

FIRST ANNUAL REPORT

OF

THE
BUFFALO MINES
LIMITED



OFFICERS AND DIRECTORS.

CHARLES L. DENISON.....President.
S. W. CHILDS..... Vice-President.
GEORGE C. MILLER.....Secretary & Treasurer.

CHARLES L. DENISON..... New York City.
GEORGE C. MILLER.....Buffalo, N. Y.
ROBERT W. POMEROY.....Buffalo, N. Y.
LOUIS E. HART.....Buffalo, N. Y.
JOSEPH H. HORTON..... Buffalo, N. Y.
EDWARD M. MILLS.....Buffalo, N. Y.
HON. JOHN B. NOBLE.....Petrolia, Ontario, Canada.
WILLIAM F. FISHER..... London, England.
S. W. CHILDS.....New York City.

TRANSFER AGENTS AND REGISTRARS.

New York.....U. S. Mortgage & Trust Company.
Toronto.....Imperial Trust Company of Canada.

NEW YORK, June 20th, 1907.

TO THE STOCKHOLDERS OF

THE BUFFALO MINES, LIMITED.

Your Company having been organized under the laws of the Dominion of Canada on May 10, 1906, I have the honor of submitting herewith the first annual report, covering operations for the year ending May 1, 1907.

The profits of the said year resulted in a surplus of \$32,105.32, after payment of dividends amounting to \$81,000.00 as will be seen from the Treasurer's Report, on pages 14 to 16. The ore shipments show a gross value of \$213,984.27, which, with income from other sources, makes the gross income of the Company for the year \$216,813.15. The expenses amounted to \$103,707.83, resulting in a net profit of \$113,105.32, of which, as before stated, \$81,000 were paid out in dividends.

The development work upon your property has been proceeding very satisfactorily during the year. Last autumn the following discoveries were made:

I.—What is now known as vein No. 3. The surface showings at the time indicated this as being the largest vein known on the property. On June 1st, 1907, it was cut from the sixty foot level of shaft No. 4, and the surface indications were fully confirmed, the width being 20

inches at the sixty foot level and assaying 2000 ounces of silver to the ton.

II.—Vein No. 9. Was found in trenching for water line.

III.—A new north and south vein was found in shaft No. 5.

During the spring, veins Nos. 10, 11 and 12 were discovered, as more fully described in the report of the Manager, hereto attached.

Owing to the number of new veins discovered on the property, it was determined early last January to double the power plant. Owing to the delay in the delivery of machinery, this new equipment was not installed until about the last of May. I am glad to be able to report, however, that ten drills are now working on the property, in place of six as formerly.

For the benefit of those stockholders who were unable to attend the annual meeting on May 23rd, I will state that it was there decided to authorize the erection of a concentrating mill of a capacity of fifty tons daily, for the purpose of handling and treating those of our own ores which are of less than shipping value. With this mill, we will have installed an up-to-date and thoroughly equipped assay plant. Construction of the mill has al-

ready been begun and will be rapidly pushed; it is estimated that it will be in working order by October 1st, 1907. There are already several thousand tons of comparatively low grade ore on the dumps, awaiting treatment in the mill when completed.

The most important question before your Board during the year has been the solution of the treatment problem. The smelter rates have been heavy and increasingly onerous, especially affecting the ores of medium grades. Important bodies of medium grade ore occur with the high grade deposits upon the Buffalo. The excessive treatment costs have deterred us from attempting an output commensurate with the ore exposures upon the property. We have every reason to believe that the method mentioned in the report of our Manager, will conserve our ores and enable us to make a satisfactory profit during the twelve months, beginning October 1st. To have shipped these lower grades before the erection of our concentrating and sampling plant would have been extremely wasteful. Heretofore, with our small drilling plant we have pushed development work at the expense of production, the wisdom of which has been fully demonstrated.

In view of the rich discoveries that have been made on your property during the past year, I feel safe in predicting an especially prosperous season during the com-

ing twelve months, owing to increased shipments rendered possible by the new veins and the enlarged equipment of the mine.

In this connection it is only fair to point out that the greater part of the shipments that have been made during the past year, have been extracted in the course of development work.

I beg to submit herewith the financial report of the Treasurer. The report of the Mine Superintendent is also attached hereto, giving in detail both the development and the prospecting work that has been done on the property during the past year.

For the information of the shareholders, in order that they may better understand the report of the Superintendent, a map is hereto attached, showing both surface and underground workings on the property. Some of the principal shareholders desired to have an independent report of the property. Permission having been granted and this report having been completed just at this time, it should prove of interest to the stockholders generally. This report has therefore been somewhat delayed in order to include it. Those who have paid for it have kindly consented to its inclusion with the current reports.

Mr. Martin Schwerin, E. M., who made this examination, has made a special study of the Cobalt district.

It is a pleasure to testify to the faithful and successful character of the work that has been done by our Manager, Mr. Thomas R. Jones.

Yours very truly,

(Signed) CHARLES L. DENISON,
President.

REPORT OF MINE SUPERINTENDENT

COBALT, CAN., May 29, 1907.

CHARLES L. DENISON, Esq., President,
143 Liberty Street,
New York City.

Dear Sir:—

I beg to submit herewith, my report, giving a summary of the development work done upon the property of the Buffalo Mines Limited from May 10th, 1906, to May 1st, 1907.

I.—SHAFT WORK.

Shaft No. 6, location L-11½ (*See Note*).

May 10, 1906, size 5' x 7' without timbers. Depth 66'
“ 1, 1907, “ 5' x 8' inside timbers. “ 121'

Work consisting of enlarging and timbering with additional sinking of 55'.

Shaft No. 5, Location D-17½.

May 10, 1906, Depth 50'

Sept. & Oct. “ 84½' size 5' x 8' inside timbers

April, 1907, “ 129', still sinking.

2nd level and station to be out on reaching 136' 5".

Shaft No. 4, Junr. Location M-25.

Dec. & Jan. Size 5' x 8' inside timbers. Depth 60'

Levels started.

Shaft No. 7, Location O. P. 18½ (a prospect).

August, 1906, Size 7' x 10', not timbered. Depth 15'.

Shaft No. 3, Location V. U. 19½.

Shaft No. 2, " V. U. 29½.

Not Working.

Total feet of shafts sunk, No. 4, 65', No. 5, -129', No. 6, -121', No. 7, -15', making a total of 330' of shaft work, all of which has been timbered with the exception of No. 7.

II.—DRIFTING.

No. 6. West drift, -165', East drift, -590', total, -755' on the 1st level.

185' of drifting has been done in the 2nd level.

No. 5, -192' of drifting has been done on cross veins and extension of No. 5 vein.

No. 4, -235' of drifting has been done North & South.

Total feet of drifting done,—No. 6, -490', No. 5, 192', No. 4, -235', making a total of 1367' of drifting.

III.—STOPING.

No. 6, West stope, -350 sq. ft. of vein face.

East stope, -100' x 40', or 4000 sq. ft. of vein face.

No. 5, old vein, -150' x 6', or 900 sq. ft. of vein face.

No. 5, new vein, -50' x 6' or 300 sq. ft. of vein face.

Making a total of 5550 sq. ft. of vein face.

Note.—All of the above stoping with the exception of that done on the new vein in No. 5 shaft, was prior to Oct. 1, 1906.

IV.—OPEN CUTS.

No. 5, Old vein, -140' x 8', or 1120 sq. ft. of vein face.

No. 4, -20' x 25', or 500 sq. ft. of vein face.

Making a total of 1620 sq. ft. of vein face.

Square feet of vein matter extracted from drifting and other sources of work, 3059 sq. ft., making a total of 10229 sq ft.

Total area of vein face developed, -57738 sq. ft.

Less extraction of, 10229

47509 sq. ft. of
vein face.

V.—PROSPECTING.

During the past year 1100' of trench work was carried to bedrock, exposing 5 small veins with high silver values, and 3 large veins of much commercial value, on the S. W. part of the property.

During the month of April 150' additional trenching was done on the S. E. part of the property, exposing 2 (if not 3) of the richest veins yet found on the property. These are designated No. 10, No. 11 and No. 12.

I say "if not three" because it is not yet determined whether No. 10 is a branch of No. 11, or one of itself.

As the property had out-grown our moderate power and drilling plants, during the month of January we were authorized to increase them. The machinery arrived on

the 18th of the present month, and is now being installed, and will be ready for use on or about the 29th. This will permit the working of 12 drills, and will make it possible to use 25 or 30 men additional, to great advantage.

We considered the important question of milling our ore, and as a result, during the month of April, we were authorized to proceed with the erection of a mill which was commenced on the 1st of June, and we expect to have it completed and in operation by October 1st, 1907. The stamp mill and concentrating plant should solve for us the vexatious problem of reasonably economical treatment.

I have omitted in this report an estimate of either tonnage or values. We have found from past experience that it is unwise and unsatisfactory to attempt to estimate the value of these Cobalt ore bodies. This is not an unusual position when a range of values exists from cents to thousands of dollars per ton, and it is my opinion that it will be impossible to estimate either tonnage or values with serviceable accuracy, and I shall continue to express ore in sight in square feet, as cubic contents cannot be obtained with any degree of accuracy.

I remain,

Yours faithfully,

(Signed) TOM R. JONES,

General Supt.

FINANCIAL REPORT
OF
THE BUFFALO MINES, LIMITED

BUFFALO, NEW YORK, JUNE 3, 1907.

C. L. DENISON, Esq., Pres't,
143 Liberty Street,
New York City.

Dear Sir:—

I beg to submit herewith, the financial report of The Buffalo Mines, Limited, for the period beginning May 10, 1906, and ending June 1, 1907.

STATEMENT OF EARNINGS AND EXPENSES.

Miscellaneous Income.		
From Royalty on Lease Ship- ments	\$1,199.29	
From Rent	10.00	
From other Sources	1,619.59	
		\$2,828.88

*Gross Ore Returns.	
792 Tons contain- ing 217,192 ozs. of Silver	209,477.57
and 12,251 lbs. of of Cobalt	4,506.70
Total	\$213,984.27

Less Transportation & Treatment Charges as follows:		
Freight	10,656.24	
S a m p l i n g Charges	990.01	
S m e l t i n g Charges	24,256.15	35,902.40
		<hr/>
		178,081.87

Smelter Returns.

Less Mining Ex- penses	48,815.45	
General Expenses	17,687.33	
Prospecting	1,302.65	67,805.43
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Net Returns from Mining	<hr/>	110,276.44
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Total Net Earn- ings		113,105.32
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Less Dividends Paid		81,000.00
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Surplus.....		32,105.32
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*These figures give only the ore sale proceeds received previous to the 1st of May, 1907. The Company had at that date considerable ore both in transit and at the mine, upon which all mining expenses had been paid but returns from which had not been received. Such returns will therefore be accounted for during the next fiscal period, while, on the other hand, the mining expenses mentioned are included in the figures given above.

CONDENSED BALANCE SHEET

ASSETS.

Mineral Rights, Mining Plant, Supplies, etc.	\$939,978.61
Cash in Bank	5,841.42
Accounts Outstanding	360.46
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	\$946,180.49

LIABILITIES.

Capital Stock Authorized \$1,000,000, Issued	\$900,000.00
Unpaid Dividends	12.45
Bills & Accounts Payable.....	13,649.89
Other Liabilities	412.83
Surplus after payment of dividends.....	32,105.32
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	\$946,180.49

Yours truly,

GEORGE C. MILLER,

Treasurer.

REPORT OF MARTIN SCHWERIN, E. M.

Mr. CHAS. L. DENISON,
President, Buffalo Mines, Ltd.,
New York City.

Dear Sir:—

I take pleasure in presenting for your consideration a report of the physical condition of your Company's property at Cobalt, Ontario, also a survey of the progress made during the six months now ended.

There are three working shafts on the property, **Equipment** known as No. 4, No. 5 and No. 6. Each is equipped with hoisting machinery, shaft house, ore bins, screens and sorting tables. There is a central power house equipped with two 80 H.P. boilers and a 12 drill compressor. There is a blacksmith shop, crusher house, ore storage house, kitchen and dining hall, 3 story office building with bedrooms above and kitchen below, superintendent's dwelling, miners' dormitory, store house, several small dwellings for employees with families, and stables for work animals. A concentrating mill capable of handling 50 tons per day is under construction.

All ore mined is raised to the top of the shaft house **Method of Handling Ore** at the shaft serving that working, and dumped over grizzly bars into small bins, from which it is drawn out as desired, onto picking tables. Here it is washed by

a jet of water and sorted into three grades, viz.: 1st class ore, 2nd class ore and mill ore.

The mill ore is run to a mill dump for future handling. First class ore is sacked by itself, taken to the ore house, and kept under lock and key. Second class ore is sacked, grab sampled from the sacks, and made up into lots, which are combined suitably with other second class ore for shipment to the smelters. The fines from the grizzly bars are sampled, and if high enough in silver, are sacked and shipped; if not, they are put on the mill dump.

Proposed
New
Method of
Handling
Ore

It is planned by the management that when the concentrating mill is completed, all ore of whatever grade, shall be conveyed to the mill for treatment. The treatment so far as outlined by the management to me, is to consist in screening, over grizzly bars, the fines to fall into a bin for sampling, while the oversize goes onto a feed floor before a crusher. On the floor the crusher feeder will pick out the first grade ore which is to be sacked without further handling. The second and mill grades are to be crushed and milled. The tailing is to be stored for further treatment. Jigging and table work will be used in concentrating.

Not having any data on the method or results already obtained by it, no criticism is offered. An obvious advantage is that derived from doing all sorting in one

place. Not only is an actual economy in labor effected and superintendence facilitated thereby, but it should then be possible to arrange for a system of automatic or semi-automatic sampling to be carried on, at or near the crusher, which will furnish accurate results as to the values in the mill ores and in the shipping ore. It is highly desirable that an improvement over the present method of grab sampling be introduced. The non-concurrence of results of the present sampling at the mine and at the smelter, is sure to prove a demoralizing vexation, which cannot be too speedily terminated.

On the first of January of the present year, the work-
ing at shafts No. 6 and No. 5, with short drifts on the
veins, crossing at No. 5 were the only underground work-
ings on the property. Since that date shafts No. 5 and
No. 6 have been connected and vein No. 5 and the cross
vein exploited. Shaft No. 5 has been sunk another 50
ft. and a level started.

Mine
Develop-
ment

Number 4, which was an open cut, has been sunk on and developed at the 60 ft. level. Vein No. 3 has been crosscut by the south drift on Vein No. 4. Previously Vein No. 3 was known only from its exposure at a depth of 6 ft. at its point of discovery, which is over 100 ft. west of where it was intersected underground by the drift on No. 4. Veins Nos. 10, 11 and 12, have been discovered.

Practically no stoping has been done since October, 1906. What ore has been extracted has come from development work, that is, sinking and drifting. The drifts on Veins No. 5 and its cross vein have opened up and made available for stoping almost all of that ground lying between those drifts and the surface. Likewise, the drifts at No. 4 have made available a block of stoping ground.

That group of veins designated by the management as Nos. 10, 11 and 12, are a complex network of veins, of which there are seven, including several stringers which cross each other in a small area and are now being mined in open cut. As many as four veins are being worked by the sinking of one irregular hole about 22 ft. long and 12 ft. wide at one end, by about 7 ft. at the other. These veins, or some of them, continue, no doubt to some distance, but as yet they have not been stripped. It will be necessary to strip nearly all of the surface in that vicinity, because it is likely that the network of veins there ramify most irregularly. So far the veins and stringers here exposed total about 120 ft. in length and have an average width of probably 2 inches. At all points exposed the veins are very rich, being heavily impregnated with native silver, the assays supplied by the Mine Manager being between 5000 and 9000 oz. per ton.

It should be stated that in addition to the bonanza streak, which is implied where the width of vein is given, there is nearly always from 6 in. to 2 ft. of wall rock on one or both sides of the vein impregnated with silver and assaying from 40 oz. to 300 oz. per ton. It is this material from which the screenings are obtained, which are shipped as second grade ore. The greater proportion of this mineralized rock goes on the mill dump. The veins No. 5 and 4 have been especially well mineralized in the manner above described.

Of greater importance to your Company is the **Vein No. 3** recently encountered vein No. 3. This vein may be said to have been just discovered, as practically nothing was known of it from the discovery pit where it was first seen last Summer. As previously noted, this vein was encountered at a depth of 60 ft. in the drift from No. 4. From this point a total of 65 ft. of drifting on Vein No. 3 has been done both East and West. Exclusive of the second grade material the vein has, throughout the length of the drift an average width of at least six inches, and an average value of 2000 oz. per ton. Although the width of this vein has been reported by the Superintendent to be greater than 6" throughout the length of the drift, I have taken that figure as a conservative estimate.

If we assume that the vein extends on its strike as far West as the point of discovery (100 ft.) and the same

distance East, we have a total of 200 ft. To assume also that it will remain unchanged to a depth of 100 ft. is reasonable. We then would have a block 200 ft. long by 100 ft. deep by 6" thick or 10,000 cu. ft. or about 1500 tons of an average value of \$1,300 per ton in silver, or a total silver content of \$1,950,000. These figures are given merely to convey an idea of the probability, and are not to be taken as applying to ore blocked out. The net proceeds of this vein, because of its width and high values, should equal 90% of the gross; to which should be added the profits from the second grade ore and mill rock.

It is possible, and indeed, altogether likely, that this vein will extend to as great a depth as any vein on the property; and on the strike it is likely that it will extend a distance of 300 ft. or more. Although these veins at Cobalt are erratic, yet on Buffalo ground there is an example of a vein which extends as great a distance as this, the earmarks of which are not so strong or favorable to persistence as are those of number three.

Unpros-
pected
Ground Much yet remains to be done in the way of prospecting before it can be said that Buffalo ground is one-half prospected. The finding of veins No. 10, 11 and 12 is an illustration of what may be expected, especially on the Southeast, South center and Northeast portions of the tract owned by your Company.

The history of these Cobalt veins teaches that at comparatively shallow depths the veins enter a different country rock and the values diminish greatly, but the large number of veins and their richness compensates for lack of great depth, if indeed, it should prove eventually that none of these veins persist. In this connection perhaps I should add that the two deepest mines in the district are below 300 feet. It may prove, therefore, that these veins continue after the interruption in continuity and values, and persist in depth.

It is not unreasonable to assume that at least as many more veins as are now known on your Company's ground will yet be discovered. There is no rule by which this can be demonstrated, but there is no reason why it should not be true. The veins already found gave no sign above ground to lead to their discovery and therefore the hope of finding others is so well warranted that every foot of the surface should be prospected. The veins of the Cobalt district are unique and the laws which govern their position have not been determined.

Upon my recent visit to the Buffalo I was impressed by its excellent condition and especially pleased that the development had realized so fully the early expectations of your Managers.

The conditions in the field to-day under which your ores are marketed, are such that they can only improve.

Conclusion
and Recommen-
dations

As to fluctuations in the price of silver, I do not venture an opinion. As to the difficulties of marketing Cobalt ores, the price received therefor, the charges, freight, penalties, etc., I believe conditions will steadily improve, so that the value of these ores will be considerably enhanced. Such ores as you are now putting on your mill dump, in some other mining districts would be considered high grade. These fields are so new that methods are not yet standardized. At the present time, therefore, conservation of the ore is clearly the best policy and I approve the course of the Buffalo Management in conserving its ores and in following the plan of marketing, at these disadvantageous rates, only sufficient to meet expenses and pay a small dividend.

Prospecting so productive of good results in the past, should be prosecuted with increased vigor, as I believe that prospecting will lead to further valuable discoveries and substantial increase of ore reserves.

When stoping is begun, the rate of ore extraction should be governed by the rate at which ore is blocked out. The latter should exceed the former until the possibilities of the property are fully known, or until the method of treating the low grade ore is determined finally.

I have further to recommend that a mine map be kept at the mine office on which shall be platted at the end of each month the record of all work done underground,

that is, shafts and winzes sunk, raises, drifts, cross-cuts and stopes carried forward so that the development of the mine may be seen at a glance.

In addition to this, an assay plan of the mine should be kept and posted up to date at the end of each month, so that an inspection of it will show the widths and values of the various veins in all parts of the mine. From such an assay plan one could make calculations as to the reserves, and ascertain what proportion of the ore bodies remains in the mine and what proportion has been extracted.

Also I recommend that a record of the tonnage and assays of the production from each vein be kept so that there may be ascertained with a fair degree of accuracy, the probable production in tons and silver, of the remaining reserves. While I acknowledge the truth of the statement that there is great difficulty and danger in forecasting the probable production of these very narrow, erratic, rich silver veins, I am convinced that were the computation based on the value of ore already mined, it can be accomplished with a degree of accuracy sufficiently dependable to be of great value to the management and the shareholders.

I have the honor to be,

Yours faithfully,

(Signed) MARTIN SCHWERIN.

July 1st, 1907.