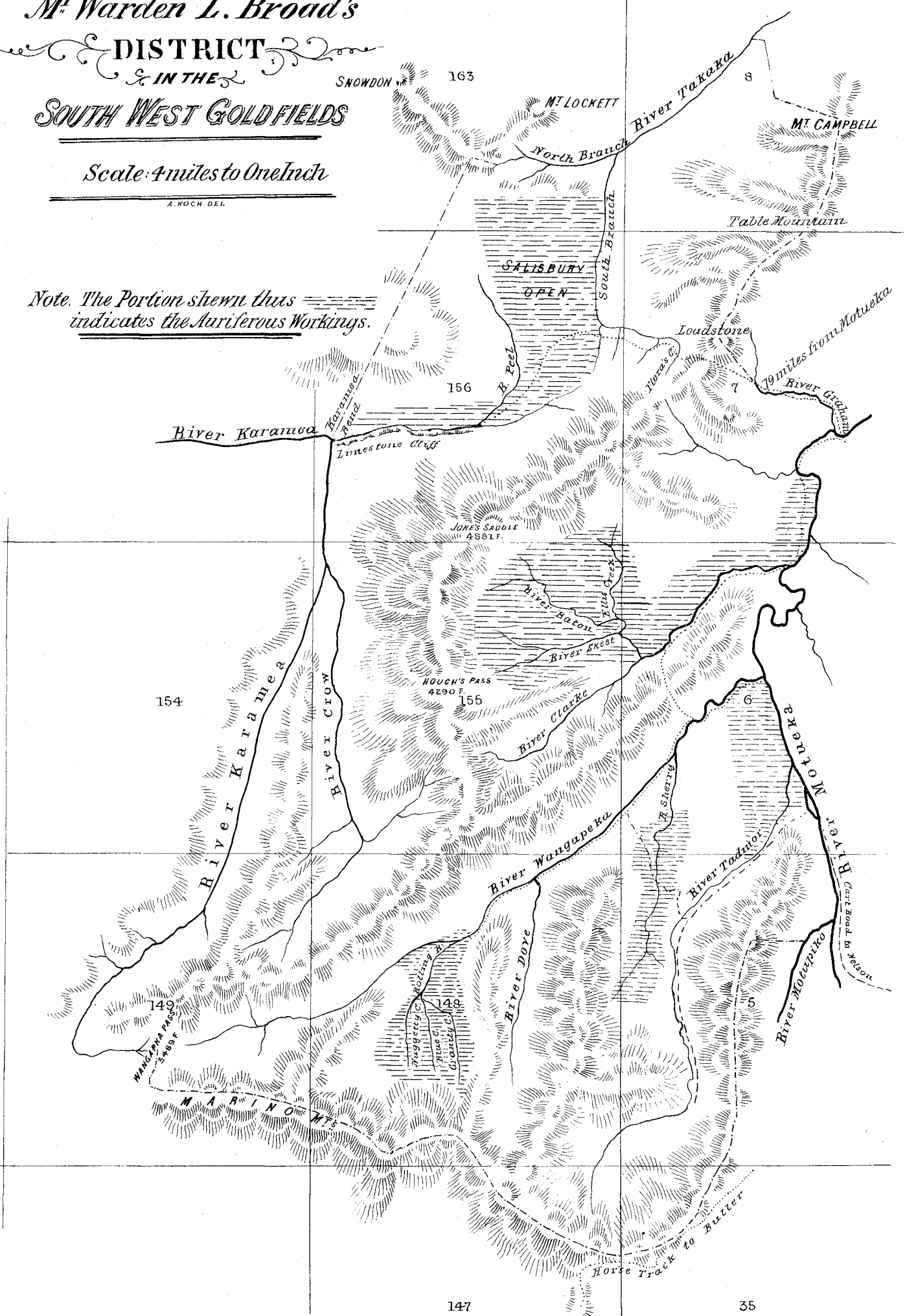
  
 OF  
**M<sup>r</sup> Warden L. Broad's**  
**DISTRICT**  
 & IN THE

**SOUTH WEST GOLDFIELDS**

*Scale: 4 miles to One Inch*

A. KOCH DEL.

*Note. The Portion shewn thus  indicates the Auriferous Workings.*





exhausted the upper lead, and have since been opening up the mine at a lower level, in doing which some rich veins of stone have been cut. In this mine "Galena" in large quantity has been discovered, and 100 tons of the ore are now in course of shipment to England, the "galena" contains a large per centage of silver. The Decimal Company, under very great difficulties, have nearly completed the erection of their machinery of ten stamps water power, and expect to commence crushing shortly. This mine adjoins the Perseverance, and is likely to turn out well. The Canterbury Company, after more than a year's work, struck the solid reef at a considerable depth, but have now suspended operations; the stone, although containing an average percentage of gold, is of such a hard character, that, with present appliances, it cannot be worked to profit. Mr. John Ross, lessee of the Saint Dathurst reef, has expended a considerable sum in prospecting his claim, and is so far satisfied with the result that he proposes erecting machinery at once.

*Alluvial Mining.*—Under this head is included seventeen leasehold claims, all of which are being worked with satisfactory results, and in some instances good profits are realised; these leases consist of small blocks, from one to ten acres; the total area leased is 56a. 3r. 19p., the other alluvial workings consist of claims held under miners' rights, and are situated principally on river terraces and in the beds of small creeks and gullies.

*River Mining.*—The past dry season has been most favourable for river workings, and a considerable quantity of gold has been obtained. Dredging machines have been tried on the Aorere River, but without success; the river bed appears to be too rocky for this system of working; those interested in the experiment have suffered considerable loss.

*Agricultural Leases.*—These are four in number, comprising a gross acreage of 141, with four applications under consideration; the land is of good quality, and when cleared and drained produces excellent crops and abundance of grass; these leases are held at an annual rental of 2s. 6d. per acre, with a right to purchase at the end of three years at a price to be fixed by the Waste Lands Board at the commencement of occupation; the occupiers seem generally satisfied with future prospects.

H. W. TURNELL,  
Warden.

Collingwood, March 31, 1872.

POPULATION AND WHERE LOCATED, MARCH 31, 1872.

DISTRICT.	NUMBER.
Anatoki River ... ..	14
Waikaramumu Hills ... ..	34
Parawahakoho Terrace ... ..	6
Parapara Terraces ... ..	21
Lightband's Gully ... ..	12
Coles Creek ... ..	8
Golden Gully ... ..	28
Bedstead Gully ... ..	51
Stanton's Creek ... ..	8
Doctor's Creek ... ..	6
Aorere River (including natives) ... ..	20
Kaituna ... ..	10
Slate River ... ..	32
Rocky River ... ..	12
Quartz Ranges ... ..	30
Anatori and Malome's ... ..	130
Total ... ..	412

STATEMENT SHOWING THE AMOUNT OF REVENUE RECEIVED DURING THE YEAR ENDED THE 31ST DAY OF MARCH, 1872, EXCLUSIVE OF GOLD AND CUSTOMS DUTIES.

FOR WHAT RECEIVED.	AMOUNT.
	£ s. d.
Miners' Right Fees ... ..	164 2 6
Water Races ... ..	2 5 0
Business License Fees ... ..	32 0 0
Rent on Gold Mining Leases ... ..	165 12 6
Rent on Agricultural Leases ... ..	11 13 9
Registration Fees ... ..	22 15 6
Warden's Court Fees ... ..	8 16 0
Publicans' License Fees ... ..	60 0 0
Miscellaneous Receipts ... ..	52 15 9
Fees and Fines Resident Magistrate's Court ... ..	£520 1 0
	46 1 5
Total ... ..	£566 2 5

Mr. WARDEN WHITEFOORD to UNDER-SECRETARY Gold Fields.

General Report to March 31, 1872.

Nelson South-west Gold Fields, Grey District,

Warden's Office, Cobden, 15th June, 1872.

SIR,—

I have the honor, in compliance with the request contained in your circular of the 27th of March last, to report as follows upon the district under my charge for the twelve months ending 31st of March, 1872.

As this is, I believe, the first report the General Government have received with reference to this District, I think some information as to when it was first discovered to be auriferous, its extent, and the various modes of working, may not be without value and interest.

Gold was first found at Black Ball Creek, a tributary of the Grey River, in the year 1864, and a mining population being attracted to the neighbourhood, other discoveries rapidly followed, which resulted in the opening up of No Town, Nelson Creek, Moonlight, Nobles, the Little Grey and other places in 1865, 1867, and finally a large population settled down in what has since been known as the Grey Valley.

From a report received by me from the Mining Surveyor (Mr. Lewis), I find that the extent of auriferous ground in the district may be estimated at 348 square miles, a very small portion of which has ever been prospected.

In a district so large and diverse in formation as this, various modes of working the different gold deposits must of necessity exist. In one or two places the auriferous ground is reached by tunnels of a thousand feet and upwards, which have been very costly, occupying parties of miners for some months to put in; in other places the gold is found at a depth of fifty feet or so, but the quantity of water to contend against has been so heavy that it is only by the employment of powerful pumps that the bottom has been reached. These pumps are generally worked by water wheels. Another class of claims is to be found on the sea beach, where the miners work below high water mark, and the auriferous deposits in their claims are renewed by every heavy storm on the coast, when the breakers throw up fresh quantities of black sand, in which the fine beach gold is invariably discovered.

The most general method of working is, however, by what is known as ground sluicing, and to enable this kind of labor to be profitably carried on, the miners have gone to very great expense in the formation of deep tail races, and in bringing water to bear upon the terraces.

The present condition of the Grey Valley may be considered in every way satisfactory, the population having been fairly maintained for some years; lately, however, some have left, owing to the great attractions held out to them by the discovery of rich quartz reefs in the Reefton district, within a few miles of the boundary of this gold field, which it adjoins. Some left after the late disastrous flood, which in many instances destroyed the work of years, and caused damage to miners and farmers to the amount of £8,000 or £10,000; the number leaving from this cause was not, I am happy to say, very great, as the majority of those whose property was injured had such confidence in the place that they at once began to repair the damage they had sustained, and set to work again with renewed vigor.

There has been for years a steady increase in the number of acres of land brought under cultivation, and there seems little doubt that eventually the miners will to a great extent be supplied with farm produce grown in the valley, a circumstance tending to give the residents here great and material advantages over the other and less fertile portions of the West Coast.

The returns which accompany this report show a reduction in the revenue received as compared with the preceding twelve months, yet they may, I think, be considered satisfactory. The decrease I attribute to the falling off of population, together with depression consequent upon losses by the flood.

What has been hitherto done in the district may be looked upon as the working of the most accessible and richer spots. With an abundant supply of water at a sufficient level to work the numerous terraces, and good roads (to reduce the price of provisions), a population of 10,000 or 15,000 persons would readily find employment in the valley.

The leading feature of this gold field appears to be the general payable nature of the ground in all places, there being thousands of acres of ground, chiefly terraces, with great depth of wash dirt, having gold distributed throughout, capable of being made to pay from ten to fifteen shillings per day for years to come. To bring water on to work these terraces properly is quite beyond the reach of the small capitalist, and as the miners here must ultimately depend on hydraulic sluicing on an extensive scale, it is apparent the district must become much depressed, unless some large and permanent water races are soon constructed in it. That these races would prove a payable speculation there can be no doubt, and increasing as they would the gold fields revenue consequent upon a great influx of miners, would be doubly productive. The formation of two large water races, one from Lake Brunner, to command what is known as the Arnold Country (embracing No Town district), and the other from Riddle's Creek to the country about Napoleon Hill and Noble's, would give such an impetus to mining throughout the valley as would speedily render it one of the most prosperous of the gold fields.

The survey of Riddle's Creek race has been made, and the scheme found quite practicable, but the estimated cost (some twenty thousand pounds) puts the project beyond the means of any company likely to be formed here.

The Government, I believe, shortly intend to construct a very important race from Lake Hochstetter to Nelson Creek; and if this very desirable work is carried out it will have a most beneficial effect upon the whole of the country through which it passes. The length of the race would be some sixteen miles.

In remarking upon the probable prospect of the district, I may state that there seems little doubt that the quartz reefs discovered so near the boundary of this gold field and the Inangahua, will

eventually be traced as shewn on the line A, on the plan attached, which I forward for the purpose of giving a general idea of the extent of this district, and the position of places I have alluded to in the course of this report. The sketch from which it was taken was made by Mr. Lowe (late Warden), some considerable time prior to the reefs (through which the line cuts as shewn by him) being discovered at Inangahua.

The line B intersects the Moonlight Reefs, but these have hitherto been but imperfectly tried, and it is generally believed by men of experience that they will yet be found payable. There is also every reason to suppose that some deep leads will yet be discovered. The expenses attending the prospecting for them (owing to the quantity of water to be contended with) has hitherto prevented their being systematically searched for. It is only within the last two years that anything in the way of deep sinking has been attempted, and the results have been so far favourable that their existence (at Half-ounce) has been established, and although the cost of pumping machinery has been considerable, the ground has paid for working.

Independently of both these resources, the prosperity and permanency of the district would be put beyond doubt by the formation of the water races I have already mentioned. Unless I have failed to make myself understood, it will be gleaned from the foregoing remarks that the district is peculiarly one to be worked by means of ground sluicing; and it is merely the want of a water race on a large scale that prevents it assuming the position and importance it merits.

Good roads would also undoubtedly do much towards developing the resources of the valley, and the lines at present in formation will be of very great service to both the farmers and miners.

The roads originally made when first the district was rushed were, at the time, of great value, but they were necessarily formed hurriedly and before a proper survey could be made to determine the best route through which they should pass. These roads were for the most part pack tracks, and answered the purpose well enough for the time being, but that day has gone by, and since the ground has been worked out within easy reach of the Grey River, which at present affords the only means for the conveyance of provisions to the various diggings in the Grey Valley, it becomes imperatively necessary, if the district is to be developed, that a main dray road be made through it with branches to the various mining centres, and also a cattle track from Ahaura to Amuri. At present, the stock consumed on the diggings is brought *via* Hokitika, an absurdly circuitous route. When the position of the place and of the pastoral country of the Amuri (from which we ought to draw all our supplies of meat) are taken into consideration, I am certain that the opening of a good cattle road from the Amuri would do much towards reducing the price of meat to the miners.

One grave consideration for the necessity of having increased facilities for communication in this portion of the West Coast, is the great danger and loss of life which frequently attends travellers and the conveyance of goods up the Grey River. At one spot alone twenty lives have been sacrificed (two within the last six weeks). The loss of property in the shape of valuable horses and cargo is of constant occurrence.

This Report would be incomplete without some notice of the valuable coal mine at Brunnerton, which is under my supervision. The seam of coal is of great thickness (nearly twenty feet through) in some places, with a fall towards the river, on whose banks it is situated, thus enabling the coal to be delivered into boats by means of a self-acting incline.

What has been done at present with the mine, which is being worked by the Nelson Provincial Government, may be said to be merely opening up the seam for future operations when a railway or tramway is made to the port.

A sum of money has, I am led to believe, been placed upon the estimates of the Provincial Council for the purpose of making a tramway from the mine to Cobden; this, if carried into effect, would be the means of enabling the mine to supply a large quantity of the coal required throughout New Zealand. It may therefore be looked upon as a work of very great value, not only to the district itself but to the colony at large.

I have, &c.,  
CALEB WHITEFOORD, Warden.

The Under-Secretary for Gold Fields.

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## WESTLAND.

No. 9.

Mr. Warden REVELL to UNDER-SECRETARY Gold Fields.

General Report to 31st March.

Warden's Office,  
Greymouth, 10th May, 1872.

SIR,— In compliance with your circular, dated 27th March, 1872, I have the honor to make the following general Report on the district under my charge, for the nine months ending the 31st March last, past.

About three years ago it was considered advisable for the better accomodation of the miners in the outlying portions of the district, to divide it into three sub-districts, viz.: Greymouth, New River, and Arnold.

Monthly sittings of the Resident Magistrate's and Warden's Courts have been held at Clifton for the New River sub-district, and at Orima (formerly Maori Gully) for the Arnold; each place being distant sixteen miles from Greymouth, and about the centre of the sub-districts.

An officer of Police is stationed at each Court in charge of the sub-district, who also performs the duties of clerk of the Court, issuing and receiving all forms of application and remitting them weekly, together with the customary fees, to the Receiver of Gold Revenue at the head office, Greymouth, for registration, if correct, and the certificates are then forwarded by return mail to the officer for delivery to the applicants.

On the south beach, between Greymouth and Paroa, the well known Beach Lead and Stoney Lead run parallel with the coast; the first named being worked at a depth of ten to fifteen feet, and the latter at a depth varying from twenty to fifty feet, by means of water wheels and tunnel tail races from 800 to 1,500 feet in length. The only steam engine at work in the district is that of the North Star Company situate on the Stony Lead.

After spring tides and heavy gales, a large quantity of black sand is thrown up on the beach by the action of the sea, which pays £6 to £8 per week to any person having a supply of water at hand.

In ordinary weather a fair complement of water can be conveyed to this locality by the Great Extended and Leviathan water races from the Saltwater Creek, together with the numerous smaller races from the adjoining creeks.

On the Lagoon Lead, south of Paroa, several new claims have been taken up since the first parties completed their tunnel tail race, 1,500 feet in length, and found payable wash dirt.

In the neighborhood of the Teramekau, a few parties are working near the beach and Sunday Flat, and the terraces further back, known as Candlelight. One party of five or six men are constructing a race about six miles in length to work the other terraces in that locality.

Rutherglen, Deep Creek, and Welchman's, still maintain a small scattered population, principally sluicing.

In the New River sub-district the miners have great difficulties to contend with from want of water, and the ground being so deep on the terraces that they are compelled to drive tunnels to work the ground instead of stripping.

The Hibernian Water Race Company are forming a race six miles long from Cockeye Creek, which will convey water on to the terraces at Nemona at a cost of £5,000 to £6,000; and the New River Company have constructed about four miles of their race, which is registered from the right hand branch of New River and Maori Creek for a distance of nine miles, to command the high terraces between Marsden and Welshmen's, at a cost of £9,000. I believe it is the intention of the proprietors of these races to avail themselves of the Government subsidies in aid of the construction of water works on the gold fields. Other races are being constructed to work the terraces about Clifton, Maori Creek, and Cockabulla. There is also an average population working in and about Manuka Swamp, Lancashire and Patterson Creeks.

In the Arnold sub-district, German Gully continues to maintain a fair population, but the ground, principally terrace workings, has not proved so remunerative as at first anticipated, and the supply of water is very short after a week's dry weather.

There has been an increase in the population about Waimea and Stillwater, where some new ground has been opened out; and the proprietors of the two largest water races in Maori Gully are extending them at a high elevation, a distance of three or four miles, to command the terraces in that locality.

Italian and Reilley's Gullies maintain their usual quota, but are likely to increase when the horse track from Orima to Maori Creek, now in course of construction, is completed.

On the block of land withdrawn from the township of Greymouth, for gold workings only, three or four claims have been taken up and worked. The greater portion of the block has since been taken up under agricultural leases, or sold as suburban lands.

In February last the town of Greymouth was visited by the heaviest flood ever known on the coast, which did considerable damage, by sweeping away great portions of the protective works, wharves, streets, and the houses and properties of many of the inhabitants, some of whom barely escaped with their lives. The prompt action of the Government in aiding the municipal authorities and authorising the immediate construction of those protective works in connection with the railway works, has re-established confidence amongst the inhabitants, who trust the works now being carried out may tend to protect the town from such another calamity.

The Gas Company completed the construction of their works in November last; it is likely to prove a profitable investment, the monthly returns showing a steady increase in the number of lights and consumption.

The Courthouses at Greymouth and Clifton are in good repair, but I regret to say that the building used for the Courthouse and Police Camps at Orima referred to in my former Report is still in the same wretched condition, although £200 has been voted at the two last sessions of the County Council for new buildings, but up to the present time I have been unable to get the work put in hand. The offices of the department of the General Government being found to be inconveniently situated at either extremity of the town, I beg to suggest that a central site should be procured whilst the land can be obtained at a reasonable rate. The local gaol is in good repair, but further accommodation is required, especially for females, and enclosing a yard for prisoners. During the past nine months the district has been free from any serious cases of crime, and the police stationed in the district are in every respect efficient, and command the respect and good will of the community.

The roads and horse tracks through the district, so far as made, have been maintained and kept in good repair, with one exception, viz, the Marsden and Clifton horse track, under the supervision of the District Road Board. This is the only public road in the district upon which tolls are levied. These tolls average about £25 per month, and if expended thereon would be sufficient to keep it in thorough repair.

The population is estimated at 4,300 souls, located as follows:—

Greymouth sub-district	...	...	...	...	2,840
New River	„	...	...	...	700
Arnold	„	...	...	...	760



The total revenue for the nine months from all sources amounts to £22,380 12s. 11d., as under:—

	£	s.	d.
Warden's Department	2,626	17	0
Resident Magistrate's Department	926	9	6
Publicans' Licenses, paid County Treasurer	720	0	0
Gold duty, Westland	3,630	8	0
Half share Customs Revenue	14,476	18	5
<b>Total</b>	<b>£22,380</b>	<b>12</b>	<b>11</b>

The number of cases disposed of in the Resident Magistrate's and Warden's Courts, are—

	Civil.	Criminal.	Warden.	Total.
Greymouth	720	286	41	...
New River	87	10	21	...
Arnold	558	22	32	...
	<u>865</u>	<u>318</u>	<u>94</u>	<u>1,277</u>

The following number of Rights, Licenses, Registrations, and Leases have been granted or applied for during the same period, viz:—

Miners' Rights.—728.

Business Licenses.—Yearly, 31; half-yearly, 67; quarterly, 35.

Registrations.—Five shillings, 275; two shillings and six-pence, 48; one shilling, 833.

Licenses.—Wholesale, 7; Bottle, 3; Retail, 6; Town do., 24; Night, 5.

11 Yearly Conditional Licenses; 30 Half-yearly do. do.

20 applications Extended Claims (6 granted).

2 applications Mining Leases.

2 applications Special Claims (granted).

13 applications Agricultural Leases (3 granted).

The statistical returns forwarded herewith, show 347 head races, 177 tail races, 314 dams and reservoirs, and 5 ground sluices, as registered in the district at the value of £32,256, and the mining plant at £14,431, making a total of £53,687 sterling.

The estimate of ground actually worked is set down at five square miles, but this can only be taken as a very rough estimate; for without some topographical survey it is impossible to give a correct estimate.

The numbers of miners actually working in the district is estimated at 1,460; but on comparing this number with that of the miners rights issued during the nine months, and allowing for the other quarter, and rights from other districts, it is evident that many miners never take out rights until actually compelled for the protection of their water rights, or having to appear in the Warden's Court.

A return of the current prices in each sub-district is also forwarded with the statistical returns.

I have, &c.,

The Under-Secretary Gold Fields.

W. H. REVELL, Warden.

## No. 10.

Mr. Warden PRICE to UNDER-SECRETARY Gold Fields.

Warden's Office,

Greenstone, 31st May, 1872.

SIR,— I have the honor to forward reports and statistical returns of Greenstone district, in accordance with instructions contained in your circular of 27th March last.

I have, &c.,

The Under-Secretary for Gold Fields.

M. PRICE, Warden.

## GENERAL REPORT to 31st March, 1872.

*Area.*—The Greenstone district contains an area of 250 square miles of country, the boundaries of which are as follows:—"Bounded on the northward by a line from opposite line E A. to Card's store, by a line along the ridge between German Gully and the New River, by the watershed between Stillwater Creek and other creeks running into the Grey and the New River, and a line to where the track to Lake Brunner strikes off from the Arnold River; on the eastward by boundary of country to Hurunui saddle; and on the southward and westward by the Teramekau River."

The approximate auriferous area is computed at about seventeen square miles, and the present actual diggings at six square miles.

*Population.*—The whole population is estimated at 560, out of which 400 are occupied in mining, distributed as per return attached. There are no Chinese in this district.

*Diggings.*—The diggings are all of an alluvial nature, and the gold is found in the terraces and gullies intersecting them, widely spread throughout; commencing from the Teramekau River at the west and continuing along the whole course of the Greenstone Creek as far as Maori Point; extending north and south each way about a mile, the width of the terraces on either side. There is but little mining in the beds of the creeks, as the heavy floods are apt to destroy the face of the claims,

tail races and mining plant. The workings are carried on entirely by ground sluicing and box sluicing; the former at a mean depth of sixty feet, the latter at an average of eight feet. There is no quartz mining in this district. There are thirty-five head water races, some in length two, three, and four miles, conveying 156 Government sluice heads of water. One belonging to the Hohona Water Race Company, Registered, is about five miles in length, formed at considerable expense and capable of carrying forty sluice heads; is one of the best constructed races in the country. Twelve tail races; thirty dams and reservoirs, one of which is five acres in extent, constructed at great cost; thirty-eight ground sluices. The present approximate value of the whole may be estimated at £52,134.

*Machinery.*—There is no steam power used—appliances by hydraulic power, principally in the way of hoses, are employed to work the face of the terraces. Their value may be calculated at about £1,495.

*Revenue and Gold.*—The gold revenue for the past twelve months amounts to £1,305. This does not include Customs duties or the duty on gold, but merely miners' rights, business licenses, and all other items within the definition of gold fields revenue.

The yield of gold may be computed at about 10,000 oz.

*General Remarks.*—This district, although the smallest both in area and population, bears favourable comparison with any other one in Westland, and sluicing is carried on on a far more extensive scale than in any other district.

The ground sluice tail races, and they may be so termed, as it is the manner the sluicing is mainly carried on, are from sixty to seventy feet in depth. The face of the high terraces being washed down in huge masses by hydraulic power, some of the ground being extremely remunerative. On the Duke of Edinburgh's Terrace, which the Hohona Company's race command, there are many claims paying £10, £15, and £20 per week per man, at an outlay of £30 and £40 per week for water.

This district exemplifies in a high degree the importance of providing a good water supply. Were it not for the Hohona Race, the terrace in question, which yields the richest gold and supports the greatest number of miners, would remain barren.

The diggings at Maori Point are the oldest in Westland, gold having been first discovered in this locality, and the reason why it does not attract a larger population arises from the difficulty of bringing in water, as the expense is too great for private enterprise.

The gold found in this district is of a scaly rough nature, with nuggets varying in weight. So late as December last a fine one of 67½ ozs. was discovered in one of the shallow claims close to the Court-house.

Taking into account the ground which the present supply of water commands, and the known auriferous nature of some fourteen or fifteen square miles of country still unworked, and which only requires a more extensive supply of water to open up, it may be safe to anticipate that this district holds out prospects of highly remunerative mining occupation to a considerable population for a number of years to come.

Warden's Office,  
Greenstown, 31st May, 1872.

M. PRICE, Warden.

DISTRIBUTION of POPULATION in GREENSTONE DISTRICT, including Women and Children, on 31st March, 1872.

LOCALITY.	NUMBER.	REMARKS.
Greenstown Township ... ..	130	Out of this population 400 are employed in mining
Duke of Edinburgh's Terrace ... ..	110	
Argus Terrace ... ..	40	
Shed Flat ... ..	40	
Greenstone to Maori Point ... ..	70	
Greenstone Road Terraces ... ..	60	
Junction and Gullies ... ..	40	
Marsden Road ... ..	70	
Total ... ..	560	

### No 11.

Mr. Warden PRICE to UNDER-SECRETARY for Gold Fields.

Warden's Office,  
Stafford, 15th May, 1872.

SIR.—

I have the honor to forward Report and Statistical Returns of Waimea district, in accordance with instructions contained in your circular of 27th March last.

The Under-Secretary for Gold Fields.

I have, &c.,

T. PRICE, Warden.

GENERAL REPORT of the state of the Gold Fields District of the Waimea, County of Westland, for the year ending 31st March, 1872.

*Area.*—The whole area of the Waimea district contains 372 square miles of country, with the boundaries as follows:—On the north by the Teremakau river; on the east by the dividing range; on the south by the Arahura River; and on the west by the sea coast.

The approximate auriferous area is computed to be between 30 and 40 square miles, and the present actual diggings at 14 square miles.

*Population.*—The total population is estimated at 2,000 souls, out of which 1,550 are occupied in mining operations, widely scattered over the district. In addition there are 18 Chinese mining.

Attached, marked A, is a distribution return of the population.

*Diggings.*—The diggings are much spread apart, and all of an alluvial nature, the gold having been traced in the terraces, creeks, gullies, and on the sea beach. The workings are carried on wholly by sluicing, ground sluicing, and hydraulic power. There is but little deep sinking, in consequence of the great difficulties to be contended with in the way of water, requiring expensive machinery to drain the ground; and the return in most cases is not found sufficient to warrant the outlay.

As regards quartz mining, although reefs have been found at the Taipo and tried, yet their position is so inconvenient of access, and the outlay required to thoroughly test them so great, that for the present the claims have all but been abandoned.

There are 397 head water races, many of them five, six, and seven miles in length, conveying 490 Government sluice heads of water, constructed at considerable expense, and entirely by private enterprise; 500 tail races, 584 reservoirs and dams, 439 ground sluices. The present approximate value of the whole may be put down at forty-one thousand pounds, although their original cost of construction was very much more.

*Machinery.*—There is no steam power used, all the workings are carried on by hydraulic appliances, principally hoses and wheels. Their present value is between six and seven thousand pounds.

*Revenue and Gold.*—The gold revenue for the past twelve months amounts to £2,966 2s. 9d. This does not include Customs duties or gold duty, which cannot be accurately ascertained, but merely miners' rights, business licenses, spirit licenses, and all other items within the definition of gold fields revenue. It is difficult to ascertain the correct yield of gold, because it finds its way out of the district unchecked, but the amount may be safely estimated the very least at 20,000 ounces.

*Prospect of the District.*—This district holds out peculiar advantages for mining operations, because the gold is not found only in solitary localities in mere leads, which frequently soon run out, but it is proved to be wide spread throughout most of the terraces, with which it abounds, and is the peculiar feature of the County. Its innumerable creeks and gullies are also more or less auriferous. The greater number are found to pay average good wages whenever a sufficient supply of water is obtainable. The watersheds are ample and extensive, the only requirement is increased facilities to utilize them by introducing a comprehensive and well-defined water scheme, whereby a permanent supply could be insured by forming large races and reservoirs at a high level to command the terraces. This would be the means of opening out a vast amount of ground, which at present cannot be worked, although known to be payable, as water cannot be brought to command it by individual enterprise, for lack of capital, as the undertaking would be of a costly nature. It is a matter, therefore, well worthy the consideration of Government, whether under such circumstances it might not initiate a system of water supply without incurring any great risk as to loss of outlay. The district offers this guarantee, that not only for years and years to come will it support the present population, but a much larger one, certainly a third more: for wherever there is plenty of water a miner is pretty sure of making average wages, and mining then becomes a fixed occupation, and induces men eventually to become permanent settlers. That in time payable quartz mining will be carried on in this district there can be no doubt, as from the auriferous nature of the reefs already discovered it only requires capital and time to develop them.

Finally, the Waimea District may be looked upon as containing a population of settled miners, respectable, well conducted, and very free from all serious crime; not likely to diminish in number; many of whom are making homes for themselves. The great majority not in possession of any very rich claims, but contented with good average wages, and relying their future prospects on the abundance of auriferous ground still unopened, and which they feel assured will yield sufficient to support them in comfort.

Statistical returns accompany this report, together with price list of provisions and rate of wages.

I have, &c.,  
T. PRICE, Warden.

## No. 12.

Mr. Warden AYLMER to UNDER-SECRETARY Gold Fields.

Warden's Office,

Kanieri, 10th May, 1872.

SIR,— In compliance with your circular, dated 27th March, 1872, requesting a report of this district, I have the honor to state that the district comprises an area of 252 square miles, containing of known auriferous ground forty-three square miles, of which sixteen square miles may be considered the present workings.

Mining throughout is still being steadily carried on; but there has been a slight falling off in the population of late, which is attributable to the good accounts recently received from the reef districts at Inangahua, in the Nelson South-west gold field, which have induced numbers to leave.

I estimate the population yet remaining to be 1,000 souls, that is to say, within a radius of sixteen miles. There are, of course, miners working in very remote parts of the district (such as thirty miles up the Hokitika River) of whom little opportunity is afforded to ascertain particulars, and of whom entirely authentic accounts scarcely ever reach me. The fact of auriferous ground existing in those localities can be testified from the men having worked and made livings there for some years past. I have no doubt eventually good accounts will be received from there, more especially so soon as tracks and roads now in contemplation by the Government are completed, which will render greater facility and give further inducement to miners to prospect for gold.

A company has been formed in Hokitika, who are endeavoring to ascertain the coal bearing properties of the district (some slight indication of such existing having been discovered up the Hokitika River). They are, I believe, contemplating receiving assistance from the Government by subsidy or grant of land to aid their undertaking, and I have reason to be sanguine of their ultimate success, should the Government take their application into its favourable consideration. Should such prove true, I need scarcely say that great advantage will accrue therefrom to the country generally.

I may state some praise is due to the Mayor of Hokitika, Mr. Todd, who has for some time past, at his own expense, furnished a prospecting party with every necessary, having despatched them up the Hokitika River, near the ranges, to ascertain the probability of existing quartz reefs. The party returned to town last week with small samples of alluvial gold; the amount, however, I was unable to ascertain. They have since left again for the same locality, which clearly proves their favorable opinion of the district.

At the Blue Spur, the Yankee Sluicing Company (formed since 1865) are still progressing favorably. Their water commands some of the highest ground in the district, being lifted from the head of the Hauhau Creek, by which means they have been enabled to work most of the leading high spurs. I may mention that general complaint is scarcity of water. The men above referred to, although at great personal labor and expense they brought in a head race and constructed three dams, are seldom (except in very rainy weather) able to command a continual supply of eight heads of water. They are now opening up a new face, about 200 yards distant above the Blue Spur township, and anticipate obtaining good results from the ground.

Beyond these parties there is the Arahura Extended Gold Mining Company, better known as Molloy and party, who have lately struck good gold upon the Arahura Flat. They are at present cutting a new tunnel through a small range to work the flat where they obtained the prospects. The tunnel, when completed, will measure 1,000 feet in length, and will then be converted into a tail race, which the parties anticipate will be of sufficient fall to allow their working the lower ground upon the flat hitherto not tested. All this area of land was some few weeks ago applied for purchase to the Waste Lands Board, the miners in the locality, however, (including the parties mentioned) objected to the sale of the same, and procured samples of gold from the ground and showed them to the Board as proof of the auriferous nature of the block, which I am glad to say the Board deemed sufficient reason to withdraw the sale of the same.

Tenders have been called for the construction of a road from the Blue Spur township, in connection with the Christchurch road, which, when completed, will open up about two miles of entirely unprospected country, besides proving a boon to miners residing in that part of the district, who will then be able to obtain the necessaries of life from the farmers up the Christchurch road and its neighborhood somewhat cheaper than they have hitherto done from Hokitika.

A road is also now nearly completed from the Kanieri township to the farming district up the Kokatahi River, a distance of fifteen miles; which has been required some time here, inasmuch as numbers of persons who had settled in that portion of the district, having cultivated land, were unable, except at great expense, to procure a market for their produce. It will also be the means of inducing others to settle down as agriculturists, and occupy the vast extent of country adapted for such purposes that abound throughout the district.

Immediately in the neighborhood of the Kanieri township little has transpired calling my particular comment. The old terrace in rear of the Court House is now nearly sluiced away; there is a party of four miners yet engaged washing away the remaining portion: their progress is, however, slow, for, not having sufficient fall for their tailings they are compelled frequently to stop operations in order to clear about a quarter of a mile of boxing, which constantly gets choked up, and, if not attended to, would be the means of causing much damage and inconvenience to other parties in the neighborhood.

The two large waterwheel claims, viz., the Victoria Co-operative and the Shenandoah, are still working, and although neither are paying dividends to the shareholders, yet are clearing working expenses, and affording employment to many. Both these claims employ numbers of boys, whose labor they obtain materially cheaper than men's, and whose work, although light, such as shifting and replacing trucks, is indispensable.

A small rush set in during last month at the Big Paddock, Hauhau, in the same gully where the Black Hawk crushing machine is erected. Davis and party, who are the prospectors, obtained 12 dwts. out of four loads of wash dirt. They report the depth of sinking to be twelve feet, with one foot of washdirt. No further particulars are yet at hand. The majority on the ground are merely shepherding until the prospectors arrive at something conclusive. Should this prove a new lead it will cause considerable stir in the district. I fear, however, the result will only prove the same as numbers of small rushes hitherto, which appear periodically to occur in that neighbourhood, and which have never as yet resulted in anything good.

At Woodstock, which is distant from the Kanieri about two miles, and lies upon the south side of the river, there is a population of 300 steadily employed: some tunnelling, but the majority ground sluicing. Mining operations have for some time past been carried on there with great negligence and want of proper care, which has resulted in many accidents having occurred, most of them, I am sorry to say, terminating fatally. During a period of twelve months I find no less than eleven Coroner's inquests have been held in the locality, which clearly bears out my statement.

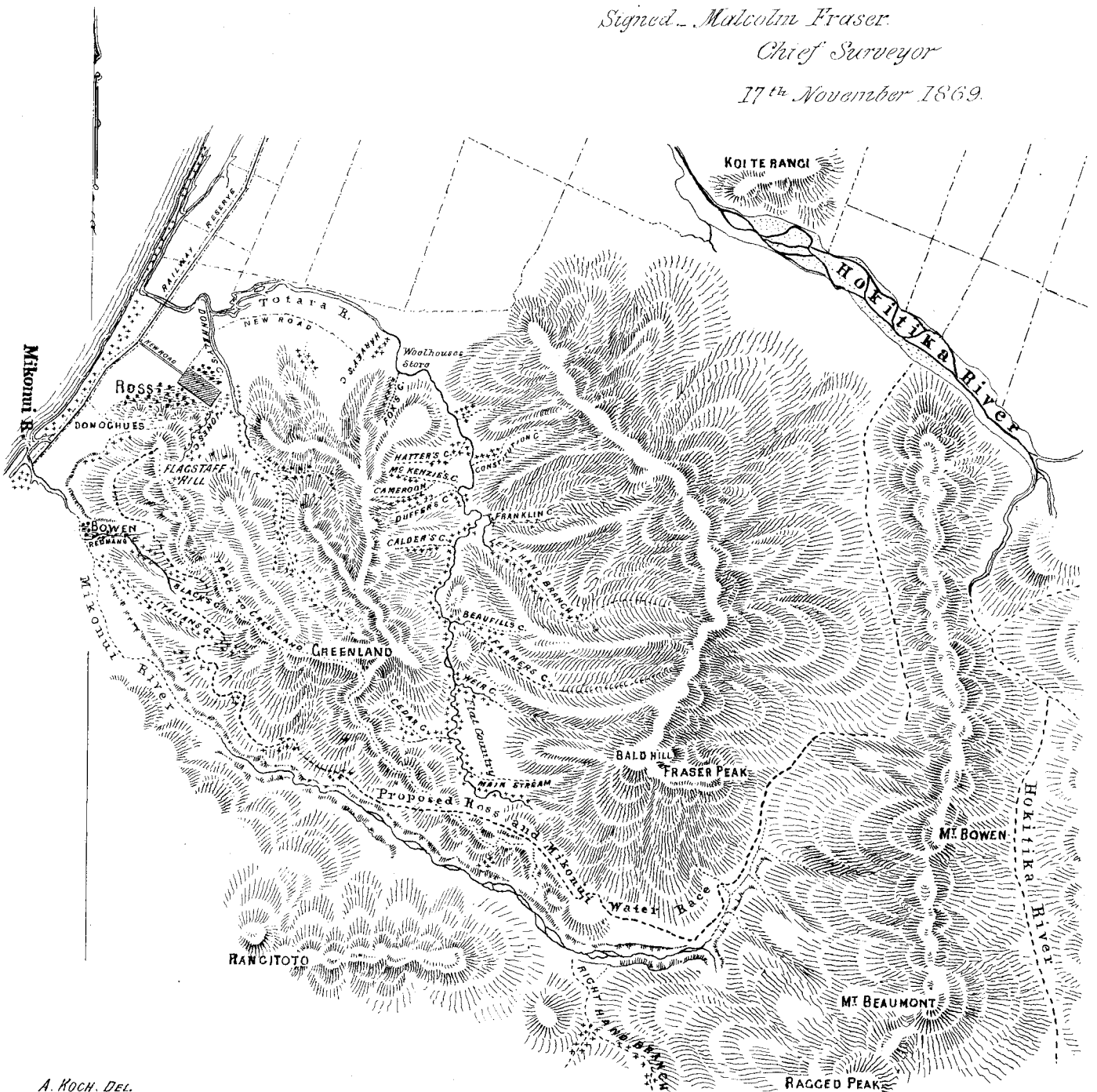


# PART OF THE TOTARA DISTRICT

— SCALE. —  
TWO MILES TO ONE INCH

NOTE. — Deep Workings from 60 to 300 feet. shewn thus **+++**  
Ground Sinking shewn thus **+++**

*Signed. Malcolm Fraser*  
*Chief Surveyor*  
*17<sup>th</sup> November 1869.*



On the same side of the river, but nearer Hokitika, and within two miles of the old Brighton lead, I have granted a party of four men a prospecting area, under clause 12, section III. of "The Westland Gold Fields Regulations," of 600 yards x 400 yards, who seem sanguine of ultimately finding payable gold. With regard to the old Brighton lead, I may state that it is almost deserted. There are, however, still three or four parties remaining who are just making a living. At the time this ground was rushed it was presumed that the old Hauhau lead (which was a remarkably rich one) had been traced across the river; but this proved not to be the case, for although a few claims contained a small run of gold, yet no signs of a lead existed, and thus the ground became abandoned.

The Maori Reserve Claim which was formed some four or five years ago, but which never turned out any good and was at last abandoned, has since been taken in hand by a party of six (chiefly townspeople) who are making every preparation to give the ground another test; they are erecting a steam engine to enable them to work the ground with greater advantage. The proposed plan is to sink a shaft, some forty feet, which will consist of three compartments, one for the pipe and the other two for the trucks or cages; the engine will, of course, answer both purposes, viz., draining the ground and working the cages. I fear, at the time of starting operations, the enterprising owners scarcely imagined the great expense and difficulty that would have to be encountered before the claim could in any way be considered in working order, and are only now beginning to realise that fact. I estimate the cost of erecting machinery and employment of labor, &c., will far exceed £2,000, and that before any attempt could be made to commence operations. I trust, however, that the individuals concerned will eventually reap some benefit, which their perseverance undoubtedly deserves.

The district affords other employment as well as mining; there are no less than three saw mills, which are constantly at work, and all are supplied with timber from the district. Formerly there was not much demand, but lately the demand has greatly increased, specially for white pine which mostly abounds here. This wood has been ascertained to suit admirably for packing purposes, being light and not easily split by nail driving; it is mostly exported for the Australian Meat Preserving Companies.

During the year I have heard and decided in the Warden's Court sixty-nine cases, which have been all more or less claims for damages of small amounts, caused by encroachment of one claimholder upon another. In the majority of cases a verdict has been recorded for nominal amounts.

There have been registered in this office during the year the following:—40 head races (ordinary), 48 tail races, 43 tunnels, 32 dams, 12 extended claims, 37 residence areas, and 16 miscellaneous properties.

There are 15 retail spirit license holders throughout the district, storekeeper's and butcheries.

The price of provisions are the following:—Beer £5 to £10 per hhd.; brandy £1 to £2 per gallon; bread 3d. per lb.; butter, fresh, 2s. per lb.; butter, salt, 1s. 3d. per lb.; cheese 9d. per lb.; coffee, 1s. 9d.; flour, 18s. to 20s. per 100 lbs.; grain (wheaten), 6s. per bushel; cattle (horned), £5 to £15 per head; goats, £2 10s. to £3 per head; horses, £10 to £60 per head; sheep 12s. to 18s. per head; swine £1 to £5 per head; meat (beef), 6d. and 7d. per lb.; mutton 4d. and 6d. per lb.; pork, 8d. per lb.; milk, 6d. per quart; rice, 6d. per lb.; salt, 2d. per lb.; sugar, 6d. and 7d. per lb.; tea, 2s. 6d. and 3s. 6d.; tobacco, 5s. and 6s. per lb.; wine, Colonial, 12s per gallon; Foreign, 16s. per gallon.

Rate of wages—Laborers, £2 10s. per week, for eight hours; mechanics, 15s. per day; boys, miners, £1 per week, for 8 hours.

In conclusion, with regard to the district throughout, I consider it (although at present dull) still preserving a prosperous future, and can bear favorable comparison with other mining centres in Westland.

The Under-Secretary for Gold Fields.

I have, &c.,  
J. AYLMEY, Warden.

### No. 13.

Mr. Warden AYLMEY to the UNDER SECRETARY Gold Fields.

Warden's Office,  
Ross, 4th May, 1872.

SIR,—  
As requested by your circular of 27th March, 1872, I have the honor to make the following Report for the information of the Government.

The Totara District contains 599 square miles, of which fifty-six square miles are known to be more or less auriferous, out of which about twenty-one square miles are actually being worked. The first rush to the district was to the Totara River, in the year 1864, but nothing of consequence was found till the following year, when new ground was discovered in and round the present township of Ross.

Mining is confined to alluvial workings, viz.—Deep sinking, ground sluicing, and creek workings.

Deep sinking is carried on from Ross to Donohue's, a distance of about two miles, and again at a small township called Bowen, about five miles distance. Ground sluicing is not followed up to the extent I should wish, owing to the want of a large and cheap water supply, there being plenty of ground that would pay handsomely for sluicing purposes if a large head race was brought in so far to command the district. The creek workings are not numerous, being confined to Donnelly's and a few small gullies up the Totara River. Many of the deep sinking claims on Jones' Flat have reached a depth of 300 feet. In sinking six payable bottoms or layers of wash have been struck, but as yet no true bottoms found.

The great difficulty to be contended with in working the deep ground has been the amount of water. To keep this water down a company was formed, who erected a ninety horse-power engine, to which all the claims on the flat within a certain area contributed, in the shape of rates levied by a

Drainage Board, formed under "The Gold Mining Claims Drainage Act, 1868." I may here remark that owing to this Act being most unsuitable, and constantly clashing with the Gold Fields Act and the Gold Fields Mining Regulations, great difficulty has had to be contended with, and heavy law expenses incurred on the part of the Board in trying to recover rates. I would suggest that this Act receive the immediate attention of the Government towards its amendment. Since the coming into operation of this Drainage Act 2,000 yards of drainage tunnels have been driven through Jones' Flat to lead the water to the drainage engine, at about £4,200, or 14s. per foot. The expenses of working the engine are about £80 per week in fine weather, and £120 per week in wet weather, so that even in fine weather the few claimholders on Jones' Flat are very heavily taxed for the drainage of their claims.

Many attempts have been made to discover a quartz reef, but, although gold-bearing quartz has been found, it has been only in the form of leaders. There is one company now prospecting a reef within one mile and a-half of Ross. But I am inclined to think that we must look for reefs near the ranges.

An application has been made through me by J. Brogden and Sons to bring in forty heads of water from the Mikonui River. The length will be eighteen miles. The County Engineer's estimate for construction is about £2,000 per miles. Some objection has been made to the amount of ground asked for by Mr. Brogden along the line, but I am inclined to think that so large an undertaking can only be carried out by dealing with the applicants in the most liberal manner. Of one thing I am certain, that should the race be brought in our population and export of gold in a few years would be doubled, and country opened up for mining purposes that at present is useless.

I enclose a section of the Morning Star shaft, showing the different layers of washdirt in Jones' Flat, together with a map on which is marked the deep and shallow workings of the district, and also the proposed line of the Mikonui race.

The population in the district seems to me to be more settled than in other parts of the coast. This I attribute to many of the miners being married men, with families, who are satisfied to work for from £3 to £3 10s. per week. Another reason is that nearly all the claims are either leases or extended claims, so that the owners have many years work before them. I may remark that it would be quite impossible to work this district in ordinary claims, owing to the great expense and time it takes before there is any return.

As yet there is very little done in the farming line, owing to the great difficulty and expense of clearing the land. But there is no want of gardens, as every miner has a small patch cleared around his house, fenced and planted with vegetables.

Owing to the new line of road inland to Hokitika having been commenced, a good deal of land has been bought along it already; and I am certain the opening of this line will lead to fresh discoveries. In fact I from day to day expect to hear of gold being struck, as already there are parties prospecting along the road. Gold was found there some years ago, but the great expense and difficulty of getting to the ground caused the miners to desist from prospecting any further.

During the last year I have been compelled to refuse to recommend any new applications for dance house licenses, as I found that the proprietors of these establishments were in the habit of making trips to Melbourne and Sydney, and in many cases importing into the district a class of girls neither fit for wives or domestic servants, in fact, girls of the lowest class.

The Public House Ordinance requires considerable alteration, as at present any one who applies for a license obtains one, so that the main portion of the town of Ross consists of nothing but drinking bars, without the slightest hotel accommodation for travellers. This evil requires to be remedied, as not only it encourages drinking, but liquors of the worst description are vended over these bars, driving many to the lunatic asylum.

There is little or no crime, and I may say that I have never been on any gold field where the population have conducted themselves in so orderly a manner as they have in this district for the last six years.

There are seven companies registered under the Mining Companies Limited Liability Act, actually in work, with a nominal capital of £41,500, and £38,000 paid up. This money has been chiefly expended in mining on leased ground of about 17½ acres in extent.

Of gold, 34,992 ounces, value £132,094 16s., have been forwarded from Ross to Hokitika during the year.

*Revenue.*—Gold fields, £3,176 16s. 10d.; Warden's Court, fees and fines, £110 2s.; Export Duty on Gold, £4,374; total £7,660 18s 10d.

*Wages.*—Managers, £6 per week; engine drivers, £3 10 per week; underground captains, £3 10s. per week; carpenters, £3 10s.; blacksmiths, £4 per week; miners, £3 (10 hour shifts).

*Timber.*—Caps, 9 feet, £8 per 100; round props, 7 feet, £6 per 100; split props, 1 and 7 feet, £5 per 100; laths, 5 feet, £1 10s. per 100; firewood, £1 5s. per cord; sawn timber, 12s. per 100 feet.

*Freight.*—From Hokitika to Ross, sixteen miles, 200 tons per month at a cost of £2 10s. per ton.

*Warden's Court.*—Number of cases in Warden's court, 94; amount sued for £316 15s. 10d.

*Resident Magistrate's Court.*—Number of cases, civil, 506; Number of cases criminal, 143; amount sued for in R.M. court, £7,095 17s. 9d.

*Population.*—Male, 1,554; female, 746; total 2,300.

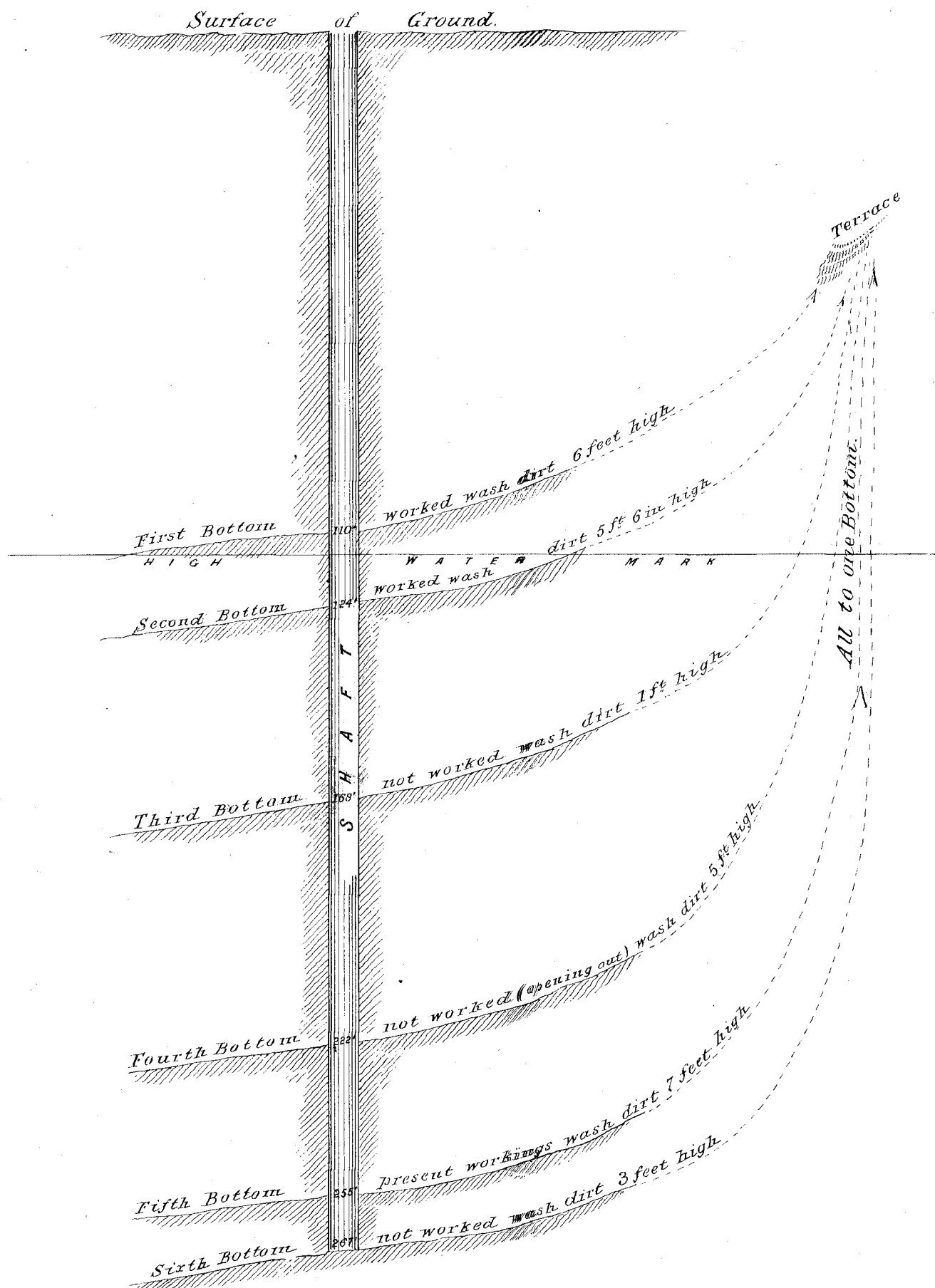
*Licenses.*—The following number of rights, licenses, registrations, and leases, have been issued or applied for, and forwarded for consideration:—Business licenses at £5, 58; business licenses at £3. 111; business licenses at £2, 41; miners rights at £1, 625; registrations at 5s., 179; registrations at 2s. 6d., 42; registrations at 1s., 363; leases, 4; special claims 1; extended claims 42; retail licenses (publicans'), 37; conditional licenses (publicans'), 1; wholesale licenses 2; bottle licenses, 6.



# MORNING STAR CO'S SHAFT

— Shewing different bottoms. —

## — JONE'S FLAT —





I find from the gold return that each miner earns 35 ounces, or £132 2s. 6d. for the year, or about 15 ounces, or £57 12s. 6d. for every man, woman and child. I think that this return will show that this is a tolerably flourishing community, and that no poverty exists. And I am certain that there is yet work for years to come for a large mining population in the Totara district.

The Under-Secretary for Gold Fields.

I have, &c.,

J. AYLMEY, Warden.

DISTRIBUTION of POPULATION of WAIMEA DISTRICT, Westland Gold Fields, on 31st March, 1872.

Locality.	Estimated Population.	Remarks.
STAFFORD TOWNSHIP	180	This population is scattered over about fourteen square miles of country.
Piper's Flat	100	
Ballarat Hill	58	
Scandinavian Hill	40	
Auckland Lead	24	
Back Lead	12	
Sea Beach	43	
Waimea Track	28	
Chapel Terrace	40	
Arohura	12	
Arohura, working on new road	10	
Chesterfield and Lamplough	100	
Teremakau	34	
Pretty Woman's Gully	70	
Fourth Terrace	63	
Liverpool Bill's	56	
Hatter's Gully	30	
GOLDSBOROUGH TOWNSHIP	250	
Gullies in vicinity	150	
Left Hand Branch, Waimea	20	
Stewart's Terrace	15	
Shamrock Terrace	40	
Italian Gully	50	
Maori Gully	30	
German Gully	60	
Natives' Terrace	20	
Right Hand Branch and Big Dam	100	
Tokero Terrace and Red Jacks	30	
Greeks, No. 2	35	
Greeks, No. 1	30	
Duffer's Gully	20	
Callaghan's Gully	85	
Fox's Creek	100	
Hatter's Gully	35	
New line of road from Greenstone road to Christchurch road	30	
Total population	2000	
Exclusive of Chinese, of whom there are working at Piper's Flat	18	

No. 14.

Mr. Warden TIZARD to UNDER-SECRETARY for Gold Fields.

GENERAL REPORT to 31st March, 1872.

Warden's Office,

Okarita, 28th May, 1872.

SIR,—  
With reference to your circular letter dated 27th March last, I have the honor to report as follows:—

The gold mining in this district is generally confined to the sea beaches, nearly all the miners being distributed on the coast between the Saltwater Beach and Bruce Bay, a distance of about seventy miles, consisting of beaches and bluffs, and here and there divided by rivers and running streams. There are a few men to the south of Bruce Bay, mostly at the Haast. On some beaches there is a considerable population, on others but one or two men are working. The best of the beaches have only held the men through water races having been brought in, and then generally the miners have not been so successful as was anticipated, through the insufficient supply of water and the high price

charged for it, viz., from £8 to £12 per head. The men at the poor beaches having the choice of the ground and the use of any available water at a trifling expenditure of labour, generally do pretty well. The sand is put through sluice boxes lined with plush, sometimes supplemented with ripples and slabs of punga (fern tree).

About twelve miles north of the township of Okarito is the Saltwater Beach, on which there are now about forty miners; worked in the early days of the Coast, and the best and handiest of the gold got at; was gradually deserted until about two years ago, a race was brought on to the beach, and miners were induced to set in; but the race has proved most inefficient, the supply of water in dry weather falling very low, and, indeed, on one occasion, it became dry. Thus, in the fine weather, when men could most advantageously work the ground, they are stopped for want of water. I was expecting that the Race Company would have endeavoured to have obtained Government assistance to increase the supply of water, but the shareholders do not appear to be sufficiently united to enter into any fresh arrangements in respect to the race, but efforts are being made to obtain water in other directions. About twelve months ago two dams were commenced in the Little Saltwater Creek by two separate parties, with a view of ground sluicing the beach. After months of work a heavy fresh came down and nearly destroyed one of the dams, but it was quickly repaired, and both were nearly complete when another heavy fresh unfortunately carried both of them away beyond repairing. Then the two parties joined to put in a new dam of a more powerful description, which has up to this time withstood freshes which have come down, and I am in hopes will be sufficiently finished for some of the party to commence sluicing in about a fortnight, leaving the others to complete the dam. The party consists of twelve men, and should the water work the beach as well as they expect, a handsome return will be realised on the labour, great as it has been, expended on the dam. Another party are at work cutting a tail race, with a view of sluicing with the water from the main Saltwater Lagoon, instead of allowing it to run at its usual outlet; sometimes the sea banks up the entrance, and taking advantage of its closing they will take means to prevent its opening and run off the water through their race. Still the space between the Lagoon and the sea appears to me to be too wide to give sufficient fall to the water to do the work required in the leads with certainty. It will take about three weeks to complete the tail race, &c. A third party are engaged putting up a whim to pump the Lagoon water to wash in a claim they have already opened. The depth of sinking at the Saltwater beach varies from six to thirty feet, and the usual way of working has been with horses and trucks, but I believe those working with barrows have done the best from having required much less water; working with trucks a quantity of poor stuff is put through that scarcely pays for the cost of the water, which is charged at the rate of £12 per head, and when there is not enough water in the race to work the claims, the horses have still to be fed at a great expense, oats being from 7s to 8s per bushel. The want of water has prevented miners on the Saltwater Beach as a rule earning wages during the year, but had there been a good supply in the race, they could have done fairly, and many more men would have been on the ground.

Two men are at present prospecting up the Whataroa River, and from the increased facilities of communication they will work more advantageously than men did in former times; and as gold was then obtained, although with difficulty, from the great labour of conveying provisions high up the river, some results may now be reasonably expected.

From Commissioners Point, about seven miles to the north of Okarito is a straight lead of about half a mile to the next small bluff north of it, and in rear of the beach, a large lagoon, which was connected by a narrow channel with the Okarito Lagoon. A dam has been placed across the channel with a view of raising the water in the lagoon sufficiently high to wash the flat between Okarito and Commissioners Point, but hitherto without success, the water escaping, it is supposed, seawards, before rising sufficiently high to work with. The piece of straight beach has been tried from time to time, and a small party are now at work there, but there does not appear to be much gold in it, but if the lagoon would rise high enough, it would probably pay well for ground sluicing. The best prospect at present is the chancing a patch of surfacing which is sometimes thrown up here.

Between Okarito and Commissioners' Point, the sea, and the Okarito Lagoon, is a sandy flat, of an average breadth of about half a mile, in which there is gold with very shallow sinking. Early in 1866 it was rushed, but generally abandoned almost the same day; however, men have since worked it in different places, but it is very patchy, and, without water power, not likely to be regularly worked, although some have done very well on it. Some good surfacing though rarely has been got on the North Beach. On the south beach of Okarito there is a small race brought over the cliff, but no beneficial result has been attained.

From the earliest times of the district men have prospected and worked up the Okarito River from Canoe Point towards and beyond the Lake. A considerable quantity of gold has been obtained, but the labour and time consumed in swagging provisions, for they have had to be swagged, has rendered it impossible to work with profit. Should facilities for the transport of provisions at any time become available, ground in this direction will be worked, for if water were brought on to it good results could be obtained by ground sluicing. Canoe Point is the highest point on the Okarito River, obtainable by boat, the falls commencing close above. It is about four or five miles from the township. Six years ago a track was cut through the bush from Canoe Point to the Lake about eight miles, but was only passable on foot. At that time about thirty or forty men were working in M'Donald's Creek, running into the Lake and on the Okarito River, but the time they lost swagging provisions reduced their earning so much, that they soon abandoned the ground, although one party of three or four men persevered in working it for years, but did not make wages. Parties who have subsequently tried the ground have reported that they could make good wages if provisions could be supplied on the spot at reasonable rates, so that the expense and labour of swagging could be avoided.

An attempt was made by the Survey Department to open a track direct from the Okarito Township to the Lake, but it was unsuccessful, being blocked by a range, which it has since been thought might be avoided; but the dense bush prevented much observation being taken until a cutting was made through it. Subsequently the Road Board took the track in hand and employed a surveyor, jointly with one of the members, to lay out an available track, but they appear to have contented

themselves by some unfortunate fatality with continuing the same general line the Survey Department stated was impracticable, indeed, making only occasional deviations from the old track, and although a great deal of money was expended by the Road Board in clearing this track, the expenditure appears to have been useless. A good road to the Lake would, I believe, lead to a great deal of gold bearing ground being worked: and also open up a considerable extent of agricultural country. Should the opportunity present itself, and I can be away from the township a sufficient length of time, I propose to examine the different tracks to the Lake with a view of observing whether the Canoe Point track could not be struck from the township, and thus a good line of road to the Lake be obtained.

There are at present but two parties of four men each, and one "hatter,"\* digging on the three mile beach south of Okarito. The beach is about two miles long, with a lagoon in the rear of it, which sometimes runs out at the northern end of the beach, and sometimes closes up. One party working off a race are doing well, so long as the water lasts, but are subject to frequent interruptions from the supply of water falling off in dry weather. The other party are working with water from a portion of the Lagoon, held by a long dam, and are doing very well, and generally have an adequate supply of water. The hatter has a small race and usually relies on surfacing. But little stripping is done on this beach, there being some gold all through, and the water rights being held by the parties working it, all the sand is put through. In the early times fifty or sixty men were working on this beach, and some of the best claims in the district were opened here. The number of men fluctuated considerably until the last two years, during which there have been only nine or ten miners on it. Formerly on this beach some rich surfacing was thrown up, and men working on the beach reaped rich harvests, but for the last two years there has been but very little of it; first observed soon after the loss of a bag of gold at the Five-mile Bluff, it was then thought likely to have been that gold thrown up on the beach, but the quantity obtained far exceeded that then lost. It is most likely gold washed down the Waiho in heavy freshes, taken out to sea, and then thrown up on the beach in large quantities of sand; subsequent seas sluice out the sand, and leave the gold and black sand on the surface. This, I suppose, is how all the gold found on the beach has, in the course of years been deposited.

The Okarito district was originally opened at the beginning of 1866, through a small craft taking down miners to Bruce Bay and Hunt's Beach; but as the ground in these parts was not found sufficiently good for the times, the miners travelled up northwards overland, prospecting on their road, one party discovering good gold on the Five-mile Beach, and there were soon about 3000 miners at work, and it turned out the richest beach worked on the Coast, many of the men making from £600 to £1200 for about three months work. The beach continued to be worked, but the claims became poorer and poorer, the pick of the ground having been easily worked, was soon got through. Then the rush to Fox's and the Buller took away the greater part of the miners, and the subsequent rush to the Haast took many others, leaving only 300 or 400 men; on the failure of the Haast rush, some of the old five-mile miners returned to bring in a race, and after considerable difficulty, and about eighteen months labour, a party of eight men brought in the Alpine Race, which has continued to supply the beach with water to this day, but from the expensive nature of the work, and the limited supply of water, it has been necessarily supplied at the high rate of from £8 to £12 a head, and still at a loss to the race party. The Okarito Company also brought in a race and supplied water, as well as worked a claim of their own, charging the same price for the water as the other Company. In the end the shareholders in this Company lost every shilling they had invested. Consequent on these races having been brought in, small companies were formed to wash the ground in leases and "extended claims;" and about twelve water-wheels, with pumping machinery, tramway, &c, placed upon them, and the whole of the beach re-worked. In some cases the headings of the original workings paid small amounts, but the best results were obtained from patches of sound ground unworked at the first and mullocked up and lost sight of. The ground has been generally re-worked, some of it twice, and the greater part of the miners have now left the beach, but the few remaining, some sixty-three, are doing pretty well, from being able to choose freely their ground and having a more constant supply of water from the less number requiring it. The beach will find employment for the number of men now on it for years, and with cheap water would employ many more. The sinking has varied from five feet to thirty feet. In the first working of the beach after the races were brought in some parties had winding gear attached to their water-wheels, others used horses and trucks, but the use of the winding gear has been discontinued on account of the expense and scarcity of water.

Towards the head of the Waiho River the ground has often been tried; about four years since a party of four men worked there for about twelve months, and although they found some good patches, they only made something below wages and abandoned the ground. Those trying it since have only made small wages. A party of three men are at present working just above the forks, very near the head of the river, but with what success is not known, but as they have continued working for about six months, it is supposed that they must be doing fairly.

There is every indication of gold-bearing reefs high up on this river. Gold has been found conjoined with quartz, and the cutting down of the banks of the rivers by continual water wearing has disclosed quartz reefs, but none bearing gold have been observed, but very little prospecting has been done in this direction.

On the beach south of the Waiho, one or two miners are working, who have been there for some years. The ground is poor, but having water power available, they have done fairly.

Between the Oamaru and the Waikupakupa good patches of gold have been obtained, but miners can only work for three or four months in the year, when the rivers are very low. It is the same with Cook's River. From the nature of the gold, experienced miners consider that on each of these rivers there are quartz reefs; but the denseness of the bush and *debris* covering the ground would generally prevent the cropping out of a reef being as observable as it would be in some countries. Two men at present working up Cook's River, washing the river bed as far as the stream allows them to go into it, are making small wages; two others are engaged prospecting.

Gillespie's is a beach about two and a-half miles in length, with a lagoon in the rear of it. There

\* A miner working without mates, entirely on his own account.

are several leads of gold extending over a greater breadth than other beaches. It was first washed by miners who followed Hunt on his well-known second rush, and has always been worked since, but at times there have been as few as eight miners on it; at the first working there were about 500 miners engaged on it, and a considerable number continued there until the rush to the Haast took away the greater part of the miners at the beginning of 1867. Subsequently there were but few men working on the beach until about two years ago, two races, carrying together about twenty heads of water, were brought in, and have induced a number of miners on the beach, numbering now about ninety; at the first working of the beach there were no very rich claims, but some paid good wages, and a few rich patches were obtained, but there has always been a large extent of poor ground payable with water power, and the beach is likely to find employment for a considerable number of men for years. The stripping varies from six feet to thirty feet, and the claims are generally easily worked, as the water can be kept down by a hand pump.

At the Karangarua a strong party of eight men have brought in a race to wash the beach. It has cost them about six months labor, and will carry about twelve heads. The beach has been worked by miners from time to time, but this is the first water brought on to it. The working of the beach will shortly be commenced, the race being nearly complete.

Hunt's Beach extends from the Karangarua to Jacobs' Bluff, a distance of about six miles, two small creeks joining at the centre of it and running to sea. It is peculiar in being always a hard beach, being in that respect an exception to the other beaches in the district, which are continually changing and are frequently soft; it is also always covered with black sand. This was the first beach worked in the district, having been opened by Hunt in 1865, most of the miners having proceeded thither by sea to Bruce Bay, and thence overland. This beach was worked in a very primitive manner by cradling, great quantities of wash dirt having been carried in bags back to the lagoon and there washed; but the ground was good, and good wages were made. Most of the miners worked here until Hunt's duffer rush, and then left for Gillespie's and other places, but a straggling population has always continued working it. At present there are about seventeen miners on the beach, and as most of them have small races, with the aid of water power, they are enabled to make a living, and occasionally by some surfacing to do something more. About two years ago a small engine was placed on the beach to pump water for washing, but the results were not satisfactory, and it was soon given up. There is a water wheel employed for a similar purpose, which has been at work for some years.

Bruce Bay has always been frequented by shipping in the different rushes, on account of its being the only available shelter in the vicinity; and, as might be expected, the beach has been prospected, and some of it worked, but never with much success. At present there are very few men working there. At the time of the duffer rush there were a number of stores, but all but one have disappeared.

Between Bruce Bay and the Haast are some dangerous bluffs, which render travelling along the coast very difficult and laborious; they rise so precipitously close to the sea as to be sometimes impassable, or only passable at the risk of life. During the Haast rush a number of men travelled overland, and I believe some rough tracks were cut through the bush over the worst of the bluffs, but I am led to believe that they have since become so overgrown as to be unserviceable. I suppose that the beaches must have been prospected to some extent, but the difficulties of the journey would, I believe, induce men to press on as rapidly as possible, without giving much attention to the ground. Tracks are now being cut by the County Government as a road inland instead of on the beach, but from the want of some connections with the beach they have not yet been much travelled.

The Haast Beach has been worked both north and south of the river. Rushed at the beginning of 1867, some hundreds of men were soon on the ground, yet it lasted but a few months, not turning out anything so good as was expected. Since then, off and on, there have nearly always been miners there, and a water race has been brought in, but unfortunately that has not proved a remunerative speculation, at present there about twelve miners working, and one storekeeper, all doing very poorly.

Different places between the Haast and Martin's Bay have been tried, but I am not aware of any men working there at present.

The population of the Okarito district numbers about 514, distributed as follows:—

	Male.	Female.	Children.	Total.
Okarito	29	14	32	75
North Beach	7	1	4	12
Saltwater Beach	53	4	4	61
Three Mile Beach	11	2	8	21
Five Mile Beach	68	22	32	122
Waiho River	8	...	...	8
Waikupakupa	5	1	...	6
Moonlight Beach	8	...	...	8
Gillespie's Beach	100	15	18	133
Cook River	6	...	...	6
Karangarua	10	1	...	11
Hunt's Beach	20	3	...	29
Bruce Bay	5	...	...	5
Paringa	3	...	...	3
Haast	14	...	...	14
Totals	347	63	104	514

Of the above number about 278 are miners, the remaining males being engaged in business, farming, storekeeping, &c.

The gold exported during the year ending 31st March last, amounted to 6,735ozs., whilst 1,284ozs. were forwarded overland to Hokitika for payment of duty there, making a total of 8,019ozs.

The average per head of the population (514) was, therefore, 15'6ozs.; per male adult (347), 23'1ozs.; and the average per miner (278) 28'84ozs.

In the following quantities of gold sent from the district in the several years is not included a considerable quantity from the Haast in 1867 :—

Year 1866	...	...	...	...	...	73,668 ounces
„ 1867	...	...	...	...	...	10,822 „
„ 1868	..	...	...	...	...	6,222 „
„ 1869	...	...	...	...	...	6,050 „
„ 1870	...	...	...	...	...	7,878 „
„ 1871	...	...	...	...	...	8,037 „

In 1866 there was a population of about 5,000 in the district, but it soon decreased to as many hundreds.

Most of the river banks and beds are stocked with cattle and sheep, which have generally proved very remunerative—the former especially, the feed being very suitable and making splendid beef, but in the rapid and cold rivers a good many sheep have been lost. The result of the good feeding the river beds have afforded has been to reduce the price of meat from about 1s. 9d. to about 9d. per lb.

Numerous patches of ground are cultivated by miners and others, and a considerable quantity of potatoes, oats (for hay and chaff), and vegetables grown, good crops being generally obtained; and when land in the district is obtainable under the special settlement clauses of the regulations, I am in hopes that some of the miners will take land up the rivers near gold bearing ground, which, worked in conjunction with their land, will afford them profitable occupation, and lead to a permanent settlement of the country with a fair prospect of discovering a new gold field.

Communication along the coast has been latterly much facilitated by the County Government having formed tracks around some of the bluffs, and also repaired the road board track over the Three Mile bluff, and Blanchard's track over the Five Mile bluff.

The great wants of the district are a cheap and plentiful supply of water and good roads inland; as these are supplied the population will increase, and the capabilities of the district be developed. At present water is both scarce and dear, and the only roads inland the river beds.

The Under-Secretary for Gold Fields.

I have, &c.,

EDWARD J. TIZARD, Warden.

## OTAGO.

### No. 15.

Mr. Warden WILLIS to the UNDER-SECRETARY for Gold Fields.

Warden's Office,

Dunedin, 8th June, 1872.

SIR,—

Herewith I have the honor to forward Gold Mining Statistics for the quarter ended 31st March, 1872, a table shewing the number of Water Races, Dams &c., a table shewing the number of Registered Companies &c., a Return of Mining and Agricultural leases, and a return of the price of provisions for the same period.

The number of miners as will be perceived is very limited in number, indeed there are actually more working without the Gold Fields boundary than within it. None of them are reaping rich returns for their labor, but all are satisfied with the moderate yet steady yield from their workings. There are a few isolated miners working in the gullies at the back of "Flagstaff" but I have not been able to obtain any reliable information respecting them.

I have not held any Courts during the quarter, in fact no cases have been referred to me that required me to do so.

The two quartz mining companies within the district, but without the Gold Fields boundary, are still only prospecting.

I have issued 12 Miners rights and two business licenses during the quarter.

I have &c.,

The Under-Secretary for Gold Fields.

ALEXANDER WILLIS, Warden.

## No. 16.

Mr. Warden PYKE to UNDER-SECRETARY for Gold Fields.

Warden's Office,

Lawrence, 4th June, 1872.

SIR,—

I do myself the honor to report as follows on the condition and prospects of the district of Tuapeka :—

This, the oldest of the New Zealand gold fields, still continues to flourish. The letter in which Mr. Read announced to the then Superintendent of Otago (Major Richardson) the discovery of Gabriel's Gully was dated 4th June, 1861—exactly eleven years ago. Since that period the district has been continuously wrought with ever-increasing accessions to the known auriferous area, and it yet presents no indications of exhaustion. It still remunerates the toil of a considerable number of miners, whilst a large settled population has been permanently located on the soil.

During the year ending 31st March, 1872, the quantities of gold escorted from the district were as follows:—

							ozs.	dwts.
1871, April	...	...	...	...	...	...	2,179	8
” May	...	...	...	...	...	...	1,896	0
” June	...	...	...	...	...	...	2,756	8
” July	...	...	...	...	...	...	1,811	13
” August	...	...	...	...	...	...	2,605	16
” September	...	...	...	...	...	...	3,132	18
” October	...	...	...	...	...	...	2,733	10
” November	...	...	...	...	...	...	2,881	1
” December	...	...	...	...	...	...	4,221	15
1872, January	...	...	...	...	...	...	4,265	14
” February	...	...	...	...	...	...	3,282	0
” March	...	...	...	...	...	...	2,557	1
Total	...	...	...	...	...	...	35,327	1

The recent development of quartz lodes is the most important feature in the present aspect of Tuapeka. The old O. P. Q. Reef at Waipori, the first quartz vein opened up and worked in the province, has again (in the hands of new owners) been further developed, with what measure of success I cannot say, as there are no present means of obtaining accurate returns.

At Gabriel's quartz has been discovered, and vigorous measures are being taken for the development of this new branch of mining industry. A personal inspection of the workings has confirmed my opinion (expressed in Reports to the Provincial Government many years ago) that here, as in California and in Victoria, quartz mining would eventually assume prominence. I hold that wherever there are alluvial auriferous deposits there must, of necessity, be also auriferous lodes in the vicinity—just as the existence of a stream indicates a source. Amongst the stone quarried from the lode in the Gabriel's Gully Company's claim, I found gold freely distributed. The lode itself is altogether unlike any other that ever came under my notice. In places the stone is soft and (so to speak) “sugary” in appearance, and in immediate contiguity is hard stone of a greyish tint, varied by occasional patches of red and yellow stone. The lode has already been wrought to a considerable extent. A tunnel or adit, 215 feet in length, has been driven in from the face of the range, and is admirably ventilated by a shaft sunk thirty-five feet from the surface, and penetrating the roof of the tunnel near its termination. At the extremity of the tunnel main drives have been put in along the line of reef, say forty-five feet in a southerly direction, and thirty-five feet to the north. When the lode was first struck near the cap it was about three feet in thickness, and this has thickened in the main drive (thirty-five feet from the surface) to ten feet, which promises well for the future of the mine. The lode dips to the west, with an inclination at the surface of 1 in 2, which in the drive decreases to about 1 in 10, or even less. The strike of the lode is N. 20° E. The main body of stone appears to diminish in thickness towards the north, and to increase towards the south. This company have purchased a powerful battery, and the materials are daily expected to arrive.

North of the company's claim an agricultural lease covers the line of reef. Satisfactory arrangements are being made for the working of the land comprised therewithin, the ground having been previously prospected under agreement, and the continuing line of the lode having been discovered.

An extensive quartz lode has lately been discovered and opened up at a locality classically denominated “The Devils Creek” which is a branch of the Deep stream and about 10 miles beyond Waipori. A company (bearing the euphonious title of the Devil's Creek Mining and Crushing Company) has been formed and registered to work this reef and I trust ere long to be enabled to furnish authentic accounts thereof.

The quartz workings at Canada Bush, and Table Hill are also in full work. From the Alexander Company's claim, some very excellent gold bearing stone has been obtained and I entertain a very favourable opinion of the future of that portion of my district.

Some very important water races are now in course of construction, one of these proposes to convey 25 sluice heads of water from the Beaumont, and Talla Burn, to the auriferous ground on the west side of the Tuapeka River; the other is designed to fetch twenty-four sluice heads from the upper source of the Waipori River to some ground below the township.

The number of agricultural holdings in the district (inclusive of areas originally leased but now freehold) is 571, comprising 20,654 acres, 3 roods, and 2 perches. This is irrespective of land occupied under the regulations as residence areas.

There are depastured on the commonage about 4,744 head of great cattle, and 19,200 sheep the property of residents.

The Under-Secretary for Gold Fields.

I have, &c,

VINCENT PYKE, Warden.

## No. 17.

Mr. Warden ROBINSON to the UNDER-SECRETARY for Gold Fields.

Warden's Office,

Naseby, 1st April, 1872.

SIR,—

I have the honor to report upon the general state of the district under my charge as follows:—

The Mount Ida district is very extensive, its area being about 2,640 square miles; this includes St. Bathans, which is now under my charge. It extends from within a few miles of Dunedin, to the Waitaki River and embraces the various diggings of Naseby, Kyeburn, Hamilton's, Hyde, Macrae's, Serpentine, Marewhenua, Hindon, Sowburn, St. Bathans, and several others of less importance. The



workings are for the most part alluvial, but quartz reefs exist in various parts, some of which have been tried but hitherto with little success.

The alluvial workings are mostly constructed on the system known as ground sluicing by which large areas of ground can be rapidly and cheaply washed away and the gold saved in the tail races. This style of working is favored by the fact of the gold being chiefly found in a sort of gravel containing but little clay and which is readily moved, and disintegrated by the action of water. Skirting the basis of the mountains are numerous spurs stretching away for miles into the plain country and formed almost entirely of ground of various ages. It is from certain layers of this ground that the miners extract the gold by the agency of water; as a rule these beds of wash dirt are by no means rich in gold; it is necessary to wash great quantities to obtain remunerative results. Thus it happens that only those places are worked which afford special facilities, in the shape of proximity to a supply of water and good fall for the disposal of the tailings. This latter point is of as much consequence as the supply of water, and it frequently happens that ground known to be richer than the average has to be left unwrought because it lies at too low a level to enable the miner to get rid of the waste ground after washing. The method of ground sluicing has been so often described that I need not here enter into any particulars respecting it, beyond remarking that the ingenuity and perseverance of the miners are frequently taxed to the utmost in the construction of the tail races that are requisite for the carrying out of the process. In some places these have to be made of great length, in others the needful gradient can only be given by deep and broad cuttings, while in others a sufficient fall can only be obtained by tunnellings through spurs that intervene between the ground to be washed away and the low lying gully or flat into which it is desired to discharge the tailings.

As a rule the sinking of shafts is never practised except for the purpose of prospecting ground to find if it will pay to sluice. There are no underground workings of alluvial ground in the district. At Macrae's Flat, the ground being richer than in most other parts, and the supply of water insufficient for the ground sluicing system, the miners work by paddocking, that is by working open excavations of slight depth, and thus exposing the wash dirt, which they put through cradles and sluice boxes. At Cambridge diggings, in the Rock and Pillar Range, somewhat similar processes are adopted. These may be taken as the only exceptions to the general rule of ground sluicing in alluvial workings in this district.

From what has been said above, it will be apparent that in most parts of the district the number of miners must depend mainly upon the supply of water and the other facilities for sluicing, referred to. But the supply of water has the most decided effect in determining the number of miners that a district can maintain; for fall can in most instances be found if the ground is good enough to warrant the expense of the necessary works for tailings. To supply the water for working, a number of races have been constructed, bringing into the various mining localities all the water that can be got within moderate distances. Some of these races are works of no small magnitude, and for their construction have demanded considerable engineering skill. The races that are brought in to Naseby are mostly the property of registered Companies, which derive most of their profits from the sale of water to the miners. The price was, until recently, £2 to £2 10s. per "Hogburn head," according to the altitude at which the water is wanted, the water at a higher level commanding a higher price; the price is now uniformly £2. The "Hogburn head" is a stream of water passing through an orifice sixteen inches by one inch, and running for the working day of eight hours. The Government head, or head of water according to the mining regulations in force in Otago, is twenty inches by two inches, measured through a box which is so contrived as to give a pressure of six inches. It is roughly estimated that the Government head of twenty by two inches, or forty square inches transverse measurement, is equal to two and a half times the Hogburn head of sixteen by one, or sixteen inches square, and as the Government head flows for twenty-four hours while the Hogburn head is only allowed to run for eight hours, it follows that the Government head is equal to seven and a half Hogburn heads.

Water being so valuable as an agent in mining, every effort is made to economise it; all the water race companies have dams in which they store the water which their races bring in at night and on the Sunday, and besides this, the water is wherever possible used a second time. Still, with all the economy possible, water can only be made to serve a certain number of miners. In some places this number will be more than in others, according to the character of the strata; some soil requiring a heavier stream to move it than others; but in every place there is a limit to the number of miners that can be profitably employed, and that limit is exactly regulated by the quantity of water that can be had.

The past year has on the whole been an unfavorable one for the sluicing interest. It has been throughout a dry season, and for the last few months there has been a positive drought; so great has been the want of water, that for a short time, recently, the races brought into Naseby have not carried much more water than was sufficient for domestic purposes, and sluicing has therefore been for the time interrupted. From this it has resulted that many miners have had to go away to seek a livelihood elsewhere; but this will not cause any permanent falling off of population, as the miners are sure to return to their work so soon as a return of wet weather assures them of a supply of water for sluicing; in fact, none have gone away except those whose necessities have obliged them to do so. The great majority have preferred to wait in expectation of a change in the weather, and in the mean time to occupy themselves with such work as they could find to do at home. This drawback of the drought has seriously affected the production of gold, but it is only reasonable to expect that after so long a season of dryness a change favorable to the miners must soon take place, and then it is to be hoped the district will resume its usual prosperous condition.

Quartz mining has not as yet been successful in this district. Reefs shewing every indication of richness were found at Roughridge, in the Ida valley, five years ago or more, and mines were opened and expensive machinery put up for reducing the quartz. The prospects seemed good, but the returns were insufficient to meet the expenses, and the works were stopped and the machinery sold. The buyers of the machinery made the discovery that gold must have been lost in working it, and so strongly were they convinced of this, that they sent men to wash up the gully down which the tail water from the machine had been discharged. What they got has not been made public, but as they

were at work for some months it is generally believed that they recovered a large quantity of amalgam, which, through the imperfection of the apparatus, or want of knowledge in its management, had been allowed to escape. So strong is the conviction that the reefs would pay if properly worked, that another company is likely soon to be formed to give them a fresh trial. At Macrae's Flat, reef workings on a large scale were undertaken but soon abandoned, and the fine machinery erected there by the Duke of Edinburgh Company was sold off, and has for some months been lying idle. It is understood that it is likely to be removed to a reef lately discovered in the Shag Valley. At Marewhenua an attempt at quartz reefing has also failed lamentably. The only machine now at work in the district is a small one erected by the Ricasoli Company at the Sutton, Strath Taieri. It remains to be seen whether this company will prove more fortunate than their predecessors in the business of quartz mining.

Notwithstanding the little success that has hitherto attended quartz mining in this district, there are still many people who have strong faith in the reefs, and who believe that all the failures are mainly attributable to ignorant management.

The Marewhenua division of the district is worthy of special mention as it is a comparatively new addition to the Gold Fields. This division comprises all the auriferous country on the Northern slopes of the Mount Ida and Kakanui Ranges, extending to the Waitaki River boundary of the province. This division presents a wide extent of "made ground" which will pay for sluicing on a large scale. Hitherto it has not been worked to any very great extent as the large races necessary to bring water on to the auriferous spurs have not been completed. When first the ground was declared within the Gold Fields, there was a rush to secure water rights, and companies were formed to construct races with capital altogether insufficient. The natural result followed: the capital expended, the work came to a stand. The shareholders, mostly persons unacquainted with mining, took fright, creditors pressed, and the properties were sold for a song to meet liabilities. Now it may be said that the water rights have for the most part passed into the hands of people experienced in water race work, and before long a supply of water may be expected, but the development of the field has been seriously retarded by the failures of the companies, which, undertaking what they could not carry out, kept other persons away who with more judgment and sufficient capital might long ere this have furnished a supply to the locality.

To enable the miner to work poor ground it is essential that he should be able to live cheaply. But unfortunately in most parts of the district living is still expensive. This is mainly attributable to the fact of there being scarcely any cultivation of the soil. In this respect the Mount Ida district stands at a singular disadvantage as compared with the other districts of the Otago Gold Fields. While Tuapeka, Wakatip, and Mount Benger are almost as much agricultural as mining districts and the Dunstan can show a considerable area of land occupied in farms, the Mount Ida district has as yet been denied the great advantage of agricultural settlement. From time to time efforts have been made to get land thrown open for settlement under the agricultural leasing system but hitherto without success. I of course, except the land obtained by holders of runs under agricultural lease, which amounts to 3381 acres. In the meantime it is to be feared that many persons who would have formed homes in this country have gone elsewhere to invest their savings. No doubt land is to be had in other parts of the province, and of better quality, but the object of most persons who have sought to obtain land in this part of the country has been to combine the cultivation of the soil with mining, and to secure the benefit of the market at their doors.

Some time since it was decided to throw open a small block at Macrae's Flat, but owing apparently to some difficulties about the survey, I am not yet authorised to receive applications.

I should mention that I have lately been called upon to take charge of St. Bathans and Hill's Creek owing to arrangements for leave of absence to Mr Warden Simpson, and that there are in that portion of the Gold Fields two areas of 2,500 acres each, portions of which are now occupied under agricultural leases.

In the statistical returns which I forward herewith will be found such information as I can furnish respecting population. The figures are necessarily only approximate.

The Under-Secretary for Gold Fields.

I have &c.,

H. W. ROBINSON, Warden.

## No. 18.

Mr. Warden CAREW to UNDER-SECRETARY Gold Fields.

Warden's Office,

SIR,—

Clyde, 21st June, 1872.

I have the honor, in accordance with your telegraphic message of the 28th May last, to supplement my report upon the Dunstan district.

My knowledge of the district, of which I have only had temporary charge from the 1st March last, is so small that I regret I feel quite unable to do that justice which it undoubtedly deserves. I therefore beg to annex hereto copies of the reports of my predecessor, Mr. Warden Pyke, for the quarters ending 30th June, 30th September, and 31st December, 1871, respectively, which afford much information.

So far as I have had opportunity of observing, I find the district to be very prosperous. No doubt some of the richest and most easily worked ground has been exhausted by the miners' labour, but the quantity worked bears very small proportion to that known to be payably auriferous, and many miles of country has never yet been prospected. It would be impossible to form any idea of a time within any reasonable degree of certainty when it is probable that alluvial workings will become unremunerative, but it is evident that the day must be far distant.

Quartz reefing is passing through only its infantile stage, but already shows promise of a vigorous and thriving future. Several reefs have been already opened out, some of which are undoubtedly rich, and others must give profitable employment when brought properly into work. To develop this branch of mining a large accession of population is required, as well as the introduction of capital, and from what I have seen I feel assured that the same opportunities in other colonies would be eagerly availed of. The price of miners' labour, which is now 70s. to 72s. a week, and this in a settled locality where provisions and other requisites are obtainable at a small allowance on the rates current in seaport towns, is strong evidence of the scarcity of labour, also of the remunerative character of the auriferous resources of the district.

The Under-Secretary for Gold Fields.

I have, &c.,  
E. H. CAREW, Warden.

### Enclosure 1.

Copy of Mr. Warden PYKE's Report for Quarter ending 30th June, 1871.

ALL branches of mining have been very dull indeed during the past quarter. Heavy frosts have chained up the water supply, thereby checking both quartz mining and sluicing operations in a very large degree throughout the Dunstan district. A fine winter harvest was anticipated by the river dredgers, but great disappointment has resulted owing to the immense quantity of tailings deposited in the river bed. These tailings are now in some places six, seven, and eight feet deep, and being of a loose description of shingle as fast as the spoon removes a quantity an equal quantity flows in to occupy the space. Many well known rich spots are overlaid by tailings, and although occasional patches may yet be reached by present dredging appliances, it is apparent that more powerful apparatus is requisite to work the river bed systematically. Our enterprising dredge owner, Mr. Sidelberg, has sent to Europe for necessary machinery, which, he informs me, cannot be obtained of the required construction in Dunedin or Melbourne. As some interest appears to be taken at present in this matter, I will explain that the Dunstan dredging ground, of proved auriferous character, extends from Clyde to Alexandra, a distance of about eight miles; during this part of its course the river runs smoothly and with an easy current, there not being any rocks to impede the navigation or disturb the flow of water; the bottom is a soft yellow pipeclay of untried depth, and it is on this that the auriferous wash is found. On other parts of the river, both above Clyde and below Alexandra, I understand that rock bottom is met with, but pipeclay is the more usual bottom, underlying indeed, not only the Dunstan Basin, but also the vast auriferous area extending from the head of the Bannockburn to the Wanaka and Hawea Lakes. The bank sluicers on the Dunstan Flat, a little below the camp, have laid bare the geological formation of the basin to the depth of eighty feet. Under and sometimes on the immediate surface, there is a compact layer of glacier boulders varying from three feet to six feet in thickness; under these is found a vein of auriferous wash, then fine shingle extends downwards to the yellow clay, on which another vein of wash dirt is met with. The clay bed dips inward and has never yet been pierced. I have reason (arguing from analagous geological data in Victoria and California) to believe that beneath this pipeclay another gravel wash containing much heavier gold will yet be found. It is a matter of regret that no one has as yet sunk a few shafts for the purpose of testing this.

The above description is equally applicable to the Dunstan Gorge and to the basins of the Bannockburn, Kawarau, and Upper Clutha above Cromwell, it is in the plains (or flats as they are locally termed) lying along and adjacent to the great River Clutha, that true "deep leads" (ancient river beds) will if anywhere yet be found. I am in possession of information which points to the existence of one such river bed in the Dunstan plain. I have no doubt that the present river bed is geologically speaking of comparatively modern formation, in remoter ages the deeper currents of the river ran in other—probably several other—channels, and in these old channels there is every reason for supposing heavy auriferous deposits to exist.

Although reefing is just now somewhat at a stand still, never were the prospects of the quartz mining community brighter. At Bendigo, the Carricks, and Conroys, and also at Thomson's, payable stuff has been discovered, and very large returns may be confidently anticipated when summer enables operations to be profitably conducted. I feel assured that the district will yet be noticed as the richest quartz field in the province.

### Enclosure 2.

Copy of Mr. Warden PYKE'S Report, for Quarter ending 30th, September 1871.

VERY little worthy of special comment has occurred during the past quarter; the most important events have been the opening up and testing of quartz reefs at Conroy's and the Carrick Ranges. Iverson and party have erected a very compact little machine on their reef, and have had several successful crushings, which may be regarded as the prelude to further investigation of the ranges abutting on Conroy's, Butcher's, and Blackman's Gullies; all on the west bank of the Clutha River.

At the Carrick Ranges a small rush has set in, very payable lodes and veins have been cut by several of the reefing companies, notably by the Star of the East, the Heart of Oak, the Royal Standard, the Elizabeth, and others; excellent results obtained from repeated crushings demonstrated the richness of those workings, in fact the entire face of the mountain would appear to be seamed with veins of auriferous stone.

At Bendigo the reefing interest is just now languishing owing to the disappointments experienced by some of the most promising companies, in fact the tide is there at ebb, to flow again probably more strongly than ever hereafter. There is nothing new to report in the way of alluvial mining.

## Enclosure 3.

Copy of Mr. Warden PYKE's Report for quarter ending 31st December, 1871.

SINCE my last quarterly Report the sub-district of Black's has been severed from the district of Dunstan, and a warden appointed specially therefor. Except where otherwise indicated, my present Report will consequently refer only to the Dunstan district, as now again reconstituted.

I have nothing of any importance to communicate, so far as the sub-districts of Alexandra and Clyde are concerned, with the exception of mentioning that Iverson's Reef at Conroys has turned out well, to the satisfaction of the shareholders, and that strenuous efforts are being made to thoroughly prospect the reef at Butchers, by draining the water which heretofore has baffled the prospectors.

At Bendigo the want of water has greatly tended to discourage mining operations. On the Carricks, however, where steam power is employed for crushing purposes, the work goes merrily on, and some really good stone has been crushed. It has been of the usual mullocky description (breccia). There is every prospect of this locality becoming an extensive and permanent quartz mining district. Bendigo will, no doubt, "suffer a recovery" next spring; there are already premonitory indications of a revival in that direction.

The Chinese element prefer in my district to resort to back gullies and untried places. At the Nevis they largely congregate. There are some doing well at the Nevis and at Fraser's River. At Earnscleugh a small and select party of Celestials have lately put in an appearance.

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 No. 19.

The CROMWELL REEFS.—Supplementary to the Warden's Report upon the Dunstan District.

MR. R. A. A. SHERRIN to UNDER-SECRETARY Gold Fields.

SIR,—

Wellington, 2nd July, 1872.

In obedience to your request I have the honor to lay before you the following report in connection with the quartz reefs on the Carrick Range, situated some seven miles S.W. from Cromwell, in the Province of Otago, and shall supplement such report by drawing your attention to some of the most salient wants of the district, and the characteristics of the reefs as manifested in their partial development.

Leaving Cromwell to visit the Carrick Range, and crossing the Kawarau River, you follow the valley of the Bannockburn some mile and a half on the Nevis Road, where the track trends to the West, leading to a small and newly formed township called Quartzville. It is composed of two hotels, two stores, a butcher's, baker's, and blacksmith's shops, several private houses, the Royal Standards Co.'s 8 h.p. 8 stamp battery, and a population of some seventy souls. The township is situated on the upper terrace of the Bannockburn Flat, and is about 1000 feet above the sea level. Two roads, both cut by private enterprise, here commence winding round the siding of the spurs, the one leading to the Heart of Oak, Star of the East, and other claims; while the road nearest to the Kawarau leads to the John Bull, the Nil Desperandum, and Robert Burns.

All the reefs on this range, and the reef workings, are as yet confined to this one spur leading to the main range, as the spurs leading from it, on which are found the Border Chief and the Pipeclay Reefs, are only offshoots of this main spur, which divides the gullies known as Adams' and Pipeclay. It will thus be seen that only a small portion of the range is being worked—in fact only prospected—and I may add that the spur on which the workings have taken place, is almost as imperfectly prospected as the main range itself.

The Royal Standard Company was the first formed on the hill. Their original claim is situated some two miles and a half from the township where their battery stands, and yielded at their trial crushing about seven ounces to the ton. The general average of the stone from this claim has been about three ounces. The leader producing this gold is thin and irregular, varying from an inch or two to eight or ten inches in thickness. Another thicker, poorer, gold bearing vein runs through their claim, but as yet remains unopened and untried. The claim is a special one, containing thirty-three acres, and may be characterised as unopened. The leader runs in a N.W. and S.E. direction, dipping to the N.E. This is nearly the uniform dip and direction of reefs on the range. With two exceptions this claim is the highest on the range, being about 3,200 feet above the sea level.

A claim still higher, called Green's, yielded at its trial crushing 21dwts to the ton, while the All Nations, some 1000 feet higher than the Standard, yielded 24dwts to the ton from the test of twenty tons. The All Nations had from two to three feet of stone. From the high elevation at which these claims are situated, they are unworkable for four months during the year.

The Standard Company hold another claim some forty chains from Quartzville, on the road side leading to Carrickton, and the upper batteries. The trial crushing from this claim yielded 123ozs from 104 tons of quartz, the reef being from three feet to four feet in thickness. Numerous leaders being traced into the reef from every direction, have had the effect of making the lode poorer, which has been taken out from fifteen feet to twenty feet in thickness, and yielding only about 6dwts to the ton. The amount of stone in sight is large, sufficient to keep the mill employed for years, the reef having been opened some five chains in length, and tested to a depth of about eighty feet. The company having their own battery, can work the mine at a profit, the quartz being easily got, two men sufficing to get stone to the amount of eighty or ninety tons weekly. The reef, running across the spur, obtains natural drainage to a depth of 400 or 500 feet. I may here state that from the broken and ravine intersected character of the spur on which the workings are situated, tunnels in all the claims yet opened, can be driven, draining the reefs at low levels, obviating the necessity for pumping gear, and enabling the lodes to be cheaply worked. Adjoining the lower Standard claim, is the Caledonian, which has yielded on an average some 12dwts to the ton. The reef is from eighteen inches to three feet in

thickness. A mile higher up the spur is Carrickton, containing four hotels, two stores, restaurants, the Elizabeth, and Star and Oak batteries, and about 100 inhabitants. The Elizabeth battery is eight horse power, driving eight head of 4cwt. stamps, crushes about sixty tons of ore weekly, is some 2000 feet above the sea, and is generally employed crushing stone for the Elizabeth Company. The Company's reef is opened about 600 feet in length; tapped at a depth of 140 feet, including its underlie; varies from ten inches to four feet in thickness, is easily and cheaply worked and drained to the above depth by the tunnel the Company have driven, some 320 feet in length. The stone crushed from this claim has varied in its yield from seven pennyweights to twenty-five pennyweights to the ton. The reef improves as it deepens. It runs nearly due N. and S., and promises to intersect the Oak line near the junction of the two claims. The Heart of Oak and Star of the East have hitherto proved the best paying claims on the Carrick. They adjoin each other, working the same reef. Their yield of gold, amount of stone crushed, and the dividends paid during the last nine months are as follows. I am indebted to Mr. Jas. Marshall, their legal Manager, for the following details:—

HEART OF OAK.

Tons Crushed.		Yield in Ozs.	Dividends.
Tons	Cwt.	Ozs.	£ s. d.
29	10	173	379 10 0
101	0	255	451 0 0
65	0	242	{ Paying for } { Machinery }
114	0	328	
146	0	260	935 0 0
175	0	294	715 0 0
179	0	330	900 0 0
809	10	1,882	3,380 10 0

STAR OF THE EAST.

20	0	27	{ Paying for } { Machinery }	
150	0	86		
106	0	200		
114	0	227		
185	0	150	...	150 0 0
162	0	180	...	300 0 0
135	0	120	...	480 0 0
157	0	126	...	
1,029	0	1,116	...	£930 0 0

The outlay for machinery and other purposes, sheds, and dams, may be estimated at about £3,500. The machine is fourteen horse-power, driving ten head of four and a half hundred weight stamps, and crushes from eighty to ninety tons weekly. The engine houses and sheds at both these upper batteries are substantially built of stone.

The Oak battery, situated 2,400 feet above the sea, is now frozen up—in fact, so frozen that the gold from the last crushing remains on the tables, and in the stamp boxes, unable to be cleaned up. The Northern boundary of the Oak claim is about three hundred feet higher than the machine site. The Elizabeth and the Star of East are both prospecting claims 1,200 feet by 300 feet, all the other claims on the range are ordinary ones 600 feet by 300 feet. The portion of the spur where the Oak and Star claims are situated appears to be permeated with auriferous leaders running into the reef in every direction, and forming at their junction large bodies of stone. The two last recorded crushings from the Star, yielding 246 ounces from 292 tons of stone, were taken from a portion of the reef twenty-two feet in width. It has been traced some 700 feet in length, and to a depth of 120 feet. North of the Oak are two claims, called the Duke of Cumberland and the Rob Roy. The trial crushing of the Duke yielded 4 ozs. to the ton; the Rob Roy, 15 dwts.

The Star of the East at its present level, in the lode overhead, at its present rate of crushing, has five or six years stone in sight, without including the heavy and payable leaders running into it, and as yet almost untouched. In the Oak, going hillward, the reef seems narrower and richer, and presents from its walls and general appearance every reason to induce a belief in its permanent character and continuity.

There are three other claims in Pipeclay Gully, some sixty chains distant from the Oak, to which I shall draw your attention.

The John Bull is a flat leader some twenty inches thick, on a hill top some 300 feet higher than the Oak; it dips apparently parallel with the hill's declivity, is scarcely opened, and yielded eighty ounces of gold to sixty-four tons of stone at its trial crushing. Lower down the side of the hill are the Nil Desperandum and Robert Burns. The former claim obtained twenty-five dwts. to the ton at its trial crushing, has a reef traced for some distance, some 300 tons of stone at grass waiting for machinery; while the Burns obtained sixty-one ounces from fifty-one tons of stone. Neither of these reefs have yet been traced to any depth; and different opinions are entertained as to the permanence of their character.

There are several other claims that have been taken up, gold found in them, and abandoned, that do not require special mention at my hands. All the trial crushings that have taken place on the range have, I am informed, paid the expenses of crushing and cartage with two exceptions.

You will, I think, be agreeably surprised at the yield of the claims above mentioned, being far above the average of quartz districts. The reason why this has been the case is not owing to the richer character of the reefs, but the necessity to test only rich stone to avoid incurring loss. Stone that is not expected to pay an ounce to the ton is allowed by private parties to remain untouched, until cheaper crushing and cartage can be obtained. Only one battery crushes for the public, *i.e.*, the Royal Standard, where the following tariff is charged:—

10 to 20 tons	...	...	...	...	...	£1 10 0
20 to 30 tons	...	...	...	...	...	1 5 0
30 to 40 tons	...	...	...	...	...	1 0 0
40 to 50 tons	...	...	...	...	...	0 18 0
50 to 100 tons	...	...	...	...	...	0 16 0
100 tons and over	...	...	...	...	...	0 14 0

In several trial crushings that have taken place under my own notice, the cartage alone has been from 20s. to 30s. per ton. You will thus see, large bodies of poor stone, with which the spur is traversed in every direction, cannot be worked on account of the costs incurred by carting and crushing. The three batteries at present on the range, driven by steam power, pay £2000 per annum for fuel; the Oak paying 35s. per ton for the lignite from the Bannockburn delivered at its battery. Timber for props, caps, &c., has to be brought from the Hawea Lake, and is delivered on the range at a cost of from 9d. to 1s. 6d. per running foot. What small amount of water there is where the Oak and Elizabeth batteries are situated belongs to a private individual, and is let to the two companies for a weekly rental of £6. Its volume is about fifteen inches, and it has to be used and pumped back again and again to enable the batteries to keep working; and when it finally leaves the tables is of such a consistency that it can scarcely be driven through the gratings.

You will easily understand how the above circumstances tend to prevent the proper opening of the Carrick Range; and how imperative it is, that the water from Coal Creek, as recommended by you, should be brought to the range, to afford cheap motive power for batteries, and give greater facilities for saving gold. Double the quantity of gold would be raised from the reefs alone, and the population quadrupled. A comparison of the escort returns from Cromwell during the past few months with those of an earlier date, will shew you what an impetus quartz reefing has given to this portion of the Dunstan district. The current rate of wages is 12s. per day of nine hours, the Saturday afternoon being a half holiday; thus the week's work is forty-nine and a half hours.

The gold is free, sulphides not being yet found in any quantity, and varies in fineness from twenty-two to twenty-three carats, being 5s. or 6s. per ounce finer than from Bendigo.

Coupling the Nevis with the Bannockburn and Carrick, you have, perhaps, the largest and least developed gold field in the province of Otago.

I have, &c.,

The Under-Secretary for Gold Fields.

R. A. A. SHERRIN.

## No. 20.

Mr. Warden CAREW to UNDER SECRETARY Gold Fields.

Warden's Office,

Clyde, Otago, 18th May, 1872.

SIR,—

I have the honor to acknowledge receipt of your circular letter, dated 27th March last, in which you request me, in addition to filling up certain forms, to furnish you with a general Report of the state of the district of Black's up to the 31st March.

In reply, I beg to state that the district of Black's, of which I had charge for six months, was divided on the 1st March; the St. Bathans's division being added to the Mount Ida district, and Black's to Clyde district, of which I have temporary charge.

Enclosed herewith I have the honor to forward statistical returns for Clyde district, and including Black's, up to the 31st March last.

The produce of gold for the last year, as by the escort returns, is as follows:—

	Ozs.	dwts.
Clyde	7,610	5
Cromwell	18,973	1
Alexandra	6,068	2
Black's	8,120	13
Total	40,772	1

This yield is a slight decrease from the preceding year, but from the fact that several months of the period reported upon has been a season of unprecedented dryness in many parts of the gold field, putting a stop to all sluicing operations, it is a matter of surprise that no large diminution has occurred.

The present condition of the district cannot but be regarded as most favorable. The extent of auriferous alluvial ground which will profitably employ labor is known to be very considerable. Improvement is being gradually made in the appliances for, and mode of working, which not only adds to the average earnings of miners, but also enables ground to be worked which some time ago was considered to be unprofitable.

Quartz mining is making considerable advance, new reefs have been discovered, and others prospected and opened out, and there are now several claims in the district known to contain large bodies of payable stone. More crushing machinery is being introduced, and improvements made, and this branch of mining will in all probability give largely increased returns for the future.

River dredging is not now, with the present appliances, considered a very profitable undertaking, in consequence of the accumulation of gravel in the river beds, which is caused by the discharge of tailings into the river. No doubt is entertained of there being large deposits of gold in the rivers yet to be procured, and attention is being directed towards obtaining some more efficient machinery for dredging with than that at present in use. With this object a steam-power dredge is being constructed, and will be brought into use during the coming winter. Other projects are also on foot for increased water supply for mining purposes, and in other ways to develop the auriferous resources of the district.

Miners wages are from £3 to £3 12s. a week, about the same rate as for some years past, while the price of provisions and clothing has been much reduced within the same time.

Agricultural settlement has made some progress, but the dry season in this district has been an unfavorable one for this interest.

The Under-Secretary for Gold Fields.

I have, &c.,

E. H. CAREW, Warden.

### No. 21.

Mr. Warden J. B. BORTON to UNDER-SECRETARY for Gold Fields.

SIR,—

Roxburgh, 2nd April, 1872.

In accordance with instructions contained in your letter, I do myself the honor to report as follows upon the present state of the Mount Benger gold fields.

The district may be considered as divided into two portions, first—the auriferous gullies and spurs on the high southern slope of the Old Man range. The first-named portion is for the most part wrought by box-slueicing, and some 160 sluice-heads of water are daily brought to bear on the various terraces along the Clutha River. The gold obtained is exceedingly fine, so much so, indeed, that a considerable quantity is continually being lost. Many of the claims have been in constant work for many years past, and, in some instances, the gold deposits have been followed into the bank a distance of 150 yards from the frontage without any perceptible diminution in the yield. That part of the district which is situated on the southern side of the Old Man range comprises a greater extent of payable auriferous ground than is found on the low land, but the severity of the weather and the great natural obstacles to be overcome by the construction of deep tail races and tunnels, deter many from setting in to work there. The yield of gold from this portion of the district is good; I have heard of none who, after giving it a fair trial, were obliged to leave unsuccessfully.

In some places, and these of very considerable area, the supply of water is the only obstacle to the securing of a competency by all those working there, and, were this one difficulty removed, there is plenty of ground which would yield from 10s. to 20s. per day per man.

The gold found in Campbell's, White Comb, and the neighboring parts is coarse and heavy, very little fine gold being obtained there. The mode of working is by wing dams and ground sluices; and only a comparatively few boxes are used.

The summer season alone is the time when the workings can be carried on, in consequence of the severe frosts; and as the low-lying workings are most active in the winter when the rivers have but little water, a semi-annual emigration is constantly going on from the hills to the flats in winter, and *vice versa* in summer. No quartz reefs have hitherto been discovered, if I except one at the Fourteen Mile Beach, on account of which, the discoverers have applied for a prospecting claim; specimens shown me from the reef are good, but it is at present impossible to speak decidedly as to the results.

Some thousands of acres have been taken up under the Agricultural Leasing Regulations, and if an equal amount of good land were available, as much more would be taken up in the course of twelve months.

The Under-Secretary for Gold Fields.

I have, &c.,

J. B. BORTON, Warden.

### No. 22.

Mr. Warden BERTHAM to UNDER-SECRETARY Gold Fields.

Warden's Office,

Queenstown, 3rd May, 1872.

SIR,—

In forwarding my Report for the year ending 31st March, 1872, I have the honor, in the first place, to point out the large increase of gold produced during the past year compared with previous ones, this increase amounts to 5,637ozs. 8dwts. 12grs.

It will be useful, for purpose of comparison, to give the yield of the Wakatipu gold field for the past three years, it is as follows:—

	Ounces.	Value.
1869	22,203	£86,056 12 6
1870	35,074	131,599 18 9
1871	40,712	152,670 5 6

These figures show that a steady increase in the produce of gold is taking place. The total number of ounces escorted during the year 1871 nearly doubling the yield of 1869.

Moreover, the produce has been seriously interfered with during the past four months by the unprecedented dryness of the weather, which has, even in this district, materially interfered with the water supply. The decrease in the amount of gold received in the quarter ending 31st March, 1872, as

against the quarter ending 31st December, 1871, being 10,947 ozs. against 11,809ozs. 3dwts. 13grs., is mainly attributable to this cause.

The district under my charge has probably suffered less from want of water than any other, in consequence of the great height of the mountains surrounding the workings, and the great number of small mountain creeks or springs from which the water supply is derived. The nature of the workings has no doubt also greatly influenced the steady character of the yield; the terrace workings, by means of tunnelling, being altogether or for the most part independent of the necessity for a large supply of water. The same remarks will also apply to the numerous creek workings, the beds of the creeks being more easily worked in the absence of an abundant stream of water.

The development of the various workings has been principally in the direction of tunnelling, and the systematic cleaning up of the beds of the creeks in all portions of the district. Some very rich terrace ground is being worked by means of sluicing in the immediate vicinity of the Arrow township. The supply of water to this locality has continued to be very good, except during the driest portion of the summer months.

The quartz lodes are being steadily worked in the neighbourhood of Skipper's Point, in which locality probably the richest terraces yet discovered in the district are to be found. A new reef, said to be of very fair promise has been taken in hand at Sawyer's Gully, and a trial crushing has resulted in a very good yield.

The Shotover River still to a great extent defies all efforts to work it in a systematic and efficient manner, in consequence of the large body of water it at all times contains, and the depth of the tailings deposited in its bed. Many parts of this river known to be enormously rich have remained almost wholly untouched.

The population of the district is steadily on the increase, especially as regards the European portion of it.

I am unable to report favorably as to the state of the tracks to the outlying portions of the district. In the event of a severe winter many of these tracks will be impassable, except at great risk. This will certainly have the effect of raising the price of provisions and other necessaries.

A large breadth of land is placed under plough for the next seasons crop, and the farmers are generally turning their attention to sowing down land in grass paddocks. 636 acres have been taken up under the Agricultural Lease Regulations during the last quarter.

The total amount of gold escorted is—

	Ounces.
Queenstown ... ..	6,237
Arrowtown ... ..	4,510

The business transacted with Courts is as follows:—Number of cases heard, 214; number of mining applications dealt with, 309; 636 acres 2 roods 35 perches have been granted under the Agricultural Lease Regulations; 20 acres 2 roods 11 perches have been granted under the Mining Lease Regulations, and 269 acres as extended claims.

Attached to this Report are tables showing approximately the statistics of the field, and the price of provisions.

The Under-Secretary for Gold Fields.

I have, &c.,

R. BEETHAM, Warden.

## No 23.

Mr. Warden J. N. WOOD to UNDER-SECRETARY for Gold Fields.

GENERAL REPORT to 31st March, 1872.

THE Switzer's division of the Otago gold field may be divided into four sub-divisions, viz. :—

1. Switzer's, including Muddy Creek and terraces, Scrubby Terraces, Welshman's Gully, and terraces for eight miles to the westward; Acton's Flat and Murphy's Hill, four miles to the southward; and the Winding Creek, Happy Valley, Frenchman's, Commissioners, Donny Brook, and Five Acre, Hills situate around the township on Carnie Hill.

2. The Nokomai, including the creek of that name, from its sources to the Mataura; Victoria Gully, Bullock Head Creek, Paddy's Alley Terraces, Old Wakatip, and Diggers' Creek; on the watershed of the Mataura River, above Nokomai junction, situate north-west of Switzer's, and distant in a direct line about twenty miles.

3. Waikaka, situate on the Waikaka Stream, and East Branch, within the gold field; and M'Intyre's and M'Nab's, outside of the gold field.

4. Waikaia, including Gow's Creek, Waikaia River, and White Comb, to north end of Waikaia Bush.

Gold was first discovered at Switzer's in November, 1861, and a few parties were working on the Winding Creek, or Argyle Burn, up to January, 1863, when Welshman's Gully was opened, and attracted a population of about one thousand men, whose average earnings for some months amounted to about twenty shillings per diem. The population got less as the best ground in the gully was worked out, and a settled population of about 200 men worked in the locality, box sluicing, till 1867, when Messrs. Skene, Hart, and Carnie completed a water race from the Argyle Burn, carrying twenty-four Government heads of water, at a cost of £5,000; which commanded Frenchman's, Commissioner's, and other hills known to be rich, and which has been in constant use ever since, the results being that fifty or sixty acres have been entirely washed away to a depth of forty or fifty feet. The system of mining is tunnelling in the terraces, and box sluicing, except where the Argyle water race is used. From the stiff nature of the ground fifty inches of water is found to be necessary to ground sluice



to advantage. Many of the claims are paying handsome dividends, and I believe there is a large area not yet prospected that will pay at least wages.

A commonage of 9,500 acres has been thrown open around the township for grazing purposes and agricultural leases have been taken up on the Waikaia Flat to the extent of about 900 acres.

The Nokomai River, situate to the west of the Garvie Mountains, which was first discovered in September, 1862, and has since been the scene of two or three large rushes, will, I believe, be one of the most permanent of the Otago gold fields, though the population at present is chiefly Chinese. The workings are on the river flat and terraces on the west side of the same. The Paddy's Alley terraces on the Mataura River, opposite the township of Athol, have been proved to be rich sluicing ground, but there is no water, nor can it be brought on under a large outlay. A company has been formed for the purpose of working the Nokomai flat about a mile and a half above its junction with the Mataura, and as the gold has been traced into the flat in several places, I do not see why, with proper appliances for drainage, the ground should not be worked to advantage.

The Waikaka, about eighteen miles south of Switzer's township, has a population of about two hundred souls, half Chinese. The system of working is box sluicing, though a water race to carry about twelve heads of water has been brought in, with one stretch of fluming over a saddle about one mile in length and ten to thirty feet in height; but the difficulty of disposing of the tailings till the flats are worked out has been a drawback to its success.

The Waikaia, situate from twelve to twenty-five miles north of Switzers, with a population of fifty or sixty persons working in the bed and banks of the Waikaia River and its tributaries, Gow's Creek and the White Comb; the former at the south end of the Waikaia Bush, and the latter at the north end. The population is a permanent one, the system of large claims (the whole district having been proclaimed as open to be taken up in acre claims), having, I believe, caused the people to settle down and make homes; a large proportion are married men with families, though so scattered that many cannot take advantage of the excellent Government school established at the township. The yield of gold for the year ending 31st March, 1872, is difficult to estimate accurately, as the gold from Nokomai is sold in Invercargill and Queenstown, but may be estimated for the year at about 2,500ozs. A good deal of the Waikaka gold is sold at Tapanui and Invercargill. The gold forwarded by escort by the branch of the Bank of Otago at Switzer's was 9000ozs, and 640ozs taken to Invercargill by one storekeeper here. I believe I am under the mark when estimating the total from the district at 12,500ozs.

JOHN NUGENT WOOD, Warden.

Switzers, Otago.

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No. 24.

Mr. Warden HENRY ROGERS to UNDER-SECRETARY for Golds Fields.

Warden's Office,

Orepuki, 15th May, 1872.

SIR,—

I have the honor to forward herewith statistics of the Orepuki and Longwood gold field, and to report that there has been a slight increase in the number of miners engaged here during the last twelve months. At one period there were a number of Chinese who appeared to be doing well, but from two cases of fraud on the part of the leading men, by which both Chinese and Europeans were serious losers, they have left this place, except a small number. There has been an addition to the number of races of four, bringing in sixteen more heads of water and extending on an average six miles each. All the water available is now in, until the supplies across the ranges are tried for, viz., the Waiau to the north and the Purapurakino to the east, but these will be works of a most expensive character, and although what is known of the extent of this gold field renders it certain that they will be payable, our population is at present too small to induce such an expenditure as would be necessary.

No applications have been made for loans under the Public Works Act. The most costly of the races here being under the amount which would render the assistance desirable.

The yield of gold during the past summer has been smaller than usual, in consequence of the dry weather, but otherwise there has been an increase in the value of this district by extension of works such as races, sludge channels, and the more permanent settlement of the miners.

I have, &c.,

HENRY ROGERS, Warden.

The Under-Secretary for Gold Fields.

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# STATISTICAL TABLES.

## No. 1.

STATEMENT showing the REVENUE of the GOLD FIELDS in the several PROVINCES of the COLONY of NEW ZEALAND for the period from 1ST JANUARY to 31ST DECEMBER, 1870, as brought to charge in the Public Accounts.

—	Miners' Rights.		Business Licenses.		Water Races, Sluices, &c.		Gold Mining Leases, Rents, and Royalties.		Registration		Fees and Fines, Wardens' Courts.		Survey Fees.		Memorial Deposits of Companies.		Depasturing Licenses and Assessments.		Timber and other Licenses.		Withdrawals of Leases.		Miscellaneous.		Nett Amount, G.F. Revenue		Total Received.															
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.									
AUCKLAND ...	3,873	0	0	63	0	0	214	5	6	1,843	13	2	510	6	0	122	19	0	152	12	6	118	15	0	2	15	0	45	0	0	1909	6	6	435	5	8	8,790	18	4	8,790	18	4
NELSON ...	4,415	8	6	3,797	0	0	215	5	0	1,203	19	6	721	5	0	323	10	6	...	...	27	0	0*	170	0	0	87	4	0	10,933	12	6	10,960	12	6*	10,960	12	6*				
MARLBOROUGH ...	269	0	0	18	0	0	6	10	0	17	0	0	18	0	6	4	1	0	...	...	12	0	0*	...	...	2	11	0	335	2	6	335	2	6	347	2	6*					
WESTLAND ...	4,050	1	0	3,573	0	0	170	11	0	628	2	4	356	7	6	352	4	6	568	1	8	...	...	5542	10	0*	...	...	57	2	6	9,755	10	6	15,298	0	6*					
OTAGO ...	6,796	0	0	2,143	0	0	328	17	6	7,929	0	6	502	12	0	297	8	0	323	12	0	...	...	3821	17	7	55	0	0*	21	4	0	83	0	3	22,246	11	10	22,301	11	10*	
	19,403	9	6	9,594	0	0	935	9	0	11,121	15	6	2108	11	0	1100	3	0	1044	6	2	118	15	0	3824	12	7	45	0	0	2100	10	6	665	3	5	52,061	15	8	57,698	5	8*
Gold Duty received during the year, £87,824 10s.																																										

NOTE.—Publicans' Licenses are marked thus \*. The figures marked \* in the column headed "Total" include Publicans' Licenses; the penultimate column shows the amount received exclusive of those Licenses.

STATEMENT showing the REVENUE of the GOLD FIELDS in the several PROVINCES of the COLONY of NEW ZEALAND for the period from 1ST JANUARY to 31ST DECEMBER, 1871, as brought to charge in the Public Accounts.

—	Miners' Rights.		Business Licenses.		Water Races, Sluices, &c.		Gold Mining Leases, Rents, and Royalties.		Registration.		Fees and Fines, Wardens' Courts.		Survey Fees.		Memorial Deposits of Companies.		Depasturing Licenses and Assessments.		Timber Licenses.		Withdrawals of Leases.		Miscellaneous.		Total.														
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.									
AUCKLAND ...	5,163	13	0	88	0	0	196	10	0	2,020	5	6	360	3	0	327	7	11	483	0	6	502	7	0	5	15	0	91	0	0	...	...	175	5	0	9,413	6	11	
NELSON ...	4,239	10	0	3895	0	0	255	7	6	1,995	16	0	745	10	0	303	13	0	...	...	4	17	6	...	...	152	0	0	155	19	3	249	18	0	11,747	13	3		
MARLBOROUGH ...	187	0	0	13	0	0	0	5	0	...	...	23	2	6	4	3	0	...	...	...	...	20	0	0	...	...	...	...	2	7	6	249	18	0	249	18	0		
*WESTLAND ...	3,023	0	0	2532	0	0	160	5	6	425	10	10	286	14	0	275	4	6	391	12	9	...	...	...	...	...	...	48	14	6	7,143	2	1	7,143	2	1			
OTAGO ...	6,905	0	0	1829	0	0	173	2	6	7,290	5	2	500	0	0	420	12	6	264	10	7	...	...	2037	2	2	...	...	10	10	0	60	6	6	19,490	9	5		
	19,518	3	0	8357	0	0	785	10	6	11,731	17	6	1915	9	6	1331	0	11	1139	3	10	507	4	6	2042	17	2	111	0	0	162	10	0	442	12	9	48,044	9	8
Gold Duty received during the year, £105,533 7s. 2d.																																							

\* Publicans' Licenses amounting to £4724 10s. are not included in the above statement.

STATEMENT showing the REVENUE of the GOLD FIELDS in the several PROVINCES of the COLONY of NEW ZEALAND for the period from 1ST JANUARY to 31ST MARCH, 1872, as brought to charge in the Public Accounts.

—	Miners' Rights.		Business Licenses.		Water Races, Sluices, &c.		Gold Mining Leases, Rents, and Royalties.		Registration.		Fees and Fines, Wardens' Courts.		Survey Fees.		Memorial Deposits of Companies.		Depasturing Licenses and Assessments.		Timber and other Licenses.		Withdrawals of Leases.		Miscellaneous.		Total.														
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.									
AUCKLAND ...	922	15	0	12	0	0	32	0	0	1106	2	1	36	14	6	45	4	0	39	0	0	52	5	6	0	15	0	35	0	0	...	...	57	6	0	2,339	2	1	
NELSON ...	2129	0	0	1882	0	0	48	2	6	667	15	6	313	5	0	118	19	0	...	...	...	...	58	10	0	57	18	6	5,275	10	6	5,275	10	6	5,275	10	6		
*MARLBOROUGH ...	31	0	0	3	0	0	...	...	...	...	...	5	5	0	2	14	0	...	...	...	...	...	...	...	...	...	...	0	2	0	42	1	0	42	1	0	42	1	0
*WESTLAND ...	1095	0	0	646	0	0	61	10	0	197	11	6	59	8	0	94	7	0	261	6	6	...	...	...	...	...	...	14	15	0	2,429	18	0	2,429	18	0	2,429	18	0
OTAGO ...	1686	0	0	432	0	0	66	12	6	1921	7	0	127	0	0	92	1	0	19	0	0	...	...	677	13	7	...	...	2	0	0	8	7	0	5,032	1	1		
	5863	15	0	2975	0	0	208	5	0	3892	16	1	541	12	6	353	5	0	319	6	6	52	5	6	678	8	7	35	0	0	60	10	0	138	8	6	15,118	12	8
Gold Duty received during the quarter, £26,425 1s. 7d.																																							

\*NOTE.—Publicans' Licenses amounting to £2035 are not included in the above statement.

J. WOODWARD, Receiver General.

STATEMENT shewing the REVENUE of the GOLD FIELDS collected in the several Districts, and the GOLD DUTY of the COLONY of NEW ZEALAND for the period from 1st JANUARY to 31st DECEMBER, 1870, as brought to charge in the Public Accounts.

## PROVINCE OF AUCKLAND.

	Miners' Rights.	Business Licenses.	Water Races, Sluices, &c.	Gold Mining Leases, Rents, and Royalties.	Registration.	Fees and Fines Warden's Courts.	Survey Fees.	Memorial Deposits of Companies.	Depasturing Licenses and Assessments.	Timber and other Licenses.	Withdrawals of Leases.	Miscellaneous.	Net Amount, Gold Fields Revenue.	Total Received.
SHORTLAND ...	£ s. d. 3,289 0 0	£ s. d. 3 0 0	£ s. d. 151 10 0	£ s. d. 1273 15 8	£ s. d. 422 5 6	£ s. d. 84 15 0	£ s. d. 151 11 6	£ s. d. 118 15 0	£ s. d. 2 15 0	£ s. d. 45 0 0	£ s. d. 1909 6 6	£ s. d. 415 12 2	£ s. d. 7867 6 4	£ s. d. ...
COROMANDEL ...	£ s. d. 584 0 0	£ s. d. 60 0 0	£ s. d. 62 15 6	£ s. d. 69 17 6	£ s. d. 88 0 6	£ s. d. 38 4 0	£ s. d. 1 1 0	£ s. d. ...	£ s. d. ...	£ s. d. ...	£ s. d. ...	£ s. d. 19 13 6	£ s. d. 923 12 0	£ s. d. ...
	3,873 0 0	63 0 0	214 5 6	1343 13 2	510 6 0	122 19 0	152 12 6	118 15 0	2 15 0	45 0 0	1909 6 6	435 5 8	8790 18 4	8790 18 4

Gold Duty received in the Province during the Year, £10,691 15s.

## PROVINCE OF NELSON.

COLLINGWOOD ...	191 8 6	49 0 0	6 12 6	165 13 9	18 10 0	5 14 0	...	...	...	...	70 0 0	29 16 0	536 14 9	536 14 9
WESTPORT ...	1061 0 0	1266 0 0	29 0 0	232 7 6	154 5 0	60 2 6	...	...	...	...	20 0 0	17 17 6	2840 12 6	2,840 12 6
BRIGHTON AND CHARLESTON ...	875 0 0	1030 0 0	82 2 6	627 15 9	302 0 0	159 11 0	...	...	...	...	15 0 0	23 15 6	3115 4 9	3,115 4 9
COBDEN ...	1583 0 0	1051 0 0	76 15 0	173 8 9	169 0 0	65 14 0	...	...	...	...	65 0 0	13 4 0	3197 1 9	3,197 1 9
AHAURA ...	403 0 0	304 0 0	14 17 6	4 13 9	53 17 6	22 0 0	...	...	...	...	...	1 11 0	803 19 9	803 19 9
MATAKITAKI ...	170 0 0	11 0 0	1 17 6	...	7 5 0	0 8 0	...	...	...	...	...	0 1 0	190 11 6	190 11 6
WANGAPEKA ...	132 0 0	86 0 0	4 0 0	...	16 7 6	10 1 0	...	...	...	27 0 0*	...	0 19 0	249 7 6	276 7 6*
	4415 8 6	3797 0 0	215 5 0	1203 19 6	721 5 0	323 10 6	...	...	...	27 0 0*	170 0 0	87 4 0	10933 12 6	10,960 12 6*

Gold Duty received in the Province during the year, £17,585 18s. 8d.

## PROVINCE OF MARLBOROUGH.

HAVELOCK ...	181 0 0	12 0 0	6 10 0	...	12 13 0	4 1 0	...	...	...	12 0 0*	...	2 10 0	218 14 0	230 14 0*
WAIKOU ...	...	...	...	...	5 7 6	...	...	...	...	...	...	0 1 0	5 8 6	5 8 6
BLENHEIM ...	88 0 0	6 0 0	...	17 0 0	...	...	...	...	...	...	...	...	111 0 0	111 0 0
	269 0 0	18 0 0	6 10 0	17 0 0	18 0 6	4 1 0	...	...	...	12 0 0*	...	2 11 0	335 2 6	347 2 6*

Gold Duty received in the Province during the year, £237 6s. 4d.

## COUNTY OF WESTLAND.

HOKITIKA ...	165 0 0	69 0 0	...	7 11 0	...	...	6 13 2	...	...	...	...	8 5 0	256 9 2	256 9 2
KANIERI ...	686 0 0	326 0 0	29 17 6	5 0 0	61 17 0	39 14 0	102 15 0	...	...	535 0 0*	...	2 12 0	1203 15 6	1,738 15 6*
GREYMOUTH ...	1054 0 0	464 0 0	42 0 0	42 10 0	84 7 0	74 15 0	256 11 0	...	...	972 10 0*	...	15 11 0	2033 14 0	3,006 4 0*
ROSS ...	607 0 0	1170 0 0	31 5 0	335 2 4	44 8 6	61 14 0	93 3 0	...	...	1195 0 0*	...	2 1 6	2344 14 4	3,539 14 4*
STAFFORD ...	1003 0 0	947 0 0	48 2 6	26 0 0	110 19 6	109 19 0	54 9 6	...	...	1340 0 0*	...	21 18 0	2321 8 6	3,661 8 6*
OKARITO ...	203 1 0	121 0 0	0 1 0	211 19 0	14 15 0	6 17 0	30 0 0	...	...	565 0 0*	...	5 2 0	592 15 0	1,157 15 0*
POUNAMU ...	382 0 0	476 0 0	19 5 0	...	40 0 6	59 5 6	24 10 0	...	...	935 0 0*	...	1 13 0	1002 14 0	1,937 14 0*
	4050 1 0	3573 0 0	170 11 0	628 2 4	356 7 6	352 4 6	568 1 8	...	...	5542 10 0*	...	57 2 6	9755 10 6	15,298 0 6*

Gold Duty received in the Province during the year, £18,021 18s. 10d.

## PROVINCE OF OTAGO.

DUNEDIN ...	70 0 0	37 0 0	0 2 6	...	0 5 0	...	...	...	...	...	...	...	107 7 6	107 7 6
NASEBY ...	1045 0 0	291 0 0	75 7 6	607 10 0	85 7 0	70 19 0	50 0 0	...	...	...	4 4 0	0 12 0	2229 19 6	2,229 19 6
BLACK'S AND ST. BATHAN'S	407 0 0	326 0 0	20 5 0	292 10 0	48 5 0	19 3 6	49 15 0	...	...	...	...	3 15 0	1166 13 6	1,166 13 6
MANUHERIKIA ...	264 0 0	62 0 0	13 2 6	154 10 0	21 17 6	9 17 0	...	...	...	...	4 0 0	...	529 7 0	529 7 0
CLYDE ...	414 0 0	58 0 0	21 12 6	331 11 8	12 7 6	17 19 0	2 0 0	...	75 16 1	...	...	3 5 3	936 12 0	936 12 0
MOUNT BENGEE ...	337 0 0	175 0 0	23 0 0	245 2 9	21 7 6	14 3 0	...	...	...	...	...	0 10 0	816 3 3	816 3 3
CROMWELL ...	888 0 0	327 0 0	44 12 6	...	58 15 0	39 0 6	...	...	...	...	...	...	1357 8 0	1,357 8 0
QUEENSTOWN ...	646 0 0	99 0 0	42 10 0	2317 11 4	38 10 0	16 14 6	71 14 0	1274 15 10	...	...	6 0 0	28 0 0	4540 15 8	4,540 15 8
ARROWTOWN ...	551 0 0	152 0 0	29 17 6	1133 8 8	47 5 0	20 10 0	19 2 0	801 12 4	...	...	5 0 0	6 13 0	2766 8 6	2,766 8 6
LAWRENCE ...	956 0 0	305 0 0	22 12 6	2804 3 7	54 7 6	41 10 0	88 6 0	1521 14 6	...	...	2 0 0	39 15 0	5835 9 1	5,835 9 1
SWITZER'S ...	514 0 0	231 0 0	17 2 6	42 12 6	68 17 6	28 1 6	42 15 0	38 14 6	...	...	...	0 9 0	983 12 6	983 12 6
WAIPOI ...	410 0 0	55 0 0	11 12 6	...	25 2 6	11 5 0	...	96 9 4	...	...	...	...	609 9 4	609 9 4
OREPUKI ...	294 0 0	25 0 0	7 0 0	...	20 5 0	8 5 0	...	12 15 0	55 0 0*	...	...	0 1 0	367 6 0	422 6 0*
	6796 0 0	2143 0 0	328 17 6	7929 0 6	502 12 0	297 8 0	323 12 0	3821 17 7	55 0 0*	21 4 0	83 0 3	22,246 11 10	22,301 11 10*	

Gold Duty received in the Province during the Year—Dunedin, £20,334 15s. 2d.; Invercargill, £307 3s. 2d.; Total, £20,641 18s. 4d.

NOTE.—Publicans' Licenses are marked \*. The figures marked thus \* in the column headed "Total" include Publicans' Licenses; the penultimate column shows the amount received exclusive of those Licenses.

N.B.—The sum of £3 14s. 6d. was also received during the year as gold duty, Province of Wellington.

J. WOODWARD, Receiver General.



No. 2 B.

STATEMENT shewing the REVENUE of the GOLD FIELDS collected in the several DISTRICTS, and the GOLD DUTY of the COLONY of NEW ZEALAND for the period from 1st JANUARY to 31st MARCH, 1872, as brought to charge in the Public Accounts.

PROVINCE OF AUCKLAND.

	Miners' Rights.	Business Licenses.	Water Races, Sluices &c.	Gold Mining Leases, Rents, and Royalties.	Registration.	Fees and Fines, Wardens' Courts.	Survey Fees.	Memorial Deposits of Companies.	Depasturing Licenses and Assessments.	Timber Licenses.	Withdrawals of Leases.	Miscellaneous.	Net Amount Gold Fields Revenue.	Total Received.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
SHORTLAND ...	698 0 0	...	32 0 0	603 10 11	22 0 0	36 6 0	33 15 0	7 5 6	0 15 0	35 0 0	...	11 10 0	1480 2 5	...
COROMANDEL ...	224 15 0	12 0 0	...	502 11 2	14 14 6	8 18 0	5 5 0	45 0 0	...	...	...	45 16 0	858 19 8	...
	922 15 0	12 0 0	32 0 0	1106 2 1	36 14 6	45 4 0	39 0 0	52 5 6	0 15 0	35 0 0	...	57 6 0	2339 2 1	2339 2 1

Gold Duty received in the Province during the quarter—£3589 2s. 2d.

PROVINCE OF NELSON.

NELSON ...	9 0 0	...	...	...	...	...	...	...	...	...	...	...	9 0 0	...
COLLINGWOOD ...	32 0 0	10 0 0	...	32 10 0	6 0 0	1 0 0	...	...	...	...	...	...	112 12 0	...
WESTPORT ...	128 0 0	212 0 0	6 15 0	143 11 3	31 18 6	13 17 0	...	...	...	...	18 10 0	12 12 0	579 19 9	...
INANGAHUA ...	1283 0 0	1071 0 0	6 7 6	39 0 0	119 9 0	72 15 0	...	...	...	...	30 0 0	13 18 0	2596 19 6	...
BRIGHTON AND CHARLESTON ...	210 0 0	181 0 0	17 5 0	328 17 6	99 5 0	12 1 0	...	...	...	...	...	19 19 6	868 8 0	...
COBDEN ...	45 0 0	5 0 0	3 2 6	70 10 0	5 17 6	0 5 0	...	...	...	...	10 0 0	1 7 6	141 2 6	...
WANGAPEKA ...	19 0 0	21 0 0	...	49 3 9	2 0 0	...	...	...	...	...	...	0 14 6	91 18 3	...
MATAKITAKI ...	47 0 0	28 0 0	...	4 3 0	3 15 0	...	...	...	...	...	...	...	82 18 0	...
AHAURA ...	356 0 0	354 0 0	14 12 6	...	45 0 0	19 1 0	...	...	...	...	...	3 19 0	792 12 6	...
	2129 0 0	1882 0 0	48 2 6	667 15 6	313 5 0	118 19 0	...	...	...	...	58 10 0	57 18 6	5275 10 6	5275 10 6

Gold Duty received in the Province during the quarter—£3432 8s. 2d.

PROVINCE OF MARLBOROUGH.

HAVELOCK ...	20 0 0	3 0 0	...	...	5 5 0	2 14 0	...	...	...	20 0 0*	...	0 2 0	40 1 0	60 1 0*
WAIRAU ...	2 0 0	...	...	...	...	...	...	...	...	...	...	...	2 0 0	2 0 0
	31 0 0	3 0 0	...	...	5 5 0	2 14 0	...	...	...	20 0 0*	...	0 2 0	42 1 0	62 1 0*

Gold Duty received in the Province during the quarter—£119 7s. 8d.

COUNTY OF WESTLAND.

HOKITIKA ...	16 0 0	4 0 0	...	0 3 0	...	...	...	...	...	...	...	...	20 8 0	20 8 0
KANIERI ...	136 0 0	66 0 0	8 0 0	2 12 0	6 3 0	9 10 0	18 18 0	...	...	...	...	...	250 8 0	295 8 0*
GREYMOUTH ...	324 0 0	191 0 0	13 15 0	55 4 0	21 7 6	22 8 0	50 17 6	...	...	45 0 0*	...	3 5 0	683 9 0	1,073 9 0*
ROSS ...	221 0 0	185 0 0	13 15 0	60 2 6	6 6 0	28 11 0	147 3 6	...	...	390 0 0*	...	4 17 0	663 2 0	1,428 2 0*
STAFFORD ...	246 0 0	73 0 0	25 0 0	30 0 0	18 19 0	18 18 0	37 6 6	...	...	765 0 0*	...	1 4 0	964 3 6*	...
OKARITO ...	71 0 0	38 0 0	...	22 0 0	4 2 0	1 7 0	...	...	...	510 0 0*	...	5 0 0	454 3 6	...
POUNAMU ...	81 0 0	89 0 0	1 0 0	27 5 0	2 10 6	13 13 0	7 1 0	...	...	165 0 0*	...	0 4 0	136 13 0	301 13 0*
	1,095 0 0	646 0 0	61 10 0	197 11 6	59 8 0	94 7 0	261 6 6	...	...	140 0 0*	...	0 5 0	221 14 6	361 14 6*
								...	...	2,015 0 0*	...	14 15 0	2,429 18 0	4,444 18 0*

Gold Duty received in the Province during the quarter—£4518 7s. 7d.

PROVINCE OF OTAGO.

DUNEDIN ...	12 0 0	10 0 0	...	...	...	...	...	...	...	...	...	...	...	...
NASEBY ...	215 0 0	85 0 0	16 0 0	78 10 10	26 15 0	5 2 0	...	...	...	...	...	...	22 0 0	...
BLACK'S AND ST. BATHAN'S ...	108 0 0	50 0 0	3 7 6	117 2 1	12 12 6	6 15 0	5 0 0	...	...	...	...	0 15 0	427 2 10	...
MANUHERIKIA ...	58 0 0	7 0 0	0 15 0	27 13 9	9 12 6	1 2 0	...	...	...	...	...	...	104 3 3	...
CLYDE ...	39 0 0	13 0 0	0 2 6	7 12 6	4 5 0	1 1 0	...	...	...	...	...	...	74 1 3	...
MOUNT BENDER ...	59 0 0	22 0 0	3 0 0	177 17 8	3 17 6	4 18 6	...	9 0 3	...	...	...	...	270 13 8	...
CROMWELL ...	220 0 0	92 0 0	14 5 0	203 8 9	11 2 6	7 13 0	...	...	...	...	...	...	548 9 3	...
QUEENSTOWN ...	164 0 0	5 0 0	6 0 0	592 17 0	10 17 6	5 11 0	...	...	...	...	...	...	1159 13 8	...
ARROWTOWN ...	220 0 0	25 0 0	5 10 0	263 4 3	16 7 6	27 1 0	...	...	374 6 2	...	...	1 2 0	830 8 8	...
LAWRENCE ...	277 0 0	55 0 0	4 17 6	417 13 5	13 5 0	14 2 0	14 0 0	...	272 15 11	...	...	0 10 0	813 8 2	...
SWITZER'S ...	256 0 0	59 0 0	10 10 0	32 1 9	15 17 6	7 5 6	...	...	10 0 3	...	2 0 0	5 10 0	381 15 9	...
OREPUKI ...	58 0 0	9 0 0	2 5 0	3 5 0	2 7 6	11 10 0	...	...	1 1 0	...	...	...	96 17 6	...
	1686 0 0	432 0 0	66 12 6	1921 7 0	127 0 0	92 1 0	19 0 0	...	677 13 7	...	2 0 0	8 7 0	5032 1 1	5032 1 1

Gold Duty received in the Province during the quarter—Dunedin, £7,098 11s.; Invercargill, £284 7s.; Total, £7,382 18s.

Publicans' License included in Receivers' Accounts are marked thus \*. The figures marked thus \* in the last column headed "Total" include Publicans' Licenses. The penultimate column shows the total of Gold Fields Revenue, exclusive of Publicans' Licenses.

No 3.

COMPARATIVE RETURN of REVENUE derived from the GOLD FIELDS in the several PROVINCES of NEW ZEALAND during the YEARS 1870 and 1871, showing INCREASE or DECREASE under each head of Revenue.

HEADS OF REVENUE.	AUCKLAND.				NELSON.				MARLBOROUGH.				WESTLAND.				OTAGO.							
	1870.		1871.		Increase.		Decrease.		1870.		1871.		Increase.		Decrease.		1870.		1871.		Increase.		Decrease.	
	£	...	£	...	£	...	£	...	£	...	£	...	£	...	£	...	£	...	£	...	£	...	£	...
Miners' Rights	3,873	5,164	1,291	...	4,416	4,240	...	175	269	187	...	82	...	4,050	3,023	...	1,027	6,796	6,905	109	...	...	...	
Business Licenses	63	88	25	...	3,797	3,895	98	...	18	13	...	5	...	3,573	2,532	...	1,041	2,143	1,829	...	...	314	...	
Water Races, Sluices, &c.	214	197	...	17	215	255	40	...	6	...	...	6	...	171	160	...	11	329	173	...	...	156	...	
Gold Mining Leases, Rents, and Royalties	1,344	2,020	676	...	1,204	1,996	792	...	17	...	...	17	...	628	426	...	202	7,929	7,290	...	...	639	...	
Registration	510	360	...	150	721	746	25	...	18	23	5	...	...	...	...	...	70	593	500	...	...	3	...	
Fees and Fines, Wardens' Courts	123	327	204	...	324	303	...	21	4	4	...	...	...	352	275	...	77	297	421	124	...	...	...	
Survey Fees	153	483	330	...	...	...	...	...	...	...	...	...	...	568	392	...	176	323	265	...	...	58	...	
Memorial Deposits of Companies	119	502	383	...	...	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Depositing Licenses and Assessments	3	6	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3,822	2,037	...	...	1,785	...	
Timber and other Licenses	45	91	46	...	...	...	...	...	...	20	20	...	...	...	...	...	...	...	...	...	...	...	...	
Withdrawal of Leases	1,909	...	...	1909	170	152	...	18	...	...	...	...	...	...	...	...	...	21	10	...	...	11	...	
Miscellaneous	435	175	...	260	87	156	69	...	3	3	...	...	...	57	48	...	9	83	60	...	...	23	...	
Gold Duty	10,692	36,261	25,569	...	17,586	13,748	...	3,838	237	233	...	4	...	18,022	16,556	...	1,466	20,642	19,368	...	...	1,274	...	
Totals	19,483	45,674	Net 26,191	...	28,520	25,496	...	Net 3,024	572	483	...	Net 89	...	27,778	23,699	...	4,079	42,888	38,858	...	...	Net 4,030	...	

J. WOODWARD, Receiver General.

## REPORT ON THE GOLD FIELDS

No. 4.

COMPARATIVE RETURN of the TOTAL AMOUNTS of GOLD FIELDS REVENUE (exclusive of Gold Duty collected in the several districts during the YEARS 1870 and 1871, showing the INCREASE or DECREASE in respect of each district.

PROVINCE.	DISTRICT.	1870.	1871.	Increase.	Decrease.
		£	£	£	£
AUCKLAND ... ..	Shortland ... ..	7,867	8,137	270	...
	Coromandel ... ..	924	1,276	352	...
NELSON ... ..	Collingwood ... ..	537	558	21	...
	Westport and Inangahua ... ..	2,841	3,254	413	...
	Brighton and Charleston ... ..	3,115	3,182	67	...
	Cobden ... ..	3,197	803	...	2,394
	Wangapeka ... ..	249	370	121	...
	Matakitaki ... ..	191	336	145	...
	Ahaura ... ..	804	3,245	2,441	...
MARLBOROUGH ... ..	Blenheim ... ..	111	...	...	111
	Wairau ... ..	5	39	34	...
	Havelock ... ..	219	211	...	8
WESTLAND ... ..	Hokitika ... ..	256	172	...	84
	Kanieri ... ..	1,204	844	...	360
	Greymouth ... ..	2,034	1,971	...	63
	Ross ... ..	2,345	1,682	...	663
	Stafford ... ..	2,321	1,449	...	872
	Okarito ... ..	593	391	...	202
	Pouamau ... ..	1,003	634	...	369
OTAGO ... ..	Dunedin ... ..	107	82	...	25
	Naseby ... ..	2,230	1,875	...	355
	Blacks and St. Bathans ... ..	1,167	1,055	...	112
	Manuherikia ... ..	529	379	...	150
	Clyde ... ..	937	734	...	203
	Mount Benger ... ..	816	979	163	...
	Cromwell ... ..	1,357	1,437	80	...
	Queenstown ... ..	4,541	3,893	...	648
	Arrowtown ... ..	2,766	2,355	...	411
	Lawrence ... ..	5,836	5,444	...	392
	Switzers ... ..	984	994	10	...
	Waipori ... ..	609	105	...	504
	Orepuki ... ..	367	153	...	209
	Totals ... ..	52,062	48,044	...	8,135
	Deduct Increases ... ..	...	...	...	4,117
	Net Decrease ... ..	...	...	...	4,018

J. WOODWARD, Receiver General.

No. 5.

RETURN of the QUANTITY of GOLD EXPORTED from NEW ZEALAND during the YEAR ended 31st DECEMBER, 1871.

PORT OF EXPORT.	PRODUCE OF GOLD FIELDS IN THE PROVINCE OF	DURING THE YEAR ENDED THE 31ST DECEMBER, 1871.						
		To Great Britain.	To New South Wales.	To Victoria	To Other Places.	To China.	TOTALS.	
		Oz.	Oz.	Oz.	Oz.	Oz.	Quantity.	Value.
Auckland ... ..	Auckland ... ..	108,194	195,377	23,469	3,286	...	330,326	1,188,708
Picton ... ..	Marlborough ... ..	...	1,082	...	...	...	1,082	4,328
Nelson ... ..	Ditto ... ..	645	140	...	...	...	785	3,140
							1,867	7,468
Nelson ... ..	Nelson ... ..	2,952	4,372	2,188	2	...	10,014	40,056
Westport ... ..	Ditto ... ..	...	...	47,843	3	...	47,846	191,384
Greymouth ... ..	Ditto ... ..	3,231	...	48,893	...	...	52,124	208,496
							109,984	439,936
Greymouth ... ..	Westland ... ..	2,367	...	32,383	...	...	34,750	139,000
Hokitika ... ..	Ditto ... ..	...	...	91,020	...	...	91,020	364,080
Lyttelton ... ..	Ditto ... ..	...	...	5	...	...	5	20
Okarito ... ..	Ditto ... ..	...	...	7,137	...	...	7,137	28,548
							132,912	531,648
Dunedin ... ..	Otago ... ..	67,637	...	78,148	33	4,834	150,652	602,608
Invercargill ... ..	Ditto ... ..	...	3,224	1,064	...	...	4,288	17,152
							154,940	619,760
	TOTALS... ..	185,026	204,695	332,150	3,324	4,834	730,029	2,787,520

WILLIAM SEED, Secretary and Inspector.



No. 6.

COMPARATIVE RETURN of the QUANTITY and VALUE of GOLD EXPORTED from the several PROVINCES of NEW ZEALAND for the QUARTERS ended 31st MARCH, 1872, and 31st MARCH, 1871.

PROVINCES.	QUARTER ENDED 31st MARCH, 1872.		QUARTER ENDED 31st MARCH, 1871.	
	Quantities.	Value.	Quantities.	Value.
	Oz.	£	Oz.	£
Auckland ... ..	32,587	118,382	84,019	292,417
Marlborough ... ..	955	3,820	140	560
Nelson ... ..	27,908	111,632	20,944	83,776
Westland ... ..	34,484	137,936	32,384	129,536
Otago ... ..	59,063	236,252	42,673	170,692
Totals ... ..	154,997	608,022	180,160	676,981

J. HACKWORTH,  
(For the Secretary and Inspector of Customs.)

No. 7.

RETURN of the QUANTITY and VALUE of GOLD EXPORTED from NEW ZEALAND, from 1st APRIL, 1857, to 31st MARCH, 1872.

PORT OF EXPORT.	PRODUCE OF THE GOLD FIELDS IN THE PROVINCE OF	DURING THE QUARTER ENDED 31st MARCH, 1872.						EXPORTED PREVIOUS TO THE 31st DECEMBER, 1871.		TOTAL EXPORTED FROM NEW ZEALAND TO THE 31st MARCH, 1872.		
		To Great Britain.	To New South Wales.	To Victoria.	To United States of America.	To other places.	TOTALS.		Quantities.	Value.	Quantities.	Value.
							Quantities.	Value.				
Auckland ...	Auckland ...	Oz. 2,849	Oz. 27,766	Oz. ...	Oz. 1,972	Oz. ...	Oz. 32,587	£ 118,382	Oz. 629,349	£ 2,193,946	Oz. 661,936	£ 2,312,328
Wellington	Wellington	...	...	...	...	...	...	...	30	120	30	120
Pictou ...	Marlborough	...	800	...	...	...	800	3,200	} 38,549	148,998	39,504	152,818
Nelson ...	Ditto ...	...	155	...	...	...	155	620				
							955	3,820				
Nelson ...	Nelson ...	...	3,633	35	...	...	3,668	14,672	} 1,126,504	4,458,340	1,154,412	4,569,972
Westport ...	Ditto ...	...	...	9,772	...	...	9,772	39,088				
Greymouth	Ditto ...	3,072	...	11,396	...	...	14,468	57,872				
							27,908	111,632				
Greymouth	Westland ...	2,548	...	7,736	...	...	10,284	41,136	} 1,609,365	6,348,835	1,643,849	6,481,771
Hokitika ...	Ditto ...	2,108	...	21,194	...	...	23,302	93,208				
Okarito ...	Ditto ...	...	...	743	...	...	743	2,972				
Lyttelton ...	Ditto ...	155	...	...	...	...	155	620				
							34,484	137,936				
Dunedin ...	Otago ...	40,556	...	11,225	5,002	5	56,788	227,152	} 2,869,081	11,207,760	2,928,144	11,444,012
Invercargill	Ditto ...	...	...	2,275	...	...	2,275	9,100				
							59,063	236,252				
Totals ...	...	51,288	32,354	64,376	6,974	5	154,997	608,022	6,272,878	24,352,999	6,427,875	24,961,021

J. HACKWORTH,  
(For the Secretary and Inspector of Customs.)

**No. 8.**  
SUMMARY of the QUANTITY and VALUE of GOLD exported from NEW ZEALAND from 1st APRIL, 1857, to 31st DECEMBER, 1870.

PRODUCE OF THE GOLD FIELDS IN THE	PORT OF EXPORT.	DURING THE YEAR 1870.						TOTALS.		FROM 1st APRIL, 1857, TO 31st DECEMBER, 1869.		TOTAL EXPORTED FROM NEW ZEALAND TO 31st DECEMBER, 1870.		
		To Great Britain.	To New South Wales.	To Victoria.	To China.	To Other Places.	Quantity.	Value.	Oz.	£	Oz.	£	Oz.	£
		Oz.	Oz.	Oz.	Oz.	Oz.	Oz.	£	Oz.	£	Oz.	£	Oz.	£
PROVINCE OF AUCKLAND	Auckland	44,586	32,888	8,110	...	...	85,534	319,146	213,489	686,092	299,023	1,005,238		
Do. MARLBOROUGH	Pictou Nelson	...	1,804 48	...	...	...	1,804 48	7,216 192	34,830	134,122	36,682	141,530		
Do. WELLINGTON	Wellington	...	...	30	...	...	30	120	...	...	30	120		
Do. NELSON	Nelson Westport Greymouth	1,118 4,924 ...	9,969 4,081 ...	1,157 65,542 60,863	...	10	12,244 74,557 60,863	48,692 299,408 243,410	884,336	3,488,774	1,031,990	4,080,284		
COUNTY OF WESTLAND	Greymouth Okarita Hokitika Lyttelton	...	...	39,739 4,819 96,493 50	...	...	39,739 4,819 99,887 243	158,956 19,276 399,512 963	1,316,325	5,171,658	1,460,983	5,750,365		
PROVINCE OF Otago (including SOUTHLAND)	Dunedin Invercargill	11,922 ...	...	149,276 2,458	1,468 ...	28	162,694 2,458	650,860 9,834	2,522,061 26,928	9,820,836 106,412	2,714,141	10,587,942		
TOTALS		64,726	50,121	428,527	1,468	38	544,880	2,157,585	4,997,969	19,407,894	5,542,849	21,565,479		

WILLIAM SEED, Secretary and Inspector.

**No. 9.**  
TABLE showing QUANTITY of SILVER EXPORTED during the YEARS 1870, 1871, and the MARCH QUARTER, 1872.

PRODUCE OF THE GOLD FIELDS IN THE	PORT OF EXPORT.	DURING THE YEAR 1870.			DURING THE YEAR 1871.			DURING THE MARCH QUARTER, 1872.			TOTAL EXPORTED TO THE 31st MARCH 1872.			
		To Great Britain.	Quantity.	Value.	To Great Britain.	Quantity.	Value.	To Great Britain.	Quantity.	Value.	Quantity.	Value.	Oz. dwt.	£
		Oz.	Oz.	£	Oz.	Oz.	£	Oz.	Oz.	£	Oz.	£	Oz.	£
PROVINCE OF AUCKLAND	Auckland	37,123	37,123	11,380	80,272	80,272	23,145	18,683	4,900	147,142	2	42,418		

N.B.—All the Silver exported has been from Auckland.

WILLIAM SEED, Secretary and Inspector.

## No. 10.

PRICE of GOLD per OUNCE in the several MINING DISTRICTS during the year ending 31st March, 1872.

MINING DISTRICT.	FROM	To
AUCKLAND PROVINCE—	£ s. d.	£ s. d.
Grahamstown ... ..	2 4 0	3 7 0
Coromandel ... ..	2 14 0	3 2 0
MARLBOROUGH—		
Pelorus and Wairau ... ..	3 15 0	...
NELSON—		
Wangapeka ... ..	3 12 6	3 15 0
Collingwood ... ..	3 12 0	3 16 9
Westport ... ..	3 15 6	3 16 0
Brighton ... ..	3 15 6	3 16 0
Charleston ... ..	3 15 6	3 16 0
Inangahua ... ..	3 15 0	3 15 6
Buller ... ..	3 15 0	3 15 6
Ahaura ... ..	3 15 6	...
Cobden ... ..	3 15 6	...
WESTLAND—		
Greymouth ... ..	3 15 6	...
Greenstone ... ..	3 15 6	...
Waimea ... ..	3 15 6	...
Kanieri ... ..	3 15 6	...
Totara ... ..	3 15 6	...
Okarito ... ..	3 13 0	...
OTAGO—		
Dunedin ... ..	3 12 0	3 15 0
Tuapeka ... ..	3 14 6	3 15 0
Mount Ida ... ..	3 15 0	...
Black's } ... ..	3 15 0	...
Dunstan } ... ..	3 15 0	...
Teviot ... ..	3 15 0	...
Wakatipu ... ..	3 15 0	...
Orepuki ... ..	3 14 0	3 16 0
Switzer's ... ..	3 14 0	3 15 0



## No. 12.

## SUMMARY.

MEAN NUMBER of MINERS employed in the several Provinces of New Zealand for the YEAR ending 31st March, 1872, distinguishing European and Chinese.

PROVINCES.	ALLUVIAL MINERS.		QUARTZ MINERS.		TOTALS.		GRAND TOTALS.
	European.	Chinese.	European.	Chinese.	European.	Chinese.	
AUCKLAND ... ..	...	...	4,300	...	4,300	...	4,300
WELLINGTON ... ..	...	...	50	...	50	...	50
MARLBOROUGH ... ..	140	...	10	...	150	...	150
NELSON ... ..	5,552	...	2,045	...	7,597	...	7,597
WESTLAND ... ..	5,288	18	6	...	5,294	18	5,312
OTAGO ... ..	5,867	3,683	417	...	6,284	3,683	9,967
TOTALS ... ..	16,847	3,701	6,828	...	23,675	3,701	27,376

## No. 13.

MEAN NUMBER of MINERS employed in the several Mining Districts for the YEAR ending 31st March, 1872, distinguishing European and Chinese.

WARDENS' DISTRICTS ARRANGED ACCORDING TO PROVINCES.	ALLUVIAL MINERS.		QUARTZ MINERS.		TOTALS.		GRAND TOTAL.
	European.	Chinese.	European.	Chinese.	European.	Chinese.	
AUCKLAND—							
Grahamstown ... ..	...	...	3,500	...	3,500	...	3,500
Coromandel ... ..	...	...	800	...	800	...	800
Totals ... ..	...	...	4,300	...	4,300	...	4,300
WELLINGTON ... ..	...	...	50	...	50	...	50
MARLBOROUGH ... ..	140	...	10	...	150	...	150
NELSON—							
Wangapeka ... ..	125	...	10	...	135	...	135
Collingwood ... ..	377	...	35	...	412	...	412
Brighton ... ..	100	...	...	...	100	...	100
Westport ... ..	500	...	...	...	500	...	500
Charleston ... ..	500	...	...	...	500	...	500
Inangahua ... ..	100	4	2,000	...	2,100	4	2,104
Buller ... ..	...	...	...	...	...	...	...
Ahaura ... ..	2,039	...	...	...	2,039	...	2,039
Cobden ... ..	773	...	...	...	773	...	773
Notown ... ..	1,038	...	...	...	1,038	...	1,038
Totals ... ..	5,552	4	2,045	...	7,597	4	7,601
WESTLAND—							
Greymouth ... ..	1,460	...	...	...	1,460	...	1,460
Greenstone ... ..	400	...	...	...	400	...	400
Waimea ... ..	1,550	18	6	...	1,556	18	1,574
Kanieri ... ..	600	...	...	...	600	...	600
Totara ... ..	1,000	...	...	...	1,000	...	1,000
Okarito ... ..	278	...	...	...	278	...	278
Totals ... ..	5,288	18	6	...	5,294	18	5,312
OTAGO—							
Dunedin ... ..	56	...	...	...	56	...	56
Tuapeka ... ..	1,080	955	105	...	1,185	955	2,140
Mount Ida ... ..	1,310	345	...	...	1,310	345	1,655
Black's ... ..	250	90	2	...	252	90	342
Teviot ... ..	548	146	...	...	548	146	694
Dunstan ... ..	850	500	250	...	1,100	500	1,600
Wakatipu—Queenstown	701	700	60	...	761	700	1,461
Arrow ... ..	500	500	...	...	500	500	1,000
Orepuki ... ..	153	17	...	...	153	17	170
Switzer's ... ..	419	430	...	...	419	430	849
Totals ... ..	5,867	3,683	417	...	6,284	3,683	9,967

No. 14.  
SUMMARY.

NUMBER of MACHINES employed in ALLUVIAL and QUARTZ MINING in the several PROVINCES of NEW ZEALAND for the YEAR ending 31st MARCH, 1872.

PROVINCES.	MACHINERY EMPLOYED IN ALLUVIAL MINING.											MACHINERY EMPLOYED IN QUARTZ MINING.						APPROXIMATE VALUE OF ALL MINING PLANT.									
	Steam Engines employed Winding, Pumping, &c.		Whims and Pulleys.	Pudding Machines.	Whips.	Sluices and Toms.	Water-wheels.	Hydraulic Hoses.	Pumps.	Sluice Boxes.	Quicksilver and Compound Cradles.	Derricks.	Stamp Heads.	Boiling Machines.	Steam Engines employed Winding, Crushing, &c.		Crushing Machines.		Stamp Heads.	Water-wheels.	Whims and Pulleys.	Derricks.	Whips.				
	No.	Aggregate Horse- power.													No.	Aggregate Horse- power.											
AUCKLAND	...	...	...	...	...	...	...	...	...	...	...	...	...	...	76	1941	70	891	19	...	...	...	16	208,875	0	0	
WELLINGTON	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	6	2	...	...	...	...	...	500	0	0
MARLBOROUGH	...	...	...	...	...	...	...	16	350	...	...	...	...	1	12	1	5	...	...	...	...	...	...	...	1,300	0	0
NELSON	...	...	...	...	...	...	...	1	4,162	...	...	...	...	...	3	35	11	94	7	1	...	...	...	...	73,850	0	0
WESTLAND	...	...	...	...	...	...	...	68	8,633	...	...	...	...	3	...	2	15	2	...	...	...	...	...	...	141,874	7	0
OTAGO	...	...	...	...	...	...	...	234	7,632	102	...	...	...	...	6	30	17	159	11	1	...	...	...	...	122,867	0	0
TOTALS	10	247	6	49	7	1654	187	991	319	20,797	102	13	50	4	86	2018	102	1170	41	2	...	...	16	348,966	7	0	

NOTE.—In the Province of Nelson there are three dredges, but not at work, value £900; in the Province of Otago eleven working, value \$5,200.

No. 15. NUMBER OF MACHINES EMPLOYED IN ALLUVIAL AND QUARTZ MINING IN THE SEVERAL MINING DISTRICTS FOR THE YEAR ENDING MARCH 31, 1872.

MINING DISTRICTS, ARRANGED ACCORDING TO PROVINCES.	MACHINERY EMPLOYED IN ALLUVIAL MINING.										MACHINERY EMPLOYED IN QUARTZ MINING.						APPROXIMATE VALUE OF ALL MINING PLANT.			
	Steam Engines employed Winding, Pumping, &c.		Whips and Pulleys.	Whips.	Bluces and Toms.	Water-wheels.	Hydraulic Hoses.	Pumps.	Sluice Boxes.	Quicksilver and Compound Cradles.	Derrick.	Stamp Heads.	Boring Machines.	Crushing Machines.	Stamp Heads.	Water-wheels.		Whims and Pulleys.	Derricks.	Whips.
	No.	Aggregate Horse- power.																		
<b>AUCKLAND—</b>																				
Grahamstown	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coromandel	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>TOTALS</b>	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>WELLINGTON</b>	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>MARLBOROUGH</b>	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>NELSON—</b>																				
Wangapeka	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Collingwood	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Brighton	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Westport	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Charleston	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Inangahua	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Buller	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ahaura	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cobden	3	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No Town	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>TOTALS</b>	4	30	1246	74	382	1	4162	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>WESTLAND—</b>																				
Greymouth	1	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Greenstone	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Waimea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kanieri	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totara	5	211	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Okarito	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>TOTALS</b>	6	217	157	48	366	68	8633	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>ORAGO—</b>																				
Dunedin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuapeka	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mount Ida	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Black's	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Teviot	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dunstan	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wakaitipu	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Orepuki	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Switzer's	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<b>TOTALS</b>	...	...	270	58	293	234	7652	102	...	...	...	...	...	...	...	...	...	...	...	...

\* No return of value furnished. NOTE.—There are in the district of Collingwood three dredges, none actually working, value £900; in the district of Wakaitipu three working, value £2,400; in the district of Dunstan eight working, value £2,800.

No. 16.  
TABLE showing approximately the NUMBER, DESCRIPTION, and VALUE of the WATER RACES, TAIL RACES, DAMS, RESERVOIRS, GROUND SLICES, &c.  
for the YEAR ending 31st MARCH, 1872.

MINING DISTRICTS.	WATER RACES.				TAIL RACES.			DAMS.			RESERVOIRS.			GROUND SLICES.			
	Number.	Cost of Construction.	Length in miles.	Number of Sluice-Heads.	Present Value.	Number.	Cost of Construction.	Present Value.	Number.	Cost of Construction.	Present Value.	Number.	Cost of Construction.	Present Value.	Number.	Cost of Construction.	Present Value.
AUCKLAND—																	
Grahamstown	106	...	30½	236½	24,380	2	...	102	...	100	...	...	...	...	...	...	...
Comandel	7	1,075	8¾	15	2,000	2	...	200	...	200	...	...	...	...	...	...	...
WELLINGTON	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
MARLBOROUGH	25	1,500	16	45	500	3	1,300	500	...	...	...	...	...	...	...	...	...
NELSON—																	
Wangapeka*	10	5,000	10	40	6,640	18	80	200	From £5 to £25	Not known.	...	...	...	...	...	...	...
Collingwood	69	£80 to £400 per mile.	51½	207	...	47	...	...	...	...	...	8	800	1,000	18	£80 per mile.	200
Brighton*	5	12,360	2	3½	...	6	...	...	...	...	...	...	...	...	...	...	...
Westport*	40	...	38½	51	...	30	...	...	...	...	...	...	...	...	...	...	...
Charleston*	12	...	6½	9	...	21	...	...	...	...	...	3	3,000	...	...	...	...
Inangahua	107	6,090	120	600	10,000	27	2,000	2,000	2,000	2,000	...	...	...	...	10	...	...
Buller (Lyell)	210	28,640	179	359	19,094	63	1,775	1,500	2,580	2,250	...	...	...	...	130	500	300
Alhaura	226	17,280	108	430	11,520	94	1,210	908	2,640	1,980	...	...	...	...	105	150	100
No Town	113	14,080	89	199	9,467	10	250	150	1,780	500	...	...	...	...	105	150	100
Cobden	374	28,794	246	474	24,100	177	15,158	7,705	11,424	7,326	...	...	...	...	5	45	45
Greymouth	35	25,408	55	156	25,408	12	9,314	2,035	1,476	1,441	...	...	...	...	38	15,000	20,000
Greenstone	397	42,989	212	490	21,437	500	14,724	10,000	6,921	3,743	...	...	...	...	439	1,944	1,944
Waimea	351	33,600	210	250	29,500	253	7,590	4,000	3,400	3,000	...	...	...	...	50	1,500	12,000
Kanieri	31	17,690	53	76	9,840	35	1,760	1,360	2,364	2,614	...	...	...	...	...	...	...
Totara	4	120	2½	11	102	4	58	58	80	80	...	...	...	...	4	57	57†
Okarito	230	49,000	Not known	460	27,000	No	informa-	tion.	14,000	8,000	...	...	...	...	440	28,000	19,000
Dunedin (Hindon)	211	101,200	917	947	71,500	237	33,050	29,900	14,800	13,600	...	...	...	...	In	cluded	in
Tuaspeka	30	24,000	...	140	9,000	85	9,000	8,000	3,500	1,800	...	...	...	...	In	cluded	in
Black's	132	18,050	396	290	16,320	98	2,812	2,560	3,175	3,175	...	...	...	...	8	350	385
Teviot	76	59,880	...	256	31,850	12	8,425	8,328	1,710	1,690	...	...	...	...	In	cluded	in
Dunstan	504	200,000	680	893	200,000	384	38,400	38,400	5,600	5,600	...	...	...	...	No	informa-	tion
Wakatipu	75	18,850	115	215	8,800	No	informa-	tion.	...	...	...	...	...	...	2	head	of
Switzer's	50	6,400	73	24	5,100	60	3,500	3,500	100	100	...	...	...	...	partially	com-	pleted
Orepuki																	

\* It is impossible to compile these Returns with even an approximation to accuracy.

† Outside Gold Fields boundary there are seven races, extending in the aggregate over ten miles.



## No. 17.

RETURN of the number of MINING LEASES in force on the 31st March, 1872, and the extent of ground leased.

WARDENS' DISTRICTS ARRANGED ACCORDING TO PROVINCES.	NUMBER.	GROSS ACREAGE.		
		A.	R.	P.
* AUCKLAND—				
Grahamstown ... ..	157	1,219	2	29
Coromandel ... ..	40	429	0	0
MARLBOROUGH ... ..	1	16	2	0
NELSON—				
Wangapeka ... ..	8	72	0	6
Collingwood ... ..	35	395	2	1
Westport ... ..	44	391	0	8
Brighton } Charleston } Inangahua† } Buller } Ahaura } Cobden }	88	378	3	25
	7	94	0	0
	14	105	2	0
WESTLAND—				
Greymouth ... ..	4	15	0	0
Greenstone ... ..	2	19	0	0
Waimea ... ..	2	20	0	0
Kanieri ... ..	...	...	...	...
Totara ... ..	4	28	0	19
Okarito ... ..	2	8	0	0
OTAGO—				
Tuapeka ... ..	60	258	1	35
Mount Ida ... ..	22	136	3	15
Black's ... ..	3	30	0	0
Dunstan ... ..	8	108	2	18
Wakatipu ... ..	107	657	3	29
Totals ... ..	608	4,384	0	19

\* 36 Leases have been exchanged for licenses under the Gold Mining Districts Act, 1871, within the Hauraki Gold Field.  
† 105 leases under application.

## No. 18.

RETURN of the number of AGRICULTURAL LEASES in force on the 31st March, 1872, and the extent of ground leased.

WARDENS' DISTRICTS ARRANGED ACCORDING TO PROVINCES.	NUMBER.	GROSS ACREAGE.		
		A.	R.	P.
NELSON—				
Wangapeka ... ..	1	3	0	0
Collingwood ... ..	4	141	0	0
Westport ... ..	75	1,561	0	36
Brighton } Charleston } Inangahua } Buller } Ahaura } Cobden }	29	510	3	32
	7	274	3	13
	56	1,956	0	35
WESTLAND—				
Greymouth ... ..	4	49	0	38
Waimea ... ..	6	30	0	0
Kanieri ... ..	4	13	0	0
Okarito ... ..	3	65	0	0
OTAGO—				
Tuapeka ... ..	472	18,361	3	24
Mount Ida ... ..	25	4,471	1	6
Black's ... ..	30	1,240	2	38
Teviot ... ..	60	3,559	0	18
Dunstan ... ..	64	4,352	3	8
Wakatipu ... ..	485	22,667	0	37
Orepuki ... ..	2	60	0	0
Switzer's ... ..	11	805	0	0
Totals ... ..	1,338	60,119	2	5

\* 4,533 acres under application.

## No. 19.

TABLE showing the NUMBER of GOLD MINING COMPANIES Registered under the Mining Companies Limited Liability Acts and the Joint Stock Act, in the several MINING DISTRICTS upon 31st MARCH, 1872.

MINING DISTRICTS.	UNDER MINING COMPANIES ACT.			UNDER JOINT STOCK ACT.		
	No.	Capital.		No.	Capital.	
		Nominal.	Paid up.		Nominal.	Paid up.
AUCKLAND—		£	£	s.	d.	£
Grahamstown ... ..	160	3,022,660	2,379,231	0	0	439,800
Coromandel ... ..	102	1,112,100	700,572	0	0	202,500
WELLINGTON ... ..	26	28,475	2,156	19	6	...
MARLBOROUGH ... ..	2	16,000	936	0	0	...
NELSON—						
Collingwood ... ..	2	24,000	10,444	10	0	...
Inangahua ... ..	14	272,500	112,550	0	0	...
Buller (Lyell) ... ..						
Westport ... ..	1	9,600	5,650	18	0	...
Brighton ... ..	3	7,400	3,699	0	0	...
Charleston ... ..						
WESTLAND—						
Greenstone ... ..	1	6,500	4,500	0	0	...
Kanieri ... ..	4	10,536	8,093	0	0	...
Totara ... ..	5	41,500	38,800	0	0	...
OTAGO—						
Dunedin ... ..	2	11,000	3,016	0	0	...
Tuapeka ... ..	8	30,815	14,842	0	0	...
Mount Ida ... ..	11	57,720	54,045	0	0	...
Black's ... ..	5	17,400	5,512	10	0	...
Dunstan ... ..	11	82,565	43,882	0	0	...
Wakatipu ... ..	1	6,000	5,280	0	0	...
TOTALS ... ..	358	4,756,771	3,392,710	17	6	642,300

## No. 20.

ABSTRACT of RETURN of EXPENDITURE on the GOLD FIELDS of OTAGO during the THREE YEARS ended 31st MARCH, 1871; from a Return laid upon the table of the Provincial Council 20th May, 1872.

DISTRICTS.	PERIODS.			TOTALS.		
	Year ending 31st March, 1869.	Year ending 31st March, 1870.	Year ending 31st March, 1871.			
	£	s.	d.	£	s.	d.
SWITZER'S... ..	1,808	8	3	1,011	1	9
MOUNT BENDER ... ..	2,634	9	3	2,193	9	0
LAWRENCE ... ..	8,748	11	1	6,544	14	4
QUEENSTOWN ... ..	5,269	9	11	10,597	13	2
DUNSTAN ... ..	6,411	7	9	6,290	0	4
MOUNT IDA ... ..	1,911	5	7	2,919	6	6
INCIDENTALS (applicable to all)...	1,700	14	2	1,652	19	3
TOTALS ... ..	28,484	6	0	31,209	4	4
				27,015	17	3
				86,709	7	7

NOTE.—Further amounts of £6,773 2s. 6d., for 1869; £6,230 17s. 6d., for 1870; and £5,756 7s. 6d. for 1871, are debited to the Gold Fields for Police supervision within the several mining districts.

# C I R C U L A R S .

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## No. 1.

Colonial Secretary's Office,  
(Judicial Branch)

Wellington, 4th January, 1872.

SIR,—

Enclosed you will receive copies of the Regulations as published in the *New Zealand Gazette*, under which it is proposed that applications for subsidies to certain works upon the gold fields shall be received. These notices it is desirable should be posted in some conspicuous place in your Court House.

Upon receipt of any application it will be your duty, without unnecessary delay, to make enquiry into the facts alleged therein by the applicants; and you will instruct the District Engineer, or failing the appointment of such officer, some competent professional man, to examine into and report to you as to the practicability of the proposed works, and the probable cost of their construction and maintenance.

The original application, with your remarks thereupon, and the Engineer's report, you will forward to the Under-Secretary for Public Works for the Gold Fields.

The Warden

I have, &c.,  
W. GISBORNE.

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### Enclosure.

WHEREAS by "The Immigration and Public Works Act Amendment Act, 1871," it is, amongst other things, enacted that the Minister for Public Works may receive applications from the owners or lessees of works for the supply of water on Gold Fields for mining and other purposes, or from other persons interested in such works about to be constructed, for advances of money to aid in the construction, extension, or improvement of such works; and by the said Act it is further enacted that the said Minister may make Regulations prescribing the mode of making and the form of such application, and for proceeding on such application, as in the said Act mentioned: And whereas it is expedient that Regulations should be made for the purposes in the said Act mentioned:

Now therefore, I, the Honorable John Davies Ormond, the Minister for Public Works, in pursuance and exercise of the authority vested in me by the said Act, do hereby make the Regulations set forth in the Schedule hereto, prescribing the mode of making and the form of application for advances of money to aid in the construction of works for the supply of water on Gold Fields, and for proceeding on such application.

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*Schedule of Regulations prescribing the Mode of Making Applications for Advances of Money to aid in the Construction, Extension, or Improvement of Works for the Supply of Water upon Gold Fields.*

1. Persons desirous of obtaining advances of money for the purposes specified shall make application in writing to the Warden of the District, and such application shall state—

- (1.) The names and descriptions of the applicants, or if they be a Registered or Joint Stock Company, then the registered particulars thereof.
- (2.) The names of the Engineer and Manager of the works.
- (3.) The general description of the water race or races, dams, reservoirs, or other works proposed to be constructed, together with duly attested copies of the certificate or certificates of title to the water or ground; the quantity of water intended to be conveyed or stored; the length of the race or races; size of reservoirs or dams, with plans, sections, and specifications; the maximum rate proposed to be charged for the water; the nature and extent of the auriferous ground proposed to be supplied with water.
- (4.) The estimated cost of the undertaking, given in detail.
- (5.) The proposed capital to be expended on works for the supply of water.
- (6.) The interests, if any, affected by the diversion or storage of the water to be dealt with.
- (7.) The amount of money proposed to be borrowed.

2. Before making application, the applicant shall pay to the Receiver of Land Revenue of the District a deposit of  $2\frac{1}{2}$  per cent. upon the money proposed to be borrowed, and, on making the application, shall forward therewith a receipt for the same.

3. The advances will be granted in proportion to the amount of money actually expended on the construction of the work, and shall not in any case exceed one-third of the amount so expended. The advances, subject to the approval of the Minister, shall be made on the certificate of the District Engineer, or other duly appointed person, that such work has been executed in accordance with the plans and specifications previously submitted and approved of by him or by the Engineer-in-Chief or

Assistant Engineer-in-Chief. Advances will be made monthly, and only during the actual progress or execution of the work, and the final payment will be made on its actual completion.

4. Not more than fifteen thousand pounds (£15,000) will be advanced to any one undertaking.

5. Immediately after any application shall have been finally decided upon, the deposit thereon will be repaid, except so much as may be retained under authority of the Minister for covering the cost of the investigation made under the Act.

6. No loan will be made unless the borrowers shall have complied with all the provisions and requirements of the several Acts relating to the Gold Fields, and of any other law or regulation for the time being in force within the Gold Fields with respect to the proposed works.

7. Every work in respect of which any advance is made, shall be carried out in conformity with the particulars contained in the application, and in strict accordance with plans, sections, and specifications, which shall be approved of by the District Engineer, or Engineer-in-Chief, or Assistant Engineer-in-Chief; and detailed estimates of the cost of the works, which shall also be approved as above, and which detailed estimates will form the basis of advances as they may be required in all cases where the work is not executed by contract; but in cases where the work shall be executed by contract, then the schedule prices attached to such contract shall be the basis of such advance. In cases where the work may already have been executed, or partly executed, for which advances have been applied for, the value thereof shall be determined by the District Engineer, who shall give a certificate as to his estimated value of such work; and the District Engineer shall have access at all times to the works; and if the Minister shall be satisfied at any time that the provisions of this regulation are not complied with, he may cause notice to be given to the borrowers, or their Engineer or Manager, requiring them to conform to such particulars and specifications; and if they shall refuse or neglect for one calendar month after such notice to comply therewith, then the Minister may cause the assent to the application for a loan in respect of such enterprise to be cancelled, and any moneys advanced under the same to be recovered under the security to be granted: Provided that the Minister may, if he think fit, agree during the progress of any works to such modifications as he may approve.

8. The promoters of any undertaking may at any time remove the same from the operation of these regulations, by writing under their hands, or under the hands of their registered manager, addressed to the Minister, and on repayment of the moneys that may have been advanced by the Government, with interest to date.

9. A full and correct account of the cost of construction of any undertaking to which the benefits of the Act are extended, shall be kept at the office of the promoters, and shall be open at all reasonable hours to the inspection of any person deputed by the Minister, and a statement of all payments on such accounts shall be forwarded at such periods and intervals as the promoters and the Minister may agree upon. A final account, showing the cost of the works, shall on their completion be forwarded through the District Engineer to the Minister, and the final balance shall be paid on this account in the proportion above stated. Always provided that the proposed manner of carrying out the work either by contract or otherwise shall have been previously approved of by the Minister.

10. The promoters of any undertaking to which money may be advanced shall, before the issue of any loan to them, give to the Minister a valid security, including a lien or mortgage to cover the amount of loan over the works and property proposed to be constructed; and all deeds necessary shall be prepared and completed at the expense of the promoters.

11. No money shall be paid towards the construction of any water race, dam, or reservoir until the promoters of the same shall have duly registered themselves under the Mining Companies Limited Liability Act or the Joint Stock Companies Act.

12. The rate of interest to be paid by the promoters of any undertaking coming under these Regulations shall be seven pounds per centum per annum, payable quarterly from the date of the advance.

13. The capital sum borrowed shall be repaid out of the profits of the undertaking in the same proportion as the amount of money advanced by the Government bears to the paid-up capital of the Company or in such other proportion as the Minister may determine.

14. In the foregoing, the term "Minister" shall mean the Minister for Public Works or the Minister acting for him for the time being, and the terms "Engineer-in-Chief," "Assistant Engineer-in-Chief," and "District Engineer," shall mean the officers appointed under those designations by the said Minister.

W. GISBORNE.

Minister Acting for the Minister for Public Works.

Public Works Office,  
Wellington, 31st January, 1872.

NOTE.—These Regulations supersede those published in *Gazette* No. 1, of 6th January, 1872.

## No. 2.

Colonial Secretary's Office,  
(Judicial Branch)  
Wellington, 27th March, 1872.

WARDENS upon gold fields are informed that the Under-Secretary for Gold Fields (Public Works Department) has been authorised to place himself in immediate communication with them, for the purpose of obtaining the information necessary for compiling the Mineral Statistics of the Colony.

By order,

R. G. FOUNTAIN,

For the Assistant Law Officer.

No. 3.

SIR,— Wellington, 26th March, 1872.  
 I beg to forward you copy of a Resolution agreed to by the House of Representatives in 1869, and have the honor to request that, in addition to filling up the forms already transmitted to you by the Hon. the Colonial Secretary, you will furnish me with such a general Report of the state of your district up to March 31st instant, as may enable satisfactory statistics to be laid before Parliament.

I am, Sir,  
 Your obedient servant,  
 C. E. HAUGHTON.

*Order of the House of Representatives, dated 3rd August, 1869.*

“That it is desirable that the Government should cause to be laid upon the Table of this House during each Session, a Report embodying a general account of the present condition of the Gold Fields of the Colony, their advancement or otherwise during the preceding year, and their probable prospects ; together with particulars showing the average price of provisions during the year on each gold field, the rate of wages, estimated population, and such other information as would afford a comprehensive idea of the general condition of the mining interest of the Colony; and that His Excellency be requested to forward a copy of such Report to Her Majesty’s Secretary of State for the Colonies.”

No. 4.

Public Works Office,  
 (Gold Fields Branch),  
 Wellington, 27th May, 1872.

SIR,— I have the honor to request you will be so good as to furnish me with the fullest information respecting your mine under the several heads in the Schedule annexed.

The return should be made up to the 31st day of March last, and should be forwarded to my office as soon as convenient.

Your prompt and careful attention to this subject is urgently requested, as the value of my Report depends entirely upon the accuracy of your return, and the promptitude used in forwarding it to me.

I have the honor to be,  
 Your most obedient servant,  
 C. E. HAUGHTON,  
 Under-Secretary for Gold Fields.

The Manager of the  
 Gold Mining Company, Registered.”

Enclosure.

QUARTZ MINES.

- Name of Company or Mine Owner—
- Name of Reef—
- Locality—
- Average Width of Reef—
- Average Number of Men employed—
- Average Price obtained for Gold during the Year in the District—£

MACHINERY EMPLOYED.

	No. at Work.	No. Idle.	Horse-power.	Remarks.
Steam Engines employed in Winding, Pumping, Crushing, &c. ...				
Crushing Machines driven by other power than Steam ...				
Stamp-heads crushing Quartz or other vein-stuff ...				
Winding, Washing, Pumping, or other Machines moved by Water-power				
Whims ...				
Whips or Pulleys ...				

Total Value of Mining Plant—£

REPORT ON THE GOLD FIELDS.

QUANTITY of QUARTZ CRUSHED during the YEAR, and the GOLD OBTAINED THEREFROM.

Name of Company.	Where Quarts, &c., were obtained.	Quartz Crushed.			Average Yield of Gold per ton.			Total Yield of Gold.			Depth at which Quartz, &c., were obtained.		Depth of Water-level.	
		tons.	cwt.	qrs.	ozs.	dwt.	grs.	ozs.	dwt.	grs.	ft.	in.	ft.	in.

QUARTZ TAILINGS, CEMENT, and MULLOCK CRUSHED.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

PYRITES OPERATED ON.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Mine Owner or Manager.

No. 5.

APPLICATION FOR GOVERNMENT SUBSIDIES FOR WATER WORKS ON THE GOLD FIELDS.

Public Works Office,  
(Gold Fields Branch),  
Wellington, 5th July, 1872.

SIR,—

Referring to the Regulations of 31st January last, and Circular No. 43, L & J, 4th January, 1872, Wardens are instructed that whenever it is found necessary to employ a professional man, other than an Engineer of the Public Works Department, to report on the works, the name of the gentleman so employed should be communicated to the nearest Engineer of the Public Works Department in the district where the works are proposed to be carried on.

In such cases a copy of the Report should be forwarded to the said officer, in order that he may inform the Engineer-in-Chief of the nature of the works.

C. E. HAUGHTON,  
Under-Secretary for Gold Fields.