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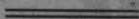
**The Mount Farrell Mining
District.**



Compiled by a Committee appointed at a Conference
of the Mount Farrell and North Mount
Farrell Companies' Directorates.



LAUNCESTON, TASMANIA, NOVEMBER 26, 1901.



... LAUNCESTON ...

PRINTED AT THE "EXAMINER" OFFICE, PATTERSON STREET.

NOTES

.. ON ..

The Mount Farrell Mining District.

Compiled for the Information of the Members of the
Tasmanian State Legislature.

J. L. FOLEY,

Secretary of Committee.

BANK CHAMBERS, LAUNCESTON, TASMANIA,

November 26, 1901.

PRINTED AT THE "EXAMINER" OFFICE, LAUNCESTON.

Notes on the Mount Farrell Mining District.

To the Members of the State Legislature,

Gentlemen,

In view of the importance of the measure that is about to be brought before you by the State Government, I, under the authority of a committee duly appointed at a conference of the combined Boards of the Mount Farrell and the North Mount Farrell Mining Companies, beg to present you with a few facts connected therewith, and briefly reviewing what has been accomplished in this remote district under peculiar adverse circumstances. Further, the committee in question desire to place before you authoritative figures respecting the value and quantity of the ore bodies that have been actually exposed on the various areas held by the more important mining companies and prospecting associations which have, and are, doing actual mining work in this particular portion of the state. At the same time they are free to admit that this information is far from complete, owing to the difficulty of communicating with the official centres of several of the companies within the short time at the disposal of the committee. But they are sure that full allowance will be made for this apparent shortcoming, in view of the fact that the figures presented are in themselves most impressive. Taken altogether the committee beg most respectfully that this short pamphlet will be carefully perused, and full weight given to the information contained therein.

The Mount Farrell mining district is situated in one of the most remote and outlying portions of the state. Its centre may be described at the junction of the Murchison and M'Intosh Rivers, which, flowing westerly, form the main Pieman River. On the east and north numerous streams flow from the high mountain ranges which divide the watershed from the Forth and Leven. Due east Barn Bluff and Mount Pelion rise to a high elevation, and on the south Mounts Reid and Tyndal form the outliers of the Western Alps. Topographically, it is a series of undulating hills, occasionally rugged and precipitous, generally covered by thick myrtle scrub, but with here and there long stretches of soft button-grass plain. It is consequently well watered, which

will afford, in the near future, it is to be hoped, both motive power and the necessary element for all concentrating plants.

Geologically, it is a continuation of the characteristic series of West Coast rocks belonging to the old Silurian epoch, and affording on every hand palpable indications of hidden mineral wealth ready for the pick of pioneer prospector. Practically the same igneous rocks may be seen with their metamorphic and sedimentary accompaniments as have been so graphically described on the more southern and western better-known mining regions—vide reports of Messrs. Thureau, Montgomery, Harcourt-Smith, and Twelvetrees.

The report of Mr. Montgomery well describes the difficulty he had in penetrating this region, and it was he who named the most pronounced landmark Mount Farrell, by which cognomen a large area is now universally known. In more recent years the construction of the Emu Bay Railway Company's system from the seaport of Burnie on the north to its terminal (Zeehan), has rendered portion of this district reasonably accessible. To reach Mount Farrell the traveller or prospector has to alight from the railway train on the south bank of the Pieman River, from which point a rough pack track, trending north of east, brings him in a distance of about six miles to the more important mining camp. It is here that we have the nucleus of a township such as Zeehan, Queenstown, and Gormanston were but a few years ago. A reasonably comfortable hotel is surrounded by several stores and other buildings, and the traveller may obtain a modicum of the comforts of civilisation. But from this point, running in all the cardinal directions, are numerous tracks of the crudest description, and such as are only seen on the rough West Coast when first traversed by the hardy prospector.

The most important metals so far discovered are the primary ores of lead, silver, copper, and bismuth, a combination rarely met with, and forcibly illustrating the variable economic ores that await development. The silver-lead hitherto discovered has been of most remarkable purity, and practically free from the zinc contamination. It is, as a matter of fact, such an ore, as all metallurgical works readily purchase for immediate smelting, as well as grading with the more refractory combinations so abundant in many mining fields, even extending to this state. The silver content is abnormally high, ranging to as good as the better class ores of the Zeehan and other local fields. The cupriferous ores, so far as tested, have been quite as pure, and their general characteristics tend to show that copper may be reasonably expected to play an important part as this extensive mining field is more exploited. The assay tests made have been peculiarly

satisfactory, showing the copper contents to range from 5 to as high as 18 per cent. The bismuth ores are quite a recent discovery, and have been found to carry a high percentage of this highly valuable commercial metal, for which there is an increasing demand for use in medicine and the arts.

Much of the ore contains a mixture of what is known as fahl ore, and this is usually considered by the practical miner as indicative of permanency and metallic value.

Gold is also known to exist, but in its free condition has not yet been discovered in any remarkable quantity; but still it may be well to note that it has shown itself in numerous assays of the sulphide ores, ranging to as high as 10dwt. per ton of material. When the mines are worked on a large scale gold will be a factor of importance as exemplified in the Mount Lyell and other districts where it practically occurs in like association.

It will be found in the records of the Mines Department of the State that the approximate total area held under lease amounts to 2065 acres, and the following are the principal mining companies:

1. The North Mount Farrell.
2. The Mount Farrell.
3. The Murchison.
4. The North Murchison.
5. The MacIntosh.
6. The Central Farrell.
7. The Farrell McIntosh.
8. Osborne's Blocks.
9. Kittson P.A.
10. Occidental P.A.

There are also several minor prospecting associations which have done little more than take up outlying areas, pending better facilities for transport of the necessaries of life. These extend easterly to the Sophia River, and north-east to the White Hawk Creek and Farrell's Copper Reward Claim.

The actual practical mining work of a notable character is in reality confined to the pioneer mines, the Farrell and North Mount Farrell, followed by the Murchison, and still later by the McIntosh Company.

On the Mount Farrell Company's property adits and drives have been put in to the extent of many hundreds of feet, perhaps equal to 1000 feet. In many places good concentrating ore is exposed, and that large bodies exist is beyond reasonable doubt.

On the North Farrell property extensive work has been systematically conducted, and the mine is now in a condition to

sustain large and continuous outputs of highly profitable ore. The general prospects of this mine are probably second to no other silver-lead producer in the State, and now that an amalgamation with the preceding company has been practically consummated, the basis of a large mining concern has been substantially consolidated, in which energy and capital will be brought to bear. It is not unreasonable to foreshadow that this combination will produce a mining venture that will add considerably to our mineral exports as well as being a substantial investment.

The following, viz., the Murchison, North Murchison, and Osborne, are Melbourne managed concerns, and have influential Boards of Management. On their respective properties extensive and payable ore bodies are exposed, and work has only been suspended pending facilities for the transport of machinery that is absolutely necessary before these properties can be worked on a large scale. The Murchison Company has already exported about 50 tons of ore to England, and it is currently reported that the returns on the realisation of the same have been highly satisfactory.

Several other local companies have done more or less work, but on all sides the same cry prevails—that the existing condition of transport prohibits the further expenditure of capital with the prospect of reasonable returns.

The district also affords large areas suitable for agriculture, and is graphically described by Mr. Twelvetrees in his report on the district. Doubtless as the population increases this will become an important auxiliary, both as affording employment to a moiety of the population and a proportionate contribution to the State revenue.

It may be also stated that the North Mount Farrell Company has between £2000 and £3000 worth of first-class ore at grass, which is being added to daily, and the second-class ore, stacked on the mine, has been valued at over £4000. This, also, is being considerably added to as the work in the mine progresses.

From the above facts we have, therefore, gentlemen, made a satisfactory case for your serious consideration, and we trust that the foregoing statements, coupled with the appendices which we herewith attach, will induce you to grant the requirements of this district in the way of reasonable facilities by means of tram connection with the existing railway system. The joint committee of the Companies stated is fully convinced there awaits, in the Mount Farrell district, a mining field that requires simple development, and the result will be the addition, to our State resources, of an appendage equal to anything now existing. It cannot be

denied that the old fields of the West Coast have played a great part in the progress of the State, and that an important addition must still further consolidate their advantages. Resting assured you will give this matter your favourable consideration, and that our efforts will not be in vain,

I have the honor to remain,

Yours respectfully,

J. L. FOLEY,
Secretary.

Appendices.

(From the Launceston "Examiner" of November 26th inst.)

THE MOUNT FARRELL TRAMWAY.

At a meeting of Directors of the Mount Farrell Mining Co., held yesterday, the following resolution was passed, and was forwarded to the Minister of Lands by the next mail:—"The Directors of The Mount Farrell Mining Company, No Liability, desire to place on record their deep sense of the injury which has been done to a most promising mining district, and to the whole State, by the rejection of the Mount Farrell Tramway Bill by the Legislative Council. The Board would also draw attention to the fact that the non-construction of the tramway will necessitate the suspension of all work in the district, that a very large amount of revenue in the shape of lease rents, sale of township lots, licenses, etc., will thereby be lost to the State; that a considerable number of men will be thrown out of employment; and that, on the other hand, the construction of the tramway, and the consequent development of the mining and agricultural interests in a district naturally endowed in both respects, would ensure the opening up of a very considerable field for labour and enterprise. This Board would desire to impress upon the Minister the fact that the field is reasonably entitled to access to civilisation; that a tramway can be constructed at a smaller cost than a macadamised road, and would undoubtedly suit the interests of the field better, and that its future continuation would render other promising districts accessible. In view of the above important considerations, this Board would urge the advisability of having the matter again introduced, and of pausing before retarding the development of the valuable natural assets of the State."

A committee was also appointed by the Directors to act in unison with members of the North Farrell Board in compiling in a concise form full particulars of the development, resources, and prospects of the district. This will be forwarded to all members of Parliament as early as possible.

The Mount Farrell Mining Company No Liability.

LIST OF ASSAYS.

Date.	By whom made.	Description.	Silver. oz. dwt. gr. p.c.	Lead. Copper 2.8 per cent.
1899—May 18..	Mr. G. J. Latta ..	Fahl Ore and Galena	41 3 0	44.7
" 18..	Mr. G. J. Latta ..	Fine-grained Galena	98 4 0	71.2
" 18..	Mr. G. J. Latta ..	Coarse-grained Galena	208 2 0	51.6
" 18..	Mr. G. J. Latta ..	Pug ..	37 9 0	23.7
" 30..	Mr. G. J. Latta ..	Galena ..	88 18 6	42
June 20	Mr. A. Allom ..	Galena ..	165 9 0	73.8
" 27	Dapto Smelting Works	Galena ..	158 0 0	71
Sept. 20	Mr. G. J. Latta ..	Fine-grained Galena	99 12 0	63.4
" 20	Mr. G. J. Latta ..	Coarse-grained Galena	78 15 0	67.8
" 20	Mr. G. J. Latta ..	Pug ..	69 12 0	37.2

Gold trace. Sample No. 1
Gold 1½ dwt. Sample No. 1

Sample No. 2

The Central Mount Farrell Mining Company No Liability.

ASSAYS OF ORE.

Date.	By whom made.	Description.	Silver. oz. dwt. gr. p.c.	Lead.
1901—March 6	Mr. A. Allom ..	Galena	266 4 16	79.2
Jan. 30..	Mr. A. Allom ..	Galena, Fahl Ore, etc.	437 14 16	65.5

Ore forwarded to The Smelting Company of Australia—Weight, 1 ton 5 cwt. 1 qr. 1 lb.; silver, 172 oz. 14 dwt.; lead, 58.8 per cent. Value per ton, £22 12s. 3d.

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North
PARTICULARS OF ORE SOLD by the Mount Farrell Mining Company, No Liability.

Date.		No. of Bags	Weight.				Assay.		Prices.				
			Tons.	Cwt.	qrs.	lbs.	Lead	Silver ozs.	Lead		Silver.		£ s. d.
								£	s.	d.	s.	d.	£ s. d.
1899—Oct. 16	Dapto Company	60	3	5	0	3	54.4	55	15	15	0	2 2 13-16	29 3 4
Dec. 25	ditto	430	20	19	0	14	63.4	70	17	1	3	2 3 3-16	253 16 10
1900—Jan. 6	Lempriere	249	12	7	3	3	66%	65	16	10	0	2 3	167 10 11
" 26	ditto	67	3	5	0	0	63	60	16	0	0	2 3	40 0 7
Mar. 7	ditto	795	39	12	2	25	62	71	16	10	0	2 3 7-16	505 2 6
May 11	ditto	292	14	10	0	23	64	74	16	15	0	2 3 9-16	196 18 5
June 27	ditto (seconds)	790	38	4	3	16	51	54	17	7	6	2 4	359 1 3
Aug. 11	ditto	629	33	1	0	9	62	64	17	12	6	2 4 1-16	570 18 2
	ditto (slimes)	222	11	11	3	1	69	59					
Sept. 27	ditto	360	19	1	3	6	73	73	17	15	0	2 4 1/2	628 9 11
	ditto	458	24	1	3	21	62	67					
Nov. 14	ditto (seconds)	84	4	4	0	0	56	64					
	ditto (slimes)	116	5	14	2	24	67	66	17	10	0	2 5 11-16	521 2 6
	ditto (jigs)	559	29	6	1	0	61	65					
1901—Jan. 12	ditto	1052	54	1	1	25	54	61	16	5	0	2 7	569 2 6
Mar. 4	ditto	398	20	8	2	15	55	61					184 6 1
	ditto	276	14	13	1	19	73	67	14	6	3	2 6 1-8	181 0 0
	ditto	55	2	14	1	25	75	65					33 14 8
Apl. 19	ditto	78	3	19	1	0	67	71					40 16 9
	ditto	131	6	9	3	15	64	75	12	3	9	2 5 1/4	67 15 6
	ditto	703	36	11	1	24	57	63					296 12 10
		7804	398	6	3	16							4645 12 9

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Particulars of Ore Sold—Continued.

	No. of Bags	Weight.				Assay.		
		Tons.	Cwt.	qrs.	lbs.	Lead %	Silver ozs.	
Ore bagged on hand at Mine	3529	180	15	1	8	69	67	Valued for purpose of advance at Silver 2/4, and Lead £1 per ton less than ruling quotations. £1974 14 3
" " "	183	8	13	3	4	68	63	
" " "	163	8	8	2	15	81	66	
" " "	190	9	1	3	9	58	55	
" " "	129	6	19	3	13	69	66	
" " "	266	13	10	1	11	56	53	
	4460	227	227	9	4			

Low grade Ore raised ready for concentration will produce 500 tons, estimated by measurements of heaps.

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Report by A. T. Brown, Esq.

372, Flinders Lane, Melbourne,

January 12, 1901.

To the Directors of

THE NORTH MOUNT FARRELL SILVER-LEAD MINE,
Devonport West, Tasmania.

Gentlemen,—At your request I herewith report as follows on the ore in sight and the prospects of your mine at the date of my last inspection (December 1, 1900):—

Top Tunnel driven 60ft. (S. 12deg. W.) in lode. The first-class ore (Galena) varies from 3in. to 36in. in width, with fair grade seconds in face and along drive.

No. 1 tunnel (42ft. below) driven about 237ft. in lode. First-class ore varies from 1in. to 36in. in width, for about 200ft. in length; and the seconds vary from 1ft. to 10ft. in width. Both the north and south faces of drive are in lode rock, but show very little ore. Cross-cuts east of the main drive have proved parallel runs of second grade ore, suitable for concentration; these require and warrant further development.

No. 2 tunnel (56ft. below No. 1) driven about 348ft. in lode. First-class ore varies from 1in. to 18in. in width for about 220ft. in length, and the seconds vary from 1ft. to 4ft. in width. Both the north and south faces of drive are in lode rock, but of no value. These tunnels are connected by winzes, showing the ore to be continuous, and of average width. Taking a general average of these workings, I estimate the first-class ore in sight to be about 2000 tons, which, at the average value of ore shipped, represents over twenty-five thousand pounds (£25,000). In addition to the above, there are several thousand tons of second-class ore, which should yield a good profit by concentration, and add considerably to the above estimate, but much more development is necessary to enable one to form a reliable estimate of the approximate tonnage. There is every prospect of this shoot of ore continuing to deeper levels. Some distance south of the main workings, at considerably higher levels, several trenches have proved the existence of fair grade ore, suitable for concentration, and it is probable that the No. 3 tunnel will open up a good deal of payable ground. I consider the general prospects of the mine are favourable, and warrant thorough development, and the erection of suitable concentrating machinery.

FUTURE DEVELOPMENT.

I advise that the No. 3 tunnel be driven with all speed to intersect the ore-bearing ground, then that a drive be opened north from this point, and extended quite under the the present main workings, and connected by winze or rise. This will act as a drainage level as well as proving the value of your ground for several hundred feet in length. I also think it advisable to extend the No. 1 level south up to and above the point of intersection of the No. 3 tunnel, and to connect by sinking winze, and that a good deal more crosscutting be done, to prove the parallel runs and branch veins of ore.

Tramway.—The construction of this should be pushed ahead with the utmost speed, so as to take advantage of the summer months, and should be built as economically as possible to comply with the nature of the traffic.

Concentrating Plant.—The site for this should be carefully selected, preferably at some point below the level of the No. 3 tunnel, and on a gradient sufficient to allow the material to gravitate quite through the mill without the use of elevators, if possible. The question of water supply and necessary power must also be taken into consideration in the selection of the site. The plant should be erected as soon as the tramway is completed, so as to save extra handling of the ore as brought from the mine.

The above works, development, tramway, etc., should be carried out without further delay, and thereby affect a very considerable saving in the working of your mine.

Yours faithfully,

A. T. BROWN.

Mine Manager's Report.

North Mount Farrell,

November 15th, 1900.

To the Chairman and Directors of the North Mount Farrell Mining Company.

Gentlemen,

I beg to submit to your notice a report on the work carried out on the mine during the past 10 months.

No. 1 Level.—The lode has been driven along its course south for 135ft.; total distance south of adit to date, 201 feet. A rise was put up to the surface at 35 feet from adit, the height of which is 51 feet. This rise produced high-grade ore up to within three feet of the surface. Stopping has been carried on from both sides of this rise, and good grade ore won. At 119 feet along this lode a crosscut is being driven to intersect the veins of ore showing in the creek east of the main workings; this crosscut is now in 160 feet. At 24 feet from the hanging-wall a vein of high-grade galena was passed through, which assayed 110oz. silver and 80 per cent. lead. At 39 feet from hanging-wall passed out of concentrating material into dark blue slate, thus proving the formation to be 39 feet wide where driven through. At 100 feet from wall the No. 3 lode was met with; this, so far as proved at present, is 2ft. 6in. wide, samples taken from it assaying 73 per cent. lead and 51oz. silver per ton, and 70 per cent. lead and 144oz. silver. At 135 feet south of adit No. 2 rise was put up for a height of 42 feet, and connected with O level. This rise passed a magnificent body of high-grade ore—at times fully 6ft. wide—of coarse and fine-grained galena of high assay value. A winze was sunk at a point 34 feet south of adit for a depth of 32 feet, passing through a body of ore 2ft. 6in. wide, of fine-grained galena for a distance of 23 feet, when the ore body passed south out of winze.

No 2 Level.—This level has been extended 80 feet. At 237 feet the lode was met with; where passed through it carried 8in. of ore and 3ft. of concentrating material. The lode has been driven along north for 69 feet and south for 270 feet. At 115 feet south of adit the ore body commenced to improve, and at times has been the full width of the drive, and going strong underfoot. At 81 feet from adit a rise was put up and connected with winze from No. 1 level. Stopes are now opened up on both sides of this rise. Stopping can now be actively carried on here during the ensuing year.

Summary of underground work done during the above period:

DRIVING	—No. 1 Level	...	44 feet	
"	No. 2 Level	...	80 "	
"	No. 3 Level	...	157 "	
CROSSCUTTING	—No. 1	...	106 "	
"	No. 2	...	12 "	
				399 feet
SINKING	... No. 1 Winze	...		32 "
RISING FROM	No. 1	...	71 "	
"	" No. 2	...	25 "	
				96 "
DRIVING ON COURSE OF LODE	—O Level	...	20 "	
	No. 1	...	135 "	
	No. 2	...	339 "	
				1021 feet

Area of lode stoped 59 square fathoms.

Surface Works.—The lode has been proved, by trenches, to live for 580 feet south of the No. 2 level, and to rise with the hill for a height of 247 feet above this level. It has also been proved to live North for 528 feet, and to carry clean galena ore within a few feet of the surface.

A shed has been erected on the No. 2 floor, 40 feet long and 18 feet wide, where the napping is carried on with an efficient staff or boys. An ample supply of timber has been kept up for underground use.

Output of ore has been 8113 bags, estimated to weigh four hundred tons, of which 5111 bags have been sold, returning £3099 14s 8d net at Pieman Bridge Station, on the Emu Bay Railway.

The output of seconds or concentrating ore has been 650 tons, valued at £3 10s per ton, or a total value of £2275.

The quantities of first-class ore in sight are as under:—

Between O level and No. 1, 693 tons, valued at £12 per ton.—£8316.

Between No. 1 and No. 2 levels, 1640 tons, valued at £12 per ton.—£19,680.

Concentrating material in sight over No. 1 level is estimated to yield 7470 tons of ore, worth £10 per ton.—Total £74,700.

Concentrates between No. 1 and No. 2 levels south of rise estimated to yield 2214 tons of ore, worth £12 per ton.—Total £26,568.

Concentrates north of rise, estimated to yield 1440 tons of ore, worth £12 per ton.—Total £17,280.

Tram line for horse traffic, to connect with Emu Bay Railway near Pieman Bridge, was laid out, distance 5 miles 43 chains; and one for steam traction to connect with Emu Bay Railway line at a point 21 miles from Guildford Junction is nearing completion. Steepest grade being 1 in 30.

Concentration.—The time is fast approaching when it will be necessary to provide a concentrating plant to deal with the vast quantities of low-grade ore being opened up in the mine.

General Prospects.—It will be seen from the foregoing statement that vast quantities of both high and low grade ores are in sight now throughout the mine, and which, there is every indication at present, will be doubled during the next six months.

In my opinion, the mine has now come to that state of development which warrants the Directors in laying down a steel instead of a wooden tram line, and to at once see about suitable concentrating machinery to treat the low-grade ores.

Assuming that the No. 3 level will open up bodies of ore similar to that going underfoot in the No. 2, it is easy to see, as soon as the tramway is completed and concentrators erected, that your mine will not only be a dividend paying one, but must soon rank amongst the leading mines of the colony.

I have the honour to be,

Yours faithfully,

JOSIAH INNES,

Mine Manager.

Report on the North Mount Farrell Mine.

Acting under instructions I visited this mine on two occasions for the purpose of inspection, and now furnish my report as follows:—

Property.—This property consists of two sections—4116-93m, 68 acres, and 3262-93m, 76 acres, comprising one block of 144 acres, charted on the Government plan in the name of W. Innes, and granted as a mineral lease by the Hon. the Minister of Mines under the Mining Act, 1893.

Location.—These sections are located north of the Murchison River, about one mile from the Suspension Bridge, and about $\frac{1}{4}$ mile to the east of the Mackintosh River, on the west slope of Mount Farrell. A corduroy pack track connects the mine with the railway station at the Pieman Bridge, on the Burnie to Zeehan line. The distance from the station to the mine is $6\frac{1}{2}$ miles.

Features of the Country.—The general features of the property may be described as fairly steep hillside, with button-grass flat from foot of hill on west boundary, extending to the River Mackintosh, the higher ground being densely covered with scrub and forest, containing timber suitable for fuel and also for building and mining purposes.

Geological Character of the District.—The rocks in the district consist of metamorphic schists, slates, quartz belts, granite, and conglomerate, also felsite.

Lode Formations.—About 15 chains from the low pack track, near the north-east corner of Section 3262-93m, a corduroy track turns off the main pack track, running in an easterly direction a short distance off the north boundary of the section. This leads right up to the No. 2 level, which is reached by an adit crosscutting eastwards for 255 feet at 143 feet. A formation carrying galena was passed through. This had not been explored at time of my visits. The No. 1 or main lode was cut at a distance of 237 feet from the approach to the adit. This level was then driven on the course of the lode (the strike of the lode is about north 20 deg. east) in a southerly direction 215 feet. This face showed the lode formation to be about 6 feet wide. A horse of country seems to have divided the metallic contents into two bands—the one about 18 inches wide, half of which is clean galena, the other about 26 inches wide, carrying 10 inches clean ore. On the north side of the crosscut

the level was driven 37 feet. The north face carried about one inch clean galena, with pyrites, quartz, etc.; lode formation about 3 feet wide. The lode where cut by the crosscut was showing 9 inches of clean galena. The ore, as far as can be judged by inspection, seems to vary from a few inches up to 2 feet of clean marketable ore. The northern face on my inspection at this level showed poorest, but there is every probability that good ore will again make in it still further north. The crosscut was extended beyond the lode a distance of 18 feet, showing in the face slate and white quartz. Going south from the crosscut at about 92 feet the lode matter seemed to string off into veins of small size. These will probably reunite further south, and possibly it may also get gathered together again at greater depth. At 92 feet from the crosscut the lode formation measured 3 feet 6 inches wide. The level was extended south to a distance of 215 feet, as before described. The lode looked highly promising, like as if it intended to make again in the south end. There was likewise a strong body of ore going down under foot of level. The ore is associated with a clay dig, which carries a few ounces of silver to the ton. In the drive 80 feet south from the crosscut a rise to the intermediate level has been put in, likewise three shoots at intervals going further along the level to the south, for sending ore down from the stopes into the trucks.

No. 1 Level is 70 feet above No. 2 Crosscut and Level. This level is approached from the surface of the ground by an adit driven in an easterly direction for a distance of 120 feet, crosscutting the lode at 68 feet from the entrance. Where cut, the lode carried 6 inches of clean galena, this widened on being driven along on its course in a southerly direction, increasing up to 2 feet. A rise has been opened up to No. 0 level at a distance of 133 feet from the crosscut going south. This level has been continued south for a distance of 166 feet, the face showing a fine body of ore mostly concentrating; this level was also opened up to the north of the adit for about 40 feet, the lode here looked poor in the face, the galena being scattered up into specks right through the slate. At 26 feet south from the crosscut the rise from the lowest or No. 2 level opens through to the No. 1 level.

No. 0 or Creek Level, from creek centre to south face, driven on lode 62 feet. At about 50 feet south a winze has been holed through to No. 1 Level. There was splendid ore won during the time it was being put through; the ore body was up to 6 feet in width, carrying 4 feet first-class ore. Ten tons clean

galena were obtained in driving the level 70 feet to the south, bulking 66oz. of silver per ton, and 67 per cent. lead. At a distance of 450 feet south of the No. 0 level the lode has been exposed on the surface in two trenches. Trenching has shown the presence of lode up to the north a distance of about 9 chains, close to the Mackintosh boundary. At a point 320 feet south of the creek a trench has exposed the lode, showing it to be 4 feet wide. By continuing the 0 level south for a distance of 250 feet, it would bring the level underneath this trench, giving 80 feet of backs. A winze was sunk about 1 chain north of creek, down to connect No. 0 level with the surface.

New Crosscut, No. 3 Level.—This new crosscut is being driven 600 feet south of the main workings, at a distance of 100 feet from the entrance; the country being driven through is felsite. The adit No. 3 is 100 feet lower down the hill than No. 2 adit; it is being driven in an eastern direction, and should crosscut a lode formation a short distance to the west of No. 1 lode—this is 2 feet 6 inches in width. This new level should enable this formation to be prospected thoroughly, and if satisfactory results are obtained levels will be driven on the course of the ore bodies.

No. 2 Lode showed outcrop in the creek about 40 feet east of No. 1 lode; appears to have a course nearly north and south.

No. 3 Lode was also discovered in the creek; it likewise has been met with in the eastern crosscut. The lode where recently cut carried about 2 feet 6 inches of good ore, assaying 70 per cent of lead and 54oz. of silver per ton. The lode was considerably broken up where cut, but there is a likelihood of the mineral getting more united as it is driven on south along its course; the No. 1 lode improved on being tested further south. The course of this body of ore appears to be north and south.

No. 4 Lode.—This is the most easterly formation that has been discovered up to the present on the surface; it lies about 25 to 30 feet to the east of No. 3 lode, seeming to have a similar course. This will shortly be sought for at a depth by continuing No. 1 adit crosscut further to the east for 30 feet or so, to cut it and test it by driving along its course; then, if it proves of sufficient value, the ore can be won by mining it from the same levels.

On Section 4116-93m, 590 feet north of the main workings, a formation carrying galena, copper pyrites, and iron pyrites, was cut in a trench. Sample of same yielded at the rate of about 1oz. of silver to the ton.

The whole of the discoveries of ore on your property are confined to the belt of dark slate, and I am of opinion that all other galena lodes in the district will be found restricted to this class of country rock.

Ore Won.—At the commencement of September the Company had ore bagged on hand amounting to 3047 bags; 527 were packed to Pieman Station, the remainder were at the mine. On the 2nd of October 42 tons of this ore was sampled, as reported by the Mine Manager, which yielded a net return to the Company of £628 9s 11d on being sold at the Pieman. This represents a gross value of £21 per ton for the whole; net value, £15.

Assays were as follows:—

	Oz. Silver, per ton.	Per Cent. Lead.	Gross Value.
456 bags Jigs	67	62	£19 13 2
560 bags Galena	73	73	£22 17 8

Also, during the last week in November the Company sampled 40 tons of ore, which yielded £521 net at the Pieman Station, or £13 net per ton.

Assay Values were as follows:—

	Oz. Silver, per ton.	Per Cent. Lead.	Gross Value
116 bags Slimes	65	71	£20 10 5
559 bags Jigs	65	61	£19 6 9
84 bags Galena 2nds	64	56	£18 6 8

At the different levels there were stacked heaps of seconds for concentrating; the appearance and quality would lead me to estimate that there might be a return of 300 tons of dressed ore. This should fetch a similar price to ore that has been already dressed and sold from the mine.

The last visit I made to the mine there had been won 664 bags of ore during the fortnight.

The cost of packing to the Pieman Station, viz., £2 5s per ton, is a very heavy handicap on the advancement of this mine. As a move in the right direction to remedy this, the North Mount Farrell Mining Company have arranged with Mr. J. Armstrong, J.P., representative of the Central Mining and Tramway Appliances Company, for the material for the construction of a 2 feet gauge tramway, consisting of 20lb. rails, strong enough to carry a 30-horse power engine, together with trucks and loading. This line

is to start from the head of the Boko Creek at the 21 mile peg on the Emu Bay Railway, to the North Farrell Mine, a distance of about eight miles. Mr. R. Montgomery, the engineer in charge, has completed the preliminary survey, and is well advanced with the permanent survey. A fair grade has been obtained, the steepest point being 1 in 30. The completion of this tramway will benefit the entire district; it should also prove a source of profit to your Company.

The future of your mine as a good ore producer for some time to come is demonstrated by the amount of ore disclosed in your levels, stopes, and rises. Appearances indicate that further driving of levels on course of lodes, as well as the probability of the lodes proving payable on being cut in lowest adit, will disclose an increased amount of good ore ready for the miner to win and send to market. The quality of your ore is excellent, and your concentrating ore is easy of treatment. With the completion of your tramway, and with continued judicious management, I consider you have a mine that can take and keep the lead in the Farrell district for years to come.

Attached to this report is a list of assays of samples I obtained on my visits to the mine.

JAMES G. A. STITT, M.M.S.,

Metallurgical Chemist and Mineralogist.

Zeehan, 15th December, 1900.

Assay returns yielded on testing samples of Ores and Lode Matter that I obtained from the North Mount Farrell Mine.

No. 2 Level.	Description.	Lead p.c. Silver p. ton. Gold.		
		oz.	dwt.	gr.
1.	Galena from No. 1 Lode going south	78	63	4 4 —
2.	Pyrites	—	0	16 8 —
3.	Quartz, etc.	—	1	9 9 Trace
4.	Pyrites with Galena, Slate, and Pug	2.5	4	14 7 ,,
5.	Clay Dig associated with Lode	—	9	12 17 Faint Trace
6.	Decomposed Slate with Quartz	—	—	Traces —
7.	Quartz and Slate, etc., ⁴¹¹⁶ / ₉₈₃₁ Section	—	0	19 14 Trace
8.	Coarse-grained Galena, with Copper Pyrites	76.75	52	18 19 Faint Trace

9. Fine-grained Galena, with Copper Pyrites and Antimony, from No. 1 Level	68.5	80	10	11	—
10. Lode Matter from Outcrop in creek, carrying Galena	60	81	0	6	—
11. Quartz Lode Matter from Outcrop in creek	2.25	15	10	8	Strong Traces.
12. Copper Pyrites	—	42	9	8	—
13. Galena, No. 2 Level, south face	72.25	54	4	12	—
14. Fine-grained Galena	78	73	10	0	—
15. Coarse Cubical Galena	81.25	67	12	9	—
16. Fine Galena Concentrates from Jigs	77.5	65	9	22	—
17. Galena with Copper Pyrites	54.5	26	12	11	—

JAMES G. A. STITT,

Metallurgical Chemist and Assayer.

Report from Mr. J. Armstrong.

ZEEHAN, TASMANIA,

3rd December, 1900.

The Directors,

NORTH MOUNT FARRELL S.M. CO., NO LIABILITY,
DEVONPORT.

Gentlemen,—

I have much pleasure in giving you the following report on the mine:—

Mine.—The mine being situated on the northern slope of Mount Farrell made the facilities for mining excellent, as the work can all be done by tunnelling and driving. The preliminary and developmental works are all well forward.

Two trenches have been put in 247 feet above the first adit, at distances of 430 and 330 feet respectively, and in both of these the lode has been cut showing galena and gossan in a nice formation.

Adit No. O.—The first adit has been driven south from the creek 430 feet, from the point where the lode has been traced to, and has been extended a distance of 62 feet, following an

excellently defined wall and lode formation which averages about 4 feet wide, carrying a fair percentage of clean galena and a quantity of seconds, with veins of carbonate of iron through it. Some 20 tons of marketable ore has been won from this drive, or more than enough to cover the expense of putting it in, also exposing the ore body going underfoot, consequently another adit was put in.

No. 1 Adit, 42 feet further down the creek, cut the lode at a distance of 78 feet, and shows the formation to be about 12 feet wide where intersected, in good slate country. The formation has then been followed 33 feet north and 205 feet south, the drive following the hanging-wall.

Good galena is showing the whole way through, and in places from 3 to 4 feet of clean ore with smaller veins going through the formation.

A rise has been put through to connect with the No. O Level, which has in places as much as 6 feet of solid metal, and not less than 4 feet. It has been followed in the drive for over 50 feet, and in no place is it showing less than 2 feet of ore. There are also legs going east from the main body, measuring from 6 inches upwards of clean ore running through the lode formation for from 15 to 20 feet. These veins are interspersed with carbonate of iron, which does not exist in any great quantity. There is no clean ore at present showing in the face of the drive, but the pug vein, which goes right across, is a sure indication of ore in the vicinity.

No. 2 Adit.—At a distance of 58 feet vertical an adit was put in 237 feet, where it intersected the lode, which showed 6 inches of clean galena. In driving south the same amount of ore showed right along with over a foot of good seconds. About 40 feet from the intersection a slab of metal came in on the eastern wall, which went up to a foot in parts. There was also good seconds showing between the two makes of metal on the walls.

Forty feet further south a rise was put through to the No. 1 Level, which shows 2 and 3 feet of clean ore in places, and which one can be quite safe in averaging at a foot of first-class ore right through.

This shoot exists for 120 feet, varying in width from 1 to 4 feet, and is all ready for stoping.

At 220 feet south a leg came right across the drive, carrying over a foot of metal; but on its being followed it became smaller, and is now about 6 inches of ore with carbonate or iron mixed

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through it. This drive has been extended 278 feet in all, and is at present in very nice country, so it should be continued with all despatch.

Another adit has been started which will give over 100 feet of backs, where it will cut the lode, but as the country at present is somewhat hard, it will be a few months before it can be put in. When the lode is cut from this level it will put the mine in a splendid position for working on the most economical lines that, combined with the kindly nature of the country, must make the cost of mining very light.

Ore.—There is at the present time some £1300 worth of ore ready bagged at the mine and the Pieman, and with the amount of ore showing by the developmental work already done, I feel sure you can win another 3000 tons, which should not return you less than, at a low estimate, an average of £10 per ton.

Tramway.—The decision to put a tramway in is an excellent thing for the shareholders, and will undoubtedly prove a very valuable asset, as it will serve as a direct means of communication with the Emu Bay Railway for the whole district, the prospects of which are most encouraging.

In conclusion, gentlemen, I have no hesitation in saying you have one of the most promising mines on the West Coast, and I see no reason why the property will not be on the dividend list shortly after the completion of the tramway.

I should recommend the policy already adopted of opening up the mine be continued, and that the drives both north and south be kept going, as well as the bottom adit.

I am, Gentlemen,

Yours faithfully,

J. ARMSTRONG.

Ore.—In making the above estimate I have not included any ore that will be won by sinking from the No. 2 level, i.e., between that and the lower tunnel that is at present being driven, and there is every reason to suppose that the ore is both going down and improving. Neither have I taken into account any ore that will be won between the face of the drives going south and where it is exposed in the trenches. It is difficult to estimate the large quantity of concentrating ore that can be won, but it will be greatly in excess of the amount of marketable ore.

J. ARMSTRONG.

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Report of Mr. G. Carlton, Mine Manager and Assayer.

Launceston, November 23rd, 1900.

TO MESSRS. J. L. FOLEY AND CO.,

Launceston.

Dear Sirs,—

I beg to report that in accordance with your instructions I went to the Mount Farrell district on the 6th inst. for the purpose of inspecting certain mines there, and now have the pleasure in handing to you the result of my labours.

All the mines worked on this field are situated on the western fall of Mount Farrell, and lie between the Mackintosh and Murchison Rivers. These two rivers joining, form what is known as the Pieman.

The only means of communication the field has with the outside world is a pack track which runs from Mole Creek to the Emu Bay Railway at the Pieman crossing. The distance from the Mount Farrell township to the Railway Station is five and a half miles.

The field may be said to lie in about the centre of that great belt of mineral-producing country which stretches in an almost unbroken line from Mount Darwin on the south to Mount Bischoff on the north, and which contains such mines as the Mount Lyell group, the Hercules, and the Roseberys.

The physical features of this district are those common to all mining centres on the West Coast—high mountains, having precipitous sides, which are heavily covered with timber, giving way to tablelands of button-grass and stunted undergrowth, and these in turn giving way to large and swiftly running rivers. It may be said here there is enough water power available within a few miles of any mine in this group to supply all possible requirements. The only question will be whether the developments will be of such magnitude to warrant the cost of installation, etc. Timber for mining purposes abounds in such quantities that it will be always obtainable at a minimum cost.

The geological features prevailing on the mines I inspected are similar in all respects, and it may be well for the sake of clearness to consider them here. The predominating rocks are schists, generally of a talcose nature, which have a strike almost due north and south, and a dip westerly. These rocks are identical with the ore-enclosing schists so common to the Mount Lyell and Mount Read mines. Bands of quartzite are occasionally met with, and may in isolated cases be of considerable width, which only future

work can decide. Sometimes small masses of an obscure igneous rock (probably keratophyre) can be seen, but their proportion to the whole is so small that at present they may be disregarded. Traversing these rocks at an angle of N. 11 deg. E. are bands of graphitic slate, which can be traced from section to section. These are in fact what are known on the field as "lodes," and as such I refer to them hereafter. They contain the argentiferous galena sought for.

The lodes vary in width from 1 to 100 feet, and lie between two well-defined slicken-sided walls. Apparently they have a mean dip of 1 in 6 to the west. As before remarked, the filling between these walls is graphitic slate, in which the galena occurs as specks, bunches, strings, and, rarer, as more or less well-defined shoots of ore. In no instance could I see galena occurring outside of these slates. Neither are the productive slates confined to one cre channel, as is plainly evidenced by the workings of the Murchison and Central Farrell properties. On nearly all the sections large lodes of quartz can be seen running almost parallel to the strike of the country. Many of these are of great width, and stand boldly out of the ground. A few specks of galena and pyrites can sometimes be seen in them, but little or no work has been done to prove their value. What bearing, if any, they have on the ore bodies I could not discover.

THE MOUNT FARRELL MINE.

This, the parent mine, is a property consisting of 235 acres—two sections of 80 acres each and one of 75 acres. Practically all the work has been confined to exploring section 2409-93m. As the work done on the other two sections is inconsiderable, and the rocks are so overlaid with soil and vegetable matter, that nothing of importance could be seen, I confined my observations to the one indicated. A series of long and deep trenches have proved the lode to run continuously right through the section. In nearly every trench a little galena can be seen, but in only one instance was there sufficient to warrant further work, and here a shaft was sunk to a depth of 51 feet. From this a drive north on the course of the lode was extended 38 feet. This work proved the existence of an undoubted shoot of second-class ore. Some three or four tons of clean metal was won, and a considerable amount of concentrating material; but the water, proving too heavy, the work of following this ore was abandoned. The face of the drive shows 4 feet of concentrating ore. Two chains south of this shaft a long trench has disclosed a large deposit of

gossan, from which a good stream of water is running. Sufficient work has not been done to prove whether it is the capping of a shoot of ore; but I am of opinion it is not, and think it is only a sedimentary deposit. Towards the southern boundary three tunnels have been put in.

No. 1 Tunnel was driven as a crosscut a distance of 220 feet, and gives 70 feet of backs to the surface. At the 197 feet point a band of clean galena was met with, and drives north and south were put in to test its value. These were produced a total distance of 70 feet, and proved a shoot of second-class ore to exist for a length of 27 feet. The behaviour of this shoot was very peculiar, at no time did it rise more than breast high, and it varied in width from 2 inches to 2 feet. A winze was sunk to a depth of 6 feet, proving it to go down, but the water became too heavy to cope with. Two hundred and twenty-four feet from the mouth of the tunnel the footwall of the formation was met with, and drives were put in aggregating 111 feet in length. This work proved the existence of another shoot of ore having a length of 40 feet, and a width which varied from 6 inches to 2 feet. The amount of concentrating material produced from these workings may equal about 100 tons. This quantity when treated should produce about 10 tons of marketable galena.

Seventy feet below the above tunnel another adit has been started to further prove the ore above-mentioned, and is now advanced 120 feet from the mouth. It is expected the lode will be reached in another 210 feet of driving. The country passed through is the slates and schists observable in the upper workings.

Another tunnel, No. 2, was started 50 feet lower than the intermediate, and was expected to cut the lode after driving 600 feet. When the work had progressed as far as 90 feet it was abandoned owing to the hard nature of the rock passed through (quartzite).

The result of the above work proves:—

- 1st. The existence of a lode having a length of at least 28 chains, and a width from 12 feet on the surface to 44 feet in No. 1 tunnel.
- 2nd. That this lode is galena-bearing, and that at least three distinct shoots of ore occur.
- 3rd. That owing to the manner in which the mine is opened no measurable quantity of ore is exposed.

4th. And though the clean galena gives high results in both lead and silver, it is idle as yet to estimate the value of the mine.

Personally I am of the opinion that this is a first-class prospecting proposition, and the way to obtain the best results is when the intermediate tunnel cuts the lode to drive north on its course, with short crosscuts at regular intervals. I may say I am surprised this course was not pursued in No. 1 tunnel.

THE CENTRAL FARRELL MINE.

This is a property of 80 acres, east and adjoining the Mount Farrell, and charted in the name of F. C. Brookes.

In prospecting this section the only ore body discovered on the surface was found in about the centre of the property. Where uncovered the lode matter was 5 feet wide, lying between two walls of clean schist. The filling is the usual graphitic slate, in which occur irregular bands and bunches of clean galena. This galena is very high grade, reliable assays returning up to 333oz. silver and 70 per cent. of lead per ton. Two hundred feet south of this discovery a tunnel has been driven to give 90 feet of backs, and has been extended some 210 feet into the hill. At 125 feet the hanging-wall was reached, the footwall not being cut until the 148 foot point was passed through. At each of these points a seam of carbonate of iron associated with galena was exposed; this led to the belief that there existed two parallel lodes. This is not the case, as can be amply proved by carefully examining the mineral contents lying between the two walls. It is really one lode formation having two splices of ore—one on the footwall and one on the hanging-wall.

A drive north has been extended on the hanging-wall for a distance of 130 feet, and is still being continued to intersect the shoot of metal showing in the creek. During the prosecution of this work a little galena has been found occurring at irregular intervals all the way. No definite shoot has been exposed so far, but the indications are such as to warrant the belief that a body of good ore exists ahead, and that at no great distance. The whole of the work so far has produced about eight tons of lode matter, from which about three tons of fair grade galena could be obtained by jigging. The face of the crosscut is letting out a large volume of water, which contains an appreciable quantity of oxide of iron, both good indications of a lode ahead. It is of the first importance that this crosscut be further extended to prove this. It is also highly desirable that a series of cuddies be driven from the north drive into the footwall to thoroughly test the lode.

Taken on the whole, and considered as a prospecting proposition, I consider this a "good show," and well worthy of your attention.

NORTH FARRELL MINE.

This, the premier mine of the field, consists of two 80 acre sections. All the work so far has been confined to the No. 1 section, north and adjoining the Mount Farrell property.

Galena was first discovered on the mine in the bed of a creek 16 chains from the southern boundary. Further work proved the existence of several small veins occurring within a distance (E. and W.) of 137 feet; this is the apparent width of the lode formation on the surface. Trenches across the lode have been put in right up to the Mount Farrell boundary. These prove the formation to be a continuation of the lode proved by the Mount Farrell Company. In each of these trenches a little galena associated with carbonate of iron can be seen.

No. 0 Tunnel was driven on the course of the lode a distance of 62 feet, and discloses the fact that whereas only a very little ore is seen over the back of the drive, a body of clean galena goes strongly underfoot.

No. 1 Tunnel, which passes 42 feet lower than the above adit, has been driven as a crosscut a distance of 118 feet. At the 78 foot point drives north and south were undertaken. The north drive was extended to 33 feet, and has been connected with the surface. Only a little ore has been disclosed here. The south drive has been extended along the hanging-wall for a distance of 194 feet. A rise from this level connects with No. 0. This south drive has produced a little clean ore for its full length, besides proving the existence of two shoots of good metal, one 60 feet in length by an average of 1 foot wide. The other is 37 feet long. This second shoot varies in width from 6 inches to 6 feet; I estimate an average of 2 feet. This is the ore body exposed by the rise, where clean metal is to be seen for the full width of the excavation. A crosscut from this level to prove the lode has been driven a distance of 106 feet. The footwall has not yet been reached. This crosscut has disclosed a little ore to exist throughout the matrix. At the time of my visit a splice of galena had been cut in the extreme face some 4 or 5 inches wide. This splice may or may not correspond with one of the seams of metal occurring on the surface, but sufficient work has not been done on it to warrant a definite statement.

No. 2 Tunnel, which gives 58 feet of backs below No. 1, was driven 237 feet before the lode was reached, and was further extended 20 feet through the formation. A drive north of 69 feet has disclosed but very little metal. The face now shows a solid body of quartz 6 feet wide, from which a fair stream of water is flowing. The south drive has been extended along the hanging-wall for a distance of 258 feet. This work shows clean galena for a length of 62 feet, and an average width of 1 foot. This is the first shoot seen in the No. 1 tunnel. The face of the drive now shows solid galena 6 inches wide, and is evidently the north end of No. 2 shoot. This tunnel is connected with the workings above by means of a rise.

Leading stopes have been taken out both in Nos. 1 and 2 levels.

Another tunnel (No. 3) has been started, and is now driven a distance of 148 feet; a further extension of 148 feet will be necessary before the known lode is reached. It is quite possible, in fact likely, that other bands of graphitic slate will be met with before this distance is completed. All these underground workings clearly prove:—

- 1st. The lode formation is at least 112 feet wide (the foot-wall has not yet been seen).
- 2nd. That most of the "filling" is barren, but that a part of it is impregnated by galena.
- 3rd. That at least two distinct shoots of clean metal occur, these shoots pitching sharply to the south at an angle of 45 deg.
- 4th. That the metal is always associated with carbonate of iron, and that this compound is rarely seen except in proximity to galena.
- 5th. That inasmuch as carbonate of iron is seen in many places in the drives, etc., it is highly desirable to prospect these places for other "shoots."

From the underground workings all the lode matter was not saved. Only the portion that was galena-bearing was stacked on one side. These stacks (aggregating some 3500 to 4000 tons) were treated by hand picking, jigging, etc., giving a return of about 410 tons of clean ore, firsts, slimes, jiggs, etc., besides leaving on hand about 600 tons of concentrating ore (that is ore not amenable to hand treatment). The Mine Manager estimates that this heap will return 150 tons of clean metal, but I am of the opinion this estimate is too high, and that 80 tons will be nearer the mark.

Ore Values.—Some of the clean metal from this property gives high returns. Picked specimens assaying to 75 per cent. lead and 150oz. of silver per ton. But the best guide is the results obtained from the ore sold. To the time of my visit 12 lots of metal had been disposed of, about 256 tons in all. These lots varied from 51 to 73 per cent. of lead and from 55oz. to 74oz. of silver per ton. The average assay value of the ore sold has been equal to nearly £21 per ton. But it must be remembered this is not the amount realised on the ground. When packing, freight, deductions, etc., have been taken off, the net realisation on the mine equals about £12 14s per ton. When better communication exists the net value will rise another two pounds per ton; packing to the Pieman Station costing 45s per ton at present. Allowing the price of lead and silver to remain constant, there is every reason to believe that all the clean metal won from this mine will keep to this average.

Ore in Sight.—This may be divided into concentrating material and clean ore. Of the quantity of concentrating material there are no data to get an accurate result. There is undoubtedly a large body of this class of ore, but a great deal more work must be done before a just estimate can be made, and it is worse than useless to merely guess.

The Clean Ore.—By this I mean that part of the metal occurring in the two shoots referred to. Other bunches of ore exist in the matrix, but their extent is unknown. I estimate that the amount of clean galena actually overhead and measurable to be 1875 tons. To this must be added about 150 tons now bagged at the mouth of the No. 2 tunnel, making a total of 2007 tons. Allowing this to have the same average assay as the ore sold, it will then have a realisation value of £30,502 at the mine. This is assuming that the ore will not cost more than 5s per ton to be carried to the Emu Bay Railway. I estimate that the winning, treating, bagging, delivery, etc., of this metal will be equal to £6 per ton, or, say, £12,000, leaving as profit a sum of £18,000 in round figures.

General.—It is the intention of the Directors to at once build a tramway to connect with the Emu Bay Railway. This is an absolutely necessary step, and its accomplishment will benefit the proposition to a very great extent. They estimate the cost of construction and equipment to be £8000; but I think it would be wiser to allow £12,000 to do this work.

In conclusion, viewing the proposition as a whole, I beg to record the following opinion:—

There is every reason to believe that the lode formation will live to great depths, and that wherever these graphitic slates occur there is a good chance of payable galena existing.

That though up to the present clean ore only has been won, the future of the mine as a dividend-paying proposition will depend mostly on the treatment of large quantities of concentrating material.

That concentrators should not be erected until sufficient quantity of such material be exposed and absolutely estimable, and then only on the best expert advice obtainable.

I feel confident in predicting a bright future for the mine, provided that it be opened up and worked by experienced and competent men only.

I am, Gentlemen,

Your obedient servant,

GEORGE CARLTON.

Mount Farrell Progress Committee.

To the Chairman

NORTH MOUNT FARRELL COMPANY

Mount Farrell, September 16th, 1901.

Dear Sir,—

We were pleased to receive yours of the 12th, from which we understand that the Hon. E. Mulcahy will in the near future, if report is satisfactory, endeavour to pass a bill for the construction of the tram to the Farrell field.

In reference to the various mines:—

- 1st. The Mackintosh Company's properties, the prospectus which we post you under separate cover speaks for itself as to their value.
- 2nd. The Mount Farrell Company's property, south and adjoining the North Farrell, has had a large amount of prospecting done on it. During the last few months the prospects have greatly improved, they having cut seams of metal which with cheaper means of transit would be converted into a valuable asset.
- 3rd. The Central mine is situated south of the Mount Farrell, employing men who have for a considerable time been winning ore. They have sent away lately a parcel of mineral which assayed over 500oz. silver, and will without doubt advance the prospects of shareholders if a reasonable freight were charged.
- 4th. The North Murchison, north and adjoining the Murchison—This property has a very defined lode of 8 feet in width, contents of which have proved payable for full width, and had to close down until there is a better way of transit.
- 5th. The Murchison have spent between £3000 and £4000 in developmental work, having proved the existence of four lodes, metal from which brought £20 per ton. They have also stacked a considerable quantity of concentrates, as the Company intend erecting machinery as soon as they can get it in and their ore to market at a reasonable rate. I might state that this Company had to stop working owing to price of packing, viz., £5.

6th. The Osborne Copper Blocks, 14 sections, which are under negotiation for flotation in England, and would have no difficulty in so doing if there was a cheaper means of sending its product to market.

7th. The Kittson's sections, situated on the northern slope of Murchison, are employing men at present in getting out a parcel of ore for shipment to England. It has a high percentage of bismuth, and would no doubt be in full working if there was a way of getting material to market.

Apart from these properties, which we hold at present to be the most valuable on the field, there have been several good lodes found on and round the Mount Farrell district, which bear every promise of being little inferior in value to the best of the most valuable, notably Thomas's, Casey's, Madden's, Donohue's, Kelly's, and Farrell-Mackintosh, all of which finds are held under lease. There has been very little work on these sections, owing to difficulties which all would be contributors of capital note on portrages. What work has been done shows that the lodes with very little difficulty could export sufficient metal to pay working expenses if carriage were less.

This cursory review of the various mines on the field is but bare facts, which will be borne out by any visitor who cares to see for himself.

Yours truly,

J. O'KEEFE, Secretary.

Extracts from Report on the Mount Farrell District by W. H. Twelvetrees, Government Geologist, under date December 20, 1900.

"The cost of packing to the Pieman Bridge, viz., £2 5s per ton, is an item that can only be borne by high grade ore. The other Companies carrying on work in the district will also be confronted by the same difficulty directly they begin to produce."

"A pack track has recently been formed from Farrell to the Murchison River cage, three miles to the south-east, and this will serve the mines on the Central Farrell, Murchison, North Murchison, and Osborne sections, and, if continued, would lead to mineral country still further east. This was only a footpath when I was there, but has been widened by the Government since to enable the miners to get their supplies to the ground.

"Innes's track goes north from the township along the western base of the mountain, supplying the North Farrell, Farrell-Mackintosh, Mackintosh, Metropolitan, and other sections. This track was being corduroyed at the time of my visit, as between the township and North Farrell Mine it was in a shocking state.

"The Company will have, in the near future, to consider the question of concentration. The present system of shipping firsts only, a necessity, perhaps, in the early stages of most mines, cannot be continued indefinitely without prejudicing the prospects of the mine, and eventually imperilling its existence. The prospects of this mine are so encouraging, and its success of such importance to the district as a whole, that it is to be hoped wise counsels will prevail. By the time the tramway is nearly ready, the drives will have been extended further, and the ground between the levels blocked out by rises and winzes, and then the construction of a small dressing mill must be taken into careful consideration."

"From the evidence presented to me at different times during my visit to the West Coast, and in spite of indications which at first sight are not altogether favourable, I have gradually formed the opinion that this copper zone is destined to be of the highest importance to the colony; but time, capital, and careful attention to the geological relations of the rocks and ore deposits will be found necessary factors of successful work."

"From the above, it will be seen that the mineral district of Mount Farrell is roughly susceptible of two divisions, a galena and a copper ore field. The galena deposits give it its immediate value, the copper a prospective one. The slates in which the galena lodes run are of a most favourable character, and the configuration of the ground is well adapted to easy and economical working. The width of the slate belt, as far as proved, is only two or three hundred feet, but there is reason to believe that bands of slate occur again a little further west, under the button-grass."