# MINES STATEMENT.

# CONTENTS.

									PAGE
Min	NES STATEMENT								1-7
	Mineral-production					44	V .		i
	Gold and Silver Mining					4.4			$\hat{1}$
	0 1								$\overset{\cdot}{2}$
	Persons employed in or							• •	$\overline{2}$
	Mining and Quarry Acei	idents		1		•••	• •	• •	$\tilde{2}$
	Dobson Colliery Explos	sion .			• •		• •	• •	$\frac{2}{2}$
	Social Amenities at Min	ing Townsh		••		1.	• •	• •	3
	Geological Survey		-		• •	• •	• •	, .	3
	Mining Privileges	• • • • • • • • • • • • • • • • • • • •		• •		•••	• •	• •	4
	State Aid to Mining			• •	• •	••	• •	• •	4
	Government Prospe		•		• •		• •	,	4
	Subsidized Prospect		• •		• •	111			4
	Roads and Tracks				• •		• •		
	Schools of Mines			- •		• •		•	4
	School of Mines: S	 Ab alamahina		• •				•	4
	Miner's Phthisis Act	-		••	••	••	••	• •	4
		land soals	• • •	• •	••	••	• •	• •	5
	Investigations, New Zea Coal-miners' Relief Fun	nanu coais	• •	• •	• •	• •	• •	• •	5
			• • • •	••	•	• •	• •	• •	5
	State Collieries	••	• • •	• •	• •	• •	• •	• •	6, 7
	Housing	••	• •	• •	• •	• •	• •	• •	5
	Output and Sales		• • •	• •	• •	• •	• •	•	6
	Items from Balance	e-sheet	••	• • *	• •				7
		α.			-				
TAI	BLES TO ACCOMPANY MIN			• •			٠.		8-13
	No. 1. Export of Miners								8
	No. 2. Gold—Quantity					• •			9
	No. 3. Coal—Output from			. ,					10
	No. 4. Coal—Output of	different Cl	asses				Ε, .		10
	No. 5. Coal and Oil-sha				ported				11
	No. 6. Coal—Imports			• •	• • •				12
		Bunkers		•	• • •				12
		Cargo							12
	No. 7. Number of Perso	ons employed	d in Mining						13
					1.4				
APE	PENDICES TO THE MINES					• •			14-69
	Appendix A.—Reports I		letalliferous	Mines and	d Stone-q	uarries			14 - 35
	Report by Inspecting				• • •				14-20
	I. Minerals:				• •				14
		$\mathbf{Exported}$							15
	II. Persons e	$_{ m mployed}$			• •	• •			15
	III. Accidents		• •		• •	• •			15
	IV. Gold-mini	ing: Bullior	a-production	a; Divide	nds declar	ed; Person	ns employ	yed;	
		Number o	f Mines and	Dredges					16
	$(1.) \ \ $	Quartz-minir	ng						16
	(2.) I	Dredge Mini	ng						16
		Alluvial Min							17
	V. Minerals o								17
	Iron								17
	Sulp		•						17
		oleum							17
	VI. Stone-qua		• •			•			17
		rying Opera							18
		ry Accident			• •	• •			18
	i—C. 2.	-					\$		

ENDICES TO THE MINES STATE	MENT	inuea.						
Appendix A—continued.  Report by Inspecting Eng	ineer—conti	mued						PAG
VII. State Aid to Min	ing	recocu.						18-2
	ized Prospec	tino		••	• •	• •	• • •	10 2
	ment Prosp							9
	ized Roads							2
	ment Water							2
	s of Mines						• •	5
Annexure A—Summary o								21-2
Northern Inspection	District							21-2
Quartz-mining								21, 2
Copper-mining								, s
Quicksilver-mini	ng							4
Oil-wells	••							2
Sulphur	• •			• •	• •			5
Accidents	• •							2
Marlborough, Nelson	, and West (	Coast D	istrict					23-
Quartz-mining	• •	• •						23-
$\operatorname{Dredging} \ldots$	• •	• •						:
Alluvial Mining	• •							
Iron	• •				• •	• •	- •	
Petroleum	• •	• •			• •	• •		
Quarries		• •						
Prospecting	• •							
Accidents	·:					• •	• •.	
Southern Inspection		• •						27,
Quartz and Allu	vial Mining	• •	• •		• •			:
Dredging	• •	• •	• •		• •	• •	• .•	
Scheelite, Platin		• •	• •	• •	• •	4 .4	• •	
Accidents						• •		
Annexure B—Summary of			iment Wa	ater-race	Manager		• •	
Waimea-Kumara Wa				• •	•.•	• •	• •	
Annexure C—Report on S					• •	• •	• •	0.1
Annexure D—Mining Sta			 J. 14.:		• •	• •	• •	31-
(1.) Quantity of Quar Northern Dis						. • •	• •	31,
West Coast I			• •	• •	• •	• •	• •	
Southern Dis		• •	• •	• •	• •	• •	• •	
(2.) Statements of Af			nanios	• •	• •	• •	. • •	33-
Appendix B—Reports relating				··	• •	• •	• •	36-
Report by Inspecting En				111102	• •	• •	• •	36-
Section I. Coal O				• •	• •	• •		50-
	s employed			• •	••	••	••	
Section III. Accide	nts				••	• •	• •	
Section IV. Worki	ng of the Co	al-mine	es Act	• •	••	••	• •	40-
(a.) Permitted F	Explosives			• •	• •	• •		<b>T</b> O
(b.) List of Mine		v Law	to use Pe	ermitted	Explosives		• •	
(c.) List of Mine						, • •	• •	
(d.) Dangerous								
(e.) Electricity a			• • •					
(f.) Prosecution		• •		• •				
Section V. Legislat			$\min_{\Omega}$	.,			• •	
Annexure A—Summary					• •		••	43-
Northern District					• •		• •	43-
Sampling of Du								
Electricity	• •							
Size of Coal Pill								
Dangerous Occu								
Prosecutions				• •				
Accidents								43,
West Coast District						• •		46-
Accidents								
Dangerous Occu								
Prosecutions								
Southern District								50-
Output	• •				••	• •		
$f Accidents \ldots$				.,				
Dangerous Occu	irrences	• •						
Prosecutions				• •	••			
Annexure B—Colliery St		• •			••			99-
Annexure B—Colliery St Appendix C—Repor	t of Boards	of Exa	$_{ m miners}$			• •	••	
Annexure B—Colliery St	t of Boards ding Certific	of Exa	miners ider the l	 Mining A	cts	• •	••	55- 59- 60- 64-

# 1927. NEW ZEALAND.

# MINES STATEMENT

BY THE HON. G. J. ANDERSON, MINISTER OF MINES.

MR. SPEAKER,—

I have the honour to present to Parliament my seventh annual statement on the mining industry of the Dominion for the year ended the 31st December, 1926.

The following statement shows the quantity and value of the production of metalliferous mines, stone-quarries under the Stone-quarries Act, and of coal-mines during 1926 and 1925:—

		Mineral.			:	1926.			1925.			
		minora.			Quantity.		Value.	Quantity.		Value.		
					1		£		,,,,,,	£		
Gold and	d silver*				554,529	oz.	539,302	625,626	oz.	546,026		
Platinun	a				31	,,	313					
Tungster					9-	$\frac{1}{0}$ tons	475	1 1 2	$\frac{5}{0}$ tons	64		
Sulphur		••			594	,,	5,217	269	٠,,	1,154		
Iron					3,997	,,	19,585	1,289	,,	8,701		
Stone	••		•. •				516,075			463,667		
Pumice					2,358	,,	8,081	2,532	,,	7,672		
Coal		. ••			2,239,999	,,	2,239,999	2,114,995	,,	2,114,995		
	Totals						£3,329,047			£3,142,279		

<sup>\*</sup> The gold-silver bullion is generally exported unseparated.

The value of minerals, including kauri-gum, exported and of the coal used in the Dominion, which is shown in table No. 1 accompanying this statement, amounted to £3,254,372, as compared with £3,170,828 during 1925. The total value of such minerals exported to the end of 1926 amounted to £162,930,715.

# GOLD AND SILVER MINING.

The following statement shows the quantity and value of bullion-production, the dividends paid by registered companies, and the number of productive claims and gold-dredges during 1926 and 1925:—

Class of Gold-mining.			Production	of Bullion.	Dividends paid by Registered Companies.		Number of Produc- tive Claims and Dredges.		
		19	26.	1925.		1926.	1925.	1926.	1925.
Quartz Alluvial Dredging	• •	Oz. 530,087 11,338 13,104	£ 442,674 43,659 52,969	Oz. 604,044 11,545 10,037	£ 460,042 44,990 40,994	£ 55,841 3,725	£ 62,390 1,950 3,283	21 288 5	$\begin{array}{c} 22 \\ 248 \\ 5 \end{array}$
Totals		554,529	539,302	625,626	546,026	59,566	67,623	314	275

#### COAL-MINING.

The output of several classes of coal mined in each inspection district is summarized as follows:—

process may be a second of the second		Total Output			
Class of Coal.	Northern District (North Island)	West Coast District (South Island).	Southern District (South Island).	Total.	to the End of 1926.
Bituminous and sub-bituminous	Tons. 111,918	Tons. 1,084,470	Tons.	Tons. 1,196,388	Tons. 39,179,785
Brown Lignite	541,931	$37,450 \\ 256$	$326,444 \\ 137,530$	$905,825 \\ 137,786$	$\begin{array}{c c} 20,807,277 \\ 3,972,280 \end{array}$
Totals for 1926	653,849	1,122,176	463,974	2,239,999	63,959,342
Totals for 1925	672,403	951,396	491,196	2,114,995	61,719,343

# PERSONS EMPLOYED IN OR ABOUT MINES AND STONE-QUARRIES.

The following table shows the number of persons employed in each inspection district during 1926 and 1925:—

	Ir	spection Distric	t.	Totals.			
Classification.	Northern (North Island).	West Coast (of South Island).	Southern (rest of South Island).	1926.	1925.	Increase or Decrease.	
Gold, silver, and tungsten ore	850	490	366	1,706	1,666	Inc 40	
Ironstone		64	• •	64	83	Dec. 19	
Sulphur	12			12		Inc. 12	
Coal	1,342	2,780	1,037	5,159	4.777	,, 382	
Stone-quarries under the Stone- quarries Act	1,608	263	372	2,243	1,972	,, 271	
Oil	20	3		23		,, 23	
Totals	3,832	3,600	1,775	9,207	8,498	Inc. 709	

# MINING AND QUARRY ACCIDENTS.

In metalliferous mines, at which 1,770 men were ordinarily employed, there were three fatal accidents.

At stone-quarries under the Stone-quarries Act, employing 2,243 men, there were three persons killed and eight persons met with serious injuries.

There were 5,159 persons ordinarily employed about the coal-mines, and there were fifteen persons killed and twenty-two persons seriously injured.

It is with sincere regret that I have to record the fact that an explosion or explosions occurred at the Dobson Colliery on the 3rd December, 1926, resulting in the loss of nine lives. As soon as possible after the last body was recovered from the mine a Royal Commission was appointed to investigate and report as to the cause of the disaster, &c. The report of such Commission, which is already known to honourable members, states that the closest investigation has failed to disclose with certainty the origin of the explosion.

3 C.—2.

As long ago as April, 1925, I wrote to the Under-Secretary for Mines pointing out that I had reasons for believing that gas would be met in considerable quantity in this mine, and directed that a close watch should be kept on the operations, and that every precaution should be taken in the interests of the safety of the men. Pursuant to this direction, and in consequence of his own observations, the Inspector of Mines for the district gave special attention to the mine. On two occasions he prosecuted with success the manager of the mine for failure to comply with the law as to the ventilation, and on other occasions he caused the men to be withdrawn from the mine until certain dangerous defects were remedied. The Commission found that the Inspector of Mines had been thorough and efficient throughout.

Since holding the portfolio of Minister of Mines I have laid it down from time to time to my staff that safety must come first, and that the safety provisions of the law must be rigidly enforced; and as long as I have the honour to hold such portfolio it is my firm intention to continue to insist upon the safety-first principle

being adhered to and observed.

Although not stated in the report by the Commission, it was shown in the evidence adduced at the inquiry that under the regulations existing at the time of the explosion the Dobson Mine did not require to be stone-dusted. It was also shown at the inquiry that subsequently the regulations were drastically amended so as to ensure that not only the Dobson Mine but other mines on the West Coast would require to be stone-dusted in future. The amended regulation goes much further than the corresponding British regulation.

A leaflet repeating specially the law dealing with the prevention of the inflammation of coal-dust has been published by the Department for the information and guidance of all colliery officials. The attention of officials has also been called in such leaflet to their responsibilities under the law, and to the fact that, by request of the Minister of Mines, the Inspectors of Mines have been instructed to insist upon

rigid compliance with the law regarding stone-dusting in coal-mines.

### SOCIAL AMENITIES AT MINING TOWNSHIPS.

In my statement last year I referred to the facilities provided for athletic sports, &c., in mining towns. During the past year two additional tennis-courts were in course of construction at Pukemiro, where a bowling-green is also projected for construction in the near future. The Pukemiro Collieries Co. is financially assisting very largely in both of these amenities. At Waipa a standard-size bowling-green has been formed, and is now in use. Half the means has been provided by the Waipa Railway and Collieries Co., Ltd. In addition, the Company has promised further means for constructing a pavilion on the bowling-green.

At Glen Afton, the Glen Afton Collieries Co., Ltd., has financed and constructed a commodious hall, which is let upon a rental basis to the public and miners'

organizations.

At Runanga another tennis-court and croquet-lawn are proposed. It is intended that these will be constructed by the clubs, with some assistance from the State Mines staff.

It is pleasing to record that the play areas provided in the various mining townships are extensively used and patronized by the miners and public.

### GEOLOGICAL SURVEY.

During the 1926–27 field season the Geological Survey began detailed examinations (1) of a large area in central Nelson, of which Murchison is the centre; (2) of the district extending southward from Poverty Bay to the northern part of Hawke's Bay; and (3) of the volcanic region of the North Island (Rotorua and adjoining districts). The soil-survey of Central Otago, undertaken last year on behalf of the Public Works Department, was continued.

As in former years, a large amount of useful work was done by the palæontological branch of the Survey. Many fossil collections, some of which were received

from outside workers in geology, were thoroughly examined.

The other office-work of the Survey comprised the preparation of detailed reports, the drawing of geological maps, the giving of general information to members of the public, the identification of mineral specimens submitted, &c.

During the year ended 31st March last the following publications were issued: Bulletin No. 28 ("Geology of the Huntly-Kawhia Subdivision"), Palæontological Bulletin No. 12 ("Cretaceous and Tertiary Foraminifera of New Zealand," by F. Chapman), and the Twentieth Annual Report. In addition several papers by members of the Survey were published in the "Transactions of the New Zealand Institute" and elsewhere. At the end of the period under review Bulletin No. 29 ("Geology of the Egmont Subdivision, Taranaki"), was ready for issue, and several other reports were in course of publication.

An important change during the year was the transference of the Geological Survey Branch of the Mines Department, in accordance with a direction given by Cabinet, to the newly organized Department of Scientific and Industrial Research. The Geological Survey was transferred from the Colonial Secretary's Department to the Mines Department on the 1st January, 1886, and therefore its connection with the latter lasted over forty years. During that time, and in earlier years, the Geological Survey, in addition to purely geological work, examined and reported upon practically all the known mineral deposits of this Dominion.

As in past years, officers of the Geological Survey will continue to examine mineral areas and to make such reports as may be required for the Mines Department.

In his letter of transmittal, dated 23rd September, 1926, submitting Bulletin No. 29 (New Series) on "The Geology of the Egmont Subdivision, Taranaki," Mr. P. G. Morgan, Director of Geological Survey, stated that such bulletin would be the last one of the Geological Survey issued under the auspices of the Mines Department, and that he thought it fitting to state also that he should acknowledge the many courtesies he had received from the Minister of Mines and the officers of the Mines Department, the assistance given on numerous occasions, and the keen desire evinced that the work of the Geological Survey should be carried out to the permanent benefit of the Dominion.

# MINING PRIVILEGES.

During the year ended 31st March, 1927, 709 licenses for mining privileges were granted under the provisions of the Mining Act, 1926. Out of this number 102 were licenses for claims authorizing the holders to mine for gold. For the same period 407 mining privileges, including 48 licenses for claims, were struck off the registers under the provisions of section 188 of the said Act.

# STATE AID TO MINING.

As in previous years, considerable use was made of the Government prospecting-drills. They were hired by seven parties, and a total of 3,726 ft. was drilled.

For the year a total of £9,098 8s. 8d. was expended in subsidies for prospecting, and 155 persons were employed in connection therewith.

£3,612 9s. 1d. was expended by way of direct grants and subsidies for roads and tracks.

The expenditure on schools of mines amounted to £3,885 16s. 5d., against £4,004 during the previous year.

# SCHOOL OF MINES SCHOLARSHIPS.

Ten scholarship candidates sat at the annual Schools of Mines Examinations, held in November and December of last year, for the six scholarships which are offered annually for competition by students attending the schools of mines within the Dominion.

Four candidates (three from Otago School and one from Thames School) were successful in gaining scholarships, which are tenable for three years at the University of Otago.

C.—2.

### MINERS' PHTHISIS ACT, 1915.

The benefits under this Act are administered by the Pensions Department, and the following is a statement supplied by the Commissioner of Pensions showing the amount and the number of pensions payable, in force, and granted to the 31st March, 1927:—

Amounts paid since inception until 31st March, 1927:—

1			,	£
From 1st November, 1915,	to 31st	March.	1926	259, 238
For year ended 31st March		• •		41,940
				£301,178
Number of new grants for year	1926-2	7		84
Annual value of new grants				$\pounds 5,733$
Number of pensions in force at	31st M	arch, 19	$27 \dots$	668
Annual value of pensions in force				£42,084
Average pension payable per an	num			£63
Total number of pensions grante	d to 31s	st March	ı, 1927	1,343
Total number of pensions granted includes the following:—	l to 31s	t March	, 1927,	
To unmarried miners				253
To married miners	• •			523
To widows of miners	••	• •		567
				1,343

### INVESTIGATIONS, NEW ZEALAND COALS.

No special investigations on New Zealand coals were carried out during the year in the Dominion Laboratory. The Department, however, deputed the Assistant Dominion Analyst (Mr. W. Donovan), who was abroad, to make inquiries in America and Great Britain re the determination of inflammability of coal-dust, and also the production of oil from coal by low-temperature carbonization and other methods. A visit was paid to the Experimental Station of the Bureau of Mines, U.S.A., at Pittsburgh, and some knowledge gained of the methods employed in determining the inflammability of coal-dust in the special mine developed for the purpose, and of the working of the ingenious instruments by which the velocity of the explosion-wave, the pressure attained, and the velocity and duration of the flame are determined. The British station, which had been transferred to Buxton from Eskmeals, was also inspected. At both places the inflammability of New Zealand sub-bituminous (or brown) coals was specially discussed with the principals.

The Fuel Research Station at Greenwich afforded an insight into some thorough methods of research having as their object the better utilization of fuel, including low-temperature carbonization. A visit to some of the coal-fields of Gormany gave additional information

fields of Germany gave additional information.

It is hoped to resume coal investigations at the Dominion Laboratory at an early date, when the knowledge thus acquired by Mr. Donovan will be of considerable value.

# COAL-MINERS' RELIEF FUND.

Under the provisions of the Coal-mines Act, 1925, Miners' Sick and Accident Funds were abolished, and from the 1st April, 1926, all accident relief payments were made from the Coal-miners' Relief Fund, which is administered by the Public Trustee. Committees of miners called Coal-miners' Relief Fund Local Committees were established in some of the coal-mining centres to assist the Public Trustee in the administration of the fund. After allowing for the transfer of the various Sick and Accident Funds to the Coal-miners' Relief

Fund, the Relief Fund shows a diminution of £203 14s. Id. as at the 31st March, 1927, as against a diminution of £1,306 9s. 9d. as at the 31st March, 1926, notwithstanding the fact that since the whole of the liquid assets of the Sick and Accident Funds were handed over to the Public Trustee a higher rate of interest was earned.

The amounts pooled at the 1st April, 1926, were—Sick and Accident Funds, £14,603 4s. 1d.; Coal-miners' Relief Fund, £12,469 1s. 3d.: a total of £27,072 5s. 4d. The interest earned for the twelve months ended 31st March, 1927, was £1,140 19s. 3d., while for the same period the income from the  $\frac{1}{2}$ d.-per-ton contribution and the total expenditure amounted respectively to £4,213 14s. 11d. and £5,584 12s. 10d. In addition, the sum of £26 4s. 7d. was recredited to the fund on account of allowances overpaid and vouchers recredited, &c.

#### STATE COLLIERIES.

#### Housing.

With the object of enabling reputable miners and other employees working at the State colleries to erect and own their own homes a housing scheme was introduced by the Government several years ago, but it was not until quite recently that the employees availed themselves of the opportunity thus offered.

Fifteen loans for financing the cost of the erection of fifteen houses have been sanctioned during the past twelve months, the lowest advance being for £250 and the highest £300. Repayments are made at the rate of 3s. 4d. per week for each £100 loaned, and at the end of twenty years' time the loan is liquidated.

# OUTPUT AND SALES.

The operations of the State coal-mines and State coal-depots for the year ended 31st March, 1927, are briefly reviewed hereunder.

Liverpool Colliery.—The gross output for the year was 151,180 tons, as compared with 107,277 tons for last year, an increase of 43,903 tons.

James Colliery.—The gross output for the year was 34,505 tons, as compared with 26,781 tons for last year, an increase of 7,724 tons.

A comparative statement for the two years is shown hereunder:—

M:	Output in To	ons, 1926–27.	Output in Tons, 1925–26.			
Mine.	Gross.	Net.	Gross.	Net.		
Liverpool James	151,180 34,505	144,970 30,147	$107,277 \\ 26,781$	$102,400 \\ 24,735$		

Note. — The difference between the gross and the net output is the allowance for mine-consumption and waste. In addition to the above 1,560 tons of coal were purchased for resale, of which 190 tons were purchased from co-operative parties on the West Coast.

The disposal, inclusive of stock on hand at the beginning of the year, was as follows: Supplied to—Depots, 46,083 tons; railways, 23,542 tons; other Government Departments, 6,246 tons; shipping, 25,867 tons; gasworks, 61,173 tons; other consumers, 11,843 tons: total, 174,754 tons.

The total sales of State coal from the Liverpool Mine for the year amounted to 144,581 tons, value £197,175, as compared with 102,953 tons, value £149,978, for last year—an increase of 41,628 tons, with an increase in value of £47,197.

The average price realized by the mine on the total sales for the year was £1 7s. 3·3d., a decrease of 1s. 10·32d. on last year's average.

The total sales of State coal from the James Mine for the year amounted to 30,173 tons, value £43,457, giving an average of £1 8s. 9.66d. per ton, a decrease of 1s. 6.69d. on last year's average.

The sales of coal, &c., through the medium of the depots totalled 115,881 tons,

value £228,347, as against 98,326 tons, value £198,745, for last year.

The profits at the mines were £20,054, and at the depots, &c., £2,615, making a net profit of £22,669. £4,552 was applied to the Sinking Fund Account. From a financial point of view the year's business may be regarded as very satisfactory, due in a large measure to the collieries losing very little time on account of strikes.

# ITEMS FROM BALANCE-SHEET.

The following items taken from the balance-sheet, which has been audited, will prove of interest as indicating the more important items of expenditure, and for reference in respect to the position of Capital Account, reserve funds, and other accounts shown therein:—

	£
The amount written off for depreciation for the year was	13,831
The payments for interest totalled	9,177
The payments for sea carriage of coal amounted to	56,885
The cost of railway haulage amounted to	44,357
The total wages paid for coal-winning were	98,289
The amount paid for management and office salaries (Head Office	
and mines) totalled	3,797
The gross capital expenditure on the whole undertaking to the 31st	
March last was	612,909
The total depreciation written off to date (equal to 59 per cent. on	
the gross capital expenditure) amounts to	366,309
The debenture and loan capital stands at	227,601
The net profits of the State Coal-mines Account from inception to the	
31st March, 1927, are	132,242
The net profit for the year ended 31st March, 1927, was	22,669
The sinking fund is in credit	55,105
General reserve stands at	63,855
The amount at credit of Profit and Loss is	18,117
The cash in hand and in the Public Account at the 31st March last	
was (last year £2,115)	,
The present net book value of permanent or fixed assets is	246,600

# TABLES TO ACCOMPANY MINES STATEMENT.

No. 1.

Table showing the Quantity and Value of Gold and other Minerals exported during the Years ended the 31st December, 1926 and 1925, and the Total Value since the 1st January, 1853. The Coal-OUTPUT IS ALSO INCLUDED.

Name of Metal or Mineral.	For Year 31st Decer	ended the nber, 1926.	For Year e		Total from the 1st January, 1853, to the 31st December, 1926.		
21020 02 part 10 part	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
Precious metals— Gold*	Oz. 125,777	£ 516,207	Oz. 114,696	£ 472,364	Oz. 23,416,564	£ 92,403,399	
Silver	425,287	51,236	495,268	60,773	25,553,463	3,016,660	
Total gold and silver	551,064	567,443	609,964	533,137	48,970,027	95,420,059	
Mineral produce, including kaurigum—	Tons.	£	Tons.	£	Tons.	£	
Copper-ore	• •				1,504	19,390	
Chrome-ore				• •	5,869	38,002	
Antimony-ore	• •	• •		• •	3,781	55,045	
Manganese-ore	• •	• • .			19,380	61,994	
Hæmatite ore	• •				77	469	
Tungsten-ore	$13\frac{8}{20}$	998	$31\frac{3}{20}$	2,255	$2,384\frac{1}{20}$		
Quicksilver				••	$16\frac{1}{2}\frac{2}{0}$		
Sulphur (crude)					4,927	13,241	
Mixed minerals†	$2,382\frac{18}{20}$	9,761	2,566	8,419	$77,255\frac{1}{2}\frac{1}{0}$	324,987	
Coal (New Zealand) exported	183,008	285,909	138,083	235,047	5,790,751	6,206,055	
Coke exported	. 230	505	50	157	17,584	27,514	
Coal, output of mines in Do- minion (less exports)	2,056,991	2,056,991	1,976,912	1,976,912	58,168,591	38,587,513	
Oil-shale					14,444	7,236	
Kauri-gum	4,877	332,765	5,370	414,901	399,299	21,855,751	
Total quantity and value of minerals	$2,247,502\frac{6}{20}$	2,686,929	$2,123,012\frac{3}{20}$	2,637,691	$64,505,863_{\frac{17}{20}}$	67,510,656	
Value of gold and silver, as above	••	567,443		533,137		95,420,059	
Total value of minerals, including gold and silver	• •	3,254,372		3,170,828	••	162,930,715	

<sup>\*</sup>In respect of gold, ounces of the fineness of 20 carats and upwards.
†Including pumice-sand, 2,358 tons; also marble of weight unspecified by the Customs Department.

No. 2.

Table showing the Quantity and Value of Gold exported from New Zealand for the Years ended the 31st December, 1926 and 1925, and the Total Quantity and Value from 1857 to the 31st December, 1926.

District and County or Borough.	31st Dec	r ended ember, 1926.		ended mber, 1925.	Total Quanti from Janua	ty and Value
	Quantity	. Value.	Quantity.	Value.	31st Decem	ber, 1926.
AUCKLAND—County of Coromandel	Oz.	£	Oz. 191	£ 559	Oz.	£
D 1 . ( 337 '1 '	865   80,487		$ \begin{array}{r} 2,212 \\ 339 \\ 69,350 \end{array} $	$\begin{array}{c} 8,564 \\ 1,251 \\ 291,003 \end{array}$		
	81,352	339,488	72,092	301,377	7,317,461	28,413,590
Wellington			•		188	706
Marlborough— County of Marlborough	660	2,520	569	2,138	106,708	415,412
Character of W. i	39	!	84 21	310 88		
	45	3 175	105	398	1,741,249	6,903,936
	$\begin{array}{c c} . & 380 \\ & 23,772 \end{array}$		184 27,736	735 110,862		
Danaugh of Charmanth	12,935	52,650	$ \begin{array}{ c c c } 53 \\ 9,449 \\ 94 \end{array} $	38,420 381		
CAMPARAMA	37,087	147,338	37,516	150,599	6,483,519	25,736,296
Otim -f A -1.1.	2	9	20			
Omugo	2	9	20	79	157	620
County of Vincent County of Maniototo	660 1,161 988	4,606	250 646 503	991 2,635 2,005	·	
County of Waitaki County of Lake	34 88 881	355	$ \begin{array}{c c} 2 \\ 61 \\ 34 \\ 922 \end{array} $	9 237 140 3,662		
County of Southland	$\begin{bmatrix} 2,241\\ 18 \end{bmatrix}$	9,116	1,191	4,926	-	
	6,071	24,517	3,609	14,605	7,758,190	30,895,944
Unknown	562	2,160	785	3,168	9,092	36,895
Totals	125,777	516,207	114,696	472,364	23,416,564	92,403,399

No. 3.

Table showing the Output of Coal from the various Coalfields, and the Comparative Increase and Decrease, for the Years 1926 and 1925, together with the Total Approximate Quantity of Coal produced since the Mines were opened.

				Out	put.			Approximate Total Output
Na	Name of Coalfield.			1926.	1925.	Increase.	Decrease.	up to 31st December, 1926.
				Tons.	Tons.	Tons.	Tons.	Tons.
North Auckl			111,918	131,540		19,622	4,629,897	
Waikato (inc	kato (including Mokau)		541,931	540,863	1,068		9,091,163	
Nelson	••		9,136	9,718		582	426,559	
$\operatorname{Buller}$			667,464	576,252	91,212		20,035,585	
Inangahua				36,600	37,276		676	571,536
Grey				408,976	328,150	80,826		12,066,300
Canterbury				12,504	12,165	339		934,171
Otago				209,253	229,633		20,380	11,477,555
Southland	• •			242,217	249,398	• •	7,181	4,726,576
	Totals			2,239,999*	2,114,995			63,959,342

<sup>\*</sup> Increase, 125,004 tons.

No. 4.

Table showing the Output of Different Classes of Coal.

Class of Coal.				. Out	put.	Increase.	Decrease.	Approximate Total Output to the	
			1926.	1925.		The state of the s	31st December, 1926.		
Bitumino Brown Lignite	us and semi	i-bitumin  	ous	Tons. 1,196,388 905,825 137,786	Tons. 1,044,726 911,425 158,844	Tons. 151,662	Tons. 5,600 21,058	Tons. 39,179,785 20,807,277 3,972,280	
1	$\Gamma$ otals	• •	••	2,239,999*	2,114,995			63,959,342	

<sup>\*</sup> Increase, 125,004 tons.

No. 5.

Table showing the Increase or Decrease in the Annual Production of Coal and Oilshale in the Dominion, and the Quantity of Coal imported since 1878.

	Coal and Shale re	aised in the Dominion.		Coal imported.	
Year.	Tons.	Yearly Increase or Decrease.	Tons.	Increase over Preceding Year.	Decrease below Preceding Year
Prior to 1878	. 709,931				
1070	. 162,218		174,148		
1070	. 231,218	Inc. 69,000	158,076		16,072
1000	900 099	60 705	123,298	• •	34,778
1001	227 060	97 990	129,962	6,664	01,110
ဝဝဝ	270 070	7 41 010	129,582	1	380
000	401 764	49 400	123,540	••	6,042
004	400 091	50,060	148,444	24,904	0,012
100		90 999	130,202		18,242
1000	511,063	92 900	,	• •	10,242 $10,329$
1007	534,353	,, 23,290	119,873 $107,230$	• •	10,525 $12,643$
000	558,620	,, 24,267		••	
	613,895	,, 55,275	101,341	06 700	5,889
1000	586,445	Dec. 27,450	128,063	26,722	177 104
	637,397	Inc. 50,952	110,939	1/ 270	17,124
	668,794	,, 31,397	125,318	14,379	• • •
	673,315	,, 4,521	125,453	135	
	691,548	,, 18,233	117,444	• •	8,009
	719,546	,, 27,998	112,961	••	4,483
	726,654	,, 7,108	108,198	• •	4,763
	792,851	,, 66,197	101,756	• • • • • • • • • • • • • • • • • • • •	6,442
	840,713	,, 47,862	110,907	9,151	
	907,033	,, 66,320	115,427	4,520	
	975,234	,, 68,201	99,655		15,772
1900	1,093,990	,, 118,756	124,033	24,378	
1901	1,239,686	,, 145,696	149,764	25,731	
1902	1,365,040	,, 125,354	127,853		21,911
1903	1,420,229	,, 55,189	163,923	36,070	
1904	1,537,838	,, 117,609	147,196		16,727
1905	1,585,756	,, 47,918	169,046	21,850	.,
1906	1,729,536	,, 143,780	207,567	38,521	
1907	1,831,009	,, 101,473	220,749	13,182	
	1,860,975	,, 29,966	287,808	67,059	
000	1,911,247	,, 50,272	258,185		29,623
1010	. 2,197,362	,, 286,115	232,378		25,807
011	. 2,066,073	Dec. 131,289	188,068		44,310
010	2,177,615	Inc. 111,542	364,359	176,291	ĺ
019	1,888,005	Dec. 289,610	468,940	104,581	
014	2,275,614	Inc. 387,609	518,070	49,130	
015	െ ഒരെ ഭവ	Dec. 66,990	353,471		164,599
016	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Inc. 48,511	293,956		59,515
017	0.000 410	Dec. 188,716	291,597		2,359
010	9 094 950	24 160	255,332	• •	36,265
010	1 047 040	100 400	391,434	136,102	
000	1 049 705	4 149	476,343	84,909	• •
		24 610	822,459	346,116	• •
	1,809,095				320,981
	1,857,819	Inc. 48,724	501,478	• •	
1004	1,969,834	,, 112,015	445,792	999 601	55,686
LOOF	2,083,207	,, 113,373	674,483	228,691	101 010
	2,114,995	,, 31,788	572,573	••	101,910
1926	2,239,999	,, 125,004	483,918	• •	88,655

No. 6.

Table showing the Total Quantity and Value of Coal imported into and exported from New Zealand from and to each Country during the Calendar Year 1926.

Impo	rts
------	-----

Country whence imported.	Tons.	Value.
United Kingdom	190 482,721 1,007	£ 303 618,677 1,414
Totals	483,918	620,394

The values shown are the current domestic values in country of export plus 10 per cent.

 ${\it Exports: Bunkers.}$ 

	Produce of N	few Zealand.	Produce of other Countries	
Country to which exported.	Tons.	Value.	Tons.	Value.
		£		£
United Kingdom	83,636	167,615		
Tonga		1		
Brazil	667	1,368		
Chile	1,306	1,501		
Australia	48,552	58,262	• •	
Fiji	2,857	3,664		
Nauru Island	6,880	6,960		
Gilbert and Ellice Islands	1,112	1,223		
Western Samoa	5	11		
Tutuila	1,132	1,230		
France	1,654	2,068		
Argentina	4,262	7,846		
Society Islands	4,350	4,350		
United States of America, via East Coast	910	910	• •	• •
United States of America, via West Coast	4,159	4,280	••	• •
Tuamotu Archipelago	3,050	3,050	••	• •
Totals	164,532	264,339		

Exports: Cargo.

	. 3	Produce of No	ew Zealand.	Produce of other Countries		
Country to which	exported.	Tons.	Value.	Tons.	Value.	
			£		£	
United Kingdom		 11	22			
Australia		 591	576			
Fiji		 3,095	4,122			
Tonga		 1	6			
Western Samoa		 5	24			
Society Islands		 2,712	2,712			
Tutuila		 3,162	4,271	• •		
Gilbert and Ellice Isla	nds	 3,202	3,574			
Nauru Island		 1,467	1,578	• •		
Belgium		 76	116	• •		
Brazil		 4,154	4,569	••	•••	
Totals		 18,476	21,570			

No. 7.

Number of Persons ordinarily employed at or about Mines other than Coal-mines during the Year ended 31st December, 1926.

				Number o	of Persons or	rdinarily en	ployed at	$\mathbf{T}$	Total.	
Co	ounty or Boro	ugh.		Gold-quartz Mines.	Gold Alluvial Mines.	Gold- dredges.	Mines other than Gold and Coal.	1926.	1925.	
Northern Inspection District.										
County of Th	ames			21				21	13	
	ninemuri			84				84	64	
	romandel			37			1	37	19	
	ako			3				3	i	
Borough of T				62		į		62	40	
	Vaihi		• •	639				639	623	
County of In							5	5		
	ranaki						5	5		
	aiapu						10	10		
	uranga	•••		4				4	29	
White Island							12	$1\overline{2}$	<b>-</b> °	
									1	
	ST INSPECTI	on Dist	RICT.			i				
Jounty of Ma		• •		9	18			27	30	
	$\operatorname{llingwood}$			8	• •		64	72	92	
	ırchison				25		3	28	24	
	ıller			2	11			13	18	
,, In	angahua			259	5			264	284	
,, Gr	ey				18	30		48	22	
,, W	estland		٠.		57	48		105	149	
SOUTHERN	Inspectio	м Втапт	TOTAL							
County of Ta									1	
Tr.	iapeka	• •	• •		56	• • •		56	55	
Vi	${f ncent}$	• •	• •	3	54	7	•••	64	51	
M.	niototo	• •	• •		51			51	59	
W	aihemo	• •	• •	6			• • •	6	2	
W/	amemo aitaki	• •	• •		8	• • •		8	8	
	-	• •	• •	$\begin{vmatrix} & \ddots \\ 2 & \end{vmatrix}$	79	6	$\begin{array}{c c} & \ddots & \\ & 2 & \end{array}$	89	82	
	ke allace	• •		_	40	_	_	69 40	28	
	anace uthland	• •	• •			$\begin{vmatrix} & \ddots \\ 2 & \end{vmatrix}$		51	56	
		• •	• •		49					
,, As	hb <b>urto</b> n	• •	• •		1	••	•••	1	<u> </u>	
	Totals			1,139	472	93	101*	1,805	1,749	

<sup>\*</sup> Includes 12 persons employed in sulphur-mining, and 23 in oil-boring operations.

Summary of Persons ordinarily employed in or about New Zealand Mines during 1926 and 1925.

		1926.	1925.	Increase or Decrease.
Gold, silver, and tungsten mines Other metalliferous mines Coal-mines	••	1,706 99* 5,159	1,666 83 4,777	Inc. 40 Inc. 16 Inc. 382
Totals		6,964	6,526	Inc. 438

<sup>\*</sup> Includes 12 persons employed in sulphur-mining, and 23 in oil-boring operations.

#### APPENDICES THE MINES STATEMENT. T0

# APPENDIX A.

# REPORTS RELATING TO METALLIFEROUS MINES AND STONE-QUARRIES.

The Inspecting Engineer of Mines to the Under-Secretary of Mines.

Wellington, 8th July, 1927. SIR, I have the honour to present my report on metalliferous mines and stone-quarries, together with statistical information, for the year ended 31st December, 1926.

In accordance with the usual practice, the tables showing expenditure on roads, bridges, tracks, prospecting operations, &c., are for the period covered by the financial year-viz., from the 1st April, 1926, to the 31st March, 1927.

The reports, &c., are divided into the following sections:-

I. Minerals produced and exported.

II. Persons employed.

III. Accidents.

IV. Gold-mining.

- Quartz-mining.
   Dredge Mining.
- (3) Alluvial Mining.
- V. Minerals other than Gold.
- VI. Stone-quarry Inspection and Statistics.
  VII. State Aid to Mining.
  (1) Subsidized Prospecting.
  (2) Government Prospecting-drills.

- (3) Subsidized Roads on Goldfields.
- (4) Government Water-races.
- (5) Schools of Mines.

- (A) Summary of Reports by Inspectors of Mines.
  (B) Summary of Report by Water-race Manager.
  (C) Summary of Report by Inspector of Quarries.
- (D) Mining Statistics.

#### I. MINERALS PRODUCED AND EXPORTED.

The following statement shows the quantity and value of the production of metal-mines and of stone-quarries under the Stone-quarries Act during 1926 and 1925:-

		251				19	26.	1925.		
	Mineral.						Value.	Quantity. Value.		
Oold and	silver (esti	matad)				Oz. 554.529	£ 539,302	Oz. 625,626	£ 546,026	
Platinum	siiver (esu		• • •	• •	• •	31	313	020,020	1	
t 1000111Uttt	• •	••	••	• •		Tons cwt.	010	Tons cwt.		
Lungsten-	ore					9 1	475	1 15	64	
fron						3,997 0	19,585	1,289 0	8,701	
Stone						••	516,075		463,667	
Pumice						2,358 0	8,081	2,532 0	7,672	
Sulphur			• •		••	594 0	5,217	269 0	1,154	
	Totals						1,089,048	• •	1,027,284	

The following statement shows the value of New Zealand minerals (other than coal) exported from the 1st January, 1853, to the 31st December, 1926:—

	1926.	1925.	Increase or Decrease.	Total from the 1st January, 1853, to the 31st December, 1926.
Gold Silver Tungsten-ore Kauri-gum Sand, lime, and building-stone Other minerals	 £ 516,207 51,236 998 332,765 8,294 1,467	£ 472,364 60,773 2,255 414,901 7,968 451	fuc. 43,843 Dec. 9,537 ,, 1,257 ,, 82,136 Inc. 326 ,, 1,016	£ 92,403,399 3,016,660 305,123 21,855,751 521,464
Totals	 910,967	958,712	Dec. 47,745	118,102,397

# II. PERSONS EMPLOYED.

The following statement shows the number of persons ordinarily employed in or about the metalliferous mines\* of the Dominion during the year:—

	CV	:04:			I				
	Class	ification.		Northern.	West Coast.	Southern.	Total, 1926.		
Gold, silver, and tungsten Ironstone						850 	490 64	36 <b>6</b>	1,706 64
	Totals for 1926					850	554	366	1,770
	Totals for 1925		• •	. ••	[	788	619	3 <b>4</b> 2	1,749

<sup>\*</sup> In addition, 12 persons were employed in sulphur-mining, and 23 persons in oil-boring operations.

#### III. ACCIDENTS.

During 1926 three fatal accidents occurred in or about metalliferous mines, at which 1,770 persons were ordinarily employed.

			Fatal Ac	ccidents.	Serious Non-fatal Accidents.			
· ·	Cause.				Number of Separate Accidents.	Number of Deaths.	Number of Separate Accidents.	Number of Persons injured.
Falls of ground					2	2		
Explosives	• •	• •	• •	•••	• •	٠;		
Miscellaneous, on surface	• •	• •	• •	• •	1	1	• •	
Miscellaneous, underground	• •	• •	• •	• •	• •		• •	
Totals					3	3		

The following is a short description of the fatal accidents:-

William Brown, cyanide foreman at the Blackwater Mines battery, on the 23rd March was treating with sulphuric-acid slimes from concentrates which had been roasted in the Edwards furnace. He became ill the same day, and was later taken to hospital, where he died on the 31st March. A postmortem disclosed the fact that death was due to arsenic poisoning, and that when treating the slimes deceased had inhaled fumes containing arseniuretted hydrogen generated by the action of the acid on the slimes.

Leonard McClure, a miner employed in the Waihi Mine, on the 18th May had gone down the travelling-way to run the pass, which had hung up. A piece of stone fell from the stope above, rolled down the pass, and struck deceased on the head. He died in Waihi Hospital on the 20th May.

On the 16th December Thomas Harris Harrison, manager of the Golden Bar Mine, Wakamarina, was examining the face of No. 1 level when a fall of mullock from the back took place and struck deceased, killing him instantaneously.

#### IV. GOLD-MINING.

The following statement shows the value of the bullion-production, also the dividends declared, number of persons employed, and the number of gold-mines and dredges:-

		Production of Bullio	n, 1926.* (All Mines.)	Dividends paid, 1926. (By Registered Com-	ordinarny employed	Number of Productive Quartz- mines, Alluvial
		Quantity.	Value.	panies only.)†	at Productive and Unproductive Mines.	Mines, and Dredges, 1926.
		Oz.	£	£		
Quartz-mining		530,087	442,674	55,840	1,139	21
Dredge mining	• •	13,104	52,969		93	5
Alluvial mining‡	• •	11,338	43,659	3,725	472	288
Totals, 1926		554,529	539,302	59,565	1,704	314
Totals, 1925		625,626	546,026	67,623	1,666	275

\* In addition to the gold produced from the gold-mines, sliver was obtained from them, hence the word "bullion" is used in ference to "gold."
† The profits of privately owned dredges and mines are unobtainable, which renders this statement incomplete.
‡ The bullion-production is from 288 alluvial claims, but the dividends are only ascertainable from those few that are the property egistered companies.

The value of gold produced during 1926 was less by £6,724 than during 1925. Gold from quartzmining decreased by £17,368, from alluvial mining the decreased value was £1,331, but the increased value of gold from dredging was £11,975.

### (1) Quartz-mining.

Inspection District.		t.	Statute Tons	of Ore treated.	Value of	Bullion.	Dividends paid (by Registered Companies only).		
		ĺ	1926.	1925.	1926.	1925.	1926.	19 <b>2</b> 5.	
Northe <i>r</i> n			190,638	193.907	£ 349,196	£ 3 <b>48</b> ,70 <b>3</b>	£ 49,591	£ 49,591	
West Coast			47,395	53,254	93,062	111,210	6,250	12,799	
Southern	• •		135	40	416	129			
Tota	ls		238,168	247,201	442,674	460,042	55,841	62,390	

The average value per ton of ore treated during 1926 amounted to £1 17s. 2d., as compared with £1 17s. 3d. during 1925.

At the Waihi Mine 185,787 tons of ore were crushed for a return of 498,101 oz. of bullion, a decrease of 6,550 tons of ore and a decrease of 67,996 oz. of bullion. The total development and deadwork footage for the year amounted to 15,939 ft., and in addition 1,770 ft. was bored by diamond drill. No large body of ore was disclosed, the result of the development work in the lower levels being particularly disappointing.

The Waihi Grand Junction Mine has been leased to the Waihi Gold-mining Co., Ltd., for a period of ten years on a profit-sharing basis. During the year under review 3,079 tons of ore were mined, and gave a return of 4,188 oz. of bullion.

At Muir's Gold-reefs Mine no work, other than repair work and work in connection with the

installation of the new pumping plant, was done during the year.

At the Blackwater Mine 40,044 tons of quartz were mined, and gave a return of 18,032 oz. of bullion, valued at £70,232. The total footage for the year amounted to 2,115 ft. against 1,037 ft. for the previous year. Most of the development work was in the direction of the North Blackwater Mine, which was recently purchased by the Blackwater Mines, Ltd.

At the New Big River Mine 1,799 tons of ore were mined, and yielded 1,727 oz. of bullion, valued at £6,608, against 3,976 tons of ore and 3,432 oz. of bullion, valued at £13,479, for the previous year. Comparatively little development work was carried out during the year, and what was done gave disappointing results.

#### (2) Dredge Mining.

The following is a statement showing the capacity, production, and profits of bucket gold-dredges during 1926. (Note.—The profits made by privately owned dredges are not obtainable for publication.)

		Dredge- in Cubic	Buckets ed per	Horse-	[ca]	pth of redged.	Bullion	Dividen	is declared.
Name of Dredge.	Locality.	Capacity of 1 buckets, ii Feet.	Number of Bu discharged Minute.	Nominal power of I	S = Steam. E = Electrical.	Average Depth of Ground dredged.	Value of obtained 1926.	During 1926.	Total.
Otago and Southland.  Nevis Crossing  McGeorge's Freehold No. 2 Shotover*	Waikaka Valley .	$6\frac{5}{2}$	10 9	12 20 300	S S E	Ft. 10 35 20	£ 2, <b>07</b> 2 728 40	£  	£
West Coast. Rimu New River	Dan marketille	7	19 18	325 155	E E	55 35	47,900 2,229	 	13,132
Totals, 1926 . Totals, 1925 .			::	::		•••	52,9 <b>6</b> 9 40,994	3,283	Unknown. Unknown

17  $C_{\bullet}-2.$ 

The Rimu Flat dredge gave better results than in the previous year, the gold won being 11,800 oz., valued at £47,900, an increase of 3,086 oz. of gold and of £12,180 in value. The company operating the dredge is still prospecting other areas in the district.

The New River dredge commenced operations on an area near Dunganville, in Grey County, in June. Considerable difficulties were encountered, but towards the end of the year better results were being obtained. The gold won to the end of the year amounted to 567 oz.. valued at £2,229.

#### (3) ALLUVIAL MINING.

The following is a statement showing the value of production and dividends declared from alluvial gold-mines during 1926:—

Numa af 6	Yanan ana	_		Estimated Value of	Dividends declared.			
Name of (	отрап	у.		Gold produced.	During 1926.	Total to End of 1926		
· · · · · · · · · · · · · · · · · · ·				£	£	£		
Scandinavian Water-race Co.			 	1,857				
Lawrence Sluicing Co			 	3,487	1,000	3,000		
Gabriel's Gully Sluicing Co.			 	4,262	1,000	18,615		
W. R. Smyth			 	1,344				
Golden Crescent Sluicing Co.			 	2,278	350	14,000		
Sailor's Gully Sluicing Co.			 	2,420	1,050	8,570		
Graham and party			 	932	325	4,388		
Nokomai Hydraulic Sluicing Co.			 	1,578		54,684		
Round Hill Mining Co.			 	2,276				
Hohonu Gold Sluicing Co.			 	1,773				
Stubbs and Steel			 	1,101				
All other claims			 	20,351	• •	••		
Totals			 ٠,	43.659	3,725	Unknown.		

# V. MINERALS OTHER THAN GOLD.

#### IRON.

The blast furnace at Onakaka, belonging to the Onakaka Iron and Steel Co., was in operation for part of the year, and smelted 7,994 tons of ore for a production of 3,997 tons of pig iron. Several alterations were made to the plant, which enabled the cost of production to be lowered, and the company is now able to put iron on the market at a price which enables it to compete with imported iron in New Zealand, and even to ship pig iron to Australia.

# SULPHUR.

The White Island Products, Ltd., has taken over from the former company the works at White Island and Tauranga. Operations on the island comprised the installation of plant to facilitate loading, and prospecting and opening up the sulphur deposits. Up till the end of the year 1,783 tons of crude sulphur had been shipped. The product after treatment was put on the market as a fertilizer.

#### Petroleum.

The Taranaki Oilfields, Ltd., continued its operations in the Taranaki and Gisborne districts. The Tarata well was drilled to a depth of 5,010 ft., but no oil was struck. The Moturoa well was sunk to a depth of 4,360 ft. without striking payable oil or gas. Waipu No. 1 well was sunk to a depth of 2,540 ft., but got no oil. Another well, Waipu No. 2, was started near Tokomaru Bay late in the year, and preparations were made for still another well, Waipu No. 3, on a site in the Waitara Survey District. Field-work by oil-geologists was carried on continuously in Taranaki and Gisborne districts with a view to locating favourable oil structures.

The Murchison Oil Co. started drilling a well near the Mangles River, and by the end of the year a depth of 1,763 ft. had been reached, without, however, striking more than slight showings of oil.

# VI. STONE-QUARRY INSPECTION AND STATISTICS.

By section 2 of the Stone-quarries Amendment Act, 1920, the application of the Act was extended to include every place, not being a mine, in which persons work in quarrying stone and any part of which has a face more than 15 ft. deep, and also in any tunnel in the construction of which explosives are used. The Act, however, does not apply to any Government operations, or any road or railway cutting, or excavations for buildings.

The following is a table showing the number of quarries under the Stone-quarries Act, also the number of persons ordinarily employed thereat, and the annual output and value of crude stone during 1926:—

		the	ons ed.				Output o	f Stone.			
Provincial District.	Name and Address of Government Inspector of Stone-quarries.	Number of Working Quarries under the Act.	Number of Persons ordinarily employed.	Stone or Gravel for Macadamizing or Ballast.	Stone for Harbour- works.	Building or Monu- mental-stone.	Limestone for Agriculture,	Limestone for Cement or Mor- tar.	Phosphate for Agriculture.	Agriculture.	Value at Quarry.
Auckland	James Newton, Mines Dept., Auckland	161	999	Tons. 524,790	Tons. 86,700	Tons. 51,400	Tons. 26,163	Tons. 252,215	Tons.	Tons.	£ 222,260
	M. Paul, Mines Dept., W a i h i (Hauraki Mining District only)	26	206	132,666	15,571	906		•••		•••	57,771
Hawke's Bay	James Newton, Mines Dept., Auckland	18	118	16,179	7,824			16,368			12,839
Taranaki Wellington Canterbury	Ditto J. F. Downey, Mines Dept., Reefton	16 29 14	73 212 106	31,496 $111,816$ $94,503$	$11,669 \\ 14,270 \\ 1,224$	5,661	$9,469 \ 2,530$	* *			12,991 52,760 35,695
Nelson Westland Marlborough	Ditto	12	157	5,310	19,068	260	2,257	36,838		10,584	
Otago } Southland }	A. Whitley, Mines Dept., Dunedin	37	372	154,633	6,073	14,691	81,762	51,597	••		106,334
Totals 1926 Totals 1925	·· ··	313 289	$2,243 \\ 1,972$	1,071,393 958,122	$162,399 \\ 52,249$	72,918 $26,623$		357,018 305,482			516,075 463,667

There were 271 more men employed than during the previous year, and the value of the stone produced was greater by £52,408.

#### QUARRY ACCIDENTS.

The following is a summary of serious accidents during 1926 at quarries under the Stone-quarries Act:—

		en.				Number o	f Accidents.	Number o	f Sufferers.
		Ca	use.			Fatal.	Serious.	Killed.	Seriously injured.
Electricity	:					 1		1	;.
Explosives Falls of ground				• •		 i	$\frac{1}{3}$	i	3
Haulage Miscellaneous	• • •	• •	• •	• •	• •	 1.		1	· · ·
	tals	••		• • •		 3	8	3	8

Of the fatal accidents the following is a short description:-

Kawahere Matu, a workman employed on the Arapuni diversion tunnel, died on the 25th February from the results of an electric shock received from coming in contact with the neutral wire used in connection with the lighting of the tunnel. The neutral was of uninsulated wire, and had broken a short distance back from where deceased was working. The voltage was 230 volts. Robert Henry Thompson, a workman employed at Waiorongomai quarry, was crushed between

Robert Henry Thompson, a workman employed at Waiorongomai quarry, was crushed between full trucks on the 21st June, and died shortly after the accident. He was engaged taking two trucks of stone from the quarry to the crusher, when he was overtaken by two other trucks, the brakes of which he had released but had afterwards omitted to put down again.

Samuel Thomas Silcock, foreman at Paeroa quarry, was struck by a fall of stone on the 31st August, and died in hospital on the same day. An examination after the accident showed that the stone had slipped from between two greasy heads, the presence of which could not have been noticed prior to the accident.

# VII. STATE AID TO MINING.

# (1) Subsidized Prospecting.

Upon subsidized prospecting operations 155 persons were intermittently employed during the year.

The following is a statement showing the results of prospecting operations as reported by the Inspectors of Mines.

Remarks.	Testing reef-system on western side of main fauit; reef intersected; gold freely seen.  £1 for £3. Work still in progress in low-grade ore. Driving on large lode; bands of ore carrying high	values met with.  Encouraging prospects met with.  No work done.  Several reefs of low value intersected.  No work done.  Intersected No. 3 reef; hanging-wall portion carrying payable values.  Encouraging prospects met with.  No work done.  Assay results nil.  Awaiting arrival of pump.	Reopened collapsed shaft and resumed active mining. Party reports finding small gold-bearing reef. Small shoot of gold-bearing quartz located. Nothing of value discovered. No work reported. Shoot of gold-bearing quartz developed. Shoot of gold-bearing quartz developed.  Several small shoots of gold-bearing quartz found. No work reported.  No work reported.  Nothing of value found.  " " "	Reef located, but not payable. Developing reef; fair prospects. Nothing of value found. Nothing payable discovered. No payable lead located. Satisfactory results.
Character of Operations,	Driving	Driving  Driving  Driving  Driving	Prospecting Driving Prospecting Prospecting Driving Driving Driving Prospecting Triving Driving Driving	Sinking and driving Driving Prospecting Sinking and driving Drilling
Nature of Claim	Quartz	Quartz Quartz Quartz Quartz	Quartz Quartz Alluvial Quartz Quartz Quartz	Quartz Alluvial "
Distance driven or sunk.	452 1,117 300	350 :: 350 :: 350 :: 350	200 100 100 100 100 100	205
Amount of Subsidy expended.	£ s. d. 305 15 0 1,423 17 1 143 0 0	151 13 4 177 3 9 75 0 0 50 14 0	763 7 9 27 6 0 28 6 8 28 6 8 62 8 0 62 8 0 62 8 0 62 8 0 740 12 1 840 15 0 853 5 5 6 88	174 10 0 91 16 5 202 2 2 101 8 0 200 0 0 240 0 0 9,098 8 8
Amount of Subsidy granted.	£ s. d. 357 10 0 1,598 13 0 143 0 0	216 13 4 86 13 4 189 6 5 21 13 4 75 0 0 50 14 0 21 13 4 10,607 12 4	763 763 763 763 77 87 87 87 87 87 87 87 87 87	203 13 4 128 16 8 202 2 2 101 8 0 200 0 0 240 0 0
Locality of Operations. Subsidygranted.	Thames Maratoto	Thames Waikoromiko Karangahake Thames Owharoa Mahakirau Coromandel	Reefton  Mokihinui  Takaka  Wakamarina  Mahakipawa  Reefton  Seddonville  Reefton  Wakamarina  Monlight  Ngakawau  Alexander River  Big River	Stoneburn Skippers Twelve - mile, Lake Wakatipu Mount Pisa Cromwell Clutha Valley
Number of Pro- spectors.	7 13 14	4:0:58 0:04	a augu⊣uga : :a :gggaag	40101 01400 10
Name of Prospecting Party.	Northern Inspection District.  Caledonia - Kuranui - Moanataiari Gold. mining Co. Majestic Gold-mining Co Ohinemuri Gold and Silver Mines	Alburnia Gold-mining Co.  Four-in-hand Gold-mining Co.  Imperial Gold-mining Co.  Rocky Point (New Discovery).  Rising Sun Gold-mining Co.  Prescott and mate  Hauraki Prospecting Syndicate C. J. Hobbs  Muir's Gold Reefs	Wealth of Nations Mine, Ltd. Blackwater Miner's Association Britannia Mine (Fry's) H. F. Chaffey Hart and Ahem Linkwater Prospecting Syndicate Murray Creek (G. Kremmer) J. McQuilkin H. Nellson New Keep-it-dark Mine O'Keefe and Grigg Rasmussen and Davey Rasmussen and Davey Rasmussen and Davey E. W. Spencer (Hobo Syndicate) South Big River Mines, Ltd. H. R. Young (Strathconor Reefs Syndicate)	Southern Inspection District. Reid and Lynch E. Oxenbridge H. and E. Barker Cornish Point Mining Syndicate Clutha Development, Ltd.

#### (2) GOVERNMENT PROSPECTING DRILLS.

The following table gives details of the drilling done and the results obtained for twelve months ended 31st December, 1926:—

Drill Superintendents: W. H. Warburton, E. A. Wilson, D. Blackadder, R. Pengally, and W. Hughes.
Drills used: Schram-Harker diamond, Keystone and placer drills.

Number of Holes drilled.	Total Depth, in Feet.	Diameter of Hole.			To whom lent.	Cost per Foot of Drilling.	Cost per Foot of Transport.	Cost per Foot of Carbon's Wear.	Results.
!	154	1						-	
	Ft.	ln.	(1 1	<i>(</i> 1	TX 101 1 111	s. d.	s. d.	s. d.	
2 1	98	3	Ceal	Gravel	D, Blackaddder	17 4	0 7		Satisfactory.
1	518	238	,,	Sandstones, mud- stone, shales, and grits	Hunter and party	7 5	2 0	1 2	No workable coal.
1	300	$1\frac{3}{4}$	,,	Shaly mudstones and sandstones	Hillside Co - op- erative party	$5  ext{ } 4rac{1}{2}$	2 10	$0 - 4\frac{1}{2}$	Four small coalseams located.
2	1,184	3 & 23	"	Mudstones, sand- stone conglomer- ates and shales	State Coal-mines,	3 2	4 7	1 8	Unsatisfactory.
4†	96	43	Gold	Shingle, silt, &c.	R. M. Aitken	‡	1		,,
19	966	6	,,	Graveldrift	Clutha Develop- ment, Ltd.	6 8			Satisfactory.
15	564	6	*	Shingle, sand, clay, &c.	Public Works De- partment, Ku- row	82 11	6 1	. •	
:	3,726	:		ļ					

<sup>\*</sup> Testing dam-sites.

#### (3) Subsidized Roads on Goldfields.

The expenditure in the form of subsidies and direct grants upon roads on goldfields amounted to £3,612, as compared with £6,033 during the previous year.

#### (4) GOVERNMENT WATER-RACES.

The Waimea-Kumara water-races, constructed by the Government for the purpose of assisting alluvial gold-mining in the district of Kumara (Westland), showed a loss for the year ended 31st March, 1927, of £135–19s, 10d. Water was supplied to claims employing in all an average of 2 persons, and gold to the value of £274–15s, was obtained.

The following is a statement showing the cash received by the Government for water sold, and the expenditure on the upkeep of the races, together with the average number of miners supplied with water, and the approximate quantity and value of gold received for the year ended 31st March, 1927:—

	Receipts. (Sales of Water.)	Expenditure.	Debit Balance.	Average Number of Miners supplied with Water.	Approximate Quantity and Value of Gold obtained.
Waimea-Kumara Water-races	£ s. d. 1,129 10 0*	£ s. d. 1,265 9 10	£ s. d. 135 19 10	2	Oz. £ s. d. 70 274 15 0
	* 1 1	10			

<sup>\*</sup> Including royalty on timber, &c.

The amount outstanding on the Waimea-Kumara water-races on the 31st March, 1927, was £654–2s. 2d., a decrease of £279–0s. 1d. on the previous year.

#### (5) School of Mines.

The expenditure on schools of mines for the year ended the 31st March, 1927, was £3,885-16s. 5d., against £4,004 during the previous year. This included a grant of £750 to the University of Otago for the Otago School of Mines.

The schools of mines continue to do useful and necessary work; but at the schools on the gold-fields the students who attend the classes are mostly from industries other than mining, so that these schools are technical schools rather than schools of mines.

I desire to acknowledge the efficient help and co-operation which I have received from the Inspectors during the past year.

I have, &c.,

J. A. C. BAYNE,

Inspecting Engineer of Mines.

<sup>†</sup> In addition, two further holes were drilled but were not bottomed.

<sup>‡</sup> Hirer unable to supply accurate costs.

C.-2.

#### ANNEXURE A.

21

#### SUMMARY OF REPORTS BY INSPECTORS OF MINES.

NORTHERN INSPECTION DISTRICT (Mr. M. Paul, Inspector of Mines).

Waihi Gold-mining Co., Ltd. (J. L. Gilmour, Manager).—No. 15 Level (1,880½ ft.).—West drive: This has reached Waihi Gold-mining Co., Ltd. (J. L. Gilmour, Manager).—No. 15 Level (1,880\fmathfrak{1}, 1).—West drive: This has reached a distance of 885 ft. At 524 ft. crosscutting was done to the south for 106 ft. The Martha and Royal lodes were intersected in this crosscut, being 17 ft. and 7 ft. wide respectively. The assay value in both cases is low. From 704 ft. the west drive was diverted 45° to the south-west to intersect the Edward lode. At 809 ft. there is a section of Edward lode 6 ft. wide; assay value 1s. per ton. At 838 ft, the main section was intersected, width 8 ft., and assaying a trace of bullion; course, 267° (true); dip 1 in 3, south-east. At 868 ft. there is a vein of quartz 14 in. wide, assaying £1 1s. per ton. At 878 ft. there is another vein, 18 in. wide; assay value, £1 5s. 5d. per ton. Edward lode: Driving south-west was commenced on the main portion and continued to 27\frac{1}{2} ft. The average assay value for this distance is 10s. 9d. per ton.

Edward lode: Driving south-west was commenced on the main portion and continued to  $27\frac{1}{2}$  ft. The average assay value for this distance is 10s. 9d. per ton.

No. 14 level.—Martha lode (north section): The east drive was continued to 550 ft. At 547 ft. a south crosseut traversed quartz for 58 ft.; the assay value was low. This is the main portion of Martha lode. At 188 ft. a winze has been sunk 58 ft. on the north section in payable ore. Dunlop south-east crosscut was extended to 294 ft. and the following veins intersected: At 68½ ft., quartz 4 ft. wide, assay value 11s. 2d. per ton; at 78½ ft., quartz 3 ft. wide, assay value 7s. 4d. per ton; at 138½ ft., quartz 17½ ft. wide (including a horse of country 2½ ft. wide), assay value 9s. 2d. per ton. This is the Empire lode. At 249 ft. the Royal lode was met; width 10 ft. and assay value 14s. 10d. per ton. Some driving east and west was done on the two latter veins, but no improvement in value was shown. Edward lode: The total distance driven south is now 398 ft. Payable ore for a distance of 177 ft. was exposed. At 163 ft. south a winze was sunk 65 ft. At 38 ft. down there is evidence of a fault crossing the reef. With the object of testing the Edward lode below No. 15 level diamond drilling was commenced from the south end of Dunlop crosscut. At an angle of 63½ from horizontal and direction 290° (true) the lode was met at a depth of 316½ ft., or, calculating vertically, 155 ft. below No. 15 level. The drill has proved a large body of quartz, but assay results disclosed no payable ore. payable ore.

No. 13 level.—Empire lode: This was intersected at 90 ft. in Trout south-east crosscut. The width is 12 ft. and mixed with country; assay value, £1 0s. 1d. per ton. Driving east was done for 12 ft. and westward 224 ft. Some payable ore has been exposed in the latter direction, and at 84 ft. the width is 14 ft. and average assay value £2 6s. 9d. per ton. Martha lode: At 50 ft. down Pascoe winze, an intermediate level, was driven 130 ft. west and 33 ft. east. This work has opened up some payable ore.

No. 12 Level.—The principal work at this level during the year was confined to prospecting with the diamond drill, but no payable ore was disclosed.

No. 11 Level.—Martha lode, north section

East of Kauri crosscut the drive was continued to 326 ft., where it connected to old level on the north section of lode. Salmon north-west crosscut: Diamond drilling was done horizontally from the end of this crosscut for a length of 405½ ft.; several small veins were intersected, but all of low value.

No. 10 Level.—Edward cross-lode: The south drive has reached a distance of 1,940 ft., or about 100 ft. from the west boundary. Assay results were very low. The width of reef in the present face is about 12 in. Shark North-west crosscut: This was continued to 474 ft. At 401 ft. a formation of quartz and country mixed, 33 ft. wide, was intersected, of very little value. At 460 ft. there is another lode formation, 13 ft. wide, of very low value. Driving south-west on the formation met at 401 ft. was commenced and carried to 125 ft. This drive is now stopped.

No. 9 Level.—Royal lode west of Edward junction: Driving was resumed and carried to 269½ ft. The width of quartz was small and value low. Work is stopped. Royal lode in Crocodile north crosscut: This was driven on cast 89½ ft. and westward 13 ft. in Grand Junction area.

No. 8 Level.—The porth leader was intersected at 80 ft. in Bulls north crosscut. The first 20 ft. is a mixture of

No. 8 Level.—The north leader was intersected at 80 ft, in Bulls north crosscut. The first 20 ft, is a mixture of quartz and country and (last 5 ft.) solid quartz, the assay value being £2 13s. 10d. per ton. A total of 383 ft, was driven north-west on the course of this lode. The average width over this length is about 12 in.

No. 7 Level. The cast face of Royal lode was resumed and carried to 1,206 ft., where the lode is cut off by the

old surface. The last 44 ft. of driving is in the Grand Junction area.

Surface: On the west side of the Martha Hill a considerable amount of stoping and development work was carried out.

No. 2 shaft was sunk 32 ft., making a total distance of 1,819½ ft. from the surface. The chamber at No. 14 level

No. 2 shaft was sunk 32 ft., making a total distance of 1,819½ ft. from the surface. The chamber at No. 14 level was opened at 169 ft. below No. 13 level.

A total of 211,530 short tons of ore was crushed and treated, and was obtained in the following quantities from the undermentioned reefs: Martha, 70,875 tons; Edward, 33,726 tons; Royal, 28,239 tons; Martha, north branch, 21,437 tons; Surprise, 8,776 tons; Empire, 8,689 tons; Alexandra, 7,319 tons; Jellicoe, 5,532 tons; No. 2 reef, 5,696 tons; North, 4,841 tons; Empire, north section, 3, 785 tons; Bell, 1,797 tons; Welcome, south branch, 1,770 tons; Victoria, 1,245 tons; Martha, south branch, 1,215 tons: North Leader, 516 tons; Welcome, north branch, 451 tons; Cross, 384 tons; Albert, 241 tons; Regina, 143 tons; Welcome, 120 tons; London, 104 tons; Princess, 63 tons; Dreadnought, south branch, 57 tons; Salmon, 54 tons; Bates, 7 tons: total of 208,082 tons from Waihi Company's area. From Grand Junction area: Empire, 2,430 tons; Mary, 489 tons; Royal, 529 tons: Total of 3,448 tons from Grand Junction area. Grand total, 211,530 short tons. Total footage, 15,939½; 1,770 ft. also bored with diamond drilling-machines. Water pumped to the surface from No. 15 level was 514,590,200 gallons. Waihi Grand Junction Gold Co., Ltd.,—The mine has been leased to the Waihi Gold-mining Co., Ltd., for a period of ten years on a profit-sharing basis.

Waihi Grand Junction Gold Co., Ltd.,—The mine has been leased to the waim Gold-mining Co., Ltd., for a period of ten years on a profit-sharing basis.

Rising Sun Gold-mining Co., Ltd., Owharoa (A. McGruer, Manager).—During the year 1,561 tons of ore won from Nos. 1 and 3 reefs above the low level yielded gold valued at £5,720 19s. 3d. Owing to stoppages due to water-supply being cut off this did not pay working-expenses. Six months' protection has been applied for and granted with the object of endeavouring to raise capital in order to open up a greater length of stoping-ground and also to do some

urgent repairs to the battery.

New Zealand Crown Mines, Karangahake (G. N. McGruer, Manager).—No work has been done in this mine during the year, and with the exception of the Earl of Glasgow section the whole of the area formerly held by this company has been abandoned.

Talisman Dubbo Claim, Karangahake (Williams and Party).—A considerable amount of trenching and prospecting

Tatisman Photo Others, that algorithm and Tately,—A considerable another of steeling and prospecting work has been done, with encouraging results.

Imperial Gold-mining Co., Ltd., Karangahake.—The crosscut eastward from Howard's level has been driven a total distance of 563 ft. and eleven reefs and veins intersected; unfortunately, all are of low value.

Macriland Gold-mining Co., Ltd., Waitekauri.—No. 4 level has been cleaned up and retimbered for a distance of 1,012 ft., leaving 280 ft. to reach the reef, which it is said contained payable values when work was discontinued. The battery is also being put in repair.

Majestic Gold-mining Co., Ltd., Maratoto (J. A. J. McLaren, Manager).—During the year the drive south on the

Majestic Gold-mining Co., Ltd., Maratoto (J. A. J. McLaren, Manager).—During the year the drive south on the United lode has been extended (exclusive of crosscutting) 949 ft., making the total distance 2,233 ft., the reef varying from 4 ft. to 16 ft. in width. The face is now reaching the point where low values were obtained in the level above, and it is fully anticipated that the ore at this level will contain higher values.

Ohinemuri Gold and Silver Mines, Ltd., Maratoto (J. W. O'Sullivan, Manager).—The drive south on the Camoola lode has been extended on the hanging-wall portion a distance of 2,074 ft. At 1,792 ft. a crosscut was put into the reef for a distance of 32 ft. without exposing the foot-wall. The drive was continued for a distance of 228 ft. on the hanging-wall, and for the greater portion of this distance a vein 2 ft. 6 in. in width in the centre portion of the reef gave highly payable assay values. No. 1 rise was put up for a distance of 16 ft. in payable values, and No. 2 rise, which is now in progress to connect with level above in order to provide adequate ventilation, was, on my last visit to the mine, up a distance of 45 ft. in payable values, and the future prospects of this mine are encouraging. Driving on the north side of the main crosscut is also in progress.

north side of the main crosscut is also in progress.

New Waiotahi Gold-mining Co., Ltd., Thames.—Work has been confined chiefly to developing the Waiotahi Cambria reef, which has been followed hillward for about 300 ft. from the crosscut. The reef is from 15 ft. to 20 ft. wide where cut, and blotches of gold have been seen in places, but nothing of a payable nature has been met with. A winze has been sunk 50 ft. below this level to test the footwall leader and the main reef—general indications

favourable.

favourable.

Alburnia Gold-mining Co., Thames (Thomas Gillon, Manager).—Work is being continued on the Orlando lode from the Norwegian level. At different points strong colours of gold have been seen, and occasionally small parcels of picked stone selected. Driving is being continued to intersect the junctions of the Star of the South and Success reefs. An electric motor and compressor have been installed to speed up this work.

Nonpareil Gold-mining Co., Ltd., Thames.—Work in this mine is still confined to driving on the Shamrock lode from the bottom of a winze sunk 50 ft. below the adit level. The results so far have proved disappointing.

Caledonia-Kuranui-Moanatairi Gold-mining Co., Ltd., Thames (S. G. Baker, Manager).—The principal work has been confined to extending the crosscut for the purpose of intersecting the Cambria reef on the seaward side of the main fault. At 670 ft. a reef formation 6 ft. in width, composed of quartz stringers showing gold freely, was intersected, and driven on seaward for 15 ft. In order to provide adequate ventilation, and also a means of escape intersected, and driven on seaward for 15 ft. In order to provide adequate ventilation, and also a means of escape for the men should a fall occur in the main tunnel, a rise has been put up and connected with a shaft sunk from the surface. This will enable the vigorous development of this lode to be proceeded with.

\*\*Kuranui Gold-mining Co., Thames\*\* (J. H. Benny, Manager).—A total distance of 291 ft. has been driven on the Ross reef without disclosing anything of a payable character. Work is now confined to testing Barry's lode from the

battery level.

Occidental Una United Gold-mining Co., Ltd.—A company was recently formed to work this claim. Four men are employed cleaning up and repairing the low level.

Joker Claim, Thunes (George Fisher).—2 tons of ore obtained from fossicking over the surface and treated produced

gold valued at £8 18s. 6d.

Lucky Shot Gold-mining Co., Ltd. (A. Christie, Manager).—The principal work carried out in this mine during the year has been driving hillward on the Ruban Parr and other reefs from Christie's level; the results recently met with are encouraging, as gold has been freely seen in the ore broken out.

New Cambria Mine, Thames (R. McGregor).—44 tons of ore treated, won from the mullock-tips, and fossicking on small leaders produced gold valued at £203 15s. 11d.

Golden Age Gold-mining Co., Ltd., Thames.—In what is known as the Gladstone level 55 ft. has been driven on the footwall portion of the Golden Age reef. The ore won is heavily mineralized, and strong colours of gold have been

Ballarat Gold-mining Co., Ltd., Thames.—Three men have been employed cleaning out and repairing the road

batter o'dot was also been driven on a 9 in. leader—a little gold was seen, but nothing payable met with.

Sylvia Gold-mining Co., Thames (H. H. Adams, Manager).—Work confined to cleaning out and retimbering the Missouri level in order to reach a winze where it is stated highly payable ore was left in the early days.

Zeehan Consolidated, Ltd., Puhoi Creek (W. H. Burton, Manager).—The principal work carried out in this mine consisted of taking along a leading stope for a distance of 250 ft., timbering and putting in passes ready to commence stoping operations. A power-house has also been built, and a 120 horse-power suction-gas engine installed. Early in September a start was made with the re-crection of the battery blown down during a heavy gale, but the available

in September a start was made with the re-crection of the battery blown down during a neavy gale, but the available funds became exhausted, and all work was suspended pending an attempt to raise further capital.

Egmont Gold-mining Co., Sluicing Claim, Tapu.—This company was formed in New Plymouth, most of the share-holders being local residents. A water-race and dam-site have been applied for and granted. It is proposed to sluice the hill on the north side on the Tapu Creek, where it is said encouraging prospects have been met with.

Hauraki Mines Consolidated, Ltd., Coromandel (H. F. Shepherd, Manager).—This company was recently formed to take over the Old Hauraki group of mines and Hauraki seefs freehold property, with the object of sinking the Hauraki shaft 200 ft. held with present level and crossout east and west to test the value of the reefs, which have take over the Old Hauraki group of mines and Hauraki Reefs freehold property, with the object of sinking the Hauraki shaft 200 ft. below the present lowest level, and crosscut east and west to test the value of the reefs, which have produced in the vicinity of £500,000 worth of gold from the 400 ft. level to the surafce. It is also proposed to continue the crosscut from the 400 ft. level, driven to within 30 ft. of the boundary-line of the Hauraki Reefs section, towards the Hauraki north shaft to prospect the reef system at a depth of 200 ft. below the lowest workings in this section. The preliminary work prior to unwatering the shaft is well under way. Two boilers have been procured, and one weighing 22½ tons installed; and to take the greatest possible advantage of the steam-pressure a high-pressure cylinder is being added to the pumping-engine. A more powerful winding-engine has been removed from the Union Beach shaft, electric-lighting plant installed, and the balance-bob renewed and enlarged to enable it with safety to carry the main rod in the new lift.

\*Mount Welcome Gold-mining Co., Ltd. (J. Vickerstaff, Manager).—Four men employed. No. 2 and No. 3 levels have been cleaned up and repaired, and a rise connected with No. 1 level. Stoping is now in progress on what is known as the Puketutu reef, and the results met with are said to be most encouraging, as gold has been freely seen through the ore broken out.

the ore broken out.

Four-in-Hand Gold-mining Co., Ltd., Coromandel.—This mine was let on tribute to Patterson and party (three men),

who crushed 120 tons of ore for 82 oz. of gold valued at £229 16s. 6d.

Iris Gold-mining Co., Matawai.—A small three-stamp battery has been erected, and connected with the mine by means of aerial trams, and it is expected that there is sufficient ore developed in the mine to keep it going at least one

Handsworth Mine, Kuaotunu (Samuel James, Owner).—Work in this mine has been confined to prospecting in the old levels.

Peter Maxwell Gold-mining Co., Te Aroha (G. E. Hyde).—A low-level crosscut to intersect the Pick and Dish and

Peter Maxwett Gota-mining Co., Te Aroha (G. E. Hyde).—A low-level crosscut to intersect the Pick and Dish and other veins exposed on the surface is now in progress for the purpose of testing these lodes at a greater depth.

Muir's Gold-reefs, Ltd., Te Puke (W. M. McConachie, Manager).—As the pumping plant in use proved quite inadequate to deal with the water, it was decided to purchase a new pumping plant. This plant when supplied will consist of (a) Worthington sinking-pump, electrically operated, having a capacity of 1,200 gallons per minute under a head of 500 ft.; (b) a squirrel-cage motor, 400 volts; (c) all necessary valves, columns, ropes, spare parts, &c.; (d) flexible armoured cable; (e) single-drum 28-ton winch, also cable, capstan, and winch. Delivery of this plant has been delayed by the coal strike in England. As everything is in readiness for its installation, no time will be lost in starting to unwater the mine on its arrival.

23

#### QUICKSILVER-MINES.

Great British Mercury-mine, Puhipuhi (T. A. Black in charge).—Three men employed open-cutting, from which about 300 tons of ore now under treatment was won; some alterations were also made to the plant, but no mercury has been won during the year.

Mount Mitchell Cinnabar-mine, Puhipuhi.—Further prospecting has been done by Mitchell and party, but nothing

of importance has been discovered.

#### OIL-WELLS.

Taranaki Oilfields, Ltd.—No. 1 well, Tarata, was sunk to a depth of 5,010 ft.; at several points gas was met with, but no oil. No. 2 well, Moturoa, sunk to a depth of 4,360 ft.; no gas or oil was met with below 2,300 ft.; full description of results met above this point in 1925 annual report. Waiapu No. 1 well, Ruatorea, sunk to a depth of 2,540 ft.; result nil. Waiapu No. 2 well now in progress, situated in an elevated position on Mr. Jefford's farm, about nine miles from Tokomaru Bay; at 270 ft. the water has been shut off. Taranaki No. 3 well: Site chosen on the Piko Road, Waitara Survey District. The plant formerly in use at the Tarata well is being removed to this site, and the first oil-sand is expected at a depth of approximately 3,600 ft. In each case the abandoned wells are filled and plugged in accordance with the regulations.

During the year the old wells Nos. 3 and 5 at Moturoa, formerly belonging to the Taranaki Oil Co. produced

During the year the old wells Nos. 3 and 5 at Moturoa, formerly belonging to the Taranaki Oil Co., produced 992 gallons of petroleum. The Blenheim oil-well also discharged some petroleum, which ran into the tanks, and no

record was taken.

#### SULPHUR.

White Island Products, Ltd. (B. Basset, Manager).—This company recently took over the assets of the White Island and Agricultural Co., Ltd. During the first half of the year operations by the old company were confined mainly to construction work, such as landing-stages, buttress and slipway, laying down moorings, creeting engine-house and plant at Crater Bay, opening up quarry-face, laying tramways, prospecting, &c. Small shipments of fertilizer were first made in May, and up to the 31st December 1,783 tons had been shipped, of which 558 tons of raw material remain to be treated; the balance, 1,225 tons, have been crushed, and 865 tons sold. The value at the average net price of £3 10s. per ton ex works makes the total value of the product treated by the old and new companies £4,287 10s. An average of twelve men employed during the year.

#### ACCIDENTS.

One fatal accident occurred during the year, at the Waihi Mine. Leonard McClure, married man, aged thirty-six years, died in the local hospital on the 20th May, 1926, as the result of being struck on the head by a falling stone on the 18th May. Just prior to the accident deceased and his mate, W. Stansbury, were engaged barring down the loose ground after a shot in a stope on the Empire lode, between Nos. 9 and 10 levels (mine). When they had, as they considered, made it reasonably safe, deceased said to his mate, "I will go down and run the pass," which had hung up. Alongside of this pass is a travelling-road, which had not been used for this purpose for some time. They uncovered this travelling-road by lifting one slab, and with difficulty deceased got through, Stansbury remaining on top. The first stage in this travelling-way is down 24 ft. Deceased had reached this stage, and, with one foot on the ladder and his arm around the hearer carrying the stage, was about to push the har through the cribbing to run the ladder and his arm around the bearer carrying the stage, was about to push the bar through the cribbing to run the pass when a fall occurred in the stope: a piece of quartz weighing about 81b. rolled down the hill, grazing Stansbury's leg, and dropped into the pass, striking deceased on the head. His mate sang out, but got no reply; he then went down the pass and found deceased unconscious, with his arm around the bearer. Stansbury then got his head between deceased's legs and lifted him to release his hold, and in this way carried him down the ladder to the level 72 ft. below.

At an inquiry the jury returned the following verdict: "That the deceased Leonard McClure died at the Waihi Hospital on the 20th May, 1926, from pressure on the brain caused by a stone falling on his head while working in a stope in the Waihi Gold-mining Co.'s mine. The evidence showed the happening was purely accidental, no blame being attachable to any one." A rider was added as follows: "The jury wishes to commend and place on record the action of deceased's mate, Mr. W. Stansbury, in immediately going to his (the deceased's) assistance, and carrying him down the ladderway, a distance of 72 ft., to the level below, where he was attended to without delay."

#### WEST COAST INSPECTION DISTRICT (J. F. DOWNEY, Inspector of Mines).

#### QUARTZ-MINING.

#### Marlborough District.

Dominion Consolidated Mine.—Work was carried on steadily throughout the year by a syndicate which had taken this mine over from the liquidator. The No. 1 level, Golden Bar, was extended through the fault that separated the workings of that mine from the Empire City Mine, and in a few feet picked up the reef formerly worked in the latter some years back down to an intermediate level between Nos. 2 and 3 levels. The extension of No. 1 Golden Bar adit cut the reef about 40 ft. below this intermediate. When first met with in this adit the stone was about 8 ft. wide, but in a few feet of driving it widened to 18 ft. of solid quartz, which width is maintained for about 30 ft. A horse of mullock then came in, which in another 30 ft. of driving to the present face widened to 10 ft. in width, with reef 4 ft. wide on one wall and 7 ft. on the other. The footwall reef carries good gold, but the values in the hanging-wall reef are not so good, but are considered payable. This hanging-wall split was apparently not worked in the higher levels of the Empire City Mine. Work was confined mainly to extending the adit referred to and taking off a leading-stope. In carrying this out some 1,287 tons of quartz were mined, which on treatment yielded by amalgamation 651 oz. 17 dwt. of gold, valued at £2,411 ls. 3d. This return was equal to £1 l9s. per ton, which is a considerably better recovery than any previously experienced in the history of the mine. For the whole period during which the mine had been worked prior to this the average yield was only worth about 13s. Id. per ton in gold values, and the best year only gave a return equal to £1 7s. 9d. per ton. If the present values are maintained, the mine seems to have a future more encouraging than its past. The reef now being worked could be readily picked up from No. 2 Golden Bar adit, and it is possible that a still lower adit than the last-mentioned could be put in to reach it.

### Reefton District.

Regton District.

Blackwater Mine.—During the year this mine continued active work with an average of 152 men. A good deal more development work was carried out than in 1925, the total footage being 2,115½ ft., of which 1,617 ft. was on reef averaging 13.58 dwt. over 23 in. Of this 1,617 ft., 1,241 ft. was on payable reef averaging 15.45 dwt. over 25.3 in. and 376 ft. on reef averaging 3.32 dwt. over 15 in. The remaining footage was off reef. The remaining footage was off reef. The following are the details of the work: No. 6 level north extended 286½ ft., all on reef averaging 15.65 dwt. over 22.7 in. No. 7 level north advanced 180½ ft., of which 159 ft. was on reef averaging 17.66 dwt. over 48 in. No. 7 level north (small branch) extended 9½ ft., all on reef averaging 17.6 dwt. over 40 in. No. 8 level north extended 120½ ft., 32½ ft on reef averaging 18.2 dwt. over 16 in. No. 9 level north extended 290½ ft., 282½ ft. on reef averaging 7.65 dwt. over 18.4 in. No. 10 level north was advanced 345½ ft., 338½ ft. on reef averaging 10.47 dwt. over 19 in. No. 10 level north advanced 263½ ft., 19 ft. on reef averaging

Sch dwt. over 9 in. No. 10 level intermediate, south of rise 360 ft, south, advanced 106 ft., all on reef averaging 15-5 dwt. over 18 in. No. 7 level rise, 1800 ft. north, risen on reef averaging 16-67 dwt. over 40 in. No. 6 level rise, 1.370 ft. north, risen 82 ft. on reef averaging 16-68 dwt. over 18 jn. No. 10 level rise, 2.60 ft. north, risen 83 ft. on reef averaging 16 dwt. over 18 jn. No. 10 level rise, 1800 ft. north, south 60 ft., of which 40 ft. was on reef averaging 12-4 dwt. over 18 jn. No. 8 level winze, 1.800 ft. north, south 60 ft., of which 40 ft. was on reef averaging 5-97 dwt. over 16 in. No. 8 level winze, 1.180 ft. north, south 62 ft., of which 40 ft. was on reef averaging 5-97 dwt. over 16 in. No. 8 level winze, 1.370 ft. north, south 63 ft., all on reef. No. 8 level crosscut, 1.800 ft. north, south 63 ft., all on reef. No. 8 level crosscut, 1.800 ft. north, advanced 14 ft. west of level, off reef. No. 10 level crosscut at 465 ft. north advanced 18 ft. cast of level in country. At the treatment plant 9.044 tons of quartz was crushed for a recovery of 18,031 oz. 19 dwt. gold, of which 13,732 oz. 4 dwt. was recovered by amalgamation, 2.979 oz. 13 dwt. by cyanidation, and 1.320 oz. 2 dwt. from concentrates. The total value of the gold was 570.232 10s. 8d. Although the quantity crushed exceeded that of the previous year by 2,105 tons, the gross value of the yield fell off by 24.682. This was due mainly to an unexpected fall in values in some of the stopes over No. 10 level, from which a considerable portion of the tonnage for the year was drawn. The appearance of zones of poor value has been a common feature of the mines of this district, but this is the first time such an occurrence has been noted in this mine. Seeing that the values in No. 10 level itself were good, here sees every probability that the value of the stone in this particular part of the year has been carried out in the extreme north of the mine—that is, in the direction of the North Blackwater Mines, Ltd., holders of the adjacen

abundant than in any of the upper workings of the mine, a condition brought about, without doubt, by the serious faulting that had occurred. Between these levels the appearance of the mine was that of a lode-channel several hundred feet in width containing blocks of ore scattered throughout it, and dipping and striking at all angles and directions. Between Nos. 11 and 12 levels this wide ore-channel has disappeared, and the reef has been confined to what may be described as mere fissure in which stone only appears in occasional small boulders. It is possible that further extension of No. 12 level to the north may reveal more important bodies of quartz, so some little further prospecting in this direction seems justified. During the year twentysmall boulders. It is possible that further extension of No. 12 level to the north may reveal more important bodies of quartz, so some little further prospecting in this direction seems justified. During the year twenty-four men on an average were employed, and 1,799 tons of stone mined and treated, for a return of 1,156 oz. 12 dwt. gold by amalgamation, 93 oz. 19 dwt. from eyanide treatment, and 476 oz. 6 dwt. from treatment of concentrates, or a total of 1,726 oz. 17 dwt., valued at £6,607 17s. 7d.

New Keep-it-Dark Mine.—Work in this mine was limited to the old Golden Ledge section, and mainly to the extension of the Golden Ledge No. 2 adit. This adit was advanced a further 265 ft., making the total distance of 630 ft. from the crosscut; of this distance 390 ft. represented new work done since operations were resumed in this part of the mine. During the driving operations in 1926, scattered small boulders were met with proportically all the way and in three places short continuous makes of stone were met with. One of those

resumed in this part of the mine. During the driving operations in 1926, scattered small boulders were met with practically all the way, and in three places short continuous makes of stone were met with. One of these was about 50 ft. long, another 20 ft., and the third 17 ft. All of these apparently carried fair gold-contents. From the first-mentioned several stopes were taken off, and in this short distance the shoot lengthened to 90 ft., with stone still making at both ends. The reef was about 3 ft. in width. In the stoping operations referred to some 245 tons of stone was mined, which on treatment by amalgamation yielded 108 oz. 6 dwt., and by eyanidation 24 oz. 14 dwt. gold, or a total of 133 oz., valued at £504 5s. 7d., equal to £2 1s. 2d. per ton. No work was done on the other shoots, but when provision is made for better ventilation of the workings, as is intened shortly, these will be further tested. I understand that a company has been formed to provide the necessary funds to enable the possibilities of this part of the mine to be fully investigated. It may be noted that in extending the Golden Ledge No. 2 adit the work met an old vertical shaft at about 630 ft. in from the crosscut. For a time the management was completely puzzled as to the identity of this working, but a search of the old plans showed that a shaft had been sunk for a few feet in this position from what is known as the "old dark tunnel." Evidently this shaft was subsequently carried on down to the old battery level (No. 4 surface adit), but the working was not posted on the plans.

North Big River Mine.—At this property four men were employed throughout the year in prospecting operations. Some further crosscutting and driving was done in the north end of No. 3 adit, and in the same adit, from a point about 100 ft. from its mouth, a crosscut was run out to the east for 400 ft., where it met the dolerite. No evidence of the existence of reef was met with in any of the work done.

New Millerton Mine.—Nothing was done during the year at t

New Millerton Mine.—Nothing was done during the year at this mine in the work done, shaft, but a certain amount of prospecting was carried out from surface on the southern end of the company's claim, south of Snowy Creek. Here an adit was put in for 208 ft., and a crosscut driven from it for 20 ft. in the hope of picking up the downward continuation of an outcrop of quartz located some years ago. Nothing but a track carrying

fragments of quartz was, however, found.

South Blackwater Mine.—The principal work carried on here was the continuation of the sinking of the main shaft, which had been started at a point between 6,000 and 7,000 ft. south of the Blackwater shaft, the idea of sinking it being to try and pick up the southern continuation of the Birthday reef worked so successfully by the Blackwater Mines, Ltd. For the year the shaft was sunk a further 217 ft., making a total from surface of 316 ft. The work was not continuous, there having been a long delay owing to difficulty in getting a party of men to take on the work at a suitable price. Apart from the shaft-sinking, some prospecting-work was done on several of the lines of reef that outcrop on the 25 C.--2.

company's property. On what is known as the Kathleen reef a shaft was sunk 22 ft. on stone about 4 ft. wide, but only very poor values were found. On what is known as the Snowy reef, about 6 chains east of the main shaft, a tunnel was put in for 28 ft., and a winze put down from it for 56 ft., from which at a depth of 50 ft. some 29 ft. of driving was carried out. This work revealed the presence of a small reef, about 18 in. wide, carrying a little gold. An average of

fifteen men were employed.

South Big River Mine.—Six men were employed throughout the year, and a considerable amount of prospecting-work was carried out. No. 3 adit was extended north a further 130 ft., making a total of about 890 ft. from mouth. A crosscut east from this adit at a point about 740 ft. from the mouth was extended 247 ft., making a total of 435 ft. In this crosscut, at about 280 ft. from the main adit, a ree—or, rather, stockwork—was intersected, and this was driven on north for 73 ft. and south for 49 ft. None of the work revealed payable values. A little crushed quartz was found in the northern extension of the adit, but it carried no values. The stockwork referred to as having been driven on from the east crosscut carried about 4 dwt. gold per ton.

was found in the northern extension of the adit, but it carried no values. The stockwork referred to as having been driven on from the east crosscut carried about 4 dwt. gold per ton.

Progress Mine.—No mining-work was done, but a retreatment of the old sands at the battery was continued, 186 oz. 3 dwt. gold being recovered, which was valued at £573 1s. 10d.

Wealth of Nations Mine.—The year was not a very satisfactory one for the company operating this mine. The renewal of the upper section of the Energetic shaft, which, as mentioned in last year's report, had collapsed in the previous October, took longer than had been anticipated, and it was not until May that more active mining and crushing operations could be resumed. The shaft had to be entirely retimbered for about 180 ft., to the old No. 1 level. Since resuming stoping, some 3,507 tons of ore was broken and treated, for a yield of 1,692 oz. 8 dwt. by amalgamation, and 639 oz. 16 dwt. by eyanidation, or a total of 2,332 oz. 4 dwt. altogether, valued at £9,204 6s. 3d. Very little development work of any kind was carried out, operations being practically confined to the stoping of the No. 13 level south block, which is being rapidly worked out. On an average, twenty-five men were employed.

Alexander River Reefs.—In March the newly formed Alexander Mines, Ltd., took over this property and started operations on the 27th of that month. Since then the following development work was carried out up to the end of the year:—No. 1 level north: This was extended 30 ft. in stone of an average width of 20 in, making a total distance on reef of 152 ft., with the face still showing reef 15 in. wide. No. 2 level north: This was advanced 86 ft. on stone averaging 4 ft. to 5 ft. in width, making a total distance on reef of 152 ft., with two says much flatter than in the upper protion of the mine. No. 2 level crosscut: This was put out for 14 ft. in an easterly direction without disclosing anything of value. No. 3 level crosscut: This was put out for 14 ft. in an easterly

#### Westport District.

Britannia Mine.—A little further prospecting work was done at this mine with a view to picking up a continuation

Britannia Mine.—A little further prospecting-work was done at this mine with a view to picking up a continuation of the shoot of stone located in the Stony Creek adit last year, but no further reef was met with.

Strathconor Reef.—In the vicinity of Rough and Tumble Creek, a tributary of the Mokihinui River, a small party carried out some work on a formation to which the above name was given. It was claimed by the prospectors that a lode formation occurred here up to 75 ft. in width, carrying good gold values. An inspection of the formation showed it, however, to be merely a wide band of metamorphosed greywacke, highly impregnated with iron-pyrites. A number of samples were taken from various parts of it, but only one of them, which came from a small vein of clean quartz, carried any trace of gold. A crosscut adit was subsequently put in across the formation for 100 ft, with the aid of Congruenant subside but failed to reveal any values. carried any trace of gold. A crossout adit was subs Government subsidy, but failed to reveal any values.

#### DREDGES.

Rimu Flat Dredge.—This big American-type dredge continued operations throughout the year with considerably better results than in 1925. The gold-recovery amounted to 11,800 oz. gold, valued at £47,900, as against 8,714 oz., valued at £35,720, for the previous year. The ground turned over for the period amounted to 1,757,505 cubic yards. This year's recovery brings the total value of gold won by the dredge since it started to £237,970. No dividend was paid during the year, the total dividends remaining at £13,132. Towards the end of the year the recoveries were very good, some 1,100 oz. being recovered just prior to the end of the period from eleven days' dredging. Close check boring of the ground ahead of the dredge was carried out continuously, and it is now estimated that there is in sight at least two years' work on ground as good as that recently worked. The wooden pontoon showed signs of becoming waterlogged, and had gone down astern till practically no freeboard was showing, but two small pontoons, 30 ft. long, 10 ft. 6 in. wide, and 10 ft. deep, were prepared, and belted to the main pontoon astern, one at each side, with the result that the boat was lifted considerably and is now showing normal freeboard. A number of inspections of the main pontoon were made, but there were no indications that it was making any water.

pontoon were made, but there were no indications that it was making any water.

New River Dredge.—This dredge was put into commission in June on an area at Dunganville, in Grey County. The dredge was formerly in the Ahaura River. On removal to Dunganville it was lengthened, and the old steam plant was replaced by electric equipment, power being supplied by the Grey District Power Board. The dredge appears to have been floated in a rather unsuitable position, at the top or higher side of the dredging area, and close to the hillside. A fair amount of gold was got immediately after work was started, but the ground in the locality had been worked from tunnels in the old days of the Dunganville field, and in order to avoid any trouble, such as loss of water from the paddock, by breaking into the old workings, the dredge had to be turned in towards the high ground into an area in which clays and immense boulders predominated and very little gold had been deposited. Towards the end of the year, having got past danger area, the plant was turned outwards towards the flat again, and better results were obtained. The total recovery for the period the dredge was operated amounted to 567 oz. 2 dwt. gold, valued at £2,229 10s. On the average, twenty-five men were employed. It is anticipated that much better values will be got when the dredge gets farther out into the clean gravels, and it is proposed to test the ground ahead of it by Keystone drilling.

Ngahere Dredging Co.—This company has continued prospecting operations on its area on the south bank of the Grey River near Blackball. A number of shafts were sunk, with, I understand, satisfactory results, and it is now proposed to put a dredge to work there. Five men were employed throughout the year at the prospecting-work.

#### ALLUVIAL MINING.

This branch of mining remained much the same as during last year. There was a slight falling-off in the output and value of gold recovered, but it was only slight, being 2,643 oz. 15 dwt. 13 gr., valued at £9,996 15s., as against 2,799 oz. 2 dwt. 15 gr. valued at £10,908 7s. 6d. There was also a small falling-off in the number of men employed from 152 to 142.

Mahakiyawa.—The Mahakipawa Goldfields, Ltd. completed the erection of its poppet-head and winding plant, and a start was made to sink the shaft. After going down 31 ft. the heavy water in the ground heat the plant owing and a start was made to sink the shaft. After going down 31 ft. the heavy water in the ground beat the plant owing partly to the unsuitability of the air-compressing plant to work the pump, partly to the pumps themselves not having sufficient capacity to meet the demand on them, and partly to the shaft not being large enough to work the pumps in to the best advantage, and it became necessary to alter the scheme of working. The shaft was increased from the surface to about double its future size, the pumps were completely overhauled, and steam was employed to drive them in place of compressed air. These alterations brought about some better measure of success, as they enabled the shaft to be carried down to its increased size to 43 ft., and timbered and cemented to 38 ft. At 43 ft. it was found that, in spite of every effort, the pumps, while holding the water, could not gain on it, and a cessation of work was once more made compulsory. It is to be regretted that the company have experienced so much difficulty in carrying on its operations, as little doubt is entertained as to the success of the work once the gutter is reached, and it is equally regrettable that the inflow of water should have proved so serious at this stage, as it is believed that another 6 ft. or 7 ft. of sinking would have got past the trouble. At 50 ft. down the Keystone-drill holes that were previously put down to test the ground showed that a stratum of clay occurred below which there was no water, so if this could have been reached the sinking of the rest of the shaft would apparently have offered no difficulty. As things turned out there was nothing to do but cease work until more powerful pumping plant was installed, and the company is now endeavouring to secure suitable plant. endeavouring to secure suitable plant.

Howard Diggings.—The returns to hand show that twelve men were employed, recovering 127 oz. 18 dwt. gold,

valued at £495 8s. 10d.

Murchison (including Lyell, Matakitaki, and Newton Flat).—Thirteen men were employed, winning 203 oz. 1 dwt. 2 gr., valued at £791 4s. 10d.

Grey Valley (including Ahaura, Nelson Creek, Blackball, Totara Flat, Moonlight, Stillwater, &c.).—Some thirteen men were employed in these fields, winning 109 oz. 15 dwt. 8 gr., valued at £405 fs. 11d.

Barrytown and Twelve-Mile.—Three men were employed, winning 140 oz. 4 dwt. 3 gr., valued at £555 16s. 1d.,

all of which came from beach leads. Greymouth (including Rutherglen, Cobden, and Dunganville).—Three men were employed, winning 74 oz. 10 dwt. 12 gr. gold, valued at £294 7s.

Collingwood (including Rockville, Slate River, and Parapara).—On these fields eight men were employed, winning

Countrywood (including Rockenie, State River, and Parapara).—On these fields eight men were employed, withing 191 oz. 5 dwt. 14 gr., valued at £688 11s. 8d.

Kumara (including Stafford, Greenstone, and Callaghans).—In these localities twenty men were employed, winning 1,044 oz. 12 dwt. 12 gr., valued at £3,850 11s. 4d. The principal producers were the Hohonu Sluicing Co. at Greenstone, with 451 oz. 15 dwt. 8 gr., valued at £1,773 0s. 9d., and Stubbs and Steel, at Maori Point, with 336 oz.

7 dwt., valued at £1,100 19s. 1d.

\*Reefton (including Capleston, Soldiers, Merrijigs, and Blackwater).—Five men were employed, winning 53 oz.
15 dwt. 9 gr., valued at £199 11s. 2d.

Hokitika (including Rimu, Seddon's Terrace, Arahura, and Blue Spur).—On these fields twenty-three men were employed, winning 361 oz. 5 dwt. 12 gr. gold, valued at £1,412 6s. 10d.

Ross (including Waitaha).—Gold to the extent of 53 oz. 8 dwt. 23 gr., valued at £209 10s. 4d. was recovered, three men being expellented.

three men being employed.

Okarito (including Waiho, Gillespie's Beach, and Bruce Bay).—On these fields ten men were employed, winning 122 oz. 14 dwt. 9 gr. gold, valued at £482 16s. 8d., all from sea-beaches.

Westport (including Charleston, Waimangaroa, Fairdown, and Bradshaws).—Six men were employed, winning 130 oz. 0 dwt. 16 gr. gold, valued at £519 7s. 10d.

#### MINERALS OTHER THAN GOLD.

Petroleum.—The only work carried out by way of prospecting for mineral-oil or gas was that carried out by the Murchison Oil Co. at the Mangles River, about seven miles from Murchison Township, where a well is being drilled. Drilling operations were started in March, and to the end of the year the bore had been carried down to 1,763 ft. through alternating beds of mudstone and sandstone. Casing was in to 1,518 ft., being 10 in. diameter to 385 ft., 8 in. to 731 ft., and 6 in. the remainder of the distance. A little gas came up when drilling was between the 1,010 ft. and 1,020 ft. marks, and at 1,172 ft. there was a very light showing of oil. From this depth to 1,400 ft. all the material brought up by the pumps had a slight smell of petroleum, but the well manager considered whatever oil there was came from about the 1,172 ft. mark, seeping down from there outside the casing. The show of oil was very slight indeed, not sufficient being present at any time to collect a sample. The drilling was carried out without oil there was came from about the 1,172 ft. mark, seeping down from there outside the casing. The show of oil was very slight indeed, not sufficient being present at any time to collect a sample. The drilling was carried out without any great difficulty, the only trouble that occurred being that with the well at about 1,300 ft. the casing slipped from the grips, necessitating the cutting out of the lowest section of the piping. Water was successfully cut off at 381 ft. and at 751 ft., after which the well was quite dry. Three men were employed.

Iron.—The Onakaka Iron and Steel Co. carried out a considerable production of pig iron during the year, but from various causes operations were not continuous, work having to cease for a time in the winter. During the period worked some 7,994 tons of crude ore were mined and treated for a production of 3,997 tons of pig iron, valued at 119 585 fts.

Economics offected at the related to the cost of production to be still further metarially reduced.

at £19,585 6s. Fconomies effected at the plant enabled the cost of production to be still further materially reduced, and at the price at which the company is now able to put its product on the market there seems no reason why, provided local ironfounders give a reasonable measure of support to the company, the works should not now continue in much more regular operation than has been possible in the past. In the plant an average of forty-one men have been

employed, with an additional twenty-three in the quarries.

#### GENERAL REMARKS.

Mining.—In the alluvial branch of the industry a further slight falling-off was noted, but this was not serious, and in the quartz-mining branch the position at the end of the year was not so healthy as might have been expected. The total production of gold from the latter was 23,980 cz. 12 dwt. 4 gr., valued at £93,061 11s. 7d., as against 27,586 cz. 11 dwt. 11 gr., valued at £111,210 0s. 9d., for the previous year. The amount of quartz crushed fell also from 53,254 tons to 47,375 tons, while the number of men employed fell from 294 to 270. This falling-off was accounted for by various causes, amongst which were the lower grade of stone mined from No. 10 level of the Blackwater Mine, the loss of six months' mining-time at the Wealth of Nations Mine owing to the collapse of the upper portion of the main shaft, and the depletion of ore-reserves in the New Big River Mine. It is quite possible that the coming year will show an improvement in the position. The development of the Blackwater Mine towards and in the North Blackwater ground should bring about an improvement in values, and much better developments are hoped for at the Alexander Reefs. The only dividend paid for the year was by the Blackwater Mines, Ltd., which disbursed £6,249 16s.

Quarries.—Throughout the district, including the Canterbury, there was a further increase in the number of men employed in or about the various quarries, the returns showing that 263 men were engaged, as against 248 last year. The value of the output increased from £48,773 to £51,120.

Prospecting.—In this line of work not much activity has been noticeable. The Rimu Gold-dredging Co., which Prospecting.—In this line of work not much activity has been noticeable. The Rimu Gold-dredging Co., which for some years previously had actively prospected various areas in Westland, confined its work to further testing its own ground ahead of the dredge by putting down a considerable number of Keystone-drill bores, which served to show that there are at least two years' work immediately ahead of the dredge on highly payable ground. At the Five-mile Beach, south of Okarito, Mr. R. T. Stewart carried out a good deal of prospecting by means of a privately owned power drill, and proved a considerable area to be payable. In the Golden Ledge adit, Keep-it-Dark Mine, Reefton, some 265 ft. of driving was carried out with the aid of Government subsidy, with a view to proving the possibilities of the Hercules line of reef north of previous workings. The driving revealed two short shoots of stone carrying fair values. Prospecting by driving at the Murray Creek Mine by a tribute party, with Government assistance, served to develop a run of stone for about 140 ft. under the old No. 1 (surface) adit. At the Ngahere Gold-prospecting Syndicate's holding on the Grey River, near Blackball, a number of shafts have been put down with, I am advised, satisfactory results. There has not been much field-prospecting, and such as there has been has not discovered anything of value.

27

which, I am advised, satisfactory results. There has not been much held-prospecting, and such as there has been has not discovered anything of value.

Accidents.—Two fatalities occurred in connection with quartz-mining. In one of these a man named William Brown, cyanide foreman at the Blackwater Mines battery, was on the 22nd March treating with sulphuric acid a parcel of slimes from concentrates that had been roasted in the new Edwards roaster plant and subsequently cyanided, when he became ill, and, after lingering for some days in the Waiuta and Reefton Hospitals, died at the latter on the 31st March. Analysis was made of the slimes, which showed that they contained arsenic, and it would appear that this, on treatment by the sulphuric acid, liberated arseninretted hydrogen, which was inhaled by the deceased. An inquest this, on treatmine by the sulphuric acid, interated arseninretted hydrogen, which was inhaled by the deceased. An inquest was held and a verdict returned to the effect that deceased met with his death by being poisoned by fumes, there being no knowledge at the time that such dangerous fumes were present. Alterations were subsequently made at the treatment plant which ensured all fumes being carried quickly and safely out of the building, and the work of treating similar material has gone on ever since without any inconvenience to the workmen.

In the other case a man named Thomas Harris Harrison, mine-manager of the Dominion Consolidated Mine, Wakamarina, was examining the face in No. 1 level, Golden Bar section of the mine, when a slab of rock fell from the backs, killing him instantaneously. An inquest was held, and a verdict of accidental death returned.

# SOUTHERN INSPECTION DISTRICT (Mr. A. Whitley, Inspector of Mines).

#### QUARTZ AND ALLUVIAL MINING.

#### Waitaki County.

Livingstone. —Searle and party prospected an area in Golden Gully with a percussion drill, but the results obtained were not considered sufficiently encouraging to warrant any expenditure in plant for working the ground. Eighteen holes were bored to an average depth of 30 ft.

Maerewhenua.—Sluicing is carried on by small parties when water is available. The gold won amounted to

166 oz., valued at £650.

#### Waihemo County.

Mount Moore Gold-mining Co., Stoneburn.—The crosscut from the shaft at the 120 ft. level was driven 125 ft., at which point the Golden Bar reef was cut. The reef was driven upon 27 ft. south and 12 ft. north, and a rise put which point the Golden Bar reel was cit. The reel was driven upon 27 it. south and 12 it. north, and a rise put through to the adit level. Samples taken from the reef over a width of 42 in. gave an average value of £1 2s. per ton, which is not payable. At the adit level 135 ft. of driving and 45 ft. of rising was done to prospect for the middle reef, but it was not found. The company ceased operations in October.

Ounce Mine, Stoneburn.—Mr. E. B. Callery, owner of this mine, crushed 60 tons of ore for a return of 8 oz. 7 dwt. 18 gr. gold and 6 tons of scheelite.

#### Maniototo County.

St. Bathan's Gold-mining Co., St. Bathan's.—This company is having considerable difficulty in working the Kildare lead below the Scandinavian Water-race Co.'s elevating-paddock, owing to the presence of running sand and water. Work in the main shaft was suspended at a depth of 120 ft. from the surface, and a small shaft was sunk in the foot-wall of the lead from the paddock, where the lead was cut but could not be opened up. It was then exposed in the bottom of the paddock and an incline shaft sunk on it to a depth of 58 ft. The lead is 3 ft. wide in the incline shaft, and the gold won was equivalent to 14 dwt. per cubic yard.

Scandinavian Water-race Co., St. Bathan's.—This company is working the United M. and E. Co.'s claim on tribute. Sluicing and elevating from a depth of 100 ft. has been in progress throughout the year. The gold won amounted to 466 oz., valued at £1,857.

Vinegar Hill Stuicing Co. Cambrian —A naddock was elevated from a depth of 20 ft.

Vinegar Hill Stricing Co., Cambrian.—A paddock was elevated from a depth of 80 ft. on Morgan's lead. This is the limit to which elevating can be carried on with the company's water-supply. The lead averages 2 ft. in width and is still going down, but the great depth of valueless overburden makes it unprofitable to work by sluicing and elevating.

Morgan Bros. and Nicholson and Party, Cambrian.—These parties have been working their alluvial claims during

the year.

Patearoa.—Johnston and McLean recovered 109 oz. gold, valued at £429, from their claim at Linnburn.

Naseby and Kyeburn.—Twenty men were employed at alluvial mining in these localities. The gold recovered amounted to 593 oz., valued at £2,248.

#### Tuapeka County.

Blue Spur.—The Gabriel's Gully Co. and Lawrence Sluicing Co. amalgamated for the purpose of working a block of auriferous cement on the boundary of their claims. Two elevators were in operation during the year, producing 1,967 oz. gold, valued at £7,749. The shareholders in each company received £1,000 in dividends.

Golden Crescent and Golden Rise Claims, Weatherstone.—Sluicing operations have been carried on throughout the year on a block of ground at Ballarat Hill for a return of 931 oz. gold, valued at £3,623. The Golden Crescent Co.

paid £350 in dividends.

Treacy Bros., Evans Flat.-This party was working a deposit of clay and gravel on the east side of the Tuapeka

Freucy Bros., Evids Full.—This party was working a deposit of clay and graver on the east side of the Tuapeka River. The low pressure of the water-supply and hard nature of the clay made the work slow and unprofitable. Sailor's Gully Sluicing Co., Waitahuna.—Sluicing operations were carried on in the upper part of the Waitahuna cement deposit. The cement was weathered and easily worked with the company's high-pressure water. Returns show that 656 oz. gold, valued at £2,420, was recovered, and dividends amounting to £1,050 paid.

Tallaburn Hydraulic Sluicing Co., Horseshoe Bend.—This company is working an old channel of the Clutha River. Water from the Tallaburn is delivered at the claim under a head of 400 ft., where it is used for breaking down and elevation the gravel. Cold valued at £627 was recovered.

Water from the Palason is delivered at the claim under a head of 400 ft., where it is used for bleaking down and elevating the gravel. Gold valued at £627 was recovered.

Murchison Bros., Fourteen-mile Beach.—This party is working a beach in the Molyneux River by sluicing and elevating. The ground contains numerous large boulders, which are handled with a crane. Work can only be carried on when the river is low. The yield of gold amounted to 134 oz., valued at £523.

#### Vincent County.

Advance Mine, Old Man Range.—In the north drive at the battery level White's reef was cut off by a fault. 80 ft. of driving was done on the north side of the fault to prospect for it, but it was not found. 75 tons of quartz was crushed for a yield of 79 oz. of gold, valued at £323. 3 tons 11 cwt. of concentrates gave a return of £61.

Black's Gold-mining Co., Poolburn. — This company's prospecting-shaft was abandoned owing to difficulty in dealing with running sand and water, which was met between 50 ft. and 70 ft. from the surface. Efforts have been made to locate the auriferous lead known as Black's No. 3 by boring. Seven holes, from 100 ft. to 195 ft. deep, were put down, but nothing payable was discovered.

Alexandra Deep Lead Gold-mining Co., Alexandra.—This company was formed to work an auriferous lead, which was followed by a dredge into the bank of the Manuherikia River near the Town of Alexandra. Efforts were made to open up the old dredge-paddock and to commence driving therefrom. A 5 in. centrifugal pump driven by electricity was provided for lifting sand and water, but it was not powerful enough to deal with the incoming water. A larger pump is to be installed. pump is to be installed.

Cornish Point Gold-mining Syndicate, Cromwell.—A shaft was sunk 42 ft. through gravel to bed-rock, and drives put out 30 ft. north and 35 ft. south. Cross-drives were also driven to the west from the north and south drives, but

no payable wash was found.

Clutha Development Co., Ltd., Lowburn.—Drilling operations were in progress in the early part of the year. About three miles of the river-bed have been bored for satisfactory results.

Clutha Junction Consolidated Prospecting and Gold-dredging Co., Ltd.—This company was formed to prospect the Clutha and Lindis Rivers near their confluence. One of the Government Keystone drills has been hired for the purpose.

Kawarau High Levels Gold-mining Co., Waitiri.—A tunnel was driven 1,280 ft. through a spur to convey water from Doolan's Creek to the company's claim on the west bank of the Kawarau River. The claim will be worked by

Barker Bros., Mount Pisa.—This party was engaged in sluicing out deep cuttings in a deposit of quartz drift at Fat Boys Diggings to prospect for an auriferous lead. Nothing payable was found.

Nevis.—Returns show that twenty-three men were employed and gold amounting to 569 oz., valued at £2,222, was recovered. Preparations were being made to erect a bucket dredge on S. C. Fache's claim at Upper Nevis.

#### Lake County.

Kawarau Gold-mining Co.—The dam at Kawarau Falls was completed during the year. On the 30th August the gates were closed, but at no point along the river did the water fall low enough to expose any virgin ground, consequently the amount of gold recovered by claimholders was very small. The disappointing results are attributed to the lateness of the season and the fact that the tributaries of the river were carrying more water than in midwinter. Big Beach Gold-mining Co., Shotover River.—This company was formed to work a deposit of gravel, known as the Sugarloaf, on the south bank of the Shotover River at an elevation of 150 ft. above the present river-bed. The water-races formerly owned by J. McMullen are being repaired and connected with a line of 18 in. pipe to deliver eight heads of water on the claim at a pressure of 150 ft.

Sandhills Gold-mining Co., Upper Shotover.—Operations were confined to sluicing out an old channel for the purpose of diverting the Shotover River. Sluicing is carried on at both ends of the channel, which is 27 chains in length.

Moonlight Mining Sundicate. Moonlight Creek —This company is working the old hed of Moonlight Creek — The company is working the old hed of Moonlight Creek — The company is working the old hed of Moonlight Creek — The company is working the old hed of Moonlight Creek — The company is working the old hed of Moonlight Creek — The company is working the old hed of Moonlight Creek — The company is working the old hed of Moonlight Creek — The company is working the old hed of Moonlight Creek — The company is working the old hed of Moonlight Creek — The company is working the old head of Moonlight Creek — The company is working the old head of Moonlight Creek — The company is working the old head of Moonlight Creek — The company is working the old head of Moonlight Creek — The company is working the old head of Moonlight Creek — The company is working the old head of Moonlight Creek — The company is working the old head of Moonlight Creek — The company is working t Kawarau Gold-mining Co.-The dam at Kawarau Falls was completed during the year. On the 30th August

Moonlight Mining Syndicate, Moonlight Creek.—This company is working the old bed of Moonlight Creek on a terrace to the west of the present creek-bed. Coarse gold is found in a layer of rough wash 6 ft. thick, which is resting on the schist bottom. The overlying gravel, 130 ft. in height, contains very little gold.

Reid and Lynch, Sawyer's Creek.—This party is driving to prospect the Crystal reef at a depth of 170 ft. below

#### Southland County.

Nokomai Sluicing Co., Nokomai.—This company was formed to take over the assets of the Nokomai Hydraulic Nokomai Stuticing Co., Nokomai.—Inis company was formed to take over the assets of the Nokomai Hydraulic Sluicing Co. and to work an area of ground in Nokomai Creek, about a mile below Victoria Gully, from which good results were obtained by boring. Nos. 1 and 2 water-races are being extended to the new claim. The claim in Victoria Gully, which was worked out during the year, yielded 420 oz. gold, valued at £1,578.

Alhol.—Three claims, employing five men, were in operation in this part of the district. The gold won amounted

to 309 oz., valued at £1,235.

King Solomon Gold-mines, Ltd., Waikaia.—An engine-room and blacksmith's shop were erected and a site excavated for the shaft-head frame. Electric power for pumping and winding is being supplied by the Southland Power Board.

#### Wallace County.

Round Hill Mining Co.—Sluicing and elevating were carried on throughout the year for a yield of 575 oz. gold, valued at £2,276.

Orepuki.—Eleven men were employed on this field, recovering 197 oz. gold, valued at £773.

New Zealand Platinum, Ltd., West Waiau.—This company has commenced to work an area on the foreshore west of the Waiau River. A 6 in. Thompson's gravel-pump, driven by a 25 horse-power oil-engine, has been installed for elevating the beach-sand, which is treated over tables lined with matting for saving gold and platinum.

### DREDGING.

Molyneux Electric Gold-dredging Co., Alexandra.—This dredge has been equipped with electric power supplied by the Otago Central Power Board. The current is conveyed on board under a pressure of 6,600 volts, and is there transformed and stepped down to 400 volts for use on the motors, of which there are three, one of 75 horse-power, to

transformed and stepped down to 400 volts for use on the motors, of which there are three, one of 75 horse-power, to operate the buckets, one of 25 horse-power, for running the pump, and one of 15 horse-power, for the winches. Everything is in readiness to commence dredging in the winter season.

Shotover Gold-dredging Co., Maori Point.—This company's suction cutter dredge commenced operations on the Shotover River in October, but, owing to a break in the race supplying water for generating electric power, and several stoppages through the dredge silting up, very little dredging was done. The yield of gold amounted to  $10\frac{1}{2}$  oz.

Nevis Crossing Dredge, Nevis.—This dredge was idle during the winter season, and operations were suspended in November. New pontoons are required, also renewals and repairs to machinery before dredging can be resumed.

Upper Nevis Gold-dredging Co., Nevis.—The company was formed to work S. C. Fache's claim at Upper Nevis by dredging. The Earnscleugh No. 3 dredge, at Alexandra, was purchased and is being removed and re-erected on the claim.

claim. McGeorge's Freehold dredge, at Waikaka Valley, ceased operations in March.

The yield of gold from this branch of mining amounted to 728 oz., valued at £2,839.

# MINERALS OTHER THAN GOLD.

Tungsten.—3 tons of scheelite were produced by the Glenorchy Scheelite Co., Glenorchy, and 6 tons by E. B. Callery, Stoneburn.

Platinum.—31 oz. of platinum were recovered with gold from alluvial and sea-beach claims at Orepuki and West Waiau.

# ACCIDENTS.

No serious accidents occurred at metal-mines or dredges in this district during the year.

 $G_{---}2.$ 

#### ANNEXURE B.

#### SUMMARY OF REPORT OF GOVERNMENT WATER-RACE MANAGER.

WAIMEA-KUMARA WATER-RACES (Mr. James Rochford, Manager).

#### WAIMEA WATER-RACE,

The cash received for sales of water from this race for the year ended 31st March, 1927, was £336 16s. 8d., and The cash received for sales of water from this race for the year ended 31st March, 1927, was £336 16s. 8d., and the expenditure on management, gauging, and repairs amounted to £776 8s., showing a debit balance of £439 11s. 4d. on the year's transactions. The sales of water only amounted to £214 2s. 6d., the smallest recorded for the past thirty-eight years, and showed a decrease of £73 16s. 2d., as compared with the previous year. The falling-off in sales was due to the complete cessation of mining operations in the Stafford district, which took place at the end of April, 1926, the total value of water supplied for this purpose during the year only amounting to £8 2s. 6d., which fully bore out the opinion expressed in my last annual report, to the effect that practically all the payable sluicing-ground commanded by the water from this race was then worked away. The balance of the sales of water, amounting to £206, was supplied to Parker Bros., for the development of power to work their sawmill at Gillam's Gully, near Stafford. This sawmill, which employed about fourteen men, was efficiently managed, and worked regularly throughout the year until about the middle of March, when, owing to the lack of orders, operations were suspended indefinitely. No serious breaks occurred on this race, and, with the exception of three days during the year, a constant supply of water was available at the terminus of the race at Ballarat Hill, Stafford. A considerable amount of repair work was carried out by the staff on this race during the year, particularly on the upper section from the Kawhaka Creek to the

carried out by the staff on this race during the year, particularly on the upper section from the Kawhaka Creek to the intake of the Waimea inverted siphon. This portion of the race is now in excellent order, but some of the timbered tunnels in the vicinity of Fox's, Goldsborough, and Stafford are in a bad state, and constant supervision and occasional

repairs will be essential to minimize the probability of serious breaks.

Although the months of December, January, and February were exceptionally dry for the West Coast, the supply of water from this race was excellent, and the Waimea inverted siphon, which has a carrying capacity of 30 cubic feet per second, could have been kept running full all the year if the water had been required. The cash received was £136 14s. 8d. greater than during the previous year, and the expenditure showed a decrease of £18 12s. 6d.

#### Branch Race to Callaghan's and Middle Branch Flat.

The cash received from this race for sales of water for the year ended 31st March, 1927, only amounted to £28 15s., and the expenditure on management, gauging, maintenance, and repairs amounted to £477 0s. 3d., showing a debit balance of £448 5s. 3d. on the year's transactions.

Havill's claim was worked intermittently for the first six months of the financial year, but the value of water purchased by the party during that period was considerably less than it should have been, and only amounted to £28 15s., a reduction of £35 16s. 8d. on that of the previous year. This party ceased sluicing operations on the 30th September, 1926, and from that date until 31st March, 1927, no water was supplied from the race for mining or

Certain urgent repairs were carried out by the staff during the year to some of the flumings on this race, but they are old structures, and the timber in most of them, particularly the boxing, is in a very decayed condition.

The cash received was £35 16s. 8d. less than during the previous year, and the expenditure showed a decrease

of £5 8s. 3d.

#### KUMARA WATER-RACE.

The cash received for sales of water from this race amounted to £106 13s. 4d.; for royalty on timber cut on the Reservoir Reserve, £627 5s.; for sale of gauger's old hut, £3; and for first payment on account of contract for right to cut dry silver-pine, £27; making a total revenue of £763 18s. 4d. The expenditure on maintenance and repairs amounted to £12 1s. 7d., thus showing a profit of £751 16s. 9d. on the year's transactions No miners were supplied with water from this race during the year; the whole of the revenue derived from sales was received from the Okuku Sawmill Co. for water supplied for power development.

During the year about sixty intermediate sets of timber and a number of lining-boards were placed in position in the Kumara head-race tunnel by the water-race staff, but a very considerable amount of repair work would have to be carried out before the original carrying-capacity of this tunnel would be restored. With the exception of certain sections of this tunnel the Kumara Water-race and the Nos. 1 and 2 Kapitea Reservoirs are in good order.

#### KUMABA TRANS-TARAMAKAU WATER-RACE.

Owing to the non-restoration of the serious break which took place in the trans-Taramakau pipe-line in November, 1925, this race was out of commission for the whole year.

# Wainihinihi and Waimea Additional Supply Water-races.

During the year about thirty-two sets of hewn timber were prepared and placed in position in different tunnels by the water-race staff, and a further number will be required from time to time to insure safety, but generally speaking these races are in good order.

### WAIMEA-KUMARA AND CALLAGHAN'S WATER-RACES.

The following is a summary of the revenue and expenditure of the above water-races for the financial year ended The following is a summary of the revenue and expenditure of the above water-races for the financial year ended 31st March, 1927: Sales of water, £349 10s. 10d.; cash received, £1,129 10s. (including royalty on timber, &c.); expenditure, £1,265 9s. 10d.; approximate value of gold obtained, £274 15s. The average number of miners employed for the first six months of the year was two. No mining operations were carried out during the last six months of the year. The sales of water show a decrease of £133 12s. 10d., and the cash received shows an increase of £215 3s. 9d. on that of the previous year. The total expenditure amounted to £1,265 9s. 10d., as against £1,298 15s. 5d., a decrease of £33 5s. 7d. Comparing the cash received with the expenditure, the combined races show a loss of £135 19s. 10d. for the year, but had the cash for the sale of iron and steel pipes been received before the close of the year the loss would have been reduced to £38 15s.

### ANNEXURE C.

#### STONE-QUARRIES.

SUMMARY OF REPORT BY INSPECTOR OF QUARRIES FOR THE NORTH ISLAND (MR. JAMES NEWTON).

During the year as much time as possible has been given to actual inspection of the various operations in and about the quarries, and, broadly speaking, I have found that the operators have exercised reasonable care in operating same. In a majority of the quarries that have been operated the work has been undoubtedly of a hazardous and dangerous nature, owing to the disposition of the stone exploited, and its having been extensively shattered, in consequence of which it is found to be traversed by treacherous backs. In very few cases has the rock been found to be bedded in such manner that it would have been wise to demand that operations should be carried on by regular-sized benching on the face of the quarry, consequently I have preferred that the face should be operated on a substantial backward batter of sufficient inclination to allow of easy and reasonable access, and also to ensure

on a substantial backward batter of sufficient inclination to allow of easy and reasonable access, and also to ensure a sufficient support to the underlying strata.

Electricity has been much more extensively used for power purposes than formerly during the year under review, and is now being used at almost all quarries where it is available. During the year quite a number of operators have discarded the suction-gas, oil, and steam engines and replaced them with electric motors. Valuable and extensive installations have been put in in the Auckland Provincial District at places owing to the fact that it has been found necessary in order to supply a demand that has arisen for more varied grades of material for roadmaking purposes, &c.

With regard to the operations of the Act and Regulations, in my opinion the remarks made by me in my last vear's report still hold good.

year's report still hold good.

When compared with the year 1925 the output of stone for the present year shows a substantial increase. Each of the four provinces under my supervision has increased its output of stone, the increases being respectively—Auckland, 204,750 tons; Hawke's Bay, 6,189 tons; Taranaki, 14,939 tons; and Wellington, 12,915 tons; or a total increase of 238,793 tons. Nineteen more quarries have been operated and 153 more men have been employed.

I have found the year a very busy one, an increased amount of my time has been occupied clerically. A very great deal of clerical work has had to be attended to in connection with applications for quarry-managers' or foremen's mortly the applicants have been examined in their own districts wery few of them elect to troval to

permits. Mostly the applicants have been examined in their own districts, very few of them elect to travel to Auckland owing to the expense of doing so, and a considerable number are examined in the evenings on account of the same thing. The greater number of applicants have been granted a pass,

the same thing. The greater number of applicants have been granted a pass.

One fatal and five serious non-fatal accidents occurred at quarries in my inspection district during the year.

On the 25th February in the diversion tunnel at the Arapuni Hydro-electric works, a workman named Kawahene Mutu, a Maori, was electrocuted through coming into contact with a live wire carrying approximately a pressure of 230 volts for lighting purposes. At the time of the occurrence Mutu was employed shovelling concrete into the framework of the tunnel-lining.

On the 5th February in the diversion tunnel at the Arapuni hydro-electric works, George Bacon sustained a broken rib as the result of slipping and falling against a pipe whilst employed shovelling concrete on a platform.

On the 7th September, in a sewerage tunnel at Ellerslie, a workman named James Grama received a broken leg and abrasions to his head and arms as the result of a premature explosion of calignite whilst delling a round of heles

On the 7th September, in a sewerage tunnel at Ellerslie, a workman named James Grama received a broken leg and abrasions to his head and arms as the result of a premature explosion of gelignite whilst drilling a round of holes in the face of the tunnel. The previous round of holes had been fired the day before, and the debris cleared out from the tunnel, and apparently all was safe to warrant a commencement of the drilling for further blasting. Shortly after commencing drilling the drill struck through into an open space in the rock, probably a crevice, either natural or caused by the previous blast of holes shattering the stone. It was stated that the hole was then cleaned out and drilling recommenced, and immediately the explosion occurred. It is supposed that when the former round of holes was fired, one of the shots must have displaced a portion of a charge from another hole and driven it away into this particular crevice.

On the 29th September, in the Gisborne Harbour Boards "Whareongaonga," a workman, Tui Rangi, received a broken leg as the result of slipping and falling on the floor of the quarry.

On the 5th November, in the Farmers' Mauriceville limestone-quarry, S. Riogard, whilst shovelling on the floor

of the quarry, was struck by a rolling stone and had a leg broken.

On the 4th December, in the Wellington City Council's Ngahauranga quarry a workman named John Parr ell over a 10 ft. face and sustained a fractured pelvis.

# ANNEXURE D.

# MINTING STATISTICS.

# Table 1.

Statement showing the Quantity of Quartz crushed and Gold obtained in the Hauraki Mining District for the Year ended 31st December, 1926.

Toronton and Name of Mana	Average Number of	0	Gold ol	otained.	57-1
Locality and Name of Mine.	Men employed.	Quartz crushed.	Amalgamation.	Cyanidation	Value.
	THAN	MES COUNTY AND BO	ROUGH.	1	*
Capu— Egmont Gold-mining Co Cairua—	3	$\begin{array}{c cccc} \text{Tons ewt. qr. lb.} \\ & 4 & 0 & 0 & 0 \end{array}$	Oz. dwt. gr 4 5 0	Oz. dwt. gr.	£ /s. d 17 0 (
New Monarch Karaka Creek—	1	• •	44 9 0	••	102 13 (
Joker	0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	••	8 18 6 44 13 6
New Cambria	6	44 0 1 16	<b>75</b> 13 0		203 15 11
Totals	13	91 0 1 16	144 16 0	• •	377 0 11
		TIV TO			
Vaihi—	1	WAIHI BOROUGH.	ı ·	: (	
Waihi Gold-mining Co. Waihi Grand Junction		185,787 10 0 0 3,078 11 1 20	••	498,101 12 0 4,188 10 0	336,995 14 10 4,354 0 5
Totals	639	188,866 1 1 20	• •	502,290 2 0	341,349 15
z 1 1		OHINEMURI COUNTY	•		
Karangahake— Talisman Battery Aitken's River Claim	2		653 0 0 78 17 0		1,419 17 ( 98 10 (
Owharoa— Rising Sun Gold-mining Co	35	1,561 0 0 0	1,824 15 0	930 1 0	5,720 19 3
Totals	41	1,561 0 0 0	2,556 12 0	930 1 0	7,239 6 3
		•			
		COROMANDEL COUNT	Υ.		
Waikoromiko— Four-in-hand	3	120 0 0 0	82 0 0	••	229 16
		SUMMARY.			
Thames County and Borough	1 000	Tons ewt. qr. lb. 91 0 1 16 188,866 1 1 20	Oz. dwt. gr. 144-16 0	Oz. dwt. gr.	£ s. d 377 0 11 341,349 15 <i>5</i>
Ohinemuri County	. 41	1,561 0 0 0 120 0 0 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	930 1 0	7,239 6 3 $229 16 6$
Totals, 1926 .	. 696	190,638 1 3 8	2,783 8 0	503,220 3 0	349,195 19 1
Totals, 1925 .	. 677	193,906 11 0 8	2,404 2 0	574,022 15 0	348,703 15 4

Statement showing the Quantity of Quartz crushed and Gold obtained in the West Coast Inspection District for the Year ended 31st December, 1926.

		Average Number of					Go	old obta	ained by			,, ,		
Locality and Name of Mine		Men employed.	Quartz crushed.		Amalgamation.		Cyanide and Concentrates.			Value.				
			N	ELSC	N.				•					
Waiuta—		]	Tons of	ewt.	qr.	Oz.	dwt	. gr.	Oz. d	wt.	gr. !	£		d.
Blackwater Mines	• •	152	40,044	0	0	13,732	4	ŏ	4,299	15	0	70,232	10	8
Globe Hill— Progress Mines Reefton—		3	••			•			186	13	0	573	1	10
Murray Creek		4	161	0	0	111	6	4				425	2	
Wealth of Nations		25	3,507	0	0	1,692	8	0	639	16	0	9,204	6	3
Crushington— New Keep-it-dark Alexander River—		5	245	0	0	108	6	0	24	14	0	504	5	7
Alexander River— Alexander Reefs		14	352	0	0	675	5	0	131	11	0	3,103	5	ę
Big River— New Big River		24	1,799	0	0	1,156	12	0	570	5	0	6,607	Ĩ7	7
			Marl	вов	oug	н.								
Wakamarina— Dominion Consolidated		9	1,287	0	0	651	17	0				2,411	1	3
Totals, 1926		236	47,395	0	0	18,127	18	4	5,852	14	0	93,061	11	7
Totals, 1925		270	53,254	0	0	23,654	6	17	3,932	4 1	8	111,210	0	ę

# Statement showing the Quantity of Quartz crushed and Gold obtained in the Southern Mining District for the Year ended 31st December, 1926.

		Average Number		Gold ob	tained by	X7 - 1
Locality and Name of Min		Men employed	crushed.	Amalgamation.	Concentrates.	Value.
			WAIHEMO COUNTY.			
Stoneburn Ounce		2	Tons cwt. qr. 60 0 0	Oz. dwt. gr. 8 7 18	Oz, dwt. gr.	£ s. d·
			VINCENT COUNTY.			
Old Man Rang Advance	ge	3	75 0 0	79 14 0	15 6 12	384 9 0
	Totals, 1926	5	135 0 0	88 1 18	15 6 12	416 3 8
,	Totals, 1925	3	40 0 0	31 0 0		129 0 0

# SUMMARY OF INSPECTION DISTRICTS.

Inspection District.	Average Number of Persons employed.	Quartz crushed.	Bullion obtained.	Value.
Northern (North Island) West Coast (South Island) Southern (Otago and Southland)	696 236 5	Statute Tons. 190,638 47,395 135	Oz. dwt. gr. 506,003 11 0 23,980 12 4 103 8 6	£ s. d. 349,195 19 1 93,061 11 7 416 3 8
Totals, 1926	937	238,168	530,087 11 10	442,673 14 4
Totals, 1925	950	247,201	604,044 8 11	460,042 16 1

In addition, 202 persons were employed at unproductive quartz-mining.

Table 2.

08.	
19	
₹CT,	
Si	
ANI	
MP.	  -
ည	
THE	
ΤH	ŀ
W	
NCE	
RDA	
(CCO)	
Ā	
I Q	
UBLISHED IN	
JBL1	
PI 8	
¥.	
NIE	
MPA	
Ç	
MINING	
Min	
Affairs of Mining Companies, as published in accordance with the Companies Act, 1908.	
RS (	ŀ
FAI	
AF	
. OF	-
ENJ	
TEM	
STA	
-	
	ı

Amount of Debts owing by	company.	•	* 2	616 616	71	199	2,907	7	3,271	65	671	962	1,076	9	45 90 530	14.000 NEI		440	2,061		311	701	165	333	58,294		Ä	170	7,880	Nil	9,799	2,888.7	5,510	11,621	3,363	9.548	)
Total Amount of Dividends	paid.	٤	# <u>5</u>	į	Z	Nil	Nil	Z	Z.	32	Ē	Z	Nil		T I	1 E Z	EN	ΪÑ	EN		Nii	N:	I.N	NEI	Nil		Z:2	499	EZ.			NII	Nil	EZ.	Nil 13 000	080,61 Nil	<u>!</u> !
	Kegistration.		£ 740	1.053	9,436	5,544	106	2,426	19,194	47875	1.984	1,574	23,097	600	30.5	402, #34 6, 355	1 157	1,101	45,070		37,913	23.6	1.236	21,969	326,802		730	10,887	15,153	3,280	211,02	26,530	8,197	18,221	4,363	52,761	
	Value.		A I		789	Nil	Nil	Nil	10,789	62 EN		NII	Nil	1.74				Ž	1,354		Nii	567	Nil	9,175	164,776		60%	7,792	442	N11		3,626	Nil	Z,	Nil	32,902	
Quantity and Value of Gold and Silver produced since Registration.	Quantity.	٥	ZZ.	Z	285	Nil	N	Nil.	5,149	) I:N		N	Nil		Ę.	Z	7	Z	7,282		ij	911	N.	:	:		1 05	2,031	100	NI 13		872	Nil	Z,	Nil se seo	7,753	
	pioyed.	*	ক	ï	Nil	13	16	9,		# 52	4	Nil	တ	•	ာ ထွ	ှင		) 1C	17		14	Ľ	Z	Nil	13		2	Ē	Z,	٠ د د	2 :	4	_	:: ::	ဆစ္	င္န္က	
	at present.		3.5	9	55	354	393	75	86	4 C	69	55	585 585	į	920	040	24.5	4	216		221	38	205	414	206		40	75	14	1 03	587	124	61	164			
Arrears of Calls.	201	c.	+ F		N	35	1,239		929	N11 60	25	[왕]	N.I.	4:1		Ę (2		15	132		12	4	25	Nil	61	ST).	N.	30	Z	228	9.288	Z	Nil	ΞŻ,	22	8	
Amount paid per Share.		RICT.	ic	£5 and £3 10/-	5/- and 2/73	2/- and $1/$ -	5/-, 2/-,  and $1/-$	5/- and 1/-		0,8 5, and 9	./e mm -/e	Various	4/7	1,4	ramons 10/	- ^0T	୍ କ୍ କ	£9.5	10 '-, 5 /-, and	9 (ન ન	2/3, 4/9,  and	5/- 1 6 and 1/5	13/6 and 12/6	Various	Various	G WEST COAST).	5/2 and 4/2	10/-	20/-	5/-, 8/-, and 9/- 33./8	Various	20/- and 17/-	20/- and $10/$ -	20/- and 6/-	20/- and 4/-	20/-, 17/-, and	16/-
Number of Shares		AUCKLAND DISTRICT	000 01	1.825	74,800	104,421	185,426	77,500	40,000	82,364	94.400	45,500	100,000	907	25,490	100 000	190,000	100	202,834		166,025	195 090	12,000	175,000	81,754	(INCLUDING	6 914	10,000	10,000	44,000	107.935	50,000	50,000	75,000	25,000	20,000	
Value of Scrip Nen to Share- holders on Phich no Cash	paid.	AUCKL	# <u>:</u>	. 000. 7.000	2,500	528	20,000	5,000	Nii	316 10 10 10	2000	6,250	2,500	9.00	2,029 160 665	000.001	000:0	į	55,175		8,301	000 F	2000	5,083	Nil	DISTRICT (	800	885	2,001	18,000 3,000	000,000 00,000	29,500	26,000	43,000	20,000	5.000	
[ E P	paid up.	و	1 ≎50 .	1,487	7,082	9,878	9,347	3,195	- 8,683 600	2,480	1.909	1,578	26,625	÷	60/ °c	6 945	- 050° -	9.500	42,310		33,151	588	4,789	11,681	81,692	NELSON	014	3,918	5,227	3,37L	69.586	17,425	12,000	9,600	143 969	14,991	
Subscribed of Capital Capital.			∓° 6	9.125	18,700	10,442	46,356	$\frac{13,125}{55}$	000,01	8,0% 10,00 10,00	30.600	5,125	22,500	6.0	16,574	10,003	13,000	2,500	101,417		41,506	21 979	12,000	12,416	81,692		1 738	5,000	10,000	22,000 27,000 20,000	107,935	50,000	50,000	75,000	25,000	20,002	
Date of Registration.			14 /0 /96	27/2/25	31/7/23	20/12/24	28/11/25	24/3/25	6/4/25	0/0/20	21/10/20	22/5/25	16/3/20	06, 0, 71	14.8/20 93/19/95	96/7/07	96/1/6	17/4/24	1,6,14		14/12/22	66.8	2/8/24	$\frac{28/4}{10}$	14/5/20		19.9.95	21/11/14	30, 5, 23	22/12/25 8/5/95	20 10 19	1/3/20	1.3/20	1/3/20	15/17/23	15/7, 22	
				: :	:	:	:	:	:	:	: :	: :	Gold.		:	:	:	: :	: :		:		: :	:	:			:	:	:	: :	: :	:	:	:	: :	
Name of Company.			on Maxwell Gold-mining Co. 14d	Renown Gold-mining Co., Ltd.	Four-in-hand, Ltd.	Alburnia Gold-mining Co., I.td	Hauraki Mines Consolidated, Ltd.	Maoriland Consolidated, Ltd	Kising Sun Gold-mining Co., Ltd.	Nuranni Gold-mining Co. (No Liability)	unt Welcome Gold-mining Co., Ltd.	: :	Moanataiari Consolidated	mining Co., Ltd. $G_{-1}$	Nom Zochen Consolidated 14d	The rection Consolinated, Learner Shot Gold-mines Itd	Golden Age Gold-mining Co. Ltd.	Gold-mining Co., Ltd.	Ohinemuri Gold and Silver Mines, Ltd		Majestic Gold-mining Co., Ltd	New Waiotahi Gold.mining Co. (No Liahility)	Argo Concentrates, Ltd.	Hauraki Reefs, Ltd. (in liquidation)	Muir's Gold Reefs, Ltd		ward Shieing Co., Ltd.	Mount Greenland Gold Quartz-mining Co., Ltd.	Buller Gold-mining Co., Ltd.	Agahere Gold Frospecting Co., Ltd. New River Gold dredging Co. 14d	Reefton Gold-mines, Ltd.	New Millerton Mines, Ltd	New Discovery Mines, Ltd	South Blackwater Mines, Ltd	South $\operatorname{Lig}$ Kiver Mines, Ltd $\operatorname{Couth}$ Gald duad since $\operatorname{Couth}$ 1+4	Wealth of Nations Mine, Ltd	
 <b>5</b> —C.	2.		Pate	Ren	Fou	Alb	Hau	Mac	KIS.		Mon	Tikı	(ale	H .	IOV.	101. 211.	101	Iris	Ohi	;	Maj	Ne.N	Arg	Hai	Mui		Hor	Mon	Par Par	367	Ree	Nev	Nev	no.	Nor To:	Wee	

Table 2-continued.

STATEMENT OF AFFAIRS OF MINING COMPANIES, AS PUBLISHED IN ACCORDANCE WITH THE COMPANIES ACT, 1908—continued.

Color   Colo	Name of Company.	Date of Registration.		Subscribed of Capital Capital, actually paid up.	Value of Scrip given to Share- holders on which no Cash paid.	Number of Shares allotted.	Amount paid per Share.	Arrears of Calls.	Number of Share- holders at present.	Number of Men em-	Quantity and Value of Gold and Silver produced since Registration. Quantity. Value.		Total Expenditure since Registration.	Total Amount of Dividends paid.	Amcunt of Debts owing by Company.
4         5         5         5         6         5         5         6         5         6         5         6         5         6         5         6         5         6         5         6         5         6         5         6         7         6         5         7         6         6         7         6         5         7         6         6         7         7         1         9         3         1         2         1         1         1         2         1         1         1         2         1         1         2         2         1         1         2         2         1         1         2         2         1         1         2		-	NELS	SON DIST	RICT (INCL)	UDING WI		continued.			-				
1,00,000   2			4	9	- c+	5		Ċ.			ċ	ų.	÷	Ç.	c <sub>+</sub>
1. 19/2/10/28 8.549 8.579 8.579 15.000 Various Nil 149 2 12 12 149 2.570 15.000 Nil 15.250 15.000 Various Nil 149 2.500 15.200 1	Alexander Mines, Ltd	9/3/2		16.093	29,000	75,000	1/-	9	255	#	808		7.613	N.	2,125
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	Victory Wines Syndicate Ltd	1/6/06	-	880	3 750	15,000	Varions	152	149	c	6	w 21.	9,119	N.	96
H. 1978/97 8, 515 8, 515 8, 510 15,025 84, 563 Perions Nij 847 7. Nij 645 892,360 892,766 892,360 893,000 15,000 1	Taylor's Creek Gold-sluicing Co. Ltd.	1/8/96		2,500	6.250	200,00	£250	5	9	ΪΞ			2,500	ž	27
Heading   Head	Mahakipawa Goldfields. Ltd.	12/10/2		8.515	15,025	384 563	Various	I.N.	347	:			11,526	Z	814
majon, I.ed. 27/729 12,509 14,509 15,000 15,	New Big River Gold-mining Co., Ltd.	$\frac{19/8}{0}$		,600	N	24,000	6d.	EZ	65	29			288,001	112,800	3,853
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	North Big River Gold-mines, Ltd.	29/10/1		12,769	34,000	48,251	15/3 and 14/9	1,050	42	67			9,575	Nii	Nil
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	New Murray Creek Gold-mines, Ltd. Southern Mines Development Corporation, Ltd.	25/7/2 27/7/2		$\frac{4}{3},821$	10,000 Nil	15,000 20,260	20/- and 10/- Various	75 840	64 206	E E			2,955	E E	673 Nil
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					OTAG		E <del>.</del>								×
19.7/26         24,706         24,600         160         20,000         21,600         21,600         21,600         21,600         21,600         21,600         20,000         21,600         20,000         21,600         20,000         21,600         20,000         21,600         20,000         21,600         20,000         21,600         20,400         21,40         20,000         21,600         20,400         21,40         20,000         21,40         21,200         20,400         21,40         21,40         22,000         20,400         21,40         22,000         20,400         21,40         21,40         22,000         20,400							•								
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Billy Creek Development Co., Ltd.  Blacks Gold-mining Co., Ltd.	$\frac{28/7/26}{2/10/28}$		160 3.990	20,000	~	20/- and 2/-	Nil Io					94 3.322	ZZ	12. 53
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		· ·					3/-,	•	! !	1		•			
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Shotover Consolidated, Ltd	$\frac{19/2}{2}$		20,020	30,000	56,950	Various	ii.	66	-		EN.	427	Ē	554
17.8   17.8	N.Z. Platinum, Ltd.	30/7/20		3,414	13,250	7,864	Various	94	III	—- ₩ ;		Z	3,243	II.	697
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	St. Bathan's Gold-mining Co., Ltd.	6/6/28		21,240	22,000	45,000	20/- and 13/-	TEN S	166	= }		147	22,479	Zi.	1,280
1.78/22         7.600         4.684         1.000         7.000	Shotover Gold Claims, Ltd.	28/1/26		1,749	3,000 3,000	$\frac{7,131}{2}$	Various	348	101	II °		EN.	527	Z.	Nii
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Rawarau High Level Mining Co., Ltd.	17/8/20		4,084	T,000	900,	16/- and 14/-	83.7	40	×		100	4,500	N11	381
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Officed M. and E. Water-race Co. (Inchastered)	71/#/07		0,000	INI 1 OOE	701 01	17.	TINT	D 60 I	: 5	_	9,105 M:1	080,#7	0,000	IIV.
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Noteman Shrisha Co., Ltd	0/12/24 0/ 2/ 1/2	G	2,740	1,929	10,780	Varions	606	155	H 6		NIII 905	2,029	11	4.7
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Colden River Mining Co. 14d	14/0/41 70/1/16		9,738	10,100	25,000	20/- and 15/-	Vec.1	8 6	9 E		909 N:1	4,097 9,665		- 480 N:1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Hidden Treasure Gold-mining Co., Ltd.	16/6/25		2,011 400	one, I	4,630 400	- /er alle -/07	15	2.5	=		ī.	2,000,000 38,000 4,000	12	40
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Birthday Claims, Ltd	8/12/24		2,500	2.000	4.500	) } -/08	Z	- 56 -	Nil		I.Z.	1.929	į.	2 20
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Akarana Claims, Ltd	25/10/24		2,000	1,500	3,500	20/-	Nil	12	Nil		Nil	1,757	Z	35
rancau), Ltd.         12/8/25         7,586         3,422         3,000         30,343         5/, 2/, and 1/- 212         43         1         Nii		$ \mid 27/11/25$		4,079	235	20,155 5	/-, 4/-, and 3/-	59	277	Nil		IIN	2,506	Nil	201
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		$\dots   12/8/25$	w	3,422	3,000	30,343 5	/-, 2/-, and 1/-	212	43			N:I	215	Nil	Nil
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		29/11/24		6,000	$^{2,000}$	32,000	5/-	Nil	312	Z.		Zil	5,773	Nil	537
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Upper Nevis Gold-dredging Co., Ltd.	$\frac{20/9}{26}$		10,275	5,000	30,000	10/-	2,225	150	31		EE I	9,918	Nii	2,498
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Another Chance Kawarau Gold, Ltd	15/12/24	8,000	6,000	2,000	35,000	5/-	Z	367	Ē		Z.	5,768	Nil	443
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	Wairarapa Gold Claims, Ltd.	18/11/24	10,200	6,322	200	10,200	13/- and 11/-	Z	138	— 滘		Nii	6,213	N	Nil
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Tallaburn Hydraulic Sluicing Co., Ltd.	3/12/04	1,200	1,200	Nii	21	£100	Z	6	G1		8,972	11,316	1,380	336
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Molyneaux Electric Gold-dredging Co., Ltd.	$\frac{23/7}{25}$	9,000	6,500	2,500	9,000 9,000	- 50/-	II.	100	<u> </u>	-	=	1,500	Z	63
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Temuka Gold-mining Co., Ltd	11/12/24	2,000	1,160	Nil	2,000 000,000	-/21	Nil	010	٦;		, IIV	1,156	N.	ZZ.
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Golden Chance Mining Co., Ltd	62/1/01	1,400	1,183	009	000,8	5,4	٥	20 I	7	-	<del>-</del>	1,018	Z	Z.
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Natural Bridge Gold-mining Co., Ltd.	02/4/20	9,600	2,178	1,400	16,000	4.6	0 0 0 11 0 11	8 f	Z :	4	81 13	1,938	Z.	Nil Se
2/8/26 2,357 1,597 1,200 14,230 5/.,2/3,and1/3 248 37 Nil Nil Nil	Nevis Junction Gold-mining Co., Ltd.	07/0/67	1,411	3,032	1,000	1,095	9 - and 5/5		7 5	Z :		NIL .	2,008	7	<b>?</b> ;
	Cromwell Gold-mining Co., Ltd.	0.2/20	1,525	1,057	000	1,920	17/- 6/15-19/6/	0 6	\$ c	E F		 و	992	N	44
	Broken film minning co., Lea	04/0/4	100,4	1,001	1,200	1±,20V 0,	-, 2/5, and 1/9	0#,1	10	II.		. IIN		INI	540

\* Also Scheelite, value £88,165.

FOREIGN COMPANIES.

£ 74 Nii 45 86 24,085
£ Nii 7,466 Nii 145,689 1,095,096
£ 45,951 331,416 3,339 2,348,695 8,875,120
$\begin{cases} £ \\ 16,848 \\ 372,312 \\ \text{Nil} \\ 2,341,856 \\ 15,116,428 \end{cases}$
Oz. 17,618 77,797 363,782* Nil†
6 Nii 3 3 4 4 639 2
169 367 11,041 1,913
, £ 285 Nii Nii Nii
4/., 3/6, and 3/- 1/. 20/- 5/-
2,160 266,979 240,840
£ 5,000
£ 11,367  Nil 40,494 4,803
£ 39,586 11,367 40,000 10,000 Nil 38,437‡ 40,494 123,976 4,803
13/1/14 16/10/00 27/8/24 22/12/97 7/12/87
;;;;;
New Zealand Crown Mines Co., Ltd. Komata Recfs Gold-mining Co., Ltd. Clutha Development, Ltd. Waihi Grand Junction Gold Co., Ltd. Waihi Gold Mining Co., Ltd.

\* Silver. † Company is a prospecting company, not a producing company. 

† Written down from £384,375 to 2/- per share.

# APPENDIX B.

# REPORTS RELATING TO THE INSPECTION OF COAL-MINES.

The Inspecting Engineer and Chief Inspector of Coal-mines to the Under-Secretary of MINES.

Sir,---

Wellington, 8th July, 1927.

I have the honour to present my annual report, together with statistical information, in regard to coal-mines of the Dominion for the year ended 31st December, 1926, in accordance with section 42 of the Coal-mines Act, 1925. The report is divided into the following sections:—

- I. Output.
- II. Persons employed.
- III. Accidents.
- IV. Working of the Coal-mines Act-
  - (a) Permitted Explosives.
  - (b) List of Mines required by Law to use Permitted Explosives.
  - (c) List of Mines required by Law to use Safety-lamps.
  - (d) Dangerous Occurrences.
  - (e) Electricity at Collieries.
  - (f) Prosecutions.
- V. Legislation affecting Coal-mining.

Annexures

- A. Summary of Annual Reports by Inspectors of Mines.B. Colliery Statistics.

# SECTION I.—OUTPUT.

The output of the several classes of coal mined in each inspection district is summarized as follows :--

		Total Output				
Class of Coal.	Northern District (North Island).	West Coast District (South Island).	Southern District (South Island).	Totals.	to the End of 1926.	
Bituminous and sub-bituminous Brown Lignite	Tons. 111,918 541,931	Tons. 1,084,470 37,450 256	Tons.  326,444 137,530	Tons. 1,196,388 905,825 137,786	Tons 39,179,785 20,807,277 3,972,280	
Totals for 1926	653,849	1,122,176	463,974	2,239,999	63,959,342	
Totals for 1925	672,403	951,396	491,196	2,114,995	61,719,343	

The following is a table showing the annual production of coal and the quantity of coal imported since 1911:-

Year.	r. Coal produced. Coal imported.		Total Quantity of Coal produced and imported.	oal produced and Year.		Coal imported.	Total Quantity of Coal produced and imported.
							± .
	Tons.	Tons.	Tons.		Tons.	Tons.	Tons.
1911	2,066,073	188,068	2,254,141	1919	1,847,848	391,434	2,239,282
1912	2,177,615	364,359	2,541,974	1920	1,843,705	476,343	2,320,048
1913	1.888.005	468.940	2,356,945	1921	1.809.095	822,459	2,631,554
1914	2,275.614*	518,070	2,793,684*	1922	1,857,819	501,478	2,359,297
1915	2,208,624	353,471	2,562,095	1923	1,969,834	445.792	2,415,626
1916	2,257,135	293,956	2,551,091	1924	2,083,207	674.483	2,757,690
1917	2,068,419	291,597	2,360,016	1925	2,114,995	572,573	2,687,568
1918	2,034,250	255,332	2,289,582	1926	2,239,999	483,918	2,723,917

<sup>\*</sup> Includes 21 tons of shale.

37 C.—2.

The gross output of coal for 1926 was 125,004 tons in excess of the output for 1925. This increase is wholly due to the increased production of bituminous coal, which is 151,662 tons in excess of the amount produced in the previous year. The output of brown coal showed a small decrease of 5,600 tons, and of lignite a decrease of 21,058 tons.

In the Northern District the output of bituminous coal for the year was 19,622 tons less than in 1925, due to the flooding of Hikurangi Shaft Colliery workings; the output of brown coal showed a small increase of 1,068 tons, making a net decrease of 18,554 tons for the district for the year.

small increase of 1,068 tons, making a net decrease of 18,554 tons for the district for the year.

In the West Coast District there was an increase of 171,284 tons of bituminous coal, a decrease of 321 tons of brown coal, and a decrease of 183 tons of lignite, making together a net increase for the year of 170,780 tons for this district.

In the Southern District there was a reduction of 6,347 tons in the amount of brown coal produced, and a reduction of 20,875 tons of lignite, a total reduction of 27,222 tons for the year in the output of this district.

During part of the year the market was not able to absorb all the coal that was offering, and consequently many of the mines had to work short time. Prospects improved towards the end of the year by reason of the fact that the Railway Department was able to take larger quantities of local coals in place of Australian coal for locomotive purposes.

The production from and the number of persons employed at the collieries of the Dominion are shown in the following table:—

Name of Colliery.			Locality.		Class of Coal.		Output for 1926.	Total Output to 31st December, 1926.	Total Number of Persons ordinarily employed.	
Nort	hern Dist	trict						Tons.	Tons.	
Hikurangi (2 ce			, ,	Hikurangi		Sub-bitumin	IODS	29,060	1,591,835	147
Wilson's Collie		• •		Gr.			io as	61,409	293,513	168
Rotowaro		• •		Huntly		Brown "		151,928	905,404	266
Pakemiro		• •						147,545	1.299,130	242
Waipa	• •	• •		,,	٠.	**		61,534	854.935	117
Glen Afton	• •			Glen Afton		,,	1	145,464	492,046	282
Gien Arton	• •		•	Glen Miton	• •	,,	•••	140,401	102,010	202
West	Coast Di	strict								
Westport-Stock				Ngakawau		Sub-bitumir	ons	104,804	2,192.827	240
Millerton		• •		Millerton		,,		237.747	7,345,288	466
Denniston				Denniston		, , , , , , , , , , , , , , , , , , ,		231,018	9,125,618	522
Westportmain			• •	Westport			1	23,076	28,874	41
Cardiff Bridge	•••	• •		Seddonville		,,	• •	$\frac{25,010}{27,761}$	84,472	37
Paparoa		• •	• •	Roa		,,		35,503	544,117	96
Blackball				Blackball		,,		101,237	3,466,834	361
Liverpool (Stat			• •	Rewanui	• •	,,	• •	145,408	1,615,187	$\frac{301}{421}$
James (State)				Rapahoe		,,	• • •	33,739	106,390	80
Dobson	• •			Dobson		,,	•••	$\frac{33,739}{42,446}$	59,001	149
Donson	• •	• •	• •	Donson	• •	,,	• • •	42,440	99,001	1.40
Som	hern Dis	trict								
Kaitangata and			lieries)	Kaitangata		Brown		95,203	4,454,509	295
Taratu	Castion		• •			Lignite	٠. ا	28,797	634,766	51
Linton (2 collie	rios)			Nightcaps		Brown	·	$\frac{20,101}{71,727}$	300,584	126
Wainalai	1105)			0 1				33,796	200,343	89
Black Diamond			• • •	,,		,,		24,885	166,327	58
Birchwood				Ohai'	• •	,,		$\frac{24,865}{28,107}$	115,919	60
125 other collie	rice	• • •	••	All coalificids	• •	Various		367,805	6,705,923	845
Collieries aband		 zuenand		Various				•	21,287,985	0.10
Comeries abanc	oned of s	suspenu	ou, œo.	v anious	• •	,,	• •		21,201,909.	
Total	als						}	2.239.999	63,959,342	<b>5</b> ,159
. 100			• • •					2,200,000	00,000,012	0,100

#### SECTION II.—PERSONS EMPLOYED.

	T	T): -414			Average Number of Persons employed during 1926.						
	Inspection	District	•		Above Ground.	Below Ground.	Total.				
outhern Vest Coast Jorthern	• • • • • • • • • • • • • • • • • • • •				2 <b>6</b> 8 739 329	769 2,041 1,013	1,037 2,780 1,342				
	Totals, 192	26			1,336	3,823	5,159				
	Totals, 192	25			1,288	3,489	4,777				

The following statement shows the tons of coal raised, persons employed, lives lost by accidents in or about collieries, &c., to 1926.

			Perso	ns ordinarily emplo	yed.	Tons raised	Lives los ab	t by Accider out Collierie	nts in or s.	
Year,	Gutput, in Statute Tons.				Below Ground.	Total.	per each Person employed below Ground.		Per Thousand Persons employed.	Number of Lives lost.
Prior to 1	900	13,444,437	*	*	*	*	*	*	165	
.900		1,093,990	617	1,843	2,460	593	3.65	1.62	4	
.901	1	1,239,686	688	2,066	2.754	600	2.42	1.09	3	
902		1,365,040	803	2,082	2,885	655	1.46	0.69	2	
.903		1,420,229	717	2,135	2,852	665	2.81	1.40	4	
.904		1,537,838	763	2,525	3,288	609	2.60	1.21	4	
.905		1,585,756	833	2,436	3,269	651	3.78	1.83	6	
906		1,729,536	1,174	2,518	3.692	687	3.46	1.62	6	
.907		1,831,009	1.143	2,767	3,910	662	6.55	3.07	12	
.908		1,860,975	992	2,902	3,894	641	2.68	1.28	5	
.909		1,911,247	1,159	3,032	4,191	630	3.66	1.67	7	
910		2,197,362	1,136	3,463	4,599	634	7.28	3.48	16	
.911		2,066,073	1,365	2,925	4,290	706	6.77	3.26	14	
912		2,177,615	1,130	3,198	4,328	681	4.13	2.08	9	
.913		1,888,005	1,053	3,197	4,250	590	3.18	1.41	6	
914		2,275,614	1,176	3,558	4,734	639	21.53	10.35	49†	
915		2,208,624	1,050	3,106	4,156	711	4.07	2.16	9	
916		2,257,135	988	3,000	3,988	752	2.65	1.50	6	
.917		2,068,419	1,090	2,893	3.983	715	1.93	1.00	4	
.918		2,034,250	1,102	2,892	3,994	703	2.95	1.50	6	
.919		1,847,848	1,095	2,849	3,944	648	5.41	2.53	10	
.920		1,843,705	1,152	2,926	4,078	630	0.54	0.24	1	
921		1,809,095	1,218	3,149	4,367	574	5.52	2.28	10	
<b>92</b> 2		1,857,819	1,191	3 <b>,3</b> 65	4,556	552	3.23	1.31	6	
923		1,969,834	1,353	3,647	5,000	5 <b>4</b> 0	2.53	1.00	5	
924	• •	2,083,207	1,364	3,505	4,869	594	4.80	2.05	10	
925		2,114,995	1,288	3,489	4,777	606	3.78	1.67	8	
.926	•• [	2,239,999	1,336	3,823	5,159	586	<b>6·6</b> 9	2.90	15	
Totals		63,959,342							402	

<sup>\*</sup> For returns for previous years see page 32, Mines Statement, 1921.

# SECTION III.—ACCIDENTS.

The following is a summary of accidents in and about coal-mines during 1926, with their causes :-

			Fatal Ac	cidents.	Serious Non-fatal Accidents.			
·			Number of Separate Fatal Accidents.	Number of Deaths.	Number of Separate Non-fatal Accidents.	Number of Person injured, including those injured by Accidents which proved Fatal to their Companions.		
Explosions of fire-damp or coa	l-dust		1	9	1	1		
Falls of ground			3	3	13	13		
Explosives			;					
Haulage			1	1	1	1		
Miscellaneous—Underground			<b>2</b>	<b>2</b>	6	6		
On surface	••	••	••	• •	1	1		
Totals		••	7	15	22	22		

The fatal accidents for the year were at the rate of 2.90 per thousand persons employed and 6.69 per million tons of coal produced.

The following is a short account of the fatal accidents:—

At Millerton Mine, on the 20th January, a miner named John Brown went back into his working-place after a shot had been fired and commenced to trim down the face, when a piece of top coal fell and struck him on the head, fracturing the base of his skull and his neck. The verdict at the inquest was that no blame was attachable to any one.

In the Millerton Mine, on the 20th May, John Evans, a deputy, was struck by a runaway truck, and died on the same day from the injuries he received. Deceased was standing near the foot of a jig waiting till a race was run. The jig was about 4 chains long. When the race got over the brow

<sup>†</sup> Year of Ralph's (Huntly) explosion.

39 C.—2.

the rope capping broke, and the full race struck the empties and uncoupled two, which ran back. One of the empties jumped the curve at the foot of the jig and crushed deceased against the rib-side. An examination of the rope capping showed that it had broken at a faulty weld. The verdict at the inquest was that no blame was attachable to any one.

In the Blackball Mine, on the 17th August, James Outram, a miner, was killed by a fall of roofstone. Deceased was greasing rollers at the top of No. 9 dip under roof, which had been timbered and was thought to be safe. A large stone dropped from between two greasy heads and crashed through the timber under which deceased was standing. At the inquest the verdict was that all the usual precautions appeared to have been taken to make the place safe.

At Linton Mine, on the 2nd October, Anthony F. Francis, a miner, was asphyxiated by firedamp. The deceased left his own working-place and wandered into some old workings. It was some time before he was missed and a search made. His body was found a short distance up an overcast from another section, and the overcast was full of firedamp.

At Kaitangata Mine, on the 15th October, George White Hosking, a miner, was killed by a fall of stone. Deceased and his mate were taking a lift off a pillar and the roof became unsound, so the deputy ordered them to leave that place and commence work on a pillar on the low side. This they did. Some four hours later the whole roof in both places collapsed without warning and buried deceased. The place was well timbered prior to the fall. The verdict at the inquest was that no blame was attachable to any one.

At the Liverpool State Mine, on the 17th November, a miner, John Birch, was struck by a jigprop which had pulled out while a truck was being run. He died on the 26th November, as a result of the injuries received. The jig-prop had been sunk in the floor a short distance, but the stone in front of the hole had broken and so freed the jig-prop. The verdict at the inquest stated that all the usual precautions had been taken and that no blame was attachable to any one.

In the Dobson Mine a violent explosion occurred at 3 o'clock on the morning of the 3rd December. At the time of the explosion nine miners were working in the mine, and all of them lost their lives. Their names were James Richards (Deputy), Robert Hunter (winchman), John Lindsay (Miner), Eric Ashton (trucker), Thomas Black (miner), James Marshall (miner), Ernest Brammer (miner), Alfred Noakes (miner), Edward Partington (miner).

Soon after the explosion a rescue-party, headed by the mine-manager and the president of the union, went down the mine in an endeavour to rescue the men in the mine. They found four men in the winch-house at the top of No. 1 dip, three of whom were dying and one was dead, and they brought them to the surface. A second rescue-party, in charge of the Inspector of Mines, made a further attempt, but were unable on account of smoke and fires to reach the parts of the mine where the remaining men had been working. The rescue-party found there was no hope of these men being alive, and that it was impossible at that time to recover their bodies, also that any attempt to do so would almost certainly lead to further loss of life. It was then decided to seal the mine by means of stoppings. Two further explosions occured, one at 3 p.m. and another at 9 p.m. which blew out the stoppings. The mine was now burning furiously, so there was no alternative left but to flood the workings. This was done. It was not till February of this year that the necessary plant for unwatering the mine was procured and erected, and the last body was not recovered till the 17th May.

After the mine was reopened a thorough examination of the workings was made with a view to determining the origin and cause of the first explosion, but it was found that the second and third explosions and the subsequent flooding of the mine had destroyed practically all the evidence. A large outburst of gas had been known to occur some months earlier in the Dobson Mine. roadways of the mine were practically all damp, and nowhere was there dry coal-dust in sufficient quantity or fineness to originate an explosion. It is therefore practically certain that the first explosion was originally an explosion of a large body of fire damp, accompanied with sufficient violence and heat to enable the explosion to be carried on as a dust-explosion by means of the coarse dust and small coal present on the roadways. The few facts observed by the rescue-parties who entered the mine after the first explosion point to the explosion having originated in the rise workings. But no men were at work there, and it is very difficult to see how an accumulation of gas in the rise could have been ignited unless it was by means of a flame safety-lamp left behind by the previous shift. It is now known, however, that the issue and return of safety-lamps were not properly checked, and that on at least one occasion prior to the explosion a flame safety-lamp had been left behind by the person using it. All the men at the time of the explosion were working down the dip, and clear evidence of a blown-out shot was found after the explosion, in one of the dip places. But if this shot was the cause of the ignition of gas it must have been fired by the miner working in the place and not by the shotfirer, as the body of the latter was found in the winch-house, about 1,000 ft. away, where he had evidently gone to have his "crib," and in addition the handle of his shot-firing machine was found in his pocket.

The Department at various times had had trouble with the management over the ventilation of the mine, and had successfully prosecuted the manager on two occasions for not complying with the requirements of the law regarding ventilation. But for some months prior to the explosion the ventilation had been improved greatly, and an inspection made just prior to the explosion had found all the working-places well ventilated. The coal-dust danger was recognized, but the condition of the roadways was such that the regulation in operation at that time did not require the mine to be stonedusted. Before the explosion it was decided to drastically amend the stone-dusting regulation, and the proposed amendment has since been effected.

# SECTION IV.—WORKING OF THE COAL-MINES ACT.

# (a) PERMITTED EXPLOSIVES.

(Regulations 233 to 237 inclusive.)

The following is a table showing the quantity of permitted explosives used and the number of shots fired at New Zealand coal-mines during 1926:—

Inspection District.	Quantit Explos				Nu	Quantity			
	A2 Monobel.	Ligdynite.	Samsonite.	Number of Shots fired.	By Defective Explosive.	By Defective Detonators.	By Defective Leads.	Total.	Approximate Qua
Northern (i.e., North Island) West Coast (of South Island) Southern (i.e., Canterbury, Otago, and Southland)	$\begin{array}{c} 83,770 \\ 175,508_{4}^{3} \\ 24,382_{2}^{1} \end{array}$	• •	$96,726\frac{1}{4}$ $53,326\frac{1}{2}$	102,520 327,105 110,289	11	170 520 61*	14 205 18*	184 736 85	Tons. 340,558 1,103,967 241,358
Totals	$283,661\frac{1}{4}$		$150,052\frac{3}{4}$	539,914	11	751	237	1,005	1,685,883

<sup>\*</sup> Unaccounted for, 6.

Seventy-five per cent. of the coal produced in the Dominion during 1926 was broken down by permitted explosive, and the average production of coal per pound of explosive used was 3.88 tons, and per shot fired 3.13 tons.

#### (b) LIST OF MINES REQUIRED BY LAW TO USE PERMITTED EXPLOSIVES.

The following is a list of mines as at the 1st December, 1926, required by law to use permitted explosives:—

Northern Inspection District.

Pukemiro Collieries, Pukemiro—throughout South Mine.

Rotowaro Colliery, Rotowaro—throughout Nos. 1 and 3 Mines.

Glen Afton Colliery, Glen Afton—all sections of the mine with the exception of A section.

Waikato Extended Colliery, Huntly—throughout the mine.

# West Coast Inspection District.

North Cape Mine.
Puponga Mine.
Westport-Stockton Mine.
Westport Coal Company's mines.
J. T. Dove's mine.
Coal Creek Mine (McGuire and party).
Cardiff Bridge Mine.
Old Cardiff (Clay Pit).
St. Helens Mine (McAllister and party).
Westport-Mokihinui Mine.
Chester and party's mine.
Marris and Murray's mine.
Ngakawau Mining Syndicate's mine.
Whitecliffs Mine.
Reefton Coal Company's mine.
Phœnix and Venus Mine.
Victory Mine (now Calliope).
Woodlands Mine.
Empire Mine.

Lankey's Creek Mine (Bolitho Bros.).

Ferndale-Timaru Coal Company's mine. Sherwood (now Morrisvale) Mine (Morris and Learmont). Paparoa Mine. Blackball Mine. Armstrong and party's mine. Baddeley and party's mine. Boote and party's mine. Dixon and party's mine. Clark and party's mine (Hillside). Duggan and party's mine. Hunter and party's mine. Manderson and party's nine. McIvor and party's mine. Moody Creek Mine (Simpson and party... Smith and party's mine. Spark and party's mine. James Mine. Liverpool Collieries.

Southern Inspection District.

Castle Hill Mine, Kaitangata—throughout the mine. Kaitangata No. 1 Mine, Kaitangata—throughout the mine. Kaitangata No. 2 Mine, Kaitangata—throughout the mine. Wairaki No. 1 Mine, Ohai—throughout the mine. Birchwood Mine, Ohai—throughout the mine. Linton No. 2 Mine, Ohai. Ohai Coal Company's mine, Ohai.

41 C.—2.

# (c) LIST OF MINES REQUIRED BY LAW TO USE SAFETY-LAMPS.

The following is a list of the mines as at the 1st December, 1926, required by law to use safety-lamps:—

# Northern Inspection District.

Pukemiro Collieries, Pukemiro—Main north heading section (now abandoned). Rotowaro Colliery, Rotowaro—throughout No. 1 Mine. Glen Afton Colliery, Glen Afton—No. 1 heading section.

West Coast Inspection District.

State Collieries—Morgan seam.
State Collieries—Morgan low-level adit.
State Collieries—No. 4A Mine.
Hilton and party's mine.
Hunter and party's mine.
Manderson's and party's mine.
Paparoa Coal Company's mine.
Millerton Mine (Westport Coal Company).
Dobson Mine (Grey Valley Collieries).

# Southern Inspection District.

Castle Hill Mine, Kaitangata—throughout each shift. Kaitangata No. 1 Mine, Kaitangata—throughout each shift. Kaitangata No. 2 Mine, Kaitangata—throughout each shift. Wairaki No. 1 Mine, Ohai—throughout each shift. Birchwood Mine, Ohai—throughout each shift. New Brighton No. 1 Mine, Ohai—throughout each shift. Linton No. 2 Mine, Ohai.
Ohai Coal Company's mine, Ohai.

# (d) Dangerous Occurrences reported.

# (Regulation 82.)

The following is a short account of the more serious of these. A full list is contained in the District Inspectors' reports.

Hikurangi Mine.—On the 20th May the workings of the shaft colliery were flooded by a serious inrush of surface water, which found its way into the mine through fault breaks and cracks extending to the surface from pillared areas underground. The inrush was estimated at 40,000 gallons per hour, and as the pumps had a capacity of only 16,000 gallons per hour the pumps and motors were soon submerged. It was not until September that additional pumping plant was procured and put into operation. The mine was unwatered in November and the workings recovered. The workings, other than those on the east side, were found to be in good order; on the east side a section that had been badly damaged by a previous fire, the roof had fallen badly in the majority of the bords, and the whole section had to be again sealed off by a new line of stoppings.

Millerton Mine.—A serious fire broke out in Evans' section of the Millerton Mine on the 10th June. In spite of strenuous efforts made to check the fire by means of temporary stoppings it advanced rapidly, and only with great difficulty was it prevented from spreading throughout the whole mine. After four sections of the mine and part of another had been lost the management succeeded in staying the advance of the fire. The temporary stoppings were afterwards backed by permanent stoppings of brickwork or concrete. This fire was difficult to deal with, on account of the numerous breaks to the surface over the pillared area; the thickness of the seam, which was as much as 40 ft. in some parts of the mine; the size of many of the roadways, which in some cases were up to 18 ft. wide and 16 ft. high; and more especially the fact that no panel system was in operation and no prior steps taken to rapidly isolate any fire that might occur. As already stated, it was only with great difficulty that the fire was prevented from spreading throughout the whole mine. As it was the fire was not checked till an area of approximately 40 acres was lost, containing something like 1,000,000 tons of coal. It is highly probable that a considerable portion of this area will be recovered, but some of it is lost for ever. A fire of this magnitude occasions great loss to the company, and is a grave menace to the safety of the mine. To prevent a recurrence the company is taking active steps to block off the mine into small artificial panels by means of concrete stoppings, so that when a fire does occur in one of these panels there will be only two stoppings to build, which can be done expeditiously and safely and without danger to the rest of the mine.

Dobson Mine.—A violent gas and coal-dust explosion occurred in the Dobson Mine on the morning of the 3rd December, and occasioned the loss of nine lives. This has been described earlier in this report.

# (e) Electricity at Collieries.

# (Regulation 243.)

The following is a summary of the annual returns, in accordance with Regulation 243 (c), regarding electrical apparatus at collieries:—

Number of collieries at which electrical apparatus is inst	talled	 	24
Number of continuous-current installations		 	10
Number of alternating-current installations		 	16
Number of collieries electrically lighted		 	21
Number of collieries using electrical ventilating-machine	<b>18</b>	 	19
Number of collieries using electrical pumping plants		 	19
Number of collieries using electrical haulage plants		 	13
Number of collieries using electrical screening plants		 	6
Number of collieries using electrical miscellaneous plant	s	 	14
Number of collieries using electrical locomotives		 	1
Total horse-power employed from motors on surface		 	2,933
Total horse-power employed from motors below ground		 	3,633

# (f) Prosecutions.

There were eight prosecutions by the Department's Inspectors during the year.

1. An engine-driver was convicted and fined £1 and costs because he acted in the capacity of a winding-engine driver while not possessed of the necessary certificate.

2. A deputy who was also the shot-firer was convicted and fined £1 and costs for deputing miners

to fire a shot in their working-place.

3. A mine-manager was fined £1 and costs for failing to appoint a competent person to examine a safety-lamp before it was taken into the mine.

4. A mine-manager was fined £2 and costs for failing to provide a safety-lamp of an approved type.

5. An acting-deputy was fined £1 and costs for failing to make a report of the result of his morning examination of the mine.

6. An acting-deputy was fined £1 and costs for using a safety-lamp which was not of an approved type.

7. An acting-deputy was fined £1 and costs for using a safety-lamp which had not been examined by a competent person since previously used.

8. A mine-manager was fined £1 and costs for using threatening language to a workman.

#### SECTION V.--LEGISLATION AFFECTING COAL-MINES.

The Coal-mines Act, 1925, came into operation on the 1st April, 1926; there were no amendments during the year.

New regulations regarding the Coal Miners' Relief Fund were gazetted on the 1st April, and

regulations regarding Mine-surveyor's certificates on the 2nd September.

The effort to get better mining methods adopted was continued during the year. Changes in method put into operation at the instance of the inspection staff in the previous year have shown by the results obtained that they were an improvement on the previous practice. The best method of pillar-extraction has been investigated, and a method is now under trial; so far it is proving successful, and it is hoped by this means to materially reduce the risk of underground fires and consequent loss of coal, and at the same time to attain greater safety when extracting pillars in very thick seams.

Stone-dusting of roadways was extensively practised in the mines in the Huntly district during the year. In the other districts the mines have been sampled to determine their condition, and after discussion with the owners and workmen a material alteration to the Stone-dusting Regulations was agreed on, which it is hoped will render the mines safe from the dangers of coal-dust explosions.

I desire again to acknowledge the efficient help and co-operation I have received from the District Inspectors during the past year. Mr. C. J. Strongman resigned the position of Inspector of the West Coast District in order to fill the position of local manager to the Westport Coal Co. at Granity; he was succeeded by Mr. O. J. Davis, who took over the duties of Inspector on the 1st December.

I have, &c.,
J. A. C. BAYNE,
Inspecting Engineer and Chief Inspector of Coal-mines.

43

# ANNEXURE A.

#### SUMMARY OF REPORTS BY INSPECTORS OF MINES.

NORTHERN INSPECTION DISTRICT (Mr. William Barchay, Inspector).

Output of Coal.—From coal-mines in the North Island Inspection District the total output for the year 1926 was 653,849 tons, a decrease of 18,554 tons when compared with the returns of the previous year. The decrease was confined to the Hikurangi Coal Co.'s shaft colliery, and was due to the flooding of the mine-workings for a period of five months.

Accidents.—No fatal accidents occurred in the Northern District during the year, this being the second year in succession that this pleasing result has been recorded. It is also worthy of note that there were only two fractures

Sampling of Dust.—All the principal mines were sampled and tested in order to determine the combustible contents of the mine-dust. At one particular colliery 160 samples were taken, and of that number analysed only 25 per cent. was found to be in excess of 50 per cent. of combustible matter. The results show that the underground roadways are being treated satisfactorily with incombustible dust.

roadways are being treated satisfactorily with incombustible dust.

\*\*Electricity\*\*—The use of electricity continues to extend; the total horse-power in use during the year was 1,913, an increase of 755 over the previous year. The Rotowaro Colliery is being equipped with entirely new plant. The scheme under review by the management entails the electrification of the whole of the underground haulages, pumps, winches, and coal-cutting machines, and on the surface the screens, workshops, fans, and haulages which were formerly driven by steam.

\*\*Size of Coal Pillars\*\*.—In the early days it was customary to leave small pillars when working by the bord-and-pillar system, in order that a large percentage of the coal could be obtained in the first working. But as mining operations were extended to greater depths it was found that the formed pillars were too small for the increasing amount of roof-cover. Numerous instances of crushing subsequent fire, and closing of scotions have been recorded.

amount of roof-cover. Numerous instances of crushing, subsequent fire, and closing of sections have been recorded due to small pillars, and an enormous amount of coal has been sacrificed by the practice followed from the early days. In consequence of instructions issued by the Department new methods of working the coal are being generally days. In consequence of instructions issued by the Department new methods of working the coal are being generally adopted in the principal mines. Much larger pillars are being formed in the first working. The minimum size of bord pillars is now 50 ft. square—formerly it was 30 ft. square—and the pillars between the main headings and barriers are being extended to 1 chain in width between the respective drives. In some cases pillars 1½ chains and over are being formed on each side of main haulage-roads.

\*\*Rawakawa Colliery.\*\*—Operations during the early part of the year were confined to the extraction of the remaining of the contraction of the remaining of the contraction of the remaining of the remaining of the contraction of the remaining of the remaining of the contraction of the remaining of the contraction of the remaining of the rem

thin coal pillars near the outcrop. Coal-carting was discontinued early in May, due to the action of the County Council in taking proceedings against the party for damage done to the road. The plant was subsequently dismantled and the mine closed.

Hikurangi Coal Co., Ltd.—Hikurangi P.W. Mine: Active operations at this mine commenced thirty-four years ago, and ceased during March of the present year. A total output of 1,437,632 tons was obtained by means of dip drives driven from the surface to economic distances in the coal-seam. Faulting and periodical flooding of the shallow workings compelled the management to abandon the deep coal, and it was decided five years ago to sink two shafts at the extreme dip of the seam in order that the coal-seam over the company's freehold area could be more advantageously worked. Subsequent to the sinking of the shafts the remaining pillars near the outcrop were withdrawn to within I chain of Perritt's dip heading, and the mine-workings beyond the dip gradually filled with water, which rose to a point approximately 70 ft. vertical from the surface. A shaft sunk by the neighbouring colliery—namely, Wilson's Colliery—is down 200 ft. at a point only I chain from the goaf of the abandoned workings, and it is reasonable to assume that the water accumulation in the old workings is percolating into the adjoining colliery, from where it

is pumped to the surface.

No. 2 Mine (shafts): There are three separate working sections in the mine, locally termed the east, west, and McKenzie's dip sections. The east section has been abandoned, due to a crushing movement and a fire in the goal. Several lines of stoppings have been erected for the purpose of isolating the fire, but considerable trouble has been experienced in making the stoppings leak-proof, due to the crushing and fracturing of the small pillars. In the Several lines of stoppings have been erected for the purpose of isolating the fire, but considerable 'trouble has been experienced in making the stoppings leak-proof, due to the crushing and fracturing of the small pillars. In the west section the fault has been pierced and the coal-seam has been recovered lying at a moderate gradient to the rise of the shafts. McKenzie's dip section has been extended by the advance of the main dip heading, which has been driven a distance of 8 chains from the top of the dip. The coal-seam has been proved to have a thickness of 12 ft., and to be of excellent quality. A modern ventilating-fan, capable of producing 50,000 cubic feet per minute at 2 in. W.G., is being installed in place of the two Waddle fans at present in use. Brick stoppings have been creeted in the crosscuts between the intake and return, resulting in better ventilation at the working-faces. The underground workings of the mine were flooded on the 20th May last, due to heavy rain-water on the surface percolating into the mine by way of the faults and subsidences caused by pillar-extraction. The flow of the inrush was estimated at 40,000 gallons per hour for a period of thirty hours. The pumping-capacity of the installed pumps (two electrically driven, 4 in., and one steam-driven, 4 in.) was 16,000 gallons per hour. Shortly after the inrush of water the electric pumps ceased running, due to the water flooding the motors, and the remaining steam-pump installed at a higher level was unable to cope with the abnormal quantity of water that had accumulated at the shaft-bottom. New pumping machinery was installed for the purpose of dewatering the mine, and the workings were subsequently recovered on the 20th October. A new pump, designed to discharge 60,000 gallons of water per hour, is being installed to act as a standby unit for use during periods of flooding. During the year the output was obtained from bords and pillars in the stone-drive section. As the leading places reached the fault, contiguous to the northern the faces. Repairs to the return airway by reheightening same effected improvements in the general ventilation. Endless-rope haulage has been installed on the main dip in place of the direct haulage formerly in use. The returnair shaft, 200 ft. in depth, has been equipped with cage and winding machinery in order to have means available to Kerr and Co. (The Rocks Mine).—The first workings reached the boundary early in the year, and the pillars are

now being extracted outwards to the main dip. A series of faults was encountered in the main dip, and driving operations were suspended. The dip is driven on a gradient of 1 in 3, and it is properly equipped with haulage and safety appliances. The output of 20 tons per day is conveyed by tramway to Waro railway-siding.

Silverdule Colliery (Foot's Crown Lease).—Mining in the old mine has been confined to the removal of the small pillars and isolated blocks of coal left by a former working of the field. The pillar coal is almost exhausted, and a new dip drive, conveniently situated to the main county road, is being driven for the purpose of opening out a section of solid workings in a proved area of marketable thin coal. A pump, winch, and loading-bank have been

installed. Timber is systematically set, and a plentiful supply is always on hand. The output is conveyed by motor-lorries to Hikurangi, a distance of three miles. A second-class mine-manager is in charge. Safety rules are

Northern Co-operative Mine (Cunningham's Crown Lease).—Three men find employment in this small colliery. Bands of fireclay and water tend to restrict the easy extraction of the remaining pillars, and much time is lost in the ding with these difficulties. The output is conveyed to Hikurangi by motor-forry.

Christie's Colliery (Freehold).—The mine ceased producing coal at the end of the year. All the shallow pillars have been extracted to the opening, and the plant and machinery were removed to a neighbouring field, over which the co-operative party has secured a right to mine a proved small area of outcrop coal. Boring operations conducted over Christie's flat failed to disclose a workable seam.

Glen Nell Colliery (Crown Lease).—Work was discontinued about eighteen months ago, owing to the thinness of the seam and the lack of orders for the output; but the party owning the property has again returned to the mine in order to give it another trial. Subsequent to the flooding of the Hikurangi Colliery a shortage of coal existed locally, to the benefit of the small mines operating in the district. The coal-seam is 3 ft. in thickness, and lies almost level. Rules are posted and inspections recorded, as required by the Act.

Hillside Coal-mine (Cunmings and Party).—Four miners leased an isolated piece of coal-bearing land from the Hikurangi Coal Co., Ltd., and they have contracted with the company to mine the available coal and convey it by road to the Hikurangi Railway-station at an agreed rate per ton. A drive and shaft have been completed to the coal-seam, and operations have been conducted safely by an experienced manager in charge. The coal-seam is badly faulted, and much stonework requires to be done to keep readways at the faces.

faulted, and much stonework requires to be done to keep roadways at the faces.

McKinlay and Party (Freehold).—The miners comprising the party have agreed with Kerr and Co. to extract a few thin coal pillars in the abandoned Rocks Colliery. The drive is water-free, and the road has been relaid to the abandoned faces. The remaining coal consists of pillars on each side of the roadway. The miners appear to be competent men. The timbering is satisfactory, and the ventilation of the old workings is effected by means of a

small shaft.

Belton's Coul-mine (Freehold).—Mr. Belton purchased a piece of abandoned coal land from the Hikurangi Coal Co., Ltd. Boring revealed a workable block of coal along the fringe of the outcrop, and the proprietor subsequently arranged with a party of coal-miners to work the coal upon a royalty basis. Two level drives from the surface have been driven into the seam, which is friable, but thick enough to return a fair profit if properly managed. A surface jig of 6 chains and a ground tramway of 10 chains have been constructed in order to remove the output to the County Road, from where it is carted to Hikurangi Station. Rules are posted, and due consideration is paid to the requirements of the Act.

Ruatangata Colliery (Freehold),—The main dip has been extended 12 chains through the old Kamo Mine workings,

Ruatanguta Colliery (Freehold).—The main dip has been extended 12 chains through the old Kamo Mine workings. Boreholes are kept in advance in order to drain off the water accumulation in the old bords. Crushing of the small pillars necessitated the removal of the plant and rails from a portion of the mine. The dip and connecting-drives are being driven narrow with the view of obtaining good pillar-extraction. The haulage dip is properly equipped and well timbered with sets. Output, 30 tons per day.

Harrison's Waro Colliery, Whaugarei (Freehold).—The mine-workings are in good order. The dip has been advanced 4 chains in faulty coal, and the seam is apparently thinning towards the southern boundary of the property. Three electric pumps, operating in stages, are employed to drain the mine-workings. The lining of the upcast shaft has been repaired during the year, and the pit-head structure, for the support of the winding-pulleys, has been strengthened with four additional uprights. Boring is in progress in order to determine the existence and thickness of the seam at a point 30 chains in advance of the face of the dip underground. The whole of the mine property, including plant, branch railway, and leases, is under offer to a new cement company at present in process of formation. formation.

Rotowaro Colliery.—During the year marked progress has been made with the installation of new machinery for the more economic handling of a larger output. New screens, electrically driven, capable of screening 1,000 tons of coal per eight hour day into three sizes, have been creeted, and the preparatory work, necessary to connect the roadways from the company's three mines, is proceeding apace. Within the company's area there is an aggregate thickness of 40 ft, of workable coal in three scams. The scams all dip to the south and are moderately inclined. The workings are reached by three separate mines and haulages. Endless ropes are installed in No. 1 and No. 2 mines, and in No. 3 mine direct haulage will soon be supplanted by an endless rope, electrically driven. No. 1 mine continues to produce the largest output from pillars formed by the first workings. A high percentage of the coal has been obtained under a roof-cover of about 100 ft. In No. 3 dip section a concealed coal area is being prospected by a stone dip turned at right angles to the main haulage-road. Boreholes drilled in the roof through a compact mass of fireday tapped blowers of inflammable gas when approaching the seam. No. 2 mine appears to be within a measurable distance tapped blowers of inflammable gas when approaching the seam. No. 2 mine appears to be within a measurable distance of exhaustion. The pillars have been removed from the top seam, and operations are now confined to the development of the bottom seam by a steep dip, which has disclosed troublesome faults. No. 3 mine (bottom seam) is being developed very rapidly, and is now producing 150 tons of coal per day from places mined entirely by a Sullivan coalienting machine. The machine has been in operation at the faces for eighteen months, and the management report satisfactory results from its use. The coal is obtained in a better commercial condition, and, notwithstanding a reduction of 9d. per ton on the hewing-rate, the miners appreciate the lessened labour required of them at the machine cut places and earn more than in ordinary working-places. An extensive undulation was located by an advance heading in the main dip, and a stone drive is now in course of being driven through the stone bank in order to keep the grade uniform for the endless-rope haulage later on. The electrical installation has been reconditioned throughout the mine, and Oldham's electric safety-lamps have been introduced into the section. Surveying operations for the purpose of ascertaining the depth of a second outlet shaft for No. 1 mine have been conducted on the surface.

Pukamiro Collieries.—The total output for the year was 147,545 tons, an increase of 14,254 tons over the returns of the previous year. The Pukemiro field is fortunately situated in the centre of the Waikato coal area. There is only one defined seam of coal, which occurs under the limestone formation and extends at low angles of dip over a wide area. Faults and other disturbances are frequently encountered in the coal-seam, and each displacement or thinning of the

Faults and other disturbances are frequently encountered in the coal-seam, and each displacement or thinning of the seam is utilized to provide a barrier between the respective sections in the mines. There are two separate mines, each accounting for half of the output. In the north mine the pillars are being extracted in two sections. The removal was commenced from the outcrop boundary in both sections under conditions favourable to the release of roof-weight from the working-pillar. The bords of the first working follow the shallow seam to the outcrop, thus providing means for drainage of the workings. Boreholes from the surface have proved an isolated but workable area of coal westward of the underground north-west headings, and the management is preparing plans for the development of this area by way of a stone dip, 1 in 2, from the surface to the seam, and thence a stone level of 400 ft. in length, required for a connection to the mine haulage-system. In the south mine a considerably increased output has been recorded from bords and headings of the first working. The main west headings have been extended 60 chains from the main dip. The seam maintained the ordinary thickness throughout that distance, but has since thinned to 4 ft. 50 ft. pillars are now being formed between the headings and bords on the west side, and the larger pillars should tend to prevent a crushing movement when the pillars are being removed. Development is proceeding in the east mine section, the operations being confined to the driving of headings, thus providing reserve working-places. Electricity, with its attendant economies, is permanently established as the motive power throughout the mine, and steam is only used for generating purposes.

Glen Afton Collieries.—This colliery reached the producing stage three years ago. The output for the past year was 145,464 tons. The location of the mine in respect to its proximity to the Government railway has been an important factor in the development and production from the mine. Only one coal-seam has so far been discovered,

45

and the seam has been opened up from the outcrop and followed by level and incline drives one mile to the north and and the seam has been opened up from the outcrop and followed by level and incline drives one mile to the north and approximately 40 chains to the east. On the west side of the main haulage-road several disturbances in the seam have been encountered, and boring operations for the purpose of ascertaining the continuity of the seam have not as yet revealed workable coal beyond the faults. A dispute in connection with the employment of truckers at the coal-faces resulted in a strike of four weeks' duration. A crushing movement commenced during the month of June in D section, consequent to the removal of a few pillars, and subsequently carried weight over the barrier pillars between D and G sections, and finally crushed both sections to the extent that the workings were made inaccessible for inspection. Seventeen substantially constructed brick stoppings have since sealed off the affected sections. Mining operations following the crushing movement have been concentrated upon the more active development of E and H sections, which have been extended to produce larger outputs. The 60 ft. fault displacement at the end of the main drive has which have been extended to produce larger outputs. The 60 ft. fault displacement at the end of the main drive has been pierced by a stone drive, and the seam recovered. During the year a thin coal area was opened out from the surface, but operations were subsequently discontinued owing to the unsatisfactory quality of the coal. In A section the pillars are being removed from the travelling-road barrier, and the falls are breaking within the excavated spaces. Additional bathing-accommodation has been provided in the bathhouse in order to shorten the waiting-time. Approximately 90 tons of incombustible dust have been used in the treatment of the roads. In compliance with the Department's requisition for larger pillars the management has increased considerably the size of pillars both in bords and headings. The company has been able to supply the increased annual demand for its coal, and, excepting the

and headings. The company has been able to supply the increased annual demand for his coal, and, excepting strike period, the mine worked full time.

Graham's Colliery (Co-operative Party).—The mine is situated at the terminus of the Huntly - Glen Afton Railway.

The coal-seam—7 ft. in thickness—occurs about 20 chains from the railway-siding. The output is conveyed by a self-acting incline to fixed screens installed contiguous to the railway. Mining operations during the year have been confined to the extraction of the pillars. Preparations are being made to drive a pair of headings into a thin seam area with the view of providing future places. The coal is of excellent quality, and commands a ready sale throughout

the year.

the year.

Pukemiro Junction Colliery (Crown Lease; Co-operative Party).—A new mine section has been developed in the western area where the outcrop seam has been followed by narrow places driven with the view of providing easy access to the pillars. A fire in No. 1 mine section occasioned some anxiety to the management, but the area was flooded and the workings subsequently recovered in good condition. Bathing facilities for the use of the workmen have been provided at the mine. Roadways and jigs have been maintained in good order.

Waipa Colliery.—The general development of the mine continues to provide places well in advance of requirements. Two travelling outlets for the workmen, affording means of escape, have been provided at the end of the farthest inbye section. In No. 3 district, where the solid work is completed to the boundary, the pillars are being attacked, whilst in No. 2 section the area of workable solid coal is almost exhausted to the fault. Work in the main dip section is proceeding on the expectation of proving a fairly large area of marketable coal on each side of the main dip. The ventilation of the mine has been assisted by the installation of a fan in the recently constructed return airway at the faces. The introduction of coal-cutting machines for the more economic mining of the coal has been considered by the management, but the preparatory work in connection with the installation has been hindered by the late arrival of the necessary machinery. The requirements in respect to the sampling of the dust on the main roads have been observed.

observed.

Waikato Extended Colliery.—This small colliery is situated on the banks of the Waikato River, two miles south of Huntly. The workings are reached by an adit level driven to the boundary, and pillars are now being extracted. Permitted explosives are used throughout. The natural ventilation, effected by a shaft and several open falls to the surface, has been good. The wharf loading-stage for river-steamers has been repaired, and the surface roadway to the mine has been reconditioned. The seam averages 20 ft. in thickness and is free from stone.

Huntly Brickworks.—An output of 15,000 tons of fireelay is annually obtained from an open quarry and manufactured locally into bricks and tiles. The conveniently situated deposit of elay exceeds 50 ft. in thickness, and there is little overburden to be stripped from the top of the quarry. Operations have been conducted safely, and competent miners are in charge of the open faces.

Kimihia Colliery (Auckland University Council Endowment Leuse).—Legal proceedings taken against the location.

are in charge of the open faces.

Kimihia Colliery (Auckland University Council Endowment Lease).—Legal proceedings taken against the lessee for trespass resulted in the cessation of work in the mine. The bords turned away from the heading dip proved the seam to be faulty and stony, and there was little demand for the output.

Taupiri East Colliery (Auckland University Council Endowment Lease).—A small rise area left by a former working of the field has been located by a level driven from the surface, and a few winning-places have been developed to produce an output of 10 tons per day. The output is still being removed by motor-lorry to Huntly Station, a

distance of four miles.

Campbell Colliery, Whatawhata (Crown Lease).—A considerable amount of driving has been done in order to prove the direction and extent of the field. The seam maintains its former thickness and quality, and working-places do not exceed 12 ft. in width by 8 ft. in height. The output of approximately 20 tons per day is conveyed to Hamilton by motor-lorries.

Old Stockman Mine, Mokau.—The mine is situated on the banks of the Mokau River, thirty miles up the stream from Mokau Village. The seam averages 4 ft. in thickness and has a strong sandstone roof. A limited output is

The steam averages 4 ft. in thickness and has a strong sandstone roof. A limited output is produced by two miners, and the coal is conveyed to Mokau by river-boats.

Hetherington's Colliery, Waikokowai.—The company has secured an extensive coal area, exceeding 2,000 acres, adjoining Maedonalds State Coal-mine Reserve. Explorations on the field by boring and driving have proved several million tons of coal. The field is not easily accessible by railway communication. A branch railway from Mahuta was first projected as a means for the transportation of the output to the Government railway, but trial surveys revealed that a standard grade could not be obtained within reasonable limits of expenditure. The owners are now considering the advisability of installing endless-rope haulage from the mine to Rotowaro Railway-station, a distance of two and a half miles. Mine-development conducted during the year was confined to roadmaking and excavations necessary for a tramway to the elevated outcrop.

Prosecution.—On the 23rd September, 1926, a mine-manager was convicted and fined £1 and costs for using threatening language towards a miner employed in the mine.

Dangerous Occurrences: Regulation 94 (1).—On the 30th April, 1926, the manager of Wilson's Colliery reported the indications of fire-stink and smoke issuing from old workings in No. 7 section. Stoppings were creeted and the fire subdued. On the 11th May, 1926, the manager of Pukemiro Junction Colliery reported a fire in the old workings. The area was subsequently sealed off. The underground workings of the Hikurangi Coal Co.'s shaft colliery were flooded on the 20th May, 1926, due to an abnormal inrush of surface water from fault breaks and subsidences. The workings were recovered four months later. On the morning of the 10th June, 1926, the acting mine-manager of Pukemiro Colliery reported the presence of smoke and fire in the south mine, due presumably to dry brattice-cloth being ignited the previous night. The fire was quenched with water available at the scene

#### SERIOUS NON-FATAL ACCIDENTS.

Rotowaro Colliery.—On the 19th March, 1926, George Holmes, miner, working at Rotowaro Colliery, received an Rotowaro Colliery, —On the 19th March, 1926, George Holmes, miner, working at Rotowaro Colliery, received an injury to his right eye, which subsequently became septic and impaired the vision. Holmes was off work seventy-four days. John Williams, miner, employed at Rotowaro Colliery, on the 26th March, 1926, sustained loss of vision of his left eye, due to a septic wound on the pupil caused by flying coal. Duration of disablement, seventy-eight days. On the 30th March, 1926, Joseph O'Brien, miner, working at Rotowaro Colliery, sustained a compound fracture of his left leg due to a fall of stone from the side of the drive he was timbering. O'Brien was off work 196 days. On the 20th September, 1926, John Beveridge, miner, employed at Rotowaro Colliery, sustained the loss of his right eye due to an injury by a piece of coal from the pick-point. Beveridge was incapacitated seventy-one days.

Clen Afton Colliery.—Brinley Kinson, miner, employed at the Glen Afton Colliery on the 4th January, 1926, on the Aton Colliery.—Briney Kinson, miner, employed at the Gien Aton Colliery on the 4th January, 1926, sustained a fractured ankle. He was engaged filling a skip of coal at the face when it ran off the rails, striking him on the ankle. Kinson was disabled seventy-nine days. On the 12th July, 1926, John Shoddon, miner, received an injury to his right ankle caused by a fall of stone whilst he was engaged setting timber at the face. Sheddon is still [February, 1927] off work.

Hiburangi Colliery.—On the 14th May, 1926, Matti Viscovich, boiler foreman, sustained an injury to his middle interest of the control of the

linger, right hand. His finger was caught in the driving-chain and sprocket-wheel of the chain-feed-grate. Viscovich was incapacitated ninety-nine days.

#### WEST COAST INSPECTION DISTRICT (Mr. O. J. DAVIS, Inspector).

During 1926 the coal-output for the combined Nelson, Buller, Reefton, and Grey districts was 1,122,176 tons, made up as follows: Nelson (decrease), 582 tons; Buller (increase), 91,212 tons; Reefton (decrease), 676 tons; and Grey (increase), 80,826 tons. Output of coal for 1925, 951,396 tons; output for 1926, 1,122,176; increase for 1926 over 1925, 170,780 tons.

The total number of men employed during the year 1926 was 2,780, being an increase of 386 over the year 1925.

#### Buller District

Denniston Collieries.—Coalbrookdale Mine.—Birchall's Section: The coal in the headings which were being driven in a south-westerly direction has thinned to 4 ft. with a stony band 6 in. to 18 in. thick near the roof. Pillar-extraction has commenced at this point. The coal in the panel headings going north-west has thinned to 8 ft., but an increase in thickness is expected farther on. Another panel has been started off the main south heading. coal is 14 ft. thick.

McHwain's Section: The two main headings proceeding westerly are in coal 15 ft. thick, of which 8 ft. is being

worked.

Waterloo: The panel system is being tried in this section on account of the beneficial results obtained in other sections. Four headings have been set out, two going south-west and two going north-west. 14 ft. of good-quality coal is showing; seven pairs of miners employed. The completion of the drainage-tunnel will enable all pumps to be withdrawn from this section.

Extended dip section: In the bottom seam and to the left of the old dip work is confined to pillar-extraction, two pairs of colliers being employed. Two headings are being developed in the new area on the south-west side of the rope-road: these are being driven 12 ft. wide by 8 ft. high, and the panel system is to be adopted. In the new dip below the fire area, work is confined to the extraction of pillars. The coal is 14 ft. high

below the fire area, work is confined to the extraction of pillars. The coal is 14 ft. high.

Big Pillar section: Operations here are confined to pillar-extraction; three pairs of men employed. Signs of heating in this section have caused extra care to be taken to prevent fires.

Big Pillar section: Operations here are confined to pillar-extraction; three pairs of men employed. Signs of heating in this section have caused extra care to be taken to prevent fires.

Callaghan's and No. 8 Cascade; Coal from this section confined to pillar extraction.

Ironbridge Mine.—This mine includes the Deep Creek. The bulk of the output has been produced from pillars in the old mine, comprising Kruger's section, Kiwi section, and No. 1 pillar section. In Kruger's section travelling road a main and tail haulage has been installed to deal with the output from the upper and lower seams. Straight-line pillar-extraction is now in vogue, and good results are being obtained. Most of the output is being obtained from the high pillars. In the Kiwi section the new workings are immediately under the first workings. All places driven 6 ft. to 9 ft. in width. Thickness of coal between workings varies from 6 ft. to 13 ft. Coal very strong, and from 36 ft. to 40 ft. in height. Armoured cables have been installed, and all electric globes enclosed in airtight fittings. New stables, in the shape of loose-boxes, have been built underground.

Millerton Mine.—No extensive development work has been carried out at this mine during the year.

Evans' Daylight section: Output confined to pillar-extraction; four pairs of miners employed. The fire area appears to be under control, but is still active. All attempts to flood this area have so far proved a failure.

Mine Croek north-east section: Pillar-extraction continues in this area under favourable conditions.

Mangatina: Operations in this section are confined to removing top coal in the old bords. It is not intended to remove the pillars owing to creeks on the surface. The coal is about 30 ft. thick. Four pairs of colliers employed. Third west pillar section: Operations consist of extracting pillars. The coal is about 30 ft. in thickness, and an effort is being made to establish straight-line pillar-extraction. Five pairs of men are employed. The atmosphere in this section is

outerop.

Second west dip section: Two pairs of colliers engaged cleaning up roads. Arrangements have been made to put

in stoppings forming the bottom end of a panel district.

During the month of June a serious fire broke out in the Millerton Mine, and eighteen stoppings had to be erected before it could be got under control. Several wooden stoppings were strengthened by the addition of brick. The following sections have been sealed off: Evans' Pillar section, Evans' Daylight section, Dutton's section, No. 2 dip section, part of No. 1 section. The total area sealed off is about 40 acres. The coal varies from 30 ft. to 40 ft. in thickness. It seems impossible to extinguish the fire on account of so many surface breaks. All that can be done is to try and prevent the fire from spreading to other parts of the mine. Stone-dusting has been commenced, and

practically all the roads leading to the fire area have been treated.

Fourth west section: Six pairs of colliers employed on solid work in this section. Roof friable. Dirty stone and shale-bands in the coal near the roof renders the work of keeping the coal clean a very difficult one.

Sixth west section: Six pairs of colliers employed in this section. The outcrop has been reached in several places, and preparations are being made to work a top seam known to exist in this section. Ventilation very good on account of elevation and exposed situation of ethis section.

Settlement section: Nineteen pairs of colliers employed in this section. Operations consists of solid workings in the bottom seam on the southern side and in solid workings in the upper seam on the northern side. The main heading, going in a westerly direction, is now in about 20 chains from the right-hand branch of Granity Creek in the

or seam. North-east section: Operations consist of pillar-extraction. Nine pairs of colliers employed. Second Mangatina section: A small area under a ridge. The solid workings are about finished, and the output

Second Mangatina section: A small area under a ridge. The solid workings are about finished, and the output will be derived from pillar-extraction.

During the year three prospecting boreholes were put down in the vicinity of Millerton Township, of an aggregate depth of 450 ft. All holes reached the granite, and no coal was found. Approximately £600 was spent on prospecting.

Stockton Mine.—During the year the fluming of coal from the mine to the bins was abandoned and the electric locomotives were again put into operation. A new area of coal at Plover's Creek has been opened out, and development work is being done with a view to working it on the panel system. In the Fly Creek area three parallel headings have been set away on 90 ft. centres. These headings will form a panel of 10 acres. The headings were very wet, and the coal of a very friable nature. The friable nature of the coal-roof necessitates the use of sets. A solid block of coal to the north of the main haulage-road at B layby is being developed on the panel system.

Westportmain Colliery.—This small mine adjoins that of the Westport Company at Millerton. Development is proceeding in a north-casterly direction towards the Millerton Mine. The seam is between 30 ft. and 40 ft. thick. About forty men are employed, the output averaging about 20 tons daily per pair of men employed.

C.--2.47

Clydevale Colliery.—The aerial having been extended to an area of coal further up the hill, work on the main heading was commenced about the middle of the year.

Cardiff Bridge Mine.—The output from this mine is conveyed by fluming, and is now approximately 100 tons per day. The mine is being laid off with barrier pillars so that portions of the workings can be sealed off in the event of fires. The nature of the coal in this district lends itself to spontaneous combustion.

Old Cardiff Mine (Dove's).—The output is derived from pillar extraction in the old area adjacent to the fire, and from a new area opened up on the worth side of the old mine. The fire is still action and the atomics are in and

from a new area opened up on the south side of the old mine. The fire is still active, and the sto order. The output is about 100 tons daily.

Old Cardiff No. 4 and Bell's Creek Mines.—These mines have not been operated during the year. The fire is still active, and the stoppings are in good

Regan and O'Brien's Mine.—This mine has not been worked during the year.

Chester and Party's Mine.—A small area on the south-western side of the old drive. Three men employed.

Work has continued steadily throughout the year on the co-operative principle.

\*Cool Creek Mine, Upper Mokihimi.\*—On account of fires the old mine was abandoned. Prospecting operations disclosed an outcrop on the north-western side, and adits are being driven to prove the area. A drive is also being put in at creek-level to work an area of coal known to exist in the old Mokihimii Mine. Four men are working this

put in at creek-level to work an area of coal known to exist in the old Mokimum Mine. Four men are working this area on the co-operative principle.

Celtic Mine.—Output about 8 tons daily. Three men employed. The coal is very friable and dirty. Stony bands and local faults disturb the seam. A cross-measure drift is being put through the fault on the higher side of the haulage to prove if the seam lives and is better on the other side.

Glasgow Co-operative Party's Mine.—This area adjoins the old State mine on the north-castern boundary. All work to the dip has been suspended for lack of a winch and pump. As soon as these are procured a new dip drive will be put in to work the dip area of good coal. Five places are being worked to the rise. The coal is of excellent quality. The places are being driven narrow, and the mine is in excellent order.

Quinn and Party's Mine, Mokihinui.—Output about 12 tons daily. An area of coal on the rise or north-western side of what is known as the old Calliope Mine (worked out). The seam thins in all directions with stony bands and rolls.

Black and Party's Mine, Seddonville.—This mine forms part of the State Coal Reserve. Only one working-place has been developed, the coal being about 5 ft. thick, and of a friable nature. The output is carted by lorry to the railway, about half a mile away.

St. Helens Mine, Seddonville.—This mine has not been worked during the year.

#### GREY DISTRICT.

Liverpool State Mines.—No. 1 Top Seam: During the year the whole of the output was won from pillar-extraction. The crosscut section was exhausted, and operations are now confined to the pillars along No. 3 bank. The coal-seam is very thick, about 30 ft. The roof is very tender, and pillar-extraction is difficult. As most of the old bords have fallen, the pillars have to be split longitudinally.

Morgan seam: The output is derived from pillar-extraction. Very little coal is left, and with steady work this

area should be exhausted early in March.

No. 2 Mine: During the year the output was derived from winning headings in the seams, of which there are three—Anderson, Kimbell, and Morgan, in order of being met with in driving the haulage-tunnel. The Anderson and Kimbell seams are really one and the same. The seam was crossed twice, due to a synclinal fold. All sections of the mine are in good clean coal except in the Anderson, where dirty stony bands intervene and the strike is ever changing. The Kimbell east and west sections and the Morgan east and west sections are inclined to be very gassy, and great care

The Kimbell east and west sections and the Morgan east and west sections are abstract to the coal is of good quality, but seems. This seam varies from 11 ft. to 20 ft. in height. In the east level the coal is of good quality, but very friable, with a tender roof. The incline headings going north are looking well, but the No. 1 east is thinning, the height now being only 9 ft. with a thin parting of stone, which will probably thicken as the driving continues. In the west level the strata is very highly inclined. The coal is of excellent quality, but the roof is very tender.

Morgan seam: On the east side the coal is very friable and wet. The grades are easy, and a good mudstone roof obtains. On the west side the inclination is steep. The coal is of good quality, with a fair roof.

No. 3 mine: Operations in this mine ceased in September, some pillars having to be left in to prevent any likelihood of slips occurring on the hillside above the storage-bins and screening plant.

No. 3 extended: Operations in this area were confined to pillar-extraction. As the mine was nearing exhaustion,

No. 3 extended: Operations in this area were confined to pillar-extraction. As the mine was nearing exhaustion, a few pillars were left in to enable a co-operative party to work a block of coal on the western side of Scott Creek.

A concrete stable for eight horses has been constructed at the No. 2 mine, also a new concrete magazine. The

A concrete stable for eight horses has been constructed at the No. 2 mine, also a new concrete magazine. The change-house has been added to to accommodate the large number of men employed at this colliery. The speed of the fan has been increased, and the quantity of air traversing the main airway is now about 100,000 cubic feet per minute. The old viaduct on the main incline haulage has been dismantled and a new one of tramway rails erected.

James State Mine.—The main heading in this mine is being driven three shifts. The coal at the face is about 5 ft. thick, with a good roof. The coal near the roof for about 18 in. is of good quality, but the remainder is very poor and mushy. On the west side four pairs of miners are employed. An endeavour is being made to get a drive in coal out to the outerop, so as to provide a drainage-tunnel and so do away with pumping of water from the higher ground, where pillaring is going on. On the eastern side pillar-extraction is going on. Oxidation of the pyrites in the lumps of stone thrown back is very evident. The heat generated has been dissipated by the cool air-current, and a brown coally substance remains.

brown coaly substance remains.

Blackball Mine.—During the year the output from this mine has been derived from Nos. 2 and 3 levels off No. 9 dip. On the third level three parallel headings are being driven—a water level, haulage level, and return level. The roof is friable. The pillars are small, and in consequence a lot of trouble is being experienced with the timber supports. Efforts have been made from time to time to get the management to increase the size of pillars, but they always say that the method practised in Blackball has been in operation for years. The rise from the bottom of No. 9 dip to the surface has been completed and serves as an additional intake. This should improve the mine-ventilation. A new electrical installation is in progress, and should be in operation early in 1927. The current will be generated at 11,000 volts, and stepped down to 400 volts for use underground. No serious fires have occurred during the year, for as soon as any heating takes place the area affected is sealed off. Owing to difficulties being experienced in coping with the water the development of the mine is in a backward state, but it is hoped that the new electrical installation will mean a big improvement in pumping efficiency and so enable a large area of ground to be opened up.

Paparoa Mine.—During the year the output was derived mainly from pillar-extraction. On the eastern side of the main incline five places in the solid are producing coal. A new return is being constructed for the west level, which should considerably improve the ventilation in this section. A new electrical installation is proposed, when the fan will be motor-driven. The ventilating system is being reorganized, and beneficial results are anticipated. In order to strengthen the pillars several old drives are being filled with debris. The mine is well timbered. Small quantities of gas have been found from time to time in the prospecting-drives in the west level.

Pobson Mine.—During the year operations have consisted of driving main levels, inclines, and dips in the seam Blackball Mine.—During the year the output from this mine has been derived from Nos. 2 and 3 levels off No. 9

C = 2.48

s used for keeping the dip clear of water. To the rise the main level going east encountered an abrupt change in the strike and forced the level heading down the hill, or in the direction of the dip of the seam. The level going west is almost to the boundary in good-quality coal. The inclines to the rise have reached the main fault, and preparations were being made to extract the pillars adjacent to the fault. Arrangements have been concluded between the management and the inspection staff to work the mine on the panel system, from which it is considered much benefit will accrue. Arrangements were also concluded to stonedust the mine as early as possible. During the year gas was found from time to time in many of the working-places. Timbering throughout was not up to the standard set by the other West Coast mines, but the management was gradually effecting an improvement.

On the 3rd December a disastrous explosion occurred through which nine men lost their lives. Four bodies were

recovered—namely, James Richards, deputy in charge; Robert Hunter, winchman; John Lindsay, miner; and Eric Ashton, trucker. Richards was dead when he was found, but the other three were alive. Hunter and Lindsay died shortly after being brought to the surface, and Ashton died in the hospital next day. Five bodies could not be recovered—namely, Thomas Black, James Marshall, Ernest Brammer, Alfred Noakes, and Edward Partington, miners. Owing to fires and a series of explosions the mine had to be flooded. To flood the mine effectually water was pumped from the Grey River. This took about ten days. The mine will remain flooded for a time to ensure that all danger

of fires is past.

Wallsend Mine.—During the year operations have been confined to unwatering the shafts and rise workings. shafts were unwatered by means of tanks. When the shafts were emptied and time allowed for the gas to drain off from the old workings, preparations were made to install an electric pump to deal with the water as it made. Preparations were then made to repair the shaft and arrange for unwatering the dip workings. It was decided to seal off the rise workings and concentrate on developing the area to the dip. Plans are in progress for railway-sidings, screening-plant, and storage-bins. A sirocco fan has been installed, and the area is to be worked on the panel system.

#### Co-operative Parties.

Boustridge and Party's Mine, Brunnerton.—This mine has been abandoned on account of the hillside slipping

Boustridge and Party's Mine, Brunnerton.—This mine has been abandoned on account of the hillside slipping away.

Allen and Party's Mine, Brunnerton.—All the top pillars having been taken out, and two pillars on the higher side of the level left in in the event of the party going for a big pillar lower down, it was decided to cease operations pending satisfactory arrangements being made regarding the lease.

Armstrong and Party, Dunollie.—Operations in this mine consist of pillar-extraction. The bottom layer of coal is about 5 ft. thick. The pillars are kept in a uniform line, and when a lift is taken up in a pillar in the bottom seam the props are drawn and the roof allowed to fall, thus enabling a fairly large percentage of the upper seam to be won.

Moody Creek Mine, Dunollie.—Faulting on both strike and rise of this area has greatly reduced the area of workable coal in this section, the third to be developed in this lease. Five places are being worked, the thickness of coal varying from 3 ft. 6 in. to 8 ft. The inclination of the seam is about 1 in 1½, and chutes are used to transport the coal from the upper workings.

Hunter and Party's Mine, Dunollie.—This mine only contains a limited amount of coal to be won, on account of faults crossing the area. The workable area is really a pocket surrounded by faults. Prospecting operations are in progress beyond the faults. One borehole put down during the year on the western side of a dip heading that is being driven in 2 ft. 6 in. of clean coal.

Brae Head Mine, Dunollie (Boote and Party).—Development in this mine is now confined to the dip workings; five working-places producing coal. In the main dip heading the seam is split by a stone band. The seam thins going cast. The coal is of excellent quality.

Hillside Mine, Dunollie (Guy and Party.)—This mine having become exhausted, operations ceased towards the end of the year. Preparations are going on for opening up an area on the western side of the Seven-

Hillside Mine, Dunollie (Guy and Party.)—This mine having become exhausted, operations ceased towards the end of the year. Preparations are going on for opening up an area on the western side of the Sevenmile Creek, adjacent to Simpson and Party's Moody Creek Mine.

McIvor and Party's Mine, Dunollie.—The main dip having reached a fault, work in this direction has been stopped. Two levels were driven about 3 chains, and were abandoned on account of the coal being of poor quality and unsaleable. A few pillars of good coal were then extracted, and arrangements made to work an area of coal at the back or western side of the lease. The quantity of water encountered, together with a soft heaving floor, caused the party considerable expense.

Buddeley and Party's Mine, Dunollie.—This mine is part of the seam of coal worked by McIvor and party. The headings have reached the boundary, and the party have started pillar-extraction. A brick-kiln has been installed to supply the local market with bricks. The fireclay underlying the seam is of excellent quality for brickmaking.

installed to supply the local market with bricks. The fireclay underlying the seam is of excellent quality for brickmaking.

Manderson and Party's Mine, Dunollie.—Operations at this mine consist in driving a main dip heading in the bottom seam of the old No. 1 mine of the Point Elizabeth Colliery. The seam along the fault is about 5 ft. 6 in. thick and of excellent quality. A borehole was put down to drain off a certain amount of water which gathered in the old workings of the main seam, about 14 ft. above the present workings. This enabled the party to recover a few chains of coal to the dip and about 5 or 6 chains in width.

Smith and Party's Mine, Dunollie.—This party is working a small area of coal adjacent to the old rise workings of the No. 1 mine of the Point Elizabeth Colliery. A stone band has split the seam in two, the top section being about 3 ft. thick and the bottom section about 2 ft. thick. The places are being driven wide so as to allow of stowage where the stone band, about 2 ft. thick, is being brushed to make height.

Duggan and Party's Mine, Revanui.—This party is working a small area of coal on the south-eastern side of the worked area known as the 3A Section of the Liverpool Colliery. There are two thin seams, and the quality of the coal is variable. The height of the seams averages about 5 ft. 6 in. The roof is of fireclay, and necessitates close timbering.

quality of the coal is variable. The neight of the scales with a scale with a necessitates close timbering.

Spark and Party's Mine, Rewanni.—The workings in this mine are still proceeding in a northerly direction. The area is on the southern side of what is known as the No. 2 mine of the Liverpool Colliery. The seam is here split by stony bands, and the thickness of coal averages about 5 ft. 6 in. Five single places are being worked. The trucking in this mine is becoming expensive.

McNeill's Mine, Rapahoe.—This is an area of coal on the Grey-Barrytown Road, in the vicinity of the ten-mile peg. During the year McNeill sold out, and the mine is now being worked by R. Marshall and W Page. Four men are employed. The seam is about 4 ft. thick with thin stony bands.

#### INANGAHUA DISTRICT.

Reefton Coal Company's Mine, Burke's Creek.—The work of driving the main dip has been stopped to allow of a sump being constructed to drain the water away from the main hanlage. The level on the left has been continued through the fault and good coal struck. A few places are being opened up. In the level to the right three places are being driven double-shift. The amount of water given off from the strata and the number of small faults met with is causing a lot of trouble to the management and expense to the company. The fire

area is still active, but under control.

\*Calliope Mine, Murray Creek.\*—A company was formed to work this area on a large scale. Plans were in progress for an aerial tramway to deal with the output. A survey was made, and then operations ceased. A portion of the area was let on tribute. The party are working along the outcrop. At present three small drives are producing coal of good quality. No definite system of working is being followed.

49

Phænix and Venus Mine, Murray Creek.—Owing to fires the old mine had to be abandoned, and the party are working a small block of coal on the dip side.

Golden Point Mine, Reefton.—This mine has done very little during the year. A certain amount of prospecting work through the fault showed coal of an inferior quality. A few places were opened up. The mine has not worked during the later part of the year.

New Big River Mine, Big River.—Only two men are employed. The coal is extracted by the stoping method. Only a small amount of coal remains to be won.

Morrisvale Mine, Burke's Creek.—In the old mine operations ceased on account of the fire. It is the intention of the owner to prospect through the fault to the dip. The fire is still active, but apparently under control. The owner has also sublet portion of his area to a small party who are at present driving on the coal to ascertain the extent of the seam. In addition to subletting the above portion of his lease, the owner, W. J. Morris, has sold about 30 acres to a party of miners who are operating the mine under the name of the Matchless Syndicate.

Matchless Syndicate's Mine, Burke's Creek.—This is a small portion of the Morrisvale area bought from W. J. Morris by a small party of miners. Levels, two in number, and 40 ft. apart, are being driven on the seam to ascertain the extent and quality of the seam. So far the coal is of good quality. Incline headings will be driven off these levels to the rise, and if the coal continues good a fair area should be opened up.

Waitahu Mine.—No coal has been produced at this mine during the year.

Reddale Collieries, Burke's Creek.—The Reddale Company acquired an interest in each of these, and is now working them as one concern.

Empire Mine.—No coal has been won from this mine during the year.

working them as one concern.

Empire Mine.—No coal has been won from this mine during the year.

Lishman's Mine.—This mine has been the subject of many fires, and the whole area to the rise has had to be sealed off. These fires are really due to bad systems of working. The management now realize that a better system of work will have to be adopted if they wish to make a success of their mines. To this end the old workings are to be abandoned and the new areas laid out on the panel system. The panels are to be about 4 acres in extent; barrier pillars, 90 ft. wide, with no more than three openings to each panel. This will be a decided improvement on the methods at present employed on the Reefton fields.

Woodlands Mine.—This is only a small area, and when the present work is completed the remainder will be worked on the panel system.

Clele Mine, Merrijigs.—Several faults have been crossed in this mine and the outcrops reached to the rise.

worked on the panel system.

Clele Mine, Merrijigs.—Several faults have been crossed in this mine and the outcrops reached to the rise. This has considerably improved the ventilation. The extraction of pillars in this area will soon be finished, and a small area of coal to the dip has been opened up by means of a dip haulage, commencing near the mine-mouth.

Lankey's Creek Mine, Crushington.—The old workings in this mine have been abandoned, and an attempt is being made to work a small area of coal to the right of the main heading. The problem of extracting pillar coal is an acute one, due to the broken country, and also the habit of the parties in making the pillars too small.

Archer's Mine, Capleston.—Operations carried on by this party consist of putting drives in the hillside and working the coal in the immediate vicinity where the drive taps the seam. A main drive has in one instance been put in to cross the measures and cut the three seams which exist in this locality. The coal varies in thickness, and is of good quality. of good quality.

Doran's Mine, Capleston.—A small drive has been put in to work a part of one seam mentioned as one of the seams in Archer's mine. The seam is fairly steep, but the coal is of good quality, and about 6 ft. thick.

Coghlan's Mine, Capleston.—This mine has been adandoned for some time, but an attempt is being made by new owners to work the area on a large scale. Up to the end of the year operations consisted of getting the mine in working-order by laying roads and timbering the roadways. For the present a flume is being used to transport the coal to the roadside.

# NELSON DISTRICT.

Puponga Mine, Puponga.—Operations consist of developing a new section, but the seams do not look well on account of many stony bands. In the C section pillar-extraction is going on in good coal. The goaf is being packed with clay. Prospecting-work due west of the present workings has disclosed a seam of coal 4 ft. 4 in. thick, but going east the seam splits and thins.

North Cape Mine, Puponga.—Very little work has been done in this mine during the year, due to the seam thinning the proposal seams of the seam of the seams of the sea

Golden Bay Mine, Motupipi.—This mine was closed during the year.

Waikohatu Mine, Takaka.—This mine was closed during the year.

Clifton Mine, Takaka.—This mine was closed during the year.

O'Rourke's Mine, Murchison.—Operations consist of working a highly inclined seam, 2 ft. thick, by driving the level in the seam and working the coal from the rise on a wide face. The roadway is brushed, and the roof is good. Props are set at suitable intervals.

# FATAL ACCIDENTS.

Thirteen fatalities occurred to workmen employed in the coal-mines of the West Coast Inspection District during the year—one by fall of coal, one by runaway trucks, one by jig-prop pulling out, one by fall of stone, and nine by an explosion in the Dobson Mine.

On the 20th January a miner named Jack Brown met with his death while trimming down some top coal in his working-place in the north-east section of the Millerton Mine. Some coal fell and caught the deceased on the head, breaking his neck.

On the 20th May a deputy named John Evans lost his life through a rope-shackle breaking on the Evans Daylight eight-truck jig of the Millerton Mine. The full race broke away and ran into some empties at the bottom of the jig. These empty trucks caught Evans, who was standing about 12 ft. away.

On the 17th August a miner named James Outram met his death by a fall of stone at the Blackball Mine. The

On the 17th August a miner named John Birch, employed in the Morgan west section of the No. 2 mine,
On the 17th November a miner named John Birch, employed in the Morgan west section of the No. 2 mine,
Liverpool Colliery, received serious injuries to the body through a jig-prop pulling out and hitting him. He
succumbed to his injuries on the 26th November, 1926.

Succumbed to ms injuries on the 26th November, 1926.

On the 3rd December a disastrous explosion occurred in the Dobson Mine through which nine men lost their lives. Four bodies were recovered, and five are still in the mine, due to flooding having to be resorted to. The names of the four men whose bodies were recovered are as follows: James Richards, deputy; Robert Hunter, winchman; John Lindsay, miner; Eric Ashton, trucker. The names of the five men whose bodies are still in the mine are as follows: Thomas Black, miner; James Marshall, miner; Ernest Brammer, miner; Alfred Noakes, miner; Edward Partington, miner.

#### SERIOUS NON-FATAL ACCIDENTS.

On the 16th February a miner named Martin Cullen fractured his leg jumping off a ladder in his working-place in Evans Daylight section of the Millerton Mine. A piece of coal fell some distance away from him and he jumped

On the 16th February a trucker named C. G. Curtain, working in No. 2 mine of the Liverpool Colliery, was cleaning up the flatsheet when a small piece of coal fell from between the laths overhead and hit him on the head, causing slight concussion. No marks could be found. He was all right next day.

On the 17th February a miner named J. Meikle, employed in the Blackball Mine, had a bone in his leg fractured by a piece of coal falling from the face. He was pulling down a piece of coal from the face, and in stepping out of the way his trousers caught a projecting rail, and about 1 cwt. of coal struck him on the ankle.

On the 26th February a miner named George Forbes met with an accident while putting stringers over a set.

A fall of coal occurred while the operation was going on and caught Forbes on the arm and back. The arm was fractured and the back all bruised.

On the 24th May a miner named James Blanc had his forearm fractured while engaged at the coal-face in the

Dobson Mine. His mate was trimming the roof, and Blanc was leaning on his shovel, when a small piece of coal fell

from the roof on his arm and fractured it.

On the 15th October a miner named George Higham ignited a small quantity of gas in his working-place (a split in a pillar) in the Kruger section of the Ironbridge Mine of the Denniston Colliery. He was burnt on the arms and side of face.

On the 5th November a youth named Eric Hanstock tripped over a trailer and received a greenstick fracture of the small bone of the right forearm whilst coupling a set of trucks in the Deep Creek section of the Ironbridge Mine, Denniston Colliery.

On the 12th November a miner named Frank Tinning sustained a simple fracture of the left leg by a fall of coal from his working-face in the Dobson Mine.

#### DANGEROUS OCCURRENCES UNDER REGULATION 94 (1).

Dove's Mine, Seddonville.—On the 20th January the barrier between this mine and the old Cardiff collapsed and the fire entered Dove's Mine. Clay stoppings were erected and the fire controlled.

Millerton Mine.—On the 10th June a serious fire was discovered in Evans section of the Millerton Mine. Steps

Millerton Mine.—On the 10th June a serious fire was discovered in Evans section of the Millerton Mine. Steps were immediately taken to deal with it, as the fire was extending rapidly. Large volumes of flames were shooting to the surface through surface breaks, as the cover is shallow at this point. Several stoppings were burnt out in quick succession, the fire advancing in one instance a distance of 10 chains in two hours. By strenuous efforts all roadways leading to the fire were blocked with wood and clay stoppings sixteen hours after the outbreak. The following sections comprise the fire area: Evans Pillar section (completely lost); Evans Daylight section (completely lost); Dutton's section (completely lost); No. 1 dip section (partly lost). As soon as the fire could be controlled arrangements were made to seal off the area with brick or concrete stoppings.

Ironbridge Mine, Denniston Colliery.—On the 15th October an ignition of gas took place in a pillar in the Kruger pillar section of this mine, whereby a miner named George Higham received slight injuries to arms and face.

Millerton Mine.—On the 25th December the fire broke over No. 15 stopping in the fifth west section of this mine. Stopping was repaired and fire checked same day.

#### PROSECUTIONS.

On the 23rd February an underviewer was convicted and fined £1 and costs for using abusive language to a

on the 23rd recruary an underviewer was convicted and fined £1 and costs for using abusive language to a workman. The information was laid under Special Rule 57.

On the 24th March a mine-manager was convicted and fined for employing an engine-driver who was not a duly certificated person in terms of section 31 (2) of the Coal-mines Act, 1908; also for failing to appoint one or more competent persons to act as fireman-deputies of the mine in terms of Special Rule 22, Coal-mines Act, 1908. Fined £1 and costs in each instance.

On the 24th March an engine-driver was convicted and fined because he acted in the capacity of engine-driver in charge of a winding-engine without the necessary certificate of competency in terms of section 31 (1) of the Coal-

mines Act, 1908. Fined £1 and costs.

On the 12th July a mine-manager was convicted and fined £1 and costs because he failed to appoint a competent person to examine a safety-lamp required to be used in such mine, as required by section 97 (a) of the Coal-mines

On the 12th July an owner of a mine was fined £2 and costs because he provided a safety-lamp of a type for the time being not approved by the Minister of Mines to be used by a person in the course of his employment in such mine, as provided by section 96 of the Coal-mines Act, 1925.

On the 12th July an acting-deputy was fined £1 and costs because he failed to make a full and accurate report as

On the 12th July an acting-deputy was fined £1 and costs because he hand a full and accurate report as to the condition of the mine, as required by section 128 (1) of the Coal-mines Act, 1925.

On the 12th July an acting-deputy was fined £1 and costs because he used in the course of his employment in such mine a safety-lamp, provided by the owner, of a type for the time being not approved by the Minister of Mines, as provided by section 96 of the Coal-mines Act, 1925.

On the 12th July an acting-deputy was fined £1 and costs because he used a safety-lamp that had not, since last in use, been thoroughly examined at the surface by a competent person appointed by the manager for the purpose and found by him to be in safe working-order and securely locked, as provided by section 97 (a) of the Coal-mines Act, 1925.

#### SOUTHERN INSPECTION DISTRICT (Mr. GEORGE DUGGAN, Inspector).

#### Coal-output.

Coal-output.

The output for the year, 463,974 tons, is a decrease of 27,222 tons compared with that of 1925. The increased use of electrical appliances for heating and cooking has resulted in reduced outputs from the Central Otago, South Otago, and some of the Southland mines. In Canterbury and North Otago there were slightly increased outputs, these increases being 339 tons for Canterbury and 1,158 tons for North Otago. The decreased outputs were: Central Otago, 652 tons; Southland, 7,181 tons; and South Otago, 20,886 tons. From the Jubilee Mine 4,778 tons less were produced than during 1925, and 5,665 tons less at the Taratu Mines. The decrease at the Kaitangata Mines was 9,585 tons, and owing to financial difficulties the New Zealand Coal and Oil Co.'s mines had to cease operations a week earlier than usual, the company being then unable to pay the wages due. Pumping and repair work has continued since, but coal-winning has not yet recommenced. Owing to labour troubles, which commenced about the middle of the year, the number of miners employed at the Black Diamond Mine was reduced from twenty to eight, and in consequence the output was reduced by 4,983 tons. Apart from this the year has been practically free from stoppage through labour troubles. The lignite-mines at Mataura show a decrease of 7,084 tons, whereas the mines of Ohai and Nightcaps produced 200,402 tons, as compared with 198,691 tons, an increase of 1,711 tons for the year. It is pleasing to report that most of the slack produced in the Ohai field is now being sold to various cement and gas works. gas works.

Mount Torlesse Mine.—The main dip in the section opened out last year west of the old safety-lamp area met a large downthrow fault when about 5 chains from the entrance. The seams met in the main dip were almost perpendicular and very thin. A little thick coal was worked to the east, but the area of workable coal proved very small. Towards the end of the year only four places were being worked. One of these was near the fault met in the main dip, and the others were in the upper east levels. Sales were slow even during the winter months, as over 200 tons had to be stored for many weeks alongside the railway-line. The flood of 1st November did much damage to the surface haulage-road alongside the north bank of Broken River. About 2 chains of the formation was washed away near Stony Creek (near the foot of the endless-rope road), and another couple of chains of formation also further up the river. A large concrete block which was supporting the rails of the surface jig across the river was shifted and broken.

51

Austin's Claystone Mine, Sheffield .-- The pillars are now being worked back on the south side of the main The main dip is stopped, as also are the places on the north side, as the claystone pinched dip haulage road.

out there.

Homebush Minc.—Development has proceeded in the engine seam area, and the main dip, driven at a grade of 1 in 3, is now down 7 chains. Owing to the large inflow of water caused by the heavy rains of November the dip was temporarily stopped. In the bottom north level the coal thinned slightly, but it is of very good quality. All the south places met faulty coal when only a few yards in from the dip, so they were stopped. The upper north level met an old drive in former workings. As this place is connected to an old air-shaft the natural ventilation was considerably improved. A new surface jig was made, giving a more direct route to the main surface transway. Work was resumed towards the end of the year in the claystone drive, and two miners are now employed there.

Bush Gully Mine.—The 3 ft seem having thinned and the middle stone thickening the pillars are now

drive, and two miners are now employed there.

Bush Gully Mine.—The 3 ft. seam having thinned and the middle stone thickening, the pillars are now being extracted in this small mine. Another level is being driven which will give another line of pillars below those now being worked back.

St. Helens (Whitecliffs) Mine.—A new dip, 6 ft. by 5 ft., was driven south of the section which had to be sealed off last year owing to an underground fire. This dip is now down 3 chains at a grade of 1 in 3, and is close-timbered owing to the very heavy country met. At the present face the miners holed into an old level which was full of black-damp.

Steventon Valley Mine.—Two miners commenced operations on a small area north of the St. Helens Mine. A level has been driven to the south-east, and when 80 yards in it pierced a seam 7 ft. thick dipping almost due south. A few places have been driven on the east side, but they met old workings when about a chain in. On the west side a downthrow fault was struck only 10 yards from the level. The miners intend driving another level from the surface on the west or downthrow side of the fault. They anticipate getting a fair area of workable coal in that direction.

Clearview Mine.—Owing to the short distance between the large fault met in the main level and the

area of workable coal in that direction.

Clearview Mine.—Owing to the short distance between the large fault met in the main level and the known break in the hill ahead no attempt has been made to cross the fault. The first working of the rise coal will soon be completed. Three places are now being worked off the last inbye incline. Two of these were in very soft coal, but that in the third one was clean and hard. A considerable area of coal should exist to the dip of the main level. Haulage and pumping gear would have to be purchased before it could be worked.

Tripp's Mine.—Except\( for\) one pillar and some top coal above the main haulage-road the lower workings of this mine are finished. A drive has been put in about half a chain from the opencast area where the upper part of the seam was formerly worked. The new drive, commenced last year, did not reach the seam. It was flooded by heavy rains early in the year and has not been unwatered since.

Burnwell Mine.—There was no output during the year from this mine. Towards the end of the year preparations were read for working the giller and on the earth.

were made for working the silica sand on the area.

Albury Mine.—The mine-fire has been well cut off on the north side from encroaching upon the traffic road. Acuting 22 yards long was made, and continued as a tunnel through the clay overburden to the bottom of the middle seam. The owner continued working the coal west of this tunnel, but the fire worked around behind him in the middle seam, and it is still active there. He had to abandon trenching, and has since broken away a place to the west, out of the tunnel, and about 15 ft. from the fire. This place is in the top seam with about 19 ft. of coal below it, and he intends picking up the middle seam and pumping water from a creek to check the fire while he is doing so. The fire is about a dozen yards from the traffic road, and it may manage to cross to the road in the unworked coal

Woodbank Mine.—There was no output during the year from this small pit.

Allanholme Mine.—Two men have been employed throughout the year in the east level area, where the coal inues of good quality. The proposed new main dip haulage-road has not been commenced, evidently owing to continues of good quality.

lack of funds.

Bellemore Mine.—Miners were engaged, who drove 100 ft. into the faulted ground north of the main level, but without success in meeting any coal. Numerous small drives were put in and shafts sunk north and south of the creek, but all efforts proved futile. The small area first worked appears to have contained all the coal in the locality.

Ngapara Mine.—Three levels are still being driven to the north, and the places regularly undermined by handlabour. A plan of the airway is now posted at the mine-entrance.

Shag Point Mine.—This mine was again flooded during May, and owing to a large slip the new haulage-road collapsed. The level which was driven to the south-west met a downthrow fault of 6 ft. displacement. Another level was driven below, and a few of the pillars have been extracted. The electric power has been extended to the mine, and the underground pump is now driven by a 5 horse-power three-phase 400-volt motor. Another motor has been ordered, of 7½ horse-power, to drive the haulage-engine. Work is now confined to driving the dip which is going towards the seashore.

Shag Point Coal-mining Co.'s Mine.—During the early part of the year most of the output was obtained from places east and west of the long crosscut. In the middle section places were worked in coal 7 ft. thick, but split up by a stone band, 18 in. thick, in the centre. This stone thickens, leaving about 3 ft. of coal, which will probably continue to the old Allandale workings, only about 8 chains ahead. Off the top west level one place was worked in coal 3 ft. 9 in. thick. East of the long crosscut the coal rapidly thinned to less than 18 in. thick. Near the bottom of the main haulage-road a new dip has been driven almost due north a distance of 5½ chains. The coal is of very good quality, but is only 3 ft. thick, with a very tender roof. The face of the dip is about 15 chains from high-water mark. Pillars were worked during the year both cast and west of the long crosscut. Many "safety first" notices (painted on sheet iron) are now posted at the tunnel-entrance and at the bottom of the main dip. A good deal of attention has been paid to these notices by the workmen, with beneficial results.

Gimmerbura Pit.—No coal having been produced for some time, the lease was determined in November.

has been paid to these notices by the workmen, with beneficial results.

\*\*Gimmerburn Pit.\*\*—No coal having been produced for some time, the lease was determined in November.

\*\*Rough Ridge Pit.\*\*—There was no output during the year from this opencast pit.

\*\*Idaburn Pit.\*\*—The output has again decreased, and is now about half of that produced two years ago.

\*\*Alexandra Mine.\*\*—Pillaring was continued during the year, three men being employed. Near the bottom of the crosscut the goaf showed pronounced signs of heating in August, and two stoppings had to be immediately put in. Early in October the timber of the air-shaft gave way and the top portion fell owing to a large inflow of water down the shaft. A water-race, constructed by the Public Works Department, crosses the gully about 60 chains north of the shaft and at a considerably higher altitude. This race was completed three years ago, but no trouble was experienced at the mine until the inflow which caused the collapse of the shaft. It is claimed the inflow was caused by seepage from the race. After completing repairs to the air-shaft a narrow crosscut was driven about 5 chains down from surface and towards the return airway. The heated area mentioned above is now well under water.

\*\*McPherson's Pit.\*—Three hydraulic jets are now used for stripping away the heavy overburden, which in places

and towards the return airway. The heated area mentioned above is now well under water.

McPherson's Pit.—Three hydraulic jets are now used for stripping away the heavy overburden, which in places is 60 ft. thick. One of the jets is directed on to the old mine-fire, which is rapidly being cut off; there is now no trace of it near the traffic road. There is workable coal under Washpool Creek, which flows across the western side of the lease, but permission would have to be obtained to divert the creek before the underlying coal could be mined.

Water from this creek is used for irrigation purposes.

Shepherd's Creek Mine.—The pillars in the old mine are almost exhausted. A new drive was started about 7 chains south of the pillar section.

This drive, going almost due west, commenced as a level, but is now dipping at a grade of 1 in 7. The coal, 8 ft. to 9 ft. thick, containing two thin seams of clay, has been reached. This drive will command about 7 acres of unworked coal between the two sections of old workings.

\*Cardrona Pit.—No coal was produced during the year.

Nevis Crossing Pit.—The customary output was maintained from this small pit, used for local requirements. Doolan's Creek Mine, near Gibbston.—A few tons were mined early in the year, but owing to the cost of haulage over the mountain by drays it became unprofitable to continue working.

Anderson's Mine, Gibbston.—Early in the year a small shaft was sunk 12 ft. down from near the face of the main 

Jubilee Mine.—The No. 4 section was exhausted in August. In the No. 6 section the grade of the dip lessened until it eventually became level. A stone band came in 3 ft. from the floor. This band thickened, and the bottom coal thinned, so work was confined to the 5 ft. of coal above the band, which thickened to 6 ft. There appear to be a few acres of profitable work ahead in this section. In the No. 5 section solid work is still being done. When down about 3 chains the main dip holed into old workings. The dip was then deflected to the south, and is now approaching the Brighton traffic read.

3 chains the main dip holed into old workings. The dip was then deflected to the south, and is now approaching the Brighton traffic road.

Willowbank Mine.—Pillar-extraction is proceeding down the old dip section. The new east level, which is over 6 chains in from the surface, has only recently met the coal-seam. This level will be driven another 4 chains before a dip is commenced to the south-east to work the area cast of the downthrow fault met in the old workings. A few acres of rise coal can also be worked from the new level, as it is many chains from the East Taieri mine-workings.

Brighton Mine.—A severe thrust was showing on the pillars, and most of the travelling-roads were closing, so the two miners ceased operations during May. Very little more can be done unless a pump is procured and the dip extended.

Waronvi Mine.—Development in the lower seam proved very disappointing, and only three miners are now employed there. Most of the places in the south-west side of the dip proved low coal. In most of them the lower 3 ft. were soft and mushy and contained many floating boulders. In the No. 2 extension heading (going north-east) one huge boulder reduced the height of the coal on the west side to only 12 in. Owing to the liability of heating

one huge boulder reduced the height of the coal on the west side to only 12 in. Owing to the liability of heating one muge boulder reduced the height of the coal on the west side to only 12 in. Owing to the liability of heating occurring in the upper seam pillar workings the management was instructed to procure a ventilating-fan for that district, and one was installed in June. Heating occurred in July, or within a month of the fan commencing duty. Another place (the farthest inbye one to the south) also caused anxiety owing to heating during November. There is about a year's output in this area of pillars, provided none are lost through heating.

Crichton Mine.—The owner and his son are still working places off a pair of levels going to the north-west. The main level is now in 5 chains, but, being in rather soft lignite, it is temporarily stopped. The back level is also in soft and dirty coal, but is still being driven. A dip was commenced, to go ahead of the old workings. Soft coal was met, when only 9 yards down, so the dip was stopped.

was met when only 9 yards down, so the dip was stopped.

Taratu Mine.—Barclay's section: This was the only section worked during the year, and most of the output is now produced from pillar-extraction. The dip on the east side was stopped when only 4 chains down. The south places off this dip met stony coal, and the north places had only 2½ chains to go to reach the dyke. places off this dip met stony coal, and the north places had only  $2\frac{1}{2}$  chains to go to reach the dyke. The two lowest rows of pillars have been worked back, and the dip is now used as a sump, leaving the other two rows of pillars to be worked in the future. The south-side workings reached outcrop coal early in the year, and the pillars were then worked back. A few solid places are still being driven on the west side, but these are nearing the fault, and will soon be stopped. Two places were driven on the east side through a barrier pillar. Throughout the year heating has been very pronounced near the mine-entrance. Over many of the timber sets boiler-plates were laid, and bags of sand then placed over these plates. Two short bores were later drilled into the heated mass, and water from the dip was pumped into these boreholes. This was successful in reducing the temperature. It is imperative that new development work as the proposed dip drive to the lower comms in the error heatened and short section and Barrier's section.

—such as the proposed dip drive to the lower scams in the area between the old shaft section and Barclay's section—be soon commenced, otherwise the Taratu Mine will be short of supply within three years.

Trackitoto Mine.—A 20 ft. roll was crossed early in the year in the development east of the main dip haulage-road. Two miners are now working there in good clean coal with about 40 ft. of coal overhead. A new multibular boiler has been purchased, and will soon be in use, to generate steam for pumping and haulage.

Kaituna Mine.—Early in the year a small quantity of coal was extracted from pillars in the dip area. The main dip has since fallen, and the mine is closed. The only work now being done is the splitting of a few pillars in the top-

Kaidale Mine.—No work has been done at this mine during the year.

Kaibrook Mine.—A small output was produced during the winter months, but nothing has been done since.

Kaitangata No. 1 Mine.—Development was continued in the Nos. 3 and 4 seams. In a heading going east from the No. 3 south workings a downthrow fault of 6 ft. was met. Beyond this fault a 6 ft. seam of hard coal (the No. 4 seam) was met. A place has been driven over 4 chains to the east in this seam. Headings have been broken away to the north, and are now in about 5 chains. The dip off the extension of the main haulage-road into this seam is now stopped. A level has been driven to the south and will connect with the headings mentioned. When this connection is made the dip will then be extended farther to the east. From a place off this level an upcast was recently started at a grade of I in 1. It is expected to pierce the main seam within 130 ft. A prospect drive going almost due north was put in from the main haulage-road to prove the unworked ground towards the Castle Hill area. This drive was was put in from the main haulage-road to prove the unworked ground towards the Castle Hill area. This drive was expected to rise and reach the surface in about 1,100 ft. if workable coal was proven en route. It was intended then to use this drive for a main return airway and thus do away with the need of the present air-shaft. The drive went level for 200 ft. then rose at a grade of 1 in 3 for another 220 ft., without proving any coal. A rise was then put up 38 ft. but only proved a 2 ft. seam, so the drive was abandoned and sealed off. The connection between the Nos. 1 and 2 Kaitangata Mines was completed early in the year, and the ventilation of portions of the No. 2 mine was considerably improved thereby. A few men have been employed at pillar work during the year in the No. 1 seam workings. workings.

Kaitangata No. 2 Mine.—The pillar section in the No. 1 seam workings near the main haulage-road became exhausted near the end of the year. In the north end of No. 1 seam workings four solid places are being worked. This is the only solid work being done in this mine. The pillars in No. 5 (McMillan's dip) section were extracted during This is the only solid work being done in this nunc. The philars in 180, a caregonal is up, seeded not call the year, and pillaring is proceeding in the seam to the west of McMillan's dip area and in the No. 4A seam workings to the north. A prospect drive was put in to the south from the main haulage-road and between Nos. 3 and 4 seam to the north. The analyses are bushes about 2 ft thick with I ft. of clay between, were followed for some time. Then a Two small seams, each about 2 ft. thick, with 1 ft. of clay between, were followed for some time. stratum of conglomerate was driven through and another small seam, 1 ft. thick, was met. The drive was stopped when 7 chains in.

when 7 chains in.

Castle Hill Mine.—A circuitous connection has been made through many large rolls from the 6 ft. seam to the main return airway. This new return will now permit the extraction of all the standing pillars in the main seam north of the main haulage-road. These pillars were formed many years ago, and should soon be extracted, as the coal is of good quality and there are thousands of tons available. A dip was recently driven a chain or so in the 6 ft. seam. It is now in fairly good coal, and a small workable area has been proved there.

Benhar Mine.—The south side workings having been effectively sealed off, and the main dip stopped in very faulted ground, development has been confined to work on the north side. A small section has been worked off a short dip a few chains north of the main haulage-road. The workings off the lowest north level are stopped. Means for air-reversal have been made, and the ventilating-fan is now driven by a three-phase electric motor; the haulage plant and pumps are also motor-driven. Two pumps are used, the lower one driven by a 3 horse-power motor and the upper one by 1 horse-power. The cables are taken to the pumps in proper conduit. A new dip drive has been commenced from the surface and about 15 chains from the present main haulage-drive. This new drive is down about 60 ft. at a grade of 1 in 4, and has passed through the No. 1 seam, which there is of poor quality.

Whiterig Mine.—A crosseut has been driven through some of the pillars on the west side of the main dip. This will be used as a continuation of the main haulage-road. Stone stoppings have been built in the old bord ends.

Green's Mine, Gore.—Work in the main dip was recommenced during the year. It was extended another 2 chains,

Green's Mine, Gore.—Work in the main dip was recommenced during the year. It was extended another 2 chains, but at first not reduced in size to the dimensions I required. Later, I was notified by the new mine-manager that the place would be driven lower and narrower than formerly. Development was continued in the levels and inclines south of the main dip. Samples of the mine-dust were collected and forwarded to the Otago School of Mines for analysis. All contained sufficient moisture and ash, so the roadways do not require treatment with incombustible 53

Glenlee Mine.—No further work has been done in the dip, and all the output has been won from the two levels to the north-west

Ramsay's Pit.—The stripping is kept well ahead at this opencast pit.

Argyle Pit.—Early in the year the output was obtained from 3 ft. of coal left on the floor of the pit during former workings. For many weeks water was in short supply, and a good deal of overburden requires to be sluiced away before any further coal is available.

McIver's Pit.—Worked for local supplies, and only a few tons produced.

Terrace Mine, Kingston Crossing.—A stenton was driven to the south-west off the main north-west level, and a back level commenced from this stention. As only an 8-yard pillar was being formed between the levels the owner was instructed to increase the thickness of this pillar to 12 yards. A new air-shaft has been sunk from the surface to near the face of the main level.

Princhester Creek Pit.—An opencast pit, worked for local requirements.

Lynwood Pit, Te Anau.—An opencast pit, the output being principally used on the steamer plying on Lake

Boghead Mine.—Only the levels to the north of the No. 2 dip are now being worked. This dip, going north-west, is now down  $4\frac{1}{2}$  chains. Stone stoppings are being built between the main haulage-road and the return airway. A plan of the mine-workings has been made by a licensed surveyor.

A plan of the mine-workings has been made by a licensed surveyor.

Mataura Liquite-mine.—All the northern places having reached the boundary, the production is now solely from the places to the south. As some very narrow pillars were being formed, the manager was notified that in future pillars must be not less than 12 yards square. It is proposed to sink a shaft from the surface to near the face of the main dip. When completed the ventilating-fan will be removed from its present position to there.

Larking's Pit.—This is an old openeast pit reopened during the year. Three men are now working there. The seam is 14 ft. thick, of which the top 10 ft. has been worked. A ditch is being cut to enable the bottom 4 ft. to be got. There is an overburden of 10 ft. of stiff clay. The seam dips to the north and pinches out on the cast side. They intend continuing the stripping up the gully, but I recommended a drive to the full dip of the seam.

Ota Creek Pit.—The customary small output has been maintained during the past year. The lignite became too thin on the cast side of the pit, so the owner recommenced working on the west side. There is about 6 ft. of stripping with 5 ft. of lignite beneath.

with 5 ft. of lignite beneath.

Clarke's (Wyndham) Pit.—The stripping of this pit, close to the town of Wyndham, was kept well ahead of the coal-getting. No work has been done at this pit since September.

Diamond Lignite-pit.—This pit has been made about 15 ft. deeper, and a second lift, of about three-years' supply,

is now being worked.

Broomhill Mine, Nightcaps.—The two miners continued extracting the few remaining pillars alongside the dip until October, when heavy rains flooded the mine. The pump at the dip-bottom was lost, and the mine was abandoned. Black Diamond Mine.—No work has been done beyond the large downthrow fault met in the south workings, and all the production for the year was obtained from the northern levels, several of which are now stopped, having reached within a chain of the boundary of the lease. A little coal was found about 3 ft. below the floor near the bottom of the dip, so, to prove if it is workable, prospecting will soon be done there. The bottom east level has reached troubled ground, apparently a washout, and a couple of places above have also reached this washout, which appears to be the some trouble as that which cut off the dip, so it has circled from the east side to the west. The places going south have not yet met this trouble, but are expected to do so soon. To keep the miners in constant employment a large quantity of surplus coal was stacked on the surface last summer. This was disposed of towards the end of the year. Owing to labour troubles only eight miners were employed during the second half of the year instead of about twenty. The

to labour troubles only eight miners were employed during the second half of the year instead of about twenty. The concrete bathhouse is now in daily use.

\*Wairio Mine.\*\*—A small area of coal was stripped on the hillside west of the Nightcaps-Ohai traffic-road. Later, three drives were put in. The coal in the middle one was at first 8 ft. in thickness, but thinner in the other levels. It became very dirty, and the few pillars which had been formed were extracted. A further outcrop has been found lower down the hillside.

\*Mossbank No. 1 Mine.\*\*—About the middle of the year the main winning-places in the lower seam entered land sublet from the Wairaki Coal Co., and to the east of the 20-acre lease held by the Mossbank Coal Co. South of the main drive very little work has been done, the coal becoming very dirty, and only two prospecting-places are now being driven in that direction. On the north side many of the places have reached a large washout running south-west, and these also are stopped. The main dip drive is now in 28 chains and within 7 chains of the Ohai School site. The cover being very shallow, most of the places are damp. No sign of inflammable gas has been found in this mine.

places are now being driven in that direction. On the north side many of the places have reached a large washout running south-west, and these also are stopped. The main dip drive is now in 28 chains and within 7 chains of the Ohai School site. The cover being very shallow, most of the places are damp. No sign of inflammable gas has been found in this mine.

Wairaki No. I Mine.—The main dip is stopped about a chain from the boundary of the Ohai Township. A large upthrow fault was met, presumably the same as that met in the No. 4 cast level, where prospecting proved it to have a displacement of 38 ft. A pair of levels will shortly be driven on the east side through this fault. In the No. 2 cast places the coal is rather stony, but varies quickly in quality. In Nos. 1, 3, and 5 west level sections development is proceeding in coal of good quality. Preparations are well in hand for building a brick and steel overcast on the main haulage-road a few chains down from the surface. When completed the Sirocco ventilating-fan purchased from the New Brighton Coal Co. will be installed. A commencement will then be made to extract the upper east pillars. Brick stoppings have been built between the main Intake and main return airways, and wooden stoppings have replaced most of the temporary cloth ones, so the ventilation is considerably improved thereby. A water-gauge and automatic indicator have been connected to the fan now used. These instruments are in the deputies' cabin and handy for reference. Several of the trucking-roads have been treated with incombustible dust. An eight-cubicle bathhouse was built near the No. 1 mine-entrance, and since its opening it has been much used by the underground employees.

Wairaki No. 2 Mine.—A few miners are still employed at pillar-extraction both on the cast and west sides. Linkon Mine.—No. 4 dip section: The places in the upper workings of No. 1 level south are being driven immediately over the lower workings of this panel were completed in August, but pillaring has not yet commence

Early in the year a little prospecting was done at the face of the dip. A little coal was found rising steeply as though approaching a large downthrow fault. A good deal of inflammable gas was given off in this place, which fell in later after work was stopped there. A borehole was then put down from the surface about 15 chains south-west of the face of the dip. Trouble was experienced in drilling, and the hole had to be cased. It was stopped at 603 ft., no workable coal having been pierced. Then four boreholes were put down on the flat near the Morley Stream and north-west of the mine-entrance. The first of these (No. 2 hole) went through two small seams near the surface and was stopped at 180 ft. down. These two seams were also pierced in No. 3 hole. No. 4 hole met 9 ft. of coal at 33 ft. from the surface, and No. 5 hole passed through two seams, 5 ft. and 6 ft. respectively. It is intended to put another deep hole down a few chains due south of the face of the dip. Sale is now being found for all the slack produced.

Ohai Coal Co.'s Mine.—The solid workings were completed early in the year, so the output has chiefly been from the small area of pillars. These will all be extracted within twelve months. Almost due north of the crosscut and about 3½ chains from the large downthrow fault met there a borehole is being put down from the surface. It is now down 420 ft., but the thick seam proved by the Linton boreholes must still be below the bottom of this hole.

Black Lion Mine.—In the east side places in the main workings the coal thinned to about 1 ft. and in the

Black Lion Mine.—In the east side places in the main workings the coal thinned to about 1 ft. and in the west places the coal became very soft and unsaleable. A prospect tunnel was driven in the hill to the west and about 10 chains from the main workings. This drive proved 7 ft. of clean coal, which appeared to be the seam worked in the main seam section of the Linton Mine. About 17 chains north of the main workings a dip section was recently opened. This is 3 chains north-east of Clapps' old opencast pit. This dip section is called "Ross's drive," and is dipping at a grade of 1 in 3. The coal is fairly hard and about 9 ft. in thickness, but it is full of dirty clay backs, so does not sell very readily. A few short boreholes were put down near the Morley Stream. These proved two seams, the upper from 5 ft. to 6 ft. thick and the lower one from 7 ft. to 10 ft. thick. A small shaft was sunk to prove the value of the lower seam. When down 30 ft. they could not cope with the inflow of water, so below the shaft they bored into a 10 ft. seam. They are now preparing to put down a dip to the north at a grade of 1 in 4 from the north bank of the Morley Stream. A fine electric haulage plant was purchased to haul the coal from the valley to the screening-plant at the railway-siding. The three-phase 50-cycle A.C.E.C. motor is rated at 55 brake horse-power. The screens, 20 ft. long with § in. mesh plates, will also be motor-driven.

Morley Collieries Ltd.—No work has been done on this area during the year. The two drives were stopped owing to lack of funds when only a few feet in.

# FATAL ACCIDENTS.

Linton No. 2 Mine.—On the 2nd October a miner named Anthony F. Francis, aged thirty-nine years, wandered

Linton No. 2 Mine.—On the 2nd October a miner named Anthony F. Francis, aged thirty-nine years, wandered into the return airway and into an overcast leading to a small panel of workings where the solid work had recently been completed. The overcast was full of firedamp, and Francis was suffocated by the gas, his body being found two hours later by a party of rescuers, two of which were also overcome by the gas, but quickly recovered. Medical evidence showed that Francis must have had a severe spasm of the glottis immediately after entering the body of gas. Kaitungata No. 2 Mine.—On the 15th October, a miner named George White Hosking, aged thirty-eight years, was instantly killed by a large fall of stone which occurred in his pillar place. He and his mate were taking a narrow lift up a pillar, and the roof becoming drummy they were instructed to cease working there and commence on the pillar on the low side of the road. This they did, having taken out a width of 6 ft. when the fall occurred. The place was timbered by props, but they were all swung by the fall. The body was recovered two hours later, nearly every bone being broken.

#### SERIOUS NON-FATAL ACCIDENTS.

Jubilee Mine.—3rd February: John Kelly, miner—fracture of the pelvis caused by a fall of stone in a low

pillar place. The prop which supported this stone prior to the fall had swung out.

Linton Mine.—5th May: James Neylou, miner, was struck by a fall of coal from the roof, causing a compound fracture of the left ankle-joint and fracture of both bones of the left leg just below the knee. He was filling a tub

fracture of the left ankle-joint and fracture of both bones of the left leg just below the knee. He was filling a tub when about 2 tons of top coal fell on to the coal already lying from a shot, and some of it struck him.

Kaitangata No. 2 Mine.—7th June: James Green, miner—fracture of the left scapula. He and his mate had just commenced a new lift off a level. A prop had been put up to the roof, and a large lump of coal rolled or fell off the face, knocking out the prop, which in falling struck him on the shoulder.

Kaitangata No. 2 Mine.—19th August: Albert Rogers, miner—injury to back and fracture of the left leg caused by a fall of coal falling from the roof and knocking out a prop. Either the prop or some of the coal struck him.

Kaitangata No. 2 Mine.—2nd September: Henry West, miner—injury to spine. Whilst trimming down tops he jumped back and fell backwards on to the top of a short prop which was sticking up above the loose coal.

Linton Mine.—20th September: Hugh McTague, miner, sustained a fractured clavicle and severe scalp wound by a fall of coal in his pillar place.

by a fall of coal in his pillar place.

Black Diamond Mine.—16th October: George Tinker, company-manager, employed as a miner, received severe cuts on the head and chest by a fall of coal from the rib of the place in which he was picking up bottoms.

# DANGEROUS OCCURRENCES NOTIFIED UNDER REGULATION 94 (1).

—A new dip was driven west of the main seam workings, and crossing a fault shortly after it was Linton Mine.—A new dip was driven west of the main seam workings, and crossing a fault shortal after it was broken away. When it was down 1½ chains a place was driven to the south, and off this place a back heading was driven to the rise for a return airway. Inflammable gas accumulated in this back heading when it was up 42 ft. The two miners working there (Joseph Moffat and John Humphries) were instructed the previous day by the underviewer to use safety-lamps. Despite this Humphries carried a naked acetylene-lamp into the place, causing an ignition of the accumulated gas. Both men were severely burned about the face and arms, and later John Humphries was prosecuted by the miner-manager. He was convicted and fined £3 and costs. In compliance with section 95 (1) (b) of the

Coal-mines Act, 1925, safety-lamps were then installed in the mine.

Waronui Mine.—6th July: Smoke was discovered when cleaning out an old bord which was driven about twenty years ago in the No. 2 section of the No. 1 mine. The bord was full of loose coal and dross, which was being filled away. The place was stopped off.

Kaitangata No. 1 Mine.—8th July: Owing to indications of fire at 10.30 a.m. in the south side of No. 4A seam workings the men were withdrawn and the section effectively sealed off by 3 p.m.

Wairaki No. 2 Mine.—23rd September: In a place in the goaf on the west side near the bottom of the dip a large fall showed slight signs of heating. This was stopped off and the adjacent pillar-extraction hastened to permit the

mine-water to rise and flood the area.

Waronui Mine.—2nd October: Fire was discovered in an old heading being reopened in No. 2 section of No. 1 mine and about 200 ft. from where the previous heating occurred. It was of small extent, and was sealed off.

Waronui Mine.—24th October: Another incipient fire was found in the old workings of the No. 1 mine, which were being reopened. This started in an old level which was standing full of dross. The heated coal was filled out.

# PROSECUTIONS.

On the 17th May a mine-manager prosecuted a miner for disobedience in carrying out instructions given for the safety of the mine. He was convicted and fined £3 and costs.

On the 7th June a deputy, who was also the authorized shot-firer, was convicted and fined £1 and costs for deputing miners to fire a shot in their working-place. A further count against him was withdrawn.

# ANNEXURE B.

COLLIERY STATISTICS, 1926.

COLLIERY STATISTICS, 1926—continued.

7. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	1	Titles held	Name of Mine		er of Classification		Thickness		shafts.	Totai Output to	Total Output to	Number of Persons ordinarily employed	f Persons employed	Means of	Depth of Shaft
Name of Mine and Locality.	scanty.	(crown nease or otherwise).	Manager.	name and Address of Owner.	Years v	Numb Seams 7		ground working. Z	Winding Output 1926.		31st December, 1926.	Above.	Total.	Ventilation.	Length of Tunnel
					WEST COAST	ST INSPECTION DISTRICT—continued.	STRICT—contin	ued.	:						
Buller District—continued. Dove's	ned. :	Crown lease	Gilbert & Dove	J. T. Dove, Seddonville	6 Sub - bit	bitu- 3 3' to 20'	10,	Bord and	Tons 15,569	Fons. 94,396	Tons. 109,965		15 18	Fan & nat.	S. 72'.
Coal Creek Cardiff Bridge	::		Wm. Smith M. Forsyth	McGuire & party, Seddonville Cardiff Bridge Co-op. party, Westport	11 Ditto 6 ""	1 5' to 20'	8,	Ditto	1,158	8 69,647 1 56,711	70,805 84,472	: ' '	32 37	Natural Fan	::
Westport-Mokihinuj	:	:	H. Monagan (P.)	II.		1 5' to 15'	Full height	:	5.74					Na.	. T. 16 ch.
Quinn's	: : :			Quinn & party, Seddonville	- on on	407			3,49	1,659		: :	11000		T 3 ch:
Glenlea Clydevale	::	State reserve Crown lease		Black & party, Seddonville Clydevale Coal-mines, Ltd., Seddon-	ଧ୍ୟ	$\begin{array}{c c} & 1 & 5' \\ \hline & 1 & 5' \text{ to } 20' \end{array}$	10,	::	1,369		1,447		20 23 20 23		T. 3 ch.
Glasgow Mitchell's	::	: :	J. Q. Niven F. T. Mitchell (P.)	R. McAllister, Seddonville F. T. Mitchell, Charleston	2 Lignite	1 6' to 12'	Full height	P. & S. Opencast	4,808	2,652	$\substack{7,460\\81}$	∞ ⊢	 	8 1 Opencast	* * *
:::	:::	: : :	J. W. Sweeney G. N. Warne L. McGrane (P.)	J. W. Sweeney, Charleston G. N. Warne, Charleston McGrane & party, Seddonville	sub -	bitu- 1 5' to 9'	Full height	Bord and	14 12 12 2,552		14 12 4.983	—— ———————————————————————————————————			T. 6 ch. :
Westportmain	:		Thos. McGhie	Westport-Granity Coal-mines, Ltd.,	minous 2 Ditto	s 1 20′	10′	pillar Ditto	23,076		28,874	16	25 — ±1	: :	v.
Harris's Whitecliffs	::	Freehold Crown lease	John Harris (P.) J. H. Burley (P.)	Westport John Harris, Karamea J. H. Burley, Berlins	4 Lignite	1 9' to 12'	5,	::	13		13 529				T. 20'. T. 6 ch.
Rocklands	:	:	J. P. Burley (P.)	Walker Bros., Rocklands	- - -	_	; %	: "		<i>∞</i>	9,029	:			.;
Reefton District.	: :	Crown lease	N. Collins (P.)	Collins & Kearns, Reefton	34 Brown	1 30′	: &	Bord and	1,338	8 55,052	56,390		61	3 Natural	. T. 7 ch.
Reefton Coal Co	:::	:::	W. Wood C. Curtis (P.) W. E. Fattorini (P.)	Reefton Coal Co., Wellington Pascoe & Alborn, Reefton Big River Gold-mining Co., Reefton	25 40 14 14	6, to 8,		Ditto	17,725 4,061 1,080	5 133,196 1 23,995 0 11,337	150,921 28,056 12,417	#T :	36 50 5 12 2 2	Nat. & fan Natural	T. Sch. T. 1,650'. T. 8 ch.
Morrisvale	:	:		W. J. Morris, Keerton		24		Bord and pillar	6,38			oo .			. T.'s 73 ch.
Lankey's Creek Reddale Coghlan's	:::	Freehold	:::	Nicholl & Ecklund, Black's Point Reddale Colliery, Ltd., Ch'ch J. Banks, Reefton	30 30 30	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<u> </u>		3,524 3,524 139	6 4,069 4 22,835 9 11,660	4,905 26,359 11,799		4 7 2 	2 2 2	. T.'s 18 ch.
Archer's Caliope	::	lease	P.)	F. W. Archer, Capleston Caliope Coal Co., Christchurch	20 20 W	4 10' to 18' 2 4' & 8'	16' Full height	::	16			c1 —	\$0 01 F		. T. 6 ch.
White Rose Lockington's Golden Point	::::		W. Osborn (P.) E. F. Lockington (P.) B. Alison	W. Osborn, Merrijas W. Osborn, Merrijas E. F. & G. G. Lockington, Reefton T. S. Patterson, Reefton	: 126	1 3' 1 12' to 20'	s' " Full height		127 23			: : : :		2 2 2 2	T. 3 ch.
Greymouth District Armstrong's	iet	State reserve	V. Armstrong	Armstrong & party, Dunollie	- qns e	bitu- 1 5 to 14'	š' to 8'	Bord and	6,222	18,572	54,794	61	10	7 Natural	:
Baddeley's Blackball	::	Freehold	J. Rowse	Baddeley & party, Runanga Blackball Coal Co., Wellington	6 Ditto	- G1 - G2 - G1 - G1 - G1	5,	Ditto	101,237	6 16,444 7 3,365,597	18,030	202 51	6 8 291 361	Fan '',	2 adits: 1,232
Brae Head Cains	::	State reserve	J. Watson E. Cain (P.)	Boote & party, Dunollie J. Cain, Rapahoe Grev Valley Collicies, Ltd., Christ	დი  <del>-</del>	1 9' 1 4' to 6'	Full height 9'	,, Bord and	6,642	13,945 9 309 6 16.555	20.587 748 59.001	4 T 6	800 51 m 51	Natural	and 650°. T. 5½ ch. T. 5 ch.
sc.	: :	State reserve	puo	church Duggan & party, Rewanni			ill height	pillar, pane! Bord and	5,113						. T. 4 ch.
Hunter's McIvor's Moody Creek	:::		Alf. Hill John Duggan Wm. Robertson	Hunter & party, Dunollie McIvor & party, Dunollie Simpson & party, Dunollie	۵04 : : :	::::		Ditto	3,549 3,386 5,405	9 14,981 6 4,687 5 12,375	18,530 8.073 17,780	H 01 00	1717-19	8 Fan 9 Natural 9 "	T. 15 ch.
Manderson's	:	:	P. Manderson (P.)	Manderson & party, Dunollie		H	•	:	5,08	_	20,739	 	-	_	. T. 9 ch.

32
.: -:
924′. 250′.
보다  :::
ural
Fan Natural
52
10 C1
: 16
634,766 5,153
500
605,969 4,697
609 4
28,797 456
χ̂ N
::
: :
::
<b>n</b> e ni
~ i~
9.00 } }
::
::
91
 ::
. :
ngata ngata
Kaita
Throp,
(lst v.) )
Haderon (Throp (P.)
J. Th
::
2 2
::
:: =8
Urs rae uakitot
t, Love toto, Ti
Tuakit
, 1 Hadroot (188 C.) Salgoou & Unrecentary, Dunctum. 25

COLLIERY STATISTICS, 1926—continued.

	Titles held			orked.	***************************************	orked. Thickness			Total			Number of Persons ordinarily employed	of Person employed	-	Depth of Shaft	∪.——. Shaft
Name of Mine and Locality.	(Crown Lease or otherwise).	Name of wine Manager.	Name and Address of Owner.	Mumber of Mumber	of Coal.	_	worked.	ground working.	Output for 1926.	31st December, 1925.	31st December, 1926.	.svodA	Below.	Ventilation.		
				SOUTHERN IN		SPECTION DISTR	DISTRICT -continued.		Ē	Ē	Ē	•	-		-	
Kaituna, Kaitangata	Freehold	T. Gage (D.)	Thos. Gage, Kaitangata	18 Lignite	ite 1		:	Bord and	154	10is. 25,651	10ns. 25,805	:	61	2 Natural	T. 66'.	
Kaibrook, Kaitangata Kaitangata No. 1, Kaitangata	Crown lease Freehold	T. Gage (D.) F. Carson (1st. C.)	Thos. Gage, Kaitangata N.Z. Coal & Oil Co., Ltd., Dunedin	7 50 Brown	nx		6½ All	Ditto	6#	2,558	2,607	:	-		T. 272'.	r. 3,960'.
Kaitangata No. 2, Kaitangata	:	F. Carson (1st. C.)	N.Z. Coal & Oil Co., Ltd., Dunedin		:		:	:	5 95,203	4,359,306	4,454,509	53	242 295	5 Fans	T. 3,135', T. T. 462'.	E. 957's
Castle Hill, Kaltangata Benhar, Benhar	::	J. McLelland (1st. C.) J. Walls (2nd C.)	N.Z. Coal & Oil Co., Ltd., Dunedin McSkimuting & Son, Ltd., Benhar	33 63 Lignite	ite 3	3 12' to 20' 3 14'	10'	::	9,128	248,151	257,279	<del></del>	2	8 Fan	(T.3,300', T. 1,320'. T. 1,300'.	1,320'.
Southland District. Whiterig, East Gore	Freehold	R. Craig (P.)	R. Craig, East Gore	48 Lignite	ite 1	1 24′	14'	Bord and	3,552	95,925	99,477	<b>–</b>	61	3 Natural	T. 660'.	
Green's, Gore	::	F. Barclay (2nd C.) F. W. Edge (P.)	Ex. Estate late Thos. Green, Gore F. W. Edge. Wajkaka	80 80	::	19,	57.68	Ditto	12,369	305,924	318,293	00	7-6		S. 40', T. 528'	528′.
Ramsay's, North Chatton Landslip, Walkaia	Lig. license	P. Ramsay (P.) T. Northcoat (P.)	P. Ramsay, Waikaka T. Northcoat, Waikaia	60 IC 0	::		12' All	Open		106,523 36,942	107,191 36,950	- : ·	:	1 Open		
Argyle, Walkala Terrace, Longridge	Crown lease Freehold	J. Hutton (P.) G. Daley (P.)	Hutton Bros., Walkaia G. Daley, Longridge		: : :	1 12' 1 23' to 25'	" 10′ to 12′	Bord and	 455 609	9,244	9,699	<u>-</u>	::=	1 " 2 Natural	T. 66'.	
Princhester Creek, The Key	Lig. license	J. A. Denton (P.)	J. A. Denton, Private Bag,	24 Br	wn	1 5' 6"	AII	pillar Open	200	2,564	2,764	T	:	1 Open	:	
Lynwood, Te Anau Boghead, Mataura	Crown lease Freehold	W. Blatch (P.) J. Bolger (D.)	E. C. Govan, Te Anau C. E. Rowe, Mataura	16 Lignite 21 ".	nite	1 8, 1 18'	:: ;:	Bord and	5,658	3,420 42,803	3,620		: 4	1 5 Natural	T. 330'.	
Mataura Lignite, Mataura Larking's Mataura	: : : :	Barclay (2nd C.)	Beattie Coster & Co., Ltd., Mataura P. Larking Mataura	- 67. 	: :	1 18'	12,	pular Ditto	13,784	295,147	308,931	es +-	9	9 Fan	T. 924'.	
Ota Creek, Wyndham Clarke's, Wyndham Djamond Lignite, Ashers		E. Genge (P.) Wm. Thompson	E. Genge, Wyndham Wyndham Coal Pit Co., Wyndham S. McMillan, Invercargill	4 - 61	: : : :	 38,7,7			1,094 	29,019 21,865 31,286	20,423 22,444 32,380		::::		: : : : 	
	Crown lease a freehold	S. Reid (D.)	Reid & Adcock, Nightcaps	45 Brown	.: ам		:	:	184	2,511	3,295	: 8			T. 297'.	
Black Diamond, Nightcaps	Crown lease	W. Duncan (1st C.	Black Diamond Coal Co., Invercar-	. 11	;	1 25'	:	:	24,885	141,442	166,327	20 20		58 Fan	T. 1,650'.	
Wairio, Nighteaps Mossbank, Ohai Wairaki No. 1. Ohai		S. Reid (D.) T. McMillan (1st C.) J. P. Mosley (1st C.)	J. H. Smith, Otautau Mossbank Coal Co., Invercargill Wairaki Coal Co., Gore	122	:::	1 5' to 32'	7, to 20'	:::	22,795	145,136	147,201	:13	_,		T. 396'.	
Wairaki No. 2, Ohai	Freehold	J. T. Mosley (1st C.) G. S. Langford (1st C.)	Wairaki Coal Co., Gore	:~:=		1 7' to 17'			33,796	166,547	200,343	- F			T. 1,188'.	
	Freehold	G. S. Langford (1st C.) I A. Morris (1st C.)	Birchwood Coal Co., Invercargill			1 7' to 8'	: [IF	Bord and	\$ 71,727	87,812	300,584 115,919	7. 1.6	100 44 1	126 Fans 60 Fan	$\begin{cases} T. 1,320'. \\ T. 924'. \end{cases}$	
Ohai Coal Co., Ohai	Crown lease	J. B. Ross (1st C.)	Dunedin Ohai Coal Co., Box 145, Invercar-	4	:	1 20′	:	pullar Ditto	12,525	19,557	32,082		21	35 ''	T. 924'.	
Elack Lion, Ohai Outputs of mines included in	previous stateme	Ed. Mason (2nd C.)	" Ed. Mason (2nd C.) Black Lion Coal Co., Invercargill previous stateme nte at which operation shave been abandoned or suspended	,o :	:		: :	:	3,718	4,581 6,076,741	8,299	• :	· ·	11 Natural	T. 99′.	
		Totale Southern Distri	ots South Island		-							280		-		
		Totals, West Coast District, South Island Totals, Northern District, North Island	trict, South Island ict, North Island	:::	:::	:::	: : :	: : :	1,122,176 31, 653,849 13,	31,868,753   32, 31,868,753   32, 13,067,231   13,	32,990,929 73 13,721,080 32	739 2,041 329 1,013	1,342			
		Grand To Output of collieries prices	Grand Totals Output of collects prior to 1890 not included in above statement state, exercised 100 prior to 1890 not included in above statement	: ement	::	::	::	::	2,239,999 61,	,422,669 63,	63,662,668 1,336 296,653	36 3,823	5,159			
		trat (manage arms	:		:		:				63.959.342		-			
										<b>&gt;</b>						!

C.—2.

# APPENDIX C.

59

# REPORT OF BOARDS OF EXAMINERS.

Geological Survey Office, Wellington, 11th August, 1927.

Sir,-

On behalf of the Boards of Examiners under the Mining and Coal-mines Acts, I have the honour to submit the following brief report on the work of the Boards during 1926.

The annual written examinations of candidates for mine-managers' certificates were held at Dunedin, Reefton, Huntly, and Waihi in October last. Twenty candidates for mine-managers' certificates under the Coal-mines Act (nine for first-class certificates and eleven for second-class certificates) and three candidates (two for first-class mine-managers' certificates and one for a battery superintendent's certificate) under the Mining Act, presented themselves for examination.

Those candidates who were successful in obtaining the necessary marks in their written examination came before the Boards for oral examination at their annual meeting in December last, with the result that the following were successful in obtaining certificates as mine-managers under the Coalmines Act:—First class—J. E. Lewis, Ohai; and J. McLelland, Kaitangata: second class—A. Colligan, Nightcaps; W. Parfitt, Millerton; J. S. Chippendale, Stockton; and J. W. Leonard, Huntly. Partial passes for mine-managers' certificates were also granted the following: First class—R. Hall, Brunnerton: second class—V. Curran, Pukemiro; W. Johnston, Pukemiro; R. L. Godden, Pukemiro; and R. McDonald, Milton. In addition the Board of Examiners under the Mining Act granted a first-class mine-manager's certificate to John Williams, Waihi. A partial pass for a battery superintendent's certificate was also granted to A. S. Morrison, Waihi.

The number of candidates offering themselves for examination under the Coal-mines Act remains fairly steady, but the metal side of mining has unfortunately shown a declining tendency, and consecutively shown a declining tendency, and consecutively shown as the state of the stat

quently the number of candidates for examination under the Mining Act has been few.

During the year four examinations for candidates for certificates as underviewers and firemendeputies were held—one at Huntly, on the 31st March; one at Dunedin, on the 5th October; and one each at Westport and Greymouth, on the 16th and 20th October respectively. Forty-seven candidates presented themselves for examination, nine for underviewers' certificates and thirty-eight for firemen-deputies' certificates. Of these, seven were successful in gaining underviewers' certificates, and thirty were successful in gaining firemen-deputies' certificates.

and thirty were successful in gaining firemen-deputies' certificates.

The following holders of British certificates of competency as coal-mine managers were granted equivalent New Zealand certificates under the Coal-mines Act: First class—E. Gascoigne, of Huntly; Thomas Geddes, of Ohai; and Thomas McGhie, of Stockton: second class—James Gray, of Runanga, and R. Hall, of Brunnerton. A first-class mine-manager's certificate under the Mining Act was also issued to F. W. R. Godden, of Reefton, in exchange for a first-class certificate of competency issued

him by the Department of Mines, Victoria.

As a result of the provision contained in the Coal-mines Act, 1925, requiring plans of the workings of a coal-mine in which more than six men are employed in the underground workings to be prepared by or under the supervision of a competent person possessing the prescribed qualifications, it was necessary to provide for the issue of mine-surveyors' certificates. During the year the following persons were issued certificates without examination: R. T. H. Dale, of Kaitangata; S. A. Flyger, of Glen Afton; and H. N. Davies, of Mount Eden, Auckland. In addition the following persons' first-class mine-managers' certificates were endorsed as competent to act as mine surveyors: G. Duggan, of Dunedin; Robert Hill, of Green Island; C. V. P. Molony, of Pukemiro Junction; P. Hunter, of Glen Afton; Andrew Burt, of Pukemiro; and Henry Talbot, of Avoca.

Two service permits as oil-well managers under the Mining Act were also issued during the year,

one to K. E. Pedersen, of Murchison, and the other to A. B. Wheat, of Gisborne.

The appointment of Messrs. W. Carson and J. L. Gilmour as members of the Board of Examiners under the Coal-mines and Mining Acts respectively expired in October last, and His Excellency the Governor-General has been pleased to reappoint both gentlemen for a further term of three years.

I have also to record with regret the death during the year of two members of the Board of Examiners under the Mining Act—Professor D. B. Waters and Mr. H. S. Molineaux. Both these gentlemen were associated with the Board in its deliberations for many years, and their death was a distinct loss.

Revised lists of persons holding certificates granted by the Boards since their establishment are appended.

I have, &c.,

P. G. Morgan, Chairman of Boards.

The Under-Secretary, Mines Department, Wellington.

# LIST OF MINE-MANAGERS, BATTERY SUPERINTENDENTS, AND DREDGEMASTERS WHO HOLD CERTIFICATES UNDER THE MINING ACTS.

FIRST-CLASS MINE-MANAGERS' CERTIFICATES.

Certificates of Service issued under the Mining Act, 1886, without Examination.

Adams, H. H., Waiorongomai Andrews, T., Thames. Bennett, J., Alexandra. Black, T., Waiomio. Burch, W. H., Thames. Cameron, A., Macetown. Chapman, J. A., Dunedin. Evans, J. H., Skipper's. Frewen, J. B., Queenstown.

Glass, W. M., Naseby. Hunter. R., Thames. Jenkins, M., Wakatipu. Johnstone, H., Bluespur. McGruer, G. N., Karangahake. McIntosh, D., Bluespur. Morrisby, A. A., Glenorchy. Newman, W., Naseby. Polton, A., Karangahake. Porter, J., Waipori. Ralph, J. G., Thames. Rooney, F., Reefton. Scott, T., Waiorongomai. Sturm, A., Waipori. Watson, T., Reefton. Wearne, T., Endeavour Inlet. Young, G., Skipper's.

Issued after Examination under the Mining Act, 1886, and Amendment Acts.

Colebrook, J. D., Coromandel. Crawford, J. J., Thames. Donaldson, W., Otago. Fleming, M., Thames. Harris, W., Thames. Horn, G. W., Thames. Horne, W., Coromandel. Hornick, M., Thames. Hosking, G. F., Auckland.

Kruizenza, W., Reefton. Logan, H. F., Wellington. Mouat, W. G., Dunedin. Watkins, W. E., Reefton.

Issued on Production of Certificate from a Recognized Authority outside the Dominion under the Mining Acts, 1886, 1891, 1898, 1905, 1908, and 1913.

Beckwith, L. H., Wellington. \*Cock, J., jun., Ross. Cock, W., Waiomio. Datson, J., Manaia. Dodd, William, Milton. Godden, Frederick William Ross, Reefton. Griffiths, A. P., Auckland. Griffiths, H. P., Auckland. Hailey, R. C., Dunedin. Hall, E. K., Reefton. McKenna, Thomas, Dunedin. Rich, F. A., Auckland. Spencer, Ernest William, Reefton. Williams, W. H., Auckland.

\* Alluvial.

Issued after Examination under the Mining Act, 1891.

Agnew, J. A., Thames.
Bennett, E. P., Thames.
Boydell, H. C., Coromaudel.
Bradley, R. J. H., Te Puke.
Gilmour, J. L., Thames.
Hodge, J. H., Thames.
Keam, P. E., Thames.
Lawn, C. H., Capleston.
Morrison, R., Thames.

McDermott, G., Thames.
McDermott, J., Thames.
McDermott, W., Thames.
McGregor, W. T., Thames.
McKenzie, H. J., Coromandel.
McPeake, J., Thames.
O'Keeffe, M. D., Thames.
Paltridge, Henry, Thames.
Paul, Matthew, Thames.

Robertson, D. B., Stafford, Ross, Richard, Thames, Russell, Murray, Dunedin, Shepherd, H. F., Thames, Stanford, W. J., Macetown, Vialoux, F., Coromandel, White, G. H., Thames, Whitley, A., Thames,

Issued after Examination under the Mining Acts, 1898, 1905, 1908, and 1926.

Allen, Henry, Waihi.
Autridge, L. E., Thames.
Baker, S. G., Thames.
Barker, B., Thames.
Barrance, K. M., Karangahake.
Bell, O., Waihi.
Bennie, Boyd, Waihi.
Bishop, Thomas Otto, Skipper's.
Blenkhorn, C., Coromandel.
Bolitho, Joseph, Reefton.
Bower, J. W., Coromandel.
Broad, R., Waihi.
Buddle, Frank, Coromandel.
Bull, C. W., Waihi.
Caisley, John, Karangahake.
Carroll, A. M., Reefton.
Carter, R. P., Waihi.
Clouston, R. E., Kaitangata.
Collier, E., Reefton.
Cooper, J. H., Thames.
Cooper, Thornhill, Waihi.
Cordes, F. M., Karangahake.
Cornes, J. G., Waihi.
Docherty, W. H., Coromandel.
Downey, J. F., Reefton.
Downey, J. F., Reefton.
Dutton, W. F., Waihi.
Evered, N. J., Waihi.

Fry, S., Waimangaroa.
George, M. T., Waihi.
Goldsworthy, C., Karangahake.
Goldsworthy, W., Coromandel.
Greening, W., Karangahake.
Gudgeon, C. W., Macrae's.
Hitchcock, W. E., Barewood.
Hogg, Tasman Rangi, Waiuta.
Hooker, John, Coromandel.
Irwin, Samuel, Waihi.
Jackson, G. T., Waihi.
Johnson, J. H., Coromandel.
Kingsford, C., Waihi.
Langdord, G. S., Waihi.
Langford, G. S., Waihi.
Lautour, H. A. de, Waihi.
Lawn, Nicholas, Reefton.
Lewis, Ralph Reginald, Waihi.
Lowes, G. W., Reefton.
Mackie, Portland George A., Waihi.
McConachie, W., jun., Waihi.
McConachie, W., jun., Waihi.
McGruer, A., Karangahake.
MacLaren, J. A. J., Coromandel.
McMahon, T., Reefton.
McMillan, T., Waihi.
Mitchell, William J., Barewood.

Moore, L. O., Waihi.
Morgan, William, Waihi.
Morrison, William, Waihi.
Moye, Michael, Reefton.
O'Shea, J., Reefton.
O'Shea, J., Reefton.
O'Sullivan, J. W., Thames.
Rimmer, J. C., Helensville.
Ruffin, R. C., Reefton.
Scoble, E. J., Waihi.
Smith, Walter, Karangahake.
Spearing, J. R., Waihi.
Stewart, F., Waihi.
Stewart, R. A., Reefton.
Sullivan, T., Reefton.
Thomson, J. R., Waihi.
Thomson, Thomas, Waihi.
Thomson, Thomas, Waihi.
Thorne, G. M., Waihi.
Tucker, E. S., Coromandel.
Turner, C. E., Murchison.
Turner, G. W. E., Reefton.
Ulrich, G. A. C., Waihi.
Walker, A. J., Waihi.
Watson, J. L., Thames.
Williams, Evan, Waihi.
Williams, John, Waihi.
Williams, John, Waihi.
Wood, P. H., Reefton.
Wotherspoon, James, Waihi.

Issued under Section 313 of the Mining Act, 1891.

Rickard, John, Thames. Snow, Thomas, Huntly. Thomas, James, Thames. Trelease, J. H., Thames.

White, John S., Karangahake. Williams, John, Kuaotunu.

C.—2.

#### FIRST-CLASS MINE-MANAGERS' CERTIFICATES—continued.

61

Certificates of Competency granted to Holders of Provisional Warrants under Section 32 of the Mining Act Amendment Act, 1896.

Argall, A. E., Coromandel. Battens, H., Coromandel. Campbell, Alexander, Cullensville. Cornes, C. A., jun., Karangahake. Draffin, Samuel, Waitekauri. Goldsworthy, William, Karangahake. Harvey, A. G., Coromandel. James, Robert, Thames. Kennerley, W. H., Thames. MacDonald, H., Coromandel. McEnteer, James, Tararu. McLean, Benjamin J., Waitekauri. Moorecraft, Walter, Coromandel. Morgan, William, Owharoa. Patton, William, Macetown. Pearce, Francis, Reefton. Potter, William H., Thames. Somervell, John, Thames. Thomas, Archelaus, Tapu, Thames.

Issued to Inspectors of Mines by virtue of Office under the Mining Acts, 1886, 1891, and 1898. Cochrane, N. D., Westport. Green, E. R., Dunedin.

# SECOND-CLASS MINE-MANAGERS' CERTIFICATES.

Certificates of Service issued under the Mining Act, 1891.

Agnew, J. A., Coromandel.
Argall, A. E., Coromandel.
Blair, Thomas, Kuaotunu.
Brown, John, Macrae's.
Byrne, John, Karangahake.
Comer, George, Thames.
Crabb, Thomas, Reefton.
Daniel, P. F., Greymouth.
Dobson, John Allen, Kuaotunu.
Edwards, George, Westport.
Gemmings, Charles, Thames.
Gill, George, Thames.
Goldsworthy, William, Mauku, Auckland.
Guthrie, John, Wellington.

Hardman, James Edward, Thames.
Hetherington, William, Thames.
Hill, Alexander Grey, Waikakaho.
Hollis, Frederick J., Waihi.
Hore, John, Wellington.
Jobe, James, Thames.
Johnstone, William, Collingwood.
Kirker, Thomas, Thames.
Law, John, Thames.
Loughlin, S., Thames.
Mackay, William, Nenthorn.
Mayn, John, Coromandel.
Meagher, John, Karangahake.
Newdick, Alfred, Thames.

O'Keefe, M. W. D., Thames. Peebles, Alexander, Kuaotunu. Pettigrew, Robert, Sydney. Rickard, John, Thames. Rogers, William Henry, Kumara. Shaw, James, Karangahake. Sligo, Alexander, Neuthorn. Thomas, A., Thames. Thomas, James, Thames. Thomson, John, Dunediu. White, John S., Karangahake. Williams, James, Thames. Williams, John, Thames. Worth, Robert, Waihi.

Issued after Examination under the Mining Acts, 1891, 1898, and 1908.

Benney, J., jun., Paeroa. Bennie, Boyd, Coromandel. Cahill, T. M., Upper Kuaotunu. Christie, William, Waitekauri. Draffin, S., Waitekauri.
Dunkin, T., Coromandel.
Patterson, William James, Driving
Creek, Coromandel.

Tilsley, G., Thames. White, F. H., Kuaotuna. White, G. H., Thames.

Issued under Section 313 of the Mining Act, 1891.

Connon, William, Thames.

Edwards, E., Coromandel.

McCormick, W. J., Waitekauri.

Certificates of Competency granted to Holders of Provisional Warrants under Section 32 of the Mining Act Amendment Act, 1896.

Allen, W. J., Coromandel. Barney, Montague T., Waitekauri. Brownlee, Henry, Thames. Collins, Charles, Waitekauri. Gardner, James, Waimangaroa. Howe, Albion S., Waitekauri. Johnson, Frank H., Collingwood. Kirwan, William, Reefton. Murphy, Joseph, Coromandel. O'Brien, John, Westport. Prescott, Arthur J., Coromandel. Ruffin, Richard, Manaia, Coromandei.

Certificates of Service issued under the Mining Amendment Act, 1910.

Adams, Albert Augustine, Thames. Adams, R. W., Thames. Barker, J. W., Coromandel. Brabyn, John, Clarendon. Butcher, F. J., Waitekauri. Donaldson, George, Macrae's Flat. Gillan, Thomas, Thames. Grace, Pierce, Waitekauri. Hansen, Charles Hans, Puketui. Hayes, James, Thames. Hill, Harrold Alexander, Thames. Iles, E. J., Bannockburn. Inglis, Robert, Kuaotunu. Lynch, James, Glenorchy. McKenzie, D., Georgetown. Reid, George, Glenorchy. Reynolds, Edmond Francis, Coromandel.

## ALLUVIAL MINE-MANAGERS' CERTIFICATE.

Certificate of Service issued under the Mining Act, 1908.

Toole, William Hopwood, St. Bathan's.

# BATTERY SUPERINTENDENTS' CERTIFICATES.

Issued under the Mining Act Amendment Act, 1894, without undergoing Examination.

Adams, H. H., Waihi.
Aitken, R. M., Reefton.
Banks, Edwin Gripper, Waihi.
Goldsworthy, Henry, Kuaotunu.
Goldsworthy, John, Kuaotunu.
Greenway, H. Howard, Auckland.

Hutchison, William, Karangahake.
Margetts, Frederick Ernest, Kuaotunu.
McKenna, T. N., Tararu.
McLellan, William, Waitekauri.
Nobel, James R., Karangahake.

Park, James, Thames. Shepherd, Henry Franklin, Waihi. Sims, C. F., Tararu. Walker, James, A., Kuaotunu. Wilson, Arthur E., Waihi.

# Issued after Examination under the Mining Act Amendment Act, 1894.

Adams, A. A., Thames.
Allen, F. B., Thames.
Allon, H. O., Thames.
Ansley, Comyn, Paeroa.
Ansley, Walter, Thames.
Banks, J. H., Waihi.
Bowers, W., Thames.
Brown, A. E., Thames.
Clarke, J. L., Thames.
Clarke, R., Waitekauri.
Clarke, W. J., Waihi.
Day, A. T., Thames.

Dixon, Clement, Waihi. Gray, J. W., Waihi. Hayward, F. W., Komata. Horn, G. W., Kuaotunu. Jackson, J. H., Paeroa. Jones, Achison, Waihi. Kidd, F. D., Thames. Laurie, D. B., Karangahake. Lee, J. W., Reefton. Macdonald, W., Waihi. McKenzie, H. J., Thames.

McMicken, S. D., Thames.
McMicken, S. D., Thames.
Morgan, P. G., Thames.
Morrin, W. S., Thames.
Noakes, H. L., Waihi.
Stafford, B. H., Waihi.
Taylor, C. H., Tararu.
Thorpe, A. H., Thames.
Vercoe, R. B., Thames.
Williams, A. G. R., Thames.
Wingate, H. M., Maratoto.
Winslow, G., Thames.

# BATTERY SUPERINTENDENTS' CERTIFICATES--continued.

Issued after Examination under the Mining Acts, 1898, 1905, and 1908.

Adams, J. H., Coromandel.
Adams, J. H., Thames.
Adams, Richard W., Tararu, Thames.
Airey, Hubert, Karangahake.
Aitken, Alexander Hugh, Waihi.
Allen, D. V., Thames.
Allen, H. E., Wellington.
Anderson, David, Waihi.
Andrews, T. T., Waihi.
Auld, J. B., Crushington.
Baker, W. H., Thames.
Banks, C. A., Waihi.
Banks, E. J., Thames.
Barrance, K. McI., Karangahake.
Barrett, J. J., Karangahake.
Barron, William E., Waikino.
Baskett, E. G., Karangahake.
Bell, L. M., Waihi.
Bell, Oswald, Waihi.
Bidlake, A. E., Waiomio.
Bird, A. W., Thames.
Bishop, T. O., Reefton.
Blackadder, William, Crushington.
Bradley, R. J. H., Karangahake.
Brown, F. M., Karangahake.
Brown, F. M., Karangahake.
Brown, F. M., Karangahake.
Brown, E., Komata.
Browne, E., Waitekauri.
Burns, William, Waiomio.
Bush, E. F., Parawai.
Bush, George Arthur, Karangahake.
Bush, H. R., Thames.
Campbell, Colin, Thames.
Carless, Noel, Waihi.
Carter, Harry Francis, Waihi.
Carter, S., Waihi.
Chappell, G. A., Karangahake.
Clark, John L., Waihi.
Clarke, Thomas, Waihi.
Cowles, R. K., Crushington.
Crawford, H., Macrea's.
Crompton, H., Maratoto.
Croucher, Herbert, Waihi.
Dawson, B., Ellerslie.
Donnelly, Thomas, Waihi.
Donovan, Willie, Waikino.
Draffin, Eugene, Kuaotunu.
Eaton-Turner, Geoffrey William,

Ellis, L. L., Waitekauri, Empson, J. B., Karangahake. Evans, G. C., Waihi. Evans, J., Waihi. Evans, J., Waihi. Evans, J., Waihi. Evans, J., Waihi. Evans, W. B., Reefton. Ewen, H. F., Auckland. Fletcher, H. T., Katikati. Fry. Sidney, Westport. Gardner, E. A., Reefton. Gibson, William, Waihi. Gilpin, J., Waihi. Gillooly, T., Roxburgh. Gillstrom, Carl A., Berlin's. Gow, E. A., Crushington. Grayden, J., Waitekauri. Grayden, Peter, Thames. Gwilliam, Benjamin, Karangahake. Halliwell, L. V., Karangahake. Hargraves, E. P., Waihi. Harsant, C., Puketui. Hay, Adam, Karangahake. Hogg, T. R., Karangahake. Hogg, T. R., Karangahake. Horn, G. W., Karangahake. Horn, G. W., Kuaotunu. Hutchison, R. M., Karangahake. Johnson, Edward, Waihi. Jones, R. D., Karangahake. Kingsford, A., Karangahake. Kingsford, G. S., Waikino. Launder, G. H., Waitekauri. Kingsford, G. S., Waikino. Launder, G. H., Waitekauri. Lawless, L. J., Paeroa. Lawn, H., Reefton. Littlejohn, W. D., Karangahake. Lovelock, J. E., Crushington. Mackay, John, Crushington. Mackay, John, Crushington. Maltman, A., Reefton. Mann, C., Westport. Matheson, A. M., Barewood. Maxwell, W. L., Waihi. McDonall, P. H., Waihi. McDonall, P. H., Waihi. McEwin, J. A., Reefton. McKinlay, John, Waihi.

McNeil, A. R., Karangahake.
McPadden, J., Coromandel.
Melrose, P., Waihi.
Metcalf, G. H., Karangahake.
Montgomery, A. E., Opitonui.
Morgan, Robert James, Waihi.
Motherwell, William, Waihi.
Moyle, W. T., Upper Tairua.
Orbell, G. S., Waikouaiti.
Orr, F. S., Waikouaiti.
Orr, F. S., Waiuta.
Paltridge, F., Thames.
Penseler, W. H. A., Dunedin.
Pond, H. C., Auckland.
Quick, J. N., Thames.
Quintrell, Sidney B., Waiuta.
Reid, J. E., Great Barrier.
Reynolds, E. A., Auckland.
Roberts, H. C., Waihi.
Rodden, William, Lyell.
Rosewarne, R. H., Thames.
Royse, W. G., Reefton.
Sanford, A. G., Waihi.
Shaw, D. S., Waikino.
Shaw, L. J., Waikino.
Staphens, H., Dunedin.
Sutherland, J. A., Reefton.
Thomson, G. W., Bendigo.
Thurlow, J. R., Coromandel.
Tomlinson, A., Karangahake.
Tomlinson, David Mitchell, Barewood.
Tomlinson, W. F., Dunedin.
Ulrich, G. A. C., Komata.
Ulrich, Herstall, Whangapoua.
Walker, Alfred James Dickson, Waihi.
Watson, A. P., Crushington.
Watson, J. P., Reefton.
Watson, J. R., Reefton.
Watson, J. R., Reefton.
Watson, J. R., Reefton.
Watson, W. A., Crushington.
Wearne, W., Reefton.
White, A. S. H., Karangahake.
White, E. D., Karangahake.
White, E. D., Karangahake.
Williams, Joseph, Reefton.
Williams, Joseph, Reefton.
Williams, Joseph, Reefton.
Williams, William Eustace, Waihi.
Wilson, A. P., Crushington.

#### DREDGEMASTERS' CERTIFICATES.

Issued without Examination under the Mining Act, 1898, and Amendment Acts, 1901 and 1902.

Anderson, L. C., Alexandra.
Andrews, Ralph, Canvastown.
Balker, J. R., Alexandra.
Ballantyne, D., Miller's Flat.
Barnes, T. J., Beaumont.
Bradley, Neil, Alexandra.
Bennett, George, Gore.
Bennett, James, Kumara.
Blue, G. P., Alexandra.
Brand, Peter, Waikaka.
Brennan, Phillip, Palmerston South.
Bremner, A. P., Lower Shotover.
Brice, William H., Cromwell.
Bringans, D., Alexandra.
Brown, T. G., Ahaura.
Bruting, James, Murchison.
Busbridge, P., Gore.
Butler, Ewen, Roxburgh.
Butler, M. J., Kanieri.
Cameron, Samuel, Alexandra.
Clarke, Edward, Port Chalmers.
Compton, Albert, Dobson.
Cormack, W., Greymouth.
Cornish, J. T., Miller's Flat.
Coutts, Henry, Miller's Flat.
Cowan, Alexander, Stillwater
Cowan, James, Nelson Creek.
Crookston, W. L., Three-channel Flat.
Cumming, J. C., Beaumont.
Cutten, W. H., Dunedin.
Deniston, R. A., Cromwell.
Donaldson, J. G. A., Greenstone.
Faithful, William, Greymouth.
Foohy, J. M., Alexandra.
Gibb, William, Croydon Siding.

Gibson, A., Island Block.
Graham, J. M., Gore.
Grogan, William A., Miller's Flat.
Hay, James, Dunedin.
Hedley, A., Cromwell.
Herbert, J., Beaumont.
Hewitt, James, Clyde.
Hogg, Thomas, Cromwell.
Hoskins, Thomas, Maori Point.
Hoy, Samuel, Alexandra.
Inwood, W. J., Rocklands Beach.
Johnston, E. A., Alexandra.
Johnstone, Alexander, Cromwell.
Kitto, Edward T., Miller's Flat.
Kitto, Francis, Lowburn.
Kitto, J., Lowburn Ferry.
Kitto, John F., Miller's Flat.
Kitto, W. H., Cromwell.
Kloogh, N. P., Lowburn Ferry.
Lawson, Edward, Dunedin.
Ledingham, J., Bannockburn.
Lee, George, Collingwood.
Lidicoat, R. H., Fern Flat.
Luke, S. J., Alexandra.
Magnus, Olaf, Box 130A, Christehurch.
Mailer, John, Stillwater.
Maitland, A. E., Miller's Flat.
McClure, F. C., Rongahere.
McConnell, J., Cromwell.
McCormack, D., Kanieri.
McDonald, E. A., Waitri.
McDonald, J., Sofala.
McDonald, John, Cromwell.
McGeorge, Alexander, Dunedin.

McGregor, D., Kanieri.
McGregor, G. R., Alexandra.
McIntosh, D. J., Lowburn Ferry.
McLean, D., Waitiri.
McMath, D. C., Ross.
McMath, Thomas, Alexandra.
Mills, Edward, Murchison.
Mitchell, D. A., Dunedin.
Morel, C. G., Inangahua Junction.
Morris, G. S., Cromwell.
Murray, D., Clyde.
Murray, Madget, Cromwell.
Neilson, S., Miller's Flat.
Nicholson, W. E., Alexandra.
O'Leary, D., Waiau.
Olsen, Charles, Roxburgh.
Parsons, J. D., jum, Clyde.
Percy, John, Clyde.
Percy, John, Clyde.
Perkins, A. C., Dunedin.
Pettigrew, George, Nelson Creck.
Poulter, G. W., Alexandra.
Pringle, John, Miller's Flat.
Ray, J. C., Totara Flat.
Reeder, Philip, Bald Hill Flat.
Rennie, Andrew, Roxburgh.
Ross, Alexandra.
Richmond, J., Gibbston.
Ritchie, J. S., Waitiri.
Sanders, H. P., Clyde.
Sanders, John, Cromwell.
Sanders, John, Cromwell.
Sanders, Thomas, Alexandra.
Schaumann, H., Alexandra.
Scott, M. G., Alexandra.

#### Dredgemasters' Certificates—continued.

Issued without Examination under the Mining Act, 1898, and Amendment Acts, 1901 and 1902—continued.

Shore, T. M., Queenstown. Shore, William, Gore. Simonsen, Charles, Alexandra. Sligo, N. K., Ahaura. Steel, Archibald, Kawarau Gorge. Steel, Thomas, Dunedin. Templeton, Ivie, Rongahere. Thompson, T., Miller's Flat. Troy, G. C., Cromwell. Turnbull, W. D., Canvastown. Tyson, John, Rongahere. Von Haast, J. H., Clyde. Wallace, John A., Miller's Flat. Weaver, Charles, Alexandra. Williamson, R., Miller's Flat.
Williamson, Walter, Miller's Flat.
Wilson, S. W., Waikaka Valley.
Wood, R. M., Cromwell.
Woodhouse, W. S., Roxburgh.
Young, Andrew, jun., Roxburgh.

#### Issued after Examination under the Mining Acts, 1898, 1901, 1902, 1905, and 1908.

Anderson, Andrew, Alexandra South. Anderson, Bertram, Maori Point. Anderson, G. B., Roxburgh. Arderson, G. B., Moxburgh. Archer, D. J., Ngakawau. Baird, William G., Clyde. Bardsley, John James, Cromwell. Bate, H. T. G., Greymouth. Beaufort, William Vincent, Roxburgh. Bishop, Hugh Arthur, Collingwood. Blair, G., Abbotsford. Borthwick, Robert, Alexandra. Blair, G., Abbotsford.
Borthwick, Robert, Alexandra.
Bourke, John, Clyde.
Brent, C. D., Cromwell.
Briggans, Thomas, Alexandra.
Briggans, William, Alexandra.
Bruce, J. A., Kawarau Gorge.
Burley, J. P., Westport.
Burnside, Walter, Alexandra.
Burton, A. P., Miller's Flat.
Callaghan, E., Three-channel Flat.
Campbell, G. W. T., Alexandra.
Carnegy, A., Three-channel Flat.
Carr, W., Alexandra.
Carter, W. W., Sandy Point.
Clark, D., Callaghan's Creek.
Clarke, R. S. B., Alexandra South.
Coup, George, Albertown.
Cox, R. D., Alexandra.
Craig, D. A., Shag Point.
Curno, C. B., Alexandra.
Dalton, J. R., Three-channel Flat.
Dalzell, T. L., Cromwell.
Donaldson, John, Lawrence.
Downie, Henry, Totara Flat.
Eaton, Edgar W., Alexandra.
Elder, D. D., Roxburgh.
Fache, S. C., Gore.
Faithful, Alfred, Bannockburn.
Farmer, Nathan C., Miller's Flat.
Farquharson, George, Alexandra. Farmer, Nathan C., Miller's Flat. Farquharson, George, Alexandra. Filippi, S. de, Westport. Filippi, S. de, Westport.
Findley, David, Dunedin.
Fisher, Hurtle, Miller's Flat.
Foley, S., Lowburn Ferry.
Forno, D., Inangahua Junction.
Fraser, W. J., Roxburgh.
French, T. E. K., Three-channel Flat.
Gibson, William H., Cromwell.
Graham, Thomas Arthur, Gore.
Gunn, W. E., Beaumont.
Guy, Donald, Cobden.
Guyton, James, Dunedin.
Hanning, C. J., Clyde.
Hansen, H. C., Three-channel Flat.
Harden, J., Stafford.

Harliwick, Matthew, Roxburgh. Hepburn, D. O., Alexandra. Hewetson, Sydney, Nelson Creek. Hogg, J., Nevis. Holden, Charles, jun., Cromwell. Holden, John, Cromwell. Hughes, John L., Miller's Flat. Johnston, John, Maori Gully. Johnston, Louis, Beaumont. Jones, David Rowland, Island Block. Jones, T. R., Miller's Flat. Jones, T. R., Miller's Flat.

Junker, Frank J., Berlin's.

Kane, William, Clyde.

Kean, F. F., Waikaka.

Kellett, C. H., Dunedin.

Kennedy, A., Ophir.

Kitto, Henry, Alexandra South.

Kitto, John, Clyde.

Linney, William, Island Block.

Livingstone, D., Alexandra.

Lloyd, Arthur, Inangahua Junetion.

Lloyd, Hubert, Lyell.

MacDonald, C. J., Cromwell.

MacGinnis, J. A., Cromwell.

MacGinnis, M. P., Alexandra.

Marklund, C. O., Lowburn Ferry.

Mathews, James Hulbert, Miller's Flat.

Matthews, A. A., Three-channel Flat. Matthews, James Hubert, Miller's Flat.
Matthews, A. A., Three-channel Flat.
Mayne, W. C., Nelson Creek.
McCallum, W. S., Alexandra.
McDonald, C. J., Waitiri.
McDonald, G., Alexandra. McGregor, Dougald S., Alexandra. McKenzie, John, Roxburgh. McKinnon, John, Alexandra. McLean, John, Roxburgh. Melvin, J. R., Roxburgh. Merchant, Isaiah, Clyde. Merchant, Isaiah, Clyde.
Milne, John A., Roxburgh.
Moffitt, R. W., Miller's Flat.
Mollison, William, Stillwater.
Moncrieff, Henry, Miller's Flat.
Monson, C. H., Miller's Flat.
Morel, A. E., Noble's.
Morel, L. H., Inangahua Junction.
Morgan, Harold, Roxburgh.
Morgan, John Alexandra. Morgan, John, Alexandra.
Morris, V., Cromwell.
Mouat, W. G., Greymouth.
Munro, C. T., Waitiri.
Munro, Hugh, Alexandra South. Munro, R. F., Ross. Murray, H. B., Cromwell. Murray, Robert John, Canvastown, Nelson, Edgar, Brunnerton.

Nelson, George L., Brunnerton. Newick, Albion Edgar Charles, Ban-nockburn. Nicholson, Charles S. G., Mataura. Noble, William, Alexandra. Omond, Thomas, Nevis. Omond, Thomas, Nevis.
Orkney, H. E., Cromwell.
Orr, H. T., Cromwell.
Orr, William W., Cromwell.
Parker, P. R., Roxburgh.
Paterson, J. B., Miller's Flat.
Patterson, J., Clyde.
Plumb, E. H., Maori Point.
Poppelwell, William, Alexandra.
Pait Huma Albertown Rait, Hume, Albertown. Ray, J. F., Bannockburn. Ray, Robert Marshall, Bannockburn. Ray, Robert Marshall, Bannockburn Reiderer, Edward, Cromwell. Roberts, G., Three-channel Flat. Robertson, D. J., Alexandra. Robertson, W. R., Alexandra. Rooney, J. B., Roxburgh. Rumble, Charles, Ngahere. Rumble, Joseph, Miller's Flat. Sanders, W. J., Ahaura. Saunders, C. E., Cromwell. Sawle, J., Cromwell. Sawle, J., Cromwell. Sawle, J., Cromwell. Sawle, J., Cromwell. Sayler, J. F., Alexandra. Sherwood, T. W., Greymouth. Simpson. Edward Robert, Cromwell. Sparrow, J. A., Upper Nevis. Sparrow, J. A., Upper Nevis. Steele, Thomas, Alexandra. Steele, W. H., Miller's Flat. Taylor, Alexander, Alexandra.
Taylor, J. T., Dunedin.
Theyers, C., Alexandra.
Theyers, J. W., Alexandra.
Turner, T. F., Moonlight.
Vickerman, E. M., Cromwell. Walker, J. J., Alexandra South. Wasserbrenner, M., Alexandra. Wathen, James, Miller's Flat. Watson, E. H., Collingwood. Watson, E. H., Collingwood.
Weir, R., Gore.
Weir, T. R., Cromwell.
Weir, W., Nevis.
Wescombe, Alfred L., Island Block.
Westcott, P. A., Miller's Flat.
Williams, Frederick, Alexandra.
Wilson, George, Marsden. Wilson, Stephen L., Inangahua June-Wilson, Stephen E., Thougant tion. Wood, W. W., Cromwell. Woodhouse, F., Bannockburn. Woodhouse, G. G., Waitiri. Wylde, G. R., Inangahua Junetion.

# OIL-WELL MANAGERS' SERVICE PERMITS.

Issued under the Regulations under the Mining Acts, 1908 and 1926.

Bender, Elmore William, New Plymouth. Christensen, C., New Plymouth. Davis, James Amos, Kotuku Fedorowicz, J., New Plymouth. Henchman, J. E. W., New Plymouth.

Taylor, Charles Norman, Island Bay, Wellington.

Huse, William C. E., New Plymouth. Thompson, Perry Delorm, Tokomaru O'Dowda, B. C., New Plymouth.

Pedersen, Krysfeldt Emar, Murchison.
Shipley, Edward Lester, New Plymouth. Whittekin, Ralph Oscar, New Plymouth.

# LIST OF PERSONS WHO HOLD CERTIFICATES UNDER THE COAL-MINES ACTS.

FIRST-CLASS MINE-MANAGERS' CERTIFICATES.

Issued under the Coal-mines Acts, 1886 and 1891.

Aitken, T., Wendon.
Binns, G. J., Dunedin.
Bishop, J., Brunnerton.
Cameron, J., Denniston.
Cochrane, N. D., Dunedin.
Dando, M., Brunnerton.
Kerr, G., Kamo.

Love, A., Whangarei Mason, J., Nighteaps, May, J., Greymouth. Moore, W. J., Springfield. Ord, J., Huntly. Reed, F., Westport. Smith, A. E., Nelson. Smith, T. F., Nelson. Sneddon, J., Mosgiel. Swinbanks, J., Kawakawa. Taylor, E. B., Huntly. Thompson, A., White Cliffs.

Issued under the Coal-mines Acts, 1886, 1891, 1905, 1908, and 1925, after Examination.

Armitage, F. W., Auckland.
Armstrong, J., Brunnerton.
Armstrong, Valentine, Runanga.
Barclay, T., Kaitangata.
Barclay, W., Kaitangata.
Baxendale, James, Reefton.
Bennie, Boyd, Waihi.
Bishop, T. O., Reefton.
Brown, J. C., Denniston.
Brown, J. C., Denniston.
Buist, Charles David, Roa.
Burt, A., Waihi.
Butler, William, Denniston.
Campbell, Peter, Fairfield.
Carruthers, J., Shag Point.
Carruthers, James, jun., Milton.
Carson, Frederick, Kaitangata.
Carson, W., Kaitangata.
Crockett, S., Millerton.
Crowe, W., Ngakawau.
Davies, W. C., Huntly.
Davis, O. J., Runanga.
Dixon, C. W., Granity.
Dixon, W., Kaitangata.
Dromgool, A. A. W., Pukemiro.
Duggan, George, Burnett's Face.
Dunn, Andrew, Denniston.
Duncan, Robert William, Nighteaps.
Fleming, J., Kaitangata.
Fox, R. A., Denniston.
Forsyth, Matthew, Denniston.

Fry, Sydney, Waimangaroa. Gibson, John, Westport. Gillanders, A., Shag Point. Gillanders, A., Shag Point. Gilbert, George, Millerton. Green, E. R., Abbotsford. Hadcroft, John, Puponga. Hamilton, J. S., Burnett's Face. Herd, J., Brunnerton. Hewitson, W. E. G., Burnett's Face. Heycock, C. R., Nightcaps. Heycs, Thomas, Kaitangata. Hill, Robert, Abbotsford. Hosking, G. F., Auckland. Hughes, Job, Puponga. Jebson, D., Canterbury. Jones, T., Kimihia. King, T., Granity. Langford, G. S., Huntly. Leitch, J., Blackball. Leitch, W., Blackball. Lewis, James Edwin, Ohai. Lowden, William, Reefton. Lowes, George Walls, Reefton. Makinson, Job, Huntly. Marshall, A. G., Denniston. McCaffrey, Patrick, Ferntown. McEwan, Robert, Coromandel. McGeachie, J., Mokau. McLean, M., Ngakawau.

McLelland, James, Kaitangata.
McMillan, Thomas, Black's Point, Reefton.
Milligan, N., Westport.
Molony, C. V. P., Pukemiro Junction.
Morgan, William, Waihi.
Mosley, J. T., Kaitangata.
Murray, T., Westport.
Neilson, James, Blackball.
Newton, James, Brunnerton.
O'Donnell, Alphonsus, Roa.
Parsonage, W., Runanga.
Pendletor. Samuel, Blackball.
Penman, A., Huntly.
Reid, William Taylor, New Lynn. Auckland.
Scoble, E. J., Waihi.
Smith, Albert, Denniston.
Smith, George, Denniston.
Smith, George, Fairfield.
Strongman, C., Ngakawau.
Talbot, H., Brunnerton.
Tattley, F. J., Mercer.
Taylor, A. H., Waikato.
Thomson, Thomas, Denniston.
Turner, G. F., Shag Point.
Westfield, C. H., Fairfield.
Whittlestone, A. W., Shag Point.

Issued under the Coal-mines Act, 1886, on Production of English Certificate.

Binns, G. J., Dunedin. Black, T. H., Waipori. Broome, G. H., Ngakawau. Cochrane, N. D., Dunedin. Hodgson, J. W., Ross.

Reed, F., Wellington. Tattley, W., Auckland.

Issued under the Coal-mines Acts of 1891, 1905, 1908, and 1925, on Production of Certificate from a recognized Authority outside the Dominion.

Alison, J., Mangatini.
Armstrong, John Eagleston, Stockton.
Bayne, J. A. C., Roa.
Broadhead, A. K., Ngakawau.
Clark, W., Blackball.
Davidson, Gavin, Blackball.
Davies, D. J., Ngakawau.
Fletcher, James, Westport.
Frame, Joseph. Kaitangata.
Gascoigne, Errington, Huntly.
Geddes, Thomas, Ohai.
Gillick, J., Kaitangata.
Goold, A. L., Auckland.

Hunter, Peter, Ngakawau. Hunter, Charles, Pukemiro. Irvine, James, Dunedin. James, Isaac Angelo, Westport. Kane, D., Denniston. Kirkwood, D., Coromandel. Lamont, J., Devonport. Lewis, W., Blackball. Mark, W. S., Kaitangata. McAvoy, H., Christchurch. McGhie, Thomas, Stockton. Morris, A., Huntly. Murray, Robert, Nighteaps. Nelson, E., Hikurangi.
Quinn, John Graham, Seddonville.
Robins, George Edmund, New Plymouth.
Ross, John, Dunedin.
Rosser, Thomas, Pukemiro.
Spence, John, Huntiy.
Thompson, Cyril, Brunnerton.
Watson, James, Greymouth.
Watson, John, Blackbali.
Wight, E. S., Auckland.
Williams, Alfred David, Reefton.
Woods, William, Mokihinui.

# SECOND-CLASS MINE-MANAGERS' CERTIFICATES.

Issued under the Coal-mines Act, 1891.

Collier, Levi, Kamo. Clarke, Edward, Shag Point. Elliot, Joseph, Coal Creek. Harris, John, Denniston. Herd, Joseph, Brunnerton. Lobb, Joseph, Mokau. McIntosh, Allan, Shag Point. McLaren, J. M., Thames. Murray, Thomas, Denniston. Radeliffe, William, Reefton.

Sara, James, Reefton. Thomas, James, Springfield. Willetts, John Morris, Papakaio. Young, William, Waimangaroa.

Issued under the Coal-mines Acts, 1886, 1891, 1905, 1908, and 1925, after Examination.

Allan, J., Brunner.
Archer, Frederick William, Stockton.
Austin, W. B., Sheffield.
Ball, A., Kimihia.
Barelay, Fred, Fairfield.
Barelay, T., Kaitangata.
Barelay, T., jun., Kaitangata.
Barelay, William, Kaitangata.
Barnes, A. E., Shag Point.
Bashall, James, Shag Point.
Brennan, John, Kaitangata.
Broome, J., jun., Gore.
Brown, Robert, Kaitangata.

Buchanan, William, Ohai.
Burleigh, James Barr, Taratu.
Cadman, J., Hikurangi.
Cain, Alexander, Kaitangata.
Campbell, Peter, Fairfield.
Carruthers, J., jun., Nighteaps.
Charles, E., Glentunnel.
Cherrie, R. C., Mokau.
Chippendale, John Samuel, Stockton.
Christie, James, Saddle Hill.
Clemo, G., Whangarei.
Coan, Ralph Charles, Rotowaro.
Colligan, Andrew, Nighteaps.

Craig, John, Coal Creck Flat.
Crockett, S., Millerton.
Dale, E. G., Kaitangata.
Davies, W. C., Huntly.
Dixon, W., jun., Kaitangata.
Duffy, Frank, Burnett's Face.
Duncan, James, Kaitangata.
Duncan, J. E., Kaitangata.
Duncan, John, Lovell's Flat.
Duncan, R. W., Nightcaps.
Dymond, John, Millerton.
Ferguson, A., Kaitangata.
Ferguson, G., Roa.

#### SECOND-CLASS MINE-MANAGERS' CERTIFICATES—continued.

Issued under the Coal-mines Acts, 1886, 1891, 1905, 1908, and 1925, after Examination—continued.

Fox, R. A., Blackball. Fox, R. A., Blackball.
Fox, Sidney Arthur, Stockton.
Griffin, James C., Kaitangata.
Harris, A., Saddle Hill.
Hewitson, W. E. G., Burnett's Facc.
Heycock, C. R., Nighteaps.
Heyes, T., Kaitangata.
Hill, R., Abbotsford.
Hodson, John, Kaitangata.
Hodson, John, jun., Bannockburn.
Hughes, Job. Roa. Hughes, Job, Roa. Hunter, A., Southland. James, Isaac, Kaitangata. Jones, Ernest George, Millerton. Kells, F. H., Denniston. Leonard, James William, Huntly. Lewis, David, Puponga. Lewis, J., Nighteaps, Lindsay, J. B., Orepuki, Lowden, W., Millerton, Makinson, Job, Huntly. Mason, Edward, Nightcaps.

Mason, James, jun., Nightcaps. McAllister, Neil, Kaitangata.
McIlwain, John, Denniston.
McLelland, A. C., Kaitangata.
McLelland, J., Kaitangata.
McCormick, Thomas, Reefton.
McNeill, D., Fairfield. McNeill, D., Fairfield.
Mills, Walter, Huntly.
Monaghan, Henry, Millerton.
Morganty, Louis, Ngakawau.
Mosley, J. T., Stirling.
Neilson, J., Runanga.
Neilson, Moffat, Abbotsford.
Newburn, S., Kaitangata.
Nicholson, David, Huntly West.
Openshaw, Arnold. Westport.
Orr, Hugh, Fairfield.
O'Romke, William, Granity.
Parcell, W., jun., Bannockburn.
Parfitt, William, Millerton.
Penman, C. P., Kaitangata.
Pfeffer, Joseph Edward, Millerton. Price, F. J., Burnett's Face.
Roberts, John Russell, Stockton.
Robertson, J., Nightcaps.
Scoble, E. J., Blackball.
Smith, Frederick, Rotowaro.
Snow, T., Mercer.
Tansey, Michael Joseph, Hikurangi.
Tattley, F. J., Mercer.
Taylor, Joseph, Collingwood.
Thompson, Joseph. Blackball.
Thomson, James, Nightcaps.
Todd, T., Nightcaps.
Turton, John, Huntly.
Waldie, A. B., Mokau.
Walls, James, Benhar.
Watson, A., Soldier's Creek. Price, F. J., Burnett's Face. Walls, James, Benhar.
Watson, A., Soldier's Creek.
Westfield, C., Fairfield, Otago.
Whittlestone, A. W., Shag Point.
Whittlestone, G. F., Abbotsford.
Wright, Thomas, Huntly.
Wykes, Alfred, Huntly.

Issued under the Coal-mines Acts of 1891, 1905, 1908, and 1925, on Production of Certificate from a recognized Authority outside the Dominion.

Arundel, W., Hikurangi.
Barlow, H., Greymouth.
Baxendale, J., Mine Creek.
Black, J., Granity.
Boyd, J., Hikurangi.
Brown, John W., Hikurangi.
Brownlie, John, Huntly.
Brownlie, T., Huntly.
Burley, T., Hikurangi.
Burt, A., Huntly.
Christopher. Richard Willian Christopher, Richard William, Greymouth.
Cross, G., Hikurangi.
Dickinson, W., Gore.
Dodd, W., Granity.
Dunbar, John, Glen Afton.
Eyeington, G., Huntly.
Ford, John Robert, Nightcaps. Graham, Robert, Huntly.

Graham, D., Huntly. Gray, James, Runanga. Grenall, S., Granity. Hall, Richard, Dobson. Hall, Richard, Dobson.
Inglis, A., Huntly.
Jones, T., Kimihia.
Kerr, D., Collingwood.
Lennox, W., Springfield.
Little, W., Wellington.
Littlewood, G. G., Denniston.
McCall, John, Wellington.
McCloy, Thomas Moggial McCloy, Thomas, Mosgiel. McGeachie, J., jun., Mokau. McGuire, P., Mount Somers. McGuire, William, Seddonville. McHardy, A. J., Ferntown. Molony, C. V. P., Auckland. Morgan, H. L., Ngakawau. Myers, T., Kiripaka.

Newburn, F., Roa.
Parsonage, W., Dunollie.
Penman, A., Huntly.
Provan, P., Runanga.
Reid, William Taylor, Reid, Wi Huntly. Taylor, Star Robertson, R., Roa. Ross, John, Hikurangi. Sneddon, J., Blackball. Strachan, J., Dunedin.
Talbot, H., Huntly.
Tennant, D., Paparoa.
Tervit, Alexander, Frankton Junetion.
Tipton, Harry, Hikurangi.
Watson, John, Roa.
Webb, T. E., Huntly. Webster, Arnold, Huntly. Westhead, Frederick, Papakura. Yates, Thomas, Huntly.

#### Mine-surveyors' Certificates.

Issued without Examination under the Coal-mines Act, 1925.

Dale, Roger Thomas Hilton, Kaitangata. Davies, Harold N., Mount Eden, Auckland.

Flyger, Stanley Arthur, Glen Afton. Kennedy, Ernest William, Runanga. Geddes, Thomas, Ohai, Southland. Turner, William Herbert, Petone.

First-class Mine-managers' Certificates endorsed under Regulation 8 (3), under the Coal-mines Act, 1925.

Duggan, George, Dunedin. Hunter, Peter, Glen Afton. Hill, Robert, Green Island. Molony, C. V. P., Pukemiro Junction. Burt, Andrew, Pukemiro. Talbot, Henry, Avoca.

McMillan, Thomas, Ohai. Davidson, Gavin, Hikurangi. Gillanders, Alex. S., Shag Point. Hadcroft, John, Lovell's Flat. Leitch, Walter, Dobson. Hughes, Job, Dobson.

Lowden, William, Reefton. Carson, William, Kaitangata. Carson, Frederick, Kaitangata. Mosley, John Thomas, Ohai. Duncan, Robert W., Nightcaps. Carruthers, Jas., jun., Milton.

# Underviewers' Certificates.

Certificates of Service issued under the Coal-mines Amendment Act, 1909.

Allan, James, Puponga.
Attrill, Charles Waterford, Mercer.
Barry, A. H., Huntly.
Bond, John, Waikaia.
Boustrage, T. Hubert, Brunnerton.
Broome, James, Gore.
Clough, Henry, Millerton.
Davidson, William, Mine Creek.
Davis William, Runanga. Davis, William, Runanga. Donaldson, James, Kaitangata, Flynn, John, Bannockburn.

Green, Richard, Abbotsford. Hawthorn, James, Puponga. Hunter, Peter, Ngakawau. Johnston, William Crowan, Gore. Johnstone, Thomas, Denniston, Levick, Harry, White Cliffs, Marsh, Charles George, Glentunnel, McAlister, Robert, Kaitangata, McNeill, William, Fairfield, Newlands, George, Brunnerton.

Nimmo, Thomas, Papakaio. Nimmo, William, Ngapara. Penman, John, Denniston. Proctor, William, Kaitangata. Robertson, William, Mosgiel. Todd, Thomas, Nighteaps. Walker, John, Blackball. Williams, William, Kaitangata. Wilson, Daniel, Kaitangata. Winter, John, Denniston.

9—C. 2.

# Underviewers Certificates—continued.

Issued under the Coal-mines Amendment Act, 1909, and the Coal-mines Act, 1925, after Examination.

Ainscough, William, Huntly. Allison, John, Pukemiro.
Archer, F. W., Capleston.
Armstrong, V., Runanga.
Astbury, Harold, Huntly. Astoury, Harold, Huntly.
Atkinson, John, Puponga.
Bashall, J., Puponga.
Bell, Thomas, Huntly.
Berry, A. H., Huntly.
Bird. Christopher, Rotoware.
Black, David Livingstone, Pukemiro.
Blair, Robert, Glen Massey. Blair, Robert, Glen Massey.
Boddy, A. J., Rewanui.
Brady, George, Blackball.
Brennan, John, Kaitangata.
Brown, Charles Henry, Denniston.
Brownlie, William Aitken, Denniston.
Buitet, Charles David, Roa.
Burleigh, James Barr, Orepuki.
Burnie, William, Glen Massey. Burleigh, James Barr, Orepuki Burnie, William, Glen Massey. Butler, William, Denniston. Bullough, Ernest, Rotowaro. Cain, A., Kaitangata. Carson, F., Kaitangata. Chippendale, John, Westport. Clark, W. S., State Collieries. Coan, Ralph Charles, Huntly. Coppersmith, Edward, Denniston. Crump, Robert, Huntly. Curran, Valentine, Pukemiro. Curran, John William, Huntly. Doel, Alfred James, Hikurangi. Downes, William Norbury, Runanga. Downes, Wittam Norouty Dowgray, John, Granity. Duffy, F., Burnett's Face. Duggan, John, Runanga. Dunn, Samuel, Pukemiro. Dymond, John, Mine Creek. Eckersley, William Hampson, Roa. Fenton, John William, Kaitangata. Fleming, Gavin, Pukemiro. Fleming, Robert, Glen Afton. Foot, Sydney George, Hikucangi. Forsyth, Matthew, Denniston. Fowler, Murray, Blackball. Fox, Sidney Arthur, Denniston. Gilbert, George, Millerton.

Goldthorpe, George, Pipiroa. Griffen, J., Kaitangata. Haderoft, John, Dunollie. Hall, Thomas, Kaitangata. Harrie, Leslie, Reefton. Hector, William, Runanga. Hewitson, W. E. G., Burnett's Face. Hill, Edwin Ernest, Dobson. Hodge, William, Pukemiro. Honey, A. J., Burnett's Face. Hughes, T. G., Huntly. Hunter, Peter, Stockton. Jack, W., Millerton. Johnston, Edward, Pukemiro. Johnston, C. M., Seddonville. Johnston, William, Pukemiro. Jones, Ernest George, Millerton. Jones, Harry, Kimihia Kennedy, Ernest William, Runanga. Kerry, Edward, Huntly. King, T. H., Granity. Leonard, James William, Huntly. Longstaff, Robert, Ngaruawahia. Lowden, William, Millerton. Maguigan, Thomas, Roa. Maher, William, Denniston. Makinson, J., Huntly. Mann, John Henry, Dunollie. McCormick, Thomas, Blackball. McDonald, Thomas, Ngakawau. McDonald, Robert, Milton. McIlwain, John, Denniston. McIlwor, D., Runanga. McKernan, John, Millerton. McLean, Archibald Kennedy, Kaitangata. McLean, Malcolm, Granity
McLeod, J. G., Millerton.
McLiskey, Edward Kemp, Pukemiro.
McLuckie, John, Huntly.
McMillan, John, Taupiri. Mercer, James, Burnett's Face.
Monaghan, Henry, Millerton.
Morris, Harry, Burnett's Face.
Morganty, L., Stockton.
Mosley, J. T., Denniston.
Mossop, Isaac, Runanga.

Nimmo, Thomas, jun., Papakaio. Openshaw, Arnold, Blackball. O'Brien, D. Q., Mangatini. O'Donnell, Alphonsus, Roa. O'Loughlis, Language. O'Loughlin, Leo Francis, Runanga. O'Rourke, William, Granity. Padfield, Charles, Rotowaro. Parfitt, William, Millerton. Parfitt, William, Millerton.
Pendleton, Samuel, Blackball.
Phillips, J., Taratu.
Pfeffer, Joseph Edward, Millerton.
Powell, Isaac, Rewanui.
Ramsden, John, Kaitangata.
Rennie, John, Millerton.
Richardson, Ernest, Kaitangata.
Richardson, William, Taylorville.
Rogers, James, Ngakawau.
Sharpe, John Russell, Taratu.
Shearer William Glen Afton. Shearer, William, Glen Afton. Sheaden. Robert M., Nighteaps. Smith, Albert, Denniston. Smith, Frederick, Rotowaro. Smith, Joseph, Denniston. Strongman, C. J., Cobden. Sweeney, J. L., State Colleries. Tennant, Alexander, Blackball. Tansey, Michael Joseph, Tartown, Hikurangi. Taylor, John Ralph, Roa. Thomson, David B., Huntly. Thomson, James, Huntly.
Thomson, James, Huntly.
Tucker, J., Kaitangata.
Tunstall, Adam Gray, Hikurangi.
Tunstall, William, Hikurangi.
Turnbull, E. V., Thames.
Turner, Alfred, Kitipaka. Turton, J., Huntly. Tyson, Isaac, Runanga. Waters, Thomas Edwin, Shag Point. Weatherspoon, Peter, Huntly. White, Edward ,Ngaruawahia. Whittlestone, G. F., Abbotsford. Williamson, W. R., Rewanui. Woods, Albert, Granity. Wright, Thomas, Huntly. Wykes, Alfred, Huntly.

Nicholson, D., Huntly.

# Certificates of Service issued under the Coal-mines Amendment Act, 1910.

Beardsmore, E., Denniston. Cuthbertson, Robert, Fairfield. Evans, William, Abbotsford. Fisher, T., Westport. Gibson, M., Abbotsford. Haderoft, J., Runanga. Hunt, W., Shag Point.

Jones, David, Nightcaps. Jones, Morris, Nighteaps. Jones, Morris, Nighteaps. Jones, W., Waikaka Valley. Kitto, Richard, Kaitangata. Manderson, P., Runanga. Mann, D., Granity. Mason, Edward, Kingston Crossing. Mitchell, Alexander, Runanga. Neill, S., Kawakawa. Newburn, S., Kaitangata. Statham, Robert, Kaitangata. Walker, J. R., Brighton.

Issued under the Coal-mines Amendment Act, 1914, on Production of Certificate of Corresponding Class granted in any British Possession or Foreign Country.

Beal, George Frederick, Runanga, Lees, Andrew, Huntly.

Martin, Elias, Ngakawan,

Middleton, Robert, Runanga,

#### FIREMEN AND DEPUTIES' CERTIFICATES.

Certificates of Service issued under the Coal-mines Amendment Act, 1909.

Aitken, George, Glentunnel. Allar, A. George, Abbotsford. Allan, Charles, Brunnerton. Beardsmore, Edward, Denniston. Berry, Albert Henry, Huntly. Blaney, James, sen., Kaitangata. Boyd, Robert, Waronui. Bradley, Robert, Denniston. Buchols, Joseph, Waikaka. Burgess, William Charles E., Gore. Burgess, William Charles E., Go Callaghan, Frederick, Kiripaka. Campbell, Samuel, Millerton. Chamley, William, Millerton. Clausen, Emil P., Wellington. Connelly, Michael, Denniston. Connew, John, Puponga. Coppersmith, John, Denniston.

Cowan, Robert Black, Gibbston. Cuthbertson, Robert, Fairfield. Davis, Evan, Denniston. Deeming, William, Hikurangi. Dellaway, Archibald, Denniston. Dickson, Richard, Hikurangi. Dillon, Lawrence M., Nighteaps. Duncan, Frank, Huntly. Duncan, Hugh, Kaitangata. Evans, William, Abbotsford. Findlay, Charles, Denniston. Foot, Frederick Ernest, Denniston. Gibson, Matthew, Abbotsford. Gibson, Robert, Millerton. Gilmour, William, Millerton. Glover, Richard, Runanga.

Gray, Thomas, Abbotsford. Gribben, John, Kaitangata. Hadcroft, James, Runanga. Hamilton, John, Hikurangi. Hargreaves, Charles, Millerton. Harris, John, Reefton. Hartley, John, Denniston. Hay, James, Denniston. Heron, Ralph, Kimihia. Higgins, Thomas James, Denniston Hislop, William, Denniston. Holden, Samuel, Granity. Housley, Benjamin, Huntly. Howe, George Charles, Shag Point. \*\* Jarvie, William Marshall, Kaitangata. Jaspers, George F., Denniston.

#### FIREMEN AND DEPUTIES' CERTIFICATES—continued

Certificates of Service issued under the Coal-mines Amendment Act, 1909—continued;

Jenkins, James, Ngakawau Johnston, C. Mountier, Seddonville.
Johnston, C. Mountier, Seddonville.
Jones, David, Nighteaps.
Kaye, Charles, Runanga.
Kitto, Richard, Kaitangata.
Leeming, J. T., South Malvern.
Lutton, William, Millerton.
Mann, Duncan, Millerton.
Mason, William, Denniston Mason, William, Denniston. Mears, Andrew David, Runanga. Monerieff, Thomas, Nightcaps. Moore, Thomas, Mangatini. Morganty, Charles, Ngakawau. Murdoch, Colin McColl, Stirling.

McCaffrey, James, Seddonville. McCaughern, John, Kaitangata. McDonald, John T., Millerton. McDonald, John T., Millerton,
McGhee, William, Kaitangata,
McGill, Douglas Thomas, Waikaka,
McGill, John, Huntly,
McKenzie, James, Nighteaps,
Newburn, Robert, Kaitangata,
Newburn, Samuel, Kaitangata,
Nicholas, William, Kaitangata,
Oliver, William, Kaitangata,
Parcell, Henry Clyde, Bannockburn Parcell, Henry Clyde, Bannockburn. Park, Francis, Stirling. Penman, Robert, Kaitangata. Sanderson, John, Kurow. Scott, John, Runanga. Smith, William, Seddonville. Sneddon, James, Blackball. Taylor, James, Springfield.
Thin, William, White Cliffs. Tripp, Albert, Kaitangata, Wallace, John, Mataura. Wardrope, Francis, Hikurangi. Watsop, Andrew, Roa. West, George Thomas, Waronui. Young, Thomas Gardner, Waikaia.

Issued under the Coal-mines Amendment Act, 1909, and the Coal-mines Act, 1925, after Examination.

Abbott, Edward Arthur, Millerton. Abererombie, William, Huntly. Allison, David, Huntly. Allison, John, Pukemiro. Allan, George, Huntly. Allan, James, Brunnerton. Anderson, David Alexander, Kaitangata. Anderson, Walter, Blackball. Anderson, Walter, Blackball.
Armstrong, V., Runanga.
Astbury, Harold, Huntly.
Atkin, William, Waikokowai.
Atkinson, J., Puponga.
Baker, Thomas, Huntly.
Ball, A., Kimihia.
Barber, Robert, Shag Point.
Barclay, F., Kaitangata.
Barclay, William, Kaitangata.
Barker, Richard, Runanga.
Beardsmore, Abel, jun., Papakaio.
Beattie, George V., Nighteaps.
Bell, Thomas, Huntly.
Bennett, Thomas, Burnett's Face.
Birchall, J., Burnett's Face.
Bird, Robert William, Ohai. Bird, Robert William, Ohai.
Bird, Christopher, Huntly.
Blair, Robert, Glen Massey.
Blair, Peter, Huntly.
Boddy, Archibald John, Runanga.
Bolger, John, Mataura.
Bond, W. T., Huntly.
Bougher, Lawrence Wilfred, Kamo.
Bowron, Christopher, Huntly.
Bovd, James Langwell, Huntly.
Brady, George Joseph, Blackball.
Brady, William Richard, Roa.
Braithwaite, Percy, Nightcaps.
Brennen, J., Kaitangata.
Broadbent, Samuel, Huntly.
Brown, J., jun., Denniston.
Brownlie, Robert Aitken, Granity.
Brownlie, William Aitken, Denniston. Bird, Robert William, Ohai. ton. Bryson, John, Millerton. Buchanan, William, Millerton. Buist, Charles David, Roa.

Bulst, Charles David, Roa.
Bullough, Ernest, Rotowaro.
Burdon, George, Denniston.
Burnett, William, Reefton.
Burnie, William, Glen Massey.
Burt, T., Huntly.
Butler, Samuel Arthur, Runanga.
Byrne, Edward Francis, Granity.
Cairne, Adam Kaitangata Cairns, Adam, Kaitangata. Calder, Thomas, Ngakawau. Caldwell, Thomas, Blackball. Callaghan, M., Blackball.
Campbell, Archibald, Cobden.
Campbell, J. C., Glentunnel.
Campbell, John, Allanholme Colliery, Waimate. Carruthers, Alexander Denton, Waronui, Milton.

Carson, Frederick. Chadwick, George, Blackball. Chadwick, A., Millerton. Chapman, A. E., Kaitangata. Chippendale, J., Millerton. Clare, William, Pukemiro.

Clark, W. S., Dunollie. Clarke, John, Millerton. Clarke, S., Roa. Cleveland, F. L., Kaitangata. Cole, Walter G., Glen Afton. Colquhoun, John C., Rotowaro. Colledge, A., Huntly. Colligan, Andrew, Nightcaps. Connolly, John Joseph, Runanga. Connolly, John Joseph, Kunanga. Connolly, John, Runanga. Coppersmith, Edward, Denniston. Cooper, J. J., Milton. Cosgriff, Edward, Nighteaps. Cosgriff, Edward, Nighteaps.
Cowan, J., Millerton.
Cowan, William, Millerton.
Craig, James, Waimate.
Crook, Henry, Rotowaro.
Cruikshank, P. G., Runanga.
Crump, Robert, Huntly.
Cumming, George, Denniston.
Cunningham, Joseph, Hikurangi.
Curragh, A., Burnett's Face.
Curran, Valentine, Pukemiro Junction.
Curran, John William, Huntly.
Curran, James, Ngakawau. Curran, James, Ngakawau. Currie, Thomas H., Runanga. Curtis, Cecil Donald, Reefton. Cuthbertson, John, Glentunnel. Dalzell, Joseph, Runanga. Dando, Walter, Brunnerton. Danks, Peter, Millerton. Danks, Peter, Millerton.
Davidson, James, Blackball.
Davidson, Thomas, Mine Creek.
Davies, F., Puponga.
Davies, Henry Hubert, Huntly.
Davies, Llewellyn, Burnett's Face.
Davis, Oliver James, Runanga.
Delaney, J. E., Puponga.
Devlin, James, Roa.
Dick, Alexander Clark, Kaitangata.
Dickson, John, Ngakawau.
Dillon, Joseph, Blackball.
Dinsdale, George, Rewanui. Dinsdale, George, Rewanui.
Dixon, Andrew Cunningham, Wairio.
Dixon, Matthew, Nightcaps.
Docherty, Edward, Rewanui. Docherty, John Edward, Nightcaps. Doel, Alfred James, Hikurangi. Doel, Charles John, Hikurangi. Dove, John Thomas, Seddonville.
Dover, William Niven, Ohai.
Dowgray, John, Millerton.
Downes, William Norbury, Cobden.
Duffy, Owen, Burnett's Face. Duggan, Francis, Runanga. Duggan, John, Upper Rewanui. Dunn, Samuel, Pukemiro. Dunlop, James, Green Island. Durkin, Thomas, Millerton. Dutton, William, Rewanui. Dymond, J., Millerton. Dymond, J., Millerton.
Eaton, Robert, Kaitangata.
Eckersley, W., Paparoa.
Edge, Albert Henry, Waikaka.
Excell, Walter, Nightcaps.
Fairhurst, R. W., Huntly.
Fannigan, P., Ngakawau.
Fazakerley, John, Stirling.
Ferguson, A., Kaitangata.
Ferguson, Hugh, Nightcaps.

Ferguson, William, Wairaki. Finlayson, Robert, Millerton. Fleming, Robert, Sarclay, Denniston. Fleming, Robert, Glen Afton. Fleming, Gavin, Pukemiro. Foot, Sidney George, Hikurangi. Ford, John, Dobson. Forrest, John, Runanga. Fowler, Murray, Blackball. Freeman, Samuel Lawrence, Night-Freeman, Samuel Lawrence, Nightcaps.
Frew, W., Huntly.
Gage. Thomas, Kaitaugata.
Gaudion, David Robertson, Waikaia.
Gavin, Hugh, Huntly.
Gordon, George William, Huntly.
Gore, Robert, Runanga.
Gould, Edward, Denniston.
Gox, Henry John, Blackball.
Gilligan, H., Runanga.
Gilmour, George, Millerton.
Green, Albert, Pukemiro.
Green, George Edward, Huntly.
Green, T., Kaitangata.
Griffiths, Horace, Brunnerton.
Griffiths, William, Runanga.
Griffen, James, Kaitangata. Griffiths, William, Runanga.
Griffen, James, Kaitangata.
Groom, George, Huntly.
Hale, Edmund, Granity.
Hale, J., Kaitangata.
Hall, R. H., Huntly.
Hall, Thomas, Kaitangata.
Halliday, Thomas, Dunollie.
Hallinan, James Joseph, Brunuerton.
Hamilton James Nighteans Hamilton, James Joseph, Brunner Hamilton, James, Nightcaps. Hannah, J., Glentunnel. Hardie, J., Millerton. Harris, George S., Mount Somers. Harris, Thomas, Mount Somers. Harris, William, Mount Somers. Harrison, William, Glen Afton. Harvey, D., Huntly. Harvey, Joseph Shaw, Riccarton, East Taieri. Hawkins, Joseph, Burnett's Face.

Hendry, John, Millerton. Hewison, John, Reefton. Heward, Nathan, Runanga. Heward, Nathan, Runanga.
Hicks, J. R., Kiripaka.
Hill, A., Lovell's Flat.
Hill, Alfred, Runanga.
Hill, E. E., Brunnerton.
Hill, Henry Adamson, Huntly.
Hill, Joseph, Milton.
Hilton, Thomas, Denniston.
Hodge, William C., Pukemiro.
Hogg, C., Blackball.
Holland, Isaac, Huntly.
Hollows, W., Fairfield.
Holt. Thomas. Huntly. Holt, Thomas, Huntly.
Holt, Thomas, Huntly.
Honey, Archibald John, Denniston.
Hopkinson, Joseph, Seddenville.
Howie, Archibald, Nightcaps.
Howison, Christopher, Gladstone, Siding. Hughes, T. E., Huntly.

Hunter, Albert Newman, Kaitangata. Ireland, Richard, Glen Afton.

#### FIREMEN AND DEPUTIES' CERTIFICATES—continued.

Issued under the Coal-mines Amendment Act, 1909, and the Coal-mines Act, 1925, after Examination -- continued.

Isherwood, T., Runanga. Jack, John, Kaitangata.
James, E. V. P., Blackball.
James, Isaac, Kaitangata.
Jenkins, William, St. Helens.
Johnson, J. H., Hikurangi. Johnson, Edward, Pukemiro. Johnson, Frederick Richard, Hikurangi Johnson, Thomas, Huntly. Johnson, Thomas, Huntly.
Johnstone, William, Pukemiro.
Johnstone, Thomas U., Huntly.
Jones, Ernest George, Millerton.
Jones, Harry, Kimihia, Huntly.
Jones, William Isaac, Blackball.
Jones, B., Millerton.
Jones, J., Hikurangi.
Jones, J., Kimihia.
Jordan, Harry Leslie. Kaitangata.
Kay, Fred, Huntly.
Keating, Edward, Dobson.
Kerr. David. Green Island. Kerr, David, Green Island. Kerry, E., Huntly. King, Michael Percival, Millerton. King, Thomas Henry, Granity. Kinson, Brinley, Huntly. Kinson, Brinley, Huntly. Kinzett, Leonard Phipps, Roa. Kyle, James, Kaitangata. Kyle, William, Nightcaps. Kyle, William, Kaitangata. Lancaster, Herbert, Puponga. Lauder, Matt Currie, Runanga. Lees, Gavin Russell, Glen Massey. Lees, Robert, Glen Massey. Lees, Robert, Glen Massey.
Leech, Richard, Runanga.
Lewis, I., Puponga.
Leitch, Robert, Blackball.
Leishman, Robert, Kaitangata.
Leonard, John Patrick, Granity.
Lidbury, Charles Hanny, Millenter Lidbury, Charles Henry, Millerton. Little, George, Runanga. Longstaff, Robert, Roa. Long, Arthur Feltham, Hikurangi. Lowden, W., Millerton. Mackie, David Wardrop, Pukemiro. Mackie, J., Kaitangata. Mackinson, Job, Hikurangi. Maddison, W., Huntly. Maguigan, Thomas, Roa. Magee, Peter Lawrence, Kaitangata. Makepeace, Henry, Runanga. Manderson, Archibald, Mosgiel Junction. Mann, John Henry, Dunollie. Mann, John, Mangatina. Mann, William, Birchfield. Mann, William, Birchfield.
Marshall, James, Nightcaps.
Martin, Charles Richard, Stockton.
Martin, T. N., Huntly.
McAuley, P., Ngakawau.
McAvoy, William, Ngakawau.
McCaw, John, Kaitangata.
McCallum, Andrew, Huntly.
McCallum, John, Blackball.
McCarmick, Thomas, Blackball McCormick, Thomas, Blackball.
McDonald, J., Ngakawau.
McDonald, Thomas, Burnett's Face.
McEwen, Harold Wallace, Stockton. McGovern, R.. Wairio. McGuinness, E., Runanga. McGhie, George, Huntly. McGhee, David, Granity. McIlwain, John, Dennistou. McIntyre, William H., Millerton. McIvor, David, Runanga. McKenty, H., Denniston.
McKernan, John, Millerton.
McLaughlin, J. W., Huntly.
McLean, Archibald Kennedy, Kaitangata.

McLiskey, Edward Kemp, Pukemiro.

McMillan, John, Huntly.

McMillan, John, Kaitangata. McMillan, R., Kaitangata. McVie, Robert, Kaitangata. Mce, Albert, Kaitangata. Mcekums, George, Glen Afton.

Mercer, James, Burnett's Face. Miles, B. C., Millerton. Milne, Charles, Kaitangata. Mitchell, A., Seddonville. Monaghan, Henry, Millerton. Moreland, S., Hikurangi. Morganti, Louis, Millerton. Morrison, Alexander, Kaitangata, Morris, Harry, Burnett's Face, Morrow, John, Kaitangata. Morrow. John, Kaitangata.
Mosley, J. T., Denniston.
Mossop, Isaac, Dunollie, Greymouth.
Moseby, Edward, Nighteaps.
Moye, John Patrick, Denniston.
Mulholland, Robert McN., Seddonville.
Murray, Thomas, Millerton.
Murphy, Francis William, Dunollie.
Myers, Richard, Millerton.
Nicholson. David. Huntly. Nicholson, David, Huntly. Nicholson, J., State Collieries. Niven, James Quinn, Ngakawau. Niven, Peter. Ngakawau. Nuttall, John, Blackball. Oakley, Frank John, Runanga. O'Brien, Denis Quinsin, Millerton.
O'Brien, Martin, Millerton.
O'Donnell, Alphonsus, Roa.
O'Fee, J., Kaitangata.
Oldham, Joshua, Burnett's Face. Oliver, R., Kaitangata. Openshaw, Arnold, Blackball. Openshaw, Arnold, Blackball.
Orr, Charles M., Ohai.
Orr, John B., Hikurangi.
O'Loughlin, Leo F., Rumanga.
Padfield, Charles, Huntly.
Page, William, Dunollie.
Parfitt, William, Millerton.
Parker, Andrew, Greymouth.
Parr, Joseph. Burnett's Face.
Parrott, W., Waiuta.
Paul, James, Seddonville.
Patterson, James William, Reefton.
Payne, Edwin, Kaitangata. Payne, Edwin, Kaitangata. Peart, Frederick Smith, Millerton. Pearson, James Thomas, Mataura. Pearson, James Thomas, Mataura.
Pearson, Samuel G., Burnett's Face.
Pendleton, S., Blackball.
Peterson, Nicholas, Blackball.
Pfeffer, Joseph Edward, Millerton.
Phillips, J., Puponga.
Phillips, James, Nightcaps.
Philp, Thomas, Denniston.
Pollock, Archibald, Whangarei.
Pollock, John. Denniston. Pollock, John, Denniston. Ponton, F., Millerton. Powell, I., Dunollie. Powell, I., Dunollie.
Prendeville, Antonio Valli, Nightcaps.
Pratt, Alexander, Millerton.
Prosser, Arthur, Millerton.
Prosser, Frederick Oliver, Millerton.
Purdie, Thomas Henry, Rotowaro.
Quinlan, Thomas, Huntly.
Quinn, Thomas, Seddonville.
Rafferty, William, Runanga.
Ralph, J., Huntly.
Ramsay, J. McK., Kaitangata.
Rarity, Alexander C., Hikurangi.
Ratcliffe, John Thomas, Kaitangata.
Rayner, Frank, Pukemiro. Rayner, Frank, Pukemiro. Reed, W. H., Hikurangi. Rees, David John, Stockton.
Reid, Henry, Millerton.
Reid, Henry, Huntly.
Reid, Samuel, Nightcaps.
Richardson, Ernest, Kaitangata. Richardson, Ernest, Kaitangata Richardson, W., Dunollie, Richmond, William, Runanga. Riggans, William M., Huntly. Robson, W., State Collieries. Robertson, John, Runanga. Robertson, William, Runanga. Rodgers, J., Huntly. Rodgers, J., Ngakawau. Rodgers, William, Granity. Rogers, A. G., Kaitangata. Rogers, Sidney, Kaitangata. Roe, James, Glen Afton.

Rollerson, Edward Francis, Reefton. Rose, George, Pukemiro, Rose, Walter Albert, Rewami. Ross, Alexander, Fairfield. Rotch, Robert William, Orepuki. Roteh, Robert William, Orepuki,
Rowse, J., Runanga,
Russell, William, Ohai,
Ruston, Edwin Walter, Huntly,
Rutherford, John Yarrow, Dunollie,
Rutherford, W. R., Kaitangata,
Scott, George R., Glen Afton,
Scott, James, Blackball,
Seddon, William, Huntly,
Sharp, J. R., Kaitangata,
Sharp, William Russell, Kaitangata,
Shearer, William, Stockton,
Shore, W. M., Taratu,
Slack, Joseph, Darlington, Stockton,
Smith, Donald, Huntly,
Smith, Fred, Rotowaro,
Smith, George, Hikurangi, Smith, Fred, Rotowaro.
Smith, George, Hikurangi.
Smith, Harold, Millerton.
Smith, J. A., Seddonville.
Smith, Joseph, Denniston.
Smith, Joseph William, Denniston.
Smith, Thomas W., Millerton.
Smith, W. A., Denniston.
Smith, Wilfred, Millerton.
Smith, Wilfred, Millerton. Smillie, John H., Albury. Smylie, Thomas, Roa. Snedden, Thomas, Blackball. Snedden, William Patterson, Kaitan-Sneuten,
gata.
Suell, J., Kaitangata.
Snowdon, W., Kaitangata.
Southward, William, Runanga.
Southward, Gibson Henderson, Steele, John, Preston Road, Greymouth. Steele, Reginald, Huntly. Strongman, Charles James, Cobden. Summers, William, Pukemiro. Sutherland, J., Millerton. Sutton, George Walker Dudley, Millerton. Sutton, John, Kaitangata. Sweeney, John Lewis, Runanga. Tansey, Michael Joseph, Kaitangata. Tate, Anthony, Seddonville. Taylor, Christopher, Millerton.
Taylor, John Ralph, Roa.
Teasdale, George William, Runanga.
Tennant, Alexander, Blackball. Tennant, Alexander, Blackball.
Tennent, Henry Francis, Kaitangata.
Thawley, William, Denniston.
Thompson, Abel George, Kaitangata.
Thompson, James, jun., Kaitangata.
Thomson, J., Huntly.
Thomson, Thomas, Mine Creek.
Thomson, Thomas, Nightcaps.
Throp, J., Kaitangata.
Timms H. Huntly Throp, J., Kaitangata.
Timms, H., Huntly.
Tomasi, John, Seddonville.
Tunstall, A. G., Hikurangi.
Tunstall, W., Hikurangi.
Turner, F., Kiripaka.
Turner, George, Reefton.
Turner, William James, Denniston.
Turton, John, Huntly.
Tyler, Ivor Llewellyn, Ngakawau.
Tyson. Isaac, Runanga. Tyson, Isaac, Runanga. Unwin, James, Runanga Vaughan, John, Blackball. Veitch, D., Blackball. Vurlow, Frederick Alex Alexander, Denvuriow, Frederick Alexan niston.
Walker, Joseph, Mangatina.
Walker, John, Pukemiro.
Walker, W. J., Granity.
Walls, James, Benhar.
Wallwork, Moses, Runanga.
Wall, Thomas, Mangatina.
Warne, John, Denniston.
Waters. Thomas Edwin, Sha Waters, Thomas Edwin, Shag Point. Waters, Thomas Edwin, Shag Point. Watson, William T., Burnett's Face. Waugh, Robert, Huntly. Wear, Daniel, Huntly.

#### FIREMEN AND DEPUTIES' CERTIFICATES—continued.

Issued under the Coal-mines Amendment Act, 1909, and the Coal-mines Act, 1925, after Examination-continued.

Webster, Oliver, Huntly.
White, Edward, Granity.
Whittle, George Handford, Granity.
Wilson, William, Pukemiro.
Wilson, Andrew, Blackball.
Wilson, J. T., Kamo.
Wilson, James Eric, Stockton.
Wilson, Sidney Robert, Kaitangata.

Wilson, Thomas Laird, Stockton.
Wilson, Vernon, Kaitangata.
Williams, Benjamin John, Blackball.
Williams, Joseph Henry, Blackball.
Williamson, W. R., Rewanui.
Wilkinson, Herbert, Pukemiro.
Wolstenholme, Frederick, Blackball.

Wood, W., Huntly. Woods, A., Millerton. Worthington, T., Millerton. Wright, Richard C. D., Brighton. Wyse, A., Blackball. Young, John, Glen Massey. Young, Thomas, Granity.

Certificates of Service issued under the Coal-mines Amendment Act, 1910.

Broadfoot, W., Millerton.
Burgess, R. S., Waikaka.
Cain, Alexander, Waikaia.
Cameron, D., North Chatton.
Churchill, S. G., Alexandra South.
Clasen, Charles, Shag Point.
Crabbe, George, Alexandra South.
Cumming, J. S., Denniston.
Dixon, A., Nighteaps.
Garrey, W., Kaitangata.
Gray, Hugh, Dunedin.

Halsey, W. J., Saddle Hill.
Hartshorne, W. C., Brunnerton.
Hodgetts, I., Burnett's Face.
Junker, F. A., Waikaia.
Kidd, G. C., Albury.
King, J., Granity.
Lee, S., Nightcaps.
Mackie, N., Kaitangata.
McAuley, John, Kaitangata.
McClimont, John, Mount Somers.
McDowell, R., Nightcaps.

McIntosh, A. S., Shag Point.
McIvor, W., Waikaka.
Nelson, J. H., Pukerau.
Ramsey, George, Waikaka.
Robinson, R., Ngakawau.
Russell, H. C., Bannockburn.
Saunders, W., Denniston.
Stevenson, J., Shag Point.
Thomas, B., Denniston.
Tinker, G., Nightcaps.
Whittlestone, G. F., Abbotsford.

Issued under the Coal-mines Amendment Act, 1914, on Production of Certificate of Corresponding Class granted in any British Possession or Foreign Country.

Barr, T., Coalgate. Coan, R., Huntly. Davies, W. C., Huntly. Malcolm, A., Nightcaps. Quinlan, A. E., —. Tucker, J., Kaitangata.

Approximate Cost of Paper .- Preparation, not given; printing (710 copies), £110

By Authority: W. A. G. SKINNER, Government Printer, Wellington. 1927.

Price 1s. 6d.]

# Fixeden and Inserted Centrements—contract.

from to white the "got mones discretioned dat, 1996, and the linds noted by the Arts, after Recommendation Continued.

ging of the owner. walnesty dispersion of

White Mainte Carriers
When Andrew Red Crad
When A. T. Sand
White A. Sand
White Sand

When Thomas Laird, Stockler, Wickers Test They re Handford, Grante Williams, Breisings John, Blackball. Wiltern, Jacob Henry, Blackball, Wilterness Al. II. Branaut Wilkings Heckert, Pubelaire

Words A. Millerton.
Words A. Millerton.
Wordsgeber, T. Millerton. Wester, Rodnawi C. D. Heighton.

West A. Markens V. Markens West A. Markens V. Markens Markens Markens Markens V. Markens Markens Markens V. V. Markens Markens V. V. Markens Markens Markens V. V. Markens Mar

east, where it counter sample ander the Continues a Lineariness, Letter 1940.

Appropriate Commission (Commission) and Water Control of Section of Control of

12M dishak to 74 . relight KC! horanamiente de VVI myntestata Hereinen Stander in Hereinen Stander I. Stan Not Passas, John, Mound Somers McDonell, R. Nighteaps

Abriganti de vilase Cumi. Adalogo A Woodasse Network I II. Pakeran izmec, finery, ivsigate, Robinson, R. Venkawan Romeoll, H.L. Bequarkhum. flugiders. W., Jennisten Accessed. J. Shar Food.
[Longes B., Bondison.
[Potter G., Nichtsep.
[Philipstone. G. F., Abndrion.]

labord and the Continuous Amendalist for 1944 of Foodbooks of Consequential Clear estated in up Herica Consequent Continue Consequent Continue 22 a. 1. Consequent Continue the Continuent the Continuent Court of Continuent Court of Continuents

Appropagi, Codyf Euger, -Arquagalan, act airon, produng (100 connex, 11)0

Street Fr. Both