1898. NEW ZEALAND.

MINES STATEMENT.

BY HON. A. J. CADMAN, MINISTER OF MINES.

Mr. Speaker,

It is again my duty to place before you the statement showing the con-

dition of the mining industry.

The impetus given to the industry through the investment of foreign capital has directed increased attention to mining pursuits. The large number of companies formed to prosecute gold-mining ventures, although now greatly reduced, owing chiefly to insufficient capital being subscribed, are in many instances carrying on works that must ultimately prove reproductive, and the mines which should become profitable concerns thereby increased.

In the Auckland District of the North Island prospecting work entailing the employment of numerous parties of men is now very much curtailed, and areas of mining land over which an option of purchase had been nominally secured on behalf of British investors are now thrown back on the hands of the original owners; in most cases, however, this has taken place in connection with land in which a fair and reasonable prospect of successful discoveries did not exist.

In the Middle Island, throughout the West Coast, Collingwood, Otago, and Southland Districts, many of the mining companies are carrying on extensive works in quartz as well as in alluvial mining, and, in the latter, more especially in dredging and the building of dredges.

I have endeavoured as far as possible to furnish the latest information procurable as to the position of the mining industry, but it will be found that the results set forth in the returns are in some instances supplemented by more

recent information in the Statement itself.

MINERAL PRODUCTION.

The quantity of gold, silver, coal, and other minerals, including kauri-gum, produced for the year ending the 31st December last will be found in Table No. 1., annexed. The total production of gold and silver was 435,537 oz., representing a value of £1,001,076, compared with a value of £1,052,017 for the preceding year. This shows a decrease of £50,941.

Of other minerals, including coal, 849,105 tons were produced, representing a value of £856,517, as against 800,205 tons, of a value of £862,224, for the previous year—the decrease in the value for this year being in a great measure due to the less value of the mixed minerals as declared to the Customs. The production of kauri-gum was 6,641 tons, valued at £398,010, as compared with 7,126 tons, valued at £431,323, for 1896.

The quantities and values of the chief mineral productions for the year

ending 31st December last were as follow:—

1--C. 2.

	Proc	luet.			Quantit	y.		Value. £
Gold					251,645	oz.		980,204
Silver			· · · ·		183,892	<i></i>		20,872
Antimony-ore					10	tons	1	157
Copper-ore								2
Manganese-ore					180	"		541
Mixed minerals					1,561	"		5,892
Colonial coal exp	orted,	including	that us	ed by				
$\operatorname{Home} \operatorname{steam}$	ers			4	76,073	"		69,595
Coke exported								
Colonial coal con	\mathbf{sumed}	in New Z	ealand		764,640	,,		382,320
Kauri-gum	•••				6,641	"		398,01 0
*								· · · · · · · · · · · · · · · · · · ·
Total va	lue of	production	for 1897	7				1,857,593
и		u,	1890	6	•••		• • •	1,914,241
	Total	decrease			• • •			£56,648

The total value of the gold, silver, coal, and other minerals, including kaurigum, exported up to the end of 1897 was £68,617,177.

GOLD-MINING.

The works connected with the production of gold, on which large sums of money have been expended by companies, are, in many instances, unfinished, or only so lately completed that returns from the mines have not yet made any material addition to the yields from the quartz-mines in both islands.

The unfinished state of some of the works in connection with hydraulic sluicing, and the scarcity of water consequent on the exceptionally dry season in Otago, will, in a great measure, account for the shrinkage in the yield from

this source.

As a result of the plants already in operation the yield from many of the mines and claims has been augmented; and with the additional appliances contemplated the returns of gold and silver will in future, it may reasonably be

anticipated, be not only maintained but considerably increased.

Many of the claims which have been taken up, especially for quartz-mining, were submitted to the public with glowing reports from so-called mining experts, with the result that the mining industry has been blamed for the misdirection and loss of capital. The chief cause of the disappointment, however, lies in the fact that too much credence was placed in the reports of inexperienced and unscrupulous persons.

Due regard for security of tenure has been shown in affording protection and concessions to claim-holders and companies who have given proof of their intention to carry on systematic operations, but the owners who have failed to do so have only themselves to blame if the land is thrown back into the goldfield

for others to occupy.

The quantity of gold entered for exportation through the Customs for the year ending 31st March last, as shown in Table No. 2 annexed, was 251,492 oz., representing a value of £976,198; while the quantity exported for the same period of the preceding year was 256,913 oz., valued at £1,015,742. This shows a decrease of 5,421 oz., which has arisen in the mining districts of the Middle Island, the returns for the Auckland District showing an increase. Of the quantity exported, Auckland contributed 108,490 oz., Marlborough 619 oz., Nelson and West Coast 66,879 oz., and Otago 75,504 oz.

QUARTZ WORKINGS.

The yield of gold from this source compares favourably with last year's returns, although there has been in the North a falling-off from the mines at Coromandel and the Thames, made up, however, by a large increase from the Ohinemuri district.

The Reefton returns are only slightly less, whilst the returns from the Morning Star at Preservation Inlet, and from the Glenrock, show a decided norease in the yield for the Otago Mining District.

C.—2

The adaptation of cyanide on improved principles will, in a marked degree, reduce the cost of extraction, and permit of an increase in the quantities of ore treated and an ultimate addition to the yield of gold. The returns from our quartz mines will probably, after the new plants are completed and kept steadily at work, reach if they do not exceed the yields maintained in former years. During last year 139,644 tons of quartz and tailings were treated in the Auckland District, yielding 321,664 oz. bullion, representing an estimated value of £405,745, as against bullion to the value of £354,256 for the former year, being an increase of £51,489. In the Nelson and West Coast Districts 19,742 tons of quartz were crushed for a return of 7,412 oz. of gold, valued approximately at £27,031.

COROMANDEL COUNTY.

The operations in the Hauraki Mine are still productive, although there is a considerable falling-off in the yield of gold. The Royal Oak Mine is again yielding very profitable returns, and steady yields continue from several other mines, notably the Tokatea Associated Reefs; and, with increased means of development, other older mines may again be expected to produce yields similar to past records. Many of the newer mines in the vicinity of the Kauri Block have yet to do a large amount of dead-work before they can become steady producers.

The Kapanga Mine, in which exploring operations at the deep levels are still being carried on, is being partly worked on tribute, and at least two of the parties so working have obtained handsome returns. In the other portions of the county operations in the mines are chiefly confined to preliminary work, and the returns show a falling-off, especially in the Kuaotunu district, where future success is dependent on the result of working at deeper levels. The Kauri Freehold Gold Estates Company is vigorously prosecuting prospecting works, and nine gold-bearing reefs are being developed. The total area held by this company is 36,000 acres, comprising twenty blocks of land, most of which are within the Coromandel County. The chief works are in the Opitonui Block, where two main shafts are in progress, equipped with steam winding- and pumping-plants. A new 40-stamp mill, provided with the latest appliances, and suitable for both amalgamation and cyanide processes, has been contracted for. A series of 2 ft. gauge tram-lines, nine miles in length, connect the mines with the battery and with the Whangapoua Wharf. As an indication of the extensive character of the various works which are being carried out, it may be stated that the expenditure of the company from April, 1897, to June, 1898, in wages alone, not including supplies and machinery, was £28,630 18s. 10d.

In this County 13,665 tons of quartz and tailings was treated during the year, yielding 27,427 oz., representing a value of £73,337. The number of miners who were employed in connection with the gold-producing mines was 741.

THAMES COUNTY.

The progressive works which have been carried on in this portion of the district have not yet reached the stage of development to admit of the chief mines again becoming producers to the extent of materially adding to the gold returns.

The low-level workings in the New Alburnia, Moanataiari, and Kuranui-Caledonian Mines have not been productive to the extent anticipated by the owners; and the valuable blocks of ground in the May Queen Mine must await drainage by the pumps at the Queen of Beauty shaft, as they cannot be operated on until the water has been lowered.

A further period must yet elapse before very large returns from any of the mines in this quarter can be expected.

During the past year, 20,850 tons of quartz were crushed and tailings treated, yielding 13,482 oz. of gold; representing an estimated value of £32,177. The number of miners in this district employed in gold-producing mines was 528.

OHINEMURI COUNTY.

The mines in this district have again given continuous returns of a most satisfactory character.

The Crown, New Zealand Talisman, and Woodstock Mines at Karangahake are now well opened up, and improvements in treatment and extraction have shown a marked increase in the yield of gold. The Waitekauri Company's Mine and the Komata Reefs Mine have both largely added to the year's return. Waihi, the Waihi Company continue to furnish excellent returns, and, now that their new mill of one hundred stamps is working, future returns will largely exceed those of the past. The Waihi-Silverton Mine also continues to yield payable returns. The future prospects of this part of the mining district are of a most favourable nature.

During the past year 105,126 tons of quartz and tailings yielded 280,708 oz. of bullion, representing a value of £300,107. 1,480 men were employed in the gold producing mines.

PIAKO COUNTY.

The mines in this district have not yet arrived at the gold-producing stage. The low-level tunnel at Waiorongomai and the other workings by the Aroha Company have not furnished any quartz for treatment, and the thermo-hyperphoric process introduced by the Rev. Joseph Campbell has not yet been so perfected as to be in a condition to deal with the quantities of refractory ores for which it is specially intended.

TAURANGA COUNTY.

The quartz reefs in the Te Puke District are not yet developed, and goldsaving machinery has not yet been introduced for treatment of the ore.

WEST COAST DISTRICT.

Reefton, the chief quartz mining centre on the West Coast, has not produced any very rich yields. The Consolidated Goldfields of New Zealand (Limited) have, during the year, completed their new battery of forty stamps, and thoroughly developed their mines. A commencement has been made to crush quartz, and it is probable that the returns for next year will show a very large increase from this source.

The other mines are receiving attention, and at Paparoa Range the Crœsus

Company have erected a small battery to crush the quartz for their mine.

The developments at Victoria Range have not yet demonstrated a value in the reefs equal to the discovery of stone on the surface made in that district last

The quantity of quartz crushed during the year was 19,742 tons, for a yield

of 7,412 oz. of gold, of the value of £27,031.

OTAGO AND SOUTHLAND.

The mines in which operations have been most successfully carried on are the Premier Mine at Macetown, the Achilles at Skipper's, the Cromwell at New Bendigo, and those mines situated at Carrick Ranges, Old Man Range, and

McRae's Flat in the northern and central parts of Otago.

Prospecting is carried on, and mines are again being opened at Barewood, Waipori, and Table Hill, in the central and southern part of Otago. There is every reason to expect success will attend future developments. The Morning Star Mine at Preservation Inlet, in the extreme south-west of the island, has again yielded rich returns, and as a considerable number of claims have been taken up, prospecting operations may reveal fresh discoveries in the Southland District.

The quantity of quartz crushed during the year was 19,820 tons, for a yield of 17,302 oz. of gold, and a parcel of 288 tons of tailings treated for a yield valued

at £1.610: making a total value of £69,510.

GENERAL.

In evidence of the continuance of rich yields of gold from quartz-mines, the returns from sixteen mines in the North Island show that 36,403 tons of quartz and 742 tons of tailings yielded 92,665 oz. of gold and bullion, of the value of £103,317; and seven quartz-mines in the Middle Island crushed 8,189 tons of quartz for a yield of 3,910 oz. of gold, valued at £14,728, during the months of April and May last; while the returns received from twelve of the dredges at work in Otago show that 1,514 oz. of gold was obtained, valued at £5,900, during the same period.

It may be interesting to state that about three-fourths of the total value of the gold-yield in the North Island for the year ended the 31st March last has resulted from the use of the cyanide process, and for the months of April and May last, 87 per cent. of the value was from this process.

ALLUVIAL MINING.

The Middle Island is the chief seat of this branch of the industry, although there are also evidences of auriferous drifts and sands in Stewart Island, but

these up to the present time have not proved of much importance.

In the North Island the gravel drifts have, so far as is known, proved barren of any precious metal; while in the Auckland quartz-mining district the free gold found in some of the creeks, being shed from the hill directly into the lower ground, differs from typical alluvial deposits.

MARLBOROUGH.

The chief gold-producing localities are at Wakamarina, Mahakipawa, and the range lying to the northward of the Wairau River. At each place a limited number of miners earn a livelihood by sluicing and washing the terraces.

Nelson.

At Collingwood the Parapara Hydraulic Sluicing Company has, under new management, secured good returns, and its prospects appear to be favourable. The Collingwood Goldfields (Limited) is actively engaged in preparatory operations, and it is anticipated that the company will be amongst the gold producers in the near future. The Anatoki and Bubu Districts, at Takaka, and the Wangapeka and Baton Rivers, in the Waimea County, still afford profitable employment for a number of parties of miners.

WEST COAST.

The great extent of country bounded on the west by the Tasman Sea, on the east by the Southern Alps, and extending from north of the Buller River to Jackson's Bay, constitutes the famous West Coast Goldfields, in which are worked the beds of the principal rivers and their tributaries, as also those vast deposits of gravel-drifts found in situations varying from below sea-level to altitudes of 4,000 ft.

The coast terraces to the north, and also to the south of the Buller River, have yielded rich returns in the past; all the branches and tributaries of this river to the source of the Owen River have also been more or less auriferous.

Operations are being successfully carried on at Waimangaroa, Addison's, Charleston, near the sea-coast, and at Fern Flat, Lyell.

Grey Valley.

The terraces in this district still continue to afford remunerative employment to a large number of miners, and, where the water-supply is plentiful, sluicing claims are to be worked on a large scale.

Kumara and Waimea.

The water-supply which is provided by the Government races has been augmented by increased provision for storage, and other sources of supply are in contemplation.

Although several of the older claims are worked out, the water-races are now managed so that large quantities of water are supplied, thus enabling the miners to deal profitably with the gravel-wash that previously did not prove payable.

Rimu and Kanieri.

A considerable number of miners are still employed in this district, both in sluicing and driving for the wash-dirt overlain by the gravel of the terraces.

The water-race from Kanieri Lake to Seddon Terrace and Back Creek has not yet been commenced. This work, if constructed, will entail the expenditure of a large sum of money. The success of this undertaking depends on the question as to whether the discharge level will prove sufficient to enable the higher terraces to be worked.

Ross.

The company which has for some years held the claims on Ross Flat having, so far, been unable to raise funds for working the deep levels, the titles to some 300 acres of land which had been held unworked for a number of years have been cancelled. It is now proposed to allow any new company that may be formed to select an area of 100 acres from this land, on condition that a working capital of not less than £20,000 is provided; in addition to which the Government will contribute £10,000, in compliance with regulations for granting assistance towards prospecting at deep levels for the purpose of working the deep leads of gold on this flat.

OTAGO.

The principal goldfields of Otago are at Tuapeka, Clutha Valley, Manuherikia Valley, Mount Ida, and the Lake Districts. Gold to the value of £20,954,891 has been obtained from the alluvial workings.

Tuapeka.

The Blue Spur Gold-mining Company is the chief gold-producer in this district, and, with their extensive hydraulicing plant, still continues to work the deposit of cemented gravel which furnished employment to the miners since the early days of the rush to Otago. Other sluicing claims are also being worked, and several dredges are employed on the Tuapeka, Waitahuna, and Waipori Rivers.

Clutha Valley.

This valley, which extends from Beaumont to Cromwell, and contains the most extensive and richest deposits of auriferous gravels yet known in New Zealand, continues to be worked by hydraulic sluicing and dredging. In the Manuherikia tributary of the Clutha River dredging is carried on; and the chief lesser streams and terraces within the Manuherikia basin are worked by hydraulic sluicing.

Lake District.

A number of dredges are at work in the Kawarau and Shotover Rivers, and sluicing is carried on in the Shotover and Arrow Rivers and their terraces.

Mount Ida.

The Mount Ida Water-race affords a means of profitable employment to a large number of miners in the vicinity of Naseby, and dredging operations are also carried on.

DREDGING.

This method of working the gravels of the beds of rivers has been adapted so as to deal with like deposits in those valleys that were no doubt ancient river-beds; the success attendant on the operations of dredges, in districts where very little surface water is to be found, has already demonstrated the fact that moderately deep and wet ground can be profitably worked in places that hitherto were untried, owing to the absence of a plentiful water-supply. There is, therefore, very little doubt that extensive areas of land of the above description, and which contain a modicum of gold in the gravel, will ultimately be dealt with.

The excellent yields obtained from dredging operations in the Cromwell, Clyde, Alexandra, Roxburgh, Miller's Flat, and Island Block Districts along the Clutha or Molyneux River, as well as in the Waipori, Waikaka, Tuapeka, and Milton Districts, has led to the construction of many new dredges throughout Otago. Upwards of seventy dredges are at work, and, as at least seven is the average number of men employed on each, work will be provided for an increased number of men when the new dredges commence work. The number of claims

taken up for dredging is about a hundred and thirty; and although this industry promises to be attended with success, it will be wise on the part of those who intend to embark in it to ascertain first what certain prospect of success exists in particular localities, before incurring the cost of building dredges. It is frequently the case in the initiative of quartz-mining that expensive machinery is erected for the treatment of the products before sufficient work has been done to ascertain what the probable value of the material to be operated on may be. It is to be hoped that similar errors will not be made in the dredging industry.

ACCIDENTS ON DREDGES.

The high percentage of fatalities amongst the men employed on dredges (1 per cent.) during the past year has rendered it necessary that provision should be made to insure that all requisite precautions should be taken for the safeguard of the lives of the employés, and it is proposed to introduce legislation dealing with this matter during the session.

ACCIDENTS IN GOLD-MINES.

In the Auckland District three fatal accidents occurred; in the West Coast District four, and in the Southern District two, exclusive of accidents on dredges. The total number of fatalities was 14, and the number of miners engaged 14,198, which gives a proportion of about one per thousand.

DIVIDENDS.

Dividends naid by New Zealand Mining Companies du

The following Table shows the Dividends paid by New Zealand Mining Companies during 1897 and 1898.

	79 .	Amount		Capital.			Divid	ends.	
Name of Company.	Subscribed Capital.	of Capital actually	No. of.	Amount	Paid up	1	897.	1	898.
	Sub	Paid.	Shares Issued.	of Share.	per Share.	Per Share.	Total.	Per Share.	Total.
Auckland.	£	£					£		£
Hauraki (Limited)	• • • • • • • • • • • • • • • • • • • •						8,000	•••	••
New Zealand Crown Mines (Limited)	••	• •	80,000	•••	• •	••	10,000	• • •	10 50
Royal Oak of Hauraki (Limited) Waihi (Limited)*	160,000	106 667	160,000	20/	20/		64,000	• • •	12,500 $32,000$
Waini (Limited)*	18,000		6,000	20/	30/		750	•••	300
Waitekauri	143,000		143,000	20/	20/		14,300		.,
37 7 1 777 /2 7			,	. '	•				
Nelson and Westland. Keep It Dark Quartz	20,000	6,208	20,000	20/	16/21		2,000		
Kumara Long Tunnel Sluicing	8,000	7,433		10/	9/33		1,298	••	••
Mont d'Or Mining and Water-race	12,000	10,800		20/	18/		2,400		• •
Sluicing (Limited)	12,000	20,000	12,000		10/		2,100	• • •	••
Otago.									
Molyneux Hydraulic			A 5,690]					465/10/6
Clyde Dredge (Limited)	3,850	3,840	B 4,310 80	1,000/	1,000/		5,800		400
Enterprise Gold Dredge	2,000	2,000		20/	20/		858	::	500
Ettrick Gold Steam-dredge (Limited)	2,500	1,937	∫ 2,500†	20/	-15/6	}	1,013		
Golden Gate Dredge (Limited)	2,500	2,500	$2,000 \ddagger 2,500$	20/ 20/	20/ 20/)	2,000		
Golden Run Dredge (Limited)	4,000	4,795	6,000	20/	20/ 20/	::	5,194		• •
Golden Treasure Dredge (Limited)	1,500	1,384	3,000	20/	20/		3,739		143/16/0
Jutland Flat Waipori (Limited)	15,000	4,000	5,000‡	20/	15/)	1,500		
3. ()	′ 1		10,000+	20/	8/	ļ	•	•••	
Otago Gold-dredging (Limited) Sandhills Dredging	4,500	2,000	4,000	20/	20/		$1,300 \\ 125$	•••	1,000
Blue Spur and Gabriel's Gully Consoli-)	•••	(3,500§	20/	20/	,		•••	••
dated Sluicing (Limited)	89,066	30,000	82,298		20/	}	4,078	•••	• •
Moonlight Sluicing	2,000	1,352	2,000	20/	17/6	·	400		
Phœnix Water-race Sluicing	1,500	1,500	1,000	30/	30/		225	• •	••.
Roxburgh Amalgamated Mining and	29,152	12,737	15,000†	20/	18/	}	841		750
Sluicing (Limited)) '	,	14,152† (10,000†	20/ 10/	20/ 10/	{			
Upper Waipori Alluvial Dredging	12,000	5,950	14.000	10/	8/6	} · ·	600		••
	1	.	(A12,000	20/	20/	1			
Morning Star Quartz	24,000	2,575	B 6,000	20/	4/9	}	8,241		
			C 5,513	20/	3/10)		-	
Sew Hoy Big Beach (in liquidation)	••		••					••	1,925

^{*} Total amount of dividends paid by Waihi Company to date is £276,500.

[†] Contributors.

COAL-MINING.

This industry continues to expand in proportion to local and foreign demands. The further development of gold-mining will also increase the

demand for the supply of coal.

The total output from the mines last year was 840,713 tons, as against 792,851 tons for the former year, showing the increased output last year to be The coal imported from other countries last year was 110,907 tons, while for the former year there were 101,756 tons, showing an increase in the importation last year of 9,151 tons. The imports were 1,500 tons from the United Kingdom, 109,403 tons from New South Wales, and 4 tons from Victoria. The total export of coal was 82,396 tons; of which 76,073 tons was colonial produce, and 6,323 tons imported coal from other countries. Of the quantity of coal exported, 55,757 tons was for coaling direct steamers trading between the colony and the United Kingdom, and will therefore be treated as in former Statements as coal consumed within the colony, as these steamers are wholly employed in trade between New Zealand and Great Britain. Taking, therefore, the output from our mines and the coal imported, we have a total of 951,620 tons, of which 26,639 tons was exported, leaving the consumption within the colony last year to be 921,097 tons, as against 866,633 tons for the previous year, being an increased consumption last year of 54,464 tons. Taking the output of the different classes of coal from the mines in the colony, there were 504,764 tons of bituminous coal, 34,969 tons of pitch-coal, 268,020 tons of brown coal, and 32,960 tons of lignite; which shows an increased production last year of 31,127 tons of hituminous coal, and a decrease of 75,578 tons of pitch-coal, 88,276 tons of brown coal, and 4,037 tons from the lignite-pits.

The mines in the Kawakawa and Hikurangi Districts show a decrease last year of 3,958 tons, but the Waikato and Mokau mines show an increase of 5,431 tons: giving a net increase on the total output for the North Island of

1,473 tons.

The Westport District mines show an increase of 35,855 tons; also the Nelson mines an increase of 404 tons; but there was a falling off in the districts of Reefton and Greymouth of 10,144 tons: making the net total increase for the West Coast District of 26,115 tons.

The mines in the Canterbury District show an increase of 1,893 tons.

There were also large increases from the mines in the Otago District: North Otago showing an increase of 2,176 tons; South Otago District, 10,769 tons; and the Central Otago District 5,533 tons: making a total net increase for the Otago District of 18,478 tons.

The Southland District shows a decrease last year of 97 tons.

The mines in which there has been the largest output are: The Coalbrook-dale, 184,376 tons; Kaitangata, 92,914 tons; Brunner, 85,592 tons; Millerton, Granity Creek, 59,240 tons; Westport-Cardiff, 54,280 tons; Blackball, 43,084 tons; Taupiri Extended, 33,913 tons; Hikurangi, 30,663 tons; Shag Point, 23,334 tons; Nightcaps, 22,762 tons; Taupiri Reserve, 18,870 tons; Kiripaka, 16,248 tons; Waikato, 13,317 tons; Allandale, 11,635 tons; Walton Park, 11,554 tons; New Bay of Islands, 11,134 tons: the output from any of the other mines being under 10,000 tons.

ACCIDENTS IN COAL-MINES.

Four fatal accidents occurred in the coal-mines during the year 1897: one in the Auckland District and three in the Otago District. The usual inquiries revealed that no blame could be attributed to any one. The total number of coal-miners employed throughout the colony was 1,912; therefore the percentage of fatal accidents is 0·209, or 2·09 per thousand.

METALLIFEROUS MINES.

Attention is again being directed to search for lodes containing copper, antimony, and other metals; but, with the exception of small shipments of manganese and sulphur from the North Island, chiefly to Australia, the quanti-

ties produced have not been of very great importance. A small shipment of 10 tons of antimony ore, the result of previous operations at Endeavour Inlet, was also exported.

OPAL-MINING.

A limited amount of work was done in Mount Peel District on the land taken up by the Record Reign Company, but no stones of any value were found.

In order to enable mining for opals to be carried on in the Tairua District, it is proposed to declare that the provisions of the Mining Acts shall apply to mining for that precious stone in the Hauraki District.

PETROLEUM.

The bore-hole at Moturoa, near the Sugar Loaves, at New Plymouth, was continued to a depth of 2,050 ft., and although indications of the presence of petroleum were found, it was determined to cease operations in this immediate locality and commence in a fresh place, four miles and a half away, and at a distance of three miles from the sea.

Samples of petroleum of excellent quality were received from the Cheviot District, but no development work has yet been undertaken.

Nothing has yet been done to explore for petroleum on the mineral lease taken up in the Rotorua District.

KAURI-GUM.

Notwithstanding the large quantity of kauri-gum exported every year, there was very little diminution in the amount exported last year, the quantity being 6,641 tons, as against 7,126 tons for the previous year. There was 485 tons less exported this year, the value being less than that of the former year's produce by £33,313, the value of last year's produce being £431,323, which gives an average value of about £60 10s. 6d. per ton, whereas for the present year the average value was £60 per ton.

This industry affords a livelihood to a large number of both Europeans and Natives; but the average earnings of persons employed in digging gum cannot be ascertained. No doubt the time is approaching when the gum will be exhausted, but a considerable period will yet elapse before this takes place. The total quantity of kauri-gum exported since 1853 is 190,570 tons, having a value of £8,512,852. For further information in respect to the industry, I would refer honourable members to the report of the Royal Commission on the subject which has been presented to Parliament (H.-12, 1898).

ROADS AND TRACKS.

The expenditure on roads and tracks has greatly increased. The activity in gold-mining demanded greater facilities to enable communications with new districts, which, on account of the discovery of payable reefs, required to be made more readily accessible for prospectors and miners working their claims. It was therefore determined to ask the House last session for an increased vote under these headings. Some of the works have been carried out on the co-operative system, but the majority have been constructed under the supervision of the County Councils and other local bodies in whose districts they are situated.

The total expenditure by the department during the last six years on roads and tracks for the development of the mining industry amounts to £242,963 19s. 8d. in direct grants, and £88,075 0s. 4d. in subsidies to local bodies; out of which £37,410 14s. 3d. and £12,158 6s. 7d. respectively was expended during the year.

WATER CONSERVATION AND WATER-RACES.

In continuation of last year's work, the site for the dam at West Eweburn having been tested by boring, &c., a re-examination was made, the site finally approved, and preliminary works in preparing foundations commenced. An examination of the proposed Thames Low-level Water-race has been made, with a view to ascertaining its adaptability for supplying water for increased motive-power; also at Te Aroha, where the water is proposed to be first used as motive-power for lighting the Sanatorium in the Domain with electricity. With a view

2—C. 2.

C.—2.

to providing a scheme for a supply of water for domestic and fire-extinction purposes at the mining townships of Coromandel, Karangahake, Waihi, and Waitekauri, exhaustive examinations have been made and designs formulated; and reports on the above subjects are now in course of preparation, and will in due course be laid before you. With reference to this matter the mining townships are in a very difficult position, owing to their being situated on Crown land and therefore unable to take advantage of the Loans to Local Bodies Act to borrow money for providing water-supplies. This question is of such importance that it must very shortly be dealt with.

The water-races constructed by the Government, and worked directly under the control of the Mines Department, are the Waimea-Kumara and Mount Ida Water-races. The gross value of the sales of water from the Waimea-Kumara Water-race last year amounted to £3,849, while the expenditure on maintenance was £2,643; leaving a net profit on the workings of £206. The value of the sales of water from the Mount Ida, including the Blackstone Hill Race, amounted to £1,523, while the expenditure on maintenance was £1,416. This leaves a direct profit of £107 on the working of these races during the last year.

PROSPECTING.

In the prosecution of prospecting for gold and minerals, assistance was during the year extended to the miners, chiefly through the medium of the County Councils and of the Miners' Associations. The following amounts were paid as subsidies towards prospecting in the different counties, viz.: Manukau, £55 2s. 3d.; Bay of Islands, £212 7s.; Coromandel, £515 6s. 11d., including £503 6s. 11d. paid to the Kapanga Gold-mining Company towards cost of sinking its shaft to 1,000 ft., and continuing to bore to a further depth; Tauranga, £10; Piako, £5 12s. 6d.; Marlborough, £34 6s. 6d.; Grey, £7 10s.; Inangahua, £11 11s.; Westland, £1,240 3s. 2d.; Vincent, £42 9s. 9d.; Wallace, £79 4s.; Southland, £13 3s.; Tuapeka, £118 14s.; Selwyn, £2 5s.; Lake, £10.

The subsidy of £25,000 for sinking a shaft and erecting pumping machinery at the Queen of Beauty Mine, at the Thames, to drain the deep levels to the seaward of the Moanataiari Slide, referred to in previous Statements, has now been all paid; but, owing to the unforeseen delays in receiving the requisite machinery, which had to be obtained from the manufacturers in England, it is not expected that pumping will be commenced for some time. So far as practicable, however, all the machinery which has been received has been placed in position, and the enlargement of the shaft has been completed to a depth of 453 ft.

To further aid the prospector, and afford facilities for crushing and testing parcels of quartz in new districts, the Government has decided on the erection of small plants for that purpose, and regulations have been made for their use by prospecting associations.

GEOLOGICAL EXPLORATIONS.

During December last Mr. McKay, the Government Geologist, visited and reported on the western slopes of the Victoria Mountains, in the Reefton District. The report indicates the probable source of the rich auriferous boulders covering the slopes of Kirwan's Hill as being in that vicinity, a matter of some moment to those engaged in the development of that field. During the month of February the same officer visited the copper lodes in the Pukipuki Valley, Whangaroa, and reported thereon, and at the same time examined certain prospecting works in connection with the development of the Kawakawa coalfield. The remainder of the season was devoted to the further elucidation of the geology of Cape Colville Peninsula. This work principally consisted in a careful examination of a part of the southern goldfields within the Ohinemuri County, and the Thames Goldfield. This work has been of an important character, and demonstrates the existence of gold in rocks that have hitherto been regarded as barren of the precious metal; also a close connection between hydro-thermal action, and deposits thereby, at and near the surface, with the deeper-seated veins of the southern goldfields.

11 C.—2.

In the Thames District Mr. McKay's work principally consisted in an examination of the rocks of that field, and of the various faults by which the reefs have been displaced.

During the progress of his examinations a large number of rock specimens were collected, which will be available for the forthcoming exhibition of the mineral and industrial products of New Zealand, to be held in Auckland towards the close of the present year.

MINING MACHINERY.

As in former years, information has been obtained in regard to any new process for the treatment of auriferous and argentiferous ores, and also in regard to new machinery and appliances in connection with mining. By giving the fullest publicity to this subject, opportunity is afforded those persons who are engaged in mining pursuits of obtaining information as to the different patents that have been granted; and, although the machinery or appliance may not in every case come up to the patentee's expectation, the ideas evolved may be the means of improvements being made by some one else who can detect defects in the patents. Plans and specifications of different machines and appliances in connection with mining will be found in the report of the Inspecting Engineer.

SCHOOLS OF MINES.

The Schools of Mines where classes are regularly carried on are those at Thames, Reefton, Otago University, Nelson, Waihi, Coromandel, Kuaotunu, and Westport, the instructors in the first two being officers of the Depart-The Otago University receives substantial assistance towards the cost of a School of Mines, and subsidy is given towards the salary of the Director at the Waihi and Coromandel Schools; while the Nelson classes are carried on by Mr. Worley, aid being granted towards the cost of plant, chemicals, and The instruction given at these schools is becoming year by year of increasing importance, and the number of ex-students from the colonial schools of mines who are occupying important positions in the scientific branches of the mining industry conclusively demonstrates alike the value of the instruction imparted and the ability of the students who have availed themselves of it. Valuable technical education is afforded at the Thames School, where students have opportunities of studying the practical methods of working mines, and of assisting in the treatment of ores for the recovery of gold and silver. A new quartz-crushing plant, with all the latest improvements in reducing, and suitable for the use of the various scientific processes for the extraction of bullion from ores of various kinds, has been recently completed at this school, aided by a grant from the Government. The recently discovered permanganate goldrecovery process for the treatment of ores has also been introduced into this school by Professor Black, who donated to the institution the requisite apparatus for carrying out the work. In the Otago School, also, the use of the new plant for the testing and treatment of ores has afforded students improved opportunities for obtaining the fullest information of a practical character.

At Miller's Flat, and also at Waipori, buildings have been erected, and it is anticipated that classes for practical instruction will shortly be carried on in each of these localities. A site for the Westport School has been provided, and

a grant made towards the cost of chemicals and apparatus.

During the year 342 students attended the various Schools of Mines—namely, 139 at the Thames, 63 at Coromandel, 60 at Waihi, 50 at Dunedin, and 30 at Reefton; and, notwithstanding that the average attendance since scholar-ships were established in December, 1894, is 56, it is somewhat disappointing to find that only two candidates have succeeded in qualifying themselves for scholar-ships—namely, Mr. W. H. Baker, of the Thames, who is attending the classes at the Auckland University, and Mr. MacLaren, who has passed the University course, having held a scholarship for the specified period of three years.

The expenditure on Schools of Mines during the year was £1,780 17s. 3d.,

exclusive of teachers' salaries.

C.-2. 12

SUMMARY OF EXPENDITURE ON WORKS.

The total expenditure on works authorised by the Department for the development of the mining industry for the year ending the 31st March last amounts to £84,467. These works consist of roads and tracks constructed by direct grants, £37,411; roads and tracks constructed by subsidies to local bodies, £12,158; water-races, £2,272; drainage-channels, £1,212; prospecting-works, £2,358; schools of mines, exclusive of salaries of teachers, £1,780 17s. 3d.; water conservation, £507; telephone lines, £50; compensation on proclamation of rivers, £5,197; and prospecting deep levels, £21,520 15s. The liabilities on the works in progress at the end of March last amounted to £50,721. A detailed statement of the expenditure on these works will be found in the tables annexed to the Inspecting Engineer's report.

MINING LEGISLATION.

The Mining Bill, to consolidate the existing Act and its several amendments, which was introduced last session, will be again brought forward. The Bill having been widely circulated throughout the colony, amongst all classes of persons interested in the mining industry, has generally met with approval. A very large number of suggested amendments have been received, some of which are forwarded by those who, from experience, are qualified to judge of the varied requirements of the mining community. These suggestions will be submitted for the consideration of the Goldfields and Mines Committee when the measure is before it. The special conditions under which the dredging industry, a form of mining of recent introduction, is now carried on have rendered it necessary that power should be taken to frame regulations to provide for the more efficient management of dredges, and the safety of the workmen employed.

The Sunday Labour in Mines Prevention Act, brought into force last year, has enabled the Inspectors of Mines to enforce compliance with its provisions, and all Sunday labour in mines and batteries, except in those cases in which permission has been granted, has now ceased. Permits have only been granted in cases in which the special conditions under which operations were being carried

on demanded their use.

The provisions of the Mining Companies Act Amendment Act of last year, making the directors of no-liability companies by whose authority debts are incurred responsible for the payment thereof, has given a feeling of security to those who work for or supply goods to such companies.

those who work for or supply goods to such companies.

The purchase under the Cyanide Process Gold-extraction Act of the patent rights in New Zealand of the processes known as "the MacArthur-Forrest"

Processes" has proved of undoubted benefit to the mining industry.

Licenses to use the process to the number of twelve have been issued, and royalty to the amount of £676 17s. 1d. has been collected for the period from

the 20th August, 1897, to the 31st March last.

It has become apparent that the liability of mine-owners under the provisions of section 383 of "The Mining Act, 1891," and section 52 of "The Coal-mines Act, 1891," in cases where serious accidents occur to any of their employés, is proving a grave obstruction to the development of the mining industry. The Government intend to frame measures defining the mutual liabilities of employers and those who are employed both in coal- and gold-

mining.

Representatives of English capital invested in the Auckland goldfields have drawn attention to the taxes and disabilities under which it is alleged they suffer, and which grievances they state call for redress. Amongst their grounds for complaint are the tax of 1 per cent. per annum on the amount of the nominal capital of the companies, the tenure of mining properties, excessive ground-rent, export duty on gold, and import duty on machinery. It is proposed by legislation to exempt mining companies from the tax of 1 per cent., and to provide for a term of license for mining properties of forty-two years with right of renewal; but the import and export duties in force will not at present be altered. The question of reducing rents on claims held for gold-mining is one which requires very careful consideration, as the rents form part of the revenue of local govern-

13 C.—2.

ing bodies in mining districts, which have to incur large expenditure in the construction and maintenance of roads, &c., which are of direct benefit to the companies engaged in mining. It might be inferred from some of the statements made that the legislation in question was specially brought into operation since the introduction of capital from outside the colony for the development of mining. This, however, has not been the case, as the measures have been in existence for years past; and the land was occupied and companies were formed with full knowledge of the then existing laws and regulations, and of the obligations incumbent upon them. At the same time, due consideration has evidently not been given by investors to the general interest displayed by the Legislature in promoting the industry by large annual contributions from the Public Works Fund towards the construction of roads, bridges, and tracks, assistance towards prospecting, the development of deep levels, and other works.

DEPARTMENTAL.

"New Zealand Mines Record."

The publication of "The New Zealand Mines Record," which was commenced by the Mining Bureau in August, 1897, has been continued monthly. Judging by the inquiries received from Australia, Great Britain, the United States, and South Africa, the "Record" is scanned for information by those who have already invested, and by many persons who may have an idea of putting a portion of their spare capital into mining investments in New Zealand; while articles on improved gold-saving and milling appliances enable mining men in this colony to keep abreast of the times. The monthly publication of battery returns and statistics, initiated by the Bureau, has been followed in Western Australia, and is in contemplation by the Governments of other colonies. Geological reports and special articles have been reprinted from the "Record," and copies forwarded to the Agent-General; others have been put into pamphlet form for circulation amongst the miners.

CONCLUSION.

In conclusion, I would point out that the state of the mining industry is now on a more stable basis than was the case last year. A large number of claims that were taken up for purely speculative purposes have been abandoned, and it may now be assumed that the areas held will be developed by steady prospecting and intelligent conduct of operations, which, with careful and economical management, should, in the majority of cases, prove remunerative. The prosperity of the industry has, no doubt, received a check from the undue speculation which prevailed during the recent "boom" in the North, but the amount of capital already invested, and still being invested in the development of the more prominent mines will, it is anticipated, secure fair returns.

I cannot, however, too strongly impress upon all persons who may be interested in gold-mining the advisableness of opening up and developing their mines before proceeding with the erection of expensive machinery and appliances for treatment of the ores.

In the southern districts capital is being freely invested in the dredging industry, and if ordinary precautions are taken to avoid the errors fallen into elsewhere, there is little doubt that an increased yield of gold will result in the employment of a large number of men. Renewed attention is being paid to hydraulic sluicing in the West Coast, Otago, and Southland Districts, where prospects appear favourable.

The construction of roads and tracks for opening up new fields, and also for improving the means of communication in the older districts, is still of urgent necessity, and ample provision must again be made for the vigorous continuance of necessary works. In order to aid in the further development of the industry, substantial grants will also be required for prospecting, water-

conservation, and deep-level mining.

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, 1896 and 1897, as well as the Total Value since January, 1853.

Name	of Metal	or Miner	al.		For Year 31st Dece	ending the ember, 1897.	For Year 31st Dec	ending the ember, 1896.	1st January	rom the , 1853, to the noer, 1897.
					Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Precious metals— Gold Silver	• • • • • • • • • • • • • • • • • • • •		••		Oz. 251,645 183,892	£ 980,204 20,872	Oz. 263,694 94,307	£ 1,041,428 10,589	Oz. 13,565,552 1,085,162	£ 53,372,634 202,724
Total gol	d and sil	ver			435,537	1,001,076	358,001	1,052,017	14,650,714	53,575,358
Mineral produce, Copper-ore Chrome-ore Antimony-ore Manganese-ore Hæmatite-ore Mixed minerals Coal exported Coke exported Coal, output of r Kauri-gum			gum—		Tons 10 180 1,561 76,073 764,640 6,641	£ 2 157 541 5,892 69,595 882,320 398,010	Tons. 21 65 79,524 105 713,327 7,126	£ 450 205 1,335 71,984 268 356,664 481,323	Tons. 1,394½ 5,666 3,610 18,285½ 552½ 15,874 974,999 16,343 10,601,614 190,570	£ 17,868 37,367 52,361 58,534 226 78,782 958,241 24,781 5,300,807 8,512,852
Total qua Value of a				als 	849,105	$\substack{856,517\\1,001,076}$	800,205	$862,224 \\ 1,052,017$	$11,828,408_{\frac{1}{4}}$	15,041,819 53,575,358
Total val- cluding	ue of mi			, in-		1,857,593	••	1,914,241		68,617,177

No. 2.

Table showing the Quantity and Value of Gold entered for Exportation from New Zealand for the Years ending the 31st March, 1897 and 1898, and the Total Quantity and Value from 1857 to the 31st March, 1898.

District and County or Borough	h.	Year 31st Ma	ending rch, 1898.		ending irch, 1897.	Decrease ending 31	ase or for Year st March, 98.	from Janua	ity and Value ary, 1857, to rch, 1898.
		Quantity.	Value.	Quantity.	Value.	Increase.	Decrease.		-
~ . * * ***	••	Oz. 16,712 4,014	£ 70,544 16,656	Oz. 27,404 3,941	£ 113,116 16,572	Oz. 	Oz. 10,692	Oz. 	£
County of Ohinemuri County of Piako		83,732 90	297,704 357	57,115 125	205,981 521	26,617	:: 85	••	••
County of Marsden County of Whangarei		3,942	 16,341	5,291	22,041		 1,349	••	••
m 1 3 m m m 1 1 1			••				-,,,,,	••	• •
Wellington		108,490	401,602	93,876	358,231	14,614		2,167,375	8,170,266 706
Marlborough—	••		••		• •	••			
Blenheim Borough		619	2,400	789 	3,070		170 	••	••
		619	2,400	789	3,070	· · · ·	170	85,764	334,009
~		33 725	124 2,729	498 2,036	1,815 7,729		465 1,311	••	• •
·		758	2,853	2,534	9,544		1,776	1,673,139	6,633,163
County of Inangahua County of Grey	•••	8,480 9,727 23,754	33,918 38,913 95,014	10,899 12,615 20,772	43,518 50,459 83,170	2,982	2,419 2,888	••	••
Brunnerton Borough Kumara Borough Hokitika Borough		21,078 295 808 1,979	84,312 1,182 3,227 7,915	23,709 311 384 2,858	94,907 1,244 1,532 11,431	424	2,631 16 879	••	••
Reefton Borough	• •	66,121	264,481	71,548	286,261		5,427	4,324,897	17,199,434
CANTERBURY							•••	24	96
County of Tuapeka County of Vincent County of Maniototo County of Waihemo County of Waikouaiti County of Bruce County of Lake County of Wallace County of Fiord County of Southland County of Stewart Island County of Clutha Borough of Alexandra		1,462 17,568 20,523 7,213 497 144 1,621 978 10,043 6,699 5,292 3,413 51 	5,597 70,976 83,008 29,166 2,031 589 6,516 3,939 41,021 26,920 21,179 13,713 207 304,862	1,708 25,011 23,430 10,040 687 602 1,814 1,042 11,315 5,823 3,383 3,282 50 29 	6,904 101,834 95,507 40,929 2,802 2,464 7,436 4,180 46,349 23,451 13,191 13,273 200 116 358,636	876 1,959 131 22	246 7,443 2,907 2,827 190 458 193 64 1,272 50 	5,388,511	21,306,286
m + 1		251,492	976,198	256,913	1,015,742	••	5,421	122 13,635,020	484 53,644,444

TABLE Showing the Total Quantity and Value of Gold entered for Duty for Exportation from the 1st January, 1857, to the 31st December, 1897. (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 gold from Invercargill and Riverton under the head of "Otago.") No. 3.

Auckland.	Nelson.													
	-	son.	Marlborough	rough.	West	West Coast.	Ot	Otago.	Wellin	Wellington.	Canterbury	bury.	Total	<u>.</u>
ue.	Oz.	Value.	0z.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.	Oz.	Value.
ದ್ಯ	-	ಆ		ಚ		€		сt		વર		ct.		CHS
:	10,437	40,422	:	:	:	:	:	•	:	:	:	:	10,437	40,422
1,192		51,272	:	:	:	:	:	:	:	:	:	:	13,534	52,464
:		28,427	:	:	:	:	:	:	:	:	:	:	7,336	28,427
:	4,538	17,585	:	:	:	:	:	:	:	:	:	:	4,538	17,585
:		24,552	:	:	•	:	187,696	727,321	:	:	:	. :	194,031	751,873
4,098		40,386	:	:	:	:	399,201	1,546,905	:	:	:	:	410,862	1,591,389
13,853		37, 120					614,387	9,380,750	.;		:	•	628,450	2, 431, 723
10,552		55.841	24.838	95,231	1.463	5.560	436,012	1,689,653	: :	: :	: :		480,171	1,856,837
17,096		47,030	7,959	30,814	980,867	1 197 370	950,139	1,004,163					574 574	9,996,474
17,463		99,643	469	2,0	550,000	9,140,046	168 871	654 647	:	:	:	:	735 376	9,844,517
10,000		25,72	204	010,1	210,012	010,010	150,015	609 018	:	:	:	:	806,008	0 600 060
10,211		90,310	TOG	1,970	911,874	Z,010,014	150,010	020,020	:	:	:	:	000, 300	2,030,002
168,874		38,396	404	1,616	405,762	1,608,844	171,649	989,589	:	:	:	:	637,474	2,504,326
434,687	_	42,524	999	2,664	317,169	1,269,664	153,364	613,456	:	:	:	:	614,281	2,362,995
319,146		48.692	1.852	7.408	280,068	1.121.525	165,152	660,694	30	120	:	:	544.880	2.157.585
1 188 708	_	40,056	1,867	7,468	989,889	931,598	154 940	619,760	,				730,099	9, 787, 590
260,100		99,000	0,00	000	470,004	600,008	157,674	690,606	:	:	:	:	445 970	1 791 961
003,0#L		24,100	2,00	0,740	410,014	030,230	101,01#	090,090	:	:	:	:	0.00,044	1,101,201
437,125		04,780	1,274	000,6	188,501	750,442	182,410	134,024	:	:	:	:	900,000	1,357,420
305,068	5,642	22,158	1,198	4,748	157,531	631,203	135,107	542,154	:	:	:	:	376,388	1,505,331
262,156		17,866	1,159	4,636	158,678	635,480	121,423	487,632	:	:	:	:	355,322	1,407,770
221,905		55,862	450	1,796	133,014	531,274	118,477	473,491	:	:	:	:	322,016	1,284,328
403,627		21,092	870	3,197	153,198	612,823	113,169	455,341	:	:	:	:	371,685	1,496,080
220,454		17,223	404	1,617	144,634	578,508	105,003	422,277	:	:	;	:	310,486	1,240,079
154.295		.11,424	879	3,460	142,822	571,061	102,869	407,868	:	:	:	:	287,464	1,148,108
176,416		12,223	1.550	5,650	144,090	575,258	113,666	457,705	:	:	:	:	305,248	1.227.252
141,326		13,039	1.378	4,531	127,544	509,971	102,670	411,923		_;		:	270,561	1,080,790
131 007		19, 494	1,359	5,400	130 048	519 978	83 446	333 804	: ⊆	37		:	951 904	1,009,790
169,619		707 4	2,001	0,504	116,005	467 150	87 778	950 994)	5	:	:	948, 874	003 820
149,564		φ, α	1 070	2,024	111 686	446 517	78,10	318 039	:5	380	:6	. 90	990,046	900,000
170,01	_	100,00	5,0	9,00	117 061	471 908	10,010	000,000	101	3	1 H	3	050,027	040,421
100,410		10,00	0.40	2,100	110,001	440,000	10,100	234,010	::	• • •	:	:	000,011	9±0,010
125,140		9,919	404	1,401	112,011	440,201	19, TO#	011,040	#	FOT	:	:	224,049	905,508
121,564		10,829	1,041	801,6	98,774	395,430	70,443	816,672	:	:	:	• •	203,809	811,100
139,556		11,320	669	2,547	100,139	400,405	62,107	247,142	:	:	42	96	201,219	801,066
113,191		12,310	5,189	20,167	101,696	406,451	64,419	256,430	:	:	:	:	203,211	808,549
125,760		11,049	6,073	24,285	969,68	356,368	63,423	255,976	:	:	:	:	193,193	773,438
181,185		16,896	5.649	22,576	109,268	437, 126	87.209	349,573	33	132	:	:	251,996	1.007.488
183,655		9,604	3,898	15,429	103,106	412,383	82,933	333, 467	52	206	;	•	238,079	954,744
186 559		α α	9,165	8,00	00 197	306 516	77,660	919 998		:	;		996,811	019 199
110,000		10,101	0,100	10,01	00,141	070,070	77. 989	907, 644	:	:	:	:	001 615	004,010
211,974		10,054	2,090	10,120	00,00	941,404	00,000	901,044	:	:	:	:	070,127	600,100
430,862		9,016	2,035	10,771	89,429		87,094	353,790	:	:	:	:	293,491	1,162,164
350,355		10,333	916	3,588	79,317		88,362	359,991	:	:	:	:	263,694	1,041,428
392,337	1,892	7,055	810	3,195	58,817	235,430	84,649	342,187	:	:	:	:	251,645	980,204
0,00	t		0.1	100	2	000 000	000	100 010	T		1	5	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 0 0
8,059,394	253,720	1,002,006	85.450	332,835	5 719 263	22, 730, 339	5.368.828	21.246.824	273	1.044	8	5.	13.565.552	53,372,634

TABLE showing the Total Quantity and Value of Mineral Ores other than Gold (the Product of New Zealand Mines), Coal, Coke, and Kaurl-Gum, exported from the Colony to the 31st December, 1897. No. 4.

-C. 2.

28,864 18,5912 18,5914 18,591 25,066 25,066 25,066 36,850 9,943,736 Value. $226,794\frac{2}{3}$ 51,686 79,147 97,828 80,287 92,891 78,191 84,052 94,026 86,878 84,465 Total, Tons. 958,241 16,343 24,781 190,5703 8,512,852 1,085,162 1 23,019 20,645 20,005 18,885 5,694 16,826 24,914 16,624 12,108 20,809 403 24,105 32,637 28,023 22,053 63,076 54,177 85,024 94,307 Oz. Value. Kauri-gum. 4,811 2,834 2,569 3,231 2,888 3,445 4,725 461 533 518 393 875 , 338 , 338 , 338 , 338 , 338 , 425 , 126 1,103 1,400 2,228 1,867 2,535 2,685 2,685 2,685 2,685 2,850 4,391 5,054 920 Tons. 177 324 135 353 480 2,057 372 385 715 715 266 1,646 3,634 3,834 5,691 5,691 160 715 263 Value. Coke. Tons. 5,139 6,187 5,977 5,610 2,380 4,879 Value. Coal. 974,999 7,020 6,621 3,527 6,104 6,104 44,129 68,087 86,405 68,087 86,405 69,614 91,664 75,004 1,672 1,696 990 724 Tons. 4,142 2,955 9,985 273 78,782 $\frac{14,824}{9,664}$ 631 650 353 880 335 892 Hæmatite-ore. | Mixed Mineral Ore. Value, 15,874 3,180 2,366 2,674 1,955 2,784 84 37 25 62 87 1,561 144 162 199 19 226 Value $52\frac{1}{2}$ Tons. 22,404 22,569 22,569 22,634 1,1239 1,156 5255 541 58,534 Value. Manganese ore. 18,2853 305 1,085 1,080 482 1,153 1,153 319 319 534 210 Tons. 5,289 1,784 3,989 6,246 6,246 11,121 4,950 8,490 3,467 1,486 1,486 1,486 1,57 52,361 612 24 900 804 Value. Antimony-ore. 3,610 62 376 376 493 44 364 384 384 211 21 21 Tons. 3 25 8 120 116 1,440 52 520 5,843 24,719 595 4,318 768 4,910 1,315 5,666|37,367 Value. Chrome-ore. .. Tons. 17,868 2,700 390 22 Value. $1,394\frac{1}{4}$ 351 245 137 110 110 51 ... 246 84 Tons. 6,162 5,151 3,996 9,743 6,697 10,679 10,589 ,512 ,500 ,236 ,286 3,785 202,724 3,169 2,946Value. Silver. 1,085,162 0z, : Totals Year.

Nore.—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, 1898.

	Count	ry whence	e importe	đ.		Quantity.	Value.
Victoria New South Wales	• •		• •		 	Tons. 1 26,844	£ 5 24,282
	Totals			• •	 	26,845	24,287

Table showing the Increase or Decrease in the Production of Coal in the Colony, and Imported, Year by Year, during the last Twenty Years.

			Coal raised	in the Colony.	•	Coal imported.	
	Year.		Tons.	Yearly Increase.	Tons.	Plus or Minus.	Increase and Decrease.
1878	 	 	162,218		174,148	1 1	••
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	1 + 1	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	1 + 1	14,379
1892	 	 	673,315	4,521	125,453	+	135
1893	 	 	691,548	18,233	117,444		8,009
1894	 	 	719,546	27,998	112,961	_	4,483
1895	 	 	726,654	7,108	108,198	_	4,763
1896	 	 	792,851	66,197	101,756	_	6,442
1897	 	 [840,713	47,862	110,907	1 + 1	9,151

No. 7.

Table showing the Output of Coal from the various Mining Districts, and the Comparative Increase and Decrease, for the Years 1896 and 1897, together with the Total Approximate Quantity of Coal produced since the Mines were opened.

					Output	of Coal.	Plus	Increase or	Approximate Total Output of
	Name of	' Distric	·t.		1897.	1896.	or Minus.	Decrease.	Coal up to 31st December, 1897.
Kawakawa a Whangarei, whau			ru, and W	/hau-	Tons. 53,449 17,285	Tons. 53,586 21,106		Tons. 137 3,821	Tons. 974,187 375,053
Waikato					66,125	61,899	+	4,226	950,857
Mokau					3,148	1,943	-	1,205	13,653
Pelorus	••				••	••		••	711
West Wangs	anui	• •			908	504	+	404	49,766
Westport	• •	•,•			298,551	262,696	+	35,855	2,642,983
${f Reefton}$	••				2,865	3,795		930	70,672
Greymouth	• •				128,676	137,890		9,214	2,395,928
Malvern					13,710	11,714	+	1,996	341,685
Timaru					••	103	- 1	103	10,657
Otago			• •		212,292	193,814	+	18,478	3,324,297
Southland	••	••.	• •	,	43,704	43,801	-	97	426,164
	Totals				840,713	792,851	+	47,862	11,576,613

No. 8.

Table showing the Different Classes of Coal from the Mines in the Colony.

•	Name	e of Coal.		Output	of Coal.	Increase or	Approximate Total Output of Coal
	218441	ou com.		1897.	1896.	Decrease.	up to the 31st December, 1897
				Tons.	Tons.	Tons.	Tons.
Bituminous			 	504,764	473,637	+31,127	6,146,449
Pitch			 	34,969	110,547	-75,578	1,686,056
Brown			 	268,020	179,744	+88,276	3,366,254
Lignite	• •	••	 	32,960	28,923	+ 4,037	377,854
Т	otals	• •	 	840,713	792,851	+47,862	11,576,613

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 1897.	Average Output per Man.
112 19 4 18	1 to 4 men in each 5 to 10 "	171 129 60 1,552	Tons. 52,012 45,945 25,979 716,777	Tons, 304 356 433 462
153		1,912	840,713	439

No. 10.

Return showing the Quantity and Value of Coal imported into and exported from New Zealand during the Year ended the 31st December, 1897.

		Importe	ed.		E	xporte	đ.	
Countries whence	impo	rted.	Quantity.	Value.	Countries to which export	ed.	Quantity.	Value.
United Kingdom New South Wales Victoria	••		Tons. 1,500 109,403 4	£ 1,238 96,885 16	United Kingdom Victoria New South Wales Queensland Tasmania United States of Americ On the West Coast Fiji Islands South Sea Islands Norfolk Island	 	Tons. 54,005 2 5,281 2 1,487 2,953 7,766 10,784 166	£ 53,445 2 4,270 10 856 2,346 5,838 8,426 180
Totals			110,907	98,139	Totals	-	82,396	75,373

Note.—Foreign coal included in exportation to—United Kingdom, 1,319 tons, value £1,205; New South Wales, 1,611 tons, value £1,459; Tasmania, 21 tons, value £28; United States of America—On the West Coast, 880 tons, value £792; South Sea Islands, 2,372 tons, value £2,174. Norfolk Island, 120 tons, value £120. The remainder is New Zealand produce.

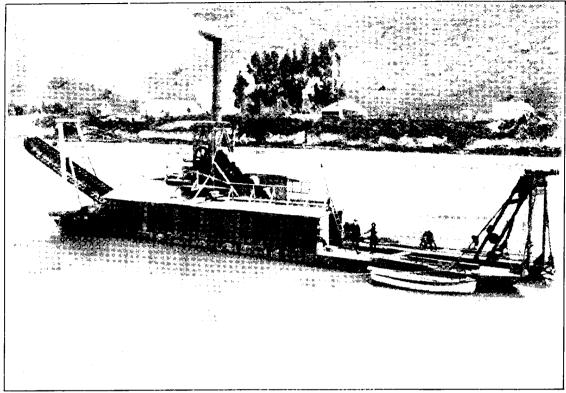
No. 11.

Number of Miners employed during the Years ending 31st March, 1897 and 1898.

20

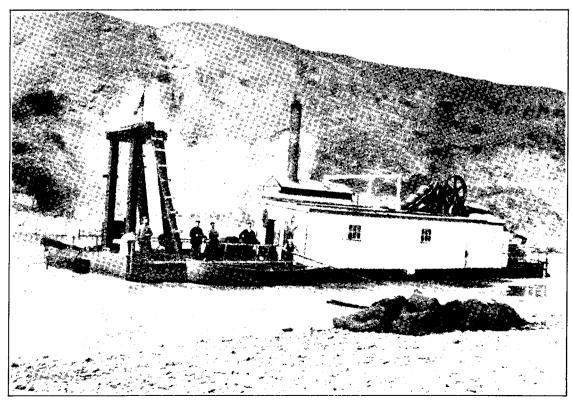
					1 0015 01		st March			
Mining	District.		Alluvial	Miners.	Quartz-	miners.	Total	als.	Grand	Total.
			European.	Chinese.	European.	Chinese.	European.	Chinese.	1898.	1897.
AUCKLAND-								•		
North Hauraki	and Coron			• •	1,101		1,101		1,101	1,329
	••			• •	756	• •	756	***	756	1,527
	••			• •	1,895	• •	1,895	•••	1,895	1,820
	••			••	184	• •	184	• • •	184	100
				• •	10	• •	10	••	10 10	2 <i>t</i> 3 <i>t</i>
Tauranga	• •			••	10	• •	10 6	• •	6	3(
Great Barrier	• •		·	• •	6		0	· · ·		50
15					3,962	•••	3,962	••	3,962	4,87
Marlborough— Pelorus					1		1		1	
Wairau			36	• • • • • • • • • • • • • • • • • • • •	7	· · ·	43		43	30
Cullen's Creek			19				19		19	5
Waikakaho			3				3		3	1
Wakamarina			59		2		61	l	61	8
Kaituna					l					
Italiana	••									
			117		10	••	127	••	127	18
Nelson—	4 a a C	NIa araure								4
Wangapeka, Ba			42	••	••	••	42	::	42	
Takaka Callingwood	• •		60	6	80	••	140	6	146	21
Collingwood	• •		20				20	"	20	1
Motueka	• •		187	195	421	1	608	195	803	67
Inangahua			420	293	66	•••	486	293	779	78
Ahaura	• •	• • • • • • • • • • • • • • • • • • • •	149	l .	00	•••	149		149	23
Charleston	luding A	ddison's,	110	• • • • • • • • • • • • • • • • • • • •		••	110		1 110	
Westport, inc Northern Te	nuang M	daison s,		ļ		ļ				
roa, North	rraces, wa	obibinui	390	1	10	}	400		400	35
roa, North	beach, M	Dellar	330	••	10		400		100	00
Karamea, ai	ia Lower	Buller	•	ì						
Valley		,	32	14	57		89	14	103	7
Lyell	••	,	52	14	91	• • •	69	14		' '
Murchison	••	. }	200	120			200	120	320	17
Owen	•• , ••	,)								
		3	1,500	628	634		2,134	628	2,762	2,56
Westland—			90	4	7		97	4	101	130
Ross	 Jahananal		420	100			420	100	520	550
Stafford and Go	nasporougi	n	450			•••	450	30	480	49
Hokitika and K			350	30		••	350	100	450	45
Kumara			990	100		• • •	330			
Greymouth	• •	7	650	210	20		670	210	880	73
Arnold	•• .		85	1			85	1	86	7
Okarito	••									
			2,045	445	27		2,072	445	2,517	2,42
Otago—			CA.		E-1		115		115	5
Hindon	••	• • • • • • • • • • • • • • • • • • • •	64		51	• • •		200	690	63
Tuapeka			450	200	40	• • • • • • • • • • • • • • • • • • • •	490 422	$\frac{200}{125}$	547	56
Clyde and Alex			410	125	12	• • •		152	522	49
Cromwell			340	152	30	• • •	370 368	70	438	46
Roxburgh	• • •		358	70	10 3	• • •	138	45	183	17
Black's	• •	• • • • • • • • • • • • • • • • • • • •	135	45	9	. ••		20	40	8
Tapanui			20	20		• • •	20	45	315	19
Waikaia	••		270	45	• • •	•••	270		12	19
Wyndham		• • • • • • • • • • • • • • • • • • • •	12	• • •	•••	• • •	12	•••	14	1
Longwood	• •	• •)	330	100	60		390	100	490	42
Orepuki		·	350	100	60	••	990	100	190	42
Roundhill and Wakatipu G	Mailblo Foldfield	uver) s—Arrow	200	20	100		300	20	320	37
Macetown, C	ardrona.	Kawarau,			*.					
Bracken's, ar					3					
			350	25	125		475	25	500	60
Naseby, Kyebu	rn Clark	e's, and)								
Mount Burst		,								
Hamilton, Sow		1		1			ļ			
Hyde and Fulle	erton's	. 1	04*				840	100	501	00
			315	152	34	• • •	349	152	201	63
Macrae's, Str	th - Taieri	, Shag								
Valley, Nentl	orn. St. B	athan's					1			
and Ida Valle										
Maerewhenua a	and Kurow	, .,	105				105		105	10
Pembroke			40	12			40	12	52	5
			3,399	966	465		3,864	966	4,830	4,84
Sun	IMARY.		J, 599	900		<u> </u>	<u> </u>			
UCKLAND			.:	••	3,962		3,962	••	3,962	4,87
MARLBOROUGH			117		10		127		127	18
VELSON			1,500	628	634		2,134	628	2,762	2,56
			2,045	445	27		2,072	445	2,517	2,42
WESTLAND			3,399	966	465		3,864	966	4,830	4,84
Westland Otago			1							
			7,061	2,039	5,098		12,159	2,039	14,198	14,88

Approximate Cost of Paper.—Preparation, not given; printing (3,750 copies), £21 4s.



McEachen, Photo.

Otago Dredge.



Electric No. 1 Dredge.

•