1892.

NEW ZEALAND.

MINES STATEMENT,

BY THE HON. R. J. SEDDON, MINISTER OF MINES.

MR. SPEAKER,—

In making my second Statement on the mining industry, it is gratifying to be able to show that the production of gold has greatly exceeded the quantity obtained for several years previously, and also that the output from the coal-mines is steadily increasing year after year. The magnitude the mining industry is assuming, and the large population it is the means of supporting, cannot fail to bring it prominently before all classes of the community as a very important element in contributing to the wealth and prosperity of the colony. It affords profitable employment to a large percentage of our population, and has been the means of bringing into the country a class of highly deserving colonists who, by their determination, energy, and perseverance have explored the hitherto unknown mineral lands the colony contains, opened up extensive tracts of land for permanent settlement, have been the means of bringing the waste lands of the Crown into a state of cultivation, filling them with smiling homesteads and populous towns, causing other industries to spring into existence, besides being a class which contributes largely to the revenue. When we look back, Sir, to thirty years ago and compare the colony in its present state to what it was then, the changes it has undergone are something marvellous. The attraction of our goldfields has been the means of causing thousands of people to pour in from all parts of the world to search for the mineral wealth the colony contains. These have had to undergo many hardships, endure privations, and overcome many obstacles; but notwithstanding all these the miner of to-day has not lost that liberal, free, and independent spirit which has characterised him from the earliest period of the gold discovery. They are a class of colonists we are greatly indebted to, and it behoves us to give them every encouragement and assistance in further developing and opening up the immense treasures which are distributed in rich profusion throughout the length and breadth of the land, but hidden from the eyes of man in the bowels of the earth. By so doing we are encouraging an industry which is yearly increasing in magnitude, giving profitable employment to the labouring-classes, and thereby increasing our wealth and future prosperity.

MINERAL PRODUCTION.

The principal attention of the mining community has hitherto been chiefly directed to the development of the gold, silver, and coal deposits, and, although a certain quantity of other mineral products have been yearly obtained, the number of men engaged in other mines is comparatively small in proportion to those employed in working auriferous and argentiferous lodes, auriferous drifts, and coal, but we may look in the future for more attention being given to the developmont of other minerals. We cannot expect this to be done rapidly, inasmuch that in commencing any new industry there are many difficulties and obstacles to be overcome, not only in opening-up and developing the mines, but also in finding a suitable market for the disposal of the products; and as nearly all the metalliferous and mineral deposits are found in the high lands and mountainous regions not opened up by roads, the question of getting proper machinery and supplies on to the ground, and cost of transit of ore to a port of shipment becomes a serious consideration, as it requires a large amount of capital to be expended before any return can be expected. An instance of this can be given in the case of the Wakatipu Scheelite Company, who some years ago opened out a scheelite mine at the Buckleburn, at the head of Lake Wakatipu, in Otago. On commencing to work their mine they had a good

market for their ore in Germany, where the only purchasers could be found for this mineral at that time. This induced them to erect machinery to dress the ore; but on sending Home again they found that the market was very limited, and the price then obtained would not pay the cost of transit, shipping charges, &c., so that they suspended operations. Recently, however, several inquiries have been made to the Mines Department by London and Liverpool merchants for this mineral, offering £12 and £14 per ton for ore containing 40 per cent. of scheelite. The same thing takes place in starting any new industry which is depending on foreign markets. It takes a considerable time to get it firmly established, and, unless there is an abundance of capital to work on, it is generally the second and third parties who reap the reward of the original prospectors' labours.

The total value of gold, silver, metalliferous ores, and other minerals, including kauri-gum, that have been obtained in the colony since the 1st January, 1853, up to the end of December last, amounts to £57,383,520: of this sum gold has has been obtained to the value of £47,433,117; silver, £140,148; copper-ore, £17,866; chrome-ore, £37,367; antimony-ore, £41,140; manganese-ore, £53,925; hæmatite-ore, £226; unclassified minerals, £69,041; coal exported, £506,958; coke exported, £17,899; coal, the output of the mines and consumed within the colony, £3,234,090; and kauri-gum, £5,831,743. During the last year ending same period the value of the mining produce was: Gold, £1,007,488; silver, £5,151; copper-ore, £4; antimony-ore, £4,950; manganese-ore, £2,634; other minerals, £7; coal exported, £91,173; coke exported, £3,658; coal, the output from the mines and consumed within the colony, £288,565; and kauri-gum, £437,056: making a total value of the mining produce last year £1,840,686, as against £1,524,794 for the former year, showing an increase in the value last year of £315,882, as will be seen in Table I. annexed, while Tables III. and IV. will give the districts from whence the minerals were produced.

GOLD-MINING.

In referring, Sir, to this branch of the mining industry it is very gratifying to me to mention that, unlike the Statements of several previous years which showed a falling-off in the yield of gold, there has been a large increase in the production last year. The quantity and value of gold entered for exportation for the financial year ending the 31st March last was 276,535oz., representing a value of £1,107,177; while for the former year it was 171,080oz., valued at £685,321; showing an increase last year of 105,455oz., and £421,856. This large increase in the quantity exported is to some extent due to gold being held by the banks pending the abolition of the gold duty, which took place on the 1st April, 1891. By reference to the Customs returns it will be seen that this is patent in the case of gold exported from Otago during the quarter ending 31st March, 1891, which only shows the export to be 64oz. Taking the other districts affected by the abolition of the duty, the quantity exported from the West Coast was 20,092oz.; Marlborough, nil; and Nelson, 80oz.: making the total quantity exported from all districts affected by the abolition of the gold duty during the March quarter 20,236oz., representing a value of £80,934. In order to arrive at the quantity and value of gold held back which ought to be included in the previous year's return, the average for the four quarters previous to the 1st January, 1891, that is the quantity and value exported from these districts during the year ending the 31st December, 1890, divided by four, will give a very close approximation of the quantity that ought to have been exported during the March quarter of 1891. If anything, it will give slightly more to the credit of the March quarter than it really would have been, as that quarter was very dry both on the West Coast and in Otago, which prevented hydraulic-sluicing operations from being continuously carried on. Taking therefore the average of the four quarters referred to, it shows that the returns from Nelson should have been for the quarter ending 31st March, 1891, 714oz.; Marlborough, 1,518oz.; West Coast, 22,274oz.; and Otago, 15,852oz.: making a total of 40,350oz., representing a value of £161,906: showing that 20,122oz., valued at £80,972, should be credited to the previous year's produce, and deducted from that exported last year, which makes the actual yield last year to be 256,413oz., representing a value of £1,026,145, as against 191,202oz., valued at £766,293 for the previous year; thus showing the actual value of the increased yield last year to be £259,852. Taking the production of gold from the different districts last year, the West Coast contributed 45·2 per cent.; Otago, 35 per cent.; Auckland, 15 per cent.; and Marlborough and Nelson 4 per cent. It is also gratifying to find the increased yield was from every gold-mining district in the colony; the increased production being from Auckland, 1,894oz.; Marlborough, 4,687oz.; Nelson, 3,691oz.; West Coast, 31,366oz.; and from Otago, 63,816oz.

QUARTZ-WORKINGS.

In reference to quartz-workings this may be said to be the most permanent branch of the gold-mining industry, and it is satisfactory to find that the extent of the workings is gradually increasing year after year. During the last year the returns from the Coromandel, Thames, Ohinemuri, Te Aroha, and Reefton Districts, which are the principal places where quartz-mining is carried on, show that there were 110,815 tons of quartz and 21,953 tons of mullock crushed, and 18,660 tons of tailings treated, which yielded 73,453oz. gold and 30,538oz. bullion, representing a value of £269,956; while for the previous year 95,606 tons of quartz and 21,261 tons of mullock were crushed, and 16,065 tons of tailings treated, which yielded 73,095oz. gold and 42,503oz. bullion, having a value of £251,248: thus showing an increase in the value of the production last year of £18,708. Although the quantity of bullion obtained for the previous year was more than last year, the value was only £26,325, while the bullion obtained last year was valued at £33,849. In dealing with this branch of mining I will confine my remarks to the principal localities where auriferous and argentiferous lodes are being worked.

Puhipuhi.

There is very little more known in regard to Puhipuhi becoming a field where the argentiferous lodes can be made to pay for working than at the time of my last Statement. The reduction and extraction plant erected by the prospectors proved unsuitable for the class of ore there is to deal with on this field. This has not only disheartened the prospectors, who have spent a considerable amount of capital without getting any return, but it has also proved a great drawback to other claims being prospected, as there was no opportunity of getting the ore tested on the field, and there being no other plants nearer than Auckland and Thames, the cost of transit of the ore to either of these places makes the working of low-grade ore prohibitive. During last year two parcels of stone were forwarded to the Thames, and treated at the experimental plant at the School of Mines. One of these parcels had only an assay-value of £1 8s. per ton, but the other one of 1,900lb. of ore from the Waipu Claim showed an assay-value of £9 10s., there being 1oz. 5dwt. of gold and 33oz. 5dwt. silver, of which bullion to the value of £8 14s. was extracted, being 91·5 per cent. of the assay-value. This shows that there is ore on the field capable of being worked at a profit if there were proper appliances to treat it; but until far more prospecting has been done, and the lodes proved to a reasonable depth, it is premature to form a definite opinion as to whether this field will ultimately be the means of affording profitable employment to a large mining population or not.

Coromandel.

Some of the mines in the Coromandel District are not looking so well as they did twelve months ago, although the quantity of gold obtained last year was 2,383oz. more than for the previous one, which is principally due to the mines on the Kuaotunu field being better opened up and developed. The claims on the Tokatea Range still continue to contribute to the production of gold, although not to the same extent as they did in former years. The falling-off in the yield of gold is attributed to the ground being held by companies, who would not employ men on wages to work it, neither would they let any portion of it on tribute without getting a large percentage of the gross yield. The ground belonging to two companies—the Harbour View and Royal Oak—was declared forfeited by the Warden, and again taken up by other parties, and recently 184oz. of gold was obtained from 200lb. of stone taken from the Royal Oak ground, showing that, although this ground has been worked near the surface for the last twenty-six years, there are still some rich patches of auriferous quartz to be obtained.

The two English companies—the Kapanga and Coromandel—have amalgamated their properties with the Blagrove Freehold, and are working all of them now under one proprietary; but their mining operations last year were not attended with that success the proprietors deserve. Some steps have been taken to float a company to purchase the whole of the holdings on the Tokatea Range, with the view of opening up the ground and properly testing the main lode going through the range, but this scheme is said to have fallen through. During last year 855 tons of quartz was crushed from mines in the vicinity of Coromandel, which yielded 1,812oz. of gold.

Kuaotunu.

At Kuaotunu mining operations are beginning to be carried on extensively. There are five crushing, grinding, and amalgamating plants on the field, but neither of them is of the

most approved construction. At the Try Fluke Company's plant they save the whole of the tailings, and grind and amalgamate it in pans, but there is a large percentage of the gold carried away in muddy water from the buddles. The average return of gold from the ordinary battery process of treatment is about 12dwt. per ton. About an equal quantity can be got by regrinding and amalgamating the tailings, and recently a test was made of the sediment obtained from twenty gallons of muddy water boiled down, which gave about 10dwt. of gold per ton, thus showing that with the ordinary process of treatment not more than about 36 per cent. of the gold in the stone is saved. The owners of mining properties on this field are beginning to see the advantages of treating the tailings, and are more careful about saving the gold than they were when the field was first opened. During last year 10,872 tons of stone were crushed, which yielded 8,331oz. of gold. There are several auriferous lodes on this field on which a large amount of work has been done in constructing adits and carrying on prospecting operations, and from the appearance of these lodes and the average returns of gold in the stone, the field, although not a rich one, is likely to afford permanent employment to a considerable population for many years.

Thames.

One of the principal gold-producing mines at the Thames having suspended operations at the deep levels, and discharged about ninety wages-men, has cast a gloom on this place for a time, but, notwithstanding this, there has been 781oz. more gold obtained in the district last year than for the previous one. There was a falling-off to the extent of 1,199oz. in the Thames Borough, but this was compensated by an increased yield of 1,980oz. within the Thames County. The whole of the mines within the Thames Borough are depending on the drainage of the ground by the Big Pump, and as the drainage-rates form a considerable element in the weekly expenditure of each of the holders of these mines, the Saxon Company, who had to pay £97 10s. a month for drainage, suspended operations at the deep levels in order to get their rates reduced. The principal gold-producing mines in this locality last year, and the quantity of gold obtained, were the Moanataiari, 5,132oz.; Saxon, 4,765oz.; Sylvia, 1,152oz. gold and bullion to the value of £7,874; Waiotahi, 2,859oz.; Hazelbank, 2,213oz.; May Queen, 2,068oz.; Cambria, 1,565oz.; Comers, 1,073oz.; and Fame and Fortune, 1,035oz. During last year 47,197 tons of stone and 21,953 tons of mullock were crushed, and 17,000 tons of tailings treated, which yielded 35,871oz. of gold. The mullock is merely material quarried in a face from the Kurunui Hill, which yielded 1,170oz. of gold, being an average of about 1dwt. 1½gr. per ton, which is said to pay all expenses in connection with quarrying and treating this class of material.

Ohinemuri.

The mines in the Ohinemuri District are looking very promising. There are large lodes containing auriferous and argentiferous ores in this district, but until within the last four years they were looked upon as being of too low a grade to pay for working, but since the principle of assaying and sampling the ores has come into general use at the mines, it is found that there are very rich ores in this district, and that with a proper method of treatment many of the mines are likely to contribute largely to the production of gold in future.

At Karangahake the Crown Company have succeeded in opening up a valuable property. They discovered a lode in the Waitewheta Gorge, which varies from 4ft. to 8ft. in thickness, but where the lode is wide only about 4ft. of it is taken at the present time, and this has averaged in value about £15 per ton. This lode has been prospected on both sides of the creek, and at different levels, and the whole of the lode stuff will pay for working when the large plant which is now in course of erection is completed.

At Waihi, extensive mining operations are being carried on by the Waihi Company, who are working the Martha, Union, and Rosemont lodes, the former lode being about 24ft. in thickness, all of which is taken out and sent to the crushing-plant for treatment. This company has erected one of the largest and most complete crushing-plants in the colony. There are thirty heads of stamps employed in dry-crushing and thirty heads in wet-crushing, the water from the wet-crushing battery being used over and over again, so that no fine gold or silver can be carried away with the muddy water. They have also large and efficient amalgamating appliances, and they are now erecting a plant to treat the pulverised ore with a solution of potassium cyanide on the Bohm process.

At Waitekauri Mr. T. H. Russell took up the ground comprising the old workings, where a large main lode of low-grade ore exists, and erected a crushing-plant similar to the one recently erected by the Waihi Company for wet-crushing; but the ore from this main lode

proved too low a grade to pay the cost of treatment. During last year a new discovery was made at Komata, and after carefully testing the ore from this new find, Mr. Russell purchased the property for £3,000, and is now engaged in constructing a tramway to connect the mine with his crushing battery. He tested 100 tons of the ore, which yielded 450oz. of gold. Several large auriferous lodes are known to exist between Waitekauri and the East Coast, but very little prospecting has ever been done on any of them, although some of them have been considered payable for working with modern appliances.

During last year 13,865 tons of quartz was crushed from the Ohinemuri District, which yielded 1,022oz. of gold, and 20,673oz. of bullion.

Te Aroha.

At Te Aroha very little mining has been carried on last year, most of the miners that formerly were on this field having left the district, owing to the principal ground being held in two large special claims for several years, without much work being done in either of them. The claims referred to are those previously held by the Te Aroha Gold- and Silver-mining Company and the Ferguson Syndicate, and although portion of this ground has now been thrown open it is difficult to get men to return to a district when once they leave it in search of employment elsewhere. When once a general exodus from a field occurs it takes some years before men can again be induced to return. There is an auriferous belt of country in this locality of considerable extent, but it requires a good deal of means to open up and develop the lodes. During last year 1,597 tons of quartz was crushed, and 1,125 tons of tailings treated, which yielded 979oz. gold.

Mahakipawa.

At Mahakipawa the Ravenswood Company, of London, have erected a crushing-plant in the Waikakaho Valley, and connected the mines and plant by an aërial tramway; but, having had many unforeseen difficulties to contend with, they have only now commenced to crush the stone, so that very little more is known about this field than there was twelve months ago.

Inangahua.

As the Inangahua District is by far the largest field where quartz-mining operations are carried on in the Middle Island, it may be interesting to honourable members to state that a table has been compiled, and appears in the report of the Inspecting Engineer, which shows the whole of the quartz-mining companies carrying on operations on this field since it was first opened, giving the paid-up capital of each company, and dividends declared. To take the whole of these companies—that is, the amount paid in calls, and that received in dividends, the table shows a profit on the workings of £221,578; thus proving that although many persons have lost money in mining on this field the loss was principally due to purchasing shares far above their nominal value, and not by investing money judiciously. The table also shows that £272,029 was paid into the different companies in calls, and £493,607 received in dividends; that 522,250 tons of quartz have been crushed, yielding 410,902oz. of gold, representing a value of £1,542,350. There is an extensive belt of country running through this district, containing numerous auriferous lodes, many of which have not yet been tested; and even those which have been worked in very few instances have the lodes been systematically prospected, so that it may truly be said that quartz-mining in this locality is only in its infancy. During last year 35,562 tons of quartz was crushed, which yielded 23,390oz. of gold, representing a value of £93,885.

Otago.

Notwithstanding the large quantity of gold obtained in the Otago District very little of it has come from the quartz-workings. Although one would expect to find auriferous lodes in the high lands, where so rich deposits of gold are found in the alluvial drifts in the valleys, the only locality where quartz-mining is chiefly carried on is in the Lake District, some of the claims at Skippers', the Shotover, and Macetown having given fair returns last year. The quantity of quartz crushed in this district for the past year has been 7,220 tons, which yielded 4,011oz. representing a value of £16,308. Other quartz-workings have been carried on in the vicinity of Nenthorn, Barewood, Deepdell, and the Old-man Range, but no definite returns from any of the mines in either of these localities have been obtained.

ALLUVIAL MINING.

I will now, Sir, refer to the alluvial mining which may be said to include hydraulic-sluicing. This class of mining is entirely confined to the Middle and South Island, and, indeed, there are so few mines in the South or Stewart Island, that the alluvial goldfields may be said to be confined to Otago and the West Coast. There are about 10,393 miners actively engaged in this branch of the gold-mining industry, of which number 2,967 are Chinese, and nearly three-fourths of the gold produced in the colony last year was obtained from the auriferous alluvial drifts. Notwithstanding that a large number of miners have been continously engaged in this class of mining since the discovery of gold in New Zealand, there are still existing extensive areas of country covered with auriferous ground which will afford remunerative employment to a large population for many years if worked with modern appliances. A great deal of the shallow and easily-worked ground has been gone over; but even after some of these places have been worked two or three times they are found to yield sufficient gold to pay for reworking them by hydraulic-sluicing where plenty of water is available. Ground is now taken up and worked with profit which a few years ago was considered valueless. Indeed it may be said that the number of men who could be profitably engaged in working the auriferous drifts is only limited by the quantity of available water which could be taken to command and work the ground.

Mahakipawa.

The most recently discovered field—Mahakipawa—suffered very much in prosperity last year by the wet season, which caused a succession of floods in the creek in which the principal workings are being carried on. Notwithstanding this, a considerable quantity of gold was obtained from this field last year for the number of men employed. The whole of the creek claims on Crown lands will be worked out within twelve months if it is moderately fine weather; but the lead or run of gold-bearing drift having been traced out of the creek-bed into the flat, which is comprised in Mr. Cullen's freehold, the field may last a considerable time. However, if the gold continues to go down the flat, heavier pumping machinery will have to be erected than is now used, as it is found there is a large quantity of water to contend with in the ground.

A new discovery of auriferous ground was made by four miners in Duncan's Gully, about two miles from Mahakipawa, nearer Queen Charlotte Sound, in February last, the prospectors getting one piece of gold about an ounce in weight, and several smaller pieces, the sinking being about 24ft. This discovery is about two miles and a half back from the Grove–Mahakipawa Road, and about one mile and a quarter up the gully above Mr. Duncan's freehold. Some other claims were bottomed higher up than the Prospectors, and gold got; but the wet weather coming on flooded the whole of them, and very little work has been done since to prove whether there is any extent of ground or not that will pay for working.

West Coast.

The quantity of gold produced from the West Coast last year was 118,158oz., representing a value of £472,672. Of this quantity, about 90,000oz. was obtained from the alluvial workings, in which 5,080 miners were employed—namely, 3,779 Europeans, and 1,301 Chinese. The whole of the West Coast may be said to contain auriferous-drift deposits, as well as lodes in which gold, silver, and other metalliferous ores are found; but owing to the rough and broken nature of the country, which is also covered with a dense forest, requiring metalled roads and horse-tracks to be constructed before provisions and supplies can be conveyed to those residing in it, the back and south portion of that part of the colony has hardly ever been prospected to any extent. Indeed, there are many parts of the West Coast that have never yet been trodden by man. Yet gold is found in almost the whole of the river-beds between Collingwood and Big Bay.

Westport.

There are a few miners still working on the ocean-beach between the Buller and the Mokihinui River, but most of the mining population is between Westport and Fox's River, near Brighton. The quantity of gold obtained in the Westport district last year was 14,148oz., valued at £56,540. There is an extensive area of ground, in which numerous leads or runs of gold-bearing drifts have been found—at Addison's, Croninville, and Charleston. At the latter place the Buller County Council is bringing in an additional supply of water for the miners from the Four-mile Creek, as it is considered by those in this locality that, with a plentiful supply, ground which was considered valueless in the early days of the field can now be made,

with modern appliances, remunerative for working. At Addison's Flat there are still some very good claims on the leads of gold discovered when this flat was first opened; and of recent years a new lead has been discovered nearer Cape Foulwind than any of the others by Minogue and party, which is found to give good returns for working.

Inangahua.

In the Inangahua District the greater portion of the gold is obtained from quartz workings, but there are a considerable number of miners still engaged in working the auriferous alluvial drifts in different portions of the district—namely, at Matakitaki, Maruia, Slab Hut Creek, Snowy River, Antonio's, and in the vicinity of Boatman's. The quantity of gold produced from the alluvial workings last year was, approximately, 5,000oz., representing a value of £20,000; and there were 307 miners employed in this branch of mining, of which 217 were Chinese.

Grey.

There are a large number of miners employed in the Grey district in working the auriferous drifts, which cover an extensive area. There is a belt of country from the main Grey River, at its junction with Clarke's River, to Maori Creek, and westward to the ocean, where rich deposits of gold have been from time to time found. There are several runs or leads of auriferous drifts running at almost right angles to the present creek-beds, in a belt of country which includes Noble's, Granville, Orwell Creek, Callaghan's, Nelson Creek, Kangaroo, Red Jacks, No Town, Maori Gully, Maori Creek, Limestone, and Rutherglen Diggings; and this belt joins with one running parallel with the coast-line coming from the direction of the Greenstone and Maori Creek. There are very few places on these belts where alluvial drifts are found—even on the terraces—but which could be made remunerative for working were a good supply of water available; but, as the whole of the creeks and streams cross this belt at about right angles, forming deep ravines and precipitous gorges, it would be a very costly undertaking to construct a water-supply to command a large extent of country. On the opposite side of the Grey Valley from this belt there is the Moonlight and Blackball Diggings. At the latter place about thirty-seven miners are employed, all of whom are making good wages, notwithstanding the primitive methods adopted in working some of the claims. Very little prospecting has been done in this direction, as there are no roads or tracks leading inland from these diggings, and the whole of the hydraulic plants that are now being used were principally carried for a distance of about two miles on men's backs to their claims. The quantity of gold produced from the Grey district last year was 25,775oz., valued at £103,135, and about 1,425 miners were employed, of which 413 were Chinese.

Westland.

Westland contains the largest stretch of auriferous country there is on the West Coast, in the southern portion of which scarcely any prospecting has been done with the exception of testing the beach leads along the coast-line. There are four large mining centres in this district which are worthy of notice—namely, Kumara, Waimea, Rimu, and Ross. The quantity of gold obtained from the Westland District last year was 25,775oz., representing a value of £103,135, and about 1,525 miners were employed in working in the auriferous alluvial drifts, of which 413 were Chinese.

Kumara.

Kumara is the largest mining centre on the West Coast, and it may be said to be a field where the miners are making better wages than any other on this side of the main range. There are about 235 miners employed in claims, and these claims are all within a radius of one mile. As near as can be ascertained, the quantity of gold obtained last year from this place was about 13,989oz., representing a value of £54,558. The most of the gold yet obtained from this field has come out of the drift above a false bottom, and it is considered by those acquainted with mining that there is a probability of other leads of gold being found under the false bottom on which the claims are being worked. Taking into consideration the large quantity of gold that has already been obtained from the whole of the claims, which do not exceed an area of 1,000 acres, and that not more than about 550 acres of this ground are yet worked, it must be admitted to be a rich field, seeing that gold has already been obtained to the value of about £1,154,000, and it is a field deserving of being further prospected to see if a deep lead or run of rich auriferous drift exists. The claimholders have combined, and each contributed an equal amount towards sinking a prospecting shaft,

which is now down 100ft. below the false bottom they were originally working on. A few colours of gold have been got in one of the layers gone through, but nothing payable for working has yet been struck. The difficulty in sinking this shaft is the quantity of water to contend with, and, as there is about two-thirds of a sluice-head to lift, it is possible that the present pumping appliance—namely, a jet-pump—will not be capable of raising the water from a great depth, and this will necessitate pumping machinery being erected before the ground can be tested.

Waimea.

There has been a large quantity of gold obtained about the Waimea; but now the ground is getting worked for a long distance back from the creek, and the creek-bed largely filled up with tailings. The fall for hydraulic sluicing is beginning to seriously interfere with working the ground advantageously. The most of the claims are worked with water from the Government water-race; but, owing to the difficulties there are to contend with here, the yield of gold is small for the number of men employed. At the present time the water-race is being extended to command new ground at the head of Waimea Creek, which, when completed, will open up a much larger field for sluicing operations to be carried on.

Kanieri and Rimu.

There are a considerable number of miners employed in the vicinity of Kanieri, Blue Spur, Back Creek, and Rimu. At the latter place about the same number of miners are employed as for the previous year, but no new ground has been opened, nor the lead traced for a greater distance in a southerly direction. The Prospecting Association sunk thirteen shafts last year in this locality, having an aggregate depth of 859ft., and also constructed 208ft. of prospecting drives, without meeting with much success, the total expenditure upon this work being only £206. Recently I have received intimation that gold has been discovered in payable quantities for working near the Ross Road, in the vicinity of Ogilvie's. A shaft has been sunk, and a layer of drift—3ft. 6in.—passed through, which prospected at the rate of 1gr. of gold to the tindishful of stuff; the wash-drift from this layer went 1dwt. 2gr. to the load.

Ross.

There are still a considerable number of miners employed about Ross in working the auriferous drifts, and also scattered along the different ocean-beaches along the coast between this and Jackson's Bay. There is a large area covered with auriferous drifts in the locality of Ross, and some very rich ground has been worked on the deep levels on the flat. These will no doubt be again opened up, when larger pumping machinery is erected to drain the ground; but at the present time the ground is held by the Ross United Gold-mining Company, who have not sufficient capital to place machinery thereon, and they are merely working the top levels on tribute. The quantity of gold obtained in the immediate vicinity of Ross last year was 4,271oz., valued at £17,078.

With regard to the south portion of Westland, coarse gold has been found in the beds of the Mokihinui, Wataroa, Waiho, Cook's, and other rivers, a considerable distance back from the ocean-beach, but no workings of any extent have been carried on inland; and, until this portion of the colony is better opened, and more facilities given by way of communication and the transmission of cheap and regular supplies, we can never expect to have a large population, nor much prospecting done in this locality.

Otago.

Next in importance to the West Coast is Otago. The quantity of gold obtained from this field last year was 105,531oz., representing a value of £423,527, and about 5,063 miners were employed in working the alluvial drifts, of whom about 1,573 were Chinese. There are very few places within the Otago goldfield where alluvial drifts exist that do not contain gold. The principal gold-mining centres are Maerewhenua, Mount Ida, St. Bathan's, Tinker's, Tuapeka, Clutha Valley, Bannockburn, Cardrona, Shotover, Nevis, Waikaia, and Orepuki, including Round Hill.

Maerewhenua.

At Maerewhenua there is a considerable area of auriferous ground, on which about seventy-four miners are employed, but very little of this area can be worked with the available water-supply that can be brought on to the field. During the last year the Maerewhenua River was proclaimed a watercourse for the deposit of tailings; but it is very

questionable if this will cause more mining to be carried on than heretofore, owing to the scarcity of water. The notice of the intention to proclaim this river a tailings-channel having been issued previous to my taking office, it was allowed to proceed; at the same time, it is questionable whether the amount of compensation already arranged for, and that which will still have to be paid, will be recouped from the revenue derived from mining in this locality. The quantity of gold obtained from this field last year was about 2,000oz., representing a value of about £8,000.

Mount Ida.

There is a large area of auriferous ground in this district, and a considerable number of miners at work in different localities on the field; but in general the ground is very poor, and the water-supply so intermittent that the miners can only make small wages. There is some very rich ground on the top of Mount Buster, but, this being at a high elevation, the claims can only be worked for about six months in the year. The quantity of gold obtained last year in this district, which includes St. Bathan's, was 12,276oz., valued at £49,380.

St. Bathan's.

There are some very rich claims in the locality of St. Bathan's, where the workings are carried on in the old quartz-drift or granite-wash. A sludge-channel or tail-race has been in course of construction for the last five years, to enable the claims to be worked to a deeper level, and last year 450oz. of gold was obtained from the excavated material in the construction of this tail-race, which will yet take a considerable time to complete. To show the value of some of the ground in this locality, one of Mr. John Ewen's claims produced last year 850oz. of gold, having a value of £3,400, and only eight men are employed in working it. From seven claims in this locality 2,350oz. of gold was obtained, representing a value of £9,400.

Tinker's.

The quantity of gold obtained from seven claims at Tinker's last year was 3,350oz., having a value of £13,400, and forty-four men were employed. This gives an average of £303 10s. for every man employed, which is by far the highest average wages on any gold-field in the colony. There is also a large extent of auriferous ground in this locality, but, all the available water being taken up, more claims cannot be opened. Every available stream is taken up that can be brought on to the ground at a sufficient elevation. To show the value that water is held at in this locality, during last year the Undaunted Company purchased the right of four sluice-heads of water from Shepherd's Creek for £1,250, and they will have to construct a water-race for a distance of about twelve miles to bring the water on to their ground.

Tuapeka.

The mining claims in the Tuapeka District are scattered over an extensive area of country. Although this is the centre of a large mining district, there are very few claims in close proximity to each other. The principal gold-working in the immediate vicinity of Tuapeka is at the Blue Spur, where an English company is working the cement. They hold most of the water rights in the locality, and therefore have the key to the available ground. Last year this company obtained 3,470oz. gold, representing a value of £13,330; but as this was principally obtained from the tailings and alluvial drift leading into the cement, it gives no criterion of the amount of gold that will be got in working the cement by itself. The total quantity of gold obtained in the Tuapeka District last year, including the portion of the Clutha Valley within the Tuapeka County, was 29,557oz., having a value of £118,706.

Clutha Valley.

The Clutha Valley may be said to contain the most extensive area of rich auriferous-drift deposits there is in the colony. The beds of almost every stream flowing into the Clutha River contains gold, some of which have been remarkably rich. Most of the claims held in the valley of the Clutha are considered good mining properties, and likely to yield fair returns of gold by working them. The Island Block Company were not so successful last year as they were previously, but they have brought in a larger supply of water, so as to be able to work more hydraulic-elevators. The Island Block Extended and Roxburgh Amalgamated Companies are said to have fair ground, and likely to be good investments. Indeed, there are very few claims in this valley that cannot be made to yield fair returns if they have a good supply of water, and are worked economically and systematically.

Bannockburn.

There are still a good number of miners working claims at Bannockburn by means of the Pipeclay Sludge-channel, but the ground is said to be getting very poor. A new sludge-channel has been constructed higher up the valley of the Kawarau River than the Pipeclay Channel, and some claims are being worked into it with fair results.

Cardrona.

The claims in the Cardrona Valley are still continuing to give fair returns. Last year there were about 2,000oz. of gold obtained, and seventy men employed; but no further new ground has been opened up. Craig and party are tracing the lead higher up the range than where previously worked, and are getting coarse pieces of gold. The diggings on the top of Mount Criffel produced a considerable quantity of gold for the number of men employed, but the ground cannot be worked for more than six months in the year, and the extent of the workings is limited to the available quantity of water brought on to the field. Last season 1,200oz. of gold was obtained from Criffel, and twenty-three men employed in the claims.

Shotover.

In the localities of the Shotover and Arrow Valleys some of the hydraulic-sluicing claims have yielded a fair quantity of gold. The terraces in the valley of the Shotover will all pay to work with a good supply of water, and the drift, being principally of fine character, almost the whole of it can be sent away in the sluice. Amongst the principal gold-producing claims in this locality may be mentioned Aspinal's, Davis and Moody's, Johnston's, and Davis Brothers. In connection with Davis and Moody's claim, an expenditure of about £10,000 was incurred in bringing in a supply of water from Skipper's Creek, and last season was the first that they were able to work the ground, the results of the working being considered highly satisfactory. The same gentlemen have another claim in the bed of the Arrow River, above the falls, on which they have expended about £7,000, and have now about got it in working order. The total quantity of gold obtained in the Wakatipu District—which includes Criffel, Cardrona, Shotover and Nevis—was 19,491oz., representing a value of £78,118.

Orepuki.

The principal place where most of the miners are working in the Orepuki District is at Round Hill, where there have been in the past some very rich claims. There are about 160 Europeans and 250 Chinese employed in this district, and some of the Chinese are said to be making as much as £10 per week a man. About two years ago a company was formed in London to work some ground at Round Hill, and last year they got the plant so far completed that a commencement was made to open it up, and, from the returns obtained, this company considers they have a valuable mining property. The ground in this locality must be very rich, as the quantity of water used to work the ordinary claims is very small. A sluice-head of water here is the quantity that will pass over a bar in the bottom of a box 10in. wide and 1in. in depth, and about four of these heads are used to work a claim. At Orepuki there are a few miners engaged in claims, but in general the ground is getting very poor.

During last year about fifty-four miners were working on Coal Island, and on the mainland, near Preservation Inlet, also in the beds of some of the streams about six miles north of Preservation Inlet. It is said that in some instances at the latter place they are able to get over 1oz. of gold a man per day when the creek is low enough to allow them to work. The quantity of gold obtained from all these localities last year was 6,829oz., representing a value of £27,537.

DREDGING.

I will now, Sir, casually refer to dredging operations in connection with gold-mining. It may be said that dredges have succeeded in lifting the auriferous material from the beds of rivers, ocean beaches, and wet ground according to expectation, but their deficiency was in the gold-saving appliances, in not being able to extract the gold from the material after lifting it. Improvements in these appliances are continually being made, and the time is not far distant when we may look forward to dredges being employed to work comparatively shallow ground more economically than by any other means, especially where there is little fall to be obtained and a large quantity of water to be contended with. It is very seldom that any new appliance is perfected in the first instance—it is only after using it that its defects are found out; and as these dredges have been worked successfully on the Clutha

River for a number of years, and more recently on the Shotover River, as well as in working wet ground on Waipori Flat, there is no reason why they should not be made profitable ventures if ordinary care is taken in prospecting the ground before incurrring expense in procuring machinery.

COAL-MINING.

I now come to one of the most important branches of the mining industry—namely, coal-mining, which is steadily progressing year after year in proportion to the increase of our population requiring fuel, and to the establishment of industries using coal for generating motive power. The increase in the output from our mines where lignite, brown, and pitch coal are obtained can only take place as the demand for local consumption increases, for, although the best of these classes of coal can be carried some distance from the mines, its supply is limited to the consumption, it may be said, within a radius of 150 miles, as no large stock of it can be kept on hand on account of its breaking up and crumbling away by exposure to the atmosphere. It is therefore only from bituminous coal-mines that a large increased output can be looked for; and, as our principal bituminous coal-field is on the western slope of the main range in the Middle Island, the yearly increased output from the mines in this part of the colony cannot be expected to be much greater than hitherto until the harbours at Westport and Greymouth are completed to such an extent that vessels carrying 3,000 tons on one bottom can leave these ports, so as to carry the coal to markets outside of the colony. No large sudden increase in the output from our mines need be expected on the completion of these harbours, as it will take some years to open up the mines and find foreign markets for the coal. Seeing that there is now a large number of coal-mines being worked in Japan, where the cost of labour is extremely small, the coal from that country being taken to different ports in India and South America, it is only owing to the superior quality of our coal that we may hope to find a market, and this will take a certain time to establish. We may, however, reasonably expect that coal properties in this colony, on the completion of the West Coast harbours, will be able to compete with those in New South Wales in supplying coal to any of the other Australian Colonies.

During last year the total output from all the mines of the colony was 668,794 tons, as against 637,397 for the previous year, thus showing an increase in the output of 31,397 tons. The quantity of coal imported was 120,775 tons from New South Wales, and 4,543 tons from other countries, making 125,318 tons, as against 110,939 tons imported for the previous year. This shows an increase in the quantity imported for the previous year of 14,379 tons. In regard to importation of coal from New South Wales, the quantity has varied from 98,241 tons to 144,442 tons per annum. The total quantity imported from New South Wales during the last twelve years was 1,428,309 tons, which is equal to an average annual importation of 119,026 tons. It may be said, taking one year with another, that the importation of coal from New South Wales has varied very little. A great deal of this is due to the coal being carried as back-freight by vessels trading with produce between here and Australia, and also by coal being used to fill up as dead-weight in vessels carrying timber.

Taking the output from the mines last year and the quantity of coal imported, it makes a total of 794,112 tons, as against 748,366 tons for the previons year. The quantity exported last year was 99,464 tons, but out of this 70,371 tons is returned by the Customs Department as coal exported to the United Kingdom, which means that it was used for coaling the Direct steamers; this may fairly be termed consumption within the colony on the same basis as supplying coal for the Union Company's steamers in the intercolonial trade; therefore, on this assumption, the net export last year was 29,093 tons, out of which 6,300 tons was of foreign produce. Deducting the quantity of coal exported it leaves the consumption within the colony last year as being 765,019 tons, as against 714,932 tons for the previous year, which shows an increased consumption last year of 50,087 tons. It is, however, very gratifying to find, notwithstanding the quantity of foreign coal consumed in the colony, that the demand is gradually increasing year after year. The consumption last year was 432,574 tons more than what it was in 1878.

Of the total quantity of the different classes of coal obtained in the colony since the records have been kept by the department, 3,531,749 tons is bituminous coal, 2,275,364 tons brown coal, 1,112,965 tons pitch coal, and 211,708 tons of lignite—making a total of 7,131,986 tons. During last year the output from the mines consisted of 387,839 tons of bituminous coal, as against 323,712 tons for the former year, thus showing an increase

in the output of this class last year of 64,127 tons; while the output of brown coal was 161,904 tons, and pitch coal 96,979 tons, as against 171,725 tons and 124,593 tons respectively for the previous year—showing a falling-off in the output of these classes of coal to the extent of 37,435 tons; while during the same period 22,072 tons of lignite was raised, being 4,705 tons more than for the previous year. The supply of lignite is entirely regulated by the demand in the immediate vicinity of the pits where it is raised, and the demand for brown and pitch coal will always depend upon the output of bituminous coal, and the price it can be supplied at in the district where brown and pitch coal are obtained.

Any large increased output of coal in future must necessarily be from the bituminous coal-mines, and as these are, as I have already remarked, situated on the west coast of the Middle Island, where the harbours are yet in course of construction, it will take a number of years yet before the coalfield is properly developed and the mines opened up. The districts in which there was an increased output last year were: Westport, 35,788 tons; Greymouth, 26,504 tons; and Mokau, 2,525 tons; the principal increase being from the Westport and Brunner Collieries. It is to be regretted that the Kawakawa Mine, in the Bay of Islands County, is almost worked out, the old workings being now abandoned. Some new workings are being opened up with a view of taking out a small area of coal left in pillars in the early days when the mine was first opened. There is a large coal-field between Hikurangi and Hukerenui, which is now being opened up by the extension of the railway from Kamo, and when this is completed it will afford a cheap means of transit of the coal to a port of shipment. The coal found in this locality is much superior to that found at Kamo, being somewhat similar in quality to that obtained at Kawakawa.

In reference to our bituminous coalfields, it is deplorable to see the waste of coal that is carried on at some of the mines. It will be recollected by some honourable members that when Mr. Kennedy, the managing director of Brunner Colliery, was giving his evidence last year before the Goldfields Committee on some of the measures of the Coal-mines Act which was passed last session, he stated that about 500 tons of slack coal was emptied into the Grey River every month from the Brunner Mine alone, which ought to be utilised and converted into a marketable commodity. There is a large market for coke of good quality in the Australian Colonies, and by a proper system of manufacture the slack from the mines on the West Coast would make the finest coke in the world. I called attention to this in my last Statement, and the facts are fully borne out by the statements in a letter addressed to the Hon. John See, the Treasurer of New South Wales, by the secretary of the Broken Hill Proprietary Company, which has been published. In this letter it is asserted that the Broken Hill Company is using 1,000 tons of coke per week, but that all the colonial coke that has been tried is far inferior to that of either English or German manufacture, on account of the slack not being washed, prepared, dressed, and burned, so as to make it more dense and hard.

Colonial coke is found to contain about 6 per cent. more ash than English coke, and this is stated to be equal to using eighty tons more of the colonial than the English article every week, reducing the capacity of the furnaces by seventy tons of ore per week, and also necessitating seventy tons more flux being used for the same period, or, as the secretary states, "The use of colonial coke instead of English would mulct the company in the sum of £645 weekly, made up as follows: Eighty tons at £5 per ton, £400; profit on seventy tons of ore at £2 10s. per ton, £175; seventy tons of flux—iron and lime—£70." The secretary to the company estimates the loss with English coke at 7 per cent., and colonial coke 13 per cent., while he states that most of the colonial coke can stand no burden, but crumbles up quickly in the furnaces, and fills the space around the tuyeres with fine coke, causing large losses in lead and silver, both chemically and mechanically. He further states that they find it inferior to such a degree that its use to a great extent is entirely out of the question, and leaves no other course open to the company but to use either the English or continental manufacture.

This is to be deplored, seeing that we have the finest coal in the world for the manufacture of coke. The coal-mine proprietors would find it to their advantage to wash and dress the slack-coal as carefully as they do in Europe before manufacturing it into coke. When coke is friable and easily broken, either in transit or in the furnace, it interferes very seriously with smelting, and becomes embedded in slags, and absorbs the lead. Special care should be taken to remove all shale and earthy matters from the slack, so as to have a less percentage of ash. If this were done there is a large market to be found, both in Australia and Tasmania, for good coke; and what is now being washed down the Grey River into the ocean ought to form an important as well as a profitable industry.

EARNINGS OF THE MINERS.

Gold Miners.

The returns furnished by the Wardens of the respective mining districts are comprised in Table 10 annexed, which show the average number of miners employed last year to be 12,724, as against 13,032 for the year previous, thus showing a decrease in the number employed to the extent of 308. This decrease is principally in Otago, where the returns show 256 less last year than in the former one. Taking the value of gold exported last year—namely, £1,107,117, and deducting the value of the gold held back by the banks for the quarter ending March, 1891—namely, £80,972—it leaves the actual value of last year's produce as £1,026,145, which is equal to £80 12s. a man per annum, while for the previous year the value of the gold exported and that held back by the banks was £766,293, being an average of £56 16s. a man per annum. The average earnings of the miners last year was therefore £21 16s. 11d. per annum more than for the former year, and also more than for any year since 1881.

Coal Miners.

The average number of persons engaged in connection with coal mines last year was 1,693, as against 1,846 for the previous year. Of the number so employed last year 1,277 were employed underground, and 416 on the surface, the output of coal being 668,794 tons, and taking the cost of raising this at 6s. per ton, gives a value of £200,638, which would make the average earnings of the miners to be £118 10s. 2d. a man per annum, while for the former year, on the same basis, it was £103 11s. 8d.; thus showing that, notwithstanding the number of inexperienced miners that are said to be employed in some of the mines, their average earnings last year was £14 18s. 6d. more than for the former year.

Taking the population actually engaged in gold- and coal-mining last year—namely, 14,417, and the value of the produce, it gives an average wage to each man so employed of £85 1s. 11d per annum. In comparing this with the agricultural labourers' earnings last year it shows a favourable result. The total value of the agricultural produce for the last season is given in the Registrar-General's statistics as £4,887,351, and, deducting 10 per cent. from this amount for seed, it leaves the net value of £4,398,616; and according to the last census there were 59,058 persons employed in this industry, which gives the average earnings of those engaged in agricultural pursuits as £74 9s. 7d. for each person employed per annum, or £8 11s. 4d. less per annum than those engaged in mining.

OTHER MINERAL ORES.

It is well known that there are a variety of ores in this colony, but hitherto very little has been done in any metalliferous mining other than for gold and silver; ores containing copper, lead, antimony, manganese, chrome, zinc, and quicksilver are abundant in different places; and also scheelite, sulphur, arsenic, and other minerals will be sought after and worked, and made remunerative mining ventures. There is also lithographic-stone found in the Northern districts which, when the quarries are properly opened up, is likely to compare favourably with the article imported from Germany. Indeed, very little has yet been done to develop the riches which lie buried in the bowels of the earth, and the want of roads in many districts prohibits mining from being carried on for many of these ores and minerals, which require a cheap means of transit to a market to make their working a profitable undertaking.

Antimony.

Very little antimony-ore was obtained last year. The English company who were carrying on mining operations for this metal went into liquidation, and the whole of their valuable plant and property was purchased by a syndicate of Wellington gentlemen for £600, who have commenced to work the mine again, and it is now expected that the venture will prove a remunerative investment. Antimony lodes are found at Waipori and Barewood, in Otago, but no extensive operations are being carried on at either of these localities. The quantity of antimony-ore exported last year was 413 tons, valued at £4,950.

Copper.

Notwithstanding the large deposits of copper there are in various portions of the colony, none of the mines that have been opened have proved remunerative for working. Recently a very large quantity of copper-ore—chalcopyrite—has been discovered in the northern portion of the Auckland District, and some of the ore, which was said to be an average sample of the

lode, on assay proved to contain 31 per cent. of copper. If the whole of the lode material be of this quality this is the most valuable lode of copper-ore that has yet been discovered in New Zealand. Prospecting operations were carried on to some extent at Maharahara last year, but it is questionable if ore of a payable character for working has yet been discovered.

Manganese.

There are large deposits of manganese in different portions of the colony, but unless it is found close alongside deep water, where vessels can load, the present value of the ore will not admit of it being worked at a profit. A valuable deposit of carbonate of manganese was said to be discovered some years ago near Paraparaumu, in the Wellington District, but no steps have yet been taken to work it. The manganese workings last year were confined to Waiheke Island, Parua Bay, and Mangapai. The quantity exported was 1,153 tons, having a value of £2,634.

KAURI-GUM.

The large quantity of kauri-gum that has been obtained from the northern portion of the Auckland District would almost lead those not having a knowledge of New Zealand to think that the supply was almost inexhaustible, but it is only a question of time when this article will become a scarce commodity. So far, year after year has passed by—the gum-fields having been worked for the last thirty-nine years—and each year the quantity produced, and value, has slightly increased. Last year 8,388 tons of gum were exported, having a value of £437,056, which is equal to £52 4s. per ton; while the year previous the quantity exported was 7,438 tons, representing a value of £378,563, or £50 18s. per ton. The total quantity of kauri-gum produced during the last thirty-nine years amounts to 143,018½ tons, having a value of £5,831,743, which gives an average value of £40 14s. per ton. With such an industry as this, confined to a comparatively small portion of the colony, it is bound to be a great assistance to the struggling settlers who have taken up land in the locality of the gum-fields, as they can always find profitable employment at gum-digging when they are not fully employed on their land.

ROADS AND TRACKS.

The most essential work to promote the mining industry and develop the mineral wealth is the construction of roads and tracks. These are absolutely necessary, in order to open up the country and afford facilities to have the mineral portions of it systematically prospected. The northern portion of the Auckland District, as well as the southern portion of Westland and Otago, are almost entirely destitute of either roads or tracks, and the whole of these portions of the colony are said to be rich in minerals. The expenditure on works of this character last year amounted to £10,223, of which £8,502 was given in direct grants, and £1,721 as subsidies to local bodies; and the total liabilities on these works at the end of March last amounted to £17,123. The total expenditure on roads and tracks within mining districts during the nine years that votes for this purpose have been under the control of the Minister having charge of the department has been £178,909, to which must be added £49,432 paid by local bodies.

WATER-RACES.

The water-races managed and directly controlled by the Government last year were the Waimea, Kumara, and the Nelson Creek, the latter being only for four months. The total receipts for sales of water amounted to £7,780, and the expenditure on maintenance £3,066, which left a profit on the working of £4,714. In regard to the Nelson Creek Water-race, it was deemed desirable to lease it at a peppercorn rent, as the receipts from the sales of water for the last two years and four months it was directly controlled by the department was £1,313, while the expenditure on maintenance for the same period was £2,150, leaving a loss on the working of £837; and, as a number of the bridges and flumes were getting into a decayed state, and the auriferous ground that the race as at present constructed commands getting yearly considerably less, the Government did not feel justified in maintaining the race at a direct loss.

In addition to this water-race the Mount Ida Race is managed by a Trust on behalf of the Government, but, although it has been worked by the Trust for the last fourteen years, the receipts from the sales of water have never covered the cost of maintenance; votes have to be continually taken for the purpose of keeping it in a state of repair. The total receipts

from sales of water during the fourteen years it has been managed by a Trust amounts to £18,768, while the total expenditure on maintenance for the same period has amounted to £22,374, thus showing a direct loss of £3,606. Taking the whole of the other water-races directly controlled by the department, including the Argyle Water-race, which was handed over to the Buller County Council in November, 1890, the total receipts from sales of water has amounted to £142,713, while the expenditure on maintenance for the same period has been £96,343, which leaves a profit on the working of £46,370. During the last year the Mikonui Water-race was handed over to the Ross Borough Council, who intend raising necessary funds to complete it. With regard to the Mount Ida Water-race, it is intended to do away with the Trust, and to place the management and control directly under the department, when it is expected that some return will be got from the race, and a more constant supply of water obtained for the use of the miners, who have been sadly complaining about the intermittent supply that they have had for the last two or three years.

A considerable portion of the ground being worked out that the Waimea Water-race at present commands, it has been deemed advisable to appropriate some of the profits on the working of the races last year towards extending this water-race for about two miles, which will admit of new ground being opened up, and thus keep up the demand for the supply of water, as well as affording the miners in the district an opportunity of making fair wages.

PROSPECTING.

As pointed out, for the reasons given in my last Statement, it was proposed to ask the House for a small vote for prospecting, to be expended under the direction of local authorities or mining associations, to assist in further prospecting and exploring the country. A vote of £1,500 was accordingly taken; and of this sum £337 was expended up to the end of March last. There are still, however, large areas of auriferous country where scarcely any prospecting has been done, and if the miners on every goldfield were to combine together, and contribute a small amount weekly into a fund to be spent in prospecting, the mining industry would soon be in a more prosperous state. Were such a fund to be formed it would be the duty of any Government to contribute something to it, so as to encourage the miners in carrying out so worthy an object.

Another system under which assistance might reasonably be granted would be by treating the individual miner's labour as representing cash on which a subsidy could be granted to such an extent as would be necessary for supplying provisions and equipment. The position would then be that the miner gives his time and labour, while the State finds sufficient to provide for the necessaries of life, and tools. This is only reasonable, seeing that the colony and the individual would equally profit if prospecting prove successful.

To carry on prospecting systematically and economically, all prospecting operations should be directly under the control of the miners' association in the district, as they would have a far better knowledge of the respective localities in which they live than any one coming from another district, and they would see that the work was properly carried on, and get value for the money expended. It is accordingly proposed to continue the vote this year to subsidise prospecting in the manner indicated.

SUMMARY OF EXPENDITURE ON WORKS.

To summarise, the expenditure and authorities given for works constructed and in progress in mining districts since they were under the control of the Minister in charge of the department is as follows: Roads and tracks on goldfields, £237,573; roads and tracks to open up mineral lands, £6,892; water-races, £47,764; drainage channels, £21,402; prospecting works, £49,936; wharves, £436; diamond and other drills, £4,449; paid towards the treatment of ores, £1,342; Schools of Mines, inclusive of amounts paid to the University of Otago, £14,357: making a total of £384,151, out of which £271,801 has been paid by Government; while the liabilities of the Government amounted on the 31st March last to £18,786, the balance being paid by local bodies and mining companies. A detailed statement of these works will be found in the tables annexed to the report of the Inspecting Engineer.

SCHOOLS OF MINES.

I will now, Sir, direct the attention of honourable members to the useful and important work being done by the Schools of Mines. The technical knowledge imparted to the miners

at these institutions is deserving of the highest commendation; it is beginning to bear fruit, by causing far more attention to be given to the working of auriferous, argentiferous, and other metalliferous lodes, and to their treatment, than was given in former years.

The Thames School has been attended with the greatest success, on account of its being situated in the heart of the gold-workings, and in the centre of a large mining population, where the workmen and others can attend the night-classes and not interfere with their daily avocations. Last year the average attendance, including Saturday classes for boys attending the public schools, was 111, while for the year previous this was ninety-three. The average attendance exclusive of the Saturday classes was fifty-eight, as against forty-five for the year previous. The students attending this school are not confined to those residing in the district. There are several young men, and also men well advanced in years, who come from different parts of the colony to attend a course of instruction, and in many cases miners come to this district for the purpose of being able to attend the school and take the chance of finding employment in the meantime in the mines.

The Reefton School was better attended last year than it was for the two previous years, and more interest seems to be taken generally in technical education than formerly; but there will never be the number of students at this school that there are at the Thames. Although Reefton is a large mining centre the mines are greatly scattered over a large extent of country, none of them being within less than a couple of miles of the township where the school is situate, so that the workmen employed in the mines have not the same opportunity of attending the night-classes as those residing in the Thames District, where most of the miners are within a radius of two miles.

During last year arrangements were made with the Chancellor of the Dunedin University to hold night-classes at the School of Mines attached to that institution, and also to get assays of any ores or minerals forwarded there on the same terms as those adopted at the Thames and Reefton Schools in regard to fees and charges. This will give any one in the Otago Mining District an opportunity of sending ores to be assayed at a minimum charge. I also arranged with Mr. W. Goodlet, assistant to Professor Black at the Otago University, to hold courses of instruction in the minor schools on the West Coast for three months last summer, and his services were highly appreciated.

The expenditure on this class of technical teaching last year, exclusive of contributions raised locally and fees from students, was £1,371; and I venture, Sir, to hope that honourable members will consider the colony is receiving full value for such expenditure, and that it is greatly benefited by the system adopted, in affording a means of a technical training to those who wish to be engaged in the mining industry.

MINING LEGISLATION.

It has been deemed necessary to bring in a Bill to amend the Mining Act of last session. Among some of the principal reasons for requiring amendment in the existing law, I may mention a recent decision given by Mr. Warden Rawson at Invercargill, in a case affecting water-rights. The Warden held that no person had any right to pollute such water, or discharge any tailings or *débris* into any stream, unless it had been proclaimed a channel for deposit of tailings. If this decision were carried out literally it would practically put a stop to mining, as the holders of water-rights could prevent any one from running tailings or *débris* into a creek, or even in any way to pollute the water between its source and the place from which the holder of such water-right lifted the water into his water-race. This would have the effect of giving the holder of the first water-right from any stream a key to the whole of the auriferous ground in the locality, and such holder could completely lock up the ground until he was ready to work it. It is proposed to take power in the amending Bill to remedy this defect.

It has been found from experience that the yearly title held under a business-license for sites within gold-field townships does not give a sufficiently secure tenure to warrant any large improvements. It is therefore proposed to take power to enable the Warden to grant a license for a period not exceeding twenty years, with the right of renewal if there be no objection.

There is also a provision in the amending Bill to admit of a Judge of a Native Land Court declaring that any land that has passed through the Court shall be open for mining if the majority of the Native owners do not object. Also, that the agreements already made

with the Native owners shall not be prejudicially affected by reason of the extinguishment of the Native title or the issue of a Crown grant for any portion of any land comprised within the original boundaries in the agreements with the Native owners.

Further, the Amending Bill provides that, in assessing compensation for any damage done to any land in consequence of a river being declared a watercourse for the deposit of tailings, that the value of such damage shall not exceed the valuation made under "The Land and Income Assessment Act, 1891," instead of "The Property Assessment Act, 1885," which is repealed by the previous-mentioned Act.

The Bill will also give power to the Governor to grant mineral leases on Crown lands outside a mining district, providing for the same payments of rents and royalties as those prescribed in the Mining Act of last session for leases granted within a mining district. The other amendments are merely of a verbal character.

In regard to the amendments in "The Mining Companies Act, 1886," it has been represented that in many instances shareholders are entirely ignorant of the position of the companies they are interested in, and, unless they can personally attend at the manager's office, they cannot get a balance-sheet showing how the affairs of the company stand. Provision is being made in the Bill for the manager or secretary of any incorporated company carrying on mining operations to transmit a list of shareholders in arrears of calls every six months to each shareholder.

Representations have also been made by investors in mining companies that "The Mining Companies Act, 1886," is not complied with in respect to the payment of calls and the qualifications of directors. The Act requires that a director shall not be eligible for election, or be qualified to act, if he be indebted to the company in any sum due in respect of shares held by him. It has been stated that, in order to comply with this provision, some directors give a cheque for their calls which the manager holds in his cash-box, and does not present at the bank for payment; in cases of companies going into liquidation, numbers of these cheques are found to be valueless. The Amending Act provides for all cheques and moneys being paid into a bank within three days after their receipt, and it also gives the Governor power to direct the Audit Office to make an audit of any company's books if at any time deemed desirable.

GEOLOGICAL SURVEY.

The annual reports of this department for the previous year were distributed during the recess. The Twenty-seventh Museum and Laboratory Report, which is now in preparation, will, besides the statistical information relative to the museum collections, the library, and the observatory work, give the details of 401 chemical analyses which have been performed for the Government and for the public.

The twenty-second volume of the Geological Reports will give a detailed account of the surveys made during the past year. These surveys have chiefly been directed with the purpose of giving information that will lead to the practical development of those mineral resources which have been indicated by previous explorations.

In the northern district of Auckland the geological map has been revised, and several special surveys have been made for the purpose of defining possible coal-bearing formations which are known to be very extensive in that part of the colony.

This survey will have a very important practical bearing on the profitable use of railways which have been constructed and are in progress.

The Hikurangi Coalfield, to open out which the Kamo Railway is being extended, has been geologically surveyed, and from the evidence obtained the area in which coal may be expected to occur has an extent of ten square miles. The seam where it has been cut is from 6ft. to 11ft. in thickness, and the coal is of excellent quality. The coalfield which is tapped by the Kawakawa Railway has undergone further examination. It has a very large extent, but owing to the manner in which the surface is obscured by recent formations, the discovery of workable seams can only be made by the use of the diamond-drill in well-selected positions.

In the same district the mineral lodes of the Puhipuhi Silverfield were investigated. They occur on the flanks of a table-land, which has an elevation of 1,100ft. above the sea, and formed by a sheet of volcanic rock about 100ft. thick, resting on greenstone slates, which have become decomposed to a great depth. In this rotten rock quartz-lodes are very numerous and generally carry silver-ore, but none of the mines have yet proved successful. Cinnabar also occurs in the creek beds, but has not been traced to its source.

The same formation, but without the covering of volcanic rock, was also examined further north, between Waikari and the Bay of Islands, where it contains extensive deposits of manganese-ore and fairly well defined lodes of antimony-ore, upon which some prospecting work has been done. The ore is of excellent quality, and has been formed over a considerable extent of country. The rock-formations associated with the mineral belt included massive reefs of white quartz and green crystalline limestone.

A siliceous rock, indicating the former action of hot-springs, is also abundant in some localities.

Still further to the north solid copper-pyrites of great purity has been found, but no defined lode has been opened up. The survey was extended to include the North Cape and the West Coast, from Mongonui to Hokianga.

The gold drifts on the West Coast have been remapped so as to embody recent discoveries which bear on the development of deep-lead mining in that part of the country.

Other reports refer to special examination of mines and mineral deposits, and to the collection of information required for the completion of a geological map of the colony, which it is proposed to publish on a larger scale than has been hitherto attempted.

CONCLUSION.

In concluding my remarks on the mining industry, I have to express my firm belief that the mineral wealth New Zealand contains will become the greatest factor in contributing to her prosperity. The abundance of mineral and metalliferous deposits, the extensive areas of our coalfields, the superior class of our bituminous coal, and the different products that can be obtained from our rocks and clays, will cause different branches of this industry to spring up; as it is well known that in any country where minerals abound it has rapidly increased in wealth, of which there are no more striking instances than Great Britain and the United States of America. We can look forward with every confidence that this colony has a great future before it; not only is it rich in mineral wealth, but its rich arable soil, extending for 13deg. of latitude within the temperate zone, gives it a variety of climate suitable for the production of most descriptions of cereals, vegetables, fruits, and plants. Its situation in regard to the other islands in the Pacific also points to the important position that the colony will occupy. Having all these advantages, we may rest assured that New Zealand will be a prosperous country, rapidly increasing in wealth and greatness, and will rank amongst the foremost of the British colonies.

No. 1

TABLE showing the COMPARISON in QUANTITY and VALUE of GOLD ENTERED for EXPORTATION, and also the QUANTITY and VALUE of other MINERALS produced, for the Years ending the 31st December, 1890 and 1891; as well as the TOTAL VALUE since January, 1853

Name of Metal or Mineral.	For Year ending the 31st December, 1891.		For Year ending the 31st December, 1890.		Total from the 1st January, 1853, to the 31st December, 1891.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Precious metals—	Oz.	£	Oz.	£	Oz.	£
Gold	251,996	1,007,488	193,193	773,438	12,070,217	47,433,117
Silver	28,023	5,151	32,637	6,162	582,633	140,148
Total gold and silver	280,019	1,012,639	225,830	779,600	12,652,850	47,573,265
Mineral produce, including kauri-gum—	Tons.	£	Tons.	£	Tons.	£
Copper-ore	$\frac{3}{20}$	4	..	..	1,394$\frac{3}{20}$	17,866
Chrome-ore	..	..	..	..	5,666	37,367
Antimony-ore	413	4,950	515	11,121	2,786	41,140
Manganese-ore	1,153	2,634	482	1,004	16,456$\frac{1}{2}$	53,925
Hæmatite-ore	$\frac{1}{20}$	1	$1\frac{1}{2}$	5	52$\frac{11}{20}$	226
Mixed minerals	2	6	19	273	14,068	69,041
Coal exported	91,664	91,173	69,614	67,003	510,364	506,958
Coke exported	2,544	3,658	2,218	3,334	11,486	17,899
Coal, output of mines in colony	577,130	288,565	567,783	283,891	6,468,181	3,234,000
Kauri-gum	8,388	437,056	7,438	378,563	143,018$\frac{1}{2}$	5,831,743
Total quantity and value of minerals	681,294$\frac{4}{20}$	828,047	648,070$\frac{1}{2}$	745,194	7,173,472$\frac{14}{20}$	9,810,255
Value of gold and silver, as above ..	..	1,012,639	..	779,600	..	47,573,265
Total value of minerals produced, including gold and silver	..	1,840,686	..	1,524,794	..	57,383,520

No. 2.

TABLE showing the QUANTITY and VALUE of GOLD ENTERED for EXPORTATION from NEW ZEALAND for the Years ending the 31st March, 1891 and 1892, and the TOTAL QUANTITY and VALUE from 1857 to the 31st March, 1892.

District and County or Borough.	Year ending 31st March, 1892.		Year ending 31st March, 1891.		Increase or Decrease for Year ending 31st March, 1892.		Total Quantity and Value from January, 1857, to 31st March, 1892.	
	Quantity.	Value.	Quantity.	Value.	Increase.	Decrease.		
AUCKLAND—	Oz.	£	Oz.	£	Oz.	Oz.	Oz.	£
County of Coromandel ..	8,422	33,573	6,039	24,427	2,383	..	..	..
County of Thames ..	15,681	62,386	13,701	52,427	1,980	..	..	..
County of Ohinemuri ..	7,331	30,563	8,761	36,293	..	1,430	..	..
County of Piako	904	3,551	744	2,902	160	..	..	..
County of Whangarei ..	1	4	..	..	..	..	..	..
Borough of Thames ..	8,186	32,683	9,385	37,629	..	1,199	..	..
Te Aroha Town District ..	..	..	..	..	..	..	..	..
	40,525	162,760	38,630	153,678	1,894	..	1,696,473	6,350,684
WELLINGTON	..	..	..	..	..	..	188	706
MARLBOROUGH—								
County of Marlborough ..	7,020	28,026	2,333	9,332	4,687	..	..	..
Blenheim Borough ..	..	..	..	..	..	..	..	..
Picton Borough	..	..	..	..	..	..	..	..
	7,020	28,026	2,333	9,332	4,687	..	73,801	286,535
NELSON—								
County of Waimea ..	1,210	4,648	92	362	1,118	..	..	..
County of Collingwood ..	4,091	15,544	1,518	6,044	2,573	..	..	..
	5,301	20,192	1,610	6,406	3,691	..	240,011	950,793
WEST COAST—								
County of Buller	14,148	56,540	12,655	50,620	1,493	..	..	..
County of Inangahua ..	38,201	152,856	22,548	90,195	15,653	..	..	..
County of Grey	25,775	103,135	16,647	66,587	9,128	..	..	..
County of Westland ..	29,413	117,655	29,675	118,698	..	262	..	..
Brunnerton Borough ..	4	16	50	200	..	46	..	..
Kumara Borough	4,224	16,902	1,726	6,899	2,498	..	..	..
Hokitika Borough ..	2,122	8,490	203	810	1,919	..	..	..
Ross Borough	4,271	17,078	3,286	13,145	985	..	..	..
Reefton Borough	..	..	2	7	..	2	..	..
	118,158	472,672	86,792	347,161	31,366	..	5,231,499	20,779,574
CANTERBURY	..	..	..	..	..	..	48	192
OTAGO—								
County of Taieri	917	3,673	659	2,628	258	..	..	..
County of Tuapeka ..	29,557	118,706	13,685	56,280	15,872	..	..	..
County of Vincent ..	22,689	91,137	7,266	29,258	15,423	..	..	..
County of Maniototo ..	12,276	49,380	3,175	12,847	9,101	..	..	..
County of Waihemo ..	3,535	13,924	705	2,784	2,830	..	..	..
County of Waikouaiti ..	1,541	6,092	1,410	5,619	131	..	..	..
County of Waitaki ..	2,553	10,340	1,690	6,724	863	..	..	..
County of Bruce	..	..	49	195	..	49	..	..
County of Lake	19,491	78,118	6,309	25,529	13,182	..	..	..
County of Wallace ..	6,829	27,537	3,786	15,005	3,043	..	..	..
County of Fiord	655	2,641	360	1,423	295	..	..	..
County of Southland ..	5,321	21,307	2,463	9,817	2,858	..	..	..
County of Stewart Island ..	..	..	8	32	..	8	..	..
County of Clutha	8	32	21	80	..	13	..	..
Unknown	65	258	23	90	42	..	..	..
Borough of Alexandra ..	94	382	106	433	..	12	..	..
Dunedin	..	..	..	..	..	..	..	..
	105,531	423,527	41,715	168,744	63,816	..	4,889,563	19,310,707
Totals	276,535	1,107,177	171,080	685,321	105,454	..	12,131,583	47,679,191

No. 3.

TOTAL QUANTITY and VALUE of GOLD ENTERED for DUTY for EXPORTATION from the 1st January, 1857, to the 31st December, 1891. (This return shows the produce of the various goldfields. Gold entered at Nelson from Hokitika, Greymouth, and Westport is put under the head of "West Coast," and from Invercargill and Riverton under the head of "Otago.")

Year.	Auckland.		Nelson.		Marlborough.		West Coast.		Otago.		Wellington.		Canterbury.		Total.	
	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.
		£		£		£		£		£		£		£		£
1857 ..	..	..	10,437	40,422	..	..	..	..	..	..	..	..	..	..	10,437	40,422
1858 ..	308	1,192	13,226	51,272	..	..	..	..	..	..	..	..	..	..	13,534	52,464
1859 ..	..	..	7,336	28,427	..	..	..	..	..	..	..	..	..	..	7,336	28,427
1860 ..	..	..	4,538	17,585	..	..	..	..	..	..	..	..	..	..	4,538	17,585
1861 ..	..	..	6,335	24,552	..	..	..	..	187,696	727,321	..	..	..	..	194,031	751,873
1862 ..	1,239	4,098	10,422	40,386	..	..	..	..	399,201	1,546,905	..	..	..	..	410,862	1,591,389
1863 ..	4,483	13,853	9,580	37,120	..	..	..	..	614,387	2,380,750	..	..	..	..	628,450	2,431,723
1864 ..	3,448	10,552	14,410	55,841	24,838	95,231	1,463	5,560	436,012	1,689,653	..	..	..	..	480,171	1,856,837
1865 ..	5,449	17,096	12,137	47,030	7,952	30,814	289,897	1,127,370	259,139	1,004,163	..	..	..	..	574,574	2,226,474
1866 ..	5,814	17,463	7,650	29,643	469	1,818	552,572	2,140,946	168,871	654,647	..	..	..	..	735,376	2,844,517
1867 ..	6,637	18,277	9,123	35,918	501	1,978	511,974	2,018,874	158,670	623,815	..	..	..	..	686,905	2,698,862
1868 ..	53,660	168,874	5,999	38,396	404	1,616	405,762	1,608,844	171,649	686,596	..	..	..	..	637,474	2,504,326
1869 ..	132,451	434,687	10,631	42,524	666	2,664	317,169	1,269,664	153,364	613,456	..	..	..	..	614,281	2,362,995
1870 ..	85,534	319,146	12,244	48,692	1,852	7,408	280,068	1,121,525	165,152	660,694	30	120	..	..	544,880	2,157,585
1871 ..	330,326	1,188,708	10,014	40,056	1,867	7,468	232,882	931,528	154,940	619,760	..	..	..	..	730,029	2,787,520
1872 ..	104,890	369,341	8,175	32,700	2,057	8,228	172,574	690,296	157,674	630,696	..	..	..	..	445,370	1,731,261
1873 ..	119,449	437,123	13,697	54,786	1,274	5,050	188,501	756,442	182,416	734,024	..	..	..	..	505,337	1,987,425
1874 ..	76,910	305,068	5,642	22,158	1,198	4,748	157,531	631,203	135,107	542,154	..	..	..	..	376,388	1,505,331
1875 ..	69,485	262,156	4,577	17,866	1,159	4,636	158,678	635,480	121,423	487,632	..	..	..	..	355,322	1,407,770
1876 ..	56,057	221,905	14,018	55,862	450	1,796	133,014	531,274	118,477	473,491	..	..	..	..	322,016	1,284,328
1877 ..	99,081	403,627	5,367	21,092	870	3,197	153,198	612,823	113,169	455,341	..	..	..	..	371,685	1,496,080
1878 ..	55,982	220,454	4,463	17,223	404	1,617	144,634	578,508	105,003	422,277	..	..	..	..	310,486	1,240,079
1879 ..	37,901	154,295	2,993	11,424	879	3,460	142,822	571,061	102,869	407,868	..	..	..	..	287,464	1,148,108
1880 ..	42,720	176,416	3,222	12,223	1,550	5,650	144,090	575,258	113,666	457,705	..	..	..	..	305,248	1,227,252
1881 ..	35,516	141,326	3,453	13,039	1,378	4,531	127,544	509,971	102,670	411,923	..	..	..	..	270,561	1,080,790
1882 ..	33,059	131,007	3,289	12,494	1,352	5,400	130,048	519,978	83,446	333,804	10	37	..	..	251,204	1,002,720
1883 ..	41,291	163,618	2,064	7,724	636	2,524	116,905	467,152	87,478	352,334	..	..	..	..	248,374	993,352
1884 ..	36,087	143,564	2,159	8,002	1,079	4,306	111,686	446,517	78,810	318,932	101	380	24	96	229,946	921,797
1885 ..	42,989	170,416	2,798	10,337	540	2,160	117,861	471,325	73,183	294,378	..	..	..	..	237,371	948,615
1886 ..	32,271	128,140	2,582	9,979	404	1,451	112,671	446,287	79,104	317,543	47	169	..	..	227,079	903,569
1887 ..	30,697	121,564	2,914	10,829	1,041	3,759	98,774	395,430	70,443	279,518	..	..	..	..	203,869	811,100
1888 ..	35,223	139,556	3,027	11,320	699	2,547	100,139	400,405	62,107	247,142	..	..	24	96	201,219	801,066
1889 ..	28,655	113,191	3,252	12,310	5,189	20,167	101,696	406,451	64,419	256,430	..	..	..	..	203,211	808,549
1890 ..	31,745	125,760	2,856	11,049	6,073	24,285	89,096	356,368	63,410	255,926	..	..	..	..	193,193	773,438
1891 ..	45,392	181,185	4,445	16,896	5,649	22,576	109,268	437,126	87,209	349,573	33	132	..	..	251,996	1,007,488
Totals ..	1,684,749	6,303,658	239,075	947,177	72,430	281,085	5,202,517	20,663,666	4,871,177	19,236,501	221	838	48	192	12,070,217	47,433,117

No. 4.

TABLE showing the TOTAL QUANTITY of MINERAL ORES (the Product of Mines other than Gold), COAL, COKE, and KAURI GUM, EXPORTED from the Colony up to 31st December, 1891.

Year.	Silver.		Copper Ore.		Chrome Ore.		Antimony Ore.		Manganese Ore.		Hæmatite Ore.		Mixed Mineral Ore.		Coal.		Coke.		Kauri Gum.		Totals.		
	Oz.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Ounces.	Tons.	Value.
		£		£		£		£		£		£		£		£		£		£			£
1853	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	830	15,972	..	830	15,972
1854	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,661	28,864	..	1,661	28,864
1855	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	355	4,514	..	355	4,514
1856	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,440	18,591	..	1,440	18,591
1857	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2,522	35,251	..	2,522	35,251
1858	..	..	351	5,000	3	25	..	..	..	..	..	..	..	..	2	4	..	..	1,811	20,037	..	2,167	25,066
1859	..	..	245	2,605	8	120	..	..	..	..	..	..	..	..	..	..	..	..	2,010	20,776	..	2,263	23,501
1860	..	..	137	1,590	116	1,440	..	..	..	..	..	..	..	..	1	2	..	..	1,046	9,851	..	1,300	12,883
1861	..	..	110	1,300	52	520	..	..	..	..	..	..	..	..	..	..	..	..	856	9,888	..	1,018	11,708
1862	..	..	51	1,024	3,843	24,719	..	..	..	..	..	..	..	..	..	..	..	..	1,103	11,107	..	4,997	36,850
1863	..	..	..	..	595	4,318	..	..	..	..	..	..	..	..	..	..	..	..	1,400	27,026	..	1,995	31,344
1864	..	..	..	..	768	4,910	..	..	..	..	..	..	..	..	..	..	..	..	2,228	60,590	..	2,996	65,500
1865	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1,867	46,060	..	1,867	46,060
1866	..	..	..	..	281	1,315	..	..	..	..	..	..	..	..	261	400	..	..	2,535	70,572	..	3,077	72,287
1867	..	..	246	2,700	..	..	..	..	..	..	..	..	..	..	973	1,228	..	..	2,685	77,491	..	3,904	81,419
1868	..	..	84	977	..	..	..	..	..	..	..	..	..	..	1,027	1,210	..	..	2,690	72,493	..	3,801	74,680
1869	11,063	2,993	..	..	..	..	..	..	..	..	..	..	..	..	750	800	..	..	3,850	111,307	11,063	3,600	115,100
1870	37,123	11,380	7	120	..	..	..	..	..	..	..	..	..	..	1,672	1,508	..	..	4,391	175,074	37,123	6,070	188,082
1871	80,272	23,145	..	..	..	..	..	..	..	..	..	..	..	..	1,696	1,612	..	..	5,054	167,958	80,272	6,750	192,715
1872	37,064	9,910	..	..	..	..	..	..	..	..	..	..	..	..	990	855	21	50	4,811	154,167	37,064	5,822	164,982
1873	36,187	9,850	..	..	..	..	..	..	..	..	..	..	..	..	724	655	..	..	2,834	85,816	36,187	3,558	96,321
1874	40,566	10,380	..	..	..	..	..	..	..	..	..	..	..	..	1,463	1,363	87	228	2,569	79,986	40,566	4,119	91,957
1875	29,085	7,569	..	..	..	..	..	..	..	..	..	..	..	..	3,385	3,129	15	51	2,231	138,523	29,085	5,631	149,272
1876	12,683	3,171	..	..	..	..	..	..	..	..	..	..	3,180	14,824	1,854	1,954	53	189	2,888	109,234	12,683	7,975	129,372
1877	33,893	7,556	..	..	..	..	..	..	..	..	..	..	2,366	9,664	2,658	2,071	25½	72	3,633	118,348	33,893	8,682½	137,711
1878	23,019	5,755	6	115	..	..	4	102	2,516	10,416	..	..	2	8	6,362	5,139	85	177	3,445	132,975	23,019	12,420	154,687
1879	20,645	4,512	55	1,105	..	..	..	..	2,140	8,338	..	..	..	..	7,144	6,187	154	324	3,229	147,535	20,645	12,722	168,001
1880	20,005	4,500	..	..	..	..	60	612	2,611	10,423	..	..	2,674	11,335	7,020	5,977	87	135	4,725	242,817	20,005	17,177	275,799
1881	18,885	4,236	5	36	..	..	2	24	1,271	3,283	..	..	1,955	4,303	6,621	5,610	223	353	5,461	253,788	18,885	15,438	271,633
1882	5,694	1,286	9	41	..	..	30	900	2,181	6,963	..	..	2,784	8,597	3,207	2,380	275	480	5,533	260,369	5,694	14,019	281,016
1883	16,826	3,785	46	678	..	..	31	804	384	1,155	½	12	22	110	6,522	4,879	1,430	2,057	6,518	336,606	16,826	14,593½	350,086
1884	24,914	5,125	20	106	..	..	..	..	318	809	..	..	..	..	6,104	4,461	236	372	6,393	342,151	24,914	13,071	353,024
1885	16,624	3,169	..	..	..	..	666	5,289	602	1,716	50½	208	114	993	43,893	51,257	267	385	5,875¾	209,762	16,634	51,468¼	362,779
1886	12,108	2,946	20	390	..	..	62	1,784	328½	1,316	..	..	445	1,846	46,136	52,133	497	715	4,920¾	257,653	12,108	52,411¼	318,783
1887	20,809	3,453	..	..	..	..	134	3,989	305	895	..	..	144	4,142	44,129	44,650	183½	266	6,791	362,449	20,809	51,666½	419,844
1888	403	71	2	75	..	..	376	6,246	1,085	2,404	..	..	162	2,955	68,087	64,971	953	1,646	8,482	380,933	403	79,145	459,261
1889	24,105	4,043	..	..	..	..	493	5,319	1,080	2,569	..	..	199	9,985	86,405	84,347	2,132	3,407	7,519	329,590	24,105	97,828	439,260
1890	32,637	6,162	..	..	..	..	515	11,121	482	1,004	1½	5	19	273	69,614	67,003	2,218	3,334	7,438	378,563	32,637	80,287½	467,465
1891	28,023	5,151	0 1/15	4	..	..	413	4,950	1,153	2,634	1/20	1	2	6	91,664	91,173	2,544	3,658	8,388	437,056	28,023	104,164½	544,633
Totals	582,633	140,148	1,394 1/15	17,866	5,666	37,367	2,786	41,140	16,456½	53,925	52 11/20	226	14,068	69,041	510,364	506,958	11,486	17,899	143,018½	5,831,743	582,633	705,391 7/10	6,716,313

NOTE.—Silver ore, 37 tons, £1,225.

No. 5.

RETURN showing the QUANTITY and VALUE of COALS IMPORTED into NEW ZEALAND during the Quarter ended the 31st March, 1892.

Country whence Imported.	Quantity.	Value.
New South Wales	Tons. 27,171	£ 24,016

No. 6.

TABLE showing the INCREASED PRODUCTION of COAL, Year by Year, during the last Thirteen Years, and the DECREASE of COAL IMPORTED for the same Period.

Year.	Coal raised in the Colony.		Coal imported.		
	Tons.	Yearly Increase or Decrease.	Tons.	Plus or Minus.	Increase and Decrease.
1878	162,218	..	174,148	..	..
1879	231,218	+ 69,000	158,076	−	16,072
1880	299,923	+ 68,705	123,298	−	33,778
1881	337,262	+ 37,339	129,962	+	6,664
1882	378,272	+ 41,010	129,582	−	380
1883	421,764	+ 43,492	123,540	−	6,042
1884	480,831	+ 59,069	148,444	+	24,904
1885	511,063	+ 30,232	130,202	−	18,242
1886	534,353	+ 23,290	119,873	−	10,329
1887	558,620	+ 24,267	107,230	−	12,643
1888	613,895	+ 55,275	101,341	−	5,889
1889	586,445	− 27,450	128,063	+	26,722
1890	637,397	+ 50,952	110,939	−	17,124
1891	668,794	+ 31,397	125,318	+	14,379

No. 7.

TABLE showing the OUTPUT of COAL from the various Mining Districts, and the Comparative INCREASE and DECREASE, for the Years 1890 and 1891, together with the TOTAL APPROXIMATE QUANTITY of COAL produced since the Mines were opened.

Name of District.	Output of Coal.		Plus or Minus.	Increase or Decrease.	Approximate Total Output of Coal up to 31st December, 1891.
	1890.	1891.			
	Tons.	Tons.			
Kawakawa	30,367	28,254	−	2,113	769,246
Whangarei, Kamo, and Whauwhau ..	19,633	16,228	−	3,405	265,860
Waikato	64,729	55,869	−	8,860	596,529
Mokau	1,188	3,713	+	2,525	4,901
Pelorus	..	..	..	..	711
West Wanganui	4,092	3,328	−	764	40,114
Westport	170,406	206,184	+	35,778	1,191,867
Reefton	6,010	4,556	−	1,454	47,740
Greymouth	118,847	145,351	+	26,504	1,522,030
Malvern	15,083	14,775	−	308	274,328
Timaru	1,430	1,488	+	58	5,442
Otago	176,428	164,870	−	11,558	2,218,982
Southland	29,184	24,178	−	5,006	194,236
Totals	637,397	668,794	+	31,397	7,131,986

NOTE.—The approximate total output up to 31st December, 1891, for Southland includes 6,518 tons omitted from last statement.

No. 8.

TABLE showing the DIFFERENT CLASSES of COAL from the MINES in the COLONY.

Name of Coal.	Output of Coal.		Plus or Minus.	Increase or Decrease.	Approximate Total Output of Coal up to the 31st December, 1891.
	1890.	1891.			
	Tons.	Tons.			
Bituminous	323,712	387,839	+	64,127	3,531,749
Pitch	124,593	96,979	−	27,614	1,112,965
Brown	171,725	161,904	−	9,821	2,275,364
Lignite	17,367	22,072	+	4,705	211,908
Totals	637,397	668,794	+	31,397	7,131,986

NOTE.—The approximate total output up to 31st December, 1891, for lignite includes 6,518 tons omitted from last statement.

No. 9.

TABLE showing the NUMBER of COAL-MINES in OPERATION, the NUMBER of MEN EMPLOYED, and the OUTPUT of COAL per MAN.

Number of Mines working.	Number of Miners employed in each Mine.	Total Number of Men employed.	Output of Coal during 1891.	Average Output per Man.
			Tons.	Tons.
96	1 to 4 men in each	196	49,416	252
15	5 to 10 „	107	30,587	285
6	11 to 20 „	95	22,141	233
16	21 men and upwards	1,295	566,650	437
133		1,693	668,794	395

No. 10.

RETURN showing the QUANTITY and VALUE of COAL IMPORTED INTO and EXPORTED FROM NEW ZEALAND during the Year ended the 31st December, 1891.

Imported.			Exported.		
Countries whence imported.	Quantity.	Value.	Countries to which exported.	Quantity.	Value.
	Tons.	£		Tons.	£
United Kingdom	962	1,030	United Kingdom	70,371	78,050
Victoria	1,246	1,304	Victoria	157	102
New South Wales	120,775	116,320	New South Wales ..	8,952	8,269
Queensland	2,335	1,768	Queensland	70	81
			South Australia	7,701	3,360
			Western Australia ..	89	45
			Tasmania	19	22
			Norfolk Island	74	80
			Fiji Islands	3,421	2,602
			U.S. America, East Coast ..	2	2
			Chili	407	509
			South Sea Islands ..	8,201	7,536
Totals	125,318	120,422	Totals	99,464	100,658

NOTE.—Foreign Coal: Included in exportation to—United Kingdom, 1,500 tons, value £2,023; New South Wales, 2,676 tons, value £3,347; Queensland, 35 tons, value £44; Norfolk Island, 1 ton, value £1; Fiji Islands, 212 tons, value £212; United States of America, East Coast, 1 ton, value £1; Chili, 407 tons, value £509; South Sea Islands, 2,968 tons, value £3,348. The remainder is New Zealand produce.

W. T. GLASGOW,
Secretary and Inspector.

Department of Trade and Customs, Wellington, 21st June, 1892.

No. 11.

NUMBER of MINERS EMPLOYED during the Years ending 31st March, 1891 and 1892.

Mining District.	Alluvial Miners.		Quartz-miners.		Totals.		Grand Total.	
	European.	Chinese.	European.	Chinese.	European.	Chinese.	1891.	1892.
AUCKLAND—								
North Hauraki and Coromandel	..	..	275	..	275	..	339	275
Thames	..	..	724	..	724	..	..	724
Ohinemuri	..	..	328	..	328	..	701	328
Te Aroha	..	..	30	..	30	..	311	30
Puhipuhi	..	..	50	..	50	..	36	50
	..	..	1,417	..	1,417	..	1,387	1,417
MARLBOROUGH—								
Pelorus	280	..	21	..	301	..	330	301
Wairau	60	..	..	..	60	..	37	60
	340	..	21	..	361	..	367	361
NELSON—								
Baton	12	..	..	..	12	..	..	12
Wangapeka	20	..	..	..	20	..	28	20
Sherry and Tadmor	7	..	..	..	7	..	..	7
Collingwood, Takaka, and West Wanganui	135	2	35	..	170	2	223	172
Motueka	12	..	..	..	12	..	6	12
Inangahua	90	217	446	..	586	217	681	803
Ahaura	360	260	10	..	370	260	678	630
Charleston	250	..	..	..	250	..	475	250
Westport, including Addison's, Northern Terraces, Waimangaroa, North Beach, Mokihinui, Karamea, and Lower Buller Valley	240	..	..	..	240	..	295	240
Lyell	50	5	78	..	128	5	128	133
Murchison / Owen	120	70	..	..	120	70	221	190
	1,296	554	619	..	1,915	554	2,535	2,469
WESTLAND—								
Ross	400	90	..	..	400	90	228	490
Stafford and Goldsborough	310	150	10	..	320	150	365	470
Hokitika and Kanieri	400	90	..	..	400	90	850	490
Kumara	500	100	..	..	500	100	620	600
Greymouth / Arnold	912	313	..	..	912	313	1,250	1,225
Greenstone	..	..	..	..	..	..	..	..
Okarito	100	4	..	..	100	4	95	104
Jackson's Bay	35	..	..	..	35	..	36	35
	2,657	747	10	..	2,667	747	3,444	3,414
OTAGO—								
Hindon	35	6	36	..	71	6	161	77
Tuapeka	400	410	30	..	430	410	880	840
Clyde	46	10	..	..	46	10	55	56
Cromwell	290	150	30	..	320	150	490	470
Alexandra	160	65	14	..	174	14	212	188
Roxburgh	340	70	..	..	340	70	313	410
Black's	160	50	8	..	210	8	211	218
Tapanui	90	125	..	..	90	125	60	215
Waikaia, Upper Waikaia, Nokomai, Waikaka, and Waikawa	30	30	..	..	30	30	380	60
Longwood	16	5	4	..	20	5	116	25
Orepuki	100	..	..	..	100	..	..	100
Roundhill	60	250	..	..	60	250	360	310
Wakatipu Goldfields—Arrow, Macetown, Cardrona, Kawarau, Bracken's, and Motatapu	325	80	50	..	375	80	455	455
Queenstown	375	100	100	..	475	100	575	575
Naseby, Kyeburn, Clarke's, and Mount Burster							345	..
Hamilton, Sowburn, &c.							62	..
Hyde and Fullerton's / Serpentine	546	315	43	..	589	315	85 / ..	904 / ..
Macrae's, Strath-Taieri, Shag Valley, Nenthorn, St. Bathans, and Ida Valley							164	..
Maerewhenua	70	..	..	..	70	..	75	70
Wyndham	90	..	..	..	90	..	150	90
	3,133	1,666	315	..	3,490	1,573	5,299	5,063
SUMMARY.								
AUCKLAND	..	..	1,417	..	1,417	..	1,387	1,417
MARLBOROUGH	340	..	21	..	361	..	367	361
NELSON	1,296	554	619	..	1,915	554	2,535	2,469
WESTLAND	2,657	747	10	..	2,667	747	3,444	3,414
OTAGO	3,133	1,666	315	..	3,490	1,573	5,299	5,063
Totals	7,426	2,967	2,372	..	9,850	2,874	13,032	12,724

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