

925 No 1.

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HALF YEARLY REPORTS + BALANCE SHEET
DIRECTORS' REPORT TO
SHARE HOLDERS
Cybell Tin Mine NL

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Cybell Tin Mine, Gladstone
by
A. E. Thomas 30.6.06.

[Plan 9-915 Cybele Tin Mine]

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THE

CYBELE TIN MINE

NO LIABILITY.

Directors Report
Dorset ✓

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A. E. Thomas
General Manager

HALF-YEARLY REPORTS and BALANCE SHEET.

30th June, 1906.

LIBRARIAN

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DIRECTORS' REPORT TO SHARE

HOLDERS.

Melbourne,
18th July, 1906

Gentlemen,

During the period under review your Board has given the matter of developing the mine the closest scrutiny and attention. Complete and extensive surveys have been made by the General Manager, Mr. Thomas, of the Anson and Ringarooma Rivers, to ascertain the possibility of a sufficiency of water from either of these streams being gravitated to a satisfactory elevation on the property. The water of the Ringarooma River could not, it was found, be gravitated to a satisfactory elevation. The Anson River, however, proved to reach a higher level, but the uncertainty of the supply of water from this source during the summer months precluded its adoption at the present time. After most careful consideration and visiting the property, your Board has decided to develop the mine by sluicing with water elevated from the Ringarooma River and by dredging. A contract has been let to Messrs Thompson & Co., of Castlemaine, for the dredging plant, at £3150, erected and under steam on the Mine by 31st July, 1906. This plant is now being delivered. It is expected the contract will not be completed in the time specified, but every effort is being made by the Board to forward the work. The tenders for the sluicing plant are now under consideration, and it is hoped the same will be erected under

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steam and ready for work in about seven or eight months.

By the plan of the mine and the report of the General Manager submitted herewith, the areas of tin-bearing ground where operations will be commenced by sluicing and dredging are clearly shown. It is very satisfactory to note, by the Manager's report, that he has, by means of shafts sunk in proximity to some of the bores, more than verified the value of the ground as represented by them. With the equipment of the present proposed sluicing and dredging plants under full operations, their joint monthly capacity should be 79,000 cubic yards, and produce 47 tons of tin oxide.

The investigation as to the best method of developing your extensive and valuable property has entailed much time and labour, and it is hoped the dredging plant will be shortly at work and productive.

In accordance with the Articles of Association, the whole of the Board retire by effluxion of time, but are eligible, and offer themselves, for re-election.

The Auditors also retire, and offer themselves for re-election.

{ H. E. ROWE, Chairman.

{ R. E. DAWSON, Manager.

GENERAL MANAGER'S REPORT.

Dorset

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55**LIBRARIAN** Melbourne,
14th July, 1906The Directors,CYBELE TIN MINES, NO LIABILITY.

Gentlemen,

For the half-year ending 30th June, 1906, I have the honor to submit the following Report and accompanying Plan for your consideration.

The control of mining operations was taken over by me on 20th April, 1906, since when much of my time has been occupied in the careful examination of all possible sources of water supply and routes for water races, as well as the consideration of the most advisable method of initiating mining operations.

PLANT.- Prior to my taking charge a centrifugal gravel pump (10 in.) and nozzle pump (12 in.), mounted on a pontoon or barge, and driven by a horizontal steam engine, had been ordered from the Castlemaine Foundry, I had the opportunity of seeing this plant under construction, and similar plants in operations, at Castlemaine, on 5th June, and consider it suitable to the requirements of the portion of the mine in which it is proposed to instal it - the Cybele workings in 4219/93M. For the purpose of distinguishing it, I shall refer to this unit as the No. 1 Pumping Plant.

The plant actually on the mine consists of several chains of 9 in. and 7 in. iron pipes and a 3 in. nozzle, and is used in utilising the Mount Cameron race water (to which we have a first right 8 sluiceways) in breaking down and sluicing the upper drifts. I may mention that it is necessary to keep this water in use or to pay for it without using it in order to prevent the right to it passing to some other party - in which case, when we require its use for the No. 1 Pumping Plant, our right would be

on the Government list instead of first, which would place us in rather a difficult position, as the total supply is limited and the number of consumers large.

WORK ON THE MINE.

The work has been of a diverse nature, covering road and bridge construction, sluicing of stripping of upper drifts, tail race construction, shaft sinking, boring, erection of buildings, and surveying.

ROADS, &c.- The extremely unsound condition of the road or track (connecting the mine with the town of Gladstone), along which all heavy material, boilers, steam plant, &c., has to travel, rendered it urgently necessary that all culverts be reconstructed, and forming and corduroying to a considerable extent undertaken before cartage of heavy material was attempted. A new route for portion of the road was adopted, traversing a hard slatey country, and minimising expenditure whilst increasing the carrying capacity of the road. The local Roads' Board was approached as to the carrying out of the work or co-operation in the expense, but their funds could not be expended here, as the revenue derived by them from this road amounted to 5/- only.

Bridges (three in number) have been made over the Mount Cameron water race to permit of sawn timber, poles, plant and firewood being carted down to the Cybele workings, 4219/93M, where the No. 1 Pumping Plant is to be installed.

TAIL RACES.- A tail race for stripping of the Cybele faces, so as not to load the No. 1 Pumping Plant with the lifting of material from the upper levels, has been put in. This race is $11\frac{1}{4}$ chains long, was started on 23rd April and completed on 8th June, and has had about 7,000 cubic yards of material sluiced through it since.

The old stripping race on tailings was, prior to this, cleaned up in that portion outside the workings, and $\text{£} 5\text{cwt } 2 \text{ grs. } 27 \text{ lbs.}$ of tin oxide obtained. On realisation, this assayed 73.3 per cent, and brought $\text{£}120/18/-$ per ton.

In addition to the stripping race, a large elevated tail race, 10 feet wide at upper end, narrowing to 6 feet, is in progress of construction in order to receive the drifts lifted by the gravel pump of No. 1 Plant; this race is well in hand, and will be completed before the No. 1 Plant is ready for operation.

The preparation of the site for the construction of the barge is nearly completed, and the plant and material for barge and pumps is now on its way to the mine, 19000 feet super of timber having been delivered at the mine (at time of writing).

SHAFT SINKING.- In order to obtain some evidence (other than bores) as to the quality of the ground to be operated on by No. 1 Plant, I had two timbered shafts sunk near bores numbered 3 and 4 in Cybele workings. The whole of the excavated material from these was sluiced in my presence, and the resulting tin yield dried and weighed.

Shaft near Bore No. 3 was 10 feet deep, and passed through clean drift for the first 6 feet (with tin all through it), then a coarse gravelly wash, rich in tin, but discoloured with black pug in parts, then a carbonaceous deposit and pug, with angular wash beneath. The total contents of the shaft measured outside of timbering was 6.4 cubic yards, and the yield of dry tin 35.1 lb. , giving a value per cubic yard of 5.48 lb. The value of the ground, as calculated from bores, was 2.8 per cubic yard.

Shaft near Bore No. 4 10 ft. 8 in. deep, and disclosed a wall of pug, occupying most of the shaft, but sloping steeply down towards the bore, which was some feet from the end of the shaft. The stanniferous wash was confined to about one cubic yard of material at the end of shaft near the bore, the balance being occupied with pug and carbonaceous deposits. The yield of tin amounted to only 4.75 lb. I do not place much reliance on this shaft as a criterion of the ground to be sluiced as the pug banks will, in the majority of cases, be sluiced round and left standing, so measuring pug into the cubic contents, which in this instance, totalled 6 x cubic yards, would be hardly fair. It will of course be necessary, where these pug bands intersect

bottom races, to remove them, but, in all other cases, they will be sluiced over or round.

Whilst dealing with shaft sinking, I may mention that shafts have been put down in mineral lease 940/M, in the neighbourhood of bores 7, 8, 9, 10, and, although water was not available to sluice the contents, the material excavated prospectively fully equal or better than the bores.

BORING.- Boring operations have been discontinued after boring a total of 2,397 feet (in addition to that done prior to flotation), a considerable amount of which was done with the object of determining the bottom levels in the neighbourhood of the Cybele workings, to determine the relative levels of bottom and tail races for pumping plant.

A line of bores has also been put down in lease 939/M extending westwards from No. 26, and proving ground of depths varying from 71 feet to 14 feet, of values varying from 1.30 lb to 0.50 lb. per cubic yard. Boring has also been carried out with a view to tracing the lead evidently worked in the past as the Tamar face in lease 1372/M; the few bores, however, that were put down, though mostly deep, were insufficient to establish the position of the lead, although ground 61 feet deep, carrying tin of an average value from top to bottom of 0.98 lbs. per cubic yard, was met with, and ground 25 feet deep of a value of 3.80 lbs. per cubic yard.

The further proving of this end of the property may very well be deferred until a date nearer that at which mining operations are likely to be carried on here.

ERECTION OF BUILDINGS.- A four-roomed cottage and five huts are being erected; the latter are completed; a blacksmith's shop, store, and tin shed are in progress.

SURVEYING.- ~~Immediately~~ Incidentally with the exploration of the surrounding watersheds, for the purpose of possible gravitating supplies of water, a large amount of levelling and survey work has been done, and expense has been unavoidable in order to set this important matter at rest. A survey party is now

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levelling a race to the Spurs Rivulet and Ansoy^m River, and gaugings of the streams will be taken for a period of 12 months and surveys of the storage capacities made, before a scheme is designed to utilise this supply, which will come on to the mine at a convenient level to operate the eastern leases.

SCHEME FOR OPERATING THE MINE.

(See accompanying Plan)

This matter has received my especial attention, and as a result, I am convinced that the soundest policy the Company can adopt is to obtain a water supply by pumping from the Ringarooma River and initiate mining by sluicing the large areas so admirably adapted by their contour to this mode of treatment, and thus by producing results by a well-established and satisfactory method, whilst allowing time for the further elaborate of the schemes of operation and the possible introduction of other plant.

I would therefore proceed on the following lines:-

1. To establish a power station of approximately 1,200 horse-power near the south-west angle of mineral lease 1758/M, and pump from the Ringarooma River 45 sluiceways of water through two 20 inch rising mains a height of 330 feet to give pressure to giant nozzles on hill, open out faces as shown by red tint, and operate on the drifts of sluicing area "A" about the centre of mineral lease 1757/M, starting at the western end and working eastwards.

For the purpose a main tail race will be cut in the ground approximately in the position shown, such race to start about the north-west corner of 1757/M, and be cut and lined in length as necessary to provide for the extension of the working face eastwards. Races at suitable points to be cut into the hill southwards from main tail race such tail races to rise at a grade of 2 feet per chain, or steeper where practicable (except the most western), so as to enable the material to be rushed away from the face and reach the main tail race as rapidly as possible. In the main tail race, which should be 14 feet wide or thereabouts, harrows

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drawn by horses must be worked frequently so as to keep the tin down, and free the tailings and facilitate their travel into Harden's Ravine, whence they will in time find their way to the river.

2. Whilst sluicing is in progress some lines of bores should be put down, cutting the valley on the south east angle of 940/M and north-east angle of 1757/M in order to prove the limit westwards of the very excellent tin ground already proved along the line of bores marked C F on plan. This valley (marked F on plan,) between the Garfield Hill and the faces of sluicing area A, is of about 80 acres in extent, and will provide at its southern side a large amount of work for the No. 1 Pumping Plant after its operations in pumping area G have been completed, and will not in any way interfere with the extensions of operations by any other type of plant which at any time it is found advisable to put on.

In the lower end of this valley, above the dam 1758/M, after the limit westwards of the tin has been proved, or after working out this end of the valley with the No. 1 Pumping Plant, a dump may be formed for the tailings from sluicing area A, and water returned to the faces in such area by electrically-driven nozzle pumps.

3. On the completion of pumping operations in pumping area G, a supply of water (about 15 sluiceways) should be sent along a head race (shown by red line), traversing the ridges from the rising mains in 1758/M to the hill at the western boundary of 939/M, from which pipe columns and nozzles should be laid to break down the hills in sluicing area B, and run them through tail races into the worked-out pumping area G, which will be used as a dump, and filled up to such an extent that tailings will flow down the valley towards the Mussel Roe River.

4. Having worked out area B, the Mount Cameron water race can be cut round on the worked-out bottom, and

the pipes of syphon east of 897/M will be available for water distribution, and will be required to be used at the head of rising mains from Power Station, the smaller pipes and nozzles being moved eastwards as the sluicing work extends. Area C can then be sluiced.

Area marked D and the northern portion of F will be dealt with at a later period, and can be operated either by sluicing or by such other means as experience shall then dictate as being the most economical and profitable.

The areas to east of the Company's property marked H, although containing deep deposits, as ascertained by Government bores and old shafts, have yet to be thoroughly investigated before the correct means of operation can be decided on. All these areas are commanded by the water now proposed to be pumped from the Ringarooma and are also conveniently situated for sluicing from the Anson River race.

As a result of the above scheme of operations, it is anticipated that, when in full working order with the present proposed equipment, the output would be about 35 tons per month from 67,000 cubic yards operated on by the water from the Power Station, and about 12 tons per month from the No. 1 Pumping Plant operating on about 12,000 cubic yards. The cost per cubic yard should average throughout about 3½ pence.

Generally, I may say that the scheme outlined above for the initiation of mining by sluicing operations, is a method of treatment that is simple and has proved successful and remunerative and it appears to me that its success on the Cybele is beyond all question.

GRAVITATION WATER SUPPLY.

It is hardly necessary for me to go into this matter extensively here, although the investigations that have been made have resulted in a large amount of information, and embrace

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all sources of supply, levels to which have been run accurately. This demonstrates that it is quite futile to hope to obtain an all gravitation scheme to command the whole of the Company's leases, or, indeed, a scheme that reaches to any appreciable extent above the level of the Mount Cameron water race.

The Ringarooma is the only source of certain supply_ and a race from this river would require the water to be pumped from it to an altitude of 180 feet. Thus a pumping station is a necessity in any case, and the question narrows down to the scheme which can be put in with the greatest certainty as to cost and in the most rapid manner, also which will admit of easy enlargement.

I have the honor to be, Gentlemen,

Yours faithfully,

ARTHUR E. THOMAS, General Manager,

(Assoc. Memb. Inst. of Civil Engineers,
LONDON.)

THE CYBELE TIN MINES NO LIABILITY

BALANCE SHEET, at 30th JUNE, 1906

ASSETS.				
To Mine .. .. .	.. .. .	£64,500	0	0
" Reserve Shares Account	.. .. .	7,000	0	0
" Unallotted Shares Account	.. .. .	12,397	0	0
" Plant .. .. .	.. .. .	3,311	14	5
" Outstanding Allotment, No. 1	.. .. .	0	10	0
" " " No. 2	.. .. .	4	0	0
" " " No. 3	.. .. .	127	0	0
" " " No. 4	.. .. .	246	0	0
" Cash in Office	0	10	0
		£87,786	14	5
" Royal Bank	12,867	3	11
" National Bank, Derby, Tasmania	20	13	3

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ASSETS (Continued)

Brought down	£100,674 11 7
To Profit and Loss Account	3,636 8 5
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	£104,311 0 0

LIABILITIES.

By Capital	£120,000 0 0
Less Uncalled	18,000 0 0
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	£102,000 0 0
" Allotment No. 5, paid in advance	28 10 0
" " No. 6, " " "	28 10 0
" " No. 7, " " "	28 0 0
" " No. 8, " " "	25 10 0
" " No. 9, " " "	25 10 0
" " No. 10, " " "	25 10 0
" Thompson and Company	2,150 0 0

Contingent:

Vendors, from First Profits £3000

 £104,311 0 0

Audited and found correct,

S. J. WARNOCK, F.I.A.V.

THOS. WOODWARD, F.I.A.V.

PROFIT AND LOSS ACCOUNT.

at 30th JUNE, 1906.

To Flotation Expenses	£1,906 2 8	By Tin	£34 3 9
" Miscellaneous Expenses ..	58 12 2	" Interest & Insurance	13 18 6
" Rents and Fees	303 4 0		
" Directors' Fees	62 10 0		
" Wages	800 10 2		£48 2 3
" Advertising and Stationery	48 8 4	" Balance ..	3,636 8 5
" Stores	55 3 11		
" Water	291 7 5		
" Freight and Cartage	0 18 0		
" Anson River Survey	32 19 0		
" Directors' Travelling Expenses ..	110 15 0		
" Engineers' Fees and Expenses	14 0 0		
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	£3,684 10 8		£3,684 10 8
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MELBOURNE, 18th July, 1906

Audited and found correct,

S.J.WARNOCK, F.I.A.V.

THOS.WOODWARD, F.I.A.V.

RECEIPTS and EXPENDITURE.
at 30th JUNE, 1906.

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To Application Fees	£16,145 0 0
" Allotment No. 1	1,614 0 0
" " No. 2	1,610 10 0
" " No. 3	1,487 10 0
" " No. 4	1,168 10 0
" " No. 5 paid in advance	28 10 0
" " No. 6	28 0 0
" " No. 7	28 0 0
" " No. 8	25 10 0
" " No. 9	25 10 0
" " No. 10	25 10 0
" Proceeds of Tin	34 3 9
" Interest	16 8 6
	<u>£22,237 2 3</u>

By Vendors, in part payment	4,500 0 0
" Flotation Expenses	1,906 2 8
" Miscellaneous Expenses	58 12 2
" Rents and Fees	308 4 0
" Directors' Fees	62 10 0
" Wages	800 10 2
" Advertising and Stationery	48 8 4
" Stores	53 3 11
" Water	291 7 5
" Plant	1,161 14 5
" Insurance	2 10 0
" Freight and Cartage	0 18 0
" Anson River Survey	32 19 0
" Directors' Expenses	110 15 0
" Engineer's Fees and Expenses	14 0 0
"	<u>£9,348 15 1</u>
" Royal Bank	12,867 3 11
" National Bank, Derby Tasmania	20 13 3
" Cash in Office	0 10 0
	<u>£22,237 2 3</u>

Finish of Receipts and Expenditure

Melbourne, 18th July, 1906

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Audited and found correct,

S. J. WARNOCK, F.I.A.V.

THOS. WOODWARD, F.I.A.V.

AUDITORS' REPORTMelbourne,
18th July, 1906

To the Shareholders of

THE CYBRIE TIN MINES NO LIABILITY
MELBOURNE.

Ladies and Gentlemen,

We beg to report that we have audited the books and examined the vouchers of your Company for the half-year ended 30th June, 1906, together with the scrip, and certify to the correctness of same.

The books, vouchers, accounts, and share registers have been kept in very good order.

Yours faithfully,

S. J. WARNOCK, F.I.A.V. } Licensed
THOS. WOODWARD, F.I.A.V. } Auditors.
