AR1939

(No. 35.)

TASMANIA

REPORT

OF THE

ACTING SECRETARY FOR MINES

FOR

YEAR ENDING 31ST DECEMBER

1939

WITH REPORTS OF THE ACTING GOVERNMENT GEOLOGIST, CHEMIST AND ASSAYER, ACTING CHIEF INSPECTOR OF MINES, ACTING CHIEF INSPECTOR OF EXPLOSIVES, DISTRICT INSPECTORS OF MINES, AND THE MOUNT CAMERON WATER-RACE BOARD.

Presented to both Houses of Parliament by His Excellency's Command

TASMANIA:
H. H. PIMBLETT, GOVERNMENT PRINTER, HOBART

1940

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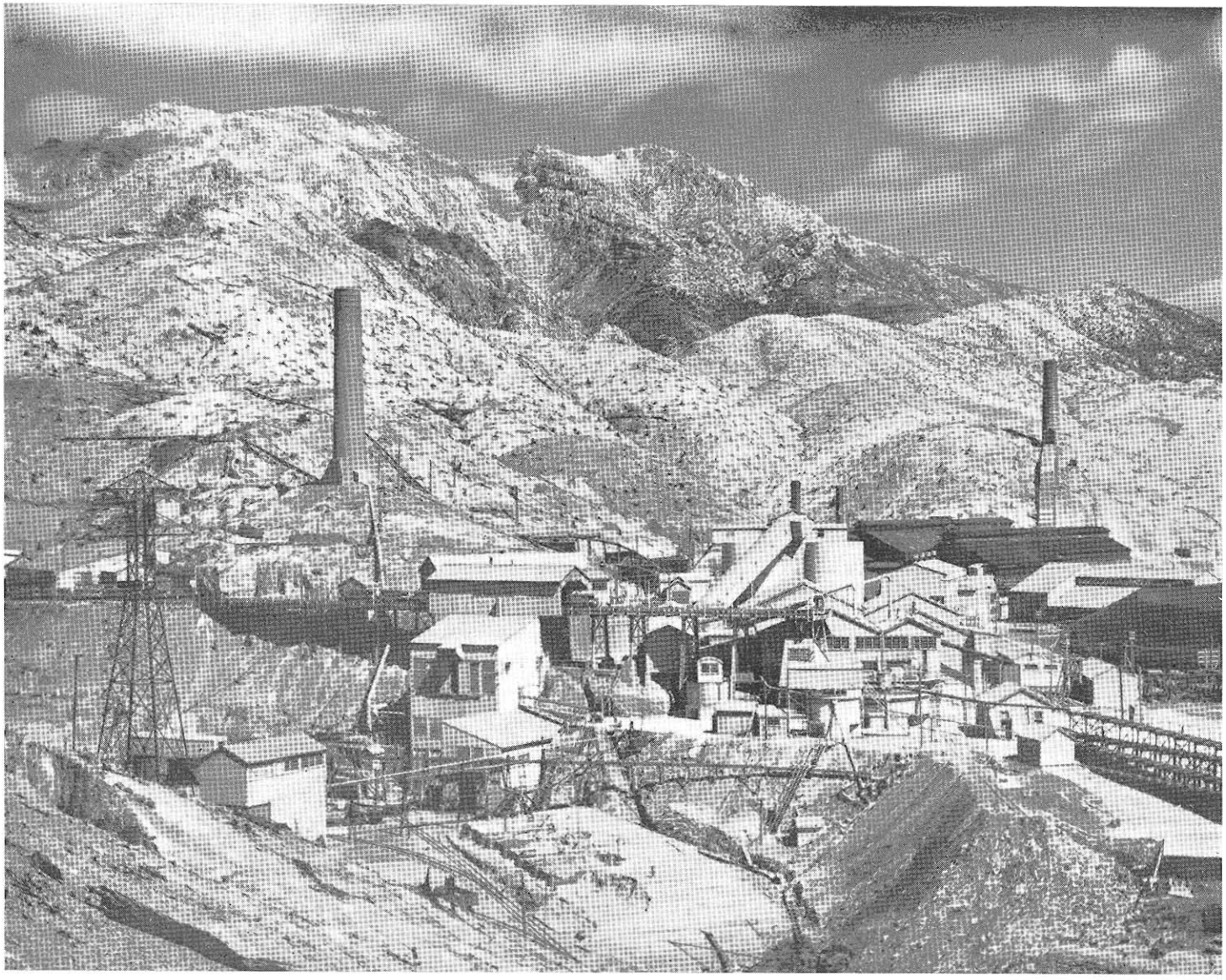
TABLE OF CONTENTS.

ILLUSTRATIONS.



Mt. Lyell M. & R. Coy. Ltd. Reduction Works, Queenstown. [*F. Hurley Photo.*

REPORT OF THE ACTING SECRETARY FOR MINES.

Department of Mines,
Hobart.

SIR,

I HAVE the honour to present my report on the progress of the Mining Industry of the State for the year ended 31st December, 1939.

APPENDICES.

The following reports, with statistical records, are appended:—

Acting Government Geologist.
Chemist and Assayer.
Acting Chief Inspector of Mines.
Acting Chief Inspector of Explosives.
District Inspectors of Mines.
Mount Cameron Water-race Board.

GENERAL STATEMENT.

The term under review was characterised by progressive mining activities and a slight incline in the average price of base metals. The average number of men employed was 5928, as against 5891 for the previous year.

The value of the output of minerals and mineral products was £2,977,815 in Australian currency, representing an increase of £257,601 in the value of the production for 1938. Substantial increases in production and value were recorded in respect of coal, copper, lead, pyrites, scheelite, silver, and carbide, cement, and limestone, whilst a slight decline ensued in the output of gold, tin, wolfram, and zinc. An expanding demand for strategic minerals activated developmental policies that should result in a further increase in the value of production for the coming year.

The Electrolytic Zinc Company was in continuous operation at Risdon in the processing of zinciferous calcines imported from other States and from the selective treatment of Tasmanian ores. Production from imported calcines was 44,965 tons of slab zinc, valued at £881,150; 124·4 tons of cadmium, valued at £40,094; and 19·5 tons of cobalt oxide, valued at £8961. Zinc calcines actually processed from Tasmanian ores returned 26,255 tons of slab zinc, valued at £512,697; 43·34 tons of cadmium, valued at £13,932; 1784 tons of lead, valued at £34,259; and 344,885 oz. of silver, valued at £39,778. An average of 1120 men was employed at these works.

The Tasmanian ores resulted from continued exploitation of the extensive occurrences of complex zinc-lead sulphides at the Read-Rosebery mines on the West Coast, where an average number of 505 men was employed in mining and metallurgical practices. The combined quantity of ore mined was 158,292 tons, and selective flotation resulted in the production of 53,732 tons of zinc and 13,127 tons of lead concentrates. The recoverable quantity of metallics was fixed at 8515 tons of lead, 25,021 tons of zinc, 48 tons of cadmium, 937,737 oz. of silver, and 11,713 oz. of gold.

The Mount Lyell Mining and Railway Company Limited continued to function as the major producer of copper, and the tonnage of crude ore treated was 1,105,749, as compared with 1,084,131 tons for the previous year. The recorded output of copper was 13,453 tons, and this constituted a new high-level in copper mining activities in the State, a result accruing from continued advancement in metallurgical practices and accelerated production from occurrences of low-grade ore.

Operations by this company substantially added to the total output of gold and silver, and afforded direct employment to an average of 1851 men.

Lead production inclined to 11,021 tons, valued at £173,670, representing an increase of 369 tons and £10,568 compared with the previous year.

Operations by the Electrolytic Zinc Company at the Read-Rosebery mines accounted for the greater portion of the recorded production. The Mount Farrell Mining Company continued as an active producer of silver-lead concentrate and added materially to the total output of lead. Crude ore, totalling 13,738 tons, was mined and milled for a recovery of 2996 tons of concentrate, containing 216,426 oz. of silver and 2169 tons of lead, in addition to which 286 tons of "firsts" was hand-picked, and contained 33,295 oz. of silver and 196 tons of lead. Small parcels of silver-lead ores intermittently resulted from activities by lesser operators.

The Montana Silver Lead Mine at Zeehan was principally concerned with developing the lode series preparatory to the installation of concentrating units.

At the Magnet Mine attention was directed to prospecting the possibilities of the lode series below the old productive workings and to developing and stoping occurrences of ore on old levels. The flotation plant was again commissioned, and 1450 tons of ore was treated for a recovery of 210 tons of silver-lead concentrate, valued at £4500. Zinc concentrates from the selective flotation were stocked, as no market was offering.

Due primarily to improved metal prices, the value of the production of tin ore inclined to £282,798 sterling, representing an advance of £38,761, although the estimated output of metallic tin was 28·74 tons less than for the previous year.

The Briseis Consolidated and the Endurance Mine, operating on tin alluvials; the Aberfoyle Tin N.L., operating on a lode series; and the Mount Bischoff Company, principally by tribute parties operating on lodes, re-treatment of residues, and tin-alluvials; continued as the major producers.

Operations on the lode series at the Storey's Creek mine, on areas of alluvial ground by the Goshen Tin Mining Company at St. Helens, on tin granites at the old Anchor mine at Lottah, activities at small mines, and production by miscellaneous parties and individuals operating on alluvial, lode, and granitic occurrences throughout the State added materially to the recorded output of 1250 tons of metallic tin.

In quantity and value, silver continued as an important product, the recorded output being 1,278,116 oz., valued at £118,310 sterling, compared with 1,219,550 oz., valued at £104,671, for the previous period. Operations by the Mount Lyell Company, at Queenstown, and by the Electrolytic Zinc Company, at Rosebery, contributed largely to the total production, but the output was substantially augmented by silver-lead from the Farrell Mine at Tullah, and, to a lesser extent, by the intermittent production of small lots of silver-bearing ores at Zeehan and other parts of the State.

The average price of tungsten ores declined to £271, but increased productive activity characterised operations at the King Island Scheelite Mine, and resulted in an output of 171 tons of scheelite, valued at £33,301 sterling, compared with 30·5 tons, valued at £6193, for the previous year.

Productive activities enhanced lode developments at the Storey's Creek Mine, in the Avoca district, where attention was principally directed to the production of wolfram. The incline shaft was deepened to 127 feet from No. 4 level, the bottom productive level, with encouraging lode developments. General electrification of the plant was a feature of the progressive policy of the company. This mine continued as the major producer, but the Aberfoyle Mine, at Rossarden, and small mines in the north-western portion of the State, contributed to the total output of 227·6 tons of wolfram, valued at £44,356 sterling.

The recorded output of gold was 19,984 oz., valued at £154,741 sterling, being a slight decline compared with the production for the previous year.

The major portion of the gold was recovered from copper ores mined by the Mount Lyell Company and from zinc-lead ores produced by the Electrolytic Zinc Company from the Read-Rosebery mines, but quantities of moment to the mining industry accrued from the working of auriferous alluvials, the crushing of lode quartz, the treatment of mine dumps, the cyanidation of sands and slimes, and from the treatment of tin-oxides recovered from the sluicing of gold-bearing stanniferous alluvials.

The new track to the Jane River goldfield rendered the area more accessible and afforded better facilities for prospecting beyond the present area of workings.

The quantity of pyrites recovered from the selective flotation of copper ores and exported to the mainland for utilisation in the manufacture of fertilisers increased to 54,229 tons, valued at £67,786 in Australian currency.

Adamsfield continued as the principal producer of osmiridium, only small isolated lots coming forward from the Savage River areas. An improved market activated operations, and the output inclined to 283 oz., valued at £5015 sterling.

There was a slight increase in the export of silica, but the major portion of the output of 7134 tons was used for fluxing and other purposes in connection with metallurgical operations in the State.

The combined production of carbide, cement, and limestone was 429,758 tons, valued at £511,735 in Australian currency, compared with 374,809 tons, valued at £463,882 for the previous year. The production was a reflex of increased activities by the Goliath Portland Cement Company at Railton, the Australian Commonwealth Carbide Works at Electrona, and the Broken Hill Pty. Ltd. at the Melrose limestone quarries.

The ornamental value of the Tasmanian red granite for building and other purposes was better appreciated, and the quantity marketed increased to 246 tons, valued at £1300. The colour and texture of available zones are attractive, and the prospects of an expansion of this industry are encouraging.

More settled industrial conditions obtained in the coal mining industry, and the output inclined to 99,392 tons, valued at £74,460, compared with 83,753 tons, valued at £61,991, for the previous year.

The Cornwall Company continued as the major producer, and accounted for an output of 61,031 tons, valued at £45,975. In addition to normal developmental and productive mining in the established workings, preliminary attention was directed to a resumption of operations on a lower seam at the Mount Nicholas Colliery.

Productive activities were more regular at the Jubilee Colliery, and the output of coal was 16,692 tons, valued at £11,462.

The balance of the production resulted from operations at small collieries in the southern, eastern, and north-western districts.

The value in Australian currency of the output of minerals and mineral products affords satisfaction and illustrates the importance of the industry to the State.

DRILLING.

Departmental drilling plants were constantly engaged, partly on hire, in testing occurrences of alluvial tin and in prospecting the Dundas copper-nickel series.

Drilling was continued at Beaconsfield, and the second bore was deepened to 1022 feet. Four inclined holes were completed in the Dundas copper-nickel series without any disclosures of prospective merit. When not engaged on other work the Calyx and Surge machines were employed in systematically drilling the Scotia deep lead at Gladstone to determine the extent and economics of this established lead of alluvial tin.

ASPHALT PRODUCTION.

Mersey Valley Oil Shale.

Research and experimentation have demonstrated that, by complex processing, asphalt and by-products can be produced from the oil-shales of Mersey Valley, but, in the absence of established precedents in the commercial application of experimental results, the economics of production remain obscure.

There was no relaxation of investigations or of consultations with engineering authorities, and, latterly, it was decided to determine mineable areas of shale and to proceed with the installation of a small-scale commercial plant to comprehensively search the commercial possibilities of converting the shale into an active asset. The initial through-put capacity of the plant will be 4290 tons of shale per annum, but the design will be sufficiently flexible to enable that quantity to be substantially increased at a relatively small cost if results warrant expansion. On the basis of average grades, the estimated recovery is 766 tons of asphalt and a percentage condensate of light and heavy oils.

AID TO MINING.

Several grants were made, under the Aid to Mining Act, for the development of mines, purchase of plants, provision of supplies of water, and for other matters allied with mining activities.

Applications for financial assistance for development or productive operations number 37, of which 24 were approved, 11 being for the purchase of plant.

The total amount authorised was £3137 affording employment to approximately 70 men.

Repayments made from these advances totalled £67. The total value of ore raised by those assisted amounted to £892.

SUSTENANCE TO PROSPECTORS.

The provision in the Aid to Mining Act enabling sustenance allowance for prospecting was availed of by 16 approved parties, involving the employment of 23 men for periods ranging to eight weeks. No discoveries of moment were reported.

THE AID TO MINING ACT, 1927.

STATEMENT OF RECEIPTS AND PAYMENTS OF THE MINING TRUST FUND FOR THE YEAR ENDED 31ST DECEMBER, 1939.

RECEIPTS.	£	s.	d.	PAYMENTS.	£	s.	d.
Balance, 31st December, 1938	1,578	12	6	Sustenance allowance	213	10	0
Repayment of loans	390	4	0	Assistance	2,588	5	5
Refund—				Drilling	5,101	7	0
Cost drilling under contract	3,555	9	0	Miscellaneous wages	239	6	0
Part freight on diamond drill	10	6	11	Batteries	2	0	3
Appropriation Act, 1938-39	3,000	0	0	Miscellaneous expenses	44	14	4
				Total payments	£8,189	3	0
				Excess receipts over payments	345	9	5
	£8,534	12	5		£8,534	12	5

THE AID TO MINING (FEDERAL GRANT) TRUST FUND.

(22 Geo. V. No. 92, and 26 Geo. V. No. 8, and 2 Geo. VI. No. 68.)

RECEIPTS AND PAYMENTS STATEMENT.

RECEIPTS. Item.	March, 1935 (commencement) to 31st Dec., 1939. £	s.	d.	1st Jan., 1939, to 31st Dec., 1939. £	s.	d.
Provided by—						
Commonwealth £25,750						
State 9,250						
	35,000	0	0	....		
Transfer balance from—						
The Aid to Mining (Federal Grant) Trust Fund, 1936-37 (1 Edw. VIII. No. 20)	1,883	18	2	1,883	18	2
The Aid to Mining (Federal Grant) Trust Fund, 1937-38 (1 Geo. VI. No. 32)	798	9	11	798	9	11
Other credits—						
Batteries	81	17	6	3	19	3
Advances	4,633	7	10	716	19	2
Plants and operation thereof	11	18	8	....		
Metallurgical investigations	0	7	11	....		
Staff	0	10	10	....		
Balance brought forward period ended 31st December, 1938	....			317	10	8
	£42,409	10	10	£3,720	17	2

PAYMENTS. Item.	March, 1935 (commencement) to 31st Dec., 1939. £	s.	d.	1st Jan., 1939, to 31st Dec., 1939. £	s.	d.
Prospecting	1,584	6	6	100	0	0
Batteries	1,323	9	0	....		
Advances	21,901	17	10	658	13	10
Plants and operation thereof	6,711	9	11	111	9	11
Metallurgical investigations	1,237	3	4	....		
Roads and tracks	6,065	9	9	165	9	9
Transport	628	5	10	128	5	10
Staff	471	8	1	70	17	3
Total payments	£39,923	10	3	£1,234	16	7
Excess receipts over payments	2,486	0	7	2,486	0	7
	£42,409	10	10	£3,720	17	2

STATEMENT OF LOANS UNDER THE AID TO MINING ACT, 1927.

EXPENDITURE.

Year.	Federal Funds.	The Mining Trust Fund.	Total.
	£ s. d.	£ s. d.	£ s. d.
1935	8,398 11 4	1,293 12 1	9,692 3 5
1936	10,462 3 7	2,807 12 10	13,269 16 5
1937	3,902 17 7	1,983 9 6	5,886 7 1
1938	3,337 2 7	1,937 1 0	5,274 3 7
1939	658 13 10	2,588 5 5	3,246 19 3
Total ..	£26,759 8 11	£10,610 0 10	£37,369 9 9

REPAYMENTS.

Year.	Federal Funds.	The Mining Trust Fund.	Total.
	£ s. d.	£ s. d.	£ s. d.
1935	300 4 9	87 10 0	387 14 9
1936	1,286 12 5	138 18 4	1,425 10 9
1937	1,244 15 5	496 18 0	1,741 13 5
1938	3,796 4 7	422 15 3	4,218 19 10
1939	716 19 2	390 4 0	1,107 3 2
Total ..	£7,344 16 4	£1,536 5 7	£8,881 1 11

DETAILS OF EXPENDITURE ON DRILLING DURING YEAR ENDED 31ST DECEMBER, 1939.

Plant.	Location.	Amount. £ s. d.
Diamond Drill	Beaconsfield (contract)	1,800 18 6
Diamond Drills, No. 2 and No. 3	Tarraleah (contract)	1,413 2 5
Diamond Drill No. 3	Hamilton (contract)	123 3 10
Diamond Drill No. 3.	North Dundas (contract)	520 18 10
Calyx Drill	Derby (contract)	412 17 4
Calyx Drill	New River (contract)	272 18 1
Calyx and Surge Drills	Gladstone	946 7 4
	Purchase of diamonds and miscellaneous expenses	642 15 7
	Total	£6,133 1 11

(During the year a refund of £3555 9s. was obtained from drilling carried out under contract.)

DRILLING RESULTS.

No. 1 Diamond Drill.

This plant was employed at the Tasmania Gold Mine, Beaconsfield, and, consequent upon the abandonment of No. 1 bore, No. 2 bore was commenced on the 29th July, 1939, and had attained a depth of 1022 feet at the close of the year.

No. 2 Diamond Drill.

This plant was in operation under the direction of the Hydro-Electric Commission at Tarraleah in connection with the proposed construction of Butler's Gorge Dam.

No. 3 Diamond Drill.

This plant was detailed to prospecting the copper-nickel series at Zeehan, and, at the close of the period, had completed a total of 1178 feet without disclosing mineralisation of prospective merit.

Calyx and Surge Drills.

These plants were principally engaged in testing the extent and value of the Scotia tin lead at Gladstone.

Number of holes drilled.—76.
Total Depth of Bores.—7975 feet.
Major Details of Drilling and Values:—

No. of Bore.	Depth to Bedrock.	Average Values. Oz. per c. yd. of 70% Conc.	Best Values. Depth.	Best Values. Oz. per c. yd. of 70 % Conc.
	ft. in.		ft. in. ft. in.	
152B	117 6	4	113 8—117 6	56·8
153B	129 6	16·5	124 0—129 6	176
154B	127 6	11·4	124 0—127 6	246
155B	123 0	10·0	113 8—123 0	87·3
156B	99 6	Trace	—	—
157B	119 0	10·1	113 8—119 0	161
158B	129 6	15·7	124 0—129 6	236·8
159B	128 0	2·4	113 8—124 0	20
160B	120 0	Trace	—	—
161B	109 0	Trace	—	—
162B	121 0	5·9	113 8—121 0	83·6
163B	82 0	Trace	—	—
164B	70 0	Trace	—	—
165B	106 6	1·2	103 4—106 6	25·4
166B	129 6	8	124 0—129 6	121·6
167B	118 6	6·4	113 8—118 6	136
168B	98 0	Trace	—	—
169B	41 0	Trace	—	—
170B	24 0	Trace	—	—
171B	96 0	Trace	—	—
172B	106 0	2·86	103 4—106 0	54·7
173B	109 6	5·4	103 4—109 6	58
174B	108 6	2·1	103 4—108 6	17
175B	109 0	Trace	—	—
176B	103 0	Trace	—	—
177B	123 0	Trace	—	—

Calyx Drill—*continued.*

No. of Bore.	Depth to Bedrock.	Average Values. Oz. per c. yd. of 70% Conc.	Best Values. Depth.	Best Values. Oz. per c. yd of 70 % Conc.
	ft. in.		ft. in. ft. in.	
178B	127 0	5·81	113 8—124 0	41·8
179B	124 0	8	113 8—124 0	54·9
180B	114 0	Trace	—	—
181B	121 0	9·3	103 4—113 8	63·6
182B	117 0	3·7	113 8—117 0	39·1
183B	106 0	Trace	—	—
184B	81 0	Nil	—	—
185B	67 0	Trace	—	—
186B	61 0	Nil	—	—
187B	66 0	Trace	—	—
188B	66 0	Trace	—	—
189B	130 0	3·8	124 0—130 0	69·2
190B	134 0	4·8	124 0—134 0	64·2
191B	103 0	Nil	—	—
192B	132 0	5·1	124 0—132 0	84
193B	110 0	Trace	—	—
194B	71 0	Nil	—	—
195B	59 0	Nil	—	—
196B	90 0	Trace	—	—
197B	81 0	Trace	—	—
198B	89 0	Trace	—	—
199B	83 0	Trace	—	—
200B	103 0	Trace	—	—
201B	140 0	12·4	136 0—140 0	305·3
202B	143 0	21·1	136 0—143 0	225·4
203B	129 0	Trace	—	—
204B	110 0	0·3	102 8—110 0	4
205B	116 0	Trace	—	—
206B	112 0	Trace	—	—
207B	40 0	Nil	—	—
208B	59 6	Trace	—	—
209B	71 0	Trace	—	—
210B	79 0	Trace	—	—
211B	67 0	Trace	—	—
212B	110 0	Trace	—	—
213B	117 0	Trace	—	—
214B	116 4	2·1	110 0—116 4	36·8
215B	104 0	Trace	—	—
216B	114 8	12·1	110 0—114 8	288
217B	125 6	Trace	—	—
218B	113 0	1·1	110 0—113 0	23
219B	130 0	Trace	—	—
220B	92 0	Trace	—	—
221B	138 6	4·4	136 0—138 6	204·4
222B	75 0	Trace	—	—
223B	139 0	14·2	136 0—139 4	198·5
224B	41 0	Trace	—	—
225B	128 6	Trace	—	—
226B	85 0	Trace	—	—
227B	95 0	Trace	—	—

QUANTITY AND VALUE OF MINERALS.

STATISTICS RELATING TO THE MINING INDUSTRY FOR THE YEAR ENDING 31ST DECEMBER, 1939.

Mineral.	Mineral Divisions.					Total Quantity.	Value.
	Northern and Southern.	Eastern.	North-Eastern.	North-Western.	Western.		
							£
Bismuth .... (tons)	....	....	....	·623	....	·623	296
Coal .... (tons)	6747	86,950	....	5695	....	99,392	74,460
Copper .... (tons)	....	....	....	....	13,453	13,453	668,561
Cadmium .... (tons)	....	....	....	....	48	48	16,249
Carbide, Cement, and Limestone .... (tons)	34,523	....	....	388,496	6739	429,758	511,735
Gold .... (fine oz.)	306·785	60·934	133·874	66·317	19,416·156	19,984·066	154,471
Granite (Red) .... (tons)	....	246	....	....	....	246	1300
Lead .... (tons)	....	....	....	137·74	10,883·22	11,020·96	173,670
Osmiridium .... (oz.)	265·823	....	....	17·242	....	283·065	5015
Pyrites .... (tons)	....	....	....	....	54,229	54,229	67,786
Scheelite .... (tons)	....	....	....	170·695	....	170·695	33,301
Silica .... (tons)	....	....	....	165	6969	7134	1798
Silver .... (fine oz.)	....	....	....	19,994	1,258,122	1,278,116	118,310
Tin .... (tons)	2·962	384·29	657·158	143·407	62·06	1249·877	282,798
Wolfram .... (tons)	....	221·976	....	5·628	....	227·604	44,356
Zinc .... (tons)	....	....	....	....	25,021	25,021	366,176
Total Value	....	....	....	....	....	....	£2,520,282
Total Value Australian Currency	....	....	....	....	....	....	£A.2,977,815
Average Number of Men Employed	1532	660	476	655	2605	5928	....

The Electrolytic Zinc Company of Australasia Limited recovered 44,965 tons of zinc, valued at £881,150; 124·3833 tons of cadmium, valued at £40,094; and 19·4802 tons of cobalt oxide, valued at £8961 from other than Tasmanian ores, and employed an average number of 1120 men at Risdon.

ASBESTOS.

RETURN showing the Quantity and Value of Asbestos produced from 1899 *to* 1939 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1899	200	363
1900	128	113
1901	46·5	45
1902–1915	—	—
1916	15	30
1917	271	271
1918	2854	5008
1919	51	1275
1920–1936	—	—
1937	2	29
1938	4·25	68
1939	—	—
Total	3571·75	£7202

BARYTES.

RETURN showing the Quantity and Value of Barytes Produced during the Years 1916 *to* 1939 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1916	83	359
1917	52	234
1918	217	977
1919	399	1160
1920	1048	4163
1921–1924	—	—
1925	3·5	16
1926–1928	—	—
1929	9·5	24
1930–1932	—	—
1933	5	15
1934–1935	—	—
1936	33	66
1937	76	174
1938	—	—
1939	—	—
Total	1926	£7188

BISMUTH.

RETURN showing the Quantity and Value of Bismuth produced from 1904 *to* 1939 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1904	·3	15
1905	3·5	800
1906	·3	24
1907	·175	27
1908	3·75	462
1909	2·9	980
1910	10·70	4249
1911	14·395	5758
1912	7·59	2646
1913	5·08	1627
1914	5·619	1666
1915	5·5	1203
1916	3·51	1059
1917	4·212	895
1918	4·608	1038
1919	1·77	573
1920	·10	9
1921	·05	21
1922	—	—
1923	—	—
1924	—	—
1925	—	—
1926	—	—
1927	—	—
1928	—	—
1929	—	—
1930	·97	475
1931	1·75	1015
1932	1·02	541
1933	1·32	705
1934	—	—
1935	·328	146
1936	—	—
1937	·22	78
1938	·871	396
1939	·623	296
Total	81·161	£26,704

COAL.

RETURN showing the Quantity and Value of Coal raised from 1880 *to* 1939 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1880 to 1903 inclusive	767,261·5	659,010
1904	61,109	51,942
1905	51,993	44,194
1906	52,895·75	44,962
1907	58,891	50,057
1908	61,067·75	51,907
1909	66,161·75	56,237
1910	82,445	48,609
1911	57,067	26,214
1912	53,560	24,568
1913	55,043	25,367
1914	60,794	27,853
1915	64,536·25	30,418
1916	55,575	27,736
1917	63,412	38,673
1918	60,163	37,676
1919	66,253	47,004
1920	75,429	64,005
1921	66,476	63,446
1922	69,238	61,016
1923	80,718	70,797
1924	75,988	66,555
1925	81,698	70,424
1926	102,358	90,401
1927	112,056	99,802
1928	128,500	106,558
1929	130,291	105,877
1930	138,716	110,253
1931	123,828	98,004
1932	111,853	86,733
1933	116,573	85,848
1934	113,633	81,262
1935	123,714	86,204
1936	132,264	92,269
1937	91,121	66,883
1938	83,753	61,991
1939	99,392	74,460
Total	£5,795,827	£2,935,215

CADMIUM.

The quantity recovered was 48 tons valued at £16,249, compared with 49 tons valued at £18,636 for 1938.

RETURN showing the Quantity and Value of Cadmium Recovered for the Years 1936 *to* 1939.

Year.	Quantity.	Value.
	Tons.	£
1936	33·64	10,799
1937	45	18,161
1938	49	18,636
1939	48	16,249
Total	127·64	£47,596

COPPER.

The production for the year was 13,453 tons, valued at £668,561.

RETURN showing the Quantity and Value of Copper in Blister Copper and Copper Ore during the Years 1919 *to* 1939 *inclusive.*

Year.	In Blister Copper.		In Copper Ore.		Total	
	Q'ty.	Value.	Q'ty.	Value.	Q'ty.	Value.
	Tons.	£	Tons.	£	Tons.	£
1919...	5014	503,977	13	984	5027	504,961
1920...	4791	528,177	·75	60	4791·75	528,237
1921...	6171	462,876	9·843	287	6180·843	463,163
1922...	5616	391,535	—	—	5616	391,535
1923...	6063	435,282	1·7	131	6064·7	435,413
1924...	6698	457,386	—	—	6698	457,386
1925...	6539	436,661	—	—	6539	436,661
1926...	6915	454,854	—	—	6915	454,854
1927...	5811	362,988	—	—	5811	362,988
1928...	6421	444,802	—	—	6421	444,802
1929...	8689	740,985	—	—	8689	740,985
1930...	9940	620,578	—	—	9940	620,578
1931...	9833·1	416,309	—	—	9833·1	416,309
1932...	10,995	399,646	3·2	116	10,998·2	399,762
1933...	10,734	395,109	5	177	10,739	395,286
1934...	8202	267,126	6·5	216	8208·5	267,342
1935...	13,036	464,007	—	—	13,036	464,007
1936...	13,040	556,734	—	—	13,040	556,734
1937...	12,382	757,311	37·92	2021	12,419·92	759,332
1938...	12,700·6	578,893	28·802	1345	12,729·417	580,238
1939...	13,453	668,561	—	—	13,453	668,561
Total	183,043·7	10,343,797	106·712	5337	183,150·427	10,349,134

The Mount Lyell Mining and Railway Company Limited. Return for the Calendar Year 1939.

Ore and metal-bearing material smelted:—

Source of Material.	Tons (Dry).
Ore:—From the Company's North Lyell Mine	8,381
Concentrates:—From the Company's North Lyell Mine, Lyell Comstock Mine, Crown Lyell Mine, and West Lyell Mines ore	55,836
Purchased ore	5
Total	64,222

Source of Material.	Tons (Dry).
Limestone delivered to works (tons)	6,739
Silica delivered at works	6,769
Pyritic concentrate shipped from Regatta Point (tons), approximate value £62,847	54,229

Blister copper produced, 13,551 tons, containing:

Copper (tons) .. 13,453
Silver (oz.) .. 70,413
Gold (oz.) .. 7,506
} Approximate value £A913,392

Average number of men employed—

Mining Department—At the Company's North Lyell Mine	185	
Ditto, Lyell Comstock Mine	173	
Ditto, Crown Lyell Mine	48	
Ditto, West Lyell	410	
Miscellaneous	201	
		1,017
Reduction Works Department (including Lake Margaret)		697
Railway Department—Mount Lyell Railway		137
Total		1,851

Copper produced from the inception of the Company to the 31st December, 1939, 341,633 tons.

Silver produced from the inception of the Company to the 31st December, 1939, 15,145,473 oz. (fine).

Gold produced from the inception of the Company to the 31st December, 1939, 452,293 oz. (fine).

Dividends paid during the year, £116,250=1s. 6d. per share.

Dividends paid from the inception of the Company to the 31st December, 1939, £5,987,819.

CEMENT, CARBIDE, AND LIMESTONE.

The combined value of output from these three industries amounted to £511,735, as compared with £463,882 for 1938.

GOLD.

The quantity won was £19,984·066 oz., fine, valued at £154,471, as compared with 22,199·961 oz., valued at £158,022 for 1938.

RETURN showing the Quantity and Value of Gold won from 1880 *to* 1939 *inclusive.*

Year.	Quantity.	Value.
	Oz.	£
1880 to 1903 inclusive	1,265,836·95	4,905,706
1904	65,921	280,015
1905	73,540·5	312,380
1906	60,023·4	254,963
1907	65,354·25	277,607
1908	57,085·1	242,482
1909	44,777·366	190,201
1910	37,048·053	157,370
1911	31,100·873	132,108
1912	37,973·252	161,300
1913	33,400·457	141,876
1914	26,243·453	111,475
1915	18,547·338	78,784
1916	15,790·096	67,072
1917	14,496·464	61,577
1918	10,528·930	44,724
1919	7,686·470	32,650
1920	6,246·192	29,796
1921	5,340·094	28,395
1922	3,431·486	15,998
1923	3,684·124	16,639
1924	4,625·600	21,563
1925	3,523·870	15,041
1926	4,222·748	17,936
1927	4860·7	20,646
1928	3603·43	15,306
1929	5596·88	23,772
1930	4466·61	18,976
1931	4759·59	22,118
1932	5937·17	34,943
1933	6672·74	41,783
1934	5622·26	38,930
1935	8342·68	59,255
1936	17,600·47	123,383
1937	20,276·31	143,138
1938	22,199·961	158,022
1939	19,984·066	154,471
Total	2,026,350·897	£8,452,401

IRON PYRITES.

RETURN showing the Quantity and Value of Iron Pyrites produced during the Years 1915 *to* 1939 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1915	12,835·59	8945
1916	14,005·084	13,597
1917	7,685·549	7137
1918	5,105·600	4667
1919	3,456·95	4288
1920	4,440	7346
1921	606·5	2579
1922	8,276	18,620
1923	11,882	26,737
1924	—	—
1925	—	—
1926	—	—
1927	—	—
1928	—	—
1929	—	—
1930	—	—
1931	506·7	253
1932	274	150
1933	1498	1498
1934	12,030	12,030
1935	25,555	25,555
1936	33,711	33,711
1937	40,630	43,723
1938	50,277	62,845
1939	54,229	67,786
Total	287,003·973	£341,467

LEAD.

The output was 11,020·96 tons, valued at £173,670, as compared with 10,652·21 tons, valued at £163,102 for 1938.

RETURN showing the Quantity and Value of Lead included in Silver-Lead during the Years 1919 *to* 1939 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1919	2357·142	64,403
1920	3855·639	142,268
1921	1434·794	32,241
1922	4925·880	118,257
1923	4784·057	127,542
1924	4559·110	154,881
1925	5525·99	197,452
1926	5892·58	183,167
1927	5583·12	135,403
1928	4786·78	101,616
1929	5983	138,793
1930	4237·84	77,590
1931	2189·47	29,024
1932	2694·06	32,637
1933	2644	30,987
1934	1507	16,723
1935	1488	21,390
1936	7563·04	134,413
1937	9116·62	212,492
1938	10,652·21	163,102
1939	11,020·96	173,670
Total	102,801·292	£2,288,051

LIMESTONE.

RETURN showing the Quantity and Value of Limestone produced during the Years 1923 *to* 1936 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1923	100,113	122,428
1924	146,140	146,140
1925	124,670	124,670
1926	153,707	153,219
1927	169,522	167,373
1928	98,654	79,050
1929	68,176	66,597
1930	100,251	94,977
1931	55,268	49,490
1932	90,335	18,725
1933	110,347	33,048
1934	174,757	44,877
1935	254,438	68,357
1936	262,301	71,243
Total	1,908,679	£1,240,194

NICKEL.

RETURN showing the Quantity and Value of Nickel produced from 1927 *to* 1939 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1927	86·2	14,656
1928	10	1697
1929	85·44	14,765
1930	11·76	1999
1931	0·2	45
1932	0·55	136
1933	8·65	1948
1934	—	—
1935	—	—
1936	—	—
1937	—	—
1938	19·75	3604
1939	—	—
Total	222·55	£38,850

OCHRE.

RETURN showing the Quantity and Value of Ochre produced during the Years 1918 *to* 1939 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1918	100	200
1919	—	—
1920	—	—
1921	14	56
1922	—	—
1923	—	—
1924	20	50
1925	—	—
1926	38	69
1927-1939	—	—
Total	172	£375

OSMIRIDIUM.

The quantity of metal won during the year was 283·065 oz., valued at £5015, as compared with 190·87 oz., valued at £2976 for 1938.

RETURN showing the Quantity and Value of Osmiridium produced during the Years 1910 *to* 1939 *inclusive.*

Year.	Quantity.	Value.
	Oz.	£
1910	120	530
1911	271·88	1888
1912	778·77	5742
1913	1261·65	12,016
1914	1018·83	10,076
1915	247·048	1581
1916	222·150	1899
1917	332·079	4898
1918	1606·743	44,833
1919	1669·715	39,614
1920	2009·196	77,114
1921	1750·655	42,935
1922	1173·924	35,512
1923	673·423	19,642
1924	364·805	10,617
1925	3365·543	103,570
1926	3172·5	61,908
1927	632·687	7456
1928	1627·186	42,458
1929	1360	30,624
1930	952·7	16,235
1931	1279·54	18,028
1932	784·95	9075
1933	548	4843
1934	487·7	4622
1935	235	2103
1936	280·6	3862
1937	586·42	9077
1938	190·87	2976
1939	283·065	5015
Total	29,287·629	£630,749

The following table gives particulars of osmiridium won from Adamsfield since its discovery up to 31st December, 1939:—

Period.	Quantity.			Value.		
Quarter ending—	Oz.	dwt.	gr.	£	s.	d.
30th June, 1925	9	1	12	281	8	11
30th September, 1925	625	19	9	20,144	10	11
31st December, 1925	2238	5	9	68,757	1	4
31st March, 1926	992	13	7	23,339	0	1
30th June, 1926	633	12	20	12,202	18	4
30th September, 1926	862	18	16	8475	8	11
31st December, 1926	555	6	6	5539	1	3
31st March, 1927	203	9	11½	1909	5	7
30th June, 1927	142	3	9	1706	0	6
30th September, 1927	93	16	6	1132	1	6
31st December, 1927	113	10	8	1362	0	0
31st March, 1928	442	8	9	10,509	18	2
30th June, 1928	261	19	7	6529	9	1
30th September, 1928	551	16	2	15,350	18	0
31st December, 1928	293	5	0	7840	11	4
31st March, 1929	168	9	8	4147	6	4
30th June, 1929	262	7	16	5683	4	7
30th September, 1929	292	2	23	7905	14	9
31st December, 1929	313	2	17	6208	3	0
31st March, 1930	186	9	17	3278	17	0
30th June, 1930	67	6	11	1300	12	1
30th September, 1930	126	16	9½	1898	4	10
31st December, 1930	347	12	17	4302	11	5
31st March, 1931	240	19	14	4008	2	4
30th June, 1931	251	9	6	3104	14	9
30th September, 1931	251	10	15	3428	14	6
31st December, 1931	354	12	3	4741	11	10
31st March, 1932	250	5	21	3372	19	9
30th June, 1932	136	12	19	1504	8	9
30th September, 1932	80	19	3	869	2	8
31st December, 1932	123	7	18	1038	2	1
31st March, 1933	161	0	0	1368	0	0
30th June, 1933	162	0	0	1458	0	0
30th September, 1933	153	0	0	1364	0	0
31st December, 1933	60	0	0	540	0	0
31st March, 1934	148	5	0	1408	0	0
30th June, 1934	107	15	0	969	0	0
30th September, 1934	71	14	0	645	0	0
31st December, 1934	160	0	0	1600	0	0
31st March, 1935	40	0	0	350	0	0
30th June, 1935	12	0	0	108	0	0
30th September, 1935	127	9	10	1147	4	7
31st December, 1935	55	0	0	495	0	0
31st March, 1936	30	0	0	270	0	0
30th June, 1936	30	0	0	285	0	0
30th September, 1936	133	12	0	2004	0	0
31st December, 1936	65	0	0	1105	0	0
31st March, 1937	54	0	0	918	0	0
30th June, 1937	150	10	0	2709	0	0
30th September, 1937	48	10	0	897	0	0
31st December, 1937	76	1	15	723	0	0
31st March, 1938	28	10	0	413	0	0
30th June, 1938	13	0	0	174	0	0
30th September, 1938	33	7	0	540	0	0
31st December, 1938	97	7	0	1558	0	0
31st March, 1939	65	0	0	1105	0	0
30th June, 1939	100	5	0	1704	0	0
30th September 1939	48	0	0	816	0	0
31st December 1939	52	11	11	1051	0	0
Total	13,758	8	1	£269,596	9	2

SHALE.

RETURN showing the Quantity and Value of Shale produced during the Years 1910 to 1939 inclusive.

Year.	Quantity.	Value.
	Tons.	£
1910	364	214
1911	500	250
1912	—	—
1913	130	130
1914	75	75
1915	—	—
1916	1286	1286
1917	—	—
1918	—	—
1919	600	900
1920	140	172
1921	868	1506
1922	40	100
1923	1101	1094
1924	1576	1526
1925	820	559
1926	2127	1475
1927	3150	2050
1928	2595	1297
1929	4299	2982
1930	5428	3490
1931	1402	600
1932	1097	1074
1933	3401	1483
1934	3276	1630
1935	30	15
1936–1939	—	—
Total	34,305	£23,908

RETURN showing the Quantity of Oil Distilled from Shale.

Year.	Name of Company.	Gallons.
1910	Tasmanian Shale and Oil Company	4800
1915	Railton-Latrobe Shale Oil Co. N.L.	24,000
1927–1928	Australian Shale Oil Corporation	65,000
1929	Goliath Portland Cement Company	2200
1930	Goliath Portland Cement Company	20,101
	Tasmanite Shale Oil Company Ltd.	35,000
1931	Tasmanite Shale Oil Company Ltd.	31,915
1932	Tasmanite Shale Oil Company Ltd.	79,236
1933	Tasmanite Shale Oil Company Ltd.	56,958
1934	Tasmanite Shale Oil Company Ltd.	37,905
1935	Tasmanite Shale Oil Company Ltd.	—
1936–1939	Tasmanite Shale Oil Company Ltd.	—
	Total	357,115

SCHEELITE.

RETURN showing the Quantity and Value of Scheelite produced during the Years 1917 to 1939 inclusive.

Year.	Quantity.	Value.
	Tons.	£
1917	69	12,130
1918	216	39,252
1919	198·98	43,181
1920	105·09	17,905
1921–1937	—	—
1938	30·53	6193
1939	170·695	33,301
Total	790·295	£151,962

SILVER.

The output was 1,278,116 oz. (fine), valued at £118,301 as compared with 1,219,550 oz., valued at £104,671 for 1938.

RETURN showing the Quantity and Value of Silver contained in Silver-Lead and Blister Copper during the Years 1919 to 1939 inclusive.

Year	In Silver-Lead.		In Blister Copper.		Total.	
	Quantity.	Value	Quantity.	Value.	Quantity.	Value.
	Oz.	£	Oz.	£	Oz.	£
1919	296,719·27	71,831	228,624	53,733	525,343·27	125,564
1920	453,411	118,898	169,948	47,869	623,359	166,767
1921	165,637	27,181	183,021	30,395	348,658	57,576
1922	674,886	104,926	119,699	18,511	794,585	123,437
1923	516,073·61	73,742	122,528	17,597	638,601·61	91,339
1924	494,782	75,398	147,376	22,439	642,158	97,837
1925	597,012·67	86,283	133,181	19,226	730,193·67	105,509
1926	632,066	80,597	134,587	17,394	766,653	97,991
1927	640,575	75,135	101,207	11,889	741,782	87,024
1928	564,156	66,386	105,270	12,515	669,426	78,901
1929	714,930	78,252	149,424	16,308	864,354	94,560
1930	528,641	41,485	182,978	14,583	711,619	56,068
1931	242,950	16,104	148,782	9650	391,732	25,754
1932	301,854	24,399	161,634	12,905	463,488	37,304
1933	361,768	29,394	127,562	10,414	489,330	39,808
1934	194,747	18,401	89,940	8726	284,687	27,127
1935	191,044	24,780	132,857	17,543	323,901	42,323
1936	803,369	71,886	103,189	9150	906,458	81,036
1937	977,552	88,252	83,233	7518	1,060,785	95,770
1938	1,152,568	91,913	66,982	5758	1,219,550	104,671
1939	1,207,604	111,893	70,512	6417	1,278,116	118,310
T't'l	11,712,345·5	1,384,136	2,762,534	370,540	14,474,879·55	1,754,676

TALC.

RETURN showing Quantity and Value of Talc produced during the Years 1928 to 1939 inclusive.

Year.	Quantity.	Value.
	Tons.	£
1928	32	96
1929	23	45
1930	13·35	53
1931	15	58
1932	5	17
1933	8·75	22
1934	5·5	16
1935	—	—
1936	3	8
1937-1939	—	—
Total	105·6	315

TIN.

The output was 1249·877 tons, valued at £282,798, as compared with 1,278·619 tons, valued at £244,037 for 1938.

RETURN showing the Quantity and Value of Tin exported from Tasmania from 1880 to 1904 (compiled from Customs Returns only), Tin Ore produced during the Years 1905 to 1918 inclusive, and Metallic Tin produced during the Years 1919 to 1939 inclusive.

Year.	Quantity.	Value.
	Tons.	£
1880 to 1904 inclusive	76,708·4	7,167,564
1905	3891·5	362,670
1906	4472·75	557,266
1907	4342·75	501,681
1908	4520·8	421,580
1909	4511·2	418,165
1910	3701·01	399,393
1911	3953·05	513,500
1912	3713·825	543,103
1913	4010·41	531,983
1914	2572·713	259,300
1915	2599·234	292,306
1916	2854·636	350,852
1917	2637·337	427,917
1918	2256·203	488,798
1919	1580·22*	395,794
1920	1310·411*	369,362
1921	790·395*	130,257
1922	679·440*	112,407
1923	1160·390*	236,955
1924	1108·450*	275,014
1925	1129·662*	297,515
1926	1096·16*	322,526
1927	1105·74*	317,593
1928	1140·14*	258,676
1929	640·36*	130,014
1930	511·77*	69,592
1931	588·83*	70,634
1932	793·92*	109,767
1933	957*	190,041
1934	952·49*	219,246
1935	1131*	258,919
1936	1004·06*	206,656
1937	1089·839*	260,673
1938	1278·617*	244,037
1939	1249·877*	282,798
Total	147,044·649	£17,994,554

* Metallic Tin.

WOLFRAM.

RETURN showing the Quantity and Value of Wolfram produced during the Years 1899 to 1939 inclusive.

Year.	Quantity.	Value.
	Tons.	£
1899 to 1903 inclusive	57·25	2157
1904	15·5	1147
1905	32·25	2371
1906	19·75	1465
1907	40·75	4411
1908	4·5	338
1909	28·35	2494
1910	67·35	7280
1911	69·96	7769
1912	66·49	6601
1913	68·07	7040
1914	46·873	4327
1915	94·685	11,115
1916	106·265	16,910
1917	172·190	28,714
1918	155·362	27,239
1919	120·907	26,613
1920	70·89	13,626
1921	10·34	676
1922	19·26	1024
1923	96·86	6150
1924	54	2785
1925	174·170	14,658
1926	83·15	5265
1927	148·57	9886
1928	176·15	12,094
1929	151·86	18,358
1930	112·6	12,216
1931	0·29	16
1932	—	—
1933	104	7,301
1934	194·19	27,375
1935	232	29,345
1936	207·13	28,323
1937	291·04	71,643
1938	299·104	63,348
1939	227·604	44,356
Total	3819·620	£526,436

ZINC.

RETURN showing the Quantity and Value of Zinc produced during the Years 1919 to 1939 inclusive.

Year.	Quantity.	Value.
	Tons.	£
1919	285	13,110
1920	9·3	334
1921–1923	—	—
1924	2748·75	90,485
1925	3112·69	110,691
1926	5377·75	183,362
1927	6326·2	181,242
1928	7112	188,691
1929	6997	185,964
1930	943	19,322
1931–1935	—	—
1936	18,769	283,105
1937	23,481	525,824
1938	25,366	356,452
1939	25,021	366,176
Total	125,548·69	£2,504,758

Electrolytic Zinc Company of Australasia Limited—

Return for the calendar year 1939:—

	Tons.
Production of slab zinc	44,965
Production of metallic cadmium	124·3833

The above is from ores other than Tasmanian.

The average number of men employed at Risdon was 1120.

West Coast Division.—The production on the West Coast properties during the year was:—

	Tons.
Slab zinc	26,255
Metallic cadmium	43·34

The average number of men employed was 1120.

VALUE OF METALS AND MINERALS RAISED.

RETURN showing Value of Metals and Minerals Raised in Tasmania from 1880 *to* 1939 *inclusive.*

Mineral or Metal.	Value.
	£
Asbestos	7202
Barytes	7188
Bismuth	26,704
Cadmium	84,759
Carbide, Cement, and Limestone	1,417,864
Carbide to 1936 (now under Carbide, Cement, and Limestone)	1,212,207
Cement to 1936 (now under Carbide, Cement, and Limestone)	2,004,014
Coal	2,935,215
Cobalt	243
Copper (Blister) to 1918 (now shown under Silver and Copper)	13,778,527
Copper Matte	133,736
Copper Ore to 1918 (now under Copper)	577,873
Copper (from 1919)	10,349,134
Gold	8,452,401
Granite (red)	6317
Ilmenite	1256
Iron Ore	25,737
Iron Pyrites	341,467
Lead (from 1919)	2,288,051
Limestone to 1936 (now under Carbide, Cement, and Limestone)	1,240,194
Nickel	38,850
Ochre	375
Osmiridium	630,749
Scheelite	151,962
Silica	11,794
Shale	23,908
Silver-Lead to 1918 (now shown as Silver and Lead)	6,429,291
Silver	1,754,676
Talc	315
Tin	17,994,554
Wolfram	526,436
Zinc	2,504,758
Unenumerated prior to 1894	31,988
Total	£74,989,745

STATISTICS OF PRODUCTION.

RETURN showing the Annual Value of Mineral Products for the State of Tasmania from 1880 *to* 1939 *inclusive.*

Year.	Value.	Year.	Value.
	£		£
1880	554,031	1911	1,349,497
1881	602,723	1912	1,493,502
1882	556,306	1913	1,415,700
1883	560,873	1914	1,007,038
1884	468,302	1915	1,225,575
1885	518,885	1916	1,521,050
1886	489,966	1917	1,582,322
1887	593,256	1918	1,597,694
1888	616,733	1919	1,301,090
1889	504,718	1920	1,421,104
1890	444,210	1921	822,851
1891	528,388	1922	1,013,415
1892	526,909	1923	1,219,456
1893	627,909	1924	1,496,804
1894	732,764	1925	1,700,861
1895	575,692	1926	1,808,847
1896	662,058	1927	1,621,027
1897	1,006,140	1928	1,593,828
1898	1,071,084	1929	1,790,653
1899	1,660,622	1930	1,270,114
1900	1,888,695	1931	894,986
1901	1,763,896	1932	897,168
1902	1,378,406	1933	1,053,373
1903	1,354,044	1934	1,037,351
1904	1,379,204	1935	1,387,511
1905	1,729,129	1936	1,979,637
1906	2,257,147	1937	2,653,822
1907	2,277,159	1938	2,294,735
1908	1,650,027	1939	2,520,282
1909	1,574,995	Unenumerated prior to 1894	31,988
1910	1,432,193	Total	£74,989,745

STATISTICS OF MINING COMPANIES.

RETURN showing the Amounts Paid in Dividends by Mining Companies during the Year ending 31*st December,* 1939.

Mines.	Dividends.
	£
Copper	54,344*
Gold	...
Tin	67,904
Silver	...
Coal	1,175
Scheelite	6,250
Zinc	335,266*
Total	£464,939

* These amounts represent total dividends out of Tasmanian profits, the remainder being paid from profits ex-Tasmania.

RETURN showing the Mining Companies Registered during the year ending 31*st December,* 1939.

Number of Companies.	Capital.
1	£6,000

In addition to the above, 1 Agent for Foreign Companies under the Mining Companies (Foreign) Act, 1884, but no Syndicate under Part V. of the Mining Companies Act, 1884, was registered.

RETURN showing the Total Area of Land and Number of Sluiceheads of Water Applied for during the Year ending December, 1939.

Mineral.	Number.	Sluiceheads.	Area.
			Acres.
Asbestos	...	...	...
Bismuth	...	...	...
Barytes	1	...	40
Clay	1	...	50
Coal	2	...	65
Copper	3	...	210
Gold	20	...	556
Granite	...	...	...
Iron	...	...	...
Lead	...	...	...
Limestone	2	...	214
Manganese	...	...	...
Minerals	9	...	278
Nickel-Silver	1	...	80
Osmiridium	1	...	10
Pyrites	1	...	80
Sand	...	...	...
Silver	8	...	400
Stone	3	...	240
Tin	62	...	799
Wolfram	2	...	120
Machinery Sites and Mining Easements	4	...	14
Water-rights and Dam Sites	43	98	74
Licences to search for Coal	...	...	...
Total	163	98	3230

RETURN showing Total Number and Area of Leases and Licences Issued during the Year ending 31st December, 1939.

Mineral.	Leases.	Sluiceheads.	Area.
			Acres.
Asbestos	1	...	10
Barytes	...	...	...
Clay	1	...	2
Copper	1	...	50
Copper-Nickel	...	...	...
Coal	5	...	481
Dolomite	...	...	...
Gold	17	...	338
Iron Ore	8	...	164
Lead-Zinc	...	...	...
Minerals	6	...	174
Manganese	7	...	45
Nickel	1	...	80
Osmiridium	2	...	80
Pyrites	1	...	80
Silver	1	...	2
Scheelite	...	...	...
Silver-Lead	...	...	...
Stone	1	...	5
Tin	52	...	581
Wolfram	1	...	5
Water-rights and Dam Sites	48	95	65·5
Licences to Search for Coal and Oil	...	...	...
Mining Easements and Machinery Sites	4	...	16
Total	157	95	2178·5

RETURN showing the Total Number of Leases and Licences in Force on 31st December, 1939.

Mineral.	Number.	Number of Sluiceheads.	Area.
			Acres.
Antimony	...	...	...
Asbestos	1	...	10
Barytes	2	...	84
Bismuth	...	...	...
Coal	28	...	5793
Clay	2	...	4
Copper	2	...	70
Copper-Nickel	5	...	249
Dolomite	3	...	365
Granite	2	...	15
Gold	108	...	1850·5
Gravel	...	...	...
Iron	11	...	355
Limestone	4	...	240
Lead-Zinc	1	...	80
Molybdenum	...	...	...
Minerals	52	...	5721
Marble	...	...	...
Manganese	7	...	45
Osmiridium	2	...	80
Pyrites	1	...	80
Scheelite	3	...	281
Shale	3	...	117
Silica	2	...	45
Silver	16	...	732
Stone	4	...	94
Tin	354	...	10,852
Wolfram	7	...	214
Mining Easements and Machinery Sites	86	...	617·25
Licences to Search	2	...	1180
Water Licences	388	1574	2172·75
Total	1096	1574	31,346·50

RETURN showing the Total Amount of Rents, Fees, &c., received by the Mines Department during the Year ending 31st December, 1939.

Head of Revenue.	Amount.
	£ s. d.
Rent of Auriferous and Mineral Lands	8307 16 3
Fees, Auriferous and Mineral Lands	641 4 9
Survey Fees	759 14 0
Fees under the Explosives and Inflammable Liquids Act	2607 4 1
Total	£12,315 19 1

Comparative Statement of Revenue from Mines, being Rents, Fees, Storage of Explosives, &c. (exclusive of Survey Fees), Paid to the Treasury for the Years ending 30th June, from 1882 to 1903, and for Six Months ending 31st December, 1903, and for the Years ending 31st December, 1904 to 1939 inclusive.

Year.	Amount.			Year.	Amount.		
	£	s.	d.		£	s.	d.
1882	23,077	1	9	1911	20,556	15	10
1883	15,439	14	5	1912	17,639	19	11
1884	6981	11	10	1913	19,410	17	8
1885	11,070	5	7	1914	14,087	0	6
1886	12,523	10	4	1915	17,679	3	6
1887	14,611	11	5	1916	14,678	19	10
1888	23,502	8	4	1917	14,669	7	2
1889	17,254	9	0	1918	17,833	14	9
1890	26,955	4	9	1919	15,388	7	7
1891	37,829	16	5	1920	16,767	11	6
1892	17,568	18	4	1921	11,248	14	11
1893	16,971	9	2	1922	14,184	7	3
1894	16,732	7	7	1923	13,224	11	9
1895	15,323	1	9	1924	14,678	13	11
1896	20,901	13	2	1925	14,229	8	7
1897	25,631	0	3	1926	15,163	15	7
1898	33,661	13	9	1927	16,887	9	9
1899	24,696	10	5	1928	14,313	12	0
1900	28,380	11	10	1929	14,665	10	7
1901	21,569	5	2	1930	11,166	7	2
1902	19,471	0	1	1931	11,520	1	10
1903	17,776	14	3	1932	10,097	18	6
1903, 1 July to 31 Dec.	14,758	17	1	1933	9459	6	9
1904, Jan. to Dec.	16,631	8	2	1934	11,166	2	11
1905	20,208	17	0	1935	10,548	10	0
1906	24,136	12	5	1936	11,023	11	3
1907	24,794	7	7	1937	12,206	10	1
1908	20,311	3	0	1938	11,177	11	5
1909	22,804	1	5	1939	11,556	5	1
1910	22,221	18	0				

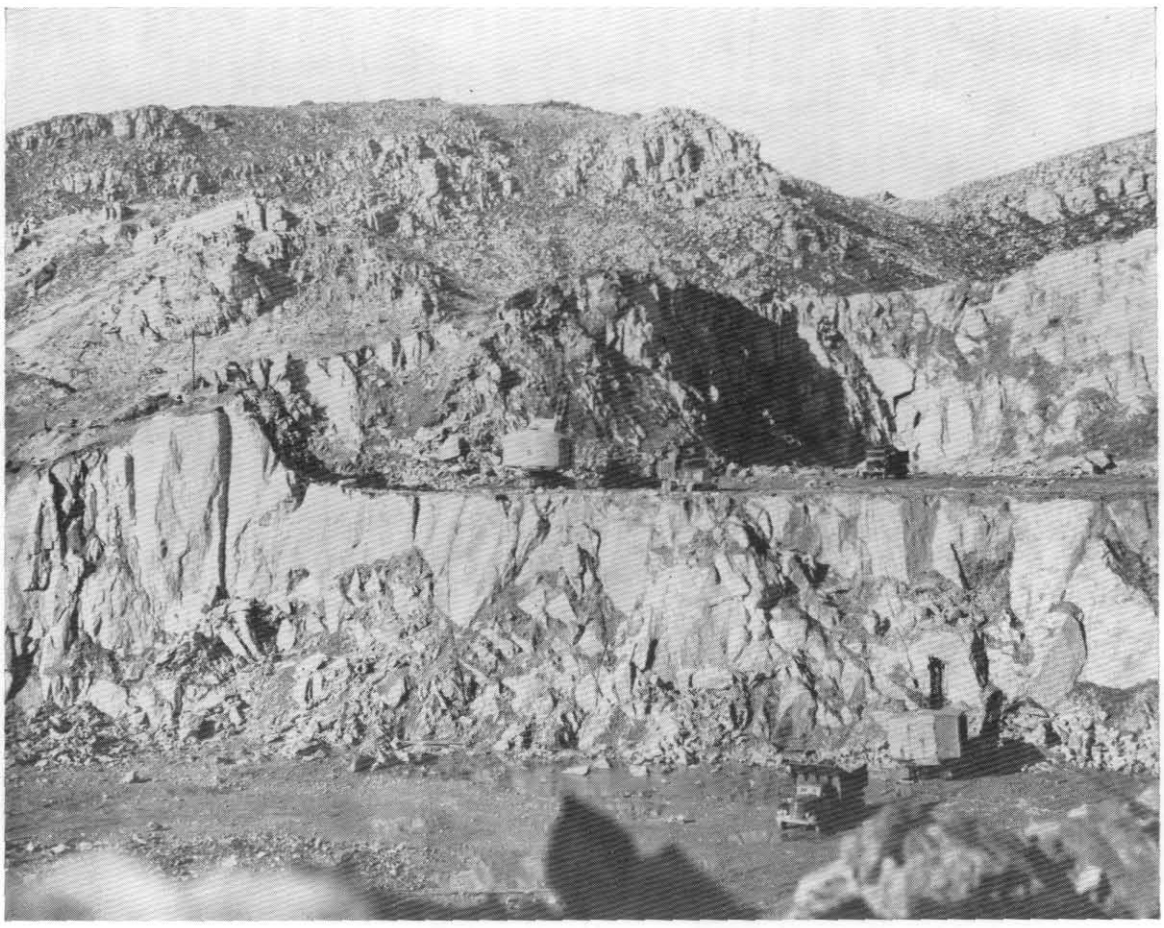
The above Statement does not include Stamp Duties upon Transfer of Leases and Tax payable upon Dividends, from which sources large sums are derived.

RETURN showing the Number and Area of Leases Held under the Mining Act in force on 31st December, 1924 to 1939, inclusive.

Nature of Lease.	In force on 31st Dec., 1925.		In force on 31st Dec., 1926.		In force on 31st Dec., 1927.		In force on 31st Dec., 1928.		In force on 31st Dec., 1929.		In force on 31st Dec., 1930.		In force on 31st Dec., 1931.		In force on 31st Dec., 1932.		In force on 31st Dec., 1933.		In force on 31st Dec., 1934.		In force on 31st Dec., 1935.		In force on 31st Dec., 1936.		In force on 31st Dec., 1937.		In force on 31st Dec., 1938.		In force on 31st Dec., 1939.	
	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.	No.	Area.
		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.		Acres.
For Minerals, Silver, Tin, &c.	532	23,588	541	22,129	642	25,604	728	28,103	652	27,052	418	18,321	379	17,101	284	13,320	326	16,734	444	18,716	500	19,802	585	21,096	603	21,368	595	23,497	463	18,843
For Coal, Slate, Shale, &c.	35	9922	49	13,136	39	11,077	52	15,407	36	11,022	32	9960	25	7223	32	6104	39	7495	51	8439	47	6635	48	7249	50	6778	43	4904	49	6683
For Gold	70	1340	42	870	38	749	40	830	36	746	40	830	57	999	77	1987	128	3879	167	3987	162	3190	155	3183	22	2619	117	2491	108	1850·5
Dredging Claims	20	195	42	363	41	502	52	626	60	756	30	353	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mining Easements	77	570	68	494	77	484	77	475	55	409	73	504	77	434	48	316	79	475	94	578	107	629	112	634	112	663	97	630	86	617·25
Machinery Sites	27	112	25	150	21	110	29	169	25	171	18	117	20	209	18	120	17	119												
Licences to search for Coal or Oil	19	14,130	8	10,669	4	5090	7	7200	9	10,844	3	1080	1	800	1	320	2	796	2	3670	2	4200	5	10,900	6	10,600	2	1180	2	1180
Water-rights, Mineral and Gold	371	2167 & 1604 sluice-heads	360	2190 & 1591 sluice-heads	394	2246 & 1748 sluice-heads	371	1552 & 1581 sluice-heads	486	2359 & 2053 sluice-heads	364	2095 & 1558 sluice-heads	388	2078 & 1546 sluice-heads	391	2448 & 1473 sluice-heads	400	1905 & 1650 sluice-heads	403	2015 & 1760 sluice-heads	447	2092 & 1835 sluice-heads	466	1963 & 2034 sluice-heads	467	2243 & 2049 sluice-heads	448	1834 & 2191 sluice-heads	388	2172.75 & 1574 sluice-heads

TABLE showing the Average Annual Prices for Minerals During Recent Years.

	Average for **1926.**	Average for **1927.**	Average for **1928.**	Average for **1929.**	Average for **1930.**	Average for **1931.**	Average for **1932.**	Average for **1933.**	Average for **1934.**	Average for **1935.**	Average for **1936.**	Average for **1937.**	Average for **1938.**	Average for **1939.**
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Copper—Standard, spot: per ton	58 0 8	59 5 8	72 2 10	75 19 7	54 3 7	38 7 9	31 14 7	32 11 4	30 6 4	31 18 1	36 12 6	60 5 9 Electrolytic.	45 16 9 Electrolytic.	49 17 7 Electrolytic.
Lead—Soft Foreign: per ton	31 2 2	21 9 6	22 13 6	23 4 11	18 3 1	13 0 7	12 0 9	11 16 1	11 1 0	14 5 8	16 7 9	23 6 1	15 6 5	15 13 7
Spelter: per ton	34 2 8	26 6 1	25 14 9	24 15 1	16 16 9	12 9 0	13 13 10	15 14 11	13 15 6	14 0 0	14 6 11	22 6 8	14 1 7	14 14 0
Tin—Standard, spot: per ton	291 3 0	254 17 7	216 6 6	263 18 10	141 19 1	118 9 1	135 18 10	194 13 4	230 7 5	225 14 6	208 6 6	242 6 7	189 12 1	226 5 6
Silver—Standard, spot: per oz.	s. d. 2 4·2	s. d. 2 2·38	s. d. 2 2·15	s. d. 2 0·57	s. d. 1 5·66	s. d. 1 2·593	s. d. 1 5·842	s. d. 1 6·144	s. d. 1 9·208	s. d. 1 9·951	s. d. 1 9·647	s. d. 1 9·65	s. d. 1 9·066	s. d. 1 8·461
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Osmiridium: per oz.	11 18 4	21 16 5	25 9 0	22 18 1	17 0 9	14 7 9	11 11 0	8 16 9	9 11 2	9 0 0	12 10 0	15 12 6	15 0 4	17 15 0
Wolfram: per ton	70 0 0	61 10 0	104 5 0	144 5 0	105 0 9	64 0 0	62 16 0	81 2 6	94 0 0	175 0 0	161 5 0	325 19 0 WO_3	289 0 0 WO_3	271 0 0 WO_3
Nickel: per ton	...	...	...	171 0 0	170 0 0	183 15 0	234 7 6	235 0 0	225 0 0	200 0 0	178 4 0	145 0 0	182 10 0	185 0 0



Mt. Lyell M. & R. Coy. Ltd. Opencut, West Lyell. [*F. Hurley Photo.*

MINES DRAFTING BRANCH.

The number of working plans in use and which are all kept up to date is 221, as compared with 215 in 1938.

Instructions issued to surveyors	120
Diagrams received from surveyors	105
Diagrams drawn on leases	314
Consolidated and other diagrams drawn	29
Lithographs entered to date	91
Various tracings prepared	60
Tracings for Launceston	179
Manuscripts entered to date	7
New manuscript plans drawn	1
Meteorological colour work	27
Underground surveys examined	48

STAFF.

It is with extreme regret that I have to record the sudden death, on the 1st December, 1939, of the late Secretary for Mines, Mr. J. B. Scott, who had occupied the position for several years and had rendered valuable service to the mining industry of the State.

Mr. W. H. Williams, Chief Inspector of Mines and Explosives, was appointed to the position of Acting Secretary for Mines on the 4th December, 1939.

Mr. A. B. Bryan (Chief Clerk and Accountant), who attained the retiring age on the 22nd July, 1938, was granted an extension of service, and was officially retired as from the 1st July, 1939.

Mr. E. C. Briggs (Secretary to the Minister for Mines) was appointed to the position of Chief Clerk and Accountant as from the 14th April, 1939.

The Government Geologist (Mr. P. B. Nye) was granted a further extension of special leave from the 1st July, 1939, to the 30th June, 1940, to continue the duties of chief executive officer on an aerial survey being conducted jointly by Commonwealth, West Australia, and Queensland Governments in Northern Australia.

Mr. J. O. Hudson, who was retired as from the 1st February, 1938, was recalled and appointed Acting Chief Inspector of Mines and Explosives pending staff consolidation.

Miss E. M. Griffith joined the staff as a typist on the 9th August, 1939, and was detailed to the office of Chief Inspector of Mines and Explosives, Launceston.

Mr. R. T. Bell was appointed to the position of Clerk in the office of Chief Inspector of Mines and Explosives as from the 24th July, 1939.

CONCLUSION.

Appreciation is recorded of the loyal and efficient services rendered by officers of the Department, including officers of Mining Drafting Branch, Wardens of Mines, and Registrars of the several districts.

I have the honour to be Sir,

Your obedient servant,

W. H. WILLIAMS,
Acting Secretary for Mines.

The Honourable the Minister for Mines.

APPENDIX I.

REPORT OF ACTING GOVERNMENT GEOLOGIST FOR 1939.

The Acting Government Geologist (Mr. F. BLAKE) reports:—

Field Work.

The undermentioned items relate to the field trips, surveys, examinations, &c., made in connection with mineral deposits, mines, &c., and carried out during the period by officers named:—

(1) Examination of Comstock Iron Deposits, by F. Blake.
(2) Examination of Rio Tinto Iron Deposits, by F. Blake.
(3) Examination of Blythe River Iron Deposits, by F. Blake.
(4) Examination of Rutherford Iron Deposits, by F. Blake.
(5) Investigation of Corinna Gold Areas, by F. Blake and T. D. Hughes.
(6) Inspection of Iron Prospect at Gawler River, by F. Blake.
(7) Visit to Britton's Swamp—Underground Water, by F. Blake.
(8) Examination of Spray Mine, Zeehan, by F. Blake.
(9) Inspection of Comstock Tunnel Workings, by F. Blake.
(10) Inspection of Comstock Iron Adits, by F. Blake.
(11) Examination of Asbestos Deposits at North Dundas, by F. Blake.
(12) Examination of Cygnet Coal Area, by F. Blake.
(13) Coal Investigation at Catamaran, by F. Blake.
(14) Examination of Oil Prospect at Ross, by F. Blake.
(15) Inspection of Anthracite Workings, Catamaran, by F. Blake.
(16) Survey of Montana Western Mine, Zeehan, by F. Blake.
(17) Examination of Macquarie Harbour Lignite Deposits, by F. Blake and T. D. Hughes.
(18) Sampling of Comstock Iron Deposits, by F. Blake.
(19) Visit to Campbell Town in connection with Underground Water Sources, by F. Blake.
(20) Survey of Comstock Iron Deposits, by F. Blake and T. D. Hughes.
(21) Inspection of Beaconsfield Iron Deposits, by F. Blake.
(22) Examination of Aid to Mining Prospects at Mathinna and Fingal, by Q. J. Henderson.
(23) Survey of Scamander-Mathinna District, by Q. J. Henderson.
(24) Examination of Humboldt Mine Area, by Q. J. Henderson.
(25) Inspection of Read-Rosebery Area, by Q. J. Henderson.
(26) Examination of Aid to Mining Prospects at Adamsfield, by Q. J. Henderson .
(27) Examination of Devonport Mine, Black Bluff, by Q. J. Henderson.
(28) Inspection of Mining Plant, Catamaran Mine, by Q. J. Henderson.

Reports.

In connection with the above and other matters, the following reports were prepared:—

(1) Lake Dora Copper Deposits, by F. Blake and Q. J. Henderson.
(2) Underground Water at Britton's Swamp, by F. Blake.
(3) Asbestos Deposit at North Dundas, by F. Blake.
(4) Montana Western Extended Mine, Zeehan, by F. Blake.
(5) Reported Iron Deposit at Gawler River, by F. Blake.
(6) Geology of Country in vicinity of the old Humboldt Mine, by Q. J. Henderson.
(7) Corinna Alluvial Goldfield, by F. Blake.
(8) Re-interpretation of the Geology of the Read-Rosebery District, by the Electrolytic Zinc Company, by Q. J. Henderson.
(9) Supposed Oil Prospect at Ross, by F. Blake.
(10) Anthracite Coal at Catamaran, by F. Blake.
(11) Geological Survey of Country between Scamander and Mathinna, by Q. J. Henderson.
(12) Devonport Mine, Black Bluff, by Q. J. Henderson.
(13) Macquarie Harbour Brown Coal Deposits, by Q. J. Henderson.
(14) Sulphide Deposits in Tasmania, suitable for Production of Elemental Sulphur, by F. Blake.

Publications.

A report entitled " The Mangana Goldfield " and accompanied by numerous plans and sections was completed during the year. It is proposed to publish the report in the near future as Geological Survey Bulletin No. 45.

Staff.

The position held by Mr. Q. J. Henderson as Assistant Geologist and Draftsman was altered during the year to that of Field Geologist.

Mr. P. B. Nye, Government Geologist, continued to carry out the duties of executive officer to the Geological, Geophysical, and Aerial Survey of Northern Australia in which position he has acted since 1934. Leave of absence was extended to June, 1940.

Routine and Other Duties.

The usual duties of interviewing visitors, answering technical correspondence, &c., were undertaken. These were chiefly concerned with the identification of mineral and rock specimens, and furnishing intelligence with reference to mineral deposits, mines, reports, &c., in connection with the mining industry.

Other duties included:—

(1) Attendance at meetings of Mining Managers' Board.
(2) Preparation of rock and mineral sections.
(3) Selection of sites for boring.
(4) Weighing of and certifying to parcels of osmiridium being shipped overseas.
(5) Compilation of boring records.
(6) Attention and additions to Departmental Library.
(7) Preparation of plans, sections, and maps to accompany reports.
(8) Attention and additions to departmental rock and mineral collections.
(9) Preparation of mineral specimens and collections for institutions and exhibitions.

Conclusion.

I desire to acknowledge the co-operation and excellent work of the staff of the Geological Survey, who have spared no effort in carrying out their duties for the benefit of the mining industry and in the interests of the development of the mineral resources of the State.

APPENDIX II.

REPORT OF CHIEF CHEMIST AND ASSAYER.

The Chief Chemist and Assayer (Mr. W. St. C. Manson) reports:—

During the year the following determinations were made:—Gold, silver, tin, lead, aluminium, arsenic, antimony, beryllium, barium, bismuth, boron, calcium, chlorine, chromium, copper, iron, magnesium, manganese, mercury, molybdenum, nickel, osmiridium, phosphorus, tungsten, titanium, zinc, and zirconium. Analyses were made of ores, minerals, clays, rocks, coal, shale, water, &c., the number of determinations approximating 4000.

Metallurgical Investigations.

Gold bearing sands and slimes from Lefroy dumps were submitted to cyanide extraction tests with the following results:—

Constant Treatment Conditions.

Percolation	72 hours
Barren solution	0·1% KCN
Solid: Solution ratio	5 : 8
Wash ratio	2 : 1

Test No.	CaO Added. Lb. Per Ton.	Consumption. Lb. Per Ton. CaO.	KCN.	Head Assay, Gold. Grs. Per Ton.	Extraction Grains Per Ton.
633	8	7·3	0·6	26·4	9·0
634	4	3·9	0·8	38·4	8·1
635	12	11·9	3·1	2·8	2·7

Constant Treatment Conditions.

Agitation	20 hours
Lime added	10 lb. per ton
Barren solution	0·1% KCN
Solid: Solution ratio	1 : 2

Test No.	Consumption. Lb. Per Ton. CaO.	KCN.	Head Assay, Gold. Dwt. Per Ton.	Extraction. Dwt. Per Ton.
753	7·8	0·4	2·6	2·08
754	8·3	0·44	2·6	2·08
755	8·15	0·28	6·8	0·38
756	10·0	1·06	4·8	3·16
757	7·56	0·36	3·7	2·14
758	7·64	0·14	1·1	0·56
759	6·46	0·16	1·3	0·42
760	8·98	0·14	0·8	0·66
799	7·1	0·18	0.54	0·08
848	7·8	0·24	1·4	0·54
849	7·2	0·28	0·8	0·50
905	8·8	0·16	0·8	0·25
986	8·3	0·16	1·0	0·25
987	8·7	0·32	1·17	0·38
988	8·3	0·16	1·19	0·44
989	6·7	0·20	1·9	0·44
990	7·4	0·16	2·2	0·25
991	6·6	0·18	2·4	0·38

No. 755 contained coarse gold.

A Sample of Gold Ore from Black Bluff was received from the Acting Field Geologist for determination in treatment.

Amalgamation and Cyanidation.—The sample was ground to pass 80 mesh, amalgamated, and amalgamated tailings cyanided with the following results:—

Test No. 1056—

Head Assays: Gold, 12 dwts. 9 grains per ton
Silver, 1 dwt. 23 gains per ton.

Amalgamated Tailings Assay: Gold, 15 grains per ton.

Cyanidation of tailings by agitation for 20 hours with 10 lb. CaO, 0·1% KCN solution (ratio 1 : 2) gave a further extraction of 9·5 grains.

Extraction by amalgamation 11 dwts 18 grs.	94·9%
Extraction by cyanidation 9·5 grs.	3·2%
Total	98·1%

Arsenical-Lead-Gold Ores from Mathinna were received from P. J. A. Plummer for investigation. Amalgamation tests and treatment of tailings were requested.

Sample 820-1 (A4-5) from "New Rising."
Sample 824-5 (B1-2) from "Golden Gate Tunnel."

The samples assayed—

	A4-5.	B1-2.
Gold	1·73 ozs.	1·11 ozs. per ton
Arsenic	1·48%	1·52%
Lead	0·42%	0·17%
Iron	3·55%	3·43%
Sulphur	1·0%	0·7%
Cu and Bi	Nil	Nil

Sample A4-5—

Amalgamation.—The ore was tested by grinding to various sizes and amalgamating—

Test No.	Mesh of Grinding.	Assays, Gold. Oz. Per Ton. Head.	Tailing.	Recovery. Oz. Per Ton.	%
1	— 33	1·73	0·46	1·27	73·4
2	— 80	1·73	0·18	1·55	89·6
3	80% — 200	1·73	0·15	1·58	91·3

Cyanidation of Tailings.—Test No. 3 tailings were treated by agitation for 20 hours; a further extraction of 2 dwts. 20 grains was obtained with a consumption of 8·7 lbs. CaO and 2·3 lbs. KCN per ton.

Extractions of 73·4, 89·6, and 91·3% were obtained by amalgamation and by cyanidation of test No. 3 tailings, a total extraction of 99·5% or 1 oz. 14 dwts. 10 grains was obtained.

Flotation of Test No. 3 Tailings.—Although extraction with cyanide was satisfactory, a flotation test was made to observe the effectiveness of same. Re-agents used:—Soda Ash (1), Ethyl Xanthate (0·2), Aerofloat "31" (0·15 lb. per ton and pine oil). Concentrate produced assayed 62·7 dwt. gold per ton, representing approximately 83% or 2·5 dwts. per ton.

Sample B1-2—

Amalgamation.—Two tests were made by grinding to pass 33 and 80 mesh screens respectively and amalgamated—

Test No.	Assays, Gold. Oz. Per Ton. Head.	Tailing.	Recovery. Oz. Per Ton.	%
1	1·11	0·17	0·94	84·7
2	1·11	0·05	1·06	95·5

Lead, Zinc, Gold ore and plant products were forwarded from the Narrawa Creek Mine, Moina, for investigation. Samples of Jig, Table, and Strake products were examined and suggestions made as to preferred methods of treatment with the installed plant. A preliminary investigation was made to assess the value of flotation treatment.

Water samples were received from the Secretary for Mines and stated to be obtained from a bore at Conara. Analyses and purification tests were made for removal of calcium and magnesium salts.

Tasmanite Asphalt.—After a preliminary trial with the Experimental Digester installed at Latrobe, it was evident, from the examination of this operation, that various mechanical and technical difficulties would have to be remedied before successful conversion could be anticipated.

Mechanical defects were rectified and tested and control factors improved and installed. Subsequently three runs were performed, resulting in the production of asphalt of similar grade to that previously obtained with the Pilot Plant at Launceston.

General.

The usual routine work was performed and information was supplied relative to methods of ore treatment, sampling, &c. In conclusion, I wish to place on record my appeciation of the services rendered by the Staff.

APPENDIX III.

REPORT OF THE ACTING CHIEF INSPECTOR OF MINES.

The Acting Chief Inspector (MR. J. O. HUDSON) reports:—

Mines and Works Regulation Act.

The average number of persons employed in mining, metallurgical, and quarrying operations was 5928, compared with 5891 for the previous year.

The appended tables relate to—

(1) Fatalities and non-fatal casualties at mines, works, and quarries.
(2) The average number of persons employed and the rate per 1000 persons of fatal and non-fatal injuries in the State and in each mineral division.

Accidents.

The total number of accidents registered under the provisions of Section 23 of the Act was 87, as against 103 for the previous year. The 87 accidents resulted in injury to 89 persons.

There were two additional accidents in Northern and Southern Divisions, an increase of 16 accidents in the North-Western Division, and in the Eastern Division an increase of four accidents. In the North-Eastern Division there was a decrease of three accidents, and in the Western Division a decrease of 35 accidents, compared with the previous year.

Two accidents were attended with fatal injuries to a like number of persons as against two fatalities recorded for the previous year.

The non-fatal accidents totalled 85 and involved injury to 87 persons, compared with 101 of the former and 102 of the latter numbers recorded during 1938.

The rate per 1000 persons employed, killed, and injured was 15·013 compared with 17·6 for the previous year.

The rate per 1000 persons employed, fatally injured, was 0·337 compared with 0·339 for the year 1938.

The rate per 1000 persons employed, incapacitated for more than 14 days, was 14·676 as against 17·315 for the previous year.

The two fatal accidents occurred in underground workings, one being due to a fall of ground and the other to a collapse of timbering.

Of the non-fatal accidents, 26 occurred underground, 48 were associated with surface operations at mines, and 11 happened at metallurgical and other works. Thirty-four accidents resulted in fractured ossa or permanent injury. Five accidents were associated with operations in coal mines, four being due to falls of ground, whilst the fifth was of a miscellaneous nature.

Health.

The prevalence of industrial dusts, the ventilation of underground workings, sanitation, and matters generally concerned with industrial ailments, were kept under surveillance with the object of controlling the health of employees.

Prosecutions.

It was found necessary to take action in three cases, in each case convictions being obtained and fines inflicted for failure to use appliances for the prevention of dust.

Operations—Southern District.

Continuous operations by the Australian Commonwealth Carbide Company resulted in an output of 8,217 tons of carbide valued at £165,040. The production of limestone from Ida Bay quarry was 21,581 tons, valued at £13,240. An average of 160 men was employed.

The Electrolytic Zinc Company, at Risdon, operated continuously during the year, producing 44,965 tons of zinc, valued at £881,150; 124·3833 tons of metallic cadmium, valued at £40,094; and 19·48 tons of cobalt oxide, valued at £8961. The average number of men employed was 1120.

Productive mining was discontinued at the Catamaran Coal Mine, and the mine was closed down. The output from this mine was 3750 tons, valued at £3000, the average number of men employed being 14.

Seven men were employed at the Sandfly colliery and produced 1849 tons, valued at £1340.

At the Langloh colliery 606 tons were produced, valued at £300, and four men were employed.

Adamsfield.

The average price of osmiridium for the year was £17 15s. per oz. In the last quarter the price advanced to £20 per oz. The recorded output from alluvial operations was 238·57 oz., valued at £4213. The small treatment plant operated by Osmiridium (Tas.) N.L. produced 43·5 oz., valued at £788, and ceased operations about the middle of the year. The average number of men employed on the field was 46.

Cox Bight.

Miscellaneous parties operating on alluvial occurrences in the South-Western (Cox Bight) areas accounted for an output of 1·7 tons of metallic tin, valued at £391. These operations afforded employment to an average of eight men.

Jane River.

The recorded output of alluvial gold from this area returned 122·5 fine oz., valued at £944. The average number of men employed was 10.

Quarries.

The bluestone quarries and quarries for the production of shale and clays for the manufacture of bricks worked continuously during the year.

APPENDIX IV.

REPORT OF THE ACTING CHIEF INSPECTOR OF EXPLOSIVES.

The Acting Chief Inspector of Explosives (Mr. J. O. HUDSON) reports:—

Explosives Act.

The imports of explosives were as follows:—

	lbs.
Monobel	302,000
Gelignite	621,000
Ligdyn	105,150
Blasting gelatine	30,785
Blasting powder	4,000
Sporting powder	1,500
	Number
Detonators	927,400

Customary attention was directed to ensuring that the compounds were in good chemical and physical condition, and recorded instances of deterioration were confined to small isolated quantities affected by the absorption of moisture. This condition, in some cases, appeared to be due to wrapping at the end of plugs not being effectively paraffined.

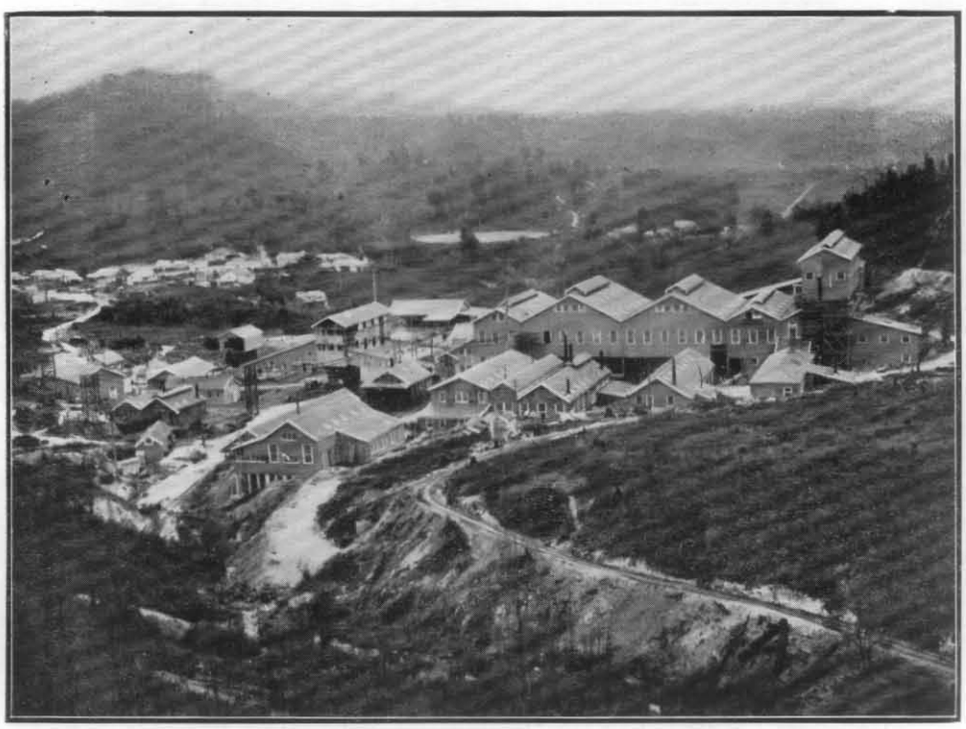
Two accidents were due to explosion:—

(1) A man, sheltering in a blacksmith's shop some distance from the scene of the explosion, had his leg fractured by a stone which crashed through the wall of the building: and
(2) An explosion of acetylene gas, caused by a naked light being placed near a container of carbide, inflicted burns to the face and hands of the person concerned.

The Inflammable Liquids Act.

The absence of untoward incidents in connection with the handling and storage of inflammable liquids reflected creditably upon the care exercised in the control of safety and fire hazards.

The outbreak of war, and the possibility of a shortage of petrol, caused a very large increase in orders for petrol in drums. The demand was so great that it became difficult to control the conditions of storage, but matters in this regard are being rapidly dealt with.



[*F. M. Nichols Photo.*

Electrolytic Zinc Co. of Australasia Ltd., Flotation Plant and Township, Rosebery.

COMPARATIVE Table of Statistics of Accidents in and about the Mines of Tasmania from 1st July, 1892, to 31st December, 1939.

Period.	Number of Miners Employed.	Number of Accidents.	Number of Persons		Total Killed and Injured.	Average per 1000 Killed and Injured.	Average per 1000.	
			Killed.	Injured.			Killed.	Injured.
1 July, 1892, to 30 June 1893	3295	28	4	25	29	8·8001	1·214	7·586
„ 1893 „ 1894	3403	25	7	20	27	7·934	2·057	5·877
„ 1894 „ 1895	3789	26	4	24	28	7·390	1·058	6·332
„ 1895 „ 1896	4160	22	7	16	23	5·529	1·682	3·847
„ 1896 „ 1897	4303	36	7	31	38	8·831	1·627	7·204
„ 1897 „ 1898	5530	36	13	33	46	8·318	2·351	5·967
„ 1898 „ 1899	6180	35	9	34	43	6·957	1·456	5·501
„ 1899 „ 1900	6834	19	7	16	23	3·365	1·024	2·341
„ 1900 „ 1901	7017	29	8	23	31	4·417	1·140	3·278
„ 1901 „ 1902	6438	38	7	35	42	6·524	1·088	5·437
„ 1902 „ 1903	6484	44	6	43	49	7·557	0·925	6·632
„ 1903, to 31 Dec., 1903	5604	27	8	20	28	4·977	1·428	3·569
1 Jan., 1904 „ 1904	6192	73	9	65	74	11·951	1·454	10·497
„ 1905 „ 1905	6586	34	7	30	37	5·618	1·063	4·555
„ 1906 „ 1906	7004	65	4	61	65	9·280	0·571	8·709
„ 1907 „ 1907	7516	68	6	64	70	9·314	0·798	8·515
„ 1908 „ 1908	6464	60	6	58	64	9·900	0·928	8·972
„ 1909 „ 1909	6054	54	6	49	55	9·085	0·991	8·093
„ 1910 „ 1910	5770	63	8	57	65	11·265	1·386	9·878
„ 1911 „ 1911	5247	80	4	77	81	15·437	0·762	14·675
„ 1912 „ 1912	5566	60	53*	53	106	19·044	9·522	9·522
„ 1913 „ 1913	6106	64	6	60	66	10·809	0·982	9·826
„ 1914 „ 1914	4741	69	9	62	71	14·977	1·896	13·081
„ 1915 „ 1915	3908	71	6	67	73	18·679	1·535	17·144
„ 1916 „ 1916	3864	53	2	51	53	13·716	0·517	13·198
„ 1917 „ 1917	4050	50	2	48	50	12·345	0·493	11·852
„ 1918 „ 1918	4279	50	5	45	50	11·684	1·168	10·516
„ 1919 „ 1919	4413	58	1	57	58	13·143	0·226	12·917
„ 1920 „ 1920	5364	52	2	50	52	9·694	0·372	9·322
„ 1921 „ 1921	4011	40	3	37	40	9·972	0·748	9·224
„ 1922 „ 1922	3835	31	4	27	31	8·083	1·043	7·040
„ 1923 „ 1923	4785	64	2	63	65	13·584	0·417	13·166
„ 1924 „ 1924	5264	72	1	73	74	14·057	0·189	13·867
„ 1925 „ 1925	5110	62	2	61	63	12·328	0·391	11·937
„ 1926 „ 1926	5309	54	5	52	57	10·736	0·941	9·794
„ 1927 „ 1927	5044	70	5	65	70	13·877	0·991	12·886
„ 1928 „ 1928	5170	47	1	46	47	9·090	0·193	8·897
„ 1929 „ 1929	4986	59	17	55	72	14·440	3·409	11·031
„ 1930 „ 1930	4606	55	4	52	56	12·158	0·868	11·289
„ 1931 „ 1931	4391	38	8	35	43	9·792	1·821	7·970
„ 1932 „ 1932	4605	71	4	67	71	15·418	0·868	14·549
„ 1933 „ 1933	4510	77	7	71	78	17·295	1·552	15·742
„ 1934 „ 1934	4843	108	4	105	109	22·506	0·826	21·680
„ 1935 „ 1935	5409	142	1	141	142	26·252	0·184	26·067
„ 1936 „ 1936	5432	97	4	96	100	18·409	0·736	17·673
„ 1937 „ 1937	5876	107	5	103	108	18·379	0·850	17·529
„ 1938 „ 1938	5891	103	2	102	104	17·654	0·339	17·315
„ 1939 „ 1939	5928	87	2	87	89	15·013	0·337	14·676

* Mount Lyell disaster.

TABLE showing Rate per Thousand Killed and Injured in different Divisions for the Year 1939.

Division.	Average Number of Men Employed.	Number of Accidents.	Number of Persons		Total Number Killed & Injured.	Average per 1000 Killed and Injured.	Average per 1000.	
			Killed.	Injured.			Killed.	Injured.
Northern and Southern	1532	5	...	5	5	3·263	...	3·263
North-Eastern	476	8	...	9	9	18·907	...	18·907
Eastern	660	6	...	6	6	9·909	...	9·909
North-Western	655	19	...	19	19	29·076	...	29·076
Western	2605	49	2	48	50	19·193	0·767	18·426
Total	5928	87	2	87	89	15·013	0·337	14·676

ANALYSIS of Statistics of Accidents for Western Division.

Division.	Number of Miners Employed.	Number of Accidents.	Number of Persons		Total Number Killed & Injured.	Average per 1000 Killed and Injured.	Average per 1000.	
			Killed.	Injured.			Killed.	Injured.
Mount Lyell	1851	30	...	30	30	16·207	...	16·207
Zeehan, &c.	754	19	2	18	20	26·525	2·652	23·872
Total	2605	49	2	48	50	19·193	0·767	18·426

APPENDIX V.

REPORTS OF INSPECTORS OF MINES.

Inspector H. A. Vaudeau, Upper Burnie, reports:—

Employment.—The average number of men employed in mining, quarrying, and metallurgical operations was 1385, representing an addition of 26 to that of the previous year. Operations afforded employment to an average of 663 men in the North-Western area, and 722 in the Western area exclusive of Mount Lyell.

Accidents.—Twenty-three accidents were registered under the provisions of the Mines and Works Regulation Act, being an increase of 15 compared with the number registered for the previous year. There were two fatalities.

An exercise of merited care would have averted several accidents, but in a majority of the mishaps the injuries were due to misadventure.

In one instance, ground affected by blasting was being tested when it settled on a bulk and resulted in a collapse of timbering, a member of which struck a miner and inflicted fatal injuries.

The second fatality was the result of a quantity of ground falling from converging lines of weakness in the roof of an underground stope. This accident caused fatal injuries to one miner and serious injuries to a second employee.

Of the non-fatal accidents, one person sustained a fractured leg as the result of a rock, from blasting operations in an open cut, crashing through the roof of the building, in which he was sheltering, and striking him. In a second case, the manager of a mine was seriously injured when the winding ropes at a vertical shaft were being turned, due to an unexpected result from releasing holding-clamps which caused a loose section of rope to suddenly tighten and hurl the manager against a wall.

Although considerable periods of incapacity resulted, the remaining accidents were of a less serious nature.

Ventilation.—Reasonable regard was directed to obtaining the adequate ventilation of mines and, as occasion necessitated, measures were taken to remedy observed deficiencies. Extensive openings, from the surface to the underground workings of one mine, were found to cause ventilating disabilities, owing to short-circuiting of air currents, and the efforts of the management are being directed to the establishment of a necessary set of controlled conditions. At a second mine, the ventilation continued to be unsatisfactory and may occasion exemplary measures to obtain the prescribed standard. The provision of an air-shaft at a small colliery resulted in improved ventilation.

Explosives.—Care continued to be exercised in the storage, handling, and use of explosives at the mines and works, and general supervision was maintained of loading and unloading of explosives at the port of Burnie.

The general condition and behaviour of nitro-compounds, detonators, and fuse was satisfactory.

Health and Sanitation.—Improvements resulted in several matters affecting health and sanitation, and a more ready response to remedy deficiencies was encountered.

An employee at a quarry was prosecuted for failing to use an appliance for the prevention of dust inhalation, and was fined £2.

Inflammable Liquids.—New installations for the storage of inflammable liquids occupied a large portion of the time allotted to official duties, and the general administration of the provisions of the Inflammable Liquids Act demanded more attention than could be devoted thereto.

Proceedings were instituted against one person for smoking while obtaining petrol from a service pump and action was also taken against the attendant at the pump for servicing the motor vehicle under those conditions. Both defendants were convicted of the respective offences.

Workers' (Occupational Diseases) Relief Fund Act.—Every assistance has been afforded the Relief Fund Board in attending to various matters under the provisions of this Act. Four persons applied for compensation and were declared to be affected in varying degrees.

General.—In addition to duties ordinarily performed under the various Acts delegated to this office, examinations were made of mining properties and prospects for the purpose of the Aid to Mining Act.

Appreciation is expressed of the assistance rendered by officials and employees at the mines, quarries, and works in the performance of my duties.

OPERATIONS AND PRODUCTION.

Tin.

Mount Bischoff Tin Mine.—Crude ore treated, 24,566 tons. Concentrates produced, 164 tons, containing 112·6 tons of metallic tin. Slimes and tailings re-treated, 9630 tons, for 35 tons of concentrates, containing 23 tons of metallic tin. 620 cubic yards of alluvial ground were treated, for 0·9 ton of tin oxide, containing 0·55 ton of metallic tin. Total production, 200 tons of tin oxide, containing 136 tons of metallic tin, valued at £30,929 sterling.

Operations afforded employment to an average of 114 men.

A small battery was erected below the North-East lode and four new "Card" concentrating tables were built and commissioned.

Underground Workings, North Valley Lode.—No. 4 level was advanced 32 feet to a total distance of 483 feet. The average width of the lode for the last 32 feet of driving was 29 inches, the average value being 0·9 per cent tin. No. 5 level was cleaned out and re-lined. A rise was lifted to No. 4 level for ore transference and ventilation. No. 6 level was re-conditioned and extended to 367 feet on an average lode width of 46 inches, carrying payable values. The completion of No. 3 5-head battery has resulted in an additional tonnage of ore from these workings being milled, with a corresponding increase in the output of concentrate.

North-East Lode.—No. 5 level was driven 170 feet on a lode averaging 8 inches in width and carrying payable values. Preparations are in progress for driving a lower level on this lode.

Happy Valley Lode.—Operations were resumed and a shallow level was driven 30 feet on the northern extension of the lode. The lode averaged 62 inches in width and assayed 2 per cent tin. Winzing and driving have been carried out with encouraging developments.

Slaughter Face Lode.—The workings on this lode were re-opened and a fair tonnage of good grade milling ore was won from the stopes above No. 1 level.

Queen Lode.—A rise was put up from No. 7 to No. 6 levels, a distance of 52 feet, and a winch was installed to haul the ore to the latter level. Operations were suspended at the end of October, owing to difficulty of transporting ore to the main bin through the main tunnel, but will be resumed in the near future, when the ore will be despatched to the new No. 2 battery.

The Wheal Lode, the Kayser Lode, and the Queen Lode Dyke have contributed a small tonnage of good grade milling ore.

Prospecting.—Two new makes of ore were exposed by surface trenching during the first quarter of the year. No. 1 prospect was midway between the main workings and treatment plant and No. 2 was 420 feet north of the southern boundary of the lease. No. 1 was tested by opencutting 20 feet and driving 54 feet. The lode averaged 8 inches in width and assayed 1 per cent tin, but it was too small to be profitably worked and operations were discontinued. The No. 2 prospect carried exceptionally good tin on the surface but the values declined when sulphides were encountered a few feet below the surface. In addition, an old prospect drive was cleaned out and found to contain fair values. A lower level has since been driven 34 feet south-east and 15 feet north-west. The lode is 56 inches in width in the southern end, averaging 0·6 per cent tin, but is small and of irregular value in the northern end. This is now seen to be the southern continuation of the North-East lode and will be tested further when the battery in the localiy is moved down the hillside.

Surface Faces.

Gossan Face.—The lower benches of this face were brought into production again with the improved price of tin, and this has resulted in a much greater tonnage of ore being sent to the main mill.

White Face.—A small tonnage has been won here, but the grade of ore milled has shown an improvement.

North Alluvial and Slaughter Faces.—There was a decline in the production of ore from these faces.

Brown Face.—Preparations were completed towards the end of the year to resume production at this face. The ore is to be despatched to the No. 2 battery, which will appreciably reduce transport charges, and this face will be in early production.

North Alluvial Workings.—Tributers continued for a few weeks but results were unpayable and operations were suspended. A new party has taken over the workings and commenced operations.

There are, in my opinion, many places in the old mine that are worthy of being developed and tested. In fact, there are places that have not been proved and which, geologically, offer much encouragement for exploration.

Leases of H. Stanley and C. Dunstan.—These tenements embrace portions of the old Mount Bischoff Extended Tin Mine. Stoping was continued on fair grade ore between Nos. 2 and 3 levels of Dunstan's section, and in Stanley's workings underhand stoping was pursued below No. 3 level on fair-grade ore. In addition, a quantity of low-grade material was treated from the dumps at Nos. 2 and 3 levels.

Exploratory work was pursued in the southern workings between Nos. 5 and 6 levels, but this was suspended owing to difficulty in making satisfactory arrangements for treatment of pyritic ore. Ore from these operations was milled, for a recovery of 2·8 tons of concentrate, containing 1·8 ton of metallic tin, valued at £414.

G.P.S. Syndicate.—The crosscut on the 21-acre lease was extended to 420 feet, with a view to cutting what is locally known as the No. 6 Wheal Lode. The work was then stopped, as the two prospectors expected to cut the lode before funds were exhausted. It is the intention of the syndicate to continue the crosscut at an appropriate time.

A limited quantity of concentrates was treated with the small battery and calciner, and recoveries are included in the succeeding returns.

In a 10-acre section, work was continued on the old mill tailings and alluvial ground. Owing to flood waters deranging lengths of the fluming, production was hampered and much time was lost in effecting replacements. An average of two men was in employment and obtained 1·15 ton of tin oxide, containing 0·79 ton of metallic tin, valued at £180.

Big Dipper Syndicate, Wombat Flat, Waratah.—A quantity of 4174 cubic yards of alluvial ground was sluiced for a recovery of 1·74 ton of tin oxide, containing 1·0 ton of metallic tin, valued at £228·63. Two men were employed.

R. W. Pryde, S.P.A. Creek, Waratah, won 0·36 ton of tin oxide, valued at £52, from alluvial ground.

Judge and Party, Waratah, produced 0·376 ton of tin oxide, valued at £53·4.

Betts and Son, operating on alluvial ground at Mount Ramsey and Wombat, recovered 0·6 ton of concentrate, containing 0·37 ton of tin oxide, valued at £86.

J. Betts, Parson Hood Track, Waratah, produced 0·2 ton of tin oxide, valued at £21·4.

Leach and Party, Tinstone Creek, Waratah, were engaged on alluvial ground and recovered 1·25 ton of concentrate, containing 0·6 ton of metallic tin, valued at £140.

J. Geason, an experienced prospector, acquired portion of the old Federation Tin Mine at South Heemskirk and, by loaming, followed a lead of fine tin to a promising formation in which a prospecting shaft was sunk to 26 feet. Material from the formation was "boxed" and it is reported that there was a recovery of 2·4 tons of concentrate, containing 1·1 ton of tin, valued at £252. The formation material was more suitable for crushing than for the applied process as tin oxide was readily visible in the "forkings."

Reid and Humphries were engaged sluicing alluvial ground at the old Montague Mine and recovered 0·34 ton of tin oxide, valued at £45.

In the North Heemskirk area sluicing was pursued by the North Heemskirk Tin Syndicate for a recovery of 3·6 tons of tin concentrate, containing 2·44 tons of metallic tin, valued at £560.

J. Dixon was actively engaged in working alluvial ground and recovered 2 tons of oxide, containing 1·2 tons of tin, valued at £268.

From similar operations R. Smith produced 1·0 ton of tin concentrate, valued at £166.

H. G. Watson was intermittently engaged in working alluvial ground and recovered 0·27 ton of tin oxide, valued at £43.

Prospecting was pursued by miscellaneous parties in the locality but no production resulted.

At Pine Hill, Renison Bell, J. Pepper was intermittently engaged in tin mining and obtained 0·19 ton of tin oxide, valued at £19.

Hydraulic mining was pursued on a 5-acre lease held by G. Cox, but there was no financial settlement of the concentrate produced.

A. Webster, Renison Bell, cleaned up for 0·4 ton of tin oxide, valued at £48·9.

Riley and Party.—This party was concerned with the treatment of tailings and detrital material, and recovered 1·9 tons of concentrate, containing 1·2 ton of tin, valued at £279·6.

A. Able was actively engaged prospecting at Pine Hill and located two lodes which returned low tin values, but which are of sufficient moment to warrant systematic exploration. A quantity of 0·3 ton of tin oxide, valued at £28, was recovered.

Renison Associated Tin Mine.—The policy of this Company was directed to an extension of the milling plant and included the provision of a flotation unit for the selective treatment of the complex sulphide ores carrying tin oxide. Innovations were completed and the plant was commissioned in the latter part of the year. Production from the ore bodies was then resumed. The plant comprises one jaw crusher, stamper batteries totalling 20 heads, each of 1200 lbs., 5 grinding pans, 12 flotation cells, and 13 concentrating tables. The plant has a rated capacity of 600 tons per week. During the latter part of the year, one-half of the stamper capacity was commissioned and crushed 1800 tons of ore, 1500 tons of which were finally treated for a recovery of 4·94 tons of concentrates, containing 3·34 tons of metallic tin, valued at £789·6.

An important innovation was an extension of the power-transmission line, under the control of the Hydro-Electric Commission, from a neighbouring mine, to better meet the power requirements than the facilities previously existing. An air-compressor unit with a rated capacity of 250 cubic feet per minute was installed for a supply of compressed air for drilling and other operations at the opencut workings. The management is sanguine in regard to the future prospects. These operations gave employment to an average of 24 men.

Tasmanian Amalgamated Tin Mine, Renison Bell.—Disabilities in obtaining an adequate supply of water for milling and other purposes hampered productive operations, but experimentation was actively pursued with the object of improving milling practices and increasing the recovery of concentrate. The policy was also directed to an alteration of the milling circuit, an installation of additional grinding units, and the provision of a large area of strake concentration. The methods of opencutting were innovated. Latterly, milling was resumed and it is reported that recoveries have materially improved as a result of the alterations and additions to the mill.

X-River and Gorge.—Miscellaneous parties operated in these localities, recovering 1·07 tons of tin oxide, containing 0·72 tons of metallic tin, valued at £162·4.

King Island Tin Mine.—This property was acquired by the Amalgamated Gold Estates and operations were resumed under new management but it is reported that, before negotiations were completed, 20 tons of ore was treated for a recovery of 0·11 ton of concentrate, containing 0·07 ton of metallic tin, valued at £16·83. Latterly, 8 men were employed in developmental operations and measures were being taken to obtain the necessary concentrating units for the treatment of ore.

At the old Mount Lindsay mine in the Stanley River area, M. Clarke was engaged in alluvial mining and recovered 0·32 ton of concentrate, containing 0·16 ton of metallic tin, valued at £38.

Razor Back Tin Mine, Dundas.—Three men were engaged in miscellaneous operations in the old workings and produced 2·0 tons of concentrate, containing 1·22 tons of tin, valued at £287.

Williams and Hess, North-East Dundas.—A trial parcel of 5 tons of ore was produced from a lode adjoining the Government tramway and forwarded to the Mount Bischoff Company at Waratah for treatment. The parcel returned ·075 ton of concentrate, containing 0·048 ton of metallic tin, valued at £11. A small stamper battery was then installed, but the project was not completed.

At Upper Natone, J. Emmerton was occasionally engaged in alluvial mining and produced 0·04 tons of tin oxide, valued at £6.

Donaghue and party continued with the driving of an old tunnel at Sweeney's Tin Mine, South Heemskirk, but abandoned the project, owing to the extreme hardness of the country. It is considered that the area has encouraging prospects, and a new party has taken over the mine with the object of extending the tunnel to attain the prospective zone of mineralisation.

Miscellaneous prospectors have been engaged in different parts of the stanniferous areas, but no discoveries of moment have been reported to this office.

Zinc-Lead Ores.

Electrolytic Zinc Company of Australasia Limited, Rosebery, Williamsford and Zeehan—

Hercules Mine.—58,653 tons of ore were extracted from stopes, developmental places, and ore dumps. Operations gave employment to an average of 89 men.

Developmental work comprised 956 feet of driving, 315 feet of crosscutting, and 664 feet of rising. Exploratory drilling was continued and in several instances penetrated occurrences of ore.

Rosebery Mine.—Productive operations were pursued between Nos. 2 and 9 levels. 99,639 tons of ore were mined and milled. Developmental work comprised 956 feet of driving, 96 feet of crosscutting, 44 feet of rising, and 78 feet of sinking. No. 9 level was opened up and the necessary haulage, pumping, and mining equipment was installed.

Appreciable innovations were made in regard to the drainage of underground workings.

An important feature of activities was the continuation of a thorough geological survey of the occurrences of ore and the inception of a drilling campaign based on the structural conclusions.

The milling plant was in continuous operation and, from combined ores, recovered 53,733 tons of zinc and 13,127 tons of lead concentrate, containing 11,713 oz. of gold, 937,737 oz. of silver, 8515 tons of lead, 25,020 tons of zinc, and 48 tons of cadmium.

At Rosebery 239 men were employed on the surface and 152 men underground.

Calcining Works, Zeehan.—Twenty-five men were employed at these works in connection with the calcining of Zinc concentrates from Rosebery prior to despatch to Risdon for final treatment.

Silver-Lead Ores.

Farrell Mining Company Limited, Tullah.—Ore mined and milled approximated 13,738 tons. Finished lead concentrate was 2996 tons, containing 2169 tons of lead and 216,426 oz. of silver. In addition, 286 tons of "firsts" were recovered and contained 196 tons of lead and 33,295 oz. of silver. The total marketable product produced was 3282 tons, containing 2365 tons of lead and 249,721 oz. of silver, valued at £61,567.

No. 6 level was opened up and a main crosscut was driven 74 feet westerly and north and south driving was carried out without intersecting payable ore. Crosscuts were driven into the footwall and hangingwall country without any developments of moment. Driving was then continued northerly and penetrated a lode channel approximating 2 feet wide but comprising mainly zinc sulphide. The southern drive was extended 130 feet on a quartz lode varying from 2 to 3 feet in width and containing payable milling ore across a width of 18 inches but with occasional enlargements of the payable zone. A rise was lifted from Nos. 6 to 5 levels in faulted country.

At No. 5 level the northern drive was advanced 110 feet on payable ore for a distance of 90 feet. A crosscut was driven 85 feet easterly into the footwall country, but did not penetrate payable ore. In the southern end, a crosscut was driven 60 feet westerly and, from this, driving was carried out for 70 feet to pick up an assumed depth persistence of the ore worked at No. 4 level, but values were not located and rising revealed that the ore zone had varied at a depth of 12 feet below the upper level.

At No. 2 level, the northern drive was extended 210 feet. Forty feet from the point of commencement, the drive was deviated into the footwall country and intersected good ore which persisted for the full distance of driving, and averaged approximately 5 feet in width, with about 40 per cent clean "firsts."

This development has been an important factor in the economics of mining, and attention was directed to an extension of No. 1 level for the purpose of locating the shoots of ore at a higher horizon.

The crushing section of the mill was operated satisfactorily on the basis of one shift daily. The flotation section was in commission for an average of six days of 8 hours per week. Re-flotation cells were added and commissioned, with a resultant increase in the assay value of the lead concentrate from 70 per cent to 75 per cent lead and 73 to 81 oz. of silver per ton. An active developmental policy has been designed for the coming year, and includes the sinking of the main shaft for a further level of workings, and extension of drives and crosscuts on the various levels to further determine prospects and productive possibilities.

Prospecting Claims at Tullah.—Davies and Finn were engaged in prospecting operations but encountered nothing of prospective moment. Driving on the claim occupied by the former was not advanced sufficiently to intersect the projected line of the lode series.

Montana Silver Lead Mine, Zeehan.—The early policy of this Company was directed to the installation of a steam-operated winding plant and to the erection of headgear at the vertical shaft. When this was completed, the main shaft was sunk a further distance of 130 feet. At a vertical depth of 150 feet, a level was opened out and developmental operations were proceeded with. Attention was directed to arranging for a complete electrification of the plant and to preparatory work in connection with the installation of concentrating units in conformity with the designed policy for future productive activities.

Swansea Mine (J. J. Hill), Zeehan.—Operations were actively pursued by two men at this mine and a quantity of marketable ore was produced but was not sold.

The Government Comstock Mine, Comstock.—Three men were engaged in prospecting the ore series at this mine. An encouraging make of ore was revealed by rising from the main tunnel but the development was of no economic magnitude. Rising also intersected occurrences of mixed sulphides of iron, zinc, and lead of sufficient characteristics to encourage continued operations, but these occurrences of ore were found to be so disturbed that sufficient concentration was not located to warrant consideration being directed to an expenditure of money in systematic development and on the installation of concentrating units necessary for the output of marketable products.

Miscellaneous.—Operators were engaged at the old Montana, Spray Mine, and other mine workings in the Zeehan area, but there are no developments of moment to be recorded in connection with these operations.

Magnet Silver Lead Mine, Magnet.—Attention was directed to prospecting the possibilities of the lode series below the old productive workings and to developing and stoping occurrences of ore on old levels.

Milling was resumed and 1460 tons of ore were treated for a recovery of 210 tons of lead concentrate, assaying 64·9 per cent lead, 7·9 zinc, and 95 oz. silver per ton, valued at £4501. Selective flotation resulted in the production of more than 100 tons of zinc concentrate, but available markets cannot be located for this product. Latterly, operations afforded employment to 63 men.

Devon Silver Lead Mine, Middlesex.—A section embracing the old workings has been acquired, and an investigating engineer recommended the installation of a pumping plant to enable a comprehensive examination to be made of the lode series in the old workings, but the contemplated project had not been materially advanced at the close of the year.

Coal.

Illamatha Colliery, Spreyton.—Productive mining was continued at this old established colliery and resulted in an output of 1159 tons, valued at £1259. Operations afforded employment to four men.

Aberdeen Colliery, Spreyton.—Reserves of coal in the No. 1 pit were exhausted and No. 2 pit was opened up. Production amounted to 1070 tons, valued at £791, five men being engaged in operations.

Dulverton Colliery, New Bed.—Work was resumed at this colliery during the second quarter of the year and 164 tons of coal were produced, the value being £136.

The Black Beauty Colliery, New Bed.—Two parties were engaged in productive mining at this colliery and from the seam, averaging approximately 16 inches in width, 1192 tons of coal, valued at £956, were produced.

The Novelty Colliery, Aberdeen.—Production amounted to 85 tons, valued at £60. Five men were engaged. Seam conditions were troubled and hampered productive activities. Boring operations were intermittently pursued with the object of locating a more settled field of coal.

H. Bott's Pit, Nook.—Limited mining was pursued but the seam was thin and the roof troublesome. Operations were suspended after 80 tons of coal, valued at £56, had been marketed.

J. Bott's Pit, Nook.—During the second half of the year the three men from the colliery owned by H. Bott were engaged at this mine, and produced 135 tons of coal, valued at £94. Seam characteristics suggested a settled area of coal.

Miscellaneous parties were engaged in boring and generally prospecting the coal measures within the known series, but there is no development of moment to be recorded in connection therewith.

Cement, Limestone, and Lime.

The Goliath Portland Cement Company Limited, Railton.—Production of cement was continuous, and the capacity of the large unit was sufficient to meet output requirements, without having to commission the small unit which is available for production when the required output exceeds the capacity of the larger plant.

Tractor and scraper equipment was installed at the quarry to facilitate the removal of over-burden.

A policy directed to improving the operating conditions was constantly observed in the interests of the Company and the employees.

Coal required for processing requirements, amounting to 25,000 tons, was obtained from Tasmanian collieries. Operations gave employment to an average of 168 men.

Broken Hill Pty. Company Limited—Limestone Quarry, Eugenana.—Opening up of No. 2 quarry enabled increased productive activities at Melrose, and the quantity of limestone produced was 296,432 tons, being a new high-level in limestone production from these quarries. The limestone was exported to Newcastle, New South Wales, for fluxing purposes at the steel works.

Leary's Lime Works, Eugenana.—283 tons of lime, valued at £739, were produced for agricultural and other purposes.

Blenkhorn's Lime Works, Railton.—Lime from these works amounted to 1046 tons, valued at £2127, operations giving employment to seven men.

Silica.

The Barock Mining Company, Silica Quarry, Ulverstone.—165 tons of silica, valued at £165, were produced from the quarry flanking the Leven River, and were despatched to the mainland. Three men were employed as trade offered.

Wolfram.

Law-kem-law Wolfram Mine, Moina.—Operations by miscellaneous parties resulted in the production of 3·6 tons of concentrates, containing 2·7 tons of tungsten, valued at £734·5.

Section 11,737-M *(A. H. Higgs), Moina.*—Productive operations were commenced at the latter end of the year and resulted in an output of 0·1 ton of wolfram concentrate, valued at £19.

Wolfram and Tin.

Red Robin Mine, Moina.—The water conservation dam was damaged by flood waters and, whilst the dam was being reconditioned, the pipe-line was altered. Sluicing was resumed and seven bags of concentrate were shipped for treatment, ultimately returning 0·17 ton of tin oxide and ·2 ton of wolfram concentrate, valued at £64·8.

Wolfram, Tin, and Bismuth.

Shepherd and Murphy Mine (J.P. Godwin), Moina.—Operations were confined partly to surface alluvials and to underground stoping on No. 2 lode at No. 4 level. 3·77 tons of mixed concentrate were obtained, containing 1·6 ton of tin, 0·7 ton of tungsten, and 0.27 ton of bismuth, valued at £710. 0·76 ton of bismuth concentrate was also produced, containing 0·35 ton of bismuth, valued at £167.

Attention was directed to this mine by mainland interests with the object of increasing productive activities.

Scheelite.

King Island Scheelite N.L., Grassy, King Island.—28,790 tons of ore were mined and 28,870 tons were milled for a recovery of 170·69 tons of concentrate, containing 123·1 tons of tungsten, valued at £33,301.

A considerable amount of overburden was removed in addition to the ore produced. The installation of two Huntingdon mills was completed and these were commissioned, but it was found necessary to install a Callow tank, and this innovation resulted in improved recoveries. The installation of a re-treatment plant was commenced, and it is hoped that this will be commissioned at an early date to further improve the total recovery of scheelite. In the latter part of the year an extension of the northern crosscut on the 90-ft. contour was commenced and extended to the 200-ft. location. The prospects of ore developments in this direction are encouraging.

Manganese.

A. G. Black, Dial Range, Penguin.—Further developmental work, principally trenching, has been carried out by Mr. A. G. Black. Some good ore was exposed, but most of the material is mixed with oxide of iron and concentration would be necessary to recover a marketable manganese product. Work was temporarily suspended. It is considered that there are good prospects of a payable deposit of manganese ore being discovered on this property.

Copper.

Welcome Home Mine, Middlesex.—Attention was directed to the possibilities of developing cupriferous ores at this mine but no material results accrued.

Balfour.—There is no record of developments in copper mining at Balfour despite the demand for copper as a strategic mineral.

Miscellaneous.—A selected parcel of 5 tons of ore was produced by W. N. Dook, Rosebery, and sold to the Mount Lyell Company for a return of 4·98 oz. of gold, 21·15 oz. silver, and 0·225 ton copper, valued at £43 net.

Copper-Nickel.

Australian Nickel Company, Zeehan.—Mainland interests acquired an option of purchase over the property and obtained a detailed geological examination, following which a designed campaign of diamond-drilling was commenced. Four holes were drilled without revealing any prospect of economic merit.

Iron.

Investigational work was carried out in the Comstock area and in other localities, but there is no development of moment to be recorded.

Osmiridium.

An inclined price incited more activity on the old fields. The recorded output was 17·24 oz. valued at £339.

Gold.

Narrawa Creek Gold Mine, Moina.—The plant was renovated and milling was resumed. 4·12 oz. gold were directly extracted, and 2·1 tons of concentrate, containing 68·9 per cent lead, 20·85 oz. silver, and 3·06 oz. gold, were saved by concentration. Attention was then directed to the production of wolfram, but no output was recorded.

Miscellaneous operators accounted for 14·3 oz. gold, valued at £108.

Wynyard Gold Syndicate, Calder.—Prospecting operations were pursued by this syndicate but did not merge into importance.

West Coast Gold Mines, Corinna.—The manager reports that the Gold Mines of Australia Limited acquired an option over the leases and spent in the vicinity of £3000 in power drilling, but the only relevant testing of the alluvial ground was that of drilling three major holes, each averaging 100 feet in depth. Drilling was then abandoned, and the manager reconditioned the races and opened up a promising gold-face in readiness for sluicing during the next winter.

West of Lyons River.—A Smithton group arranged for intermittent prospecting in this area, and although encouraging prospects were reported, the objective shed of alluvial gold was not located.

Miscellaneous.—J. Westerway extracted 2·4 tons of old smelt-refuse from the Oonah dump at Zeehan. This contained 3·1 oz. gold, 251·6 oz. silver, and 2·2 tons of lead, valued at £77.7.

Inspector J. F. Shaw, Launceston, reports:—

Men Employed.—The average number of men employed in the mining industry was 1174, compared with 1202 for the previous year. Many were engaged in fossicking for tin and in general prospecting, but their employment was irregular and dependent to an extent on storm water for working.

Accidents.—The number of accidents registered was 14 and these involved injury to 15 men. Nine occurred on the surface and five happened in underground workings Two persons were injured by falls of roof stone in coal mines. In one case the stone fell from a visible "slip" and it was apparent that the roof should have been timbered. In the second case the roof broke away from an invisible "slip." The injured person admitted that the roof was "drummy" and stated that he was proceeding to get timber, to secure it, when the fall occurred. In the other case of an accident in a colliery, two miners had fired a shot in the bottom of a face and, after waiting for the smoke to clear, had returned to the place and resumed shovelling, without inspecting the face, when a lump of face-clod fell and struck one of the miners. While working a high pressure nozzle in an alluvial-tin mine an employee slipped, and, in falling, held on to the nozzle which was caused to pin him to the ground. Observing this predicament, a second employee rushed to his assistance and hurriedly lifted the nozzle which, under the pressure of water, swung round and caused him to be thrown to the ground and sustain bodily injury.

In another alluvial-tin mine a man was nozzling a 7-ft. face, which was undercut, when a second person went to the top of the face to bar it down. In doing so the bar penetrated through the crust of the ground and, as he stepped away, the undercut face collapsed and caused him to fall with it. He sustained a fractured rib and distended muscles of the leg and arm. The remaining accidents were of a less serious nature. Seven were considered to have been due to misadventure and two were were attributed to carelessness on the part of the persons injured.

Inflammable Liquids.—There was continued activity in connection with the installation of petrol pumps and provision of storage depots. This activity involved the devotion of more than the usual amount of time to the administration of the provisions of the Inflammable Liquids Act.

Explosives.—The landing of imported explosives in Launceston and the conveyance thereof to the magazines was supervised by the Marine Board. A complaint regarding faulty detonators was received and, on investigation, it appeared that the trouble was caused either by failure to completely clean out the sawdust filling or by the internal introduction of moisture. Measures were taken to avert these defective practices and no further trouble was experienced. A case of several plugs of A.N. gelignite softening and becoming moist was reported and this deterioration appeared to have been due to faulty wrapping of the plugs. The considered discrepancy was referred to the manufacturers and was duly investigated by their representative. In connection with the conveyance of explosives by motor-lorry, difficulties have been experienced in having the lorries equipped to comply with the requirements of the Explosives Act, but this matter is gradually being overcome. Modes of storage were generally satisfactory.

Aid to Mining.—Inspections were made and reports were furnished in connection with several applications for assistance under the provisions of the Aid to Mining Act.

Workers' (Occupational Diseases) Relief Fund Act.—Medical examinations were arranged and certificates were forwarded to the Board in the case of employees coming under the provisions of the Act.

Mining Operations and Production.

Coal.

The year was comparatively free from industrial trouble and the output of coal was 87,442 tons, valued at £65,161, compared with 63,632 tons for the previous year.

At the Cornwall Mine the output was 61,031 tons, valued at £45,975, representing an increase of 17,650 tons compared with the previous year. Operations afforded employment to an average of 120 men. In addition to normal mining and developmental operations in the established workings, preliminary attention was directed to a resumption of operations on a lower seam at the Mount Nicholas Colliery. Erection of bins near the tunnel and the construction of a branch line to connect with the main haulage were commenced.

Productive activities were more regular at the Jubilee Colliery and the output of coal was 16,692 tons, valued at £11,462. The production was 3140 tons more than for the previous year, and operations gave employment to 42 men. Major developmental work comprised a widening of the main heading, installation of a double haulage system, erection of new surface bins, and the extension of a double line haulage to those bins. In the mine, the main heading was continued as part of the project to open up a new area of workings. Portion of the total output of coal was from the Cardiff seam.

Two men were employed at the Fingal Coal Mine and accounted for an output of 731 tons of coal, valued at £365, compared with 834 tons for 1938. A party of miners re-opened the Dalmayne Colliery. More than 1 mile of road was reconditioned, but did not remove difficulties experienced in the transport of coal from the mine to the railway. Operations afforded employment to five men, and the output of coal was 500 tons, valued at £216.

At the Stanhope Coal Mine, operations were concerned with production from the old workings and developing the seam from a new tunnel. An average of 17 men was employed, and the output was 7,966 tons, valued at £6505, representing an increase of 2739 tons compared with the previous year. Operations at the York Plains Coal Mine afforded employment to two miners, and 492 tons, valued at £629, were produced from the longwall face. Production was less active than formerly.

Gold.

The average price of fine gold was £7·757 sterling, compared with £7·125 for the previous year. The total production was estimated at 485·9 oz., valued at £3794·4 sterling. This is a reduction of 1215·4 oz. and £8318·3 compared with 1938, due mainly to a suspension of operations by the Grosvenor Gold Mining Company at Beaconsfield, where treatment of a dump of complex battery slimes was completed In 1938, the Company produced concentrates estimated to contain 1032 oz. gold and 17·2 tons of copper.

No new discoveries of importance came under notice.

At Beaconsfield the only recorded production was 4·21 oz. of gold from the crushing of 20 tons of stone, at the Golden Horseshoe Mine. Gold mining in the district has been practically at a standstill.

At Lefroy, H. A. Tripptree crushed material selected from the mullock dumps of the Golden Point and Volunteer mines, and produced bullion containing 54·7 oz. of gold. Two men were employed.

F. Randall operated a 5-head battery and crushed similar stone from dumps at the Pinafore mine for bullion containing 55·5 oz. of gold.

The Lefroy Dump Syndicate erected a cyanide plant, and in the latter half of the year treated 1500 tons of old tailings for a recovery of 40·6 oz. of gold. Continuous rains in the winter months hampered operations by making the ground too soft for carting. Employment was given to eight men while work was in progress.

Miscellaneous producers in the Lefroy district accounted for 8·2 oz. of fine gold. Several prospectors, working intermittently, failed to find anything of value.

In the Lisle-Nabowla district tributers continued sluicing at the Cradle Creek Gold Mine, Cradle Creek, and returned 47·3 oz. of fine gold, two to three men being employed.

Miscellaneous parties, operating on auriferous alluvials in the Lisle Basin, accounted for 76·5 oz. of fine gold. These operations afforded employment to seven men.

At Mathinna, Brock Bros. continued prospecting work at the Enterprise Mine. A shaft was completed to 117 feet from the surface. At this level, crosscuts were driven east 80 feet and west 40 ft. A northern drive was connected at 27 feet, by a short rise, to other workings. A southern drive was started from a western crosscut, and it was intended to continue it to 50 feet. Four men were employed. Nothing of value was disclosed as a result of this work. Apart from these operations only work of a spasmodic nature was done in the district. Two small crushings of surface stone from the Old Boys' Mine returned 8·3 oz. of fine gold.

Hydraulic Mining at an East Coast Mine. *L. T. Hudson Photo.*

Miscellaneous fossickers, working intermittently, sold 18·3 oz. fine gold, which was obtained from alluvial deposits and creek beds below old battery sites. No work was done at the Golden Gate Mine during the year, but consideration is being given to the treatment of accumulated sand and slime dumps, of which there is a fairly large tonnage.

In the Fingal-Mangana district, Messrs. Chapman and Rodman crushed stone from the Argyle Gold Mine, Mangana, for a return of 30·46 oz. fine gold. Included in this is a crushing of 32 tons which averaged 6·74 dwt. fine gold per ton. A later crushing of 82 tons, in the selection of which less care was exercised, averaged 1·8 dwt. per ton. The stone was obtained partly from surface dumps of quartz and partly from stoping over an adit driven on the reef. The ore occurrences are lenticular in shape and in all places, when stoped, the ore narrowed to a few inches in width. Further driving is desirable to develop more ore. A total of 14·2 oz. fine gold was produced by miscellaneous parties, mainly from alluvial workings.

In the belt of country between Fingal and Mathinna and at Tower Hill, several men have been prospecting and examining old workings. In places which came under notice the work done was not far enough advanced to enable a definite opinion of the prospects to be formed.

In the Gladstone-South Mount Cameron-Herrick district, the Endurance Tin Mining Company recovered from tin concentrates a total of 39·6 oz. fine gold. H. A. Krushka won 5·1 oz. fine gold from tin concentrates at his alluvial mine near Herrick. Other miscellaneous lots of gold, probably obtained from tin concentrates, totalled 26·2 oz. fine gold.

From the Derby-Winnaleah district a total of 11·5 oz. of fine gold was recorded, and it is probable that most of this gold was extracted from tin concentrates. At Alberton there was very little activity in gold mining. At the Mount Victoria Mine, J. C. Matthews recovered 6·3 oz. from the mechanical treatment of tailings. Some prospecting work was also done underground without locating anything of value.

McCann's Associated Gold Mines crushed 15 tons of ore, from the Long Struggle Mine, for 11·46 oz. fine gold. Attention was then directed to Ringarooma United mine, where an eastern crosscut was started from an underlay shaft at a level 100 feet below the adit. The intention was to test the eastern reefs below the adit-level stopes but work in the crosscut was suspended and it was proposed to test the country by diamond drilling.

At New River, the New River Prospecting Syndicate, by hydraulicking the upper reaches of a shallow lead, accounted for 14·6 oz. An output of 17·9 oz. was recorded from operations by miscellaneous parties in the New River, Alberton, and Ringarooma areas.

Tin.

The average price of tin was £226·275 sterling per ton, compared with £189·6 for the previous year. The recorded production was 1041·8 tons of metallic tin, valued at £235,589, compared with 1069·2 tons (a decrease of 27·4 tons) and £204,355 (an increase of £31,234) for the previous year. There was a reduction of 30·6 tons of metallic tin from the Briseis Mine, and this accounts for the lower total for the year.

Piper's Beach.—From tabling of beach sand V. J. Miller recovered concentrates estimated to contain 1·26 tons of tin and 1·9 oz. fine gold. Rough weather during the winter hampered operations. Two men were employed.

Storey's Creek Tin Mining Company.—Owing to abnormally dry conditions in January and February, causing a shortage of water, operations had to be suspended for five weeks. Development work in the mine has included driving north on Nos. 2, 3, and 4 levels and south on lode 1A at the intermediate level, the total distance driven being 713 feet. Average widths and values were disclosed by the work. Development work, giving important information, was the sinking, on the lode, of the pump shaft below the existing bottom level (No. 4). At the end of the year the shaft was deepened to 127 feet below No. 4 level on a flat underlay, and the lode in the shaft averaged 7 feet in width, with values of wolfram and tin above the average.

During the year, ore was drawn from development and stoping operations over a length of lode of about 1300 feet. All plant, except the steam-winch, is now electrically driven with power from the Hydro-Electric Commission.

A total of 12,271 tons, won from stoping and development work, was milled for a recovery of 197 tons of high-grade wolfram, valued at £38,908 sterling, and 52·1 tons of tin oxide, estimated to contain 34·7 tons of tin and valued at £7922 sterling. The average number of employees was 109.

Mount Rex Tin N.L., Storey's Creek.—The driving of No. 2 adit, with the object of locating the downward continuation of a series of tin-wolfram lodes, was continued until the latter part of the year when, owing to disappointing results, work was suspended. The leases have since been abandoned.

Aberfoyle Tin N.L., Rossarden.—During the year the major development work was the completion of No. 2 main shaft to 408 feet from the surface and the connecting of it to No. 2 adit. Plats were cut also at Nos. 1 and 2 levels. This shaft is equipped with steel head frame and an electric hoist. It is located 435 feet south of No. 1 main shaft and from it, at No. 4 level, exploration of the ore veins is being carried out by driving, mainly to the north towards No. 1 shaft.

The vein system is also being tested by diamond drilling, a series of lateral holes being drilled at intervals along the drive. Existing timber head-gear and the steam hoist on No. 1 shaft are being replaced by a steel head-frame and electric hoist. In the ore treatment department, rod-milling and flotation have been adopted in substitution for roasting and re-dressing of "seconds." The tonnage of ore mined and milled was 15,267, from which was recovered 339·65 tons of tin and 31·05 tons of wolfram concentrates.

Finished products sold were 278·48 tons of tin oxide, containing 192·73 tons of tin, valued at £43,357, and 25·09 tons of wolfram, valued at £4600 sterling. The average number of men employed was 117.

Brookstead Tin Mine, Royal George.—(P.D. Beard Pty. Ltd.)—After producing ·47 ton of tin oxide, containing ·29 ton of tin, at Main Creek, attention was directed to an area of alluvial ground adjacent to the St. Paul River, Royal George. A plant was installed, using power from the Hydro-Electric Commission line nearby, but after a short run, during which 1200 cubic yards were treated for a return of ·525 ton of oxide, containing ·378 ton of tin, the workings and plant were submerged by a flood and the project was abandoned.

Foster's Freehold, Royal George.—Protracted dry weather and bush fires hindered operations in the early part of the year. Later, sluicing was pursued by T. Fitzallen for an output of 2·14 tons of oxide, containing 1·58 ton of tin.

McDonald and Floyd, Rossarden.—A flat make of high-grade ore was stoped from a lode-formation at the 50 ft. level. The ore was hand picked and dressed for a return of 7·83 tons of oxide, containing 5·61 tons of tin. A light 2-head stamper battery was installed and it is intended to test the lower grade formation by crushing and concentration. Two men were employed.

Miscellaneous parties were engaged in shallow sluicing at Story's Creek, Rossarden, Gipp Creek, and Royal George, and accounted for an output of 6·2 tons of tin oxide estimated to contain 4·392 tons of metallic tin.

Siamese Tin Syndicate, St. Helens.—Owing to operating results being unsatisfactory, the syndicate decided to abandon mining operations in Tasmania, and productive work ceased in September. Tenders were called for the sale of all assets and, after some delay, the Goshen Syndicate took over the main assets and resumed work on selected areas. Up to the date of ceasing work by the Siamese Tin Syndicate, a total of 242,900 cubic yards was sluiced for a recovery of 40·67 tons of tin oxide, estimated to contain 29·28 tons of tin. In the early part of the year 56 men were employed, but the number was gradually reduced as work was curtailed.

George's Bay Tin Mine, St. Helens.—From the sluicing of 76,500 cubic yards of ground 11·52 tons of tin oxide were recovered and were estimated to contain 8·35 tons of tin. As in many other cases, dry conditions, in the early part of the year, interfered with production. Employment was afforded to nine men.

Hunt Tin Mine, St. Helens.—Shallow sluicing was continued for an output of 2·16 tons of oxide, estimated to contain 1·56 tons of tin.

Goshen Tin Syndicate, Groom River.—This syndicate employed eight men and sluiced 75,000 cubic yards of river-flats for a recovery of 14·68 tons of oxide, estimated to contain 10·2 tons of tin.

Miscellaneous operations in the St. Helens, Priory, Goshen, Gould's Country, and Pyengana districts accounted for an output of 29·19 tons of tin oxide, estimated to contain 20·55 tons of tin, and afforded employment to an average of 60 men.

At the Tasman Tin Mine, Lottah, a tribute party of 27 men continued productive operations at the old Anchor mine. 26,204 tons of ore were quarried and milled. Finished products sold amounted to 34·123 tons, estimated to contain 24·3 tons of metallic tin. Eighty bags of concentrate were on hand at the close of the year.

Laffer Tin Mine, Weldborough.—V. A. Walker and party sluiced 18,500 cubic yards of leader-formation at the head of Main Creek and alluvial ground along Fancy Creek for a recovery of 3·47 tons of oxide, containing 2·42 tons of tin.

Weld Tin Syndicate, Weldborough.—Sluicing of river-flats, at the Weld River, resulted in a production of 7·13 tons of tin oxide, containing 4·19 tons of tin. From four to seven men were employed.

Niagara Syndicate, Weldborough.—Two men, by sluicing shallow areas in the Emu Basin, recovered 2·04 tons of oxide, containing 1·45 ton of tin.

An area of shallow ground, on portion of the Weldborough Recreation Reserve, was made available for mining. Sluicing operations were pursued by Bryce and others for an output of 5·38 tons of tin oxide, containing 3·5 tons of metallic tin.

Weld Tin Mine, Moorina (A. W. Bird).—Work was continued on the flats and terraces of the Weld River for a recovery of 15·09 tons of oxide, having a content of 10·15 tons of tin. The number of men employed varied from six to 14.

Bird and Thompson, Moorina, sluicing on the Weld River flats, returned 3·58 tons of oxide, containing 2·25 tons of tin.

From alluvials and leader formations in the Lottah, Weldborough, and Moorina districts, miscellaneous parties and individuals produced and sold 36 tons of oxide, estimated to contain 25·21 tons of tin. Up to 66 men were concerned in this production.

G. A. Krushka, Herrick, sluiced 15,000 cubic yards of alluvial ground near the Ringarooma River. The present workings are approaching old workings on the Moorina Lead and will command lower-level drifts. A total of 2·48 tons of oxide, containing 1·81 tons of tin, was won. 5·15 oz. of fine gold was recovered from the concentrates.

Eastern Leads Mine, Pioneer (W. J. Ponting & Sons).—A total of 10,000 cubic yards of alluvial ground was sluiced for a recovery of 5·64 tons of oxide, estimated to contain 4·21 tons of tin.

Rajah and Waugh Mines, Pioneer.—Woods and Sons and Whitmore and Sons, working under an arrangement with the Companies, produced, from areas along the Wyniford River, a total of 11·17 tons of oxide, estimated to contain 8·15 tons of tin.

Endurance Tin Mining Company.—At South Mount Cameron, work was continued on the deep ground when power from the Company's power plant was available. When, owing to water shortage for the power plant, the power supply for the gravel pump was restricted, sluicing was carried on in the shallow ground. The total yardage sluiced for the year was 533,000. Tin oxide produced was 116·17 tons, estimated to contain 85·89 tons of tin. From the tin concentrates 39·57 oz. fine gold was recovered. A party working under a tribute agreement with the Company recovered 15·51 tons of oxide, estimated to contain 11·27 tons of tin, by sluicing old Pioneer tailings at Bradshaw's Creek. The average number of employees was 49.

Miscellaneous producers in the Herrick, Pioneer, and South Mount Cameron districts sold 40·81 tons of oxide, with an estimated content of 28·62 tons of tin.

In the Gladstone area work was spread over a wide range of country. The Mount Cameron water-race was again of great benefit to tin miners in the district.

Star Hill Syndicate.—Hydraulicking of alluvial ground at Amber Hill, Archer's Creek and Deep Creek, and sluicing operations on a leader formation, resulted in an output of 13·45 tons of oxide, containing 9·63 tons of tin. Average employment was eight men.

Lanka Tin Mine.—Using water from the Mount Cameron race, 6·56 tons of oxide, containing 4·8 tons of tin, were produced.

Black Duck Tin Mine.—Employing 12 men and using a steam driven nozzle and gravel pump, 64,600 cubic yards of material were treated for a recovery of 16·96 tons of oxide, containing 12·44 tons of tin. Floods in the winter impeded operations, the Ringarooma river breaking into the workings and submerging the pump.

Palomar Tin Mining Company, Mussel Roe.—Average employment was 4 men and sales were 2·54 tons of oxide, containing 1·81 tons of tin. Work was suspended in the latter part of the year.

Miscellaneous parties, using water from the Mount Cameron Water Race on a royalty basis and averaging 25 men, recovered 33·94 tons of oxide, containing 24·14 tons of tin.

Other miscellaneous producers in the Gladstone district numbering 32 men, sold 16·88 tons of oxide, containing 11·81 tons of tin.

Briseis Consolidated N.L., Derby.—Drought conditions in the early part of the year caused a hold up of overburden removal. An abnormally wet winter followed, and continuous rain caused the ground about the workings to become completely saturated with water. This resulted in several falls of overburden, which was so saturated with water that it became a slurry and flowed into the working paddock. Though there was no danger to life, several columns of piping were dislodged, and elevators and nozzles were buried under mud and stones. The removal of this material from the working paddock interfered greatly with productive work, and normal conditions had not been completely restored at the end of the year.

During the year 277,000 cubic yards of overburden and 740,000 cubic yards of drifts were removed by sluicing. Production was 505·4 tons of tin oxide, estimated to contain 363·7 tons of tin. The gross sterling value of the output, taken at the average London price, was £81,659. The value of the concentrates delivered in Launceston was £93,829 in Australian currency. Average employment was 149 men. An overburden-stacking conveyor of 330 feet, carrying 680 feet of 26-inch heavy stacker belt and driven by a 45 h.p. motor, was put into commission. With it, the rough part of the overburden is being stacked into the paddock behind the working face and along the front of the high side of the paddock. It will have the effect of supporting the drift underlying the high part of the hill. Other installations were:—

One 10-inch gravel pump, belt driven by a 100 h.p. motor, for stacking tailings:
One 8-inch motor driven water pump, for lifting drainage water from paddock to sump of main 14-inch drainage pump:
A new ore dressing house, 30 feet x 24 feet, with hydraulic elevator for raising concentrates from ore bin to dressing launders: and
Several crib houses and drying houses about the workings.

Lone Brothers Mine, Derby.—Production for the year was 4·36 tons of oxide, containing 2·56 tons of tin. Owing to continuous rain (15 inches in August) causing saturation of the country, an extensive slip of basaltic soil occurred at a face which had not been worked for several years. The saturated soil flowed down the sloping bottom of the worked portion for a distance of about 100 yards. The plant was moved across the Ringarooma River and, for a time, was used to work drift material at the old Mutual workings. Results were disappointing and towards the close of the year, a new face was started North of the Lone Brother workings, on a comparatively shallow bed of wash.

Miscellaneous parties in the Derby-Winnaleah district sold 19·18 tons of oxide, containing 13·53 tons of tin. These operations afforded employment to 30 men.

Arba Tin Mine, Branxholm.—From the sluicing of 59,500 cubic yards of ground, tributers recovered 25·05 tons of oxide, containing 17·75 tons of tin. Average employment was 10 men.

Ormuz Tin Mine, Branxholm.—Tributers, numbering three men, produced 3·51 tons of oxide, containing 2·40 tons of tin.

Ruby Flat Tin Mines, Branxholm.—37,000 cubic yards of detrital material and decomposed granite were sluiced for an output of 15·49 tons of concentrate, containing 11·11 tons of tin. Nine men were employed.

Baker's Discovery Branxholm.—R. B. Hill and five employees produced 7·54 tons of oxide, estimated to contain 5·3 tons of tin.

W. G. Stevens sluiced a total of 27,000 cubic yards, for a return of 6.55 tons of oxide, containing 4·61 tons of tin.

N. Dutton, Black Creek, produced 1·31 ton of oxide, with a tin content of ·94 ton.

Mt. Paris Tin Mines.—The Tasmanian assets of the Mount Paris Company were sold during the year to the Briseis Consolidated N.L. Tributers, working under agreement with both companies, produced 9·03 tons of oxide, estimated to contain 6·62 tons of tin.

Miscellaneous producers in the Branxholm district sold 14·87 tons of oxide, containing 10·4 tons of tin. A total of 29 men was concerned in the production.

Miscellaneous producers in the Ringarooma and New River areas sold 10.35 tons of oxide, containing 7·24 tons of tin.

L. H. McNeair, on an alluvial area at Dunn's Creek, Trenah, produced two tons of oxide, containing 1·5 ton of tin. There was an output of 4·18 tons of tin oxide, containing 2·92 tons of metallic tin, from the Scottsdale-Bridport area.

Strait Islands.—From Flinders Island, the total recorded production was 3·02 tons of oxide, containing 2·15 tons of tin. This includes 1·145 tons of oxide, recovered by the Flinders Island Prospecting Company.

From Cape Barren Island, the recorded production, inclusive of ·487 ton of oxide from Lode Hill Consolidated Tin Mine, was 2·59 tons of oxide, estimated to contain 1·75 tons of tin.

Wolfram.

The average London price for the year was £271·375 sterling, per ton of Tungstic Acid. There was no production except from the Storey's Creek and Aberfoyle Tin Mines. These have been dealt with under "Tin." The production recorded was 222·085 tons, valued at £43,499 sterling.

In conclusion, I wish to record my appreciation of the co-operation and assistance afforded by managers, miners, and others associated with the mining industry.

Inspector K. A. Rae, Queenstown, reports:—

Men Employed.

The average number of persons employed in the mining industry was 1871, representing an addition of 24 to the number for the previous year. Of the total number, 1851 were employed in connection with operations by the Mount Lyell Mining and Railway Company Limited. The remainder was intermittently concerned with prospecting operations, and in producing small quantities of alluvial gold.

Accidents.

Thirty accidents, involving injury to a like number of persons, were registered under the provisions of the Mines and Works Regulation Act, compared with 64 accidents, involving fatal injuries to one person and non fatal injuries to 64 persons, registered during the previous year. Nine accidents occurred underground, and 21 were associated with surface operations.

It is gratifying to record that no fatalities were registered under the provision of the Act.

Of the underground accidents, one person sustained a fracture of both legs as a result of falling through a narrow opening in the cover of an ore pass, after having been engaged shovelling ore into the pass. A second person sustained a fractured leg when square-set timber overbalanced from the loaded position in a winding cage and struck him. Two persons received eye injuries, one being occasioned by a "scat" flying from a lump of ore being spalled by his mate, and the second being due to a fragment of steel flying from a jack-bit, during rock drilling operations.

Of the surface accidents, two persons were struck by motor lorries, a third sustained an injured arm as the result of a back-fire when he was cranking the engine of a truck, and the fourth was struck by the tip-body of a lorry, when it fell during repairs to the lifting gear. Whilst barring the face of an opencut, loose material rolled back and struck the employee, causing a fractured leg.

The remaining accidents were of a less serious nature, and of these several were due to a lack of care by the persons injured.

An electrical contact resulted in the death of one person, and a second person sustained a mutilated hand as the result of an accident with a drill-sharpening machine, but these cases were not within the province of the Mines and Works Regulation Act and were referred to the Machinery Department.

Workers' (Occupational Diseases) Relief Fund Act.

Clean certificates were issued in respect of 173 employees. Application was made by 53 persons for examination for alleged ailment. In 10 instances, applicants were declared to be partially affected, and the remaining 43 cases were pronounced free of disease. The following is a comparative analysis of afflicted cases:—

	1938.	1939.
Incapacitated	10	Nil
Partially incapacitated (over 50 per cent affection)	1	Nil
Partially incapacitated (50 per cent affection)	2	1
Partially incapacitated (under 50 per cent affection)	3	9
TOTAL	16	10

Inflammable Liquids Act.

Regular inspections were made of storage outfits and depots. There was an increase in storage facilities, and accommodation for an additional 4000 gallons of mineral spirit was approved.

Explosives Act.

Surveillance has been maintained in respect of the importation, landing, transport, storage, and general use of explosives.

Quantities landed at Regatta Point were:—

For Queenstown—	Lbs.
Polar A.N. gelignite "50"	249,750
Polar A.N. gelatine dynamite	28,600
Polar quarry monobel	275,000
TOTAL	553,350
No. 6 L/A detonators (number)	46,000
Safety fuse in reels (cases)	273
Fuse igniters (number)	20,000
For Zeehan—	
Safety fuse (cases)	9

Generally, the quality of the explosives was satisfactory. On one occasion, several plugs deteriorated through deliquescence of the nitrate salts, and investigations revealed defective wrapping, due to faulty waxing of the wrappers. The defect was referred to the manufacturers and remedied in the case of subsequent shipments. Instances of nails withdrawing from cases during shipment were encountered and referred to the manufacturers for correction. Cautionary measures were taken to counter recorded cases of carelessness in the handling and use of explosives.

One accident occurred in connection with explosives but did not result in serious injury. When a person was engaged lighting a round of pop-holes during a foggy night he unaccountably pulled the fuse from a hole and applied the means of ignition to the detonator, causing it to explode. Investigations are being made with a view to averting similar happenings.

Frequent inspections have been made of main and subsidiary magazines. An alteration was made in the transport and handling of explosives with beneficial results.

GENERAL.

Matters affecting health and safety were kept under surveillance and constituted the major duties of this office.

On two occasions, employees were prosecuted for failing to use appliances for the prevention of dust during rock-drilling operations.

A third prosecution was directed against the servicing of the tank of a motor vehicle while the engine was running.

OPERATIONS AND PRODUCTION.

Mount Lyell Mining and Railway Company Limited.—The output from all mines was 1,105,749 tons of ore, representing an addition of 15,645 tons to that for the previous year, due to an increase in the tonnage of ore won by opencutting. There were 910,203 tons of ore which resulted from surface mining, being an increase of 37,654 tons, made possible by an extension of the opencuts and additional mechanisation. Production from underground workings decreased by 22,009 tons, due largely to gradual depletion of known reserves in the North Lyell mine.

A progressive policy has been maintained at West Lyell and Prince Lyell open-cuts, and innovations to equipment resulted in a record tonnage of ore being handled. Two

units of the transport section were converted into a semi-trailer type with capacities of 16 and 20 tons. The innovation was successful and is to be applied to other units. A new pass was put in hand for the transfer of ore from the surface to the main tunnel and should be completed in the near future. A suction fan, with a displacement capacity of 40,000 cubic feet per minute, has been installed at the Royal Tharsis shaft to control atmospheric dust at the loading station of the new pass.

At the Lyell Comstock mine the main shaft was sunk for a new lift of workings below No. 10 level. Cross-cutting, rising, and driving were continued as required for developmental purposes. The two ore bodies opened up at No. 10 level have been stoped on the ground floor. The magnitude and value of these occurrences of ore remained reasonably constant with those on the upper level. The major tonnage of ore is being produced from below the main adit, No. 5 level, ore stope between the fourth and fifth levels and the opencut being the only sources of supply of ore above the adit. A controlled settlement of ground occurred in a depleted section above the third level and caused no material damage to productive workings. An average of 173 men was employed and 86137 tons of ore resulted from productive activities at this mine.

No development of moment occurred in the North Lyell mine, and production declined by 23,364 tons, due to a gradual depletion of known reserves of ore. The total production was 62,636 tons, and of this 8381 tons of high grade ore were despatched direct to the converter plant.

The Crown Lyell mine was in active production, the total output of ore being 2123 tons in excess of that for the previous year. Improved metal prices made it economically possible to mine arches and other sections of ore previously left in situ. Mill tailings continued to be used for stope filling and contributed to the safety of mining practices.

The followinag tabulation reveals the disposition of ore production:—

	Tons.
North Lyell mine	62,636
Crown Lyell Mine	46,773
Lyell Comstock mine	86,137
West Lyell opencuts	910,203
TOTAL	1,105,749

The concentration plant was in operation for 361 days, and processed 1,096,207 tons of ore for a recovery of 55,836 tons of copper-pyrite concentrate and 54,229 tons of iron-pyrite concentrate, the latter being exported for utilisation in the manufacture of fertilisers.

The reduction works treated the copper-bearing concentrate from the concentration plant, and, in addition, 8381 tons of high grade ore and five tons of purchased ore were processed by smelting and conversion for an overall output of 13,453 tons of blister copper. Operating on a 356-day run the refinery produced 13,453 tons of cathode copper. There were also 70,413 oz. silver and 7506 oz. gold recovered.

The blast furnace was reconstructed, and its length was increased by 3 feet 6 inches. Innovations were made in the collection of dust. A new 20-ft. bowl classifier and a vibrator screen were important additions to the classifying section. Preparatory work was commenced for the installation of a Telsmith crusher with a through-out capacity of 5000 tons per day.

The limestone quarry at Hall Creek and the silica quarry at Queenstown were worked as required, 6739 tons of limestone and 6769 tons of silica being used for fluxing and other purposes.

The following is a comparative table of productive activities by the company:—

	1939.		1938.	
		£		£
Copper (Electrolytic)	13,453 tons	668,562 S	12,700 tons	579,924 S
Silver	70,412 oz. f.	6427 S	67,176 oz. f.	5773 S
Gold	7507 „	57,888 S	7919 „	62,239 S
Pyritic concentrates	55,229 tons	67,786 A	50,278 tons	62,847 A
Limestone	6739 „	2358 A	5751 „	2013 A
Silica	6969 „	1692 A	6781 „	1695 A

S = Sterling value. A = Value in Australian currency

Miscellaneous.

Twenty men were intermittently engaged in prospecting and in working auriferous ground. These operations accounted for 61 oz. fine gold, valued at £546, but there was no discovery of moment.

APPENDIX VI.

REPORT OF THE MOUNT CAMERON WATER-RACE BOARD FOR THE YEAR ENDING 31st DECEMBER, 1939.

SIR,

We have the honour to submit our report for the year ended 31st December, 1939.

Main Race.

Sections of the race from the intake at Great Mussel Roe River to the Little Mussel Roe River, and from the concrete syphon to the new No. 6 syphon, were cleaned out during the year. The main race is now in good order, except for a growth of weed in that section from Old Chum Creek to the cottage occupied by Channel Keeper Moore.

Branch Races.

All branch races are now in good order, the branch from the main race to H. C. Lawry's machinery site having been cleaned out during the year.

Syphons.

The trestles and stringers of the Little Mussel Roe syphon are in need of attention. The syphon over the Ringarooma River is beyond repair, and restoration is necessary.

Flumings.

The old iron fluming across Old Chum Creek has been replaced by a wooden structure.

Dams and Culverts.

These are all in good order.

Tunnels.

The tunnel under Gladstone road has been well timbered, and is now in good order.

We have the honour to be,

Sir,

Your obedient servant,

W. H. WILLIAMS,
Acting-Chairman of the Board,

GEO. MALLINSON, } Members.
C. G. RYAN, }

The Hon. the Minister for Mines.

STATEMENT FOR THE YEAR ENDED 31ST DECEMBER, 1939.

Rainfall.

The registered rainfall for the year was as follows:—

Great Mussel Roe	46 inches 21 points
Little Mussel Roe	46 inches 20 points

Revenue.

The revenue for the year amounted to £1534 12s. 6d., being an increase of £317 9s. 11d. on the previous year.

Disbursements.

The expenditure for the year amounted to £1208 13s. 4d., being an increase of £152 18s. 6d. for the previous year.

Statistics.

The statistics for the year are as follows:—

Average number of claims supplied per week	12
Greatest number supplied in any one week	16
Total number of heads supplied under—	
Fixed or cash scale	363 5/16
Royalty or credit scale	3375

Tin ore raised—	tons.	cwt.	qr.	lb.
Under royalty scale	39	10	1	12
Under fixed scale	11	6	0	20
TOTAL	50	16	2	4

Average number of men employed per week—30

Receipts.	£	s.	d.
Water sold under fixed scale	218	6	1
Water sold under royalty scale	1,315	1	5
Sale old boards	1	5	0
Payment Workers' Compensation Act	25	1	10
	£1,559	14	4

Payments.	£	s.	d.
Salaries and wages	778	12	8
Travelling expenses	9	16	9
Stationery and printing	9	6	7
Insurance	9	0	4
Stores	38	4	5
Repairs to race, syphons, dams, and culverts	164	19	3
Repairs to tunnel	81	13	8
Repairs to fluming	88	17	7
Cartage and freight	19	10	5
Miscellaneous	8	11	8
Claim for workers' compensation	25	1	10
Total payments	£1,233	15	2
Excess receipts over payments	325	19	2
	£1,559	14	4

H. H. Pimblett, Government Printer, Tasmania.