AR1936

(No. 16.)

TASMANIA

REPORT

OF THE

SECRETARY FOR MINES

FOR

YEAR ENDING 31ST DECEMBER

1936

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

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

TASMANIA:
WALTER E. SHIMMINS, GOVERNMENT PRINTER, HOBART

1937

88290

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TASMANIA

Showing the Position of

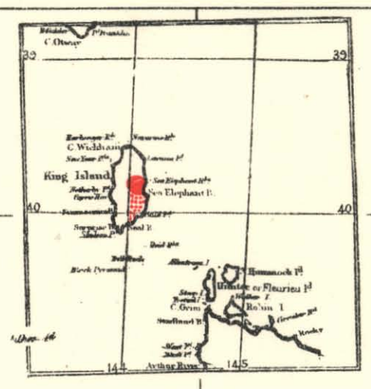
MINERAL BEARING AREAS
RAILWAY COMMUNICATION AND
HYDRO-ELECTRIC POWER LINES

SCALE OF MILES

5 0 5 10 15 20 25 30

RAILWAYS

POWER LINES



Flinders Island

Cape Barren Island

Clarke Island

BANKS' STRAIT

Hunter Islands

Robbins Island

Stanley

Rocky Cape

Table Cape

Cape Portland

Marrawah

Wynyard

Burnie

Devonport

Beaconsfield

Latrobe

Gladstone

Pioneer

Derby

Lottah

Bramxholm

George's Bay

Lefroy

Lisle

Launceston

Balfour

Sandy Cape

Waratah

Magnet

Mathinna

St. Marys

Seymour

Ayoca

Moina

Tullah

Rosebery

Zeehan

Williamsford

Dundas

Queenstown

Cape Sorell

Point Hibbs

Swansea

Oyster Bay

Freycinet's Peninsula

Schouten Island

Spring Bay

Maria Island

Hobart

Margate

Tasman's Peninsula

Storm Bay

Brumi Island

Cape Raoul

Cape Pillar

Port Davey

S.W. Cape

Cox Bight

Recherche Bay

S.E. Cape

Huon River

Arthur River

Flowerdale River

Blythe River

Leven River

Wilmot River

Forth R.

Don River

Mersey R.

Tamar River

North Esk River

South Esk River

Meander River

Dove River

Macintosh R.

Whyte R.

Pieman River

Savage R.

Donaldson R.

Huskisson R.

Henty R.

Macquarie Harbour

King River

Franklin River

Gordon River

Denison River

Lake St. Clair

Lake Echo

Shannon R.

Nive R.

Derwent River

Dee River

Ouse R.

Clyde River

Florentine River

Styx River

Great Lake

Arthur Lakes

Lake Sorell

Lake Crescent

Macquarie River

Ringarooma R.

TARRALEAH

WADDAMANA

LEGEND

- GOLD
- TIN
- COAL
- COPPER
- SILVER LEAD AND ZINC LEAD
- OIL SHALE
- NICKEL
- OSMIRIDIUM
- LIMESTONE
- DOLOMITE
- RED GRANITE
- TUNGSTEN
- IRON

PAINT, GLASS, POTTERY AND CERAMIC MATERIALS NOT SHOWN

5 cm

145 146 147 148

40 41 42 43

Walter E. Shimmins, Government Printer, Tasmania.

AR 1936

REPORT OF THE SECRETARY FOR MINES.

Department of Mines,
Hobart.

SIR,

I HAVE the honour to present my report on the Mining Industry of the State for the year ended 31st December, 1936.

APPENDICES.

The following reports, with locality map, mineral map, and statistical records, are appended:—

Acting Government Geologist.
Chemist and Assayer.
Chief Inspector of Mines.
Chief Inspector of Explosives and Inflammable Liquids.
District Inspectors of Mines.
Mount Cameron Water-Race Board.
Mineral map of the State, including railway communication and hydro-electric power lines.

GENERAL STATEMENT.

A year of definite progress, both in activity in the industry and value of output, is recorded for the year under review. The latter, amounting to £2,331,783, constitutes a record.

The output of copper by the Mt. Lyell Company is the largest for five years, with a corresponding increase in gold and silver. The average price of metal was the highest for the same period, the quantity produced showing little variation to that of the previous year. The value of output for the term amounted to £617,232 (sterling), being 13,040 tons of copper, 103,189 oz. of silver, and 7046 oz. of gold. Pyritic concentrates to the value of £33,711 were shipped to the mainland.

Steady production of zinc, lead, cadmium, and silver by the Electrolytic Zinc Company at the Mt. Read-Rosebery Mines is mainly responsible for the greatly increased value of minerals raised. The output of lead (7563 tons, valued at £134,413), is the highest for eight years. Silver shows a corresponding increase, the output being 906,458 oz., valued at £81,036; and cadmium, 3364 tons, valued at £10,799.

Considerable attention has been given to tin-mining, chiefly to alluvial deposits on the east and north-east coast fields. A slight reduction in output is recorded. The yield was 1004 tons, valued at £206,656, as against 1135 tons, valued at £258,919, the previous year. There is every prospect that the ensuing year will witness a substantial increase in production. The Briseis Consolidated and Endurance Mines should then be in full production. The average price is lower than that of last year by £17 per ton. Regular production has occurred from operations on the lode deposits, with wolfram as a by-product, at the Storey Creek and Aberfoyle Mines in Avoca district.

Gold production shows a substantial increase, the Mt. Lyell Copper Mines being the chief producer. A small but regular output is now being obtained from a small crushing plant at Moina. About 20 miners are engaged in working the alluvial deposits on the Jane River field. The output from that remotely situated locality in the south-west district (being 1444 oz.) brings the total to £10,194.

The two State batteries were intermittently employed, one being at Lefroy, the other at New River, North Mt. Victoria, in dealing with trial crushings on account of prospectors. These light batteries are designed for testing bulk samples of stone. They have a capacity of about three tons per day.

Other sources of gold are from shallow alluvial deposits on various fields, also that recovered in association with alluvial tin. An appreciable quantity is recovered in the treatment of the West Coast silver-lead-zinc deposits by the Electrolytic Zinc Company.

The value of production from cement and carbide industries, together with the export of limestone to the Newcastle Steel Works of the Broken Hill Proprietary Company, amounted to £418,832, being an aggregate increase of £20,583.

Osmiridium mining has been inactive, which is attributed to the depletion of alluvial deposits and the comparatively low market price, although it has increased from approximately £9 to £14 per oz. The output amounted to 280·6 oz., valued at £3862. More attention has been given to the development, by tunnelling, of the rock formations which carry payable quantities of the metal. Arrangements are in hand by a mainland syndicate to instal crushing and concentrating machinery to deal with the ore. The remote situation of the field, together with inadequate means of transport (the latter being a pack track 22 miles in length in mountainous country), is a factor tending to retard its development.

OIL SHALE DEPOSITS: PRODUCTION OF BITUMEN.

To enable metallurgical investigations to be carried out in conjunction with the Department's laboratory an eight-cell experimental flotation plant was erected at Launceston early in the year. It has been used in connection with the experimental treatment of the Mersey Valley oil shale.

The process involves the separation and concentration of the organic constituent. This material, on being subjected to low heat treatment, is converted into asphalt, with the production of gas and a high-grade oil distillate, the proportion being 40 gallons to the ton of concentrate. Asphalt so produced has been tested in road making, under heavy traffc, and is reported by the Department of Public Works to be equal in all respects to imported bitumen.

The siliceous residue from the flotation process is valuable as "filer" for bitumen in road surfacing. The concentrate, if necessary, under higher heat treatment, will yield up to 130 gallons of oil per ton, with a small proportion of asphalt residue.

AID TO MINING.

The Aid to Mining Act, 1927.

Receipts.

	£	s.	d.
Royalty paid by tributers	7	2	1
Repayment of loan	138	18	4
Hire of plant	6	8	0
	£152	8	5

Ore Sales.

	£	s.	d.
Amount received from ore sales	74	1	3
Which was distributed as follows:—			
Royalty paid to State (£7 2 1)			
Paid to tributers (66 19 2)			
	74	1	3

Expenditure.

	£	s.	d.
Sustenance allowance to prospectors	386	0	0
Assistance to individuals and companies	2,807	12	10
Investigations in connection with production of bitumen	1,164	3	5
Drilling at Musk Vale	453	0	5
Drilling at Catamaran	88	7	5
Purchase of plant and erection at Adamsfield	466	1	9
Printing	1	0	0
Insurance	2	13	2
Miscellaneous	6	15	2
	£5,375	14	2

The Unemployed Relief Act.
(26 Geo. V. No. 65.)

	£	s.	d.
Tracks to mineral areas:—			
16-mile, Waratah-Corinna	222	0	10
Specimen Reef	276	1	1
	£498	1	11

The Aid to Mining (Federal Grant) Trust Fund.

Expenditure.

	£	s.	d.
Prospecting	421	2	6
Batteries	322	18	5
Advances	7,962	3	7
Plants and operations thereof	2,291	10	4
Metallurgical investigations	874	11	1
Roads and tracks	2,027	3	3
Transport	500	0	0
Staff	197	9	8
	£14,596	18	10

Receipts.

	£	s.	d.
Batteries	3	11	6
Advances	1,286	12	5
Total	£1,290	3	11

The Aid to Mining (Federal Grant) Trust Fund (1936-37).

Expenditure.

	£	s.	d.
Prospecting			
Advances	2,500	0	0
Plants and operations thereof	1,467	9	7
Metallurgical investigations			
Roads and tracks	266	8	9
Transport	180	3	5
Staff	7	11	6
Total	£4,421	13	3

DRILLING, 1936

No. 1 Diamond Drill.

Location.—Lefroy (Morning Star, Golden Era, and West Volunteer Reefs).
No. of Holes.—7.
Total Depth of Holes.—3927 feet.
(N.B.—Besides these bores, No. 3 Bore on the Chum Reef, which was commenced in 1935, was completed at a depth of 1300 feet.)
Details.—

No. of Bore.	Location.	Depth.	Values.	Bottomed on.
		ft.		
4	Morning Star Reef	512	Core 338–347—Au. trace Ag. trace Cuttings 338–342—Au. trace Ag. trace Cuttings 342–347—Au. 6 gr. per ton Ag. 6 gr. per ton Pyrite conc. 506–512—Au. trace Ag. trace	Black slate
		ft. ft.		
4A	Morning Star	614	562 – 565—Au. 9 gr. per ton Ag. 3 gr. per ton 565 – 570—Au. trace Ag. trace 570 – 574 – Au. 13 gr. per ton Ag. 6 gr. per ton 574 – 577—Au. 9 gr. per ton Ag. 3 gr. per ton 577 – 582—Au. 13 gr. per ton Ag. 6 gr. per ton 582 – 587—Au. 13 gr. per ton Ag. 6 gr. per ton 590 – 597—Au. 19 gr. per ton Ag. 6 gr. per ton	Black slate and sandstone
5	Morning Star	624	—	Slate and sandstone
6	Morning Star	286	Coarse, clean material—Au. 6 gr. per ton Ag. 6 gr. per ton Fine, dark material—Au. 1 dwt. 14 gr. per ton Ag. 2 dwt. 2 gr. per ton	Slate and sandstone
7	Morning Star	633	—	Sandstone
		ft.		
8	Golden Era	398	Cuttings 272—Au. 12 gr. per ton Ag. 12 gr. per ton Cuttings 273–275—Au. nil Ag. trace Core 273–274—Au. nil Ag. trace Cuttings 286–287—Au. nil Ag. 1 dwt. 7 gr. per ton	Slate and sandstone
9	West Volunteer	860	—	Slate and sandstone

CALYX DRILL.

Location.—Gladstone, vicinity of Scotia Lead.
No. of Bores.—76.
Total Depth of Bores.—6550 feet.
Details.—

No. of Bore.	Depth to Bedrock.	Average Values. Oz. per c. yd. of 70% Conc.	Best Values. Depth.	Oz. per c. yd. of 70% Conc.
	ft. ins.		ft. in. ft. in.	
12	107 9	6·98	102 8 ... 107 9	98·01
13	103 2	5·52	102 8 ... 103 2	134·22
14	109 6	2·39	102 8 ... 109 6	27·88
15	105	0·83	102 8 ... 105	16·09
16	85	0·35	80 8 ... 85	3·54
17	61	Trace	—	—
18	91 3	Trace	—	—
19	98 9	7·07	95 4 ... 98 9	153·74
20	100 10	13·40	95 4 ... 100 10	243·36
21	85 6	1·20	80 8 ... 85 6	7·55
22	95	5·38	88 ... 95	69·70
23	100	5·33	95 4 ... 100	104·57
24	87	3·74	80 8 ... 87	30·99
25	79 6	0·56	73 4 ... 79 6	2·10
26	87 6	0·18	14 8 ... 22	1·22
27	95	0·58	88 ... 95	5·19
28	97 10	10·01	95 4 ... 97 10	311·52
29	80 4	0·12	73 4 ... 80 4	0·31
30	74	Trace	—	—
31	62 3	2·62	58 8 ... 62 3	44·52
32	55 6	Trace	—	—
33	55	0·84	51 4 ... 55	9·73
34	21	Trace	—	—
35	6	Nil	—	—
36	36 6	0·20	29 4 ... 36 6	0·61
37	73	1·55	66 ... 73	11·86
38	76 9	0·83	73 4 ... 76 9	2·37
39	61	2·21	58 8 ... 61	41·99
40	55	0·24	51 4 ... 55	1·16
41	84	8·49	80 8 ... 84	105·76
42	78	0·97	73 4 ... 78	5·86
43	77	2·26	73 4 ... 77	27·55
44	79 6	5·89	73 4 ... 79 6	60·96
45	70	0·63	66 ... 70	2·24
46	87 6	0·59	80 8 ... 87 6	5·97
47	93 8	16·22	88 ... 93 8	257·38
48	92 6	3·93	88 ... 92 6	68·93
49	91	7·88	88 ... 91	104·30
50	75 6	Trace	—	—
51	98	2·45	95 4 ... 98	57·72
52	91	Trace	—	—
53	76	Trace	—	—
54	104 5	24·41	102 8 ... 104 5	1208·28
55	91	0·60	88 ... 91	5·68
56	58	Trace	—	—
57	20	Abandoned	—	—
58	80 3	Trace	—	—
59	65 6	Trace	—	—
60	106 6	3·49	102 8 ... 106 6	45·13
61	79 6	Trace	—	—
62	99 3	1·42	95 4 ... 99 3	18·83
63	85 3	Trace	—	—
64	44 6	Trace	—	—
65	46	Trace	—	—
66	57 3	0·17	51 4 ... 57 3	0·68
67	40 9	Trace	—	—
68	89 6	Trace	—	—
69	112	3·70	110 ... 112	124·89
70	113 3	0·55	110 ... 113 3	6·44
71	66	0·09	58 8 ... 66	0·28
72	58 7	3·45	51 4 ... 58 8	15·69
73	44 6	Trace	—	—
74	36 9	0·32	... 7 4	0·91
75	35	Nil	—	—
76	104 9	3·54	102 8 ... 104 9	56·92
77	117 2	11·26	110 ... 117 2	171·82
78	122 2	43·14	117 4 ... 122 2	1070·17
79	124 7	12·74	117 4 ... 124 7	180·70
80	124 8	1·82	117 4 ... 124 8	26·40
81	117	0·55	110 ... 117	4·31
82	127 5	8·43	124 8 ... 127 5	239·20
83	131	4·45	124 8 ... 131	55·94
84	117	0·35	102 8 ... 110	1·81
85	136 8	0·67	132 ... 136 8	4·75
86	119 6	0·36	117 4 ... 119 6	13·78
87	85 9	0·51	80 8 .. 85 9	1·30

NO. 2 DIAMOND DRILL.

Location.—Magnet Mine. Nos. 8 and 13 Levels.
Period.—29.9.36 to 19.12.36.
No. of Bores.—5.
Total Depth.—661 feet.
In No. 1 Bore, at 128 feet 6 inches, 6 inches of galena was intersected.

SURGE DRILL.

(1) *Location.*—Musk Vale, George Town.
Period.—16.12.35 to 16.5.36.
No. of Bores.—6.
Total Depth.—833 feet.
No coal was intersected.

(2) *Location.*—Catamaran.
Period.—4.6.36 to 24.9.36.
No. of Bores.—2.
Total Depth.—506 feet.

Details.—

No. of Bore.	Depth.	Coal Intersected.	Bottomed on.
		ft. ft.	
1	274	136 – 137 — Coal	Sandstone
		230 – 250 — Coal measures	
		253 – 259 — Coaly matter	
2	232	150 – 156 — Coal	Diabase

QUANTITY AND VALUE OF MINERALS.

RETURN showing the Quantity and Value of Minerals produced in the State of Tasmania during the Year 1936.

Mineral.	Quantity.	Value.
		£
Barytes ..... tons	33	66
Coal ..... ,,	132,264	92,269
Carbide ..... ,,	6855	137,100
Cement ..... ,,	73,285	210,489
Copper ..... ,,	13,030	556,734
Cadmium ..... ,,	33·64	10,799
Gold ..... oz. f.	17,600·47	123,383
Granite (red) ..... tons	568	3209
Lead ..... ,,	7563·04	134,413
Limestone ..... ,,	262,301	71,243
Osmiridium ..... ozs.	280·6	3862
Pyrites ..... tons	33,711	33,711
Silver ..... oz. f.	906,458	81,036
Silica ..... tons	6463	3231
Tin ..... ,,	1004·06	206,656
Talc ..... ,,	3	8
Wolfram ..... ,,	207·13	28,323
Zinc ..... ,,	18,769	283,105
Total Sterling...		1,979,637
Total Sterling Australian Currency		£2,331,783

The Electrolytic Zinc Company of Australasia Limited recovered 57,744 tons of Zinc, valued at £1,119,713, and 214·2081 tons of Cadmium, valued at £59,978, from other than Tasmanian ores, and employed an average of 906 men at Risdon

ASBESTOS.

RETURN showing the Quantity and Value of Asbestos produced from 1899 *to* 1920-36 *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	—	—
Total	3565·5	£7105

BARYTES.

RETURN showing the Quantity and Value of Barytes produced during the Years 1916 *to* 1936 *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
Total	1850	£7014

BISMUTH.

RETURN showing the Quantity and Value of Bismuth produced from 1904 *to* 1936 *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	—	—
Total	79·447	£25,934

CEMENT, CARBIDE, AND LIMESTONE.

The combined value of output from these three industries amounted to £418,832, as compared with £398,249 for 1935.

COAL.

RETURN showing the Quantity and Value of Coal raised from 1880 *to* 1936 *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
Total	3,521,561	£2,731,881

COPPER.

The production for the year was 13,040 tons, valued at £556,734.

RETURN showing the Quantity and Value of Copper in Blister Copper and Copper Ore during the Years 1919 *to* 1936 *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	267,116	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
Total	144,508·1	8,339,022	39·993	1971	144,548·09	8,341,003

The Mount Lyell Mining and Railway Company Limited: Return for the Calendar Year 1936.

Ore and metal-bearing material smelted:—

Source of Material.	Tons (Dry).
Ore:—From the Company's North Lyell Mine	7,289
Concentrates:—From the Company's North Lyell Mine, Lyell Comstock Mine, Royal Tharsis Mine, and Crown Lyell Mine ore	51,675
Purchased ore	2
Total	58,966

Source of Material.	Tons (Dry).
Limestone delivered to works (tons)	4,896
Silica delivered at works	6,463
Pyritic concentrate shipped from Regatta Point (tons), approximate value, £33, 711)	33,711
Blister copper produced:—13,136 tons, containing:	
Copper (tons) 13,040 / Silver (oz.) 103,189 / Gold (oz.) 7,046 — Approximate value £617,232 (sterling).	

Average number of men employed—

Mining Department—At the Company's North Lyell Mine	373	
Ditto, Lyell Comstock Mine	207	
Ditto, Royal Tharsis Mine	49	
Ditto, Crown Lyell Mine	7	
Ditto, Lyell Tharsis	122	
Ditto, West Lyell	16	
Miscellaneous	140	
		914
Reduction Works Department (including Lake Margaret)		573
Railway Department —Mount Lyell Railway		123
Total		1,610

Copper produced from the inception of the Company to the 31st December, 1936, 303,099 tons.

Silver produced from the inception of the Company to the 31st December, 1936, 14,924,651 oz. (fine).

Gold produced from the inception of the Company to the 31st December, 1936, 430,696 oz. (fine).

Dividends paid during the year, £155,000 = 2s. per share.

Dividends paid from the inception of the Company to the 31st December, 1936, £5,484,069.

GOLD.

The quantity won was 17,600·47 oz. fine, valued at £123,383, as compared with 8342·68 oz., valued at £59,255 for 1935.

RETURN showing the Quantity and Value of Gold won from 1880 to 1936 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
Total	1,963,890·56	£7,996,770

IRON PYRITES.

The quantity won was 33,711 tons, valued at £33,711.

RETURN showing the Quantity and Value of Iron Pyrites produced during the Years 1915 to 1936 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
Total	141,867·973	£167,113

LEAD.

The output was 7563·04 tons, valued at £134,413, as compared with 1488 tons, valued at £21,390 for 1935.

RETURN showing the Quantity and Value of Lead included in Silver-Lead during the Years 1919 to 1936 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
Total	72,011·502	£1,738,787

LIMESTONE.

The quantity won for the year was 262,301 tons, valued at £71,243.

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 1936 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	—	—
Total	202·8	£35,246

OCHRE.

RETURN showing the Quantity and Value of Ochre produced during the Years 1918 to 1936 inclusive.

Year.	Quantity.	Value.
	Tons.	£
1918	100	200
1919	—	—
1920	—	—
1921	14	56
1922	—	—
1923	—	—
1924	20	50
1925	—	—
1926	38	69
1927–1936	—	—
Total	172	£375

OSMIRIDIUM.

The quantity of metal won during the year was 280·6 oz., valued at £3862, as compared with 235 oz., valued at £2103 for 1935.

RETURN showing the Quantity and Value of Osmiridium produced during the Years 1910 to 1936 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
Total	28,227·274	£613,681

The following table gives particulars of osmiridium won from Adamsfield since its discovery up to 31st December, 1936:—

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	8	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

Osmiridium Won from Adamsfield:—*cont.*

Period.	Quantity.			Value.		
Quarter ending—	Oz.	dwt.	gr.	£	s.	d.
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
Total	12,991	5	23	£256,988	9	2

SCHEELITE.

RETURN showing the Quantity and Value of Scheelite produced during the Years 1917 *to* 1935 *inclusive.*

Year.	Quantity.	Value.
	Tons.	£
1917	69	12,130
1918	216	39,252
1919	198·98	43,181
1920	105·09	17,905
1921–1935	—	—
Total	589·07	£112,468

SHALE.

RETURN showing the Quantity and Value of Shale produced during the Years 1910 *to* 1936 *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	—	—
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	Tasmanite Shale Oil Company Ltd.	—
	Total	357,115

SILVER.

The output was 906,458 oz. (fine), valued at £81,036, as compared with 323,901 oz., valued at £42,323 for 1935.

RETURN showing the Quantity and Value of Silver contained in Silver-Lead and Blister Copper during the Years 1919 *to* 1936 *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	91,33
1924	494,782	75,598	147,376	22,439	642,158	97,83 7
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
T'tl	1,374,621·55	1,085,077	2,541,607	350,848	10,916,328	1,435,925

TIN.

The output was 1004·06 tons, valued at £206,656, as compared with 1131 tons, valued at £258,919, for 1935.

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 1936 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
Total	143,426·276	£17,207,046

* Metallic Tin.

TALC.

RETURN showing Quantity and Value of Talc produced during the Years 1928 to 1936 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
Total	105·6	315

WOLFRAM.

RETURN showing the Quantity and Value of Wolfram produced during the Years 1899 to 1936 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
Total	3001·872	£347,089

ZINC.

RETURN showing the Quantity and Value of Zinc produced during the Years 1919 to 1936 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
Total	51,680·69	£1,256,306

Electrolytic Zinc Company of Australia Ltd.—

Return for the calendar year 1936:—

	Tons.
Production of slab zinc	57,744
Production of metallic cadmium	214·2081

The above is from ores other than Tasmanian.

The average number of men employed at Risdon was 906.

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

	Tons.
Slab zinc	18,769
Metallic cadmium	33·64

The average number of men employed was 318.

VALUE OF METALS AND MINERALS RAISED.

RETURN showing Value of Metals and Minerals Raised in Tasmania from 1880 to 1936 inclusive.

Mineral or Metal.	Value.
	£
Asbestos	7105
Barytes	7014
Bismuth	25,934
Cadmium	31,713
Carbide	1,212,207
Cement	2,004,014
Coal	2,731,881
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)	8,341,003
Gold	7,996,770
Granite (red)	3209
Ilmenite	1256
Iron Ore	25,701
Iron Pyrites	167,113
Lead (from 1919)	1,738,787
Limestone	1,240,194
Nickel	35,246
Ochre	375
Osmiridium	613,681
Scheelite	112,468
Silica	3231
Shale	23,908
Silver-Lead to 1918 (now shown as Silver and Lead)	6,429,291
Silver	1,435,925
Talc	315
Tin	17,207,046
Wolfram	347,089
Zinc	1,256,306
Unenumerated prior to 1894	31,988
Total	£67,520,906

STATISTICS OF PRODUCTION.

RETURN showing the Annual Value of Mineral Products for the State of Tasmania from 1880 to 1936 inclusive.

Year.	Value.	Year.	Value.
	£		£
1880	554,031	1910	1,432,193
1881	602,723	1911	1,349,497
1882	556,306	1912	1,493,502
1883	560,873	1913	1,415,700
1884	468,302	1914	1,007,038
1885	518,885	1915	1,225,575
1886	489,966	1916	1,521,050
1887	593,256	1917	1,582,322
1888	616,733	1918	1,597,694
1889	504,718	1919	1,301,090
1890	444,210	1920	1,421,104
1891	528,388	1921	822,851
1892	526,909	1922	1,013,415
1893	627,909	1923	1,219,456
1894	732,764	1924	1,496,804
1895	575,692	1925	1,700,861
1896	662,058	1926	1,808,847
1897	1,006,140	1927	1,621,027
1898	1,071,084	1928	1,593,828
1899	1,660,622	1929	1,790,653
1900	1,888,695	1930	1,270,114
1901	1,763,896	1931	894,986
1902	1,378,406	1932	897,168
1903	1,354,044	1933	1,053,373
1904	1,379,204	1934	1,037,351
1905	1,729,129	1935	1,387,511
1906	2,257,147	1936	1,979,637
1907	2,277,159	Unenumerated prior to 1894	31,988
1908	1,650,027		
1909	1,574,995	Total	£67,520,906

STATISTICS OF MINING COMPANIES.

RETURN showing the Amounts Paid in Dividends by Mining Companies during the Year ending 31st December, 1936.

Mines.	Dividends.
	£
Copper	93,868
Gold	...
Tin	14,280
Silver	...
Coal	4081
Total	£112,229

RETURN showing the Total Area of Land and Number of Sluiceheads of Water Applied for during the Year ending 31st December, 1936.

Mineral.	Number.	Sluiceheads.	Area.
			Acres.
Antimony	...	...	...
Bismuth	...	...	...
Barytes	...	...	...
Coal	5	...	805
Dolomite	2	...	240
Granite	1	...	40
Gold	37	...	1344
Iron	10	...	411
Minerals	11	...	315
Phosphate Rock	...	...	...
Scheelite	...	...	...
Shale	...	...	...
Silver	3	...	150
Stone	2	...	55
Tin	120	...	2704
Wolfram	2	...	83
Machinery Sites and Mining Easements	12	...	93
Water-rights and Dam Sites	51	172	185
Licences to search for Coal	5	...	10,100
Total	261	172	16,525

RETURN showing Total Number and Area of Leases and Licences Issued during the Year ending 31st December, 1936.

Mineral.	Leases.	Sluiceheads.	Area.
			Acres.
Antimony	1	...	10
Copper, Nickel	4	...	93
Coal	4	...	1704
Gold	34	...	1008
Granite	1	...	10
Minerals	8	...	189
Scheelite	...	...	...
Silver-Lead	2	...	50
Stone	3	...	100
Tin	131	...	2692
Wolfram	3	...	96
Water-rights and Dam Sites	88	594	58
Licences to Search for Coal and Oil	4	...	9900
Mining Easements and Machinery Sites	9	...	54
Total	292	594	15,964

RETURN showing the Total Number of Leases and Licences in Force on 31st December, 1936.

Mineral.	Number.	Number of Sluiceheads.	Area.
			Acres.
Antimony	1	...	10
Asbestos	1	...	1
Barytes	2	...	90
Bismuth	1	...	40
Coal	29	...	6577
Clay	2	...	7
Copper-Nickel	5	...	249
Dolomite	1	...	129
Granite	5	...	88
Gold	155	...	3183
Gravel	...	...	...
Iron	1	...	5
Limestone	4	...	240
Molybdenum	...	...	...
Minerals	61	...	6131
Marble	1	...	10
Osmiridium	1	...	10
Scheelite	2	...	271
Shale	3	...	119
Silver	8	...	350
Stone	3	...	79
Tin	501	...	13,880
Wolfram	1	...	59
Mining Easements	112	...	634
Licences to Search	5	...	10,900
Water Licences	466	2034	1963
Total	1371	2034	45,025

RETURN showing the Mining Companies Registered during the Year ending 31st December, 1936.

Number of Companies.	Capital.
5	£219,700

In addition to the above, 8 Agents for Foreign Companies and 2 Syndicates under Part VA of the Mining Companies Amendment Act, 4 Geo. V. No. 44, were registered.

RETURN showing the Average Number of Persons Engaged in Mining during the Years 1880 to 1936 inclusive.

Year.	Number.	Year.	Number.
1880	1653	1909	6054
1881	3156	1910	5770
1882	4098	1911	5247
1883	3818	1912	5566
1884	2972	1913	6107
1885	2783	1914	4741
1886	2681	1915	3908
1887	3361	1916	3864
1888	2989	1917	4050
1889	3141	1918	4278
1890	2868	1919	4413
1891	3219	1920	5364
1892	3295	1921	4011
1893	3403	1922	3835
1894	3433	1923	4785
1895	4062	1924	5264
1896	4350	1925	5110
1897	4510	1926	5309
1898	6052	1927	5044
1899	6622	1928	5170
1900	7023	1929	4986
1901	6923	1930	4606
1902	5934	1931	4391
1903	6017	1932	4605
1904	6194	1933	4510
1905	6581	1934	4843
1906	7005	1935	5409
1907	7516	1936	5432
1908	6466		

RETURN showing the Total Amount of Rents, Fees, &c., Received by the Mines Department during the Year ending 31st December, 1936.

Head of Revenue.	Amount.		
	£	s.	d.
Rent of Auriferous and Mineral Lands	8621	0	0
Fees, Auriferous and Mineral Lands	885	6	5
Survey Fees	1720	2	7
Fees under the Explosives and Inflammable Liquids Act	1517	4	10
Total	£12,743	13	10

RETURN showing the Average Number of Miners Employed during the Year ending 31st December, 1936.

Division.	Number.
Northern and Southern	1387
North-Eastern	660
Eastern	626
North-Western	554
Western	2205
	5432

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 1936 inclusive.

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

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, 1922 to 1936, inclusive.

Nature of Lease.	In force on 31st Dec., 1922.		In force on 31st Dec., 1923.		In force on 31st Dec., 1924.		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.	
	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.
For Minerals, Silver, Tin, &c.	716	Acres. 26,459	614	Acres. 2 1,880	460	Acres. 23,308	532	Acres. 23,588	541	Acres. 22,129	642	Acres. 25,604	728	Acres. 28,103	652	Acres. 27,052	418	Acres. 18,321	379	Acres. 17,101	284	Acres. 13,320	326	Acres. 16,734	444	Acres. 18,716	500	Acres. 19,802	585	Acres. 21,096
For Coal, Slate, Shale, &c.	73	16,809	66	16,053	27	8901	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
For Gold Dredging Claims	127	2424	108	1687	91	1829	70	1340	42	870	38	749	40	830	36	746	40	830	57	999	77	1987	128	3879	167	3987	162	3190	155	3183
	36	399	33	369	20	289	20	195	42	363	41	502	52	626	60	756	30	353	—	—	—	—	—	--	—	—	—	—	—	—
Mining Easements	87	607	81	606	77	592	77	570	68	494	77	484	77	475	55	409	73	504	77	434	48	316	79	475	94	578	107	629	112	634
Machinery Sites	31	123	30	124	26	115	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	73	137,692	36	34,761	21	38,528	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
Water-rights, Mineral and Gold	493	3002 & 1814 sluice-heads	435	2147 & 1612 sluice-heads	338	1990 & 152 sluice-heads	371	2167 & 1604 sluice-heads	360	2190 & 1591 sluice-heads	394	2246 & 1748 sluice-heads	371	1552 & 1581 s luice-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

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

	Average for **1924.**	Average for **1925.**	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.**
	£ 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	63 4 3	61 9 7	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
Lead—Soft Foreign: per ton	33 13 11	35 17 3	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
Spelter: per ton	33 12 0	36 5 0	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
Tin—Standard, spot: per ton	248 17 4	261 1 8	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
Silver - Standard, spot: per oz.	s. d. 2 9·97	s. d. 2 8	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.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Osmiridium: per oz.	...	...	11 13 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
Wolfram: per ton	...	...	70 0 0	61 10 0	104 5 0	144 5 0	105 0 0	64 0 0	62 16 0	81 2 6	94 0 0	175 0 0	161 5 0
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

MINES DRAFTING BRANCH.

The number of working plans in use and which are all kept up to date is 209, as compared with 208 in 1935.

Instructions issued to surveyors	213
Diagrams received from surveyors	346
Diagrams drawn on leases	544
Consolidated and other diagrams drawn	34
Lithographs entered to date	95
Various tracings prepared	44
Tracings for Launceston	314
Manuscripts entered to date	13
New manuscript plans drawn	3
Geological colour work	2
Underground surveys examined	63

STAFF.

The Government Geologist (Mr. P. B. Nye, M.Sc., B.M.E) was granted a further extension of special leave for one year from 21st September, 1936, to continue his duties as chief executive officer of an aerial survey being conducted jointly by the Commonwealth, Western Australia, and Queensland Governments in Northern Australia.

Miss A. I. Kelso was appointed to the position of typiste as from the 29th February, 1936.

Mr. W. F. Evans (Assistant Chemist in the Department's laboratory at Launceston) resigned as from the 24th April, 1936.

Mr. J. D. McElroy, B.Sc., was appointed to the position of Assistant Chemist (*vice* Mr. W. F. Evans, resigned) as from 21st September, 1936.

Miss E. M. Bennett, typiste, who was appointed on 5th January, 1930, resigned as from 19th June, 1936.

Miss H. M. Killick was appointed to the position of typiste as from the 23rd June, 1936.

CONCLUSION.

I desire to express my appreciation of the loyal and efficient help rendered by all officers of the Department, including the Mining Drafting Branch, and to the wardens and registrars of mines of the respective districts.

I have the honour to be,

Sir,

Your obedient servant,

J. B. SCOTT,
Secretary for Mines.

APPENDIX I.

REPORT OF ACTING GOVERNMENT GEOLOGIST FOR YEAR 1936.

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

Field Work.

The following list includes the field trips, surveys, examinations, &c., made in connection with mineral deposits, mines, &c., which were carried out during the year and the officers by whom they were conducted:—

(1) Mainwaring River to Wanderer River, by F. Blake.
(2) Visit to Lefroy in connection with Drilling, by F. Blake.
(3) Jane River and Prince of Wales Range, by F. Blake.
(4) North Zeehan Area, by F. Blake.
(5) Comstock Workings, Zeehan, by F. Blake.
(6) Sampling Nickel Deposit at Trial Harbour, by F. Blake.
(7) Examination of Tin Deposits at Upper Natone, by F. Blake.
(8) Examination of Espie's Coal Prospect at York Plains, by F. Blake.
(9) Princess Mine, Lynchford, by F. Blake.
(10) Investigation of Water Supplies at Lisle Goldfields, by F. Blake.
(11) Examination of Alluvial Gold Prospect at Winnaleah, by F. Blake.
(12) Examination of Munning's Coal Mine, York Plains, by F. Blake.
(13) Survey of Mangana Goldfields, by F. Blake.
(14) Survey of Blythe River Iron Deposits, by F. Blake.
(15) Investigation of Limestone Resources in vicinity of Melrose and Railton, by Q. J. Henderson.
(16) Survey of Eastern Hill Tin Mine, Storey Creek, by Q. J. Henderson.
(17) Investigation of Gold Prospects at Petchey's Bay, by Q. J. Henderson.
(18) Examination of Dam Site for Kingston Water Supply, by Q. J. Henderson.
(19) Examination of Gold Prospect near Merry Creek, by Q. J. Henderson.
(20) Survey of Beaconsfield Gold Mines, N.L. Prospects, by Q. J. Henderson.
(21) Examination of Some Lodes, near Mt. Montgomery, Brookstead, by Q. J. Henderson.
(22) Inspection of Mt. Mary Gold Mine, Cygnet, by Q. J. Henderson.
(23) Examination of Great Pyramid Tin Mine, Upper Scamander, by Q. J. Henderson.
(24) Examination of Lady Havelock and Laranda Mines, South Mt. Victoria, by Q. J. Henderson.
(25) Investigation of Geological Structure Magnet Mine, in preparation of Drilling Campaign, by Q. J. Henderson.
(26) Laboratory Investigation, Launceston, of alleged Osmiridium-bearing Bronzitite from Adamsfield, by Q. J. Henderson.
(27) Investigation of various Aid to Mining Prospects, vicinity of Zeehan, by Q. J. Henderson.
(28) Examination of Prospects at the Koonya Mine, Rosebery, by Q. J. Henderson.
(29) Examination of Iron Deposits at Hampshire and Highclere, by Q. J. Henderson.
(30) Examination of various Prospects at Adamsfield, with particular reference to Operation of Plant erected for Treatment of Osmiridium-bearing Bronzitite, by Q. J. Henderson.

Reports.

In conection with the above and other examinations the following reports were prepared:—

(1) Drilling at Michael Tin Mine, Blue Tier, by F. Blake.
(2) Boring at Gladstone, by Q. J. Henderson.
(3) Dam Site for Kingston Water Supply, by Q. J. Henderson.
(4) District between Mainwaring and Wanderer River, by F. Blake.
(5) May Queen Area, North Zeehan, by F. Blake.
(6) Mt. Rex Tin, N.L. Properties, Eastern Hill, Storey Creek, by Q. J. Henderson.
(7) Espies Coal Prospect, York Plains, by F. Blake.
(8) Comstock Adit Workings, vicinity Allison's Lode, by F. Blake.
(9) Track-cutting Operations (Progress Report), by Q. J. Henderson.
(10) District between Jane River and Prince of Wales Range, by F. Blake.
(11) Report on Tin Lodes, Upper Natone, by F. Blake.
(12) Prospecting Operations of Beaconsfield Gold Mines, by Q. J. Henderson.
(13) Boring for Coal at Musk Vale, George Town, by F. Blake.
(14) Jordan's Gold Prospect, Winnaleah, by F. Blake.
(15) Gold Prospects between Petchey's Bay and Lymington, by Q. J. Henderson.
(16) Munning's Coal Prospect, York Plains, by F. Blake.
(17) Water Supplies for Mining at Lisle Goldfield, by F. Blake.
(18) Notes on an Iron Deposit at Highclere, by Q. J. Henderson.

In addition numerous departmental reports and recommendations were made in connection with applications for assistance to mining and sustenance for prospecting, &c., in various parts of the State.

Staff.

No changes occurred in staff during the year.

The Government Geologist was granted a further term of 12 months' leave of absence while acting as Executive Officer to the Geological, Geophysical, and Aerial Survey of Northern Australia.

Track-Cutting and Prospecting Operations.

Supervision of track-cutting and prospecting by the Geological Survey staff was continued during suitable months of the year. The areas selected were Meredith Range, Que River, Waratah-Specimen Reef, Jane River-Prince of Wales Range, and Mainwaring1Wanderer Rivers districts.

Routine and Other Duties.

During the year the usual duties of interviewing visitors, answering correspondence, &c., were carried out. These were chiefly concerned with identification of specimens and furnishing information about mineral deposits, mines, publications, &c., in connection with the mining industry of the State.

Other duties included:—

(1) Preparation of rock sections for microscopical examination.
(2) Attendance at meetings of Mine Managers' Board.
(3) Attention and additions to departmental collections.
(4) Weighing of, and certifying to, parcels of osmiridium being shipped overseas.
(5) Preparation of collection of rocks and mineral specimens for schools and other institutions.
(6) Selection of sites for drilling.
(7) Setting and correcting papers for mine managers' examinations.
(8) Preparation of plans, sections, maps, &c., to accompany reports.
(9) Attention and additions to departmental library.

In conclusion, I desire to record my appreciation of the co-operation and excellent work carried out by the staff of the Geological Survey and the capable and energetic manner in which such work was performed.

APPENDIX II.

REPORT OF THE CHIEF CHEMIST AND ASAYER.

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, fluorine, iron, magnesium, manganese, mercury, molybdenum, nickel, osmiridium, phosphorus, platinum, potassium, sodium, sulphur, tantalum, titanium, tungsten, zinc, and zirconium. Analyses were made of ores, minerals, cement, clays, rocks, coal, shale, water, &c.

The number of determinations amounted to approximately 8200, including 3000 flotation plant determinations. Departmental samples increased to 1019 as compared with 897 and 352 during the two previous years.

Tasmanite Shale.

Analyses of samples of mudstone overlying the shale seams and flotation tailings have supplied useful information in relation to the kerogen content of the shale. All samples contain water of constitution and carbon dioxide (present as carbonate) ranging from 3 to 7 per cent. Similar analyses have been made with shale, and prove that, in estimating the quality of the shale from the ash content, the percentage of water of constitution and carbonate carbon dioxide must be taken into account.

The Pilot flotation plant was in operation for nine months, and 25 tons of shale were treated. Concentrates produced were utilised for ashpalt production.

The flotation plant for continuous testing consists of 12 " Sub. A " cells, 6" x 6", together with ball-mill, classifiers, thickener, &c. During this period research relative to the treatment of the shale was carried out, and included the following:—

Classification.—Variation of W/S ratio and analyses of overflows. As the kerogen has a specific gravity of 1·2 only, a low solid content is necessary for suitable classification.

Thickening of classifier overflow.

Flotation.—A wide range or reagents were tested and the results examined for selection.

Control and place of addition or reagents and water were found to require close attention, and special reagent feeders were built for this purpose.

Various types of circuits were tested, circulating loads determined together with the effects of many variables.

The number of plant samples assayed amounted to 1500.

Tailings and flotation concentrates from the Beaconsfield district were submitted to cyanide tests.

General.

The usual routine work was attended to, and information supplied relative to laboratory work, sampling, methods of treatment, &c.

APPENDIX III.

REPORT OF THE CHIEF INSPECTOR OF MINES.

The Chief Inspector (Mr. J. O. HUDSON), reports:—

I beg to submit my annual report for the year 1936, in connection with the administration of the Mines and Works Regulation Act, 1915.

The tables attached show—

(1) Fatal accidents and injuries received in or about mines, works, and quarries in the State of Tasmania.

(2) The rate per 1000 of fatalities and injuries in the different divisions, and the number of persons employed.

(3) The average price of metals from the year 1923 to 1936.

The average number of persons employed for the year was 5432, being an increase of 23 compared with the year 1935.

Accidents.

The total number of accidents reported during the year was 97, being a decrease of 45 compared with the year 1935.

The 97 accidents caused injury to 100 persons.

In the Northern and Southern Divisions there was a decrease of four accidents. In the North-Eastern Divisions there was an increase of four accidents. In the Eastern Division there was a decrease of three accidents. In the North-Western Division there was a decrease of four accidents, and in the Western Division there was a decrease of 38 accidents compared with the year 1935.

There were three fatal accidents during the year causing the death of four persons, being an increase of three compared with the year 1935.

The non-fatal accidents were 94—causing injury to 96 persons, being a decrease of 45 compared with the previous year.

The rate per 1000 persons employed who were killed and injured was 18·409, compared with 26·252 for the previous year.

The rate per 1000 persons employed who were fatally injured was 0·736, compared with 0·184 for the year 1935.

The rate per 1000 persons employed who received injury necessitating absence from work for more than 14 days was 17·673 compared with 26·067 for the previous year.

The three fatal accidents were caused as follows:—

In a blue-stone quarry a portion of the face was considered dangerous. Two men were instructed to remove the dangerous ground. They bored a hole to bring down this ground and while charging the hole a fall of rock, about three tons, occurred from above them striking both men and causing fatal injury.

A miner was assisting to replace some centre boards in a pass which had an inclination to 35 degrees from the horizontal. Mullock was hung up in the pass above where repairs were being carried out; prior to commencing work the men turned water on to the hung up mullock from the level above. The water caused the mullock to run and the man was swept down the pass and killed.

A miner was climbing on to a square set of timber in a stope when a short tom which he grasped gave way and he fell a few feet, the tom striking him on the chest causing rupture of the liver which at a later date terminated fatally.

Of the 96 serious accidents, 49 occurred underground, and 47 on the surface; nine occurred at sluicing mines, 17 at works, and two at coal mines.

The injuries in 25 cases were fractures or permanent injury.

Prosecutions.

There were five prosecutions for failing to comply with the provisions of the Act, viz.:—

(1) An electrician for riding in a cage with material.
(2) A miner for careless handling of explosives.
(3) A shift-boss for failing to see that the General Rules were observed.
(4) A platman for riding in a cage with material.
(5) A mining company for using a water storage dam before the structure was approved.

In four cases convictions were obtained and the other case was dismissed.

Operations—Southern Division.

The Electrolytic Zinc Company operated continuously during the year. The Directors have intimated the intention of the Company to extend the operations by producing aluminium.

The output for the year was 57,744 tons of zinc, valued at £1,119,713, and 214·2081 tons of metallic cadmium, valued at £59,978, from ore obtained outside Tasmania.

In addition, 25,365 tons of zinc calcines were treated from ore obtained in Tasmania for a production of 12.765 tons of slab zinc, valued at £255,106, and 20·21 tons of metallic cadmium valued at £5658. The average number of men employed was 906.

Australian Commonwealth Carbide Company operated continuously during the year and produced 6855 tons of carbide, valued at £137,100, and sold 18,207 tons of limestone, valued at £11,064. The average number of men employed was 149.

The Catamaran Coal Mine operated continuously during the year, producing 10,700 tons of coal, valued at £7920, and employed on an average 40 men.

Adamsfield.—The price of osmiridium remained low, but increased at the end of the year. The average price for the year was £12 10s. per oz. The reported output of metal was 258 oz., valued at £3644.

Quarries.—The bluestone quarries worked fairly continuously during the year.

In conclusion, I again desire to express my appreciation for the energetic manner in whcih inspectors have carried out their duties.

COMPARATIVE Table of Statistics of Accidents in and about the Mines of Tasmania from 1st July, 1892, to 31st December, 1936.

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

* Mount Lyell disaster.

TABLE showing Rate per Thousand Killed and Injured in different Divisions for the Year 1936.

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	1387	4	2	3	5	3·605	1·442	2·163
North-Eastern	531	8	...	8	8	15·066	...	15·066
Eastern	756	4	...	4	4	5·291	...	5·291
North-Western	554	11	...	11	11	19·855	...	19·855
Western	2204	70	2	70	72	32·667	0·907	31·760
Total	5432	97	4	96	100	18·409	0·736	17·673

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	1625	58	...	60	60	36·923	...	36·923
Zeehan, &c.	579	12	2	10	12	20·725	3·454	17·271
Total	2204	70	2	70	72	32·667	0·907	31·760

APPENDIX IV.

REPORT OF THE CHIEF INSPECTOR OF EXPLOSIVES AND INFLAMMABLE LIQUIDS.

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

I have the honour to submit my annual report on the administration of the Explosives Act, 1916, and the Inflammable Liquids Act, 1929, for the year 1936.

The imports of explosives for the year were as follows:—

	lb.
Monobel	101,500
Gelignite	516,000
Ligdyn	89,750
Blasting gelatine	3,050
Powder	13,375
	No.
Detonators	464,100

The quality of the explosives imported was very satisfactory and the non-freezing type of explosives have given every satisfaction through the recent severe weather.

A new explosive has been introduced and tests and its use have given good results.

Accidents.

Four accidents occurred during the year, as follows:—

(1) At the Hydro-Electric Works a charge of explosives was fired, the men taking shelter in a hut. A stone passed through the roof, striking one of the men on the head, causing fatal injury.

(2) At a sawmill a saw was being sharpened on an emery wheel. The sparks ignited a bag of blasting powder which was wrongfully on the bench. Injury was caused to one man.

(3) A youth took down the hose from a petrol pump to clean grease from his trousers, another youth held a lighted match to see if the grease was removed, and an explosion was caused, inflicting burns.

(4) A motor car was being serviced, with engine running, a fire occurred which caused damage to the car.

Prosecutions.

There were six prosecutions. Convictions were obtained in five cases and the other case was dismissed.

Two cases were for the careless use of explosives, one case for selling explosives without a licence, and one case for servicing a car with the engine running.

Two cases for storing inflammable liquids without a licence.

Revenue.

The following licences were issued and fees paid in connection with them for the year 1936.

Explosives Act, 1916 (1st January to 31st December, 1936).

	No.	£	s.	d.
Magazine licence	67	65	10	0
Permits to sell explosives	267	66	15	0
Permits to import explosives	13	26	0	0
Permits to convey explosives	53	13	5	0
Permits to sell fireworks only	130	16	5	0
		£187	15	0

Inflammable Liquids Act, 1929 (1st July, 1935, to 30th June, 1936).

	No.	£	s.	d.
Licences for store	565	864	5	0
Registration of premises	264	66	5	0
Permits to import	6	1	7	6
Increased quantities	19	7	15	0
Transfer fees	10	2	10	0
Amendment to licences	23	5	15	0
		£947	17	6
Magazine rents		111	1	5
		£1,246	13	11

APPENDIX V.

REPORTS OF INSPECTORS OF MINES.

Inspector W. H. WILLIAMS reports:—

I have the honour to furnish the following report upon the work of inspection and administration of the provisions of the Mines and Works Regulation Act, the Explosives Act, and the Inflammable Liquids Act, within the Launceston Inspection Division, for the year ended on the 31st December, 1936:—

The average number of persons engaged in mining and metallurgical operations was 1384, as against 1536 for the previous year, the slight decrease being consequent upon the completion of constructional works for an expansion of mining activities.

Thirteen accidents were registered under the provisions of the Mines and Works Regulation Act. There was one fatal accident, involving two deaths, and 12 non-fatal accidents attended with a like number of casualties. Three accidents occurred underground, and 10 were associated with surface operations, five of the latter being due to miscellaneous mishaps during the construction of a rock-fill dam.

The underground accidents were of a minor nature and the limited number of this class of accident continued to reflect creditably upon the general conduct of operations.

The fatal accident occurred in a municipal stone quarry. Two employees were charging a jumper hole, on a bench near the summit of the quarry, when approximately four tons of ground fell from the wall of the bench. One person, who was attached to a safety-line, was instantly killed, whilst the second person, who was dislodged from the bench and fell a slope-distance of 145 feet, sustained injuries to which he succumbed several hours later. The inquest revealed that examinations had been made of the area of ground, that the planes of weakness were not visible, and that the conditions of working were deemed safe. A finding of accidental deaths was recorded.

Although the periods of incapacity exceeded 14 days in each of the non-fatal accidents, the injuries were not of grave moment and no permanent disability resulted. The causes were of a miscellaneous nature and no contravention of the provisions of the Mines and Works Regulation Act was involved.

The principal metalliferous mines and the collieries commanded the greater number of surface and underground inspections, but, as opportunity permitted, the work of inspection was extended to the small mines, and official records of deficiences in applied practices and of the prescribed remedial measures continued to pronounce the value of inspection in the production and maintenance of safe operating conditions.

Congenial industrial conditions directly benefit health, produce contentment amongst employees, add to individual efficiency, and indirectly react as an economic advantage to employers. Advances have been made in elevating the standard of conditions but records have continued to demonstrate that much good may still be accomplished in matters pertaining to health and sanitation. Instances of incomplete systems of ventilation and of atmospheres polluted by smoke and fumes lingering from blasting operations and rendered uncongenial by intense fogging have not been as rife as formerly but were still unnecessarily prevalent. Ventilating fans were installed at three mines and the associated ventilating disabilities became less persistent. Thermometrical conditions were not excessive and the prevalence of underground atmospheric dust, at the metalliferous mines, was not pronounced, but objectionable dispersions of dust were associated with crushing, calcining, separating, and the general handling of dry material. A suppression of the dust nuisance was obtained by the application of water at one plant, but in two cases the use of water was not practicable and consideration is now being given to the installation of collecting units.

Facilities for rendering first-aid, bathing and changing accommodation, latrine arrangements, crib-houses, and shelter-sheds were provided at the principal mines, but the appointments were often of a mean order and much benefit would accrue from innovations which might be practised in those directions.

Maintenance and protection of machinery in use at the various mines received the attention demanded by the provisions of the Act. Deficiencies were more pronounced at small mines, and, in several instances, exception was taken to windlass arrangements, sinking ropes, and connections, to maintain a reasonable standard of safety.

Regular examinations were made of the explosives used and exception was not taken to the quality of the nitro-compounds but with the diminishing spplies of Ardeer No. 2 Gelignite, and the more extensive marketing of Polar S.N. Gelignite, a degree of uncertainty was displayed in regard to the explosive sensitiveness and efficiency of the latter. In one case, a stronger detonator was introduced and the behaviour of the compound is being kept under surveillance. Isolated quantities of defective compound were condemned owing to deterioration due to irregularities of local storage. Examinations and tests of the safety fuse and detonators revealed no untoward deficiencies.

Considerable attention was again devoted to an enforcement of the provisions of the Inflammable Liquids Act, but the full duties of administration commanded more service than could be allotted thereto.

One untoward incident was reported under the provisions of the Act and resulted in the institution of legal proceedings. The tank of a motor car was being serviced from a kerbside pump whilst the engine was running. The exhaust ignited the gases drifting from the fill-vent of the tank and the car was damaged by the ensuing fire.

Legal proceedings were instituted against one person for persistent storage in unlicensed premises.

Special attention was given to the construction of two large dams for mining purposes, one of the rock-fill type and one of the flat-decked buttress type of reinforced concrete. Both dams were completed, satisfactorily consolidated under initial stresses, and exhibited no distress under conditions of flooding due to an abnormal rainfall.

In one instance, exception was taken to the condition of an old earth and timber dam, and arrangements were made for necessary repairs, but a breach occurred before the work was commenced and reconstruction could not be agreed to. In a second instance, a concrete dam was constructed without approval of the design and the owners were inflicted with the requirement of adding to the structure to ensure a desirable degree of stability. In a third instance, the owner of an earth and timber dam was ordered to effect repairs owing to erosion of the embankment and decay of the timbered section of the structure.

In addition to the duties ordinarily performed under the provisions of the foregoing Acts, examinations were made of mining properties for the purposes of the Aid to Mining Act, and special reports were furnished upon the pollution of rivers by mining operations and upon matters of a miscellaneous nature.

Mining Operations and Production.

Coal.

The improved demand for native coals for industrial purposes was sustained, and, with two exceptions, increased outputs were recorded at the various collieries, the total production advancing from 103,898 tons to 111,167 tons, valued at £77,205.

Operations at the Cornwall Colliery gave employment to 105 men and the output was 56,287 tons, valued at £36,943. Production was exclusively from the No. 3 tunnel workings, where the seam maintained its normal width and quality, and, although the output was 530 tons less than that for the previous year, operations gave employment to an increased number of men and developmental activities were pursued to ensure a productive capacity equal to any exigencies of trade conditions.

The output of coal from the Mount Nicholas Colliery advanced to 29,666 tons, valued at £23,252, and 81 men were employed. Troubled seam conditions continued to hamper the regular advancement of places but a more progressive developmental policy was prosecuted and partially compensated the loss of productive places due to the incursion of the major down-throw fault in the western workings and the roof troubles experienced in the marginal section of the old longwall workings in the eastern area. Developmental activities were continued on the 4 feet 9 inches seam, 108 feet below the major workings, and the advancement of leading places is gradually making available additional productive bords, which, consistent with an expansion of the industrial reception of the grade of coal, will ameliorate the operating disabilities attending exploitation of the higher seam.

The Jubilee Company employed 40 men and produced 18,759 tons of coal, valued at £11,853, representing a slight reduction in the number of employees and an advance of 4185 tons on the output recorded for the previous year. Activities were characterised by continued extraction of pillars on the retreat from the major upthrow fault, the mechanisation of holing in a productive district by the installation of an electrically operated Siskol header, and more active development of the eastern area to centralise production and lessen haulage traverses.

Operations were more continuous at the Fingal Colliery and the output increased to 1680 tons, valued at £840. Production was derived from the advancement of gaining bords and cut-throughs northerly from the main heading.

Troubled seam conditions and the absence of a forward developmental policy continued to hamper productive operations at the Stanhope Coal Mine. The output declined to 3479 tons, valued at £2696, a converse result to the marketing possibilities of the quality of clean coal producible from the seam being exploited.

Modified longwalling was more active on the dip-seam at the York Plains Colliery. The demand for this class of coal, for kiln practices and skin dehydration, improved and the output increased to 1296 tons, valued at £1621.

Efforts to rehabilitate productive operations at the Seymour Coal Mine did not merge into importance and were abandoned after the workings had been partially dewatered.

Gold.

The estimated production of fine gold was 1293·3 oz., valued at £9084·7, representing an advance of 552·3 oz. on the recorded output for the previous year.

Five hundred and seventy-six oz. accrued from the treatment of complex battery slimes, 236 oz. were recovered from operations on the auriferous alluvials, 216·8 oz. were returned as reef gold, 129·6 oz. were extracted from tin oxides recovered from the sluicing of stanniferous alluvials, 54·4 oz. accrued from the milling of mine dumps, 40·8 oz. resulted from the straight cyanidation of battery sands, and 39 oz. were recovered from battery debris.

Alluvial gold, weighing 123·8 oz., containing 113·5 oz. of fine gold, valued at £797·3, was recovered by miscellaneous parties operating on the auriferous alluvials in the Lisle basin.

Intermittent sluicing was pursued by a tribute party at the Cradle Creek Mine and accounted for 17·8 oz. of fine gold, valued at £124·5.

Alluvial gold, weighing 8·5 oz., containing 7·9 oz. of fine gold, valued at £56·5, represented the extent of productive mining at Golconda, and 3·15 oz., containing 2·9 oz. of fine gold, valued at £20 were recovered from the Camden alluvials.

Appreciable interest was directed to the economic possibilities of a restoration of productive mining at Alberton.

Investigational operations were pursued at the Long Struggle, Mercury, and Ringarooma United group of mines, interest being principally centred in the prospects of the Long Struggle, Caxton, Mercury No. 2, Rosalind, Premier, and Strahan lines of reefing. A bulk parcel of 26 tons was raised from the old underhand stope on the Mercury No. 2 lode and returned 2·5 oz., containing 2·3 oz. of fine gold, valued at £16. The result was not encouraging, and an option of purchase was not exercised, but the lessees were not convinced by this result, and, later, advised that a further parcel of 3·3 tons raised by them returned 3·73 oz., containing 3·42 oz. of fine gold, valued at £23·7. Miscellaneous parcels from various other reefs, covered by this group of mines, and aggregating 73 tons, were crushed for a battery recovery of 64·25 oz., containing 58 oz. of fine gold, valued at £500.

Endeavours to introduce capital for comprehensive prospecting and developmental operations beyond the lateral and depth extremities of the old workings, upon which the economic future of the series is dependant, were not successful, and, latterly, operations were reduced to crosscutting for the Caxton Reef from the bottom adit at the Long Struggle Mine.

Matthews and party continued with small-scale operations on the Mount Victoria leases and 11 tons of quartz was crushed at the Ringarooma United battery for 7·8 oz., containing 5·9 oz. of fine gold, valued at £43·4. The owner is satisfied with developmental prospects and is proceeding with the installation of crushing units.

Early activities by the New River Gold Developmental N.L. in the development and exploitation of the New River reefing series, and alluvials did not merge into the productive importance anticipated. Trial crushings at the State battery were succeeded by the installation of a 5-head stamper battery but reef mining was not persisted with. As far as could be ascertained, from battery records, 30 tons of quartz was crushed for 4·85 oz., estimated to contain 4·44 oz. of fine gold, valued at £31. A small nozzling and elevating plant was installed and 34·96 oz., containing 28·56 oz. of fine gold, valued at £202 were recovered from sluicing operations on the auriferous alluvials.

A shallow adit was driven at Heathorn's Prospect and intersected a reef from which encouraging surface prospects had been obtained. The adit development was not encouraging, and, latterly, operations were directed to prospecting the trend and persistence of the occurrence of gold. Five tons of quartz, from the adit, returned 12 dwt., containing 11 dwt. of fine gold, valued at £3·9.

Exploratory work was intermittently pursued at the Una, Hinemoa, and other old workings, between Alberton and Mathinna, but there are no new developments to be recorded in connection with these operations.

Mining is quiescent at Mathinna and there are no developments of moment to be recorded, productive operations being restricted to an output of 17·5 oz. of fine gold from miscellaneous operations on the alluvials at Long Gully and other areas; to the return of 8·76 oz. of fine gold from reefing prospects; to the recovery of 4·5 oz., estimated to contain 4·17 oz. of fine gold, valued at £28·8; from the crushing of 12 tons of quartz from exploratory operations by Messrs. Brock Brothers; and to the recovery of 7·98 oz., containing 5·23 oz. of fine gold, valued at £37, from the cyanidation of 200 tons of battery sands at the Golden Gate Mine.

Operations, by miscellaneous parties, on the alluvials at Mangana were less active and accounted for 17·34 oz., containing 15·89 oz. of fine gold, valued at £111·85.

Sinking was continued on the quartz-vein at Rodman's Prospect, Mangana, and, at the 50 feet level, 50 feet of driving was done. 2·7 tons of quartz from sinking was crushed for a recovery of 2·94 oz., containing 2·67 oz. of fine gold, valued at £18·67. The encouraging surface values were not sustained in the driving at the 50 feet level.

Brannan and party completed the re-opening of the haulage tunnel at the Mangana Reefs Mine, and, latterly, was engaged driving northerly on the lode to explore the depth persistence of values exploited in the upper workings.

Operations in the Beaconsfield area were principally centred in developments at the Golden Horseshoe Mine and in the application of flotation practices to the treatment of the complex slimes at the site of the old Tasmania battery. Alluvial mining was not active, the production receding to 2·86 oz., containing 2·61 oz. of fine gold, valued at £18·36.

Gold recovered by the G.L.K. Gold Mines Pty. Ltd. from continued investigational cyanidation of the mineralised sands at Blyth's Creek was estimated to contain 35·6 oz. of fine gold, valued at £246·96.

Mining at the Golden Horseshoe Mine was confined to driving easterly at the 60 feet level and stoping above that level. The reef continued to be small and irregular, and in the eastern drive complete displacement, by faulting, was encountered. Recurrence beyond the fault has not been located. 110·5 tons of quartz and detritals was crushed for a battery recovery of 103·47 oz., containing 85 oz. of fine gold, valued at £595·55.

The installation of flotation, calcination, and other units was completed by the Grosvenor Gold Mines No Liability, formerly Austin Friars Pty. Ltd., and treatment of the complex slimes, at the old battery site of the Tasmania Gold Mine, was commenced. 5975 tons of slimes was reconditioned and processed for a reported recovery of 576 oz. of fine gold, valued at £4048. The initial process involved the cyanidation of the calcined float, but this was succeeded by the shipment and sale of the calcine. Operations gave employment to 27 men.

Productive operations in the Lefroy area were mainly concerned with the milling of mine dumps and with operations on the alluvials at Lefroy and Back Creek. 87·5 oz., containing 74·36 oz. of fine gold, valued at £523·93, were recovered from milling selected materials from the Volunteer and other dumps. Operations, by miscellaneous parties, on the auriferous alluvials at Lefroy and Back Creek accounted for 30·11 oz., containing 27·58 oz. of fine gold, valued at £93.

At the Perpetual Mine (Lathey and Harris), the prospecting shaft was enlarged and sunk to 110 feet. At the 100 feet level, a crosscut was driven southerly and intersected the reef at 29 feet. The reef, varying from 4 inches to 14 inches in width, was driven on for 36 feet westerly, and, although encouraging prospects for gold were intermittently obtained, the general average value, in relation to the available reef-widths, gave no cause for optimism in regard to the economic prospects.

Attendant upon prospect sinking and driving on the gold-bearing reef discovered by A. W. McDonald at Back Creek, a trial parcel of five tons of quartz was forwarded to the mainland for treatment and returned 3·56 oz., containing 3·4 oz. of fine gold, valued at £23·8, but no further developments accrued and operations were suspended.

Several small trial parcels of quartz, aggregating 7·25 tons, from prospects at Lefroy and Back Creek, were crushed at the State battery, for a recovery of 1·77 oz. of gold, estimated to contain 1·63 oz. of fine gold, valued at £11·55.

The balance of the recorded output of gold accrued from miscellaneous operations on the auriferous alluvials and reefing occurrences, from the treatment of battery debris, and from the treatment of tin oxides recovered from the sluicing of stanniferous alluvials in areas correlated with the denudation of the auriferous series.

Tin.

The recorded production of metallic tin was 750·9 tons as against 829·6 tons for the previous year. The average quarterly quotation for metallic tin declined to £204·6 per ton, and, on the basis of average prices, the value of the output was £154,363·33.

Although production operations by miscellaneous parties were less active in several areas, the decreased output was due more to a curtailment of productive operations consequent upon the inception of constructional, developmental, and investigational operations, than to reduced mining activities.

Piper River.—V. J. Miller installed a tabling unit, proceeded with the treatment of a known occurrence of stanniferous beach sands near the mouth of the Piper River, and recovered 5·96 tons of concentrate, containing 3·8 tons of metallic tin, valued at £771·59.

Storey Creek Mine.—Productive mining was less active but operations gave employment to an increased number of men and development of the lode series was more progressive, particularly in regard to opening up the No. 2 lode which has been the predominating factor in the output of wolfram. Stoping was continued on developed sections of No. 1 lode and associated veins, from the adit to No. 4 level, for the major output of tin concentrate. 9353 tons of ore was mined and milled for a recovery of 67·55 tons of tin oxide, containing 45·16 tons of metallic tin, valued at £9239·56, and 177·7 tons of wolfram, valued at £20,306.

Aberfoyle Tin N.L.—Operations at this mine were characterised by the prosecution of a more active developmental policy, and the lode system has responded encouragingly to immediate and projected productive requirements. Stoping was continued on the 26, 40, and 50 feet lodes and associated veins on the Nos. 1 and 2 levels of the shaft workings and the opening up of the Eastern lode on both levels and developmental disclosures of the series southerly on No. 2 level have enhanced recent

developments at the mine. Effect was given to the project of driving a low-level adit to prospect the zone of mineralisation and develop the present lode system at a vertical depth of 172 feet below No. 2 level of the shaft workings. The adit was commenced and driven 941 feet, the estimated distance being approximately 3000 feet.

Production was maintained within the margin of economic requirements and with the inception of a vigorous developmental policy the output was not pressed to that of the previous year. 13,307 tons of ore was mined and milled for a recovery of 283·4 tons of tin concentrate, 333·5 tons of "seconds," and 36 tons of wolfram concentrate. Finished products were stocked for sale, and sales effected were 226 tons of tin oxide, containing 182·664 tons of metallic tin, valued at £37,968·24, and 25·187 tons of wolfram, valued at £3019·495. Operations gave employment to an increased number of men, the average being 104.

A progressive development of the Company is to be the conversion of the present steam to electric power, the electricity for which is to be serviced by the Hydro-Electric Commission.

Brookstead Tin Mines (P. D. Beard Pty. Ltd.)— Sluicing operations were pursued at Kent's Creek, Bailey's Marsh, and Foster's Freehold, during the major portion of the year, but, latterly, were reduced to tributing at Kent's Creek pending the execution of a reconstructional policy. During the operating period, approximately 20,257 cubic yards of ground were treated for a recovery of 14·9 tons of tin oxide containing 10·7 tons of metallic tin, valued at £2121·64.

Exploration by winzing, shafting, and surfacing was continued on the lode series at Main Creek and revealed a persistence of ore-widths and values beyond the limits searched by the old workings on the Main and Christoe lodes. An endeavour is being made to introduce capital for the further development of the series.

Miscellaneous.—Operations by miscellaneous parties, in the Storey Creek, Avoca, and Royal George areas, were less active and the output from surfacing and shallow ground-sluicing declined to 2·8 tons of tin oxide, estimated to contain 1·96 tons of metallic tin, valued at £392·385.

Pyramid Hill Mine.—Investigational operations were pursued on the formations and tin-impregnated slates and quartzites at Upper Scamander but did not merge into importance. Twenty-one tons of ore was milled at Waratah for a recovery of ·37 ton of concentrate, containing ·245 ton of metallic tin, valued at £48·6.

Siamese Tin Syndicate.—An increased yardage of ground was sluiced during operations on the alluvials flanking the George and Groom rivers and at the Argonaut sections, but the average value was less and the output, from the treatment of 423,900 cubic yards, declined to 86·48 tons of tin oxide, containing 60·8 tons of metallic tin, valued at £12,334.

George's Bay Tin Mine.—Operations were suspended in the Ferntree alluvials and transferred to the Saxelby area where sluicing has been economically pursued in relatively shallow ground. An increased quantity of ground, aggregating 70,124 cubic yards, was sluiced for an output of 13·5 tons of oxide, containing 9·7 tons of metallic tin, valued at £2017.

Miscellaneous.—Productive operations, on small areas of terrace and alluvial ground, were less active at the Hunt Tin Mine and the output declined to 2·3 tons of concentrate, estimated to contain 1·6 tons of metallic tin, valued at £348·26.

Activities by miscellaneous parties on shallow alluvials and terrace ground in the St. Helens district gave employment to 24 persons and accounted for 15·7 tons of tin oxide, estimated to contain 11 tons of metallic tin, valued at £2253, but there are no developments of moment to be recorded.

Interest was revived in the possibilities of the lode formations in the granites at Priory and although the face of the main drive from a shallow adit shows an encouraging development, insufficient exploratory work has been done to assess the productive prospects of the series. The operating party is sanguine in regard to the prospects and has proceeded with the installation of a 5-head stamper battery and concentrating units.

Tasman Tin N.L. (Anchor Tin Mine).—Opencutting and milling the tin-granites at the old Anchor Mine were economically pursued by the Anchor Tin Syndicate, and an option of purchase was exercised by the Tasman Tin N.L., which Company immediately proceeded with the installation of new classification and additional tabling and vanning units to increase the through-put and reduce the milling losses. Machines have been installed to supplant hand-drilling in the quarry and the progress of future developments will be of marked interest in the exploitation of the stanniferous granites at Lottah.

Seventeen thousand and eighty-four tons of ore was quarried and milled for a recovery of 30·5 tons of concentrate, containing 21·7 tons of metallic tin, valued at £4520·56. Operations gave employment to 34 men.

Cambria Tin Mine.—Sluicing was more actively resumed on the quartz-leader granites at Cambria, and operations gave employment to seven men. 6·06 tons of tin oxide were recovered and returned four tons of metallic tin, valued at £886·8.

North George Tin Mine.—Low values forced the Company to suspend operations, but sluicing was continued by a tribute party and 15,000 cubic yards of ground were passed through the sluice-box for a recovery of 1·58 tons of tin oxide, containing one ton of metallic tin, valued at £192. The result was not encouraging and the project was abandoned.

Miscellaneous.—Operations of a more restricted nature were continued on the leader country and alluvials at the Laffer Tin Mine, and the reported production, from the treatment of 6500 cubic yards of material, was 1·7 tons of oxide, containing 1·05 tons of metallic tin, valued at £226·4.

Bryce and party recovered 1·5 tons of tin oxide from the shallow alluvials at the Niagara Tin Mine, and, latterly, transferred operations to the terrace ground in anticipation of increased production.

Interest was centred in projected activities by the Circle Hydraulic Tin Mining Company, which was formed for the purpose of exploiting areas of alluvials and quartz-greisen-leader granites at Weldborough. The major portion of the inception of operations was occupied upon preparatory work, and, during the latter part of the year, 3·7 tons of oxide were recovered, and contained 2·7 tons of metallic tin, valued at £599·7.

Miscellaneous parties, operating on the shallow alluvials and granite formations in the Lottah-Weldborough-Moorina areas, accounted for an output of 72·3 tons of tin oxide, which was estimated to contain 51·6 tons of metallic tin, valued at £10,333, and the collective importance of these operations may be assessed from the fact that an average of 94 men was afforded employment. The most important of those operations was the installation of a steam plant and the inception of sluicing on the alluvials at the Seven Mile Creek at Lottah; sluicing of the relatively shallow alluvials of the Weld flats by the J.B.L. Syndicate at Moorina; and the resumption of open cutting and milling of a granite lode occurrence at the Frome River, Weldborough.

Waugh Tin Mine.—Productive operations were less active in the deep bouldery drifts flanking the Wyniford River, attention being more concerned with the re-construction of a small head-water dam. 3000 cubic yards of ground were sluiced for an output of 1·2 tons of tin oxide, containing ·839 ton of metallic tin, valued at £169.

Rajah Tin Mine.—Sluicing was continued on the Wyniford River flats and operations gave employment to 16 men. The output declined to 12 tons of oxide, containing 8·7 tons of metallic tin, valued at £1765.

Miscellaneous.—A continuity of operations by Ponting and party at the Eastern Leads Tin Mine was hampered by damage to the head-water facilities by river floods. 3000 cubic yards of ground were sluiced for a recovery of 1·27 tons of concentrate, containing ·917 ton of metallic tin, valued at £184·6.

Operations by Harmon and party at the old Poverty Point workings did not merge into material importance consequent upon the provision of water for sluicing requirements. 17.728 cubic yards of ground were sluiced for an output of 3·6 tons of tin oxide, containing 2·6 tons of metallic tin, valued at £526·4.

Remunerative operations have been pursued by Shean and party on the Wyniford River alluvials and 14·8 tons of tin oxide, containing 10·9 tons of metallic tin, valued at £2309·6, have been recovered from the sluicing of approximately 16,000 cubic yards of ground.

Endurance Tin Mining Company.—Operations by this Company were characterised by a progressive advance in the output of tin oxide from continuous sluicing of the extensive area of terrace drifts and sinking for the future exploitation of the deep lead at South Mount Cameron. Inclusive of a small quantity of concentrate from the treatment of residues, and the production of ·9 ton of oxide by tributers, the total output of tin oxide was 103·6 tons, containing 75·8 tons of metallic tin, valued at £15,417·7. Alluvial gold extracted from the oxide returned 70·4 oz. of fine gold, valued at £497. Operations gave employment to 43 men.

Miscellaneous.—Stevens and party continued with mechanically controlled nozzling and elevation of terrace drifts at the Clifton Extended and sluiced 9000 cubic yards of ground for an output of 4·6 tons of concentrate, containing 3·25 tons of metallic tin, valued at £658.

Johnson and party persisted with the mining of deep drifts overlying the soft granites at Simpson's Estate workings, and, from the sluicing of 14,120 cubic yards of ground, recovered 3·8 tons of tin oxide, containing 2·7 tons of metallic tin, valued at £556.

The metallic content of 13·12 tons of oxide, recovered from the sluicing of 12,700 cubic yards of creek alluvials and terrace ground at the Star Hill Mine, was 9·57 tons of tin, valued at £1959·5. Operations gave employment to six men.

The Mount Cameron Race continued as an important factor in mining operations at Gladstone. An average of 13 parties, aggregating 24 men, were serviced in the sluicing of tin alluvials on a royalty basis, and these operations accounted for an output of 29 tons of oxide, estimated to contain 20·4 tons of metallic tin, valued at £4166.

Operations were continued by the tribute party on the alluvials at the Monarch Tin Mine and four tons of oxide were produced and returned 2·85 tons of metallic tin, valued at £598·8.

Productive activities by the Company were suspended at the Delta Tin Mine and sluicing was continued by a tribute party for a recovery of 5·23 tons of tin oxide, containing 3·7 tons of metallic tin, valued at £730·6. The proved area of payable ground was exhausted and operations were then suspended by the party.

Much interest was directed to the economic possibilities of increased mining activities on occurrences of alluvial tin in the Gladstone area, but the only project to materialise was the establishment of production by the Lanka Tin Mining Company, which Company constructed two concrete head-water dams on Amber Creek, excavated two head-water races, installed a sluicing plant, and, from the sluicing of 5500 cubic yards of deep and shallow ground, recovered 4·55 tons of tin oxide, containing 3·3 tons of metallic tin, valued at £733.

Miscellaneous parties and individual operators continued to be engaged in productive mining on relatively shallow alluvials and terrace drifts in the Pioneer-South Mount Cameron-Gladstone areas. There are no developments of moment to be recorded, but these operations afforded employment to 63 men and accounted for a production of 62·2 tons of oxide, containing 43·6 tons of metallic tin, valued at £2987.

Briseis Consolidated N.L.—Operations by this Company were severely retarded by an abnormal flooding of the Ringarooma River. The rock-fill dam, on the Cascade River, had been completed and preliminary works had been sufficiently advanced at the mine to enable the below-river workings to be recovered and partial production to be commenced when an abnormal rainfall caused the Ringarooma River to rise and break across the levee of the river diversion works, despite the fact that the diversion channel was wider and the levee higher than those servicing operations by the previous company. The river-diversion works were severely damaged and the below-river workings were again flooded and partially filled with sand and slimes. In addition, the electrically operated pumping-plant, which had been installed as the first unit of the scheme of mechanical elevation, was totally submerged and other units of the operating plant were disrupted and damaged. A progressive re-constructional policy was immediately incepted by the Company, and the river-diversion works have been sufficiently adanced, with a wider channel and a higher levee, to enable the workings to be de-watered, and the accumulated sand and slimes are now being sluiced and hydraulickally elevated pending a re-conditioning of the pumping unit and the utilisation of power, serviced by the Hydro-Electric Commission, for the latter purpose. Commendable progress has been made and relatively early production is anticipated.

When production has been restored to the designed scale of operations, the Company will be better situated for progressive production, consistent with an equal persistence of values, than the previous operators in having a command of head-water of not less magnitude, a less height of overburden removal, and the inception of electrically-operated mechanical elevation as against the former hydro elevation, thus enabling the water used for elevation to be diverted to advancing the progress of drift-sluicing and overburden removal.

A limited amount of sluicing was pursued on the cemented drifts at the old No. 1 mine but was not persisted with. From these operations and from operations in the major workings, prior to the flooding, 76·95 tons of tin oxide were recovered, containing 55·4 tons of metallic tin, valued at £10,989·5. Operations gave employment to 103 men.

Lone Brother Tin Mine.—Sluicing of the high face of basalt-mantled drifts was less active at this mine and the output declined to five tons of tin oxide, containing three tons of metallic tin, valued at £621·53.

Miscellaneous.—Miscellaneous parties continued to operate on the shallow alluvials along the Cascade River and Main Creek and at Winnaleah, and accounted for a production of 16·5 tons of oxide, containing 11·5 tons of metallic tin, valued at £2449·6. These operations afforded employment to 25 men.

Arba Tin Mine.—Operations were continued by tribute parties, and 73,000 cubic yards of ground were sluiced for a recovery of 32·6 tons of tin oxide, containing 27·6 tons of metallic tin, valued at £4701·8.

Ormuz Tin Mine.—Operations on the high face of drifts, flanking the Arba workings, were less active and the production receded to 2·23 tons of oxide, containing 1·6 tons of metallic tin, valued at £317.

Ruby Flat Tin Mines.—Productive sluicing of shallow alluvials and altered granties resulted in the treatment of 24,400 cubic yards of ground for a recovery of 10·83 tons of tin oxide, containing 7·88 tons of metallic tin, valued at £1684·9.

Mount Paris Tin Mines Limited.—Activities by this Company were of moment and were principally confined to the construction of a concrete dam at Morning Star Flat on the Cascade River, to the re-construction of the race from the dam to the mine, to investigational operations, and to the inception of hydraulic mining on a scale not previously possible in the exploitation of the extensive occurrence of stanniferous granites and greisen.

Plant installation was completed and 11,250 cubic yards of ground were sluiced for a recovery of 36·45 tons of tin oxide, containing 26·7 tons of metallic tin, valued at £5616·7.

A pilot crushing plant was installed and investigational observations were conducted into the economics of providing full operating units for the recovery of tin oxide from the material normally too hard to deal with by sluicing practices. 750 tons of ore was milled for a recovery of ·712 ton of concentrate, containing ·493 ton of metallic tin, valued at £92·8. Present investigations are not inclined to the installation of a treatment plant and the rock is being dumped.

Miscellaneous.—Productive operations on the quartz-greisen-leader formation at the Mount Ruby Tin Mine continued to be hampered by impoverished head-water facilities for sluicing and the absence of facilities for milling the tinstone normally refractory to hydraulicking. 5800 cubic yards of ground were sluiced for a recovery of 3·55 tons of tin oxide, containing 2·57 tons of metallic tin, valued at £521.

The provision of a new head-water race at the Baker's Discovery Mine improved the facilities for sluicing the tin-granites and the output of tin oxide inclined to 3·61 tons, containing 2·56 tons of metallic tin, valued at £552·77.

Miscellaneous parties were occupied in sluicing shallow alluvials and granite formations in the Branxholm area, and produced 7·4 tons of oxide, containing 5·16 tons of metallic tin, valued at £1049.

Tin mining in the Ringarooma area was concerned with activities by miscellaneous parties on shallow ground at the Star of Peace and Pera Flats. Operations afforded employment to 18 men and accounted for an output of 8·24 tons of tin oxide, containing 5·8 tons of metallic tin, valued at £1210·6; there are no developments of moment to be recorded.

Strait Islands.—Productive mining was not more active on the Strait Islands and was principally confined to the tin-alluvials at Rooke River on Cape Barren Island, and to a lesser extent at Tanner's Bay and Pat's River on Flinders Island. As hitherto, production was hampered by a paucity of head-water for sluicing requirements. Two men were engaged at the Lode Hill Extended Mine and recovered 3·7 tons of tin oxide, containing 2·65 tons of metallic tin, valued at £525, whilst miscellaneous parties, averaging seven men, accounted for an output of 5·7 tons of oxide, containing 3·6 tons of metallic tin, valued at £752·33.

Wolfram.

Wolfram producers were again favoured with an economic price for the mineral and there was a ready market for the high-grade concentrate produced at the Storey Creek and Aberfoyle mines, which accounted for 203 tons, valued at £23,325·5. Operations at those mines have been reviewed under "Tin."

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

The average number of men engaged during the year was as follows:—North-Western area, 594 men; Western area (excluding Mt. Lyell), 537; Total, 1131.

There were 23 accidents registered, an increase of five over last term, two being fatal and 21 that caused loss of employment for 14 days and over. Nine occurred on surface workings and fourteen underground.

One fatal accident was caused through material in a mullock pass, which was temporarily hung up, coming away with a rush, caused through addition of water, whilst a miner engaged therein was attempting to release it.

The second one was caused through a piece of timber falling on a miner engaged on underground operations.

Ventilation.—Some improvements were made during the year at two coal mines, provision being made for second exits as well as improving air currents.

Requests were made at two other mines for improvement and this was promised towards the close of the term.

At other places defective ventilation was remedied as directed.

Explosives.—No complaints were received concerning the condition of fuse, detonators, or high explosives, or any such reported.

Workers' (Occupational Diseases) Relief Fund Act.—In all three claims were made; one was refused on a medical certificate, the others awarded 50 per cent. compensation.

OPERATIONS AND PRODUCTION.

Zinc-Lead Sulphides.

Electrolytic Zinc Company of Australia Limited, Rosebery, Williamsford, and Zeehan.—The transmission line from Tarraleah to Rosebery was completed on 18th February, 1936, when productive operations were commenced. Pending the construction of the Tarraleah Power Station, power supply has been brought from Waddamana, *via* Tarraleah.

Mining.—Developmental work performed during the period totalled 2334 feet, being 1391 feet at Rosebery, and the remainder at the Hercules Mine.

The principal work done at Rosebery was the extension of the north drive at No. 8 level. This was advanced 535 feet. The ore-body at this point proved to be structurally irregular. The main east cross-cut at No. 8 level was advanced 99 feet. Passing through 12 feet of high grade ore this was driven a distance of 150 feet, indicating the presence of a hitherto unknown eastern ore body. A band of high grade ore, two feet wide, was cut years ago by diamond drilling, but it was thought it was only a spur off the main lode. The north drive at No. 6 level was extended 539 feet. The ore body disclosed ore of high grade, but was also much disturbed, as in the north drive at No. 8 Ievel.

At the Hercules Mine, a rise was put through from No. 6 to No. 5 level on "G" lode. Total distance being 235 feet on the underlay. No. 5 level shows considerable length and width of high grade ore which is still being driven on in a northerly direction.

Driving was continued in a southerly direction on "L" lode at No. 5 level, being extended 152 feet. Some good ore was opened up here.

Ore for the flotation plant was drawn from the Hercules and Rosebery Mines, from underground as well as from surface ore dumps.

The average number of men employed for each quarter was 236, 339, 370, and 378. In addition to these there were engaged at the Roasting Plant at Zeehan, 13, 18, 19, and 21 respectively.

Silver-Lead Ores.

Farrell Mining Company Limited, Tullah.—During the term 10,248 tons were mined from the Northern Leases. Forty-eight tons being hand picked, and 10,200 tons treated at the flotation plant. The total quantity of marketable ore recovered was 2365·2 tons, containing 186,618 oz. of silver, valued at £15,721., and 1634·4 tons of lead, valued at £29,312. Total value, £45,033.

The main shaft was continued to a depth of 369 feet below the surface and No. 4. level opened. From this a cross-cut was driven west 36 feet to intersect the lode.

No. 4 level south was advanced on the lode channel 280 feet but only occasional bunches of ore were met with. Cross cuts were driven into footwall and hanging wall respectively, but nothing payable was exposed. A rise was put up on the hanging wall of the lode to No. 3 level, but only a small seam of ore was struck and it would now appear that this ore has either pitched further south or has not lived down to No. 4 level. Further work is to be carried out here.

No. 4 level branch drive.—A cross-cut was driven into lode channel and averaged from 12 to 18 inches wide of good milling ore. The face of drive being still in payable ore, over 12 inches wide.

No. 4 level branch drive.—A cross-cut was driven into the footwall of the main ore channel, 19 feet, and intersected what appears to be the main footwall lode. A 6-inch seam of pug in on the wall, carrying slugs of galena and about 18 inches of second-class ore on the other wall. This was driven on for 30 feet, carrying payable values.

No. 3 level.—The south drive was advanced 147 feet, making a total from the main shaft of 446 feet. The lode, though patchy, proved payable for the greater part of the distance driven and though the face was poor at the end of the year payable ore has been struck again.

No. 2 level.—A cross-cut was driven 85 feet at a point 300 feet south of main shaft, into the hanging wall country, but nothing of a payable nature was struck.

Stopes.—Stoping was carried out above the No. 3 level south of the shaft over a length of 300 feet and the lode averaged 18 inches of milling ore. Stoping was also carried out above the No. 4 level in the north end; this has also been of a payable nature.

Magnet Silver Mine, Magnet.—282·7 tons of concentrates were produced, containing 26,080·23 oz. of silver, valued at £2318·6, and 142 tons of lead, valued at £232. Total, £4639·5.

The average number of men for the first three months was 26.

During the third quarter, the syndicate working the mine discontinued operation and the Government subsequently kept the mine unwatered and carried out some drilling work.

Mt. Wright Mine (W. Doran, Heazlewood), produced 3·9 tons of galena, containing 332 oz. of silver, and 1·5 tons of lead, valued at £55. The occurrence of the ore in the formation worked was very erratic.

Zeehan Area.

Comstock Tunnel Extension, Comstock.—The Government kept three men employed here and a considerable amount of driving, cross-cutting, and raising was carried out. The country being much broken and distorted. On several occasions bunches of galena were located, but nothing of economic value was met with.

The Silver Beauty Mine, Comstock (J. Dunkley).—Two men have been at work at different periods, cross-cutting and driving, but failed to locate anything of value.

Kynance Mine, Comstock.—A little prospecting work has been carried out here. Nothing of value disclosed.

North Swansea Mine (J. J. Hill), Swansea.—A good deal of surface work was carried out, cutting head-race from the Swansea Mine to the northern workings to bring the water in for power purposes. Several trenches were cut and ore exposed in some of them.

A water-wheel was erected at a prospecting shaft to drive a small pump and to allow productive work to proceed. 37·4 tons of marketable ore were produced, containing 2592 oz. of silver and 27·06 tons of lead, valued at £783·5. Three to four men were occupied at this work.

Spray Mine (J. McDermott), Zeehan.—The main adit is being continued towards "'G' lode, the main objective. Two formations have been struck but with no value.

A change of country is expected any time, as ahead of it, nearer to the surface, some good ore was won.

Spray Mine (Heywood and Cornish), Zeehan.—Some cross-cutting, shaft sinking and rising was carried out on a gossan formation. Samples gave as high as 500 oz. of silver to the ton. The average values are, however, too low for profitable mining. Some experimental work, with a view to concentration, was carried out on the ore and thus render it marketable.

G. Bell and Pilkington, Old Crown Mine.—A good deal of cross-cutting, some raising, and winze sinking was done, but on the whole results were disappointing. Two tons of galena were raised, containing 150·8 oz. of silver and 1·33 tons of lead, valued at £43.

W. F. Thomas, No. 2 Argent Mine, recovered from old dumps ore to the value of £50.

Higginson-Nubeena Mine, sold a small parcel of ore containing 90·3 oz. of silver and 1·79 tons of lead, valued at £38.

W. Evans and Party, Zeehan, Montana. sold four tons of galena carrying 270·5 oz. of silver and 2·4 tons of lead, valued at £77.

G. Heyward, Argent, Zeehan., sold ·9 ton of galena, containing 40·8 oz. of silver and ·43 ton of lead, valued at £13·3.

North Zeehan Government Prospecting Work.—Four men at work. A considerable amount of trenching, tunnelling, and some cross-cutting from a small shaft was carried out with encouraging results.

Dundas Area.

South Comet Mine (Griffith and Party), Dundas.—Some stoping work and a short cross-cut into the footwall was carried out in tunnel workings. 9·08 tons of ore were sold, containing 524· 9 oz of silver and 5·6 tons of lead, valued at £140·9. On an average three men are employed. The ore has to be sledged two miles over a very rough track and the cost is heavy.

J. Bailey, Five-Mile Mine.—.84 ton of galena was sold, carrying 57·7 oz. of silver and ·6 ton of lead, valued at £18·6.

Prospects in this locality are favourable but the flow of water is heavy.

Tin.

Mt. Bischoff Mine, Waratah.—During the period, 18,982 tons of crude ore were crushed and 9400 tons of slimes re-treated, making a total of 28,382 tons treated for a recovery of 249·25 tons of tin concentrates. In the North Valley 9900 cubic yards of alluvial ground were sluiced for a recovery of 21·85 tons of tin oxide, the total quantity of metallic tin produced being 183·8 tons, valued at . The average number of men employed was 145.

North Valley Alluvial Workings.—The extremely dry summer experienced, causing a shortage of water, hampered operations considerably. Operations ceased temporarily at the end of October.

The following work has been carried out by tributors:—

Thompson's Lode.—The No. 2 level was extended 175 feet south-east: Total 225 feet; Average width of lode, 4 inches; Average value, 6 per cent. tin.

Although very small and the ground hard, results are favourable. The party has its own air compressor plant for rock drilling purposes.

Cross Lode.—The level driven from the winze below the Stanhope Adit was extended north-west 191 feet; total from winze, 225 feet. The south-eastern end was extended 20 feet; total, 50 feet. Average width of lode, 7 inches; average value, 1·8 per cent. tin. Pumping and transport costs were heavy. The lode was too small to be profitable with the prices ruling, work, therefore, was discontinued at the end of September.

Queen Lode.—The intermediate drive below the 75-feet level was extended 146 feet south-east from rise and 55 feet north-west; total, 201 feet. Average width of lode, 13 inches; Average value, 1·1 per cent. tin.

Queen Lode Dyke.—An intermediate 20 feet below the 75 level was driven north-west 70 feet. The lode was small and irregular at this level. It has since been cut at 50 feet below the 75-feet level and shows much better values in the south-eastern end.

Wheal Lode.—The No. 1 level was extended 58 feet south; total distance, 239 feet. This level has reached the southern boundary of the lease and a connection has been made with the old Mt. Bischoff Extended Workings. Good grade ore is being won from the stopes above this level.

No. 2 Wheal Lode.—The No. 2 level was extended 125 feet north of the No. 2 cross-cut and 35 feet south. The lode was very small in this level and work was suspended.

Gossan Face.—The western end of this face has supplied a comparatively large tonnage of medium grade ore. The eastern extension of the greisen deposit worked here has been located in the main tunnel and has been risen on to the surface 58 feet vertically above. The values are rather low but should improve as driving west proceeds. At the southern end of this deposit a large tonnage was recovered and sent to the mill.

Happy Valley Face.—A four-head battery was erected by the tributor at the beginning of the year below the Happy Valley to treat the low grade ore from this face. The values were too low to pay the cost of transporting to the Company's mill, but by being able to treat it on the spot, it has been possible to profitably deal with it.

Don Alluvial Deposit.—Fair returns have been won here by Packett and party.

Northern Lodes.—The No. 4 level on the eastern seam was extended for 112 feet south-east of the cross-cut and 62 feet north-west. Average width of lode, 42 inches in the southern end; average value, 1.1 per cent. tin. In the northern end the lode averaged 24 inches; average value, 1 per cent. tin. This seam has been cut 80 feet below the No. 4 level and driven on for 120 feet south. The values are low, but should improve as driving proceeds. In the southern end of lode, No. 5 level was extended 62 feet north-west; total distance, 159 feet from cross-cut; average width, 8 inches; average value, 1·2 per cent. tin. Stoping is proceeding above this level on fair grade tin.

At various other parts of the mine investigations are in progress.

Mount Cleveland Mine.

Prospecting work has been in progress by the Mt. Bischoff Tin Mining Co.

Hall's Lode.—Work has been carried on continuously. This lode was cut in tunnel at 96 feet and driven on south-west 63 feet in fair grade ore. The footwall side of lode is being followed with drive, full width has not been determined. In the open cut above it is from 15 to 25 feet in width. The north-eastern end has been driven 15 feet from the cross-cut on ore of low value.

Henry's Dyke.—Three seams were intersected in this cross-cut. No. 1 at 140 feet, and No. 2 at 148 feet, and No. 3 at 168 feet. Nos. 1 and 2 seams averaged two feet each in width of payable grade ore, No. 3 seam, 2 inches. The Nos. 1 and 2 seams had been driven on for 27 feet on the south-western side when poor grade material was encountered, driving was suspended. A winze has been started on the south-western end of open cut above. In this winze a seam of high grade ore from 6 to 13 inches in width has been located, the depth being nine feet. This is being continued and if values continue the south-western drive will be extended to cut it.

Battery Lode.—This lode was cut at 61 feet in from the Smithy Lode Adit and has since been driven on for 47 feet north-east. The lode was reported to be 10 feet in width where intersected. It carried good ore for the first 20 feet of driving, but the values decreased in the last 27 feet.

Luck's Lode.—The hanging wall of this lode was cut at 170 feet with the No. 4 cross-cut, the footwall at 196. The first eight feet in low grade ore, the succeeding 18 feet were payable. A level has been driven south-west on footwall side in low grade ore and a connection made by rising to a winze sunk from the No. 1 level. Some good grade ore is showing in this winze, it, however, appears to be of limited extent.

Khaki Workings.—These workings are extensive and have been sampled systematically. The ore body is large, the greater part of it appears to be too low grade. In the Nos. 1, 2, and 3 south-eastern drives, also in the No. 1 south-western, payable values were found as well as in a level 15 feet below the main workings. The ore is all oxidised and free of pyrites. A good quantity should be won from these workings.

Surface Work.—The alluvial flats south-west of the old Battery were tested by sinking shafts through the wash, but the area is not considered to be of sufficient extent to warrant installing plant to treat it.

Hall's formation was proved by trenching to extend for at least 500 feet south of the No. 1 cross-cut and to carry fair values at the surface. It has also been located 350 feet north of this cross-cut with surface trench. This is considered by the manager to be the main ore body of the mine and that further driving will prove a large tonnage of ore above No. 1 level.

A limited tonnage of fair grade ore is reported to have been proved by surface trenching on the southern slopes.

Old Mount Bischoff Extended Mine.

H. Stanley and Party.—Work has been continued here principally in stoping out blocks of ore left by the former company and cleaning up some of the old dumps at Nos. 2 and 3 levels. About 200 tons were obtained from the latter. 6·3 tons of tin concentrates were raised, containing 4·2 tons of metallic tin, valued at £860. Average men at work, seven.

C. Dunstan and Party.—Several crushings were obtained from between old Nos. 2 and 3 levels, yielding 10 per cent. tin. Four others have been tributing at Nos. 5 and 3 levels on payable ground. They have also prospected a large body of ore going south, with encouraging results. 9·9 tons of tin concentrates were sold, containing 6·8 tons of metallic tin, valued at £1453·9. Average number of men, nine.

G.P.S. Syndicate, 20 Acre M.L.—Only a limited amount of work was carried out here by three men. ·59 ton of tin oxide was raised, containing ·4 ton of metallic tin, valued at £81·5.

G.P.S. Syndicate, 5 Acres.—The syndicate treated approximately 5000 tons of mill tailings. A 12-foot water-wheel was installed to drive grinding-pan, also two concentrating tables and other appliances. Tailings treatment commenced early in September from which has been recovered 1·8 tons of tin concentrates, carrying 1·3 tons of tin, valued at £282·4. Three men employed for nine months.

Waratah Tin Mine, Waratah River.—12,000 tons of tailings were treated for a recovery of 5·73 tons of tin concentrates, containing 3·8 tons of tin, valued at £781·7. Four men employed for the first half and three for the latter half of the year.

Tin Stone Creek.—Four men were working here separately at various times, winning ·85 ton of tin oxide, containing ·56 ton of tin, valued at £116·4.

S.P.A. Creek and 6-Mile, (Waratah-Corinna Road).—R. W. Pryde and son obtained from 1780 cubic yards, ·9 ton of tin oxide, containing ·6 ton of tin, valued at £129·5. E. Littler obtained ·5 ton of tin oxide, containing ·34 ton of tin, valued at £69·57.

Mt. Ramsay.—R. Laughlin and mate sluiced some 1700 cubic yards for 1·85 tons of tin oxide, containing 1·2 tons of tin, valued at £267.

Harrington sold ·04 ton of tin oxide, containing ·02 ton of metallic tin, valued at £4·5.

Parson Hood Track Area.—R. Pearson obtained ·2 ton of tin oxide, containing ·14 ton of tin, valued at £29·17.

Wombat Flat.—The Big Dipper Syndicate, Foy and Gale, put in hydraulic sluicing plant and started sluicing in the third quarter. They obtained from 3400 cubic yards, 2·8 tons of tin oxide, containing 1·7 tons of tin, valued at £351. About a third of a mile further up, W. A. Betts and son obtained ·3 ton of oxide, containing ·2 ton of tin, valued at £46·5, during the last six months.

A few other men were prospecting about the Waratah district and sent away ·2 ton of tin oxide, containing ·137 ton of metallic tin, valued at £30·3.

Balfour Area.—Returns have been received from four men who obtained 1·78 tons of tin oxide, containing 1·2 tons of tin, valued at £249·4.

Housetop and Kara Area.—Messrs. L. F. Clark and party have been doing some prospecting work on and around the old Kaolin Tin Mine. During the early part of the term had up to four men at work, but had only one man during the last six months. No ore was sold.

Two other parties obtained from Trial Flat, ·5 ton of tin oxide, containing ·29 ton of tin, valued at £60.

King Island Area.—King Island Tin Lodes, N.L.; area, 160 acres. The development of the tin lodes started in September last. A main shaft was sunk 117 feet in a central position to command the various lodes outcropping at surface through mineralized schist and bands of kaolin. At 35 feet a quartz lode carrying tin was met with having the usual westerly underlay. It passed out of shaft at 68 feet. Maximum width being three feet. Cross-cuts east and west at 100 feet level were driven to intersect these lodes. The cross-cut east was driven to 94 feet, passing through lode matter from 56 to 94 feet, consisting or tourmalinised schist with seams of tourmaline quartz heavily charged with iron pyrites. The cross-cut was terminated at 94 feet on a well defined slide. Driving south along on one of the quartz seams at 56 feet was carried on for 23 feet to intersect the downward continuation of the enrichments met with in the old workings above. Work closed down on December 19th. The cross-cut west was continued to 56 feet through mineralised schist carrying pyrites and garnets, but is not sufficiently advanced to cut the lodes. At the surface lodes are reported to carry satisfactory values where located by trenching.

Barrier Lodes Co., N.L.—This Company gave up their work on the zinc-lead formations and gave their attention to the old Sea Elephant Tin Mine, putting in a dieselene engine and 6-inch centrifugal gravel pump on a portable chassis to treat the alluvial ground which is, on an average, six feet deep. This was erected on an 80-acre section and sluicing started late in December in the vicinity of the main dam. When sufficient ground is opened up it is intended to put in further plant. Water supply was good; with the help of subsidiary dams along the creeks for return scheme, the conservation of the main supply is favourably maintained.

Renison Bell Area.

Renison Associated Tin Mines.—The mines. A series of sampling of oxidised and semi-oxidised ores was carried out by the Company and has given promise of a fairly large quantity of this class of ore available for milling, with the possibility of further reserves. This class of ore is principally developed on the Dreadnought and Boulder sections, and where it has actually been able to be proved that the values are very consistent, giving a return from the mill of ·7 per cent. tin; a highly payable product. Principally from the South Dreadnought Open Cut Workings, 27·6 tons of tin concentrates were won, containing 16 tons of tin, valued at £3269·6. During the term, the Government tramline was put in order to facilitate transport. Five head of stamps were in operation. In August the tramway was extended to the Boulder lease. Since then, with a more favourable market for tin, productive work was resumed.

Tributors' Work.—

R. K. Mears won ·7 ton of tin oxide, containing ·5 ton of tin, valued at £105·2.

A. Abel won ·5 ton of tin oxide, containing ·34 ton of tin, valued at £71.

J. Riley raised ·65 ton of tin oxide, containing ·48 ton of tin, valued at £97.

J. Hetherington, working on lease No. 11,308, won ·3 ton of tin oxide, containing ·2 ton of tin, valued at £46·9.

J. Pepper, working on Pine Hill, sluicing, won ·8 ton of tin oxide, containing ·5 ton of metallic tin, valued at £111.

G. Cox, Miners' Right Claim, won by hydraulic sluicing, ·5 ton of tin oxide, containing ·36 ton of tin, valued at £80·8.

From the *Ring River Alluvial Flat*, two men won ·16 ton of tin oxide, containing ·1 tons of tin, valued at £22.

D. Wilkinson by crushing recovered 3·3 tons of tin oxide, containing two tons of tin, valued at £417·6.

Amalgamated Tin Mines and Anglo-Tasman Development Mines.—These two companies started active operations in October last, scrubbing and clearing for dam and mill sites, and stripping over burden at "Dunn's Face." Four and sometimes five men employed.

X Gorge and River Area.

F. Salmon Leases, X Gorge.—Only a limited amount of work was carried out here. He won ·5 ton of tin oxide, containing ·3 ton of tin, valued at £58. He also won some gold.

E. Williams, X River Tin Mine.—Two men, working occasionally, won ·6 ton of tin oxide, containing ·4 ton metallic tin, valued at £77·43.

A. Fenton also won ·1 ton on the old Williamsford Tin Mine, containing ·068 ton tin, valued at £15.

Heemskirk Area.

Federation Tin Mines Ltd., South Heemskirk.—During the earlier months of the year, milling operations had to be suspended on account of water shortage for power. In order to keep the men in employment, the Cumberland Dam embankment was raised another three feet. Prospecting by trenching and development work in the western workings was carried on, proving the tin contents to be too patchy for profitable work. In consequence of this, the Mill again closed in July, when work was again confined to prospecting and development. A new ore body was located in the vicinity of the Black Face. It appears to be separate from the large open cut workings. Investigation of this body is proceeding. 3461 tons were crushed for a recovery of 10 tons of tin concentrates, containing six tons of metallic tin, valued at £1223·6.

J. G. Geason, South Heemskirk, Vicinity Federation Tin Tin Mine, won 1·3 tons of tin oxide, containing ·8 ton of tin, valued at £159·6.

Maynes Tin Mine, South Heemskirk.—H. Read won ·19 ton of oxide, containing ·135 ton of tin, valued at £28.

R. Clark, M.R. Claim, South Heemskirk, won ·4 ton, containing ·22 tons of metallic tin, valued at £43.

Cook Bros., Hydraulic Sluicing Claim, North Heemskirk.—Three men obtained two tons of tin oxide, containing 1·4 tons tin, valued at £274·3.

H. G. Watson, M.R.C., North Heemskirk, working for a few weeks won ·08 ton of tin oxide, carrying ·06 ton of metallic tin, valued at £12.

R. Smith, M.R.C., North Heemskirk, ground sluicing won ·6 ton of tin oxide, containing ·4 ton of tin, valued at £90·5

Tas. Dixon, M.R.C., Heemskirk River, working in the bed of the river won ·5 ton of oxide, containing ·3 ton tin, valued at £67·6.

Jas. Dixon, M.R.C., North Heemskirk, won ·6 ton of oxide, containing ·4 ton of metallic tin, valued at £89.

Two other men carried out some prospecting work at South Heemskirk.

Dundas Area.

Dundas (Tasmania) Tin Limited, Dundas.—This Company took over the Razor-back Mine and carried out extensive repair work to the mill, tramline, and water race, making various alterations at the mill. This now consists of the following:—Ten head of stamps driven by oil engine, a low-head pressure turbine driving five concentrating tables, grinding-pan and small lighting set, and two strakes. 1877 tons of gossan have been treated. 1326 tons, including a few tons of the detrital, from the north end of No. 1 Open Cut. The metallic tin won from this being 1 ton 3qr. 12lb., showing an average recovery of ·08 per cent. The remaining 551 being of gossan and detrital from the extreme north end of No. 3 Open Cut., the return from this being 10cwt. 1qr. 6lb. of metallic tin, giving a recovery of ·105 tin per ton. The mill has been working 16 hours per day for the last four months of the term. A few trenches were put in to the south of No. 1 Open Cut, but nothing of value exposed.

The manager reports that work up to date has been very disappointing and that he has recommended that all work be discontinued at the mill and that he be allowed to put in a thorough prospecting and development scheme.

The value of ore sold was £327. Average number of men, 14.

W. J. Ferguson, Melba Flat, doing a little ground sluicing, obtained ·06 ton of tin oxide, containing ·04 ton of tin, valued at £8.

C. Bye, Melba Flat, doing a little ground sluicing, obtained ·14 ton of tin oxide, containing ·1 ton of tin, valued at £20·6.

Two other men did some work, cutting tail race, &c., but produced no tin, about a quarter of a mile further up the Flat.

Wolfram.

Lawkemlaw Wolfram Mine, Moina.—Most of the wolfram won was obtained from a small shaft workings from very small quartz formations, which were very erratic, being very much faulted. The ore being hand dressed. 5.5 tons were won, containing 3.8 tons of tungsten, valued at £609.

Wolfram and Tin Ores.

J. Godwin's Lease, Moina.—Two men obtained one ton, containing ·4 ton of tungsten and ·3 ton of metallic tin, valued at £122.

Talc.

H. Templar's Talc Mine, Gawler.—3·04 tons were mined and sold for £7·8.

Limestone and Lime.

The Broken Hill Pty. Ltd., Melrose, *via* Devonport, shipped 237,648 tons to Newcastle, valued at £56,592.

Average number of men employed, 124.

Two other lime works produced 779 tons, valued at £1389·75. Average number of men working, 6.

Cement.

Goliath Portland Cement Co., Railton.—The main unit was in operation during the greater part of the year, except for stoppages for plant maintenance and alterations. The average number of men employed works out at 131, beside these a good many coal miners are kept busy in the adjacent neighbourhood, whose output is consumed almost entirely by the Company.

Coal.

Illamatha Colliery, Spreyton.—An output of 1775 tons, valued at the mine at £1088, was produced by nine men.

Aberdeen Colliery, Spreyton.—The output was 1927 tons. Value at mine bin, £1215·6. An average of seven men at work.

Tarleton Colliery, Tarleton.—The average number of men at work was five. They won 1150 tons, valued at £803 at the mine bin.

The Star Colliery, New Bed.—The output was 294·1 tons, obtained by an average of two men, valued at £199·7.

The Southern Star, Tarleton.—An output of 411 tons was won by two men, valued at £286·65.

Brickyard Colliery, New Bed.—173¾ tons was broken and sold. Value at mine bin was £132·8. Work only carried out for half year by two men.

Black Beauty Colliery, New Bed.—The output was 500·45 tons, value at mine bin, £417·8. Average number of men, two.

Lucky Hit Colliery, New Bed.—735·75 tons were won by four men. Value at mine bin, £692·7.

Hard-to-Get Colliery, New Bed.—This pit is well-named, for it is full of "rolls" and "jumps." Only 85·95 tons were obtained, valued at £64·4 at the mine bin. Obtained by an average of two men.

Dulverton Colliery, New Bed.—1247 tons were mined here. At the mine bins the value was £810·55., the coal being won by five men.

Esk Bank Colliery, New Bed.—An output of 546·9 tons, valued at £403·8 at the mine bins was produced by an average of two men.

Gold.

Narrawa Creek Gold Mine, Moina (H. Higgs).—The reported recovery of gold was 280·7 oz., containing 213·45 oz. fine, realising £1712·5. On an average of seven men at work. An addition to plant was made. A lower adit was put in to cut the ore channel at a lower depth but passed through a cross-course. A rise was put up and cut the ore at 17 feet and a connection was made to workings above. The gold was very patchy.

Bell Gold Mine, C. Packett, Moina.—Very little has been done on this property. ·1 oz. was sold for £·7. This was obtained from very shallow ground.

Tasmanian Gold Development.—Between Cethana and Liena. Under the management of H. Evenden, this Company is prospecting in the vicinity of the old Devonian Gold Mine with four men. Some trenches have been put in and at present a tunnel is being put in to cut some surface exposures.

W. J. Mawer and A. Bounds.—Just below the above property are prospecting, having put in a small stamp battery to try out the various outcrops, &c.

Doctor's Rocks, Somerset.—At the early part of the term, from the sea-shore, T. A. Atkinson won 2·9 oz., valued at £20·26.

Middleton Creek Gold Mine, Corinna, via Waratah.—Messrs. C. T. Crabtree and party gave a working option to the Cassowary Dredging N.L., over this and adjoining ground held under Special Prospecting Licence. Early in the year, with a hand-boring plant, they put down some holes, but soon after let a contract to Messrs. F. N. Bethune Pty. Ltd., of Melbourne, to carry on with a power drilling plant. A larger hydraulic sluicing plant was brought out.

Some 12·95 oz. of gold were raised.

During the last run, 5000 cubic yards of drift were treated for a return of 55 oz. of gold.

Tasmanian Gold Development, Rocky River and Whyte River.—A small portable plant was put in to test some alluvial ground near the old workings of the Holdfast Gold Mine, and on Taranaki Flat. The manager, Mr. Hart, stated that the ground on the latter was highly payable. The ground treated was from 18 inches to 6 feet in depth. During three quarters 9·5 oz. were reported, valued at £66.

C. Evans and Lynch, Smith's Creek (below Long Plain), won from ground sluicing 6·2 oz., giving on smelting 5·9 oz., valued at £66.

M. Williams, Brown Plains, reports having won ·44 oz., valued at £3·1, by dishing shallow alluvial ground.

Burnie-Waratah Gold Syndicate—S. Counden and Party, 13-Mile, Waratah-Corinna Road.—Two men were employed cutting track, trenches, and tunnelling for a few months. Two formations were exposed but gold values were very low.

Wilson and Huskisson Rivers.—F. Salmon obtained and sold 2·84 oz. fine, 2·325 oz., valued at £16.

North Zeehan Area.—Three men have been working at odd times on shallow ground when storm water is available in this locality. The gold is right up in the roots of the button grass. They reported having recovered 7·5 oz. of gold, valued at £52·5.

Arthur River Area.—J. Leary reports having won 2 oz., valued at £14, during the first quarter.

Inspector J. F. SHAW, Queenstown, reports:—

I have the honour to submit the following report for the year ended 31st December, 1936, in connection with the work of inspection, and administration of the Mines and Works Regulation Act, the Explosives Act, and the Inflammable Liquids Act in the Queenstown-Strahan district.

Men Employed.

The average number of men employed in the industry was 1625, compared with 1778 last year. The average number employed by the Mount Lyell Company was 1610, compared with 1758 for the previous year. Those not employed by the Mount Lyell Co. were mostly engaged in intermittent fossicking and prospecting. Towards the end of the year 3 men were employed by Barock Mining Company N.L. in mining a parcel of Barytes, and constructing a short road to the claim at Howard's Plains. In previous years employment has at times been curtailed owing to shortage of power from Lake Margaret During the year the State Hydro-Electric line from Tarraleah to Rosebery was completed. Power from this line can now be purchased by the Mount Lyell Co. to supplement supplies from Lake Margaret, and was used to a small extent in the first half of the year, when the Lake was at its lowest. This is possible with existing .transformer plant while power for Rosebery is being transmitted from Waddamana, but later, when it will be transmitted from Tarraleah, the voltage on the line will be higher, and new transformers will be needed to step down the voltage. For the first quarter the rainfall was much below the average, but by the end of the year the total recorded at Lake Margaret was 141.3 inches, compared with an average over 23 years of 145.06 inches. At Queenstown 96.39 inches was recorded.

Accidents.

There were no fatal accidents. Accidents causing absence from work for 14 days or more were 58, resulting in injuries to 60 men. Of these there were 26 on the surface, in which 27 men were injured, and 32 underground, in which 33 men were injured. All the accidents were on the mines and works of the Mount Lyell Company. In the previous year there were 105 accidents (1 fatal), in which 105 men were injured, the figures for this year showing a reduction of 47 in the total accidents, and 45 in the number of men injured. The number of new employees engaged was 271, compared with 519 for the previous year.

Explosives.

The landing of explosives at Regatta Point, and transport by rail to Queenstown were supervised. The quantity landed for the year was:—

	lb.
Ardeer Gelignite, No. 2	49,850
Quarry Monobel	85,000
Polar Gelignite, 50%	135,500
A. N. Gelignite, "50"	30,150
Total	300,500
Detonators	70,000

The quality of explosives received has been satisfactory.

Inflammable Liquids.

During the year 8 new petrol pumps were installed, with storage capacity for 6000 gallons. Additional storage for 500 gallons was installed at an existing pump.

The Workers' (Occupational Diseases) Relief Fund Act.

Medical certificates as free from disease for 271 new employees were collected and forwarded to the Board. Applications for medical examination were made through this office by 48 old employees, of whom:

35 were certificated as not suffering.
8 were certified as partially incapacitated.
5 were certified as incapacitated.

Medical certificates for these were forwarded to the Board. Two employees appealed through this office against the decision of the certifying medical officer, and their appeals were forwarded to the Board. Other applications were made, but the applicants did not attend for examination.

The Mount Lyell Company's Mines and Works.

As in the previous year, close inspection of the various operations of the Mount Lyell Co. at Queenstown has comprised the major part of the work in this district, and I wish to again record my appreciation of the manner in which officials of the Company have co-operated in adopting means to improve working conditions, and reduce the risk of accidents.

Mining.

The policy of expansion in output has been continued, and the output for the year was 729,440 tons, an increase over the previous year of 142,691 tons. This is easily the largest tonnage of ore recorded for a year. Although the assay value was a little lower than in the previous year, the net cost of producing copper was less, being the lowest in the history of the Company. The gradual expansion is shown in the totals for the four quarters:

1st Quarter	162,909 tons
2nd Quarter	169,951 tons
3rd Quarter	192,253 tons
4th Quarter	204,327 tons

About 60 per cent. of the ore was produced by open-cut mining at the West Lyell and adjacent mines, where it is loaded into motor lorries by electrically operated power shovels and scrapers. In the lorries it is conveyed about a half-mile to the Royal Tharsis Transfer Pass. From this it is loaded into electric trains and conveyed via the tunnel to the mill. During the year underground mining in the Crown Lyell and Royal Tharsis mines was suspended as a similar grade of ore can be mined more cheaply by open cutting at West Lyell and adjacent mines. The working of the open-cuts has entailed a great deal of road construction and maintenance. For this a diesel-driven road roller and a metal crushing plant were added to the equipment. Other plant in the vicinity of West Lyell includes offices, ambulance room, crib-houses, garages for housing electric shovels and motor lorries, repair shops, and underground petrol tanks and pumps. A new change-house, with hot wash water, and facilities for drying clothes was nearing completion at the end of the year. An electrically operated shovel of 2 cubic yards capacity, additional to 2 similar shovels of 1 cubic yard each already installed, was put into use early in November. Surface prospecting and testing has been continued, and this work has proved further extensions to reserves of low-grade ore. At 30/9/36 ore reserves were officially estimated to be 8,825,000 tons, assaying copper 1.9 per cent., silver 0.14 oz. per ton, gold 0.016 oz. per ton. In the North Lyell mine routine ore production was continued, and there were no fresh developments. The use of fine tailings, pumped from the mill, is now general for stope-filling in the North Lyell mine, and the quarrying of surface mullock in the Crown quarry has been discontinued. The tailings make a very satisfactory stope-filling, and the method of pumping them into stopes has many advantages over the old method of running wet mullock from the surface. At the Lyell Comstock the opening up by stoping of No. 8 Level, 130 feet below No. 7 Level, has been the main feature. As far as developed the ore body on No. 8 is normal in size and grade. Sinking of the main shaft below No. 8 is being continued.

Reduction Works.

At the concentration plant the vertical disc crusher was replaced by a set of 72 inches by 24 inches crushing rolls. These rolls are separately motor driven at a speed of 100 r.p.m., and have increased the capacity of both coarse-crushing and fine-grinding sections of the mill, as, apart from their larger capacity, they deliver a finer product to the fine grinding section. A 15 feet Bowl classifier was also added to the plant. No additions were made to the smelter plant. At the Refinery 8 more cells are being installed to increase the capacity of the plant. An appreciable amount of bluestone from this plant was readily sold during the year.

Mine Hygiene.

Conditions generally regarding ventilation in the mines were satisfactory. At the Royal Tharsis, No. 7 (Tunnel) Level loading station trouble was experienced with dust during loading of ore from the pass. Various schemes were tried to improve conditions. In addition to other means a fan on No. 7 Level now draws from the top front of the pass, and from over the truck being filled. The air is drawn away through large pipes, and passed into the main ventilation rises. Another fan at the surface assists in drawing air to the surface. While full use is made of all the means provided, conditions during loading can now be kept reasonably good. In the open-cut workings the use of water while drilling is general. As the rock is mainly schist, dust from which would be detrimental to health, it is in the interests of all concerned that wet drilling be strictly adhered to.

Quarries.

From the Hall's Creek limestone quarry 4896 tons of limestone were delivered for use at the reduction works. A second kiln for burning lime was constructed alongside the old one near the smelters. From the silica quarry on Pyenghana Road 6463 tons of silicia were delivered to the smelter for use as flux. As previously stated, work at the Crown quarry was suspended, as, owing to the use of mill tailings for stope-filling throughout the North Lyell mine, mullock from the Crown quarry was no longer required. At Lyell Comstock the mullock quarry on No. 4 Level has supplied mullock for stopes on the lower levels.

General Production.

	1935	1936
Copper (Electrolytic), tons	13,036	13,040
Pyritic Concentrates, tons	25,555	33,711
Gold (fine), oz.	7,107	7,121
Silver (fine), oz.	132,857	103,188
Limestone, tons	4,140	4,896
Silica, tons	6,012	6,463
Barytes, tons	Nil	33

General Mining Operations.

Gold.—Production by Mount Lyell Co. was 7046 oz. Other production was 75 oz., including 30 oz. from Jane River. Only a small proportion of the gold produced at Jane River is sold through Queenstown. The other 45 oz. was sold by various fossickers, who got it in small lots, mainly from Lynch, Conglomerate, Linda, and Specimen Creeks, and from creeks on Howard's Plains. J. Herighty continued prospecting on his lease at Princess River, Lynchford, but nothing of value has been reported. Messrs.

A. P. Reimers and T. Cunningham, with Government aid, put down 6 shafts in Linda Flat to bottom at depths of from 4 feet to 10 feet, to test the alluvial. They did not consider the prospects they got good enough to encourage them to continue the work further.

At the old Woody Hill mine C. Costain cleaned out an old drive, which had fallen in, to test the reef under an old stoped area. Samples taken of the reef were assayed, but values were all under 1 dwt. gold per ton.

Other intermittent prospecting has been done in various parts of the district, but nothing of value has been disclosed.

Copper.—The total of 13,040 tons was all produced by the Mount Lyell Co.

Silver:—The total of 103,188 oz. was all produced by the Mount Lyell Co.

Barytes.—Towards the end of the year the Barock Mining Co. N.L. constructed a short branch road from the Strahan Road to the claim on Howard's Plains, and produced 33 tons of Barytes for shipment to Melbourne.

Prosecutions.—Separate legal proceedings were taken at different times against two men for riding in a cage with material. Warnings had been issued against the practice. In the first case the defendant pleaded guilty, and a conviction was recorded with costs against defendant. In the second case the defendant also pleaded guilty, and was fined 10s. and costs. It is hoped that the action taken will prevent a recurrence of this dangerous practice.

Appendix VI.

REPORT OF MOUNT CAMERON WATER-RACE BOARD FOR THE YEAR ENDED 31st DECEMBER, 1936.

Sir,

We have the honour to submit our report for the year ended 31st December, 1936.

Main Race.

The race has been maintained in an efficient state. It will be necessary to have the portion between the No. 2 syphon and Little Mussel Roe River cleared of weed growth before the end of the year.

Syphons and Flumes.

The Little Mussel Roe (No. 1), Channel Keeper Moore's (No. 2), the Cybele (No. 4), the Concrete (No. 5), and New Syphon (No. 3) are all in good order. The Ringarooma (No. 3) needs frequent attention. The Fly-by-night and Mt. Cameron are, for the time being, out of use.

The iron fluming is still holding out, although it may be found necessary to replace it with some of the pipes from the syphon now disused.

Dams.

The dams generally are in fairly good order.

General.

The matter of painting the residence of the Manager and Channel Keeper Moore's cottage was held in abeyance for the time being owing to decrease in revenue from the race for the year.

We have the honour to be,

Sir,

Your obedient servants,

J. B. SCOTT, Chairman of the Board.
GEORGE S. MALLINSON, } Members.
CECIL G. RYAN, }

The Hon. the Minister for Mines, Hobart.

Statement for the Year ended 31st December, 1936.

Rainfall.

The registered rainfall for the year was as follows:—

Great Mussel Roe	47 inches 41 points
Little Mussel Roe	47 inches 24 points

Revenue.

The revenue for the year amounted to £1030 3s. 3d., being a decrease of £459 8s. 4d. on the previous year.

Disbursements.

The expenditure for the year amounted to £1015 4s. 0d., being a decrease of £11 7s. 0d. on the previous year.

Statistics.

The statistics for the year are as follows:—

Average number of claims supplied per week	10
Greatest number supplied in any one week	13
Total number of heads supplied under—	
Fixed or cash scale	356⅛
Royalty or credit scale	3385½
Total	3741⅝

Tin ore raised—

	Tons.	cwt.	qr.	lb.
Under royalty scale	29	7	2	8
Under fixed scale	12	19	1	6
Total	42	6	3	14

Average number of men employed per week 23.

Receipts.	£	s.	d.
Water sold under fixed scale	154	10	0
Water sold under royalty scale	875	13	3
Total	£1030	3	3

Expenditure.	£	s.	d.
Salaries and wages	780	6	0
Travelling expenses	10	7	11
Insurance	8	16	5
Stationery and printing	4	9	11
Stores	14	19	4
Freight and cartage	8	3	9
Repairs to race	12	18	10
Repairs to manager's residence	34	7	3
Cleaning of race	139	19	5
Miscellaneous	0	15	2
Total	£1015	4	0

Walter E. Shimmins, Government Printer, Tasmania.