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THE PROGRESS OF  
THE MINERAL INDUSTRY

OF

TASMANIA,

FOR THE QUARTER ENDING 30<sup>TH</sup> JUNE, 1898.

COMPILED BY

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BY ORDER OF

THE HONOURABLE ALFRED T. PILLINGER,

MINISTER OF MINES.

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1898.

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## PROGRESS OF THE MINERAL INDUSTRY OF TASMANIA

FOR THE QUARTER ENDING JUNE 30, 1898.

Launceston, 28th July, 1898.

DURING the Quarter ending 30th June, 1898, there has been a considerable falling off in the output of Tin Ore, and a slight decrease in that of Blister Copper and Iron Ore, but these decreases are more than made up by the increased returns of Gold, Silver-Lead Ore, and Coal.

The following Table shows, as far as can be ascertained, the quantities and values of the Metals and Minerals raised or exported during the period under review, compared with those for the previous Quarter :—

	DURING THE QUARTER ENDING JUNE 30, 1898.		DURING THE QUARTER ENDING MARCH 31, 1898.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Gold won ..... ozs.	13,446	50,590	9367	35,578
Gold Quartz and Pyrites exported tons	134	602	69	641
Silver Ore exported..... "	3671	44,040	3327	38,795
Blister Copper exported..... "	1109½	88,760	1125	78,750
Copper Ore exported ..... "	71	1440	16	376
Tin (metallic) exported..... "	383½	25,594	543	34,752
Iron Ore exported .... "	404	404	548	548
Coal raised ..... "	13,755	11,004	9632	7705
<b>TOTAL VALUE .....</b>	... £	222,434	... £	197,145

## GOLD.

The quantity of Gold obtained from the different fields is shown in the following Table :—

	GOLD OBTAINED DURING THE QUARTER ENDING JUNE 30, 1898.				TOTALS FOR PREVIOUS QUARTER.
	From Quartz.	Alluvial.	Cyanide and Chlorination.	TOTAL.	
	ozs.	ozs.	ozs.	ozs.	ozs.
Beaconsfield .....	6520	48	697	7265	3706
Mathinna .....	4272	...	389	4661	4519
Mount Victoria ...	663	30	...	693	<i>Nil.</i>
Mangana .....	389	...	...	389	<i>Nil.</i>
Lefroy .....	57	20	80	157	383
Lisle & Golconda..	...	200	...	200	200
West Coast, Middlesex, &c. ....	...	81	...	81	559
TOTAL .....	11,901	379	1166	13,446	...
TOTALS for previous Quarter ...	7841	756	770	...	9367

BEACONSFIELD.—At the Tasmania Mine the water is gradually subsiding, and at the end of the quarter it was about 30 feet below the 600 feet level. Work has again been resumed at this level, and it is hoped that sufficient stone will now be raised to keep both batteries running. During the past quarter a total of 7182 ozs. of gold has been obtained, including 697 ozs. from the chlorination plant. Extra furnaces are now being erected in connection with this plant to treat the large stack of accumulated pyrites from the vanners. The cyanide plant which was erected by a syndicate to treat the tailings from the Florence battery, has not been very successful, owing to the copper in the sands, and work has been temporarily suspended. 647 ozs. of base bullion were sent away during the past quarter, but the gold contents are not yet known, and no account has been taken of this in the quarterly returns. Sinking at the new main shaft has been delayed, owing to a breakage of the pumping machinery : at end of the quarter the shaft was down about 700 feet.

Prospecting is still being carried on at the Little Wonder and Moonlight Mines, and two small parcels of stone have been crushed, 20 tons from the Little Wonder yielding 30 ozs., and 5 tons from the Moonlight yielding 6 ozs. of gold.

From the North Tasmania Mine 35 tons of ore have been sent away to the Dapto Smelting Works, New South Wales. The

average assay of 20 tons, of which the returns have been received, was 8.1 per cent. copper and 19 dwts. 18 grs. gold per ton.

**LEFROY.**—At the New Pinafore Mine the central shaft has been sunk to a depth of 1020 feet, and sinking is still proceeding. From the bottom of the main winze, at the 1150 feet level, the W. drive along the hanging-wall has been continued to upwards of 550 feet from the winze, and a little gold has been occasionally met with, but, so far, not in payable quantities. 100 tons of quartz from the main shaft stopes were crushed for a return of 57 ozs. gold. For the greater part of the quarter the cyanide and chlorination plants were idle owing to scarcity of water: the yield of gold from these sources was 80 ozs.

At the Volunteer Mine, drives have been continued along the reef channel, at the 1300 feet level, 165 feet west and 110 feet east, but nothing payable has so far been met with.

Vigorous prospecting is being carried on at both ends of the field, with, in several cases, good indications of ultimate success. A party of miners have erected a small cyanide plant to treat the battery tailings accumulated in Sludge Creek, but the probable success of the undertaking is not yet ascertained.

**MATHINNA.**—The most important feature of the quarter's progress on this field is the striking of a good body of gold-bearing quartz at a depth of 915 feet in the Golden Spur shaft, belonging to the Tasmanian New Golden Gate Extended Mine, Limited, and if this turns out as well as anticipated it will doubtless lead to some of the abandoned mines in the district being tested at a greater depth. At the Gate Extended Mine, belonging to the same company, the cross-cut at the 400 feet level has been extended to 760 feet from the shaft, but nothing payable has yet been cut.

At the New Golden Gate during the quarter ending 30th June, 4650 tons of quartz were crushed for 4234 ozs. of gold, valued at £16,073 12s. 11d., and 389 ozs., valued at £1523 16s. 9d., were obtained from the cyanide plant. For the same period the sum of £10,400, equal to 6s. 6d. per share, was paid in dividends.

North of Mathinna several companies are working in a small way, and a parcel of 13 tons raised by tributors from the Hickson's Mine yielded 22 ozs. of gold.

Between Mathinna and Fingal the prospects continue very encouraging, and it is probable that a battery will shortly be erected by the Salmon Gold Syndicate.

**MANGANA.**—At the New Sovereign Mine, owned by the Mangana Gold Reefs, Limited, a strong reef is being opened up,

and the facilities for economic mining are very good. Rich stone occurs in patches, but the bulk of the reef is of low grade. During the past quarter 1531 tons of quartz were crushed, which yielded  $389\frac{1}{2}$  ozs. of gold. Several other companies are prospecting in the neighbourhood, but no new finds of any importance have been reported.

**MOUNT VICTORIA.**—The Ringarooma Mine is still producing stone of good quality, and during the past quarter 363 tons were crushed for 663 ozs. gold, valued at £3 19s. 0d. per ounce. At the Mercury Mine the water-wheel is being repaired, and a 10-head battery is being erected. A small parcel of stone has been raised from the Bright Star Mine for a trial crushing, and at the Alberton Mine a shaft has been sunk over 100 feet.

**WARRENTINNA.**—The East Volunteer Company have driven the main adit 915 feet, and expect to cut the reef in about 165 feet. A little prospecting is being carried on at the Derby Mine, but work has been temporarily suspended at the Coronella Extended, pending the result of a trial crushing of stone.

A small battery is being erected at the Lucy Spur Mine, near Corinna, but progress is very slow, on account of the difficulty of getting in the machinery. Prospecting is going on in various parts of the Colony, and two reward claims have been recently applied for near Port Cygnet.

**ALLUVIAL.**—No fresh finds of alluvial gold have been reported, and the yield from this source is gradually falling off, but it is very difficult to obtain accurate returns.

**DREDGING.**—It is satisfactory to note that there is a probability of a new industry being started, viz., dredging for gold. A company is being formed to work dredging claims which have been taken up on the Whyte River near its junction with the Rocky River, and should its operations prove successful, which there is much reason to hope, doubtless several of the other rivers on the West Coast will be worked in a similar way. In New Zealand the dredging industry has become a very important one, and in some cases all working expenses are said to be covered by a yield of 2 grains of gold per ton.

#### TIN.

**MOUNT BISCHOFF.**—At the Mount Bischoff Mine work has been considerably hampered during the past quarter by several

large slips which occurred at the Brown Face, covering up a large quantity of crush-dirt, and it will take some months to remove the fallen ground, which contains a little tin ore, but not in payable quantities. The output of "black tin" for the quarter was 444 tons, as compared with 582 tons for the previous three months, and the total quantity produced from this mine up to June 30th, 1898, was 53,436 tons 7 cwt. 2 qrs. 26 lbs.

The following particulars, taken from the last Half-yearly Report, show the cost of mining and dressing a ton of staniferous material during the six months ending 30th June:—

	<i>s.</i>	<i>d.</i>
Mining, including new works, maintenance, &c.....	2	3
Hauling, filling, and emptying trucks .....	0	6½
Crushing and dressing, maintenance of plant, &c.....	1	0¾
Slime-sheds .....	0	2¼
Ring-tail sheds .....	0	2½
Management and supervision .....	0	10¼
Plant, including all machinery .....	0	3½
Development and progressive work.....	0	1¾
Waterworks .....	0	0¾
Ore bagging .....	0	0¾
Contracts and sundries .....	0	2½
Stores .....	0	5
TOTAL.....	6	3¾

For the same period the earnings were £25,271 3s. 9d., out of which the sum of £21,000 was distributed in dividends, and £1050 paid as Income Tax. The total amount paid in dividends is £1,509,000.

**NORTH-EASTERN DISTRICT.**—There has been a slight increase in the output of tin-ore from this District, 136 tons 7 cwt. having been sent away, as compared with 119 tons for the previous quarter. For the first part of the quarter water was very scarce, but most of the mines now have a good supply, and there should be an increased output of ore for the current quarter. The Engineers' strike in England has delayed the delivery of the machinery for the dredging plant at Derby, for which the pontoons are ready.

**EASTERN DISTRICT.**—At the Anchor mine the cost of treatment is very low, but the average quality of the stone crushed has, so far, not proved satisfactory. Up to July 9th a total of 12,773 tons of stone had been crushed, but the yield of tin-ore has not been payable since the first 2100 tons. During the last six weeks one battery of 50 stamps was working continuously, and crushed 7774 tons, equal to 4·318 tons per stamp per day, including stoppages. The following particulars show the cost of

treating a ton of rock, taking the average of the costs for three consecutive fortnights, as supplied by the Manager :—

	s.	d.
Mining .....	1	3·716
Cracking.....	0	1·286
Haulage, emptying trucks, and delivering to stampers	0	0·993
Dressing, including bagging and sewing.....	0	5·933
Supervision, engineer, carpenter, smith, &c.....	0	2·233
Oil .....	0	0·590
Tools.....	0	0·280
Materials.....	0	0·763
Explosives .....	0	3·763
Management and supervision.....	0	3·553
<b>TOTAL.....</b>	<b>2</b>	<b>11·110</b>

At the Australian Mine the battery of 30 heads was only working 1 shift per day, and crushed 1200 tons, which yielded 10 tons 2 cwt. of tin ore. Latterly the stone has been very poor, but is now said to be improving.

A very complete dressing plant has been erected at the Liberator Mine, containing 20 heads of stampers, but only trial crushings have been made during the quarter.

At Weldborough and St. Helen's, 32 Europeans and 60 Chinese have been engaged in alluvial mining, but the yield of tin ore was only 23 tons 3 cwt. Several parties are engaged cutting races and prospecting new ground, and now that water is more plentiful an increased output may be expected.

The price of tin has shown a very satisfactory rise, from £65 10s. per ton on 31st March, to £70 per ton on 30th June, with a tendency to a still further rise.

## SILVER.

During the past quarter 3670 tons of ore, of an approximate value of £44,040, were sent away from the Zeehan station, an increase of 343 tons on the previous quarter's output. The bulk of this was silver-lead ore, but it also includes several small parcels of argentiferous copper ore from the mines in the neighbourhood of Ringville. The following list shows the principal mines contributing, with the quantity and approximate value of the ore raised by each :—

	Quantities.	Approximate Value
	Tons.	£
Western .....	785	10,205
Montana .....	726	9438
Oonah .....	461	5532
Smith's Section .....	416	5200
Silver Queen.....	328	2400
British Zeehan .....	231	2872

Other contributors were the S. W. Curtin-Davis, No. 1 Curtin-Davis, Block 291, Bonnie Dundee, West Comet, Tasmanian Crown, Comstock, and several tribute parties.

At the Montana the shaft is being sunk with all possible speed. The mine looks well, and has large reserves of ore in sight. A regular output of about 75 tons marketable ore per week is maintained from the Western mine, and the average assay value is higher than usual. About 100 tons of the quarter's output has been stacked at the mine, owing to the difficulty of obtaining freights. Considerable improvement has taken place in the lower levels, but sinking has been temporarily suspended on account of the water, and it will be necessary to provide a more powerful pumping plant. Up to March 31, 1898, the Company had sold a total of 26,405 tons of ore, containing 2,643,694 ozs. silver, and 14,270 tons lead, the net value of the same at the mine being £317,487 16s. 5d. The total length of drives and cross-cuts in the mine to the same date was  $4\frac{3}{4}$  miles.

At the Oonah the concentrating mill is now doing good work. The mine is looking well, and a regular output of about 40 tons marketable ore per week is maintained.

At the Silver Queen work has been temporarily suspended at the No. 2 workings owing to increase of water and poorness of the lode. At the No. 4 shaft the main lode is being opened up at the 210 feet level, and Clarke's lode at the 44 feet and 110 feet levels, and prospects are improving. The main lode lies very flat, dipping at angles of  $25^{\circ}$  to  $40^{\circ}$ , and it is proposed to test this by sinking a deep winze on the underlay from the bottom level by means of an air-winch. At No. 5 shaft, near the Montana boundary, what is known as No. 6 lode of the Montana has been intersected at a depth of 112 feet, and driven on upwards of 100 feet, but is so far of little value. During the past quarter the output of ore was 328 tons, of an approximate value of £2400, and for the 12 months ending June 30, 1898, 1676 tons were raised by the company and by tributors, valued at £14,041.

The output from the British Zeehan is increasing, and prospects are improving. It is probable that the various tribute parties on Smith's Section will amalgamate, and thus be able to work to much better advantage. A tramway is to be made to connect the mine with the Zeehan Tramway Company's Line.

At the Western Extended the erection of a concentrating mill is nearly completed, and this mine will probably be on the list of producers before the end of the current quarter.

At the Comet Mine, Dundas, good progress has been made with the re-erection of the buildings and machinery destroyed

by the bush fires, and work will shortly be resumed below ground.

The branch line from the Zeehan-Strahan Railway to the Tasmanian Smelting Company's Works has been completed, and the first consignment of machinery is expected to arrive almost immediately. A start has been made with the smelter buildings, and bricks are being manufactured locally for the furnaces, &c. It is probable that smelting operations will be started before the end of the year, when an increased output from these fields may be confidently expected.

No ore has been sent away from the Magnet Mine, near Waratah, during the quarter, the ore being stacked pending the completion of the pack-track from the mine to the road. This is nearly finished, and tenders have been called for packing and carting 500 tons to Waratah. The mine is opening up well, and it is anticipated that a regular output of 15 to 20 tons of first class ore per week will be maintained. A good deal of prospecting is going on in the Middlesex District, and some high grade galena has been obtained, but progress is much hindered by difficulty of access.

### COPPER.

During the past quarter the Mount Lyell Company's sixth furnace was blown in, and, including stoppages for necessary repairs and renewals, the quarter's run was about equivalent to full time for five furnaces. 1109 tons 9 cwts. 3 qrs. of blister copper were shipped from Strahan, worth approximately £80 per ton, and a fourth dividend of 4s. per share, amounting to £50,000, has been paid, making a total of £194,220. Good progress has been made with the erection of the second smelting plant. The five new furnaces will measure 210 inches by 42 inches at the hearth, and will have an aggregate capacity about equal to the six at present running.

The following particulars are taken from the Company's Reports for the half-year ending March 31, 1898:—

#### COST PER TON OF ORE TREATED.

	£	s.	d.
Mining operations .....	0	2	4·64
Removal of overburden .....	0	2	0
Smelting operations .....	0	17	9·87
Converter operations .....	0	2	9·18
<b>TOTAL.....</b>	<b>1</b>	<b>4</b>	<b>11·69</b>

As against £1 3s. 3·1d. per ton for the previous half-year.

The quantities of ore treated during the half-year were :— 56,007 tons from the open cut benches, and 6861 from the stopes above No. 4 Tunnel. Total 62,868 tons, of an average assay of 4·25 per cent. of copper, 3·69 ozs. silver, and 0·177 ozs. gold per ton on the net weight of the ore.

Since the beginning of smelting operations up to March 31, 1898, a total of 146,673 tons of ore was treated, of an average value of 4·51 per cent. of copper, 3·92 ozs. silver, and 0·185 ozs. gold per ton on the net weight.

The following Table shows the average quantities smelted per furnace per day actual running time, since the start :—

	Tons.	Tons.
Ore .....	86·72	
First matte .....	18·52	
		105·24
Quartz .....		32·48
Limestone .....		20·26
Slag .....		15·71
Coke .....		5·18
Flue Dust .....		1·33
Converter slag .....		3·45
<b>TOTAL .....</b>		<b>183·65 tons of</b>

material, of which 110·02 tons are metal-bearing.

Converter Results for the half-year ending March 31, 1898 :—

Converter Matte treated.				Blister Copper produced.			
Tons.	Assay Value.			Tons.	Containing.		
	Copper.	Silver.	Gold.		Copper.	Silver.	Gold.
	per cent.	ozs. per ton.	ozs. per ton.		tons.	ounces.	ounces.
4558	55·33	46·45	2·57	2363	2338	201,520	11,106

The approximate amount and value of the ore above No. 4 Tunnel, according to a careful estimate by the General Manager, is as follows :—

1,781,300 tons, of an average value of 55s. per ton.	
364,700	17s. "
314,300	14s. "
<u>2,460,300</u>	

The valuations were based on the current prices of copper, £51 10s. per ton; silver, 2s. 2d. per oz.; gold, £4 4s. per oz.;

and are the gross values without deductions for smelting losses or costs.

Other mines have shipped small parcels of copper ore, amounting in all to 40 tons 15 cwt., the bulk of which came from the King Lyell Mine, where they are now sluicing with four nozzles. The Tharsis Mine is opening up well, and an aërial tramway is being constructed to send the ore to the Mount Lyell smelters. Steady development work is going on at the North Mount Lyell Mine, and the Company has started to erect wharves at Kelly's Basin, on Macquarie Harbour, and to clear the line for the railway to Gormanston. This line passes through mineral-bearing country, and its construction would greatly assist development.

Besides the mines already mentioned, there are fourteen others at work in the neighbourhood of Mount Lyell, and several companies are engaged in prospecting at Mount Darwin and Mount Jukes.

A good deal of prospecting has been done in the Dora and Red Hills District, and several promising finds have been reported from the latter district; but progress is necessarily slow, especially in the winter months. Steady development work is going on at the Mount Read Mines.

The Hercules Company has started a tunnel 160 feet below Nos. 2 and 4 tunnels. The self-acting tramway is nearly completed, and the Mount Reid Company have decided to junction with this line instead of constructing an aërial tramway; but nothing definite has been settled as to the disposal of the ore from these mines.

Preparations are being made for the erection of the smelters at the Tasmanian Copper Mine, Rosebery, but there is nothing fresh to report from the other mines of this District.

At the Colebrook the tunnels are being pushed ahead, but the ground is very hard, and it has been decided to procure a diamond drill to prospect the huge ore body more expeditiously.

Several small parcels of ore, some of them of very high grade, have been sent away from the S.W. Curtin-Davis, No. 1 Curtin-Davis, Bonnie Dundee, Rich P.A. (tribute), and Block 291 Mines, and some rich ore has lately been struck in the Fahl Ore Mine.

## COAL.

There has been a considerable increase in the output of coal during the past quarter, and the collieries have been working full time. The output from the collieries from which returns have been received was as follows:—

	Tons.
Mount Nicholas.....	8000
Cornwall.....	5080
Russell.....	650
Dulverton .....	25
<b>TOTAL.....</b>	<b><u>13,755</u></b>

Prospecting is being carried on between Bicheno and Seymour on the East Coast, and several small seams have been discovered of what is said to be a good coking coal.

### IRON ORE.

The anticipated increase in the output of iron ore has not yet been realised. The quantity shipped during the past quarter was 404 tons.

### BISMUTH.

Underground work has been temporarily suspended at the Shepherd and Murphy's mine, pending the completion of the track and the erection of a battery.

The average number of men employed in or about mines during the past quarter was as follows :—

Europeans .....	6051
Chinese .....	260
<b>Total .....</b>	<b><u>6311</u></b>

Of these 4000 were employed on the West Coast, but this number includes those working at the Mount Lyell smelters.

In the last Quarterly Report there is an error in punctuation on line 12, page 6. There should be a full stop after "branch lines," and a comma after "At Mount Read."