

MININD1904-2

THE PROGRESS OF  
THE MINERAL INDUSTRY  
OF  
TASMANIA,

FOR THE QUARTER ENDING 30TH JUNE, 1904.

COMPILED BY

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BY ORDER OF

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MINISTER OF MINES.



Tasmania:

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1904.



# PROGRESS OF THE MINERAL INDUSTRY OF TASMANIA

FOR THE QUARTER ENDING 30TH JUNE, 1904.

*Launceston, 25th August, 1904.*

THE following Table shows, as far as can be ascertained, the quantities and values of Metals and Minerals raised and exported during the quarter ending 30th June, 1904, compared with the corresponding quarter in 1903, and the previous quarter ending 31st March, 1904:—

	During the Quarter ending 30th June, 1904.		During the Quarter ending 30th June, 1903.		During the Quarter ending 31st March, 1904.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		£		£		£
Gold won ..... ozs.	17,127 <sup>a</sup> <sub>513</sub>	72,753	13,925 <sup>a</sup> <sub>801</sub>	59,153	14,235 <sup>a</sup> <sub>370</sub>	60,468
Auriferous Quartz and Pyrites exported..... tons	74 <sup>1</sup> <sub>2</sub>	1283	52 <sup>1</sup> <sub>2</sub>	1079	35	816
Gold Quartz exported .....	16 <sup>1</sup> <sub>2</sub>	75	...	...	6 <sup>1</sup> <sub>2</sub>	223
Silver Ore exported..... "	5236 <sup>1</sup> <sub>10</sub>	60,788	4299	46,578	4097 <sup>1</sup> <sub>2</sub>	41,717
Silver-lead Bullion exported .....	1363 <sup>3</sup> <sub>4</sub>	39,655	1757 <sup>1</sup> <sub>2</sub>	61,489	1694 <sup>1</sup> <sub>2</sub>	42,370
Silver Lead Ore exported .....	399 <sup>1</sup> <sub>4</sub>	5636	...	...	...	...
Zinc Ore exported..... "	785	2458	100 <sup>1</sup> <sub>2</sub>	402	...	...
Zinc Blende exported .....	...	...	...	...	1295	4008
Blister Copper exported.... "	2607 <sup>1</sup> <sub>4</sub>	171,554 <sup>†</sup>	1548 <sup>3</sup> <sub>4</sub>	108,338 <sup>†</sup>	1705 <sup>1</sup> <sub>4</sub>	105,446 <sup>†</sup>
Copper Matte exported .... "	...	...	1815 <sup>1</sup> <sub>4</sub>	44,366	...	...
Copper exported .....	...	...	...	...	9	494
Copper Ore exported .....	...	...	6 <sup>3</sup> <sub>4</sub>	60	26 <sup>3</sup> <sub>4</sub>	155
Tin Ore exported..... "	45 <sup>1</sup> <sub>2</sub>	2054	45 <sup>9</sup> <sub>2</sub>	2230	48 <sup>3</sup> <sub>4</sub>	2150
Tin (metallic) exported .... "	532 <sup>1</sup> <sub>2</sub>	65,946	597 <sup>1</sup> <sub>2</sub>	79,089	559 <sup>1</sup> <sub>2</sub>	71,620
Iron Ore exported .....	1490	740	1484 <sup>1</sup> <sub>2</sub>	1635	3450 <sup>1</sup> <sub>2</sub>	1733
Iron Stone Flux .....	102	153	...	...	...	...
Coal raised .....	15,783	13,415	14,694	12,856	11,873 <sup>8</sup> <sub>20</sub>	10,092
Bismuth..... "	1	12	...	...	...	...
Sulphide Ore exported ... "	...	...	5 <sup>3</sup> <sub>4</sub>	17	...	...
Gossan Ore exported .....	...	...	7	20	...	...
Galena Ore exported .....	...	...	16 <sup>3</sup> <sub>4</sub>	101	...	...
Oxide Ore exported .....	...	...	4	16	...	...
<b>TOTAL VALUE .....</b>	<b>... £ 436,522</b>		<b>... £ 417,429</b>		<b>... £ 341,292</b>	

\* Fine gold, including gold obtained from blister copper and silver-lead bullion.

† Value of gold contents deducted.

# MINERAL INDUSTRY

## GOLD.

During the past quarter 8964½ ozs. of gold were obtained from quartz, 216 ozs. from alluvial, 1274½ ozs. by means of the cyanide and chlorination processes, 5849 ozs. from blister copper from the Mount Lyell Mining and Railway Company, Limited, 825½ ozs. from the silver-lead bullion from the Tasmanian Smelting Company's works, Zeehan, and 915½ ozs. from the sulphide ores from Mount Read; valued at £72,753.

The following table shows the quantities obtained from the various sources on the different fields during the period under review, together with the totals for the corresponding period of 1903, and the previous quarter ending 31st March, 1904:—

	Gold obtained during the Quarter ending 30th June, 1904.							Totals for Quarter ending 31st Mar., 1904.
	From Quartz.	Alluvial.	Cyanide & chlorination.	From Blister Copper.	From Silver-lead Bullion.	From Sulphide Ores.	TOTAL.	Totals corresponding Quarter, 1903.
	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Beaconsfield	5395½	11	983½	...	...	...	6390	2902½
Mathinna ...	3137½	...	175	...	...	...	3312½	3836
Mt. Victoria	43½	6	...	...	...	...	49½	60½
Warrentinna								
Lefroy .....	221½	...	116	...	...	...	337½	225
Lisle .....	...	128	...	...	...	...	128	129
Golconda ...								
Mangana ...	166	...	...	...	...	...	166	...
Bell Mount.	...	15	...	...	...	...	15	14
Middlesex...	...	...	...	...	...	...	...	...
West Coast.	...	56	...	5849	825½	915½	7646½	8278½
TOTALS	8964½	216	1274½	5849	825½	915½	18,044½	...
Totals corresponding Quarter, 1903.....	4139½	242½	1889	6302	781	1119	...	14,472½
Totals for Quarter ending 31st Mar., 04.....	6169½	243	1196½	5281	940½	1069½	...	14,900½

Value £72,753; equal to 17,127·513 ozs. fine gold.

BEACONSFIELD.—Five hundred and five men were employed on this field during the quarter, of which twelve were prospectors.

At the Tasmania Mine 5942 tons of quartz were crushed, and 6327 ozs. gold obtained (by amalgamation and chlorination), being a total for the entire history of the mine of 516,998 tons crushed, and 588,788 ozs. 13 dwts. 17 grs. gold obtained. Mr. C. F. Heathcote, the company's superintendent, reports that further preparations are being made for installing a large pumping plant in Hart's shaft. Excavations for foundations have been started for a large central boiler house; also excavations for foundations round the collar of a new shaft, to be known as Grubb's shaft. This shaft will be 32 ft. 1 in. long by 8 ft. 6 in. wide, and will be timbered with 15-in. square timber.

Prospectors won 63 ozs. of gold.

*Bonanza Proprietary.*—The shaft has been sunk to 400 feet, and it is proposed to continue it to a greater depth, when the owners hope to cut the Tasmania reef within their own boundary. A proposal has been made to the Proprietary to amalgamate with the Amalgamated West Tasmania G.M. Co., and is under consideration.

*Ophir Mine.*—Work at present is confined to re-timbering and extending the main drive at the 400-ft. level, which has just passed out of sandstone 98 feet from the shaft into carbonaceous pug lying on the bedrock on the western side. Some distance has to be driven before the wash proper is reached.

*King Victor Mine.*—This is situate in the Gorge, 3 miles from Beaconsfield, at the south end of the Cabbage Tree Hill. The same country-rocks run through from north to south, and this end of the hill merits prospecting equally with any other part. The shaft is now down to a depth of 200 feet. A short crosscut from the bottom level cut a large reef carrying gold, but not in payable quantity. Some stone is being stoped from another reef close to the shaft at the 60-feet level.

LEFROY.—The quarter's statistics of the field are as follows:—

	Gold produced, ozs.	Men employed.
New Pinafore .....	164½	31
Digney Association .....	169	8
Laird and Sons .....	4½	2
Other Companies, &c. ....	...	18
	<hr/>	<hr/>
	337½	59
	<hr/>	<hr/>

The Digney Association is working out an old block of stone at the former Volunteer Mine. The Reliance P.A. is prospecting west of the Point reef. Spotswood and Walker are working south of the Era reef. Grey and party are washing the Volunteer tailings, but no record of results is obtainable. Gee Heng and party are also

working old tailings at Chums and Creek, with no known results. The Revival P.A. is prospecting on Specimen Hill, &c.

LISLE.—The Dredging Company raised 128 ozs. gold with 22 men.

GOLCONDA, ETC.—At the New Enterprise the water created difficulties, and work had to be suspended pending fresh arrangements for pumping. At the Wyengatta the lode is reported as looking well.

At the New Panama there is a strong lode of good quality. The gold is associated with argentiferous galena, and will have to be concentrated for special treatment.

MOUNT VICTORIA.—The quarter's returns are as follows:—

	Quartz crushed.	Gold produced.	Men.
	tons.	ozs.	
Long Struggle .....	18	43½	4
Krushka's Freehold ....	...	6	1
Mercury .....	...	...	9
M'Caul Bros. ....	...	...	2
Mammoth .....	...	...	2
Reform .....	...	...	2
Hinemoa .....	...	...	4
	<hr/> 18 <hr/>	<hr/> 49½ <hr/>	<hr/> 24 <hr/>

The Long Struggle party has been working alternately on one or other of the two reefs which are being developed, and have obtained profitable results on a small scale. A low crosscut is necessary for more economical working; but this and other progressive work has to be deferred for want of funds. The Mercury is raising small crushings, but its deep work has come to a stop owing to water. McCaul Bros. are working on two sections at the top of the hill, and getting out a crushing of gold-bearing stone from the old Pennefather shaft, but the cartage to the Mercury battery and crushing charges are a heavy expense—16s. per ton of stone. The Short Struggle has had to suspend on account of water, after turning out a few small crushings of rich stone, ranging from 1 or 2 ounces to over 6 ounces per ton. The Reform and Mammoth properties are idle, pending attempts to influence capital: and the combined Una and Hinemoa propositions have been taken to New Zealand for flotation. The good results obtained by the small working parties on the Mt. Victoria field working under disadvantages should direct attention to the numerous reefs of the district.

MATHINNA.—The statistics for the quarter are as follows:—

	Crushed.	Gold produced.	Men.
	tons.	ozs.	
New Golden Gate .....	4750	3076	175
Volunteer Consolidated...	160	125	33
Miners' Dream .....	11	90½	4
King Edward .....	30	21	6
Other Companies, &c ....	...	...	54
Total .....	4951	3312½	272

*Tasmanian Consols.*—Has been driving north at 1300 feet on payable stone. The new battery plant is now being received and erected.

*Volunteer Consolidated.*—Stone from the No. 5, or Black Boy, reef is being broken at a depth of 450 feet, worth 11 dwts. per ton. The reef has widened to over 15 feet, and will be vigorously opened up by driving and rising. The crosscut at the 300-foot level will be extended till Nos. 4 and 5 reefs are intersected.

*Volunteer.*—The total quantity of quartz raised from the mine to 30th June is 6630 tons, yielding 2059 ozs. gold, or 6 dwts. 5 grs. per ton, and realising £7341 12s. 8d. During the past half-year work has been principally confined to the erection of pumping plant and sinking the main shaft. It is expected that the reef will be intersected at the 330-foot level towards the end of September, and at 400 feet soon afterwards. In the early part of the new sink, the reef as seen in the shaft was 4 to 5 feet wide, and payable.

*Miner's Dream.*—The underlay shaft is down nearly 100 feet; the reef showing in the bottom is 12 to 16 inches wide, and of good quality.

*Miner's Dream South.*—An adit is to be driven on this claim from the eastern side of the hill.

#### MANGANA :—

	Crushed.	Gold produced.	Men emp'oyed.
	tons	ozs.	No.
Golden Entrance .....	108	160	7
Golden Prince .....	7	6	2
Abbotsford Creek .....	...	...	4
Total .....	115	166	13

WEST COAST.—At the Coronation Mine exploratory work continues at the 70-foot and intermediate levels, but the shoots of gold have proved short and unreliable. This is to be regretted, as the

owners have tested the reef to the depth mentioned in a workman-like manner. Four men were employed. At Howard's Plains 2 men are engaged, and 5 men at Flannigan's Flat.

The gold sold locally at Gormanston this quarter was 56 ozs.

*Lake Jukes.*—Mr. H. S. Muir reports that a promising discovery has been made at the Lake Jukes Mine of free gold in an iron and quartz matrix, in felsitic rock, worth 2 ozs. per ton. This shoot of ore was met with in driving, and is a downward continuation of the rich shoot carrying gold in the upper tunnel. The width of the metalliferous ground at the upper tunnel is 20 to 30 feet, and at the 200-feet level at least 15 feet. The smalls of the rock broken from the face, and without crushing, give from 2 to 4 grs. to the dish.

### TIN.

The production of tin ore at Waratah was as follows:—

	Tons.	Cwts.	Men employed.
Mount Bischoff .....	316	0	220
Wombat Mine .....	2	0	6
Stanhope Alluvial .....	2	16	3
Waratah Alluvial .....	1	0	3
Total .....	321	16	232

NORTH-EASTERN DIVISION.—The output throughout the districts comprising this division has been about the same as that of the previous quarter. The ore raised has totalled 318 tons 7 cwts, and the men employed were 624.

The returns for the Ringarooma District were as follows:—

	Tin ore obtained.		Men employed.	
	tons.	cwts.	Europeans.	Chinese.
Star of Peace Co. ....	11	13	25	...
Mammoth Co. ....	...	...	10	...
New Hope mine .....	0	4	3	...
Hope Creek lease .....	0	2	1	...
Dorset claims .....	0	12	4	...
Dunne's Creek Claims .....	1	12	8	...
Cascade River claims .....	2	13	9	9
Maurice River .....	0	1	1	...
Black Creek lease .....	0	9	3	...
Star of Peace Lease ...	0	4	2	...
Henry Dombus .....	3	0	2	...
Red Bank Tin Mine .....	0	17	2	...
Tin Pot Creek Leases .....	0	8	2	1
Brittannia Creek .....	0	3	2	...
Nugget mine .....	0	2	2	...
Total .....	22	0	76	10

PIONEER AND GLADSTONE DISTRICT.—The quarter's returns are as below:—

	Tin ore obtained.		Men employed.	
	tons.	cwt.	Europeans.	Chinese.
Pioneer mine .....	97	0	58	...
Garibaldi and Wyniford claims .....	9	16	12	46
Little Mt. Horror claims...	4	8	15	...
Ringarooma River.....	2	5	3	5
South Mt. Cameron .....	3	6	24	18
East Mt. Cameron .....	2	1	9	1
Mussel Roe River.....	3	4	16	0
Scotia mine .....	12	17	13	1
Gladstone claims .....	7	4	25	6
Mount Cameron .....	...	...	4	...
Ah Mong (Pioneer).....	0	6	...	2
Total .....	142	7	179	79

Mr. Cecil G. Ryan's report on work at the Pioneer Mine for the year ending June 30 states that 351,100 cubic yards of drift were pumped and sluiced, at a total mine cost of 7·171d. for a yield of 371½ tons of stream-tin, assaying 74·1 per cent, the average recovery being 2·367 lbs. of stream-tin per cubic yard, and the cost £28·231 per ton of stream-tin. Since sluicing began in June, 1900, 1,016,300 cubic yards of drift, averaging 2·345 lbs. of stream-tin, have been handled, at a cost of 6·598 lbs. per cubic yard, yielding 1064 tons 6 cwts. 1 qr. 20 lbs. tin ore. The ground is still being worked in two benches, the total lift from the bottom of gutter to tail-race being 127 feet, of which No. 1 plant is lifting 80 feet. The lead is widening out, the portion worked during the last twelve months being about 13 chains wide, with an average depth of 50 feet. The ground immediately ahead is 17 chains wide. The new plant is expected to start work about October, as the present workings have to be sluiced clean and the sites for the plants prepared. Mr. Ryan, in reporting upon the functions of this plant, explains that the present dump available for tailings is nearly filled up, and to continue dumping on the same site would necessitate pumping to an excessive height, much beyond the capacity of the present plants, which are working at nearly their full power. It is therefore proposed to dump the tailings into the worked out ground behind the plants. The bottom of this ground is about 20 feet below the level of the Ringarooma River, which carries off the water from the present dump, and the tail-water will have to be pumped out. Through a tunnel the tail-water will flow to the suction pipe of the new plant alongside the sluicing plants in the working face, and will thence be pumped to a height that will enable it to be worked again through the nozzles. A strip of ground, with a gap to float the plants through,, will be left across the workings, behind which the tailings will be dumped.

Before the plants are floated to a new paddock, this strip will be sluiced away.

The South Mt. Cameron Co. has been carrying out progressive work, laying down pipes, &c., and preparing for a start. Groves Bros' mine, near Gladstone, has been putting out an excellent return of ore. Between this and the Scotia a block of land has been taken up by a Launceston syndicate, who are also taking over Torley's mine on the Mussel Roe Fall, where there is some very rich wash. A Melbourne syndicate has secured extensive dredging areas on the Wyniford River and on the Ringarooma below Gladstone. The Gladstone District, consequently, is witnessing a distinct revival of activity.

MOORINA DISTRICT.—The following is the quarter's output:—

	Tin ore obtained.		Men employed.	
	tons.	cwt.	Europeans.	Chinese.
Native Youth Tin Mine ....	6	15	9	...
Moorina Tin Mine.....	...		7	...
Weld Tin Mine .....	8	10	8	...
Moa Tin Mine .....	6	0	7	...
Ah Wah .....	0	5	...	1
Barnes Bros. ....	1	1	3	...
Total .....	22	11	34	1

DERBY DISTRICT.—

	Tin ore obtained.		Men employed.	
	tons.	cwt.	Europeans.	Chinese.
Briseis .....	101	6	150	...
Cascade claims .....	3	3	3	22
Main Creek claims .....	1	17	11	...
Baker Bros. (Tin Pot) ....	0	8	2	...
Total .....	106	14	166	22

BRANXHOLM DISTRICT.—

	Tin ore obtained.		Men employed.	
	tons.	cwts.	Europeans.	Chinese.
Arba Tin Mine.....	18	5	30	...
Ruby Flat Claims .....	6	10	9	18
	24	15	39	18

EASTERN DIVISION.—The statistics for the quarter are as follows:—

	Tin ore obtained.		Men employed.	
	tons.	cwts.	Europeans.	Chinese.
<i>Weldborough Mines.</i>				
Weldborough Tin Mine .....	3	3	5	...
Weldbrook " .....	2	18	6	...
R. B. Inglis .....	1	5	2	5
Other claims .....	9	17	29	...
Chinese claims .....	5	2	...	53
Total .....	22	5	42	58
<i>Lottah and Blue Tier Mines.</i>				
Anchor Mine .....	68	10	150	...
Lit erator and Cambria .....	0	17½	3	...
Australian Tin Mine .....	1	2	27	...
Ogilvie's Lease (Blue Tier). .....	0	10	2	...
White and Kirwan's Lease (Blue Tier) .....	0	19	2	...
Woolley Bros., Crystal Creek .....	1	10	2	0
Other claims .....	1	16	10	...
Chinese Claims .....	0	9	0	5
Total .....	75	13½	196	5
<i>St. Helens Mines.</i>				
Royal Ruby .....	8	14	13	...
Thureau's Deep Lead .....	2	10	5	...
Hunt P.A. ....	2	4	7	...
C. E. Baird .....	2	10	7	...
Other claims .....	5	15	32	1
Total .....	21	13	64	1
<i>Avoca Mines.</i>				
Mount Rex .....	35	16	35	...
South Esk .....	6	10	11	...
Storey's Creek .....	1	0	3	...
No Call .....	0	5	2	...
Prospectors .....	...	...	4	...
Total .....	43	11	55	...
TOTAL EASTERN DIVISION	163	2½	357	64

WEST COAST.—The quarter's output was:—

	tons.	cwt.	Men employed.
Tasman Tin Mine .....	2	0	3
Birthday Tin Mine .....	3	10	7
Mayne's Tin Mine .....	18	0	14
Total .....	23	10	24

Mr. W. Fisher reports that at the Tasman the average quality of wash continues about the same. It is intended to put in two more boxes after the next clean up.

### SILVER.

WEST COAST.—The registered output of silver ores from the Zeehan and Dundas mines for the quarter ending 30th June is as follows:—

	Ore.	Tons.	Value.	Men.
<i>Zeehan Mines:</i>				
Mount Zeehan, Tas.	galena .....	2027	£ 17,379	198
Zeehan-Montana	" .....	1114	12,878	12
Zeehan-Queen	" .....	28½	223	45
Oonah	silver lead, &c.....	94	290	36
"	fluxing ore.....	583	420	
"	stannite .....	94	701	
Zeehan-Western	galena .....	117	1327	65
"	iron carbonate .....	27	94	
"	gossan.....	146	383	
"	fluxing ore.....	50	37	45
Florence	galena.....	316	2439	
Silver Queen Extended	" .....	4	45	9
<i>Dundas Mines:</i>				
Hercules	zinc-lead ore ... ..	2370	1459	145
"	zinc-ore .....	1725	4859	
Comet	galena.....	373	1747	70
"	flux .....	1232	831	
West Comet	flux .....	1470	650	20
Ring Valley	fahl ore .....	106½	1318	14
Total .....		11,877	47,080	859

*Mount Zeehan (Tasmania).*—Mt. T. Vincent, manager, reports:—Spray Mine, No. 4 level south, driven 150 feet, cross-cutting the lode, the width of which is not known. Main shaft 12 feet 6 inches below the level; lode rich. Crosscut to No. 3 lode 440 feet out of an estimated 590 feet. Stopes are turning out regular quantities of first-class ore. Queen Extended: prospects improved, mine paying its way. No. 6 shaft has paid cost of all work done, including sinking main shaft. Water very heavy.

*Zeehan-Montana.*—Mr. John Craze, manager, reports:—At No. 1 shaft No. 6 lode, No. 6 level, is now producing a little ore of second grade; No. 8 lode, No. 5 level, has been driven on for a distance of about 100 feet, averaging 1½ feet wide, a good portion of which is clean galena of high silver value. At No. 2 level now driving through the slate which intersected and cut off No. 4 lode. The drive is 160 feet in slate, north of the point where the lode is cut off, and another 100 feet will take it out of the slate into the melaphyre, when the lode is expected to be cut at No. 2 shaft. The east crosscut has reached a point 1000 feet from

shaft, and has entered the Despatch section. Nothing of value has been found in crosscut. No. 2 lode continues of moderate size, and a very fair quantity of clean ore is being won. The silver value is low; the last sampling gave 55.5 per cent. lead, 34 ozs. silver, per ton. The west crosscut is in 675 feet from shaft; nothing cut of a payable character since passing No. 2 lode.

*Zeehan-Queen.*—Mr. T. H. Vincent, manager, reports:—No. 1 Shaft, No. 1 level, Clarke's lode, drive north now 650 feet north of crosscut, and for the last 50 feet shows up to 3 feet milling ore.

*Oonah.*—Capt. W. Fisher reports:—At the Junction a tram-line has been constructed, to connect with Oonah main tram, length 28 chains, and carbonates are now being won at the rate of 100 tons per week. The stannite still produces good ore, a new shoot being met with in No. 4 level going north, and driven on for 60 feet—good quality. The sulphide of iron from gossan tunnel is low in silver; gossan from same tunnel is 6 inches wide, with 80 to 100 ozs. silver per ton. Galena occurs only in bunches.

*Zeehan-Western.*—Mr. Jno. Craze, manager, reports:—During the past three months five drives have been kept going on various lodes, but nothing of importance has been discovered. The pumps at Nos. 5 and 8 levels have been taken out, and new pumps of larger capacity have been placed in position; new main rods and stronger strapping plates have been put in to take the place of the old ones, and sinking of the shaft commenced. The shaft is now 700 feet below the surface, and it is intended to sink it at least 200 feet, in order to prove the lode at that depth.

*Silver Queen Extended.*—Mr. Chas. Stevens, supervisor, reports:—Driving, 69 feet; costeaning, 43 feet; trenching, 448 feet.

*DUNDAS AND MT. READ.—Comet Mine.*—Mr. A. Clark, manager, reports:—Stopping above Maestri's bottom level. Here the grade of the ore is much lower than at deeper levels. Still continuing to prospect drives at No. 3 level, but so far without any remunerative lode being met with, though prospects are highly encouraging.

*Ring Valley Mine.*—Mr. John Moyle, manager, reports:—The output was from No. 1 tunnel level workings. Fifty feet of driving and 5280 cubic feet of stopping have been carried out. The length of the level is now 1000 feet, and the lode is 10 feet wide, consisting of iron and copper pyrites, about one-fifth being payable.

*Hercules Mine.*—Mr. Sydney Thow, general manager, reports:—2370 tons of ore, containing 581½ ozs. gold, 35,597 ozs. silver, and 219 tons lead were consigned to the Tasmanian Smelting Co., Zeehan, and 1725 tons, containing 334 ozs. gold, 19,160 ozs. silver, 174 tons lead, and 749 tons zinc were exported to Europe. No. 6 tunnel has not disclosed anything of value, but is still going into the hill, and the copper ore bodies are believed to be still ahead. An air-power winch has been installed at No. 4 for removal of

zinc ores from the intermediate workings. Prospecting work is to be continued north to connect with the Barlen Mine, which is now the property of the Hercules Co. The old workings of the Barlen are also being drained, for examination. At Williamsford a crushing mill is going up, and the siding put in by the Government to connect with this plant has been finished. Contracts have been made for delivery of zinc ore up to 1905, and there is a good demand for this class of material.

*Primrose Mine.*—Mr. W. Hodge, manager, reports that 149 tons of ore were raised, containing 22 tons lead, 31 ozs. gold, and 2350 ozs. silver; net value £150. Seven men were employed.

*Tasmanian Smelting Co., Ltd.*—Mr. P. Kunze, manager, reports:—Ore purchased in the quarter ending 30th June, 6444·355 tons, containing 2090·222 tons lead, 282,263·39 ozs. silver, and 642·041 ozs. gold. Bullion exported: 2060·567 tons lead, 290,432·53 ozs. silver, 825·839 ozs. gold. Mr. Kunze also reports as follows on the progress made at the Works in the treatment of refractory ores of the Mt. Read type:—These ores defied any attempt for treatment by the ordinary lead-smelting process, for obvious reasons. The objectionable matter in the ores has been the high zinc contents in connection with the refractory gangue. The blende is finely disseminated through the slate, and retains its sulphur contents most pertinaciously, even when the temperature in the roasting furnace is considerably raised. The insufficient quality of roast obtained interfered seriously with a smooth furnace run. Besides the high zinc and silica contents of the ore required such large quantities of fluxes that the treating costs became quite out of proportion to the gross metal value. These difficulties were overcome by the adaptation of the Huntington-Heberlein process to the treatment of these ores. This process expels the sulphur forcibly by the use of compressed air sent through the heated ore mixture, and produces a roast low in sulphur contents, besides turning out the roast in an agglomerated form eminently suitable for blast furnace treatment. The costs of treatment fell to such an extent that ores formerly considered valueless came within the reach of treatment. It is a happy coincidence that metal-bearing iron ores and lead ores are in such close proximity to the refractory ores, and for this reason Zeehan must be considered as a most suitable place for the treatment of zinc-lead sulphides. The extent which this industry will assume in future will depend greatly on the improvement of local conditions. The ore will have to be mined in the most economical and effective manner, and smelting operations will have to be carried out on a large scale, and with the help of up-to-date facilities for handling the material and the best metallurgical apparatus. It is to be hoped that the transport of ores, fluxes, and coke may be effected cheaper in future, owing to the increased quantities handled; by the reduction the industry will be benefited, as the quantities of lower-grade which can be

economically handled will to a very great extent depend on the costs for bringing them to the smelting centre. It is to be regretted that by the lead-smelting process only lead, silver, and gold are recovered. There is very little hope that the zinc will be recovered in future in a marketable form. A satisfactory recovery of all four metals in a metallurgical way seems impossible with ores of the Mt. Read character.

**NORTH-WESTERN DISTRICT.—Magnet Mine.**—During the quarter 2511 tons silver-lead ore, net value £4186, were shipped to New South Wales under contract. One hundred and seventeen men were employed at the mine. In the No. 5 level the shoot of ore has been driven on for 170 feet, and is continuing both north and south. In the south end the ore is much oxidised, and by crosscuts the lode has been proved to be 22 feet wide, consisting of gossan ore with rich veins of high-grade material. A dressing mill has been erected at the mine.

**Silver Cliff.**—Mr. C. H. Hall is prospecting north-west of the old workings. A shaft is being sunk on an outcrop, which is supposed to be a continuation of the old lode. Twenty tons of zinc ore are at grass. Two men employed.

**Long Tunnel.**—One hundred and fifty tons of silver-lead ore are stacked in paddock ready for transport when the tramway is constructed. Eight men employed.

**Godkin.**—This mine has produced 20 tons of silver ore, which is stacked at grass. Six men employed.

**North Farrell.**—At this mine 3900 tons of ore stuff were raised, producing 483 tons of silver-lead ore, averaging 59 per cent. lead and 59 ozs. silver per ton, valued net at £3300. One hundred men employed.

### COPPER.

**Mount Lyell Mine.**—Mr. Robert Sticht, general manager, reports the quantities of ore treated and metal produced during the quarter ending 30th June to have been as follows:—

Ores and metal bearing fluxes treated:—

	Tons.	cwts.	qrs.	lbs.
Mt. Lyell Mine ore .....	69,745	13	1	25
North Lyell Mine ore .....	26,354	2	1	5
Purchased ores.....	220	4	0	10
	96,319	19	3	12
By-products from Crotty Works.....	0	11	0	0
Metal-bearing flux from—				
North Lyell Mine .....	466	10	0	7
Royal Tharsis Mine .....	312	14	3	24
	97,099	15	3	15

The quantity and value of metals produced was—

Blister copper, 2178 tons, containing—	£	s.	d.
Copper, 2150 tons, valued at.....	126,437	16	11
Silver, fine, 217,001 ozs., valued at.....	23,056	7	1
Gold, fine, 5849 ozs., valued at .....	24,858	5	0
Total value.....	£174,352	9	0

Number of men employed—

At the Company's	Mt. Lyell Mine .....	350
"	North Lyell Mine .....	466
"	Reduction Works .....	1020
"	Mt. Lyell Railway.....	143
"	North Lyell Railway.....	17
	Total .....	1996

At the Iron Blow the usual pyritic extraction is now chiefly confined to the north-west breast, or densest remaining surface, portion of the main ore-body, which, with the removal of the overburden, absorbs all the labour at present devoted to this portion of the property.

*North Lyell Mine.*—Productive and developmental work is continued vigorously. The workings are being extended from a well designed base or centre, which, whenever necessary, permits of the despatch of 500 tons of ore per day to the smelters. Six levels are in operation, and another 100-feet sink is being added to the main shaft, in order to bring it into line with the winze or auxiliary shaft workings, which have already attained that depth (600 feet), and cut a continuation of the rich ore in the newly opened level. On the surface, open-cut operations are continued on the eastern, main, and western, or Lyell-Tharsis, ore-bodies, which, in addition to their more valuable constituents, supply the reduction works with the necessary silica, thus dispensing with the faces previously worked for that special purpose. It is intended to use portions of the mine produce for the manufacture of fertilizing and other by-products; unfortunately, most of the work in connection with this branch is likely to be carried on outside the State.

*Lyell Blocks.*—The balance shaft is being connected with the concentrating mill. After this is accomplished, the mine will become again a regular producer. Seventy-seven men employed.

*Crown Lyell.*—The main shaft has been sunk a further depth of 57 feet, making a total of 514 feet from the surface. The manager reports that some fair ore was carried down on the north side of the shaft, upon which he is now preparing to open out. Eighteen men employed.

*Tasman and Crown Lyell Extended.*—Seventy feet have been risen between the Nos. 3 and 2 levels, leaving a balance of 85 feet. When finished, this will provide means for more expeditiously proving the

ore-bodies which were worked in the higher levels. Six men employed.

*Tasman-Comstock Consolidated.*—Work has been confined to driving southerly from the Queen tunnel on an ore-channel, but nothing of importance has been located. Five men employed.

*Copper Mines of Mt. Lyell West.*—Surface prospecting has been continued with 2 men. Negotiations for use of diamond drill are proceeding.

*Lake Jukes Proprietary.*—Mr. H. S. Muir, manager, reports favourably on the prospects of the mine. The free gold lately met with has been referred to under the head of gold in this report. Four men employed.

**NORTH-WEST COAST.**—*Blythe and Stowport.*—At Rutherford's Mine a new shaft is being started by the syndicate for developing the mine in depth. Prospecting in the Blythe District has resulted in the discovery of several copper lodes. On Clarke and Sice's property a bulk-parcel of what is stated to be rich ore has been raised for treatment in the furnaces of the Tasmanian Smelting Co., Zeehan. The Blythe, the Commonwealth, the North Commonwealth, are names of other copper shows in the vicinity. There is no doubt that a copper ore belt of country exists here, and continues through to the sea coast, beneath the overlying basaltic sheet. There is every likelihood that this field will prove to be of considerable importance. Prospecting has also been carried on at Detention River, near Rocky Cape.

### COAL.

The output this quarter was 15,783 tons, against 11,873 tons 8 cwts. the previous quarter. The production of the various coal mines was as follows:—

Colliery.	Tons raised.	Men employed.
Cornwall .....	7691	65
Mount Nicholas .....	6307	63
Cardiff .....	94	5
Dulverton .....	64	7
Spreyton .....	250	6
Bound's (Illamatha) .....	150	7
York Plains .....	138	4
Marialva .....	200	3
Sandfly .....	23	3
Mt. Cygnet .....	866	6
<b>Total .....</b>	<b>15,783</b>	<b>169</b>

The Mt. John Syndicate is endeavouring to develop seams of excellent coal at the Denison, near Bicheno. Some satisfactory tests have been made of the coal in Launceston.

## IRON.

The quarter's output of the Tasmanian Iron Co.'s Mine at the Penguin was 740 tons, sold for fluxing purposes. Twelve men were employed.

## CONCLUSION.

The total value of minerals raised and exported this quarter was £436,522, as compared with £417,429 in the corresponding quarter of the previous year. The increase principally comes under the heads of gold, copper, and coal. The quantities, however, of silver-lead ore and bullion have increased by nearly 1000 tons.

Return showing the average number of men employed in or about the mines during the quarter ending the 30th June, 1904.

District.	European.	Chinese.	Total.
Northern and Southern .....	669	2	671
North-Western .....	371	...	371
North-Eastern .....	525	130	655
Eastern .....	775	64	839
Western .....	3571	...	3571
Total .....	5911	196	6107

Value of the mineral output per man employed, £71 9s. 7d.

The dividends paid during the quarter were:—

From Copper Mines:—

Mount Lyell Mining and Railway Co., Ltd. ....	£	s.	d.	£	s.	d.
	75,000	0	0	75,000	0	0

From Gold Mines:—

New Golden Gate G. M. Co., N.L. ....	4800	0	0	4800	0	0
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From Tin Mines:—

Pioneer T. M. Co., Ltd. ....	4050	0	0	19,075	0	0
Mt. Bischoff T. M. Co., Registered ...	13,500	0	0			
Mayne Tin Mines, N.L. ....	1500	0	0			
Wilberforce Pump Co., No. 1, N.L. ...	25	0	0			

From Silver Mines:—

Mt. Zeehan (Tasmania) Silver Lead Mines, Ltd. ....	4198	4	0	4198	4	0
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Total .....	£103,073	4	0
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