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THE PROGRESS OF
THE MINERAL INDUSTRY
OF
TASMANIA.

FOR THE QUARTER ENDING 30TH SEPTEMBER, 1908.

COMPILED BY

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SECRETARY FOR MINES.

BY ORDER OF

THE HONOURABLE D. C. URQUHART.

MINISTER FOR MINES.



Tasmania:

JOHN VAIL, GOVERNMENT PRINTER, HOBART.

1908.



PROGRESS OF THE MINERAL INDUSTRY OF TASMANIA

FOR THE QUARTER ENDING 30TH SEPTEMBER, 1908.

Hobart, 13th November, 1908.

THE following table shows, as far as can be ascertained, the quantities and values of Metals and Minerals raised during the quarter ending 30th September, 1908, as compared with the previous quarter ending 30th June, 1908:—

	During the Quarter ending 30th Sept., 1908.		During the Quarter ending 30th June, 1908.	
	Quantity.	Value.	Quantity.	Value.
* Gold won	ozs. 13,396·343	£ 56,904	15,428·017	£ 65,534
Silver-lead Ore produced	tons 17,177·79	83,540	5060·48	38,536
† Blister Copper produced	" 2260	153,987	2190	143,089
Copper Ore and Copper produced	" 460·65	2281	489	2095
Tin Ore produced	" 1187·55	111,094	1095·5	101,626
Iron Ore raised	" 1000	400	800	400
Coal raised	" 15,872·25	13,491	16,876	14,345
Wolfram Ore produced...	" ...	...	35	18
Bismuth	" 1·85	222	50	60
	...	421,919	...	365,703

* Fine gold, including gold contained in blister copper and silver-lead bullion.

† Value of gold contents deducted.

THE MINERAL INDUSTRY

GOLD.

During the past quarter, 5899 ozs. of gold were obtained from quartz, 158·22 ozs. from alluvial, 1773·15 ozs. by means of the cyanide and chlorination processes, 4735 ozs. from blister copper from the Mount Lyell Mining and Railway Company, Limited, and 928 ozs. from the silver-lead bullion from the Tasmanian Smelting Company's works, Zeehan, valued at £56,904.

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 1907, and the previous quarter ending 30th June, 1908:—

	Gold obtained during the Quarter ending 30th September, 1908.						Totals corresponding Quarter, 1907.	Totals for Quarter ending 30th June, 1908.
	From Quartz.	Alluvial.	Cyanide & chlorination.	From Blister Copper.	From Silver-lead Bullion.	TOTAL.		
	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	
Beaconsfield	5265	...	1543·15	...	...	6808·15	9339	9017
Mathinna ...	615	...	...	...	...	615	1398	1484
Mt. Victoria	}	49·72	...	...	...	49·72	180	162·87
Warrentinna								
Mt. Cameron								
New Burns Creek ....	...	...	...	...	...	...	11	...
Lefroy	19	..	230	...	...	249	336·25	380
Lisle	}	105	...	...	...	105	65	55
Golconda ...								
West Coast.	...	3·5	...	4735	928	5666·5	6642	4512
TOTALS	5899	158·22	1773·15	4735	928	13,493·37	...	...
Totals corresponding Quarter, 1907.....	7886·25	219	3228	5215	1423	...	17,971·25	...
Totals for Quarter ending 30th June, 1908.....	8581	234·87	2343	4308	144	...	...	15,610·8

Value £56,904; equal to 13,396·343 ozs. fine gold.

BEACONSFIELD.—The quarter's statistics for the district are as follow:—

	Gold produced. ozs.	Men employed.
Tasmania Mine	6305	535
Tasmanian Tailings Syndicate...	503.15	17
Others .....	...	22
Total.....	6808.15	574

Tasmania Mine.—Nineteen thousand five hundred and twenty-eight tons of quartz crushed, and 6305 ozs. gold obtained (by amalgamation and chlorination), which makes a total of 743,347 tons quartz crushed, and 717,922 ozs. gold obtained since the mine was first started.

LEFROY.—The quarter's statistics are as follow:—

	Gold produced. ozs.	Men employed.
New Pinafore	61	6
Creek Cyanide	169	22
Kitto's Chum Syn	19	17
Prospectors and others.....	—	26
Totals.....	249	71

LISLE, GOLCONDA, &C.—One hundred and five ounces of gold have been won from these fields. Thirty-nine men have been employed.

Alluvial Gold and Dredging Companies.—Gold has been obtained by the following companies in streaming tin:—

	Standard Gold. ozs.
Briseis.....	20.98
New Brothers' Home.....	8.74
South Mount Cameron	20
Ringarooma Dredge	—
Dorset Dredge.....	—
Gladstone Dredge.....	—
Total	49.72

MATHINNA.—The quarter's statistics are as follow:—

	Quartz crushed. tons.	Sand treated. tons.	Gold produced. ozs.	Men.
New Golden Gate	208	...	213	39
Tasmanian Consols.....	1188	...	377	80
Scott and Pickett ... ..	...	...	...	...
Golden Horseshoe.....	20	...	9	6
Miner's Dream	39	...	16	11
Others .....	...	...	...	47
Totals	1455	...	615	183

WEST COAST.—Mr. Inspector Curtain reports:—Three and a half ounces of alluvial gold were obtained during the quarter by three men.

KING ISLAND.—The old King Island Prospecting Association, which has lately changed hands, is now putting in a crosscut, and it is calculated they will have to drive 50 feet before they cut what is considered to be the main lode. The King Island Gold Mining Association (head office in Melbourne) is sending a pumping plant to continue their present workings. The British Flag Syndicate have their black sand lease, on the Fraser River, under offer to a Melbourne firm, who are sending a boring plant to test the extent and value of the black sand deposit.

TIN.

The statistics for this metal for the past quarter are as follow:—

	Ore won. tons.	Men employed.	
		Europeans.	Chinese
Northern and Southern Division	16·20	32	...
North-Eastern Division.....	764·20	823	72
Eastern Division.....	102·70	310	34
North-Western Division.....	261·55	399	...
Western Division.....	42·90	77	...
Totals.....	<u>1187 55</u>	<u>1641</u>	<u>106</u>

NORTH-WESTERN DIVISION.

The output has been as under:—

	tons.	Men employed.
Mount Bischoff	230	300
Mt. Bischoff Extended	24·90	58
Waratah Alluvial.....	4·075	4
Wombat Mine	·125	3
Stanhope Alluvial	1·85	2
Others .....	...	32
Totals.....	<u>261·550</u>	<u>399</u>

Mt. Bischoff Extended.—Mr. W. Gullock, manager, reports:—New battery working well; also latest tin-saving appliances, crushing continuously 3 shifts: rate, 103 drops per minute (per stamp). No. 6 level advanced to 603 feet; large body of porphyry carrying payable tin. This is an important development for deep tin-mining in Tasmania, being approximately 1100 feet in depth

from the top of mount. In Warren's crosscut large bodies of payable ore are being opened up for crushing.

NORTH-EASTERN DIVISION.

RINGAROOMA DISTRICT:—

	Tin ore won. tons.	Men employed	
		Europeans.	Chinese.
Britannia	·45	2	...
New Hope	1·25	3	...
Others	7·75	27	2
Totals	9·45	32	2

PIONEER AND GLADSTONE DISTRICTS:—

	Tin ore won. tons.	Men employed.	
		Europeans.	Chinese.
Pioneer Tin Mine	106	220	...
Pioneer Extended	11·20	24	...
New Aberfoyle	3	5	...
Argus Tin Mine.....	10·75	25	...
South Mt. Cameron	24·50	38	...
Ringarooma Dredge	9·40	17	...
Dorset	13·35	17	...
Mussel Roe	3	4	...
White Rock.....	3·55	6	...
Scotia	2·05	4	...
Purdue Tin Mine	21·30	25	...
Garibaldi	17·50	11	6
Other Claims	13·30	23	25
Totals	238·90	419	31

DERBY DISTRICT:—

	Tin ore won. tons.	Men employed.	
		Europeans.	Chinese.
Briseis Tin Mines.....	261·60	73	...
New Brothers' Home, No. 1....	92·10	26	...
Briseis Extended	50	34	...
Other Derby Claims	8·05	80	24
Total.....	411·75	213	24

BRANXHOLM DISTRICT:—

	Tin ore won. tons.	Men employed.	
		Europeans.	Chinese.
Arba Tin Mine.....	30	50	...
New Ruby Flat	28	20	...
Other Claims	4·65	6	10
Total	62·65	76	10

THE MINERAL INDUSTRY

MOORINA DISTRICT:—

	Tin ore won. tons.	Men employed.	
		Europeans.	Chinese.
Weld Tin Mine	10	7	...
Native Youth	10	9	...
Abbotsford	3·60	6	...
Mutual Hill.....	1·25	10	...
Main Creek.....	2	5	...
Other Moorina Claims	8·20	26	5
Total.....	35·05	63	5

MT. HORROR DISTRICT:—

	Tin ore won. tons.	Men employed.	
		Europeans.	Chinese.
North-Eastern T. S. Co.	1·90	6	...
Banca T. M. Co.	·70	4	...
Other Claims	·65	3	...
	3·25	13	...

MT. STRONACH DISTRICT:—

Mount Strobach Tin Mine....	3·15	7	...
<i>Total for North-Eastern Division</i>	<i>764·20</i>	<i>823</i>	<i>72</i>

EASTERN DIVISION.

<i>Weldborough Mines.</i>	Tin ore won. tons.	Men employed	
		Europeans.	Chinese.
Pioneer Tribute	4·05	6	...
Fancy Creek Co.	6·20	9	...
Weldbrook	1·95	4	...
Cambria	·35	2	...
Walker and Co.	2·10	5	...
Chinese (Weldborough)...	5·95	...	30
Other Claims	9·65	38	...
Total	30·25	64	30

OF TASMANIA.

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	Tin ore won. Tons.	Men employed. Europeans. Chinese.	
<i>Lottah and Blue Tier Mines.</i>			
Anchor Mine.....	44.10	120	...
Other Claims	5.35	25	3
Chinese Claims			
Total	49.45	145	3
<i>St. Helens Mines.</i>			
McAuliffe & Party .....	.95	3	...
A. Williams	1.75	5	1
J. C. Macmichael.....	2	6	...
Royal Ruby Co.	1	4	...
Deep Lead.....	1.40	3	...
Others	1.75	15	...
Total	8.85	36	1
<i>Avoca Mines.</i>			
Gipp's Creek.....	.70	4	...
Story's Freehold	2.55	10	...
Mount Rex Co.....	.60	5	...
South Esk.....	.60	2	...
C. W. Foster.....	3.05	7	...
Other Claims	6.65	37	...
Total	14.15	65	...
<i>Total for Eastern Division</i>	<u>102.70</u>	<u>310</u>	<u>34</u>

WESTERN DIVISION.

	Tin ore won. tons.	Men employed. Europeans.
Emu Bay Railway (various claims)	42.9	77

Mr. Inspector Harrison reports that the tin deposits at North-East Dundas are opening out very satisfactorily indeed.

NORTHERN AND SOUTHERN DIVISION.

	Tin ore won. tons.	Men employed. Europeans.
Shepherd and Murphy Mine	16.2	32

SILVER.

WEST COAST.—The registered output of silver ore in the Western Division for the quarter ending 30th September is given below:—

	Ore.	Tons.	Value.	Men.
<i>Zeehan Mines :</i>				
Mount Zeehan, Tas.	galena	1733	18,971	240
Zeehan-Montana	"	930·35	10,350	271
Zeehan-Western	galena, &c	130·65	1462	106
"	carbonate of iron...	144·45	276	
Zeehan-Queen	galena, &c.	218	608	14
Silver Queen Extended	"	73	661	10
Oonah	"	193	1938	40
"	pyrites	1500	1500	
"	stannite	500	2250	4
Silver King	galena .....	...	...
Florence	"	568·50	6099	102
New Mt. Zeehan	"	70·87	345	7
Tas. Smelting Co's. Sections,	"	96	723	23
Section 1816-M	"	62·50	264	4
Victoria-Zeehan	"	15·50	169	20
Colonel North	"	49·47	461	22
Section 1914	"	20·30	205	4
Austral Valley	"	5·21	6	12
"	pyrites	8·57	29	
"	zinc sulphides	109·80	215	
<i>Dundas Mines :</i>				
Comet	galena.....	20·40	206	38
"	iron-flux.....	2523·80	1263	
Hercules	zinc-lead sulphide...	3523	13,508	98
Adelaide	galena.....	31·44	414	24
Anderson's	"	20	255	5
<i>Rosebery Mines :</i>				
Primrose	zinc-lead sulphide ...	536	2006	6
Tasmanian Copper	"	2080·85	6471	35
<i>Mt. Farrell Mines :</i>				
North Mt. Farrell	galena.....	838	7123	140
Mackintosh Mine	"	18	79	4
<i>Sundries :</i>				
Tasmanian Smelting Co. ....	.....	...	...	280
Sundry Companies.....	.....	...	...	132
Prospectors, &c. ....	.....	...	...
Total		16,020·66	77,857	1641

Mr. Inspector Harrison reports:—During the quarter one of the principal mines (the Florence) had to close down temporarily through striking a heavy flow of water in the bottom level, and not having sufficient boiler power to contend with it. I understand that extra boilers are being provided. Against this, we

have fresh mines adding to the output, namely, the Victoria Zeehan, Colonel North, and the Adelaide. The Montana has got a very nice shoot of ore in the bottom level, and the Mt. Zeehan (Tas.) has struck some very rich antimonial ore.

I understand that a sum of money has been voted for the construction of a bridge over the Murchison River. When completed this will allow two mines of the district to forward their ores to market, namely, the Thomas' Blocks and the Tullah.

The Tasmanian Smelting Company has been purchasing all available ores containing lead, this metal being a necessary adjunct in the smelting of the refractory ores of the Mt. Read and Rosebery districts.

Mount Zeehan (Tasmania).—Mr. T. Vincent, manager, reports:—

Spray Mine (No. 2 shaft).—Development continued on No. 1 lode at Nos. 4, 5, and 6 levels, north; prospects improved. Opening No. 2 level, 380 feet, No. 1 shaft.

Queen Extended (No. 2 shaft).—Driving north, No. 16 lode payable. Continuing prospecting and development at No. 5 shaft.

Silver Queen Extended.—Mr. Charles Stephens, manager, reports:—

Developments.

	feet.
Driving	120
Stopping	78
Sinking	15
Total	213

Zeehan-Montana Mine.—Mr. John Craze, manager, reports:—

No. 1 Shaft.—No. 8 lode, No. 8 level, south of shaft is now producing a little ore, and the stopes on same lode and level are improving. During the last six months we have been exploring No. 3 lode north of shaft, and have a drive at Nos. 5 and 4 levels about 700 feet. A rise is now being put up from No. 5 level in payable ore, and surface prospecting has uncovered a capping of the lode, and on further trenching a fair shoot of high-grade galena ore has been brought to light. This appears to be quite a new ore shoot, as it is fully 200 feet north of any ore on the same lode in any of the levels.

No. 2 Shaft.—This company has secured a tribute on that portion of the Zeehan Queen which adjoins these main workings, and three drives are now being driven south on No. 2 lode, Nos. 1, 2, and 3 levels. So far the lode has been poor, but there appears to be some improvement shown in the ends at time of writing.

No. 3 Shaft.—Preparations are still in progress for starting to unwater this shaft. During the last few months a very considerable expenditure has been entailed in regard to this shaft. The tramline has been relaid with 40-lb. rails for a distance of $1\frac{1}{4}$ mile,

two boilers have been built in, winding engine and electric lighting set placed in position, engine and boiler and work sheds built, poppet heads erected, and pumps placed in the shaft. Provision has been made for a supply of good water for the boilers. This is brought in pipes from a storage tank, one mile distant from No. 3 shaft. The supply is maintained by the use of a 12-ft. windmill, on a 40-ft. steel tower, with 5-in. pump attached. The water is supplied by a spring, and is pumped by the windmill to a storage tank on a hill 50 feet above the spring, from which it gravitates to the No. 3 shaft. The whole of the works are nearing completion, and I hope to be pumping in about three weeks' time.

Stopping and driving are being carried on at the mine by a prospect shift, and the lode at the 100-foot level appears to be of sufficient value to warrant one in believing that the outlay will return a fair profit.

The mine, as a whole, so far as appearance and reserves show, is in a good healthy condition. The price of lead and silver is, however, too low to allow of much profit. With a better price the mine generally will continue to do well.

Colonel North Mine.—Mr. Alexander Yates, manager, reports:—During the term under review 20 feet of winze-sinking, 30 feet of rising, and 81 feet of driving has been done. A little stopping has been carried on from various points, with the view of sampling the lode. The ore contents have, so far, proved buncy and erratic. In extending the south end of No. 4 level the lode has been found to be faulted. A strong body of milling ore is sitting on this fault above the level. The fault is dipping to the south-east.

Oonah.—Mr. W. Fisher, manager, reports:—The Oonah Option has exported to Liverpool 500 tons of stannite for experimental purposes, and the life of the Option depends upon the results. Tributors are raising fair quantities of sulphide ore from the main working, and Bruce is exporting some hundred tons of pyrites per week. Mainwaring is endeavouring to reopen the old Junction mine-workings on the property.

Florence.—Mr. F. K. Astell, manager, reports:—During the quarter the main work that has been carried on has been stopping above 128 feet level on Moyle's lode. At the 200-foot level a cross-cut has been driven 200 feet, and lode cut and driven on for 20 feet, when a fresh of water came in and flooded the mine, which will necessitate the erection of larger machinery, also boiler-power. The mine in general was looking well when it was flooded.

Zeehan-Western.—Mr. John Craze, manager, reports:—The main shaft has been sunk to the 1000-foot level, and the shaft-men are now sinking below this level for a well. I intend sinking

a further 15 feet for this purpose, and then cut the station at the 1000-foot level. A lode has just entered the shaft at 1000 feet below the surface, dipping easterly. It is not yet certain whether this is the main lode or a new lode not previously known. At the 800-foot level a lode was driven on north and south for a long distance. The lode was found about 40 feet west of shaft, and had a slight dip to the west. The main west crosscut was driven some 300 feet north-west, but no other lode was seen. In sinking the shaft a lode crossed the shaft at about 75 to 80 feet below the 800-foot level, dipping east. It was thought that this lode was the same as that driven on at the 800-foot level, presuming that the lode had changed its dip from west to east. But now, at the 1000-foot level, a second lode has come in from west side of shaft, dipping east. This lode is 18 inches wide, composed of carbonate of iron, showing splashes of copper pyrites. Up to the present we have not been able to determine whether the lode operated on at the 800-foot level has split, forming two legs (one of which crossed the shaft at 880 feet, the other at 1000 feet); or whether the lode which crossed the shaft at 880 feet is the main lode, and the one now crossing at 1000 feet is a new lode. However, this will be determined later on as exploratory work is carried on.

MT. READ DISTRICT.—Hercules Gold and Silver Mining Company.—Mr. Claude H. Moxon, manager, reports:—Operations have been confined to the main, or No. 4, level, throughout the various workings, of which ore-breaking has been extensively carried on. Developmental work has been continued, and the new ore-body, termed the "E" lode, has been proved to be over 50 feet in width. The length of this shoot is now being determined. Other progressive work is being carried on by the extension of the main drives of the various lodes.

Tasmanian Smelting Company.—Mr. H. Harris, manager, reports:—Ore bought during the quarter, 11,313 tons, containing—2857 tons lead, 369,940 ozs. silver, 1004 ozs. gold. Exported 2358 tons bullion, containing 316,973 ozs. silver and 928 ozs. gold.

NORTH-WESTERN DIVISION.

Magnet Mine.—Mr. E. A. De Latour, general manager, reports:—1157 tons of silver-lead ore were obtained of a gross value of £5684. Ninety-two men employed.

Victorian Magnet.—Five men were employed.

NORTHERN AND SOUTHERN DIVISION.

Round Hill Mine.—No returns received,

COPPER.

Mt. Lyell Mine.—Mr. Robert Sticht, general manager, reports:—The ores and metal-bearing fluxes treated during the quarter ending 30th September were as follow:—

Ores and metal bearing fluxes treated at Reduction Works:—

	tons.	Dry weight.		
		cwt.	qrs.	lbs.
Mt. Lyell Mine ore	66,461	3	0	16
North Lyell Mine ore	32,544	7	0	7
Purchased ore.....	94	12	1	9
By products from Crotty Smelting Works	13	5	1	17
	<u>99,113</u>	<u>7</u>	<u>3</u>	<u>21</u>

Metal-bearing fluxes:—

North Lyell Mine.....	158	12	3	25
Lyell Tharsis Mine.....	543	8	1	3
	<u>702</u>	<u>1</u>	<u>1</u>	<u>0</u>
Total.....	<u>99,815</u>	<u>9</u>	<u>0</u>	<u>21</u>

Quantity and value of metal produced:—

Blister Copper, 2260 tons, containing —	£	s.	d.
Copper, 2232 tons, valued at	136,352	17	7
Silver, fine, 175,245 ozs., valued at.....	17,634	0	7
Gold, fine, 4735 ozs., valued at	20,123	15	0
Total.....	<u>£174,110</u>	<u>13</u>	<u>2</u>

Number of men employed:—

At the Company's Mt. Lyell Mine	357
” ” North Lyell Mine.....	488
” ” Lyell Tharsis Mine.....	17
” ” Crotty Mine	6
	<u>868</u>
” ” Reduction Works.....	965
Railway Department—Mt. Lyell Railway	134
” ” North Lyell Railway	16
	<u>150</u>
Total.....	<u>1983</u>

Mount Lyell Mining and Railway Company Group.—Inspector Curtain reports:—

Mount Lyell Mine.—Pyritic extractions and removal of overburden continue from the open-cut workings. Underground stoping is renewed in "No. V.," with which connections have been made with the former, and the ore through there raised to the main haulage bins.

North Lyell Mine.—Extractions similar to those previously recorded continue, the daily supply reaching, when desired, 500 tons of easily-graded 6 per cent. ore. This is won chiefly from the 850-feet, 700-feet, and other (higher) levels (workings), to which can now be added those at the 1000-feet, where, in addition to stope 23, on the shoot of the first (main) ore-body (that is situated close to the winze or auxiliary shaft), the downward continuity of those larger deposits in Nos. 19 and 20 stopes have been located in the drives and easterly crosscut from the main shaft. The latter has been sunk another 100 feet, and totals 1100 feet from the surface, or 800 feet below the No. 3 adit, or lowest water-level, where the plat for the next level is being opened out. In sympathy with this the winze, or auxiliary, shaft has been sunk 40 feet below the last level in favourable country.

On the surface a large electrical hoist in conjunction with a compressing plant nears completion, a trial run of the former being deemed satisfactory.

Reduction works.—Smelting operations continue uninterruptedly, the blast for the furnaces (6) being supplied by the steam turbo-blowers that have replaced those (Root's) that were previously in use.

Lyell Consols Mine.—Mr. John Carroll reports:—Negotiations for raising additional capital have not yet been brought to a successful issue; therefore, the only work in progress is confined to keeping the various drives, machinery, &c., in order. As soon as the necessary capital is subscribed the main shaft will be sunk another 75 feet, and the various levels extended, so that a minimum output of 5000 tons of ore (copper clays) per month can be maintained, while further developmental work is proceeded with. Three men employed.

Lyell Blocks Mine.—This mine remains idle, but it is stated locally that in unison with its neighbour (the Consols) work will also be resumed in this property.

Lyell Extended Mine.—Mr. Wm. Madden reports that work was resumed on the copper clays, and extension of the top adit on the contact zone, with 4 men.

Crown Lyell Mine.—Mr. Wm. Madden reports:—Preparations are being made to resume operations by sinking the main shaft and extension of the western slope adit. Two men employed.

Copper Mines of the Mount Lyell West.—Mr. Thos. Griffiths is still in charge, but no mining work has been done during the past quarter, which also relates to the Duke Lyell, Sidler's sections, and others (section) in that neighbourhood.

Comstock Copper Mine.—Mr. Charles E. Coote reports that in addition to 14 feet driven, 18 feet risen, and 7 feet sunk in the No. 3 adit, 294 feet by way of prospecting has been bored with the diamond drill; with 9 men.

Tasman and Crown Extended Mine.—Mr. Edward Carter reports:—Work by way of prospecting was confined to the No. 3 adit, where two more rises are under way, on the ore. The quantity of the latter mined and at grass at the end of the term is estimated (approximately) at 100 tons of copper ore, valued at £900; and 500 tons of galena ore, valued at £7500; in addition to which 200 chains of tram and pack-track have been repaired, formed, and put in order; with 12 men.

Darwin—Thompson P.A.—Mr. J. C. O'Brien, legal manager, reports:—Thirty-five feet has been added to the prospecting adit, which totals 185 feet, in green schist country, through which is interspersed favourable impregnations of copper ore. Two men are employed.

Mount Darwin Copper Syndicate.—Work continues on these sections on lines similar to those reported in the last quarter's issue; 5 men being still retained for that purpose.

Gold.—The returns to hand only total $3\frac{1}{2}$ ozs., valued at £13 2s. 6d., which was purchased by Mr. F. O. Henry's various firms; from 3 men. Others are engaged in this calling (alluvial), but their returns are limited.

NORTH DUNDAS DISTRICT.—The Ring Valley Mining Company obtained 37.65 tons of copper sulphides, valued at £166. Ten men employed.

NORTHERN AND SOUTHERN DIVISION.

Burnie Copper Mines.—Output 423 tons, valued at £2115. Thirty men employed.

Copper Creek Mine, Gunn's Plains.—The Government Geologist reports:—Attention has recently been drawn to the property of the Copper Creek Mining Company, No Liability, near Gunn's Plains, 12 miles from Ulverstone. It is situated on what is charted as Walloa Creek, which falls down a rocky gorge into the Leven River. The local name for the stream, however, is Copper Creek. Outcrops of copper ore up the creek were discovered in the old days by the late Mr. James Smith, but doubt exists as to where that gentleman actually worked, though some traces of his tools are said to have been found. An outcrop in the steep

creek bank was discovered about seven years ago, and Mr. W. H. Applebee took up 40 acres for mining purposes. An official examination of the spot was made in 1903, and a calcite-copper ore lode-formation found to occur in hard slate country on the south-west bank of the creek. The Government analyst's assays of samples chipped from the outcrop yielded 4·8 per cent. copper and 2 ozs. of silver. Samples taken to Launceston by Mr. Percy Harrison and assayed at the Mt. Bischoff's Smelting Works showed 2·3 per cent. copper and 9 ozs. 16 dwts. silver per ton. A series of parallel bands of copper-bearing calcite-slate exists here. These outcrops were recognised as being in an excellent position for driving upon from the creek banks, and were considered as encouraging the hope that something more payable would be found after further exploration. Last year the present company was formed. A 40-acre section was acquired, and some adjoining ground taken up for prospecting. Some underground prospecting work has been carried out on the 40 acres in connection with a new lode which was found to outcrop about 250 feet above the creek. This work comprises:—

(1) Trenching on the gossan outcrop near the hut 300 feet above the creek.

(2) An open cut into outcrop on hill side.

(3) An adit driven 60 feet into the hill intersecting the lode at 39 feet in and 30 feet below the open cut.

(4) A lower adit driven at creek level for 280 feet, intersecting the lode in 200 feet of driving.

The following is a brief description of what has been disclosed by this work:—

(1) *Gossan trench*.—This is 40 feet south of the hut, and has been cut N.W. for about 12 feet in length on the course of some kindly looking gossan, some of which the company sent for assay to the Government Analyst, and yielded three-quarters per cent. of copper and 1 dwt. gold per ton. About a foot of the gossanous material is showing in the trench, but the full width has not been ascertained.

(2) An open cut has been put into the hill for 17 feet, exposing the lode $3\frac{1}{2}$ feet to 4 feet wide, vertical, widening underfoot, and striking about 15° east of south. The lode gangue is slate and calcite and contains bunches of specular iron, iron pyrites, and a little copper sulphide. The country is light-coloured slate, becoming harder when in proximity to the lode.

(3) *Upper Adit*.—This has been driven into the hill in a direction of 20 degrees south of west, cutting the lode at 29 feet in. As the strike of the lode is about S. 40° E. here, the adit has intersected it obliquely, causing the width as passed through to be greater than the actual width. The apparent width is $6\frac{1}{2}$ feet to 7 feet, but the true width is probably about 5 feet. The lode-matter consists of siliceous slate well mineralised with iron and

copper pyrites and specular iron. It is widening also in this adit underfoot. It has been driven upon for a few feet south. Two and a half tons of ore from this point have been forwarded to Queenstown for trial, but unfortunately the quantity was inadequate for treatment, and the ore has remained unsmelted.

Both the lode and strata underlie to the N.E., but a few feet behind the end of the adit a pug seam occurs, beyond which the slate dips S.W. into the hill. This underlay of the lode will cause it to be met with in crosscuts lower down at increasingly shorter distances.

(4) *Lower Adit.*—This has first been driven from the creek in a south-easterly direction across regularly cleaved slates, which have here a strike of N. 70° E. It would appear therefore that the strike of the strata differs considerably from that in the upper tunnel, and the lode could not be expected to be intersected by driving across them. After driving 90 feet into the hill the direction of the crosscut was changed to south-westerly, and at 100 feet the lode-formation, 9 feet wide, with wet flucans on each side, and carrying perhaps 3 feet of hard ore-bearing stone, was crossed. From its position and character it would seem to be the same lode as the one cut above, but absolute certainty on this point is not possible until a survey has been made. It carries iron and copper pyrites, and its gangue is calcite and slate, the latter inclined to be graphitic.

The precipitous nature of the country prevents a view of the various mine openings and outcrops, and a comprehensive surface and underground survey would be extremely useful in giving data for reliable determinations of position. The crosscut has been carried 80 feet beyond the intersection. At about 20 feet behind the end is a pug, slate, and quartz formation, carrying no mineral, but yet indicative of some lode action. This might very well be tested to see whether it leads to anything. After passing through the main lode the country changes; it becomes harder and rougher, and a little behind the present end merges into a breccia. Further driving in this direction would probably prove unremunerative. The lode cut in this adit, though not so rich in copper as in the higher level, is not less strong. It has been strong enough to break through the strata in descending, notwithstanding their change of strike, and it appears to be going down unimpaired. The company states that the lode-matter from the bottom level yielded 4 per cent. copper by assay. The lode in the upper level will no doubt be tested first, and the pitch of the ore-shoot ascertained before driving aimlessly at the lower intersection. The company will probably obtain good advice as to whether it would be well to cut the lode a little lower than the present upper tunnel so as to avoid the shallow ground of the gully.

The lode where it has been cut at the different places is not yet payable, but sufficient has been disclosed to justify work with a view of proving its value.

Some other lodes have been met with, which, if not remunerative, establish the existence of a copper-bearing channel of country. In fact, the section taken up seems to comprise an ore-bearing slate channel between two belts of conglomerate. McDonald's tunnel, about 50 feet above the creek, has been driven for 30 feet into the hill. At the entrance a small puggy seam of copper ore was met with, and there is said to be another one in the end, but at present standing water in the level prevents examination.

A little distance down the creek is also a copper-bearing lode, which has not been worked.

Sufficient water-power exists in the creek for all purposes, and the creek route will, in the event of operations proving successful, no doubt be made the outlet to the property. At present a horse and bullock track winds its way up from the plain to the crest of the hill overlooking the mine for a height of about 600 feet.

The preparation of a report on the district is in hand, and this will deal fully with the geological features and economic possibilities of the field.

Alma (near Forth).—The Government Geologist reports:—

The Alma Prospecting Syndicate has been carrying on operations recently at the old Alma, or Barrington, Mine, as it used to be called. This is a mine that was started about 1880, and had £1000 or £1200 expended upon it in those days. It is situated about a couple of miles above the Wilmot Bridge, and lies west of the Forth River.

The country is composed of slate and breccia, belonging to the Cambrian or Lower Ordovician, having the general strike of N.W.-S.E., and vertical or dipping S.W. A long line of strong gossan courses down the hillside in the direction of the strata, and this has been tried at surface about 150 feet above the creek by a shaft sunk on it to a depth of 35 feet. A drive from the bottom of the shaft went through it for 18 feet. The main tunnel from creek, which was driven parallel with this gossan line, which appears also to be a line of contact of slate and breccia, has been extended with a view of coming below the shaft. According to the plan, the face is now within 10 or 20 feet of where the downward extension of the gossan might be expected. Thirteen feet behind the end a solid barytes lode, 10½ feet wide, has been passed through, carrying a little copper pyrites. This lode is at a contact of slate with breccia, but whether this is the main contact may be doubted. *Primâ facie*, it is improbable that the gossan outcrop is represented by the insoluble barytes below. The probability is that this is another contact line tapped by the short cross-cuts nearer the entrance, and it would be imprudent to suspend driving at this stage, if the idea is to prove the gossan lode in depth. At the same time, if the syndicate continues its operations, it will no doubt test the barytes lode by a little driving to see whether its copper contents are likely to improve. About 4 chains

west of the main tunnel is what is known as the Devonport tunnel, which was extended a little over 12 months ago to about 50 or 60 feet. What seems to be a lode-channel of puggy slate has been left at the entrance, and the tunnel driven across dark slate country towards its contact with the breccia belt. The lode-matter consists of black slate, with iron and copper pyrites and barytes.

A good deal of barytes occurs on the property. About 100 yards west of the Devonport tunnel a broad belt of slate is exposed in the creek, carrying bunches and streaks of barytes, over a width of 30 or 40 feet. Much of this looks of good quality. Other parts are stained by iron-bearing solutions percolating from the creek banks.

A hundred feet up the hill to the south a cut for about 10 feet has been put across a rather solid outcrop of barytes, somewhat discoloured by iron oxide.

Barytes deposits are evidently a feature of the property, but their economic value will depend upon their freedom from iron. The copper lodes will belong to Beck's type of spathic copper veins. Whether they will be found sufficiently rich to be payable can only be decided by prospecting work. The general absence of leaching stains and secondary ores is a rather unfavourable sign, but on the other hand the persistent gossan line, which has been traced for a long distance at surface, invites perseverance in the work which has been begun.

This preliminary note is in advance of a fuller report in course of preparation.

COAL.

The output this quarter was 15,872 tons, against 16,876 tons the previous quarter. The output of the respective collieries was as follows:—

Colliery.	Tons raised.	Men employed.
Cornwall Colliery	10,483	90
Mt. Nicholas ,,	3344	57
Jubilee ,,	23	3
Spreyton ,,	261	5
Illamatha ,,	60	2
York Plains ,,	190	3
Mount Cygnet ,,	550	3
Wallsend ,,	941·25	36
Woodbridge ,,	20	2
Total	15,872·25	201

In pursuance of the practice of having standard analyses made of the various coal seams in the State, Mr. Inspector Griffin has taken,

on behalf of the Mines Department, samples of coal from the Cornwall and Mt. Nicholas seams. The sampling was carried out in accordance with the rules laid down for this purpose by the geological survey, and the analyses have been made in the Government Laboratories at Hobart, with the following results:—

	Moisture.	Hydro-Carbons.	Fixed Carbon.	Ash.
<i>Cornwall Colliery—</i>				
1. From 3' 4" working seam, 60 chains in from surface	6.50	26.30	57.70	9.50
2. From do. 1600 yards E. from Main Heading	7.48	26.14	58.36	8.02
<i>Mt. Nicholas Colliery—</i>				
1. From 4' working seam 400 yards from outcrop	8.72	23.10	58.88	9.30
2. From do. 176 yards from outcrop.....	8.60	18.20	61.40	11.80
3. From 6' working seam, 264 yards from outcrop	6.66	21.48	56.76	15.10

IRON.

The Tasmanian Iron Company at Penguin raised 1000 tons of iron ore, with 10 men, valued at £400.

BISMUTH.

The Shepherd and Murphy Company obtained 1.85 tons of bismuth from its tin ore, valued at £222.

SCHEELITE.

The Scheelite Mine, at Grassy River, King Island, is still being prospected with satisfactory results.

SLATE.

The slate deposit at City of Melbourne Bay, King Island, is now owned by a company having £3500 working capital.

MINERAL INDUSTRY OF TASMANIA.

The following return shows the average number of men employed in or about the mines during the quarter ending the 30th September, 1908:—

District.	European.	Chinese.	Total.
Northern and Southern	807	...	807
North-Eastern	823	72	895
Eastern	643	34	677
North-Western	496	...	496
Western	3750	...	3750
Total	6519	106	6625

Value of mineral output per man employed:—£63 13s. 8½d.

Dividends paid by Mining Companies during the quarter ending 30th September, 1908:—

	£	s.	d.	£	s.	d.
From Copper Mines:—						
Mt. Lyell Mining and Railway Co., Limited			<i>Nil</i>			
Mt. Lyell Blocks Mining Co., No Liability			<i>Nil</i>			
From Gold Mines:—						
Tasmania G.M. Co., Limited			<i>Nil</i>			
From Tin Mines:—						
Bischoff T.M. Co., Registered	9600	0	0			
Pioneer Tin M. Co., Limited	8887	0	0			
Briseis Tin Mines, Ltd.	15,000	0	0			
New Brothers' Home No. 1 T.M. Co., N.L.	3000	0	0			
New Ruby Flat T.M. Co., N.L.	609	0	0			
				36,493	0	0
From Silver Mines			<i>Nil</i>			
Total .....			...	£36,496	0	0