

MININD1901-4

THE PROGRESS OF  
THE MINERAL INDUSTRY  
OF  
TASMANIA,

FOR THE QUARTER ENDING 31st DEC., 1901.

COMPILED BY

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BY ORDER OF

THE HONOURABLE EDWARD MULCAHY,

MINISTER OF MINES.



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1902.



# PROGRESS OF THE MINERAL INDUSTRY OF TASMANIA

FOR THE QUARTER ENDING 31ST DECEMBER, 1901.

Launceston,  
28th February, 1902.

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 31st December, 1901, compared with the corresponding Quarter in 1900 and the previous Quarter ending 30th September, 1901:—

	During the Quarter ending 31st Dec., 1901.		During the Quarter ending 31st Dec., 1900.		During the Quarter ending 30th Sept., 1901.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		£		£		£
Gold won ..... ozs.	14,662½	54,984	15,071½	56,518	12,714	47,677
Auriferous Quartz and pyrites exported ..... tons	36½	1110	58¾	873	76	1452
Silver Ore exported..... "	3766½	39,636	4463½	72,332	5190¾	62,184
Blister Copper exported.... "	2503	213,987	2457¼	228,098	2416½	217,762
Copper Ore exported ..... "	950	16,096	4041	61,831	2346	33,655
Iron Ore exported ..... "	202	102	652	2132	200	200
Coal raised ..... "	12,587	10,699	12,356	10,502	16,705	14,199
Silver-lead Bullion exported "	2071	65,771	...	...	749¾	26,215
Tin Ore exported..... "	41½	1896	10	500	30	1600
Lead exported..... "	...	...	...	...	...	...
Tin (metallic) exported .... "	498	56,158	585½	73,015	469½	56,052
Wolfram Ore exported .... "	...	...	3½	88	...	...
Asbestos exported ..... "	...	...	22	22	...	...
Gold Quartz exported ..... "	11	125	20	86	12	300
Oxide Mineral exported .... "	...	...	5	125	...	...
Gold Concentrates exported "	2	45	...	...	...	...
Zinc-lead exported ..... "	...	...	...	...	...	...
Iron Pyrites exported..... "	14½	116	...	...	...	...
Galena exported ..... "	...	...	...	...	...	...
Gold & Silver Ore exported cwt.	...	...	...	...	...	...
Copper exported ..... tons	100	8000	...	...	150	10,511
TOTAL VALUE .....	... £	468,725	... £	506,122	... £	471,807

## MINERAL INDUSTRY

## GOLD.

During the past quarter 11,557½ ounces of gold were obtained from quartz, 295 ounces from alluvial, and 2810 ounces by means of the cyanide and chlorination processes, valued at £54,984.

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 1900:—

	Gold obtained during the Quarter ending 31st Dec., 1901.				Totals corresponding Quarter, 1900.	Totals for Quarter ending 30 Sept, 1901.
	Quartz.	Alluvial.	Cyanide & Chlorination.	TOTAL.		
	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Beaconsfield .....	7843	122	1723	9688	6507	7910
Mathinna .....	3054	...	805	3859	6962	4048
Mount Victoria, and Warrentinna .....	238	8	...	246	488	112
Lefroy .....	53	...	282	335	178	238
Lisle and Golconda .....	...	156	...	156	229	11
Mangana .....	369½	...	...	369½	689½	385
West Coast, Middlesex, &c. ....	...	9	...	9	18	10
TOTALS .....	11,557½	295	2810	14,662½	...	...
TOTALS for corresponding Quarter, 1900 .....	10,524	245½	4302	...	15,071½	...
TOTALS for Quarter ending 30th Sept, 1901 ...	9760	129	2825	...	...	12,714

BEACONSFIELD.—Gold-mining has given employment during the Quarter ending 31st December to 661 men in this district, of whom 649 were in the service of various companies, and 12 were tributors and prospectors. The companies at work have been the following:—Tasmania, North Tasmania, Moonlight-cum-Wonder, Tasmania United, Imperial, Ophir, Duchess of York.

Since the close of the Quarter, the reef has been struck in the Tasmania Mine at the 1000 ft. level, worth from 1 to 1½ ozs. gold per ton of quartz. The stone has the same kindly appearance as at the higher levels. After cutting through 3 ft. 3 ins. of sold stone, a horse of mullock was encountered, from which there has been a burst of water, causing a good deal of trouble. During the Quarter, 6400 tons of quartz were crushed, and 9486 ozs. gold obtained, value £35,677. £6000 dividends have been declared in the same period.

The directors' report for the year ending 31st December states that 12,640 tons of quartz were raised and crushed during the year, yielding 12,781 ozs. 19 dwts. of gold by amalgamation, and that a further

amount of 3359 ozs. 4 dwts. was recovered by chlorine, making a total of 16,141 ozs. 3 dwts. gold, averaging 1 oz. 5 dwts. 13 grs. per ton of ore treated.

The proceeds of gold for the year amounted to £60,019 17s. 11d.; five dividends were paid, amounting to £15,000.

The additional 40 heads of stampers have been erected, making a full battery of 105 heads. The manager calls attention in his report to the necessity during the coming half-year for pushing development work forward as actively as possible, so as to keep the new battery fully supplied, as well as to increase the reserve of stopping ground.

The total amount of gold won at this mine since the formation of the company is 556,755 ozs. 2 dwts. 17 grs. from 447,615 tons of quartz crushed; value, £1,967,298 12s. 3d.; paid in dividends, £757,071 15s.; the average yield of the stone has been 1 oz. 3 dwts. 23½ grs. per ton; 600 men have been employed during the past quarter.

The Moonlight-cum-Wonder Mine has given employment to 19 hands. The formation intersected in the crosscut north at the 800 ft. level has been driven upon east, and 25 tons of concentrated pyrites treated at Dapto, N.S.W., for 10 dwts. 9 grs. gold per ton of concentrates. The concentrates contained 2½% zinc, 33·2% iron, 22% silica, 38% sulphur. Three bags of the crude stuff, which were sent for assay, returned—gold, a trace; silver, 2 dwts. 8 grs. per ton. Driving on this formation has been suspended, and the extension of the crosscut north continued. In this direction it is hoped to intersect the track of lines of reef-quartz known to exist further east. This company is exploring its ground with praiseworthy perseverance, and deserves to meet with success.

The negotiations for the amalgamation of the Tasmania West Extended and the Amalgamated West Tasmania Companies have fallen through.

The North Tasmania Mine has employed 8 tributors, who have raised 120 tons of quartz, yielding 80 ozs. gold.

The other tributors and prospectors have obtained 122 ozs. gold.

The Duchess of York Prospecting Association is sinking a winze on mineralised stone and pug, the latter of which gives prospects of free gold. It is intended, also, to sink near the old Victoria shaft, with the view of entering a run of ground from which gold was won in the old days.

The Salisbury Gold-mining Company has been formed to work the lode known to exist on that claim near Beaconsfield.

LEFROY.—Forty-two men have been employed in gold-mining here, of whom 32 were at work at the New Pinafore. The latter mine excited great hopes during the quarter by meeting with gold-bearing stone at the 1200 ft. Unfortunately, this stone was irregular. The

western drive on the Pinafore South reef has been extended in mullocky reef-matter 4 feet wide, between defined walls. Some of the stone (poor quality) is being stoped and saved for crushing. During the quarter, 42 ozs. gold were won from quartz and 156 ozs. by cyaniding. The irregularity of the stone and its quality causes regret, but its existence encourages the hope that a payable body will still be discovered. The importance of the work now going on at this mine can hardly be over-estimated.

Johns Bros.' Cyanide Syndicate produced 126 ozs. of bullion. Laird's (Industry) and West Bros. appear to have been the only other claims working at Lefroy.

LISLE.—The dredging there resulted in obtaining 156 ozs. gold, 15 hands being employed. Want of water has since caused temporary suspension of work. On the adjoining ground, a Wilberforce pump is to be put in.

WARRENTINNA.—The 10-head battery on Bayley's Leases has been completed, and a crushing of 150 tons of quartz put through, which gave the disappointing result of 35 ozs. of gold. Better results are anticipated from the next crushing. On the Derby Company's mine a new reef is being opened out; the stone is expected to be rich.

MOUNT VICTORIA.—Work to a limited extent is proceeding on this field, and, considering the small amount of capital and labour engaged, the results are encouraging. The New Mercury tributors (five in number) have crushed 50 tons of quartz for 103 oz. 14 dwts. gold. The Long Struggle party have crushed 44 tons quartz for 70 ozs. 11 dwts. gold; the prospects of this claim are considered good. At the Central Ringarooma tribute, 10 tons of quartz have been crushed for 10 ozs. gold. The Imperial Prospecting Association report discovery of a reef on one of the old Mount sections. It is to be regretted that the Ringarooma Company has not yet succeeded in introducing capital for the development of its extensive property at Mt. Victoria, which is lying idle in the meantime.

MATHINNA.—The financial half-year of the New Golden Gate Mine does not terminate till the 31st January; consequently, the results do not appear in this report. The sinking of the main shaft has been continued down to 1500 feet in blue slate, well mineralised, and considered by the manager very favourable for reef-bearing. At the 1500 ft. level, east and west chambers have been cut. After sinking another 100 feet, the 1600 ft. crosscut will be driven for the reef. The south drive on the No. 1 west reef at 1400 feet has proved the reef from 4 to 12 feet wide, of highly-payable stone. The driving on the No. 1 east reef at 1200 feet has given encouraging results. At 600 feet, a new reef-formation, west of all the old workings, has been driven on, and promises to furnish a payable block of stone.



At the 700, 800, 900, 1000, and 1100 feet levels, work has been confined to stopping.

The reef is going strong underfoot at the 1400 feet, which is promising for a continuation of this payable stone at still greater depths. The general outlook is very bright.

During the past quarter, 5450 tons of stuff have been treated, and 3859 ozs. gold obtained; 170 hands employed. The tailings and slimes continue to be satisfactorily cyanided; the extraction is reported as having still further improved, while the assay value of tailings has been lower than usual.

At the Volunteer Mine, the reef at the No. 1 level (150 ft.) has developed into a good-sized body of stone, but of low grade. At No. 2 level (250 ft.), the payable stone proved small, and the ground too wet for sinking on it. The bulk of the work is now confined to the freehold portion of the property. To the end of December the shaft was completed to 112 feet. The lode was cut in drive from the shaft at the 100 ft. level, which is estimated to give 140 feet of backs on the underlie. It is expected that a yield of 10 dwts. will yield a fair profit.

The East Volunteer is driving at 400 feet, and prospecting work has been started on the old Yellow Boy section east and adjoining.

The New Golden King has opened out at 122 feet, 50 feet below the last level, and will have to crosscut some 30 feet before reaching the reef. If the stone met with above descends, maintaining its quality, the outlook will be bright.

On the Golden Stairs, two lines of lode are being prospected; both carry gold, but not payable so far.

Hickson's Mine has been re-started as the Havelock. The Revenue Prospecting Association has started on a wide formation N.E. of Mathinna, and taken out a small payable crushing. The Malahide Prospecting Association is operating south and west of the New Golden Gate. None of the British syndicates have started yet on the Mathinna field.

**MANGANA.**—At the Mangana Gold Reefs, Limited, the main shaft is 634 feet from surface, and the track of the reef is now being driven on at the No. 7 level, 619 feet below surface, at 144 feet east of shaft, where a damp course had been noticed in the crosscut, but not recognised as the reef-channel. Work should be persevered with, for the reef at the upper levels in this mine is too powerful to have died out at this depth. It will now be necessary to thoroughly prospect the reef-course by horizontal drives.

The Golden Entrance continues driving and raising stone, all payable.

**FINGAL.**—At the Fingal Reefs, a considerable amount of sinking and driving has been done, to prove the big lode, which is still of low grade. The small lode is still of the same size and quality.

The Hit or Miss Prospecting Association, Fingal, is sinking a shaft half a mile north of the Salmon Gold Estates. The veins are small, but are hoped to widen as greater depth is gained.

BEN LOMOND.—The Bright Prospect has now suspended operations.

NORTH-WEST COAST.—The Whyte River Company report having raised 26 ozs. by dredging during the quarter. The operations of this company are disappointing, so far. A heavy deposit of gold was expected to be met with at the mouth of the Rocky River, where it flows into the Whyte, but none was found. The dredge is now moving up the Whyte, and is on deep ground, consisting of 20 feet and upwards of wash, carrying very little gold.

Mining is very quiet all round Corinna. It is still hoped that Long Plains may return further quantities of gold.

A few men have obtained a little alluvial gold at Bell Mount.

WEST COAST.—Sluicing at the King River Prospecting Association claim continues; but, beyond winning some 4 ozs. of reef-gold, nothing of importance has transpired.

Mt. Black Proprietary Mining Company's Mine at Rosebery has now been idle for nine months, and there is no present intention to resume work, as it is now apparent that the ore in sight cannot be mined and smelted profitably. The lode has been carefully sampled, and the directors report that the results of analysis by Mr. W. F. Ward, the Government Analyst, are as follows:—

Constituents.	Per cent.	Per ton. dwt. grs.
Gold .....	...	8 4
Silver .....	...	11 10
Copper.....	0·7	
Bismuth .....	0·5	
Iron .....	11·5	
Alumina .....	6·2	
Silica .....	32·1	
Magnesia.....	0·3	
Potash and soda .....	2·0	
Sulphur .....	7·3	
Calcium fluoride.....	36·2	
Lime .....	0 5	
Oxygen, in oxide of iron .....	2·3	
Combined water, &c. ....	0·4	
	<hr/> 100·00 <hr/>	

The value of this, taking copper at £60 per ton, gold at 80s. per oz., and silver at 2s. 3d. per oz., will be nearly £2 10s. per ton. It is intended to dispose of the concentrating plant, which was erected for the treatment of the ore.

## TIN.

The output of tin-ore at Waratah during the Quarter has been 326 tons, from the following mines:—

	Tons.	Men employed.
Mount Bischoff .....	318	225
West Bischoff .....	2½	16
Stanhope Alluvial .....	2½	4
Waratah Alluvial .....	3	3
	<hr/> 326	<hr/> 248

At Mt. Bischoff Mine, the quantity of material treated at the mill during the past six months has been—60-head battery, 39,802 tons, producing 404 tons ore; 15-head battery, 10,549 tons, producing 145 tons 16 cwt. ore; average per cent. of stuff, 1·312%. Quantity milled was 4·64 tons per stamper per 24 hours, after allowing for holidays and stoppages. The General Manager (Mr. H. W. Ferd. Kayser) reports that at the White Face the few patches of the original formation are fast disappearing; but there is still a large quantity of porphyry and tailings, which will last for many years. At the Brown Face, the falling off has been compensated by an increase from other parts of the mine. The new find on the northern side of the hill is turning out better than was expected. A working face has been opened on it 164 feet long by 3 to 12 feet high. The northern side of the hill is now being prepared for prospecting.

The cost of mining, milling, and bagging for the half-year has been 5s. 10·146*d.* per ton of stanniferous material. The quantities of ore obtained since the formation of the company have been 59,655 tons 14 cwt. 3 qrs. 19 lbs.

*Mt. Rex Mine.*—The development of this promising mine has received a check. The market which appeared to be opening for its ore is not at present available. The refractory nature of the ore involves higher reduction-charges than it is considered advisable to incur, and attempts are being made to find a suitable market or a more profitable method of treatment. A parcel of 50 tons has been shipped to England. Pending a solution of the difficulty, mining operations are suspended.

At the Briseis Mine, 67 tons tin-ore were won. The water-race is nearing completion, when operations will be carried on upon an extensive scale. The New Brothers' Home No. 1 continued removing the overburden by dry-stripping, and have made good progress in the work; 33 men are employed.

The Ringarooma Tin Mine employs 42 men. The overburden is being removed with nozzle, and preparations made for a blower to elevate the tin-drift from the rich lower levels. The small claims near Moorina continue to yield payable returns. The Weld Mine has returned 11 tons 18 cwt. tin ore. The Pioneer Tin Mine raised



25 tons 8 cwt. ore, employing 32 men, and the outlook is excellent. A start has been made to pay dividends.

At Branhholm, the Arba Company is erecting machinery and driving a tunnel a distance of 11 chains, which will cost about £1000; 35 tons tin-ore were raised during the quarter; 31 men employed.

At Ruby Flat, 22 Chinamen raised 16 tons of ore, and the claim looks well. There is no improvement to report at Gladstone, nothing much being done outside the Scotia Mine, which has raised  $7\frac{1}{2}$  tons tin-ore during the quarter, with 10 men employed. The bores being put down by the Government north-west of the Scotia will soon cross the line of lead further north, and show whether the Scotia channel continues rich in that direction. The series of borings undertaken in the Gladstone district have not been successful in striking tin yet. They appear to support the inference that the payable deposits of ore have been confined to the terraces near Mount Cameron, and on the line of contact of the granite with slate country.

At South Mt. Cameron, the Ruby claims returned 9 tons 18 cwt. ore, 18 men being employed.

At Lottah, the Anchor Company raised 51 tons tin-ore; 138 men were employed at the mine, and 150 on race-construction. The other productive mines at work near Lottah were the Australian and the Liberator. At the Crystal Hill Mine, preparations were being made for beginning work which will test the value of this claim. The Laffer and Weldborough mines have produced small quantities of ore.

Near St. Helens, development work has proceeded at the Stonyford Mine. A quantity of stone was submitted to the Government Analyst for examination, and it returned 10% metallic tin. The Royal Ruby, Ruby King, Thureau's Deep Lead, and other claims near St. Helens, have raised a few tons of ore in the aggregate.

The South Esk Mine, near Avoca, has produced  $16\frac{1}{2}$  tons of ore during the quarter, with 9 men.

**NORTH-WEST COAST.**—The tributors have obtained 7 tons 4 cwt. tin and bismuth ore at the Shepherd and Murphy Mine, Bell Mount. The reports of the experts who lately visited this mine are under consideration in London, with a view to introduce the capital greatly needed for the proper development of this deposit.

**WEST COAST.**—At the Federation Tin Mine, Mt. Heemskirk, no work has been done during the quarter, but it is understood that the property is to be placed on the market shortly, so that the necessary capital may be found to open it up. Several small parties are tin-mining at Mt. Heemskirk, with fair results generally.

At the Renison Bell Mine, prospecting work has been carried on intermittently. The introduction of capital is urgently needed to develop the property, upon which rich tin-ore has been found, besides large formations of low grade.

## SILVER.

WEST COAST.—The output of ore during the past Quarter from the principal mines in the Zeehan division has been as follows:—

		Tons.	Value.
			£
Zeehan-Montana	galena.....	1024	17,560
British Zeehan	" .....	1102	13,899
Silver King	" .....	990	10,146
"	blende .....	33	280
Silver Queen	galena.....	737	2804
"	stannite .....	16	128
Oonah	galena.....	50	770
"	stannite .....	76	1078
Colonel North	galena.....	110	700
Zeehan-Bell	" .....	62	325
Comstock	" .....	6	87
Hercules	gossan .....	2043	6590
"	sulphide .....	671	1675
Comet	" .....	377	2634
"	gossan .....	752	550

The Zeehan-Montana gives employment to 180 men. The 1024 tons raised during the quarter have come in nearly equal proportions from the five ore-supplying levels. A good supply of water has been obtained for the boiler by laying 7134 feet of 4-inch pipes to the Queen Extended dam. This has been done at a cost of £730. The outlay is judicious, as the water used previously had an injurious effect on the boiler. A condenser has been added to the pumping-engine, and another Lancaster boiler placed in position, at a cost of about £1900. Underground prospects are excellent.

The outlook is bright at the Mount Zeehan (Tasmania) or British Zeehan. The manager considers that he has several years' ore in sight at the Queen end of the property. A new boiler and pumps are being got ready; when in position, the sinking of the shaft another 100 feet will be proceeded with as quickly as possible. On the Spray section, the lode looks well in the bottom level, and good returns are looked forward to. The output of ore during 1901 was 4461 tons, value £58,891.

The ore raised at the Silver Queen has been won by tributors above water-level. The total raised this quarter was 753 tons. The total the previous quarter was 276 tons; not 70 tons, as published. During the half-year to December 31st, 55 tributors have been employed, and 1030 tons 13 cwt. 1 qr. 15 lbs. ore raised, which realised £4733 13s. 3d. This brings the total quantity of ore raised since the formation of the company to 23,442 tons, valued at £218,856. An offer to purchase the company's leases and plant for £5500 has

been received, and is to be submitted to the shareholders at the half-yearly meeting. The ore sold during the half-year was as follows:—

	tons cwt. qrs. lbs.				£	s.	d.
Galena and gossan .....	982	5	3	8	4377	1	1
Stannite .....	48	7	2	7	356	12	2
	1030	13	1	15	4733	13	3

The stannite on this property is mined from Clarke's lode, and is associated in the lode with galena, the ore-shoot varying from 3 inches to 2 feet clean galena, with 1 to 2 feet of seconds and stannite.

Most of the output from the Silver King is from Fahey's tribute at the southern end of the property. At the main workings, a prospecting drive is being carried out west, to intersect the western run of lode-country known to exist. Good progress is being made with it; 130 men are employed, the greater part by the tributors.

The ore raised at the Oonah Mine has been by tributors, and won from above water-level.

The shoot of ore so successfully worked by the South King tributors is fast dipping south into the Zeehan Bell property.

The 110 tons raised at the Colonel North gave a return of 4400 ozs. silver and 71 tons lead. The main workings were shut down for a short time, but have been started again by a party of tributors. In another portion of the property, tributors have cut what is considered a continuation of the Silver Spray lode, and are now engaged sinking on the formation.

The Western Silver Mine is still idle. The prices of lead and silver did not, for many months, allow the output to cover the expenses. At the time of cessation of work, the prospects were improving rather than otherwise, and everything has been left in fair working order, ready for re-starting when favourable arrangements can be made.

COMSTOCK DISTRICT.—At the South Comstock, which is now in the hands of an English syndicate, about 500 tons of hand-picked zinc-blende ore, valued at £2 per ton, and 1500 tons of second-class ore, are stacked at surface. As soon as the Government tramway is completed, the clean ore will be sent away; the seconds will have to be crushed and concentrated, when the mill is erected. A lower adit has been started some distance south of the present workings, which will give over 100 feet more backs to work on; 16 men are employed on the property at present.

At the Comstock Mine, a few tributors are working, with varying results. At the Tenth Legion, prospecting is continued, and results are expected when the Kynance line of lode-country is reached, in another 50 or 60 feet of driving.

DUNDAS.—The Comet Mine is looking well, especially the new strike at the No. 2 level, which is opening up good ore, both firsts

and seconds; 65 men are employed. During the half-year, the company has sold 701 tons ore, realising £3571; during the previous half-year, 671 tons were sold.

At the Ring Valley Mine, prospecting at the 100 ft. level is going on steadily, and, as rich Fahl ore was mined in the shallow levels, the outlook is promising. The company has a good main shaft and powerful pumping and winding machinery; the former is not yet required, as the water is easily controlled.

*Mt. Read.*—The Hercules Mine continues to export regularly quantities of gossan-ore to Dapto, and to supply sulphide-ore to the Zeehan Smelters. Quantities of gossan and marketable sulphide are in sight. Prospecting will be pushed ahead in No. 5, or lowest level, and, if the result is satisfactory, another level, 100 feet lower, will be put in. As the self-acting tram-line is not quite adequate to the strain upon it, a new rope is to be installed forthwith. Its total length is  $2\frac{1}{2}$  miles. The installation will take some little time, but the actual exportation of ore is not expected to be delayed for more than a month.

*Tasmanian Smelting Company.*—During the past quarter, 3999·697 tons of ore have been smelted, which produced 1886·266 tons bullion, containing 1838·834 tons of lead, 158,486·33 ozs. silver, and 197·091 ozs. gold. A small parcel of 171·739 tons copper ore was also smelted, which produced 50 tons copper matte, containing 15 tons copper and 11,000 ozs. silver.

**NORTH-WESTERN DISTRICT.**—The tramway to the Magnet Mine was nearly completed at the end of the year. It has since been finished, and is now running satisfactorily. The installation of crusher and revolving drier, with large bagging floors, is proceeding. The ore will be sent down from the mine by gravitation to the tram-terminal at the lower level. Two contracts have been entered into for 5000 tons mixed ore in each case, one with the Tasmanian Smelting Company at Zeehan, the other with the Smelting Company of Australia, Dapto. Both companies take delivery of ore at Magnet Junction, and regular consignments are going forward day by day. By the end of March, or beginning of April, it is expected that mining will be in full swing, and deliveries made at the rate of 500 tons per month. The crusher and drier will be run by water from the Magnet Falls, driven by a Pelton wheel. A Post Office is required at the mine badly.

At the North Mt. Farrell Mine, ore is being actively raised. The output for the quarter was 130 tons galena, assaying 64% lead, 70 ozs. silver, per ton. This mine is in a position to raise larger quantities when tramway communication is provided. A dressing-mill is required before the mine can be worked to advantage. About 20 men are employed.

At the Mt. Farrell Mine, 20 tons of concentrating-ore were raised. Prospecting has been going on steadily, with encouraging results. A shoot of 15 to 18 inches ore has been followed for 20 feet in No. 1



level north from No. 2, or lower adit, and still shows in the face. The assays are 61% lead, 50 ozs. 2 dwts. silver, and 64.5% lead, 70 ozs. 7 dwts. 22 grs. silver per ton.

At the Mackintosh, the supposed continuation of the North Farrell lode is being driven upon, and several bunches of fine-grained galena have been met with. The other mines in the Farrell district are idle, pending the expected construction of a tramway to connect the field with the Emu Bay Railway.

*Devon Mine.*—The improved condition of the track admits of more ore being sent out. The solid galena in stope is reported as 1 ft. wide.

### COPPER.

*Mount Lyell Mine.*—At the Reduction Works, the following quantities of ores have been treated during the quarter ending 31st December:—

	Dry Weight.			
	Tons.	cwts.	qrs.	lbs.
Company's ore.....	65,688	6	1	7
Purchased ores.....	20,731	0	2	26
Metal-bearing flux from South Tharsis Mine .....	6479	18	1	18
Total.....	92,899	5	1	23

and the metal produced was—

Blister copper, 2607 tons, containing—	£	s.	d.
Copper, 2579 tons, valued at .....	180,530	0	0
Silver, 160,102 ozs. ....	19,345	13	2
Gold, 5002 ozs. ....	21,258	10	0
Total.....	£221,134	3	2

The number of men employed was:—

At the Company's Mount Lyell Mine .....	426
At the Company's South Tharsis Mine .....	41
At the Company's Royal Tharsis Mine .....	1
At the Company's Reduction Works .....	1300
At the Company's Railway .....	225
Total .....	1993

The work at the mine has comprised the circumscribing of the ore-body with levels, and removing a couple of thousand tons of overburden and a thousand tons of ore daily. The main shaft has attained a depth of 100 feet below No. 7, where operations are well in hand with No. 8.

*North Mt. Lyell.*—Work at the mine has been confined principally to ore-winning from the No. 1 level and the open faces. At Crotty, the large construction works in progress include a concentrating plant, the initial capacity of which is to range from 150 to 200 tons

per day. Two more reverberatory furnaces have been completed. The matte produced contains 50% of copper, 32 ozs. of silver, and 0.25 ozs. gold per ton, but sufficient data have not yet been obtained for any further information as to smelting results. During the quarter, this mine has disposed of the following quantities of ore:—

	Tons.	Value.
Sold to the Mount Lyell Company ...	11,824	£53,824
Supplied to Company's own smelters at Crotty.....	1422	12,000
Shipped at Pillinger.....	643	6757
Total .....	13,889	£72,581

The company has employed 740 men.

*Mount Lyell Blocks.*—The ore won this quarter totals 2495 tons of 8½% ore, valued at £10,600; 112 men were employed. The total quantity of ore raised during the year ending 31st August was 12,543 tons, at a mining and trucking cost of 13s. 1d. per ton, and the average grade of ore despatched was 7%. It is intended to suspend productive work during the depressed state of the copper market, and to confine operations to exploratory work and further sinking of the shaft.

*Lyell Tharsis Mine.*—The ore won during the quarter totals 6563 tons, worth 3.93% copper; 82 men have been employed. Exploratory work has been confined to driving north on the ore-body and sinking winze from the 100 ft. level. The latter is down 55 feet, at which point cross-cutting will be adopted before sinking further. During the half-year ending 30th November, 13,026 tons of ore were delivered to the Mt. Lyell Company's smelters, giving an average assay of 4.58% copper, and yielding 597 tons metallic copper. This made a total output to that date of 58,721 tons ore. During the same half-year, the company carried 4942 tons of ore over its ropeway for the Lyell Blocks Copper Corporation.

*Lyell Comstock Mine.*—Ninety-eight men have been employed; 300 feet have been driven, and 2 miles of formation work done, to connect the mine on a uniform gauge with the North Lyell Railway at the Linda.

*Tasman Lyell Mines.*—Twenty-six men are employed. The main drive from the North Lyell No. 1 adit totals 820 feet, and continues through mineralised country. On the northern section, adjoining the Comstock, two adits are kept going on the schist and conglomerate contacts.

*Tasman and Crown Lyell Extended.*—Six men are employed. The bottom adit totals 710 feet. Country favourable for driving.

*Lyell Peaks Mine.*—The prospecting adit is still being driven through the last-mentioned company's property. It totals 142 feet, and employs 2 men.

*Lyell Tasman Comstock Mine.*—Two men started prospecting here in November.

*North Crown Lyell Mine.*—Until recently, prospecting has been continued in the bottom adit, with 3 men.

*Lyell Consols Extended Mine.*—Six men employed. An adit has been opened and driven 100 feet in soft country towards a clay formation, carrying native copper, which is about 500 feet ahead.

*Great Lyell South Mine.*—Thirteen men employed. At the 168 ft. level, 45 feet have been driven north, and a winze sunk 30 feet. Some surface-prospecting has also been carried on.

*Western Tharsis.*—This mine stopped working on the 8th August, in view of the decline in the market value of metals. Prior to the suspension of operations, work was carried on in the main tunnel level and two other tunnels. The mine manager recommends that, when work is resumed, the drive south-east of No. 1 W. crosscut be extended, and drives be driven at one or two points further in the crosscut than where this drive was started from, where fairly good, though narrow, seams of ore were cut, to ascertain if they are or are not extremities of ore-bodies that may have valuable copper contents; and that attention be given to the ore-body showing on the side of No. 1 S.E. drive, and that the most northerly ore-body should be tested below water-level by a small shaft.

*Darwin and Jukes Field.*—The No. 2 adit at Mt. Jukes Proprietary has been continued to 644 feet. At 585 feet another band of ore was cut, but since the end of November operations have been suspended. At the Lake Jukes Proprietary, a shallow adit is being driven towards a surface-outcrop. At the Darwin Proprietary, 1300 feet have been driven, but work was discontinued towards the end of the year. A project is on foot for amalgamating the North and King Jukes properties, and developing them vigorously. The Jukes and Darwin field needs, above all things, continuous, steady exploration and development. The copper-ore which is so widely disseminated in the rock indicates the existence of zones of concentration, which should be perseveringly sought for.

### COAL.

The output this quarter has been 12,587 tons, against 12,356 tons in the corresponding quarter of 1900. The quantities raised at the different collieries during the three months ending 31st December have been as follows:—

Colliery.	Tons raised.	Men employed.
Cornwall .....	6909	63
Mount Nicholas .....	5000	50
Mount Cygnet .....	305	4
York Plains .....	126	2
Dulverton .....	177	6
Glen Leith .....	50	2
Jubilee .....	20	1
Total .....	12,587	128

**INGLIS RIVER.**—The new discovery of cannel coal in the parish of Preolenna has been reported upon by Mr. George A. Waller, Assistant Government Geologist, who states that the upper seam (the only one of commercial importance, 20 to 22 inches thick) contains two classes of coal, one of which resembles the fragmentary cannel coal at Barn Bluff, and is allied to the kerosene shale of New South Wales, and the other a second-class cannel. He considers that the seam should first be opened up at a number of places, in order to determine the relative proportions of the two qualities of coal present. He recommends prospecting to pick the seam up in the valley of the Inglis, several miles nearer the seaport. A tramway from the present outcrop to the port would be 18 miles in length.

**LATROBE.**—The Dysodile shale has been reported upon by Mr. Esdaile, who takes a favourable view of the deposit, and the Adelaide syndicate is now taking steps to test by boring the depth to which the shale extends.

Deposits of oil shale at Native Creek, two miles from Railton, have attracted attention. The outcrop is on the opposite side of the Mersey to the Latrobe deposit.

It is considered that valuable lubricating oils can be extracted from these shales, and that the crude oil could be used as liquid fuel for steamships.

At Brown Mt., four miles from Latrobe, Messrs. Crocker have been testing an outcrop of coal, of which they publish the Government Analyst's assay—Fixed carbon, 38·6%; gas and moisture, 58·3%; ash, 3·1%. Tests at the Latrobe Gasworks are stated to be favourable.

**RECHERCHE.**—A seam of good coal is about to be developed at Catamaran River. Where sunk on, it shows 6 feet of workable coal, though, as the seam is 9 feet 6 inches thick, further exploration may result in nearly the whole of the seam proving marketable. The assays by the Government Analyst show:—

Fixed carbon .....	65·8	per cent.	to 66·7	per cent.
Ash, white and very light.....	8·2	"	8·6	"
Gases, &c. lost at red heat ...	20·3	"	21·0	"
Moisture lost at 212° .....	4·4	"	5·0	"

Small working tests have been made by steamship owners and others, with highly satisfactory results, for it is unanimously described as a good steaming coal. The situation of the property is favourable, being within 60 miles waterway from Hobart, and the mine works little over a mile from the port of shipment.

**LLANDAFF.**—The No. 2 Government bore is being continued. To the end of December a depth of 503 feet had been attained through sandstone and shale, with numerous thin seams of coal. The coal intersected by the bore to that date was:—



	ft.	in.	
At 21 ft. 6in.....	1	3	dark shale and coal
At 23 ft. 9 in. ....	0	3	coal
At 34 ft. ....	0	2	coal
At 34 ft. 10 in. ....	0	4	coal
At 36 ft.....	0	6	coal
At 42 ft.....	...		small vein of coal
At 56 ft. to 89 ft. ....	...		sandstone, with small veins of coal
At 212 ft. to 254 ft. ...	...		ditto
At 292 ft.....	0	2	coal
At 346 ft.....	1	8	coal
At 347 ft. 10 in. ....	0	7	coal
At 352 ft.....	0	6	coal
At 389 ft.....	0	10	black shale and coal
At 477 ft. 4 in.....	0	8	shale and coal

The coal struck at 346 feet in the bore proved to be of inferior quality. Upon analysis by the Government Analyst, it yielded 35 1% ash.

The Cornwall Company is now exporting coal to Victoria. It has succeeded in establishing a market on the other side of the Straits, and the prospects seem favourable for the development of a good inter-State trade.

Return showing the average number of men employed in or about the mines during the Quarter ending 31st December, 1901:—

District.	European.	Chinese.	Total.
North and South .....	760	...	760
North-East .....	522	169	691
East .....	940	103	1043
North-West .....	368	...	368
West .....	4115	...	4115
	6705	272	6977

Value of the mineral output per man employed, £67 3s. 7d.

The dividends paid during the Quarter were:—

	£	s.	d.
From Copper Mines .....	37,450	0	0
" Gold     " .....	14,000	0	0
" Tin     " .....	15,000	0	0
" Silver   " .....	4967	19	0
" Coal     " .....	...		
Total.....	£71,417	19	0