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REPORT
OF
THE DIRECTORS
OF THE
MONTREAL MINING COMPANY,
TO THE
STOCKHOLDERS
AT THE
ANNUAL GENERAL MEETING,
20TH FEBRUARY, 1850.



Montreal:
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1850.

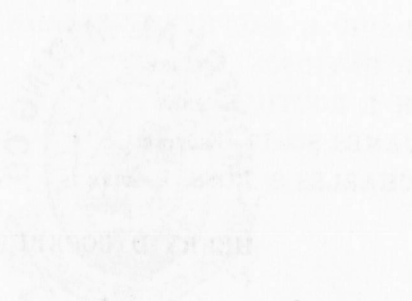
REPORT

THE DIRECTORS

MONTREAL MINING COMPANY

AND GENERAL MEETING

FOR THE YEAR 1900



PRINTED BY J. G. BROWN, 11, RUELLE DE LA MONTAGNE, MONTREAL, P. Q.

Montreal Mining Company,

INCORPORATED BY ACT OF PARLIAMENT.

Capital—£300,000 in Shares of £5 each.

DIRECTORS:

THE HONBLE. GEORGE MOFFATT, PRESIDENT.

“ JAMES FERRIER, VICE-PRESIDENT.

“ A. N. MORIN.

DAVID L. MACPHERSON, ESQUIRE.

D. DAVIDSON, ESQUIRE.

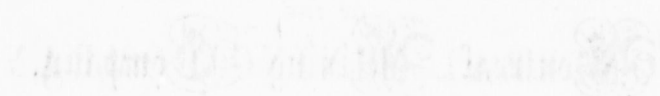
H. L. ROUTH, ESQUIRE.

JAMES SCOTT, ESQUIRE.

CHARLES S. ROSS, ESQUIRE.

HENRY D. COCKBURN, Esq., *Secy. and Treas.*

REPORT



INCORPORATED BY ACT OF PARLIAMENT

1854

The following is a summary of the business of the Company during the year ending on the 31st day of December 1854. The Company has during the year received from the shareholders the sum of £100,000, and has expended the same in the purchase of land and buildings, and in the carrying out of the works of the Company. The profit of the year is £10,000, which has been added to the reserve fund. The balance of the reserve fund is £100,000. The Company has during the year received from the shareholders the sum of £100,000, and has expended the same in the purchase of land and buildings, and in the carrying out of the works of the Company. The profit of the year is £10,000, which has been added to the reserve fund. The balance of the reserve fund is £100,000.

REPORT
OF
THE DIRECTORS
OF THE
MONTREAL MINING COMPANY,
SUBMITTED AT THE
FOURTH ANNUAL GENERAL MEETING,
20TH FEBRUARY, 1950.

THE DIRECTORS of the MONTREAL MINING COMPANY lay before the Fourth Annual Meeting of the Stockholders, the following Report of the Company's affairs :

In reviewing the transactions of the past year, it is considered unnecessary to relate again the unfortunate circumstances brought under the consideration of the General Meeting held in June last, as those were fully detailed in the Report made by the Vice-President, on his return from the Mines, and which was laid before the meeting; nor would it be of any avail to dwell on the disappointment to which the circumstances referred to gave rise, entailing, as they did, not only the loss of the large sum of money expended in the erection of a building utterly unfit for the purposes for which it was intended, but protracting for another year the prospect of any returns from the Mines. The Directors cannot, however, dismiss the subject without remarking, that this is the second instance in which the Company has suffered severe loss and disappointment, from the employment of persons whose recommendations entitled the Directors to look for very different results.

No time was lost in taking steps to remedy Mr. Vivian's mismanagement, and to ensure the housing of the machi-

nery, and, if practicable, to bring down a fair sample of fine copper before the close of the navigation. Good progress was made during the succeeding two months, but in September the cholera made its appearance, and with such fatal effect, in the first instance, as to spread dismay in the settlement. Some of the best mechanics and laborers left it, and for a time the buildings were nearly at a stand. Fortunately the epidemic spent its force in a couple of weeks, when fresh hands were brought from Toronto and Detroit, and the season proving favorable, the buildings were run up and covered in before the winter came on.

For more ample details of the improvements made at the settlement during the season, and for the present state and prospects of the Mines, the Directors beg leave to refer to the Reports of Mr. Campbell, the Manager, and Mr. Palmer, the Mining Captain, printed herewith. These Reports are very full, and in the main highly satisfactory.

It will be seen that the further opening of the Mine confirms the opinion entertained of its richness and durability, and that, in the opinion of the Manager, an additional force may be, next season, employed in it with advantage, a subject that will necessarily engage the early attention of the new Board of Directors,—that the Engine House is a most substantial building, well adapted for its purpose, and that the laborious task of fitting and setting up the engine and crusher has been successfully accomplished, and both found to work smoothly and satisfactorily,—that the smelting works are well advanced, and the furnaces erected doing good work; but the number agreed upon last spring, and required to keep pace with the Mine, cannot be completed before next summer. There will then be an abundant supply of bricks produced from the yard formed near the works, and this addition to the establishment will operate a saving, as well as a convenience in the future progress of business. It was intended to have had the vertical section

of the Mine, referred to in the Reports, lithographed and circulated with them, but it would have added considerably to the expense, and could not be completed in time for the General Meeting.

Since these Reports were received, accounts of a week's later date have come to hand, advising an arrangement with Mr. Davies for smelting the ore at 30s. per ton—the Company supplying coal, iron, brick, &c., which will raise the price to about 85s. per ton. This is rather higher than the Directors had been led to expect, but under the circumstances, perhaps not excessive to begin with, and Mr. Davies admits that when the works are complete, the cost will be reduced to 80s. per ton., the rate assumed by Mr. Campbell in estimating the value of the stock of ore on the ground. The arrangement with Mr. Davies was to commence on the 1st instant, but no assurance is given that it will extend beyond the term of his previous engagement with the Company. The accounts also mention that the crusher was then crushing at the rate of about ten tons of stuff per hour.

The operations of the Company during the past year have been again confined to the Bruce Mines, and for the present, the Directors do not recommend any further outlay for the more full examination of the remainder of the Company's property on Lake Huron, or that on Lake Superior. It would appear, however, that the attention of Mining capitalists in England has been drawn to the latter region, and a more perfect exploration of the Company's interest in that quarter may become expedient at no distant day.

The Company is still without the Government Patent for the location on which they are making so large an expenditure, although the land was actually paid for, under an assurance that the Patent should immediately issue, in the month of August, 1848; and the Directors

regret to add that their last communication to the Commissioner of Crown Lands on the subject, made nearly two months ago, remains unacknowledged. In making this statement the Directors do not mean that it should imply any doubt in their mind of the eventual fulfilment of the pledge given by the Government in this matter; but further delay in the issuing of the Patent may be attended with much inconvenience, and debar the Company from the exercise of an important privilege conceded to it by the Act of Incorporation. The occurrences at Mica Bay, on Lake Superior, will probably hasten the settlement to be made with the Indians, the only reason assigned by the Government for the delay by which the Company is aggrieved.

The Annual Statement of Receipts and Disbursements for the year, closed on the 31st December, is subjoined, and to which the Stockholders are referred. In connection with this statement it becomes necessary to advert to the existing engagements of the Company, which the Directors regret to say very considerably exceed the estimates made in June last. It was then supposed that calls to the extent of 8s. 3d. per share, would cover all the disbursements to be made to June next, including wages to March preceding. Of these calls 5s. 3d. per share has been paid up, and two of 1s. 6d. each mature on the 26th instant, and the 28th March respectively, and will amount to £7,000, while the sum required to meet the demands to June, as shewn in a statement laid on the table, is £17,915 11s. 10d., leaving an excess of £10,915 11s. 10d. to be provided for.

This is unquestionably a very large excess, but it is satisfactory to know that by far the largest portion of it is for supplies, which will eventually entail no loss on the undertaking, though it may be attended with present inconvenience.

On drawing Mr. Campbell's attention to the subject, he writes as follows:

“ The real surplus in merchandize for the year, over the
 “ the estimate, is £9,869 16s., but this includes all supplies,
 “ as coals, lumber, bricks, and a variety of other items, which,
 “ for the sake of regularity in the accounts, are passed
 “ through that head. It consequently includes a large por-
 “ tion of the excess of expenditure over the estimate in any
 “ building or other work, such as the excess of cost of
 “ smelting works over Mr. Davies' statement, amounting to
 “ £1,700, of the Engine House and Jigging House, of the
 “ Mining operations, &c., &c., as wherever there is an
 “ excess of expenditure from the employment of a larger
 “ force, a larger stock of merchandize must be bought for
 “ their supply, as well as material to perform the work they
 “ are engaged on. The heavy excess, however, lies in the
 “ enormous stock of goods on hand. Undoubtedly the
 “ supply requires to be large for a nine months' supply of a
 “ population of 500 people.”

Of the excess the Directors have the option of postponing the payment of £2,500 to the 1st June next, £3,063 to the 14th July, and £3000 to the 1st August following, reducing the amount to be met by the month of May to £2,352 11s. 10d. But the entire excess, as well as the supplies required for next summer, has to be provided for, either by calls or by subtraction from the first returns to be received from the Mines. With respect to the probable amount of these returns, and the period when they may become available, Mr. Campbell's Report shows that the Mine has not been deficient, and that there is ore on the surface to make the quantity of fine copper assumed in the estimate laid before the Meeting in June last, but for the reasons which he assigns the quantity expected to be ready by the month of June will be considerably reduced.

The Directors beg to call the attention of the Share-

holders to the statement which Mr. Campbell appends to his Report, showing the amount of the Company's assets at the Mines, independent of the original cost of the location itself. There is yet a good deal to be done about the establishment, to make it what it should be for the safe and economical management of the business. Some further accommodation will also be required for the officers and men, but the further outlay for these purposes will be trifling compared with what has been already incurred; and an account will be now opened for the purpose of showing the income derived from rent under the last mentioned head.

The Directors have also to notice that the charges on the business of the year, though increased by two unexpected losses, amounting together to £504 1s. 11d., and otherwise larger than they are likely to be another season, are nearly covered by the gain on the business at the Mines.

During the past season 49 schooners, the tonnage of which must have exceeded 7,000 tons, discharged cargo at the Bruce Mines, the American steamers also called there frequently to land passengers and freight, and the "Gore" touched nearly 50 times for the same purpose. At present this trade has to be reported at Sault Ste. Marie, a distance of more than 30 miles, and the public as well as the Company would be accommodated if the settlement were made a Port of Entry. A representation has been made to the Government on the subject, but to which no answer has as yet been received.

The trade of the place is further much inconvenienced by the want of circulating medium, and notice has been given of the intention of the Company to apply to Parliament for authority to issue its own notes in settlement of its transactions at the mines.

No appropriation of the Reserved Stock having been made during the year, the amount remains the same as per last Report—11,900 Consolidated Shares.

The Board, in justice to the Vice-President, cannot omit to notice the important service he has rendered to the Company during the past year. Mr. Ferrier has not only made two journeys to Baltimore, on business connected with the Smelting Department, but, at no inconsiderable inconvenience to his own affairs, twice visited the Bruce Mines, where his practical information and valuable suggestions have essentially aided Mr. Campbell in the construction of the building, and the erection of the machinery now in successful operation there.

The vacancy caused at the Board by the resignation of Mr. Meredith, soon after the last Annual Meeting, was filled by Mr. Davidson, who was again elected by the Stockholders in June last ; but as doubts exist as to the regularity of the latter election, and the By-Law on the subject is ambiguous, Mr. Davidson will again vacate his seat along with Messrs. Morin, Macpherson and Moffatt, who retire in terms of the Act of Incorporation. It will therefore be necessary that the Shareholders should elect four qualified persons from the list on the table to fill up these vacancies, the retiring members being eligible for re-election.

In order to prevent future inconvenience growing out of the ambiguity in the By-Law referred to, the Directors have, by a Resolution of the Board, repealed it and substituted another in its place, which, in terms of the Act of Incorporation, they now submit for the confirmation of the Stockholders.

(Signed,)

G. MOFFATT,
President,

“

H. D. COCKBURN,
Secretary.

Montreal, 14th February, 1850.

PROPOSED BY-LAW.

Should any vacancy happen among the Directors, by death, resignation or permanent removal out of the Province, such vacancy may be forthwith filled up, until the next General Annual Meeting of the Stockholders, by the remaining Directors, who shall choose and elect, out of the qualified Stockholders, one or more, as the case may be, to fill the vacancy or vacancies which may have occurred as above, and such Stockholder shall take his seat as a Member of the Board of Directors, and exercise the same rights and powers as he could have done, had he been elected at the General Annual Meeting of the Stockholders; and at the next General Annual Meeting, all Directors thus chosen shall retire, along with those Directors retiring in terms of the fifteenth Section of the Act, but shall be eligible for re-election.

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| | | | |
|---|-------------|--------------|--------------|
| | 2,310 18 2 | | 2,450 3 4 |
| DEDUCT— | | 41,716 13 2 | |
| Balance due Bank British N. America..... | 564 0 0 | | |
| Servants' Wages due at Mines.....£1,541 5 6 | | | |
| Do. due at Montreal 261 13 0 | | | |
| Bills Payable..... | 1,802 18 6 | | |
| | 14,765 19 5 | 17,132 17 11 | |
| | | £24,583 15 3 | £24,583 15 3 |

E. E.

H. D. COCKBURN, Secy. & Treasurer.

Montreal, 31st December, 1849.

* This Sum should have been deducted at the last statement, from the debts due to the Company, and also from the item of property transferred from Lake Superior.

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Receipts and Disbursements to 31st December, 1849.

| | | | |
|---|-------------------------|---|---------------------------|
| Cash on hand per last Account... £1,747 4 7 Less clerical error* 40 3 2 | £1,707 1 5 | Paid Bills Payable due by last Account £2,151 17 11 " Servants' Wages due by " 1,191 5 10 | £3,343 3 9 |
| " Received Calls outstanding per last Account..... " " Calls 9s. per share on 48,100 shares..£21,645 0 0 Less amount of outstanding Calls... 221 15 6 | 1,181 0 0 21,423 4 6 | " further on account of purchase of Bruce Mines..... " for mining operations at Bruce Mines..... " erection of new Engine House and Machinery.. 2,919 18 9 " expenses incurred on old Engine House..... 1,721 0 11 " Dwelling Houses, Offices, Church, repairs and improvements at Bruce Mines.....£2,332 0 4 Less Rents received... 38 7 0 | 4,659 12 4 11,014 15 8 |
| " " on account of Call 1s. 3d. per share: due 26th Jan., 1850.. 139 18 9 " " from G. Desbarats, being his share of expence in exploring the "Desbarats" Location in 1847 | 21,563 3 3 | " Survey of Location..... 2,293 13 4 " erection of Smelting Works..... 86 3 5 " Smelting operations..... 7,020 16 4 " Brick Machine and Yard, cost..... 3,463 13 0 Less Credit for bricks delivered..... 404 3 1 " Less Credit for bricks delivered..... 329 11 9 " Horses, Carts, Sleighs, &c., cost..... 48 6 0 " Less Credit for work performed..... 174 3 6 " Merchandise for sale at Store and use of Mine... 65 0 0 " Interest on purchase money, &c..... 109 3 6 " Law Expenses..... 7,920 3 1 " Furniture for Office..... 985 2 11 " Charges and Expence of 20 17 5 " 5 10 0 | 281 5 9 |

| | | | |
|--------------------------------|---------------|-----------|-----------|
| " Merchandise for sale at | 7,920 | 3 | 1 |
| " Store and use of Mine... | 985 | 2 | 11 |
| " Interest on purchase | 20 | 17 | 5 |
| " money, &c..... | 5 | 10 | 0 |
| " Law Expenses..... | | | |
| " Furniture for Office..... | | | |
| " Charges and Expense of | | | |
| " Management..... | 2,331 | 0 | 8 |
| " Loss by charter of School- | | | |
| " ner "Sorel" | 266 | 11 | 11 |
| | <u>2,597</u> | <u>12</u> | <u>7</u> |
| Less sum received for | | | |
| penalties incurred for | | | |
| non-payment of Calls | | | |
| and apparent gain on | | | |
| sales at the Mines,.... | 2,559 | 9 | 7 |
| | <u>139</u> | <u>5</u> | <u>2</u> |
| Balance of Cash..... | | | |
| Sundry Debts due to the Compa- | | | |
| ny.....£2321 | 4 | 10 | |
| Do. due by the | | | |
| Company.. | 10 | 6 | 8 |
| | <u>2,310</u> | <u>18</u> | <u>2</u> |
| | 2,450 | 3 | 4 |
| | <u>41,716</u> | <u>13</u> | <u>2</u> |
| DEDUCT— | | | |
| Balance due Bank British N. | 564 | 0 | 0 |
| America..... | | | |
| Servants' Wages due at | | | |
| Mines.....£1,541 | 5 | 6 | |
| Do. due at | | | |
| Montreal | 261 | 13 | 0 |
| | <u>1,802</u> | <u>18</u> | <u>6</u> |
| Bills Payable..... | 14,765 | 19 | 5 |
| | <u>17,132</u> | <u>17</u> | <u>11</u> |
| | £24,583 | 15 | 3 |

E. E.

H. D. COCKBURN, Secy. & Treasurer.

Montreal, 31st December, 1849.

* This Sum should have been deducted at the last statement, from the debts due to the Company, and also from the item of property transferred from Lake Superior.

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REPORT BY W. W. PALMER,
MINING CAPTAIN, BRUCE MINES.

BRUCE MINES, 8th January, 1850.

TO ARCH. H. CAMPBELL, ESQ.,
Manager, Bruce Mines.

SIR,—In accordance with your request, I lay before you my Report on the Bruce Mines, in the first place giving an abstract of the appearances and the produce of the several Bargains worked within and during the last four months, commencing at the eastern part of the Mine, with Stope No. 2 East, followed by a statement of the other mining operations performed in the same period; and as a reference to both, I beg also to lay before you a copy of the vertical section of the working plan.

No. 2 EAST.—Running 12 fathoms east from Trial Shaft. The working of this bargain was suspended in September, there being at that time, already at the surface, more ore than we had the proper means of making merchantable. The Stope is 9 feet below the surface, where the lode is 4 feet 6 inches wide, and will produce about 4 tons of ore per fathom;* 40 feet deeper the Lode is 7 feet wide, and will produce from $5\frac{1}{2}$ to 6 tons per fathom, of ore yielding 20 per cent. of fine copper.

No. 2 WEST.—Running $9\frac{1}{2}$ fathoms west from Trial Shaft. Lode 3 feet wide; Stope 14 feet below the surface; produce during September, 1 ton 18 cwt. per fathom. October to November 3rd, 1 ton 12 cwt., and 2 tons 15 cwt. per fathom, and improving in depth. In November the men were put to secure the open cutting, and afterwards to get Trial Shaft into working order. The Stope was therefore suspended and has not since been worked.

No. 3 EAST.—Situated 21 fathoms N. E. from Trial Shaft, and worked on a branch of the main Lode, which "takes horse"

*In estimating the yield of the bargains, &c., it is understood that the tons are of 20 per cent. ore.

at Davis' Shaft; producing during September, $2\frac{1}{3}$ tons per fathom, in October, $2\frac{1}{2}$ tons, and during November and December, $2\frac{1}{3}$ tons per fathom. The Stope is 50 feet 6 inches long, and worked to 7 fathoms below the surface, where the average breadth of the Lode is $2\frac{1}{2}$ feet, shewing two well defined walls dipping south, or towards Trial Shaft, about four inches in a fathom.

No. 3 WEST.—A continuation of 65 feet west from the last bargain, worked 30 feet below the surface. During September, produced $1\frac{1}{2}$ tons per fathom, in October 1 ton 12 cwt.; and in November $1\frac{3}{4}$ tons per fathom. The eastern part of this bargain for five fathoms will not at present pay cost; the Lode throughout has been unsettled, but it is likely when we reach a greater depth, it will produce about the same quantity of ore as in No. 3 East, as the ore in that bargain dips west.

No. 4, including No. 23.—Running 12 fathoms east from Davis' shaft; worked on the main Lode to the depth of 5 fathoms from the surface, where the average breadth of the Lode is 3 feet 4 inches; produced in September and October, 2 tons and $2\frac{3}{4}$ tons per fathom, and during November and December, $2\frac{1}{4}$ tons of ore per fathom.

No. 5 EAST.—Running 17 fathoms west from Davis' Shaft, is 5 fathoms below the surface, where the average breadth of the Lode is 2 feet 11 inches; produced during September, 33 cwt. per fathom, in October, $1\frac{2}{3}$ tons, November and December, $2\frac{1}{3}$ tons per fathom. In the eastern part of this bargain the Lode throws off a branch from the north side, and at about the centre a "cross course" traverses the Lode. The ore is of better quality as we approach it from the east, but immediately on the west of the cross course the Lode presents its usual appearance.

No. 5 WEST.—A continuation of 13 fathoms west from the last bargain. Stope 3 fathoms deep. Lode $3\frac{1}{2}$ feet wide; produced in September, 2 tons. October, $2\frac{1}{10}$ tons and during November and December, $2\frac{1}{3}$ tons per fathom. From the north side of this bargain, several branches are thrown off which impoverish the Lode, but those branches, and the one thrown off from No. 5 East, together with another which springs from the west end of Davis' Shaft, unite in the two

bargains next mentioned, and form a large portion of the Lode on which they are worked.

No. 6.—Situating $3\frac{1}{2}$ fathoms north of, running nearly parallel with, and dipping towards No. 5 East. Length 46 feet; Lode 2 feet 4 inches wide; Stope 33 feet below the surface; produced in September, $2\frac{1}{2}$ tons per fathom; in October, 1 ton 18 cwt., and during November and December, $2\frac{1}{4}$ tons per fathom. The cross course, which passes through No. 5 East, also traverses this bargain without materially changing the character of the Lode.

No 7.—A continuation of 52 feet west from the last bargain, and worked to about the same depth; produced during September, $2\frac{1}{4}$ tons, and in October, 2 tons per fathom. The men were then put to sink Prideaux Shaft, by which the bargain is bounded on the west. I cannot give the width of the Lode, as a large portion of it is still standing on the south wall. In taking down 2 fathoms of the west end of the Stope with Prideaux Shaft, we had both walls, the Lode measuring $4\frac{1}{2}$ feet, and is worth $3\frac{1}{2}$ tons of ore per fathom.

The bargains next to be described are No. 26, No. 10 East and West, and the Winze. These are working on the North Lode, which underlies north, keeping nearly the same course going east, and about 17 fathoms distant from the Lode on which the two bargains last described are worked.

No. 26.—In the back of the 10 fathom level, east of Harris' Shaft. For some time in September, the Lode was small and poor, but by the end of the month measured 3 feet in breadth, and produced $2\frac{1}{4}$ tons per fathom; in October, $2\frac{1}{4}$ tons, and during November and December, 3 tons per fathom. Work suspended last month as the men were required to assist in sinking Prideaux Shaft.

No. 10 EAST,—Produced during September and October, $2\frac{1}{4}$ tons per fathom—part of the bargain having then been excavated to the back of the 10 fathom level, over the Winze, the men were put to rear up a whim shaft through the Stope, and to put in stulls, &c., to secure the open excavation.

No. 10 WEST.—Produced during September and October, $2\frac{1}{4}$ tons of ore per fathom, and the bargain was then suspended. It can now be worked with No. 10 East, and the stuff broken in both Stopes, taken to the whim shaft already mentioned, and thence hauled to the surface by horse power.

The Winze, or sink in the bottom of the 10 fathom level, west of Harris' Shaft, is now at the depth of 18 fathoms 2 feet from the surface. The Lode in the eastern end has been good from the 10 fathom level to the bottom; the west end has not been so productive. From the bottom, 10 feet east and 10 feet west have been driven; the Lode, in the east end, is 4 feet wide, showing two good walls and producing $3\frac{1}{2}$ tons of ore per fathom. The end driving west was at first very poor and the Lode disordered. After driving 3 feet, it improved considerably, but still has a great deal of trap mixed with it. The Winze will now be sunk five fathoms long to the 25 fathom level. A whim kibble way and a ladder road from the surface direct to the bottom of the Winze, are being made—the one for more economically raising the ore when broken, and the other for conveniently going into and coming out of this part of the mine.

The following bargains are on a section of the main Lode, traced 108 fathoms on its course, which is about west from the last.

No. 11 (including 12).—Situating about 35 fathoms N. W. from Prideaux Shaft. Stopped to 34 feet below the surface—length 16 fathoms, and produced in September and October, 2 tons 13 cwt. per fathom, and during November and December, 2 tons 2 cwt. per fathom. A large quantity of iron pyrites has been found in this bargain during the past month, but it appears to be gradually giving place to the copper pyrites. The Lode is 2 feet 9 inches wide.

No. 13.—This bargain, when suspended in September last, was worth about 50 cwt. per fathom. Length 9 fathoms, bounded on the west by the Engine Shaft.

Nos. 14 and 15.—A considerable portion of the Lode in this bargain was left standing; some of it has been taken

down, and the walls of the Lode, where uncovered, are about $3\frac{1}{2}$ feet apart—the produce is about $1\frac{1}{2}$ tons per fathom. Between this bargain and the next to be described, the Lode has not been worked on. A short time ago a shode pit was sunk through the overburthen, and the Lode cut at the depth of 12 feet in it, measuring $4\frac{1}{2}$ feet between the two walls, and rich in yellow copper ore.

Nos. 16 and 17.—Commencing about 30 fathoms west of the west end of No. 15, and bounded on the west by Ferrier's Shaft—length $10\frac{1}{2}$ fathoms. Lode, $5\frac{1}{2}$ feet wide, worked to 34 feet below the surface; produced during September, October and November $2\frac{1}{4}$ tons, and in December, $3\frac{1}{4}$ tons per fathom.

Nos. 18 and 19.—Running west from Ferrier's Shaft 13 fathoms. The working of the western part of this bargain was resumed in October; at first it was poor, but before the end of the month, it produced about $1\frac{3}{4}$ tons, and is now worth $2\frac{1}{4}$ tons per fathom.

Four fathoms of the eastern part of the bargain is worthless. Nothing had been done here for several months, but its working was resumed on the 22nd of December, in anticipation of an improvement, and also to make way to bring the stuff broken in the bargains lying to the west of it to Ferrier's Shaft, to be hauled by horse power.

Nos. 20 and 21.—A continuation of the workings west—length 11 fathoms; Stope $5\frac{1}{2}$ fathoms from surface. Lode $3\frac{1}{2}$ feet wide; produced during September and October, 2 tons 6 cwt., in November and December, 2 tons 11 cwt. per fathom.

No 22.—Suspended in October in order to get Meredith's Shaft into working order. It was then worth about 1 ton per fathom, and looked unkindly. The bargain is short, measuring about 3 fathoms.

This concludes the bargains worked on the eastern section of the location.

The produce of the ground already broken, together with the present prospects of the mine, making the undertaking altogether beyond a speculation, a considerable sum of money

above the cost of breaking ground, has been expended in making arrangements for developing the Lode at a greater depth, to expose the vein so as to enable the Company to apply to it three or four times the present force, and consequently to obtain an increased quantity of ore in the same period.

The following is a statement of the other mining operations performed, commencing at Meredith's Shaft and going east.

Meredith's Shaft, when suspended last spring, a depth of 72 feet had been attained; on resuming operations in October, it was found necessary to make it larger, to enable whim kibles to work, and also to raise the collar to save the labor of wheeling the stuff from it when brought to the surface. In cutting down the Shaft, two fathoms of the west end of No. 22 were taken down with it. In 15 feet, the Lode increased in size to 4 feet, and in produce to $2\frac{1}{2}$ tons of ore per fathom. In the west end of the Shaft the Lode is good from top to bottom, and when we reach a depth of 15 fathoms, we shall be able to prove the Lode under the swamp, by driving a level west.

The Shaft is now in proper working order, and sinking will be resumed this month.

Ferrier's Shaft has also been made a Whim Shaft. From the bottom a 15 fathom level is being driven east, to meet another to be driven west from the Engine Shaft, the length of which will be about 52 fathoms, passing through a piece of ore ground scarcely touched from the surface, or but enough done to prove that it is valuable. The Lode in the end is 5 feet 10 inches wide, between two plain walls, and producing from 4 to $4\frac{1}{2}$ tons per fathom, of fine yellow ore.

The Engine Shaft, sunk between Stopes Nos. 13 and 14, has also been put into working condition, and the bottom of the Shaft lengthened to 5 fathoms, which length it will be sunk to the 25 fathom level. It is now 14 fathoms below the surface, and a bargain to sink it 10 fathoms deeper has been set to nine men, which will take them about 4 or 5 months. The ground is favorable for sinking, but the Lode is poor, only a small portion of it worth saving. There is every indication of an early improvement.

Prideaux Shaft is 50 feet 6 inches below the surface ; 7 feet 3 inches of which have been sunk five fathoms long since October. The Lode in the east end of the Shaft is $4\frac{1}{2}$ feet wide, showing two good walls, and producing about $3\frac{1}{4}$ tons per fathom. In the west end the Lode is disordered and will scarcely pay cost.

Trial Shaft is 49 feet deep. The Lode in the bottom is 7 feet wide, producing from $5\frac{1}{2}$ to 6 tons per fathom, (see No. 2 East). We have been engaged since the middle of December, in putting this Shaft into working order, and taking down portions of the Lode left standing last year. A bargain to sink 3 fathoms by 5 fathoms long, has been set to 9 men.

Whims, or Horse Machines, to draw the stuff, have been erected—one to draw the stuff broken in Meredith's and Ferrier's Shafts, and the Stopes communicating with them. Another at the Engine Shaft, and a third is in course of erection to draw the stuff broken in Trial and Prideaux Shafts. The old Whim at Harris' Shaft will draw the stuff from the Winze.

With the arrangements made we shall be able to sink all the Shafts to the 25 fathom level, when galleries will be driven from one Shaft to another, and a communication opened from the eastern to the western part of the mine, then, all the ore broken can be taken in tram waggons to the most central of the Shafts, and thence drawn to the surface.

At present there is no water in the mine, to cause inconvenience, nor is there prospect of much.

ORE DRESSING.

In this department we have made satisfactory progress ; a large portion of the piles of ore lying at the surface, has been prepared for the crusher, which, when dressed, will turn out about equivalent to 2,050 tons of ore of 20 per cent—so much of the finer stuff as could be, has been jigged. Of the produce of hand jigging machines, we have sent, since 17th December, 115 tons to the smelting works, and have about 35 tons remaining.

The total quantity of ore at grass is calculated to be about 3,500 tons.

In conclusion I beg to give the present distribution of the Miners.

| | | |
|--|-------|------|
| Sinking Trial Shaft..... | 9 | men |
| “ Prideaux Shaft..... | 9 | “ |
| “ Engine Shaft..... | 9 | “ |
| “ Meredith Shaft..... | 9 | “ |
| In the Winze..... | 9 | “ |
| Driving East, 15 fathoms level from Ferrier Shaft... | 4 | “ |
| Stopeing in No. 3 East..... | 4 | “ |
| “ “ 3 West..... | 4 | “ |
| “ “ 4 | 3 | “ |
| “ “ 5 East.. | 4 | “ |
| “ “ 5 West..... | 4 | “ |
| “ “ 6 | 3 | “ |
| “ “ 11 | 4 | “ |
| “ “ 15 | 2 | “ |
| “ “ 18 and 19..... | 4 | “ |
| “ “ 20 and 21..... | 4 | “ |
| | <hr/> | |
| Total..... | 85 | men. |

I have the honor to be,

Sir,

Your most obedient servant,

WALTER WM. PALMER.

OFFICE OF MONTREAL MINING COMPANY,
BRUCE MINES, 15th January, 1850.

To the HONORABLE GEORGE MOFFATT,
President, Montreal Mining Co.

SIR,—In anticipation of the Annual General Meeting of Stockholders, I beg to lay before you a general Report of the progress and state of the Company's affairs at the Bruce Mines during the past year, and shall take them up under their different heads.

1ST.—MINING OPERATIONS.

On this subject the report I have to make will I think prove satisfactory, as every thing that has been done during the past year has tended to show that the Bruce Mines are not only rich, but lasting, and that the Stockholders will be amply remunerated for all their outlay ; and as the time draws near, when returns may be confidently counted on, it is most encouraging to find that these returns will not only be handsome, but that they will continue increasing from year to year, if proper means are taken to open the mine for the employment of a larger number of miners than can be at present.

Herewith I beg to hand you a detailed Report by Captain Palmer, of the state of each separate Bargain, together with a vertical section of that part of the mine to which operations are now confined, and I shall merely make a few remarks on the whole.

In order perfectly to understand the plan, you will require to keep in view, that at the east end of the mine there are two veins running nearly parallel, upon both of which excavations have been made. Thus No. 2, east and west, are some fathoms to the south of No. 3, east and west, as you will see by reference to Mr. Logan's printed plan, herewith sent, and the same remark applies to the position of No. 5, and Nos. 6, 7 and 8. In the vertical section, the northern branches are colored deeper than the south and are supposed to be seen through them. Again

the north lode, as it is called, is behind Nos. 6, 7 and 8. If the plan of the north lode be therefore placed exactly behind the other, and the upper part raised to an angle of 35° a correct idea of the situation and appearance of the lodes in a vertical section will be given.

By a reference to the section you will perceive the positions and various depths of the shafts, with the level proposed to be driven through the mine, on reaching a depth of 25 fathoms from the surface, as well as the ground to be opened up by that level. That portion of the plan colored green shows the excavations already made, and the yellow exhibits the extent of stopes already opened by the shafts, and ready to be worked out as soon as desirable, as well as what lies between that and the 25 fathom level. The extent of ore ground which will be opened by the 15 fathom level west from Meredith's shaft, cannot of course be estimated, as the vein there takes its course through a swamp, and its surface has never been uncovered; nor can we estimate that which will be exposed by a level from trial shaft running east at the same depth, as the lode here enters a bluff, and although it is easily traced on the surface, the ground is very unsettled; but if the lode answers the hopes it now holds out in the shaft and stopes, this will be one of the most productive parts of the mine. At present the quantity of surface exposed by working amounts to 209 fathoms (5 fathoms of which are not shown in the plan) yielding a produce of 502 tons, 14 cwt. 1 qr. 8 lbs. of ore of 20 per cent of fine copper, in one fathom in depth, or an average of 2 tons, 8 cwt. 0 qr. 12 lbs. per fathom. Part of this is exposed by the shafts to a depth of 18 fathoms from the surface, part not so deep, but taking the average of the whole we have 1845 fathoms of ore ground opened up, promising to produce 4402 tons of ore. As the shafts are sinking, new ground will be constantly exposed, so that by the time they reach the 25 fathom level, and it is driven through, there will be opened up between it and the surface, an additional 4,370 fathoms of ground, which there is every reason to believe will be at the least as productive as the portion already exposed. Indeed there is good cause for

expecting that in the more settled ground which will then be reached, the lodes will also partake of a more settled character, and yield a steady and regular supply of ore. And if we count merely the present length of the mine, each ten fathoms that are sunk will open up more than two thousand fathoms of additional ore ground. While the 25 fathom level is being driven, which will be done east and west from each shaft, the shafts will be sunk to the depth of 35 fathoms, where a second level of the same extent will be driven, and at the same time the ground above stoped away. By this arrangement a very considerable increase may be made to the force employed, and I hope before winter to see 180 or 190 miners under ground. It is calculated that by June, 1851, the level marked as to be driven at 15 fathoms depth will be finished, and by June following the 25 fathom level will be driven from one end of the mine to the other, by which time the shafts will be at depths from 35 to 42 fathoms, and the 35 fathom level partly driven. We shall then probably be able to employ about 400 men in the mine. When the deep level is through, the whole of the stuff broken in the stopes will be brought to one shaft, whence it will be carried to a dressing floor, the wall rock separated from ore, and the latter prepared for the crusher. This will save considerable expense, and will concentrate the whole ore in one spot, where the workmen employed in preparing it will be under the eye of the dresser, instead of as at present being scattered along the whole course of the lode.

During the last three or four months a large number of the miners have been engaged in enlarging the shafts, putting in stulls, timbering, and other work than raising ore, but it is calculated that there is now at the surface in this the eastern section of the mine, sufficient ore to yield upwards of 3,300 tons, of a percentage of one-fifth or 20 per cent of fine copper. To this has to be added about 200 tons consisting of the piles at Moffatt's shaft, the western lodes, and a small parcel on the wharf, making a total of about 3,500 tons, about two-thirds of which is now ready for the crusher and jigging machines. What the exact expense of dressing will be it is impossible

accurately to ascertain, until the crusher has been some time at work, but I hope we shall be able (with the exception of working the engine) to set the whole dressing by the ton. In the meantime it is put down in the estimate at a rate which, it is believed, will considerably exceed the real cost.

The system of working the mine has as far as practicable been assimilated to that pursued in Cornwall, and as soon as the ore now at the surface has been cleared away, it would be well to carry it out still further, and work the mine upon tribute, thus giving the miner an interest in the welfare of the mine, and an object in working to the best advantage. The erection of smelting works, on the spot, has done away with one great difficulty in carrying this into effect.

At the west end of the location the bargains have not been worked for some months. With one exception they are poor at present, and I think should be left, until the sinking of one or two shafts has proved the ground, which can be undertaken at some future period. The country is very unsettled on the surface, but there is a large quantity of rich ore in many parts of the lode, and probably at a greater depth the veins will be found more concentrated and regular in their character,

The total cost for mining operations for the past year has been £11,014 15s. 8d. including a sum of £1,177 2s. 10d. for dressing ore for the smelting house and preparing for the crusher, and £17 10s. for a laboratory.

2ND.—ENGINE AND ENGINE HOUSE.

It is unnecessary for me to recur to the disastrous result of the attempt made last winter to erect an engine house, and the total failure which followed, except in so far as it will explain a heavy expense incurred this year in building the present house, and the delay in making returns, from the impossibility of cleaning more ore by hand (except at a ruinous expense), than could be reduced on the spot, and was necessary to keep the smelting furnaces in work prior to the crusher being ready. The necessity of removing the engine to a more suitable building was decided by the visit of the Vice President to the Mines in June last, and a new site was determined on, where a sufficient

supply of water could be obtained, both for the engine and for dressing the ore. The foundation of this building was laid in the beginning of July, and the stone work completed on 1st November. The erection of the engine was carried on as far as possible while the house was building, and the whole is now complete and ready for work. The progress of the work was considerably delayed, and the expense increased by the prevalence of cholera, which for a short time was very severe, and in consequence of which most of the masons left the place. The extremely open weather which marked the fall, however, permitted the completion of the work. The building is entirely of stone, and is built in the most substantial manner, the loading being composed of immense masses of greenstone, weighing, some of them, nearly three tons. The dimensions of the house are as follows: Boiler House 58×25; Engine House 50×23; Crushing and Jigging House 66×31. These are the outside measurements. The Engine House is 43 feet, and the Stalk 54 feet in height. The expense attendant on the erection of these houses and the machinery has been considerable, amounting, at 15th ult., to £2,919 18s. 9d., owing partly to the necessity for getting masons, in the latter part of the season, at very high wages, and a heavy expense for passage money, and a good deal to the Engine not having been properly fitted before, and the time employed in arranging those parts which were not put together last year.

I believe, however, that you have now got one of the best appointed steam engines in North America, and one that will perform its duty as economically as it is possible for a steam engine to do.

The machinery for washing the ore has not yet been attached, but preparation is being made for it, and in the meantime a more than sufficient supply can be dressed by the crusher and our present machines for the furnaces.

3RD.—SMELTING WORKS.

In this department the work laid out for the summer has not been completed, and it will require a good part of next summer to erect all the furnaces necessary to keep pace with

the mine. The smelting house already built consists of a stone building of about 100 feet in length, and 36 feet in breadth, and is calculated to contain four furnaces, three for the ore in its different stages, and one for refining. As yet there have been put up only two of these furnaces, but the refining furnace will be completed during the winter, in time to refine all the Blister Copper made prior to the opening of the navigation. Next spring the other ore furnace will be built, and the house enlarged to contain three more, which will be put up during the summer. These it is calculated will be sufficient for the present. In the course of two or three years, however, I hope that a much larger number will be required. A large furnace in a separate building has also been put up for calcining the ore. All the furnaces appear to do their work well, and to the satisfaction of Mr. Davies, the head smelter. He also speaks very highly of the quality of the copper, and states that when refined, it will equal the best in the market. Owing to the late period at which the calciner was finished, and other causes, it will be impossible to get the third ore furnace built this winter, and consequently the quantity of copper ready for market in June will be materially decreased; but until the furnaces have been at work some time, it is difficult to make a correct estimate of what we shall have.

The cost of the smelting works entered in the accounts, amounts to £3,463 13s. and includes the castings for the remainder of the furnaces, and a large stock of fire bricks as well as the coal wharf, railways, and expense of levelling the coal bed, which was considerable. With the exception of two tons of Blister Copper made in summer, there was no ore smelted prior to the 15th of December, owing to the calciner not being ready, but since it has been going, all the furnaces have been regularly at work, the calciner extracting the sulphur, No. 2 furnace melting the ore, and No. 1 roasting and making copper. We have now about twelve tons of the latter ready to be refined, besides a stock of calcined ore, coarse and white metal, with some regulus. Mr. Davies speaks confidently of the short time required to bring this ore into metal after the first melting, and the low cost of the process. But whatever the

cost may turn out to be, I believe that it would be more beneficial to the Company if the whole of the ore were smelted by contract, at so much per ton of fine copper, the standard to which the ore is to be brought being fixed.

It would be premature at present to make any attempt at a close calculation of the expense of smelting the ore here, the furnaces having been in operation so short a time; but if Mr. Davies is correct, the profit will be handsome, independent of the saving of £2 5s. per ton of freight on shipping ore. In my estimate I have put the cost of smelting at £4 per ton of ore, which is from 15s. to 20s. per ton more than Mr. Davies informed me he believed it might be done for, if it were well cleaned. This ore cleans very easily, and there will I think be no difficulty on that score.

4TH.—LOCATION.

Owing to the large number of people expected last spring, it became necessary to provide additional accommodation, and a contract was given for the building of various frame houses. These have all been finished and consist of ten blocks, of two houses in a block, costing in the aggregate £1,314 11s. In addition to these, nine new log houses have been built, and several old ones removed from their previous position, in order to make room for the engine house, &c., at a cost of £352 9s. Until 1st May next four of these houses are rent free, after which the income from them, and some old houses repaired, will amount to nearly £300 per annum. It will be necessary in spring still farther to increase the number of dwelling houses, and I think that a row of brick ones might be advantageously placed behind the front row, forming a kind of barrier in case of fire between the front and back streets. A new bake house and oven, stable for nine horses, slaughter house, boat house and scow, have also been built, along with a small but comfortable church, and an office at the mine. The house of the overseer has also been substantially repaired, of which it stood much in want.

In the amount charged this account, there is also included the balance of the cost of the old engine house, with the expense

of dismantling it, and removing the pieces to the new building. The whole cost of the second erection is included under the head engine and engine house, already noticed.

A survey of the location was made last summer, and lines run up the centre and sides, with three cross lines at equal distances, and right angles to the main line, but as the Report is before you I need not farther notice it.

5TH.—BRICK YARD.

Owing to the large number of bricks necessary for the erection of the smelting works, and the high rate of freight from the St. Clair, it was deemed advisable to send up one of Adam's Patent Brick Machines, and a spot adapted for it was accordingly chosen, cleared and levelled. The brick yard is about a quarter of an acre in extent, and is calculated to dry about a hundred thousand bricks at one time. An excellent bed of clay, five feet thick, and abundance of sand, are on the spot, which is close to the water, and the brick maker promises a first rate brick. Owing to the clay used last summer not having been exposed to frost, it was very stiff and difficult to work, and the quantity of brick made was consequently small. A large supply of clay has now been got out for next summer's make, probably not far from one half of what will be required. The remainder will be got out during the winter, and being frozen, will lose all the stiffness which was so detrimental last summer.

The balance of £281 5s. 9d. against the account, and which includes the cost of getting out the clay for spring, will I expect be more than wiped off this year, and a fair profit upon this special branch realized.

6TH.—THE STORE.

This department, I am happy to say, has more than realised my expectations. The amount of sales during the past twelve months have amounted to £10,204 14s. 7d., and the profit carried to credit of head office to £2,440 4s. 4d., from which, however, have to be deducted in estimating the real amount, £211 6s. 4d. for wages, &c., connected with it, and £95 12s. 6d. for rent and insurance. The amount of profit for the past year would have been £390 16s. 11d. more, had it not been

for the unfortunate fire at Windsor, whereby an actual loss of £237 10s. occurred, and for the omission, in not deducting from the profit of last year, £153 6s. 11d., balance of an account paid in Montreal, and not advised prior to the accounts being forwarded.

The total amount of property, in Store, Warehouse and Coal-bed on 15th December, were as follows:—

| | | | |
|--|---------|----|----|
| Provisions, Pork, Beef, Flour, Hams, &c.,..... | £1,751 | 1 | 11 |
| Iron, Steel, Powder, Fuze, Lumber, &c.,..... | 2,223 | 4 | 11 |
| Coals, 4427½ tons,..... | 3,830 | 15 | 3 |
| Dry Goods, Groceries, Hardware, &c.,..... | 5,505 | 3 | 4 |
| <hr/> | | | |
| Value of Goods at Cost and Charges, or at Value if bad Stock..... | £13,310 | 5 | 5 |
| Book debts, all good,..... | 1008 | 14 | 2 |
| <hr/> | | | |
| Total property connected with Stock..... | £14,318 | 19 | 7 |

7TH.—POPULATION.

A Census of the population taken at 15th December, amounted to 492 souls, viz: 279 men, 64 Women, and 149 Boys and Girls, of whom 274 men and 15 Boys were in the service of the Company, but of these, 11 men and 1 boy were discharged on the 17th December.

Since the cholera left the mines, the health of the place has been excellent, and I trust that there will be no recurrence of the complaint next year. For the instruction of the youth a day school has been opened, as well as an evening one for those of maturer years. A Sunday school has also been opened for religious instruction. Divine service is performed every Sunday, morning and evening, in the church.

8TH.—PROPERTY.

I have made up with great care a statement of the assets of the Company, at the Mines. The account has been made up with a view to ascertain as nearly as possible the actual value of the Plant, and I am satisfied that the amount does not exceed the reality. The debts here, including wages to 15th

December, amount to £2,387 11s. 2d. and the assets (without counting anything for the property for which an equivalent of more than £40,000 was paid) to £90,484 9s. 1d. Since the purchase of the mine the property has greatly increased in value, owing to the opening of the mine, laying open a very large quantity of ore ground, and proving that a steady supply of ore will be forthcoming, and consequently steady returns. The price at which fine copper is stated from Mr. Davies Report, who quotes the price as 21 cents per pound. I have no means of rectifying the statement, but, if there is any error, it can easily be rectified. He informs me that the Baltimore and Cuba Smelting Company used to get $21\frac{1}{2}$ to 22 cents per pound for their copper, and that the Bruce Mines copper will be equal, if not superior to their best.

In conclusion I have much pleasure in commending the zeal displayed by the Officers of the Company in their several vocations, and also the quiet and orderly conduct of the men generally.

I have the honor to be,

Sir,

Your most obedient. servant,

ARCH. H. CAMPBELL,

Manager.

Statement of Debts and Assets at the Bruce Mines, 15th Dec., 1849.

DEBTS.

| | | | |
|--|--------|----|---|
| Balance due to Servants, per Ledger..... | £1,541 | 5 | 6 |
| Sundry Invoices, Duties, &c..... | 846 | 5 | 8 |
| | <hr/> | | |
| | £2,387 | 11 | 2 |

ASSETS.

| | | | |
|--|---------|----|----|
| STORE, WAREHOUSE, COAL, &c.— | | | |
| Stock of Goods and Materials in Store, Coal, and Book debts..... | £14,318 | 19 | 7 |
| Duties not charged, but included in debts | 67 | 18 | 9 |
| | <hr/> | | |
| | £14,386 | 18 | 4 |
| LOCATION— | | | |
| Value of Dwelling houses, Stores and Materials in use. | 3,690 | 1 | 1 |
| MINES— | | | |
| Value of Tools and Material in use, Floors and Machinery for dressing Ore..... | 1,000 | 18 | 11 |
| TEAMING ACCOUNT— | | | |
| Value of Horses, Harness, Carts, Sleighs, &c..... | 154 | 11 | 3 |
| BRICK YARD— | | | |
| Value of Brick Machine, Yard, Materials, Hakes, House and Stock of Clay..... | 329 | 5 | 9 |
| ENGINE AND ENGINE HOUSE— | | | |
| Value of Steam Engine, Dressing Machinery, Pumps, Buildings, and fitting up, | 7,907 | 12 | 9 |
| SMELTING WORKS— | | | |
| Value of Furnaces, Smelting House, Fire-brick, Castings, Tools, &c..... | 3,463 | 13 | 0 |
| ORE— | | | |
| Value of 700 tons fine Copper, less freight and 5 per cent duty @ 19½ cts. per lb..... | £76,508 | 5 | 0 |
| Deduct, cost of dressing 3500 tons Ore to 20 per cent..... | £4,250 | 0 | 0 |
| Less already paid for cleaning..... | 1,177 | 2 | 10 |
| | <hr/> | | |
| | 3,072 | 17 | 2 |
| Smelting 3,500 tons @ £4 per ton..... | 14,000 | 0 | 0 |
| | <hr/> | | |
| | 17,072 | 17 | 2 |
| CASH— | | | |
| Cash on hand, per accounts..... | 59,435 | 7 | 10 |
| | <hr/> | | |
| | £90,484 | 9 | 1 |