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REPORT

on the

BUCKSKIN MINE

of the

AMBASSADOR GOLD MINE, LTD.

for

PAUL G. HOFFMAN AND E. R. CARPENTER

by

JAY A. CARPENTER E. M.

of

RENO, NEVADA

March 17, 1937

The Buckskin Mine of the Ambassador Gold Mine, Ltd., is a group of patented claims 10 miles west of Yerington, Nevada. The Company has in its possession detail reports on the property. This is a private report to certain stockholders based upon, to quote my instructions, "a one-day survey with your opinion as to values, your treatment, the management, and the possibilities of profitable operation."

Acting upon these instructions I spent the day of March 14th at the property. I was given a cordial reception by the manager, Mr. Horace Lackey and his assistant W. A. Burton, in charge of the mine and mill, both of whom freely answered all my inquiries.

A one-day examination is a very limited time. I sampled no faces of ore, as the claims for values were apparently conservative, and their own working assays were open to me for inspection. My main inquiries were toward ascertaining data to judge as accurately as possible upon the economic features of importance to stockholders. Much of my information is approximate but reliable enough, I believe, to base conclusions or taken in connection with what I saw, and my familiarity with small mines of a similar type.

The Buckskin Mine was taken over by the Company in the spring of 1936. The mill reconstruction was completed, as a "50-ton" flotation unit, and started in the early fall.

Meager mine equipment was installed to develop and mine oxidized ore above the #1 tunnel, but none for pumping the water out, or mining ore from the two main shafts.

By the end of 1936 several thousand tons of oxidized ore were mined and milled of approximately an "$8.00" gross value, yielding only about "60% extraction" or $4.80, with a marketing cost of about 12½%, leaving a net per ton of $4.20, which probably came close to meeting the actual costs of mining and milling or at least showing, I judge, no profits.

This low net recovery by flotation of oxidized gold ores checks in general with actual results obtained by other plants I have been familiar with, and could have been expected, however the expectation was, probably, that a good profit could be made on this oxidized ore.

By 1937, development work failed to open up new oxidized ore bodies, on the tunnel levels, and drifting was started on the 90' level of the #2 shaft, a few feet above water level, to get under stopes on the tunnel level. Before reaching this objective the drift went through about 50 feet of sulphide ore carrying milling values of about 1/3 oz. in gold, with some copper (not determined by assay).

The mill was closed down due to extreme winter weather from about the middle of January to the middle of February.

The ore supplied the mill from February 16th to 28th inclusive was partly oxidized ore from the tunnel level and partly sulphide ore from the 90' level, averaging about a quarter ounce in gold about 3/4% of copper per ton (estimated) or a gross value of $11.00 and yielding a 70% extraction or $7.70 a ton which with 12½ marketing would give a net return of about $6.75 a ton. The mining cost is estimated at "$3.50 to $3.90 a ton" and a milling cost of "$1.25 to $1.50", with probably another $1.00 for indirect charges of management, royalty, etc. Based on this information and estimates, there was a possible profit of $1.00 a ton on the 600 tons milled.

Since the first of March, a greater percentage of sulphide ore has been treated, and the extraction has increased to "close to 80%". I am quite sure, from past experience, that with all sulphide ore and minor in-

stallations and changes in the mill flow sheet, an extraction of 90% could be maintained.

The flotation process finds its best application to sulphide ores, but it is only a concentrating method, and the concentrate must bear the cost of shipping and smelting along with the refining of the metals therein. This cost varies with the concentrate made being 10% to 20% of the gross value of the metal content therein.

The condition at the mine at present is that (experience has shown) oxidized ore of profitable milling grade is no longer available. A small body of sulphide ore is now being mined on the 90' level of #2 shaft, with crude and costly hoisting and mining methods. The breaking of this necessary ore to keep the mill running taxes the mining equipment so that no work is being done to find new ore bodies of sulphide ore. The best that can be hoped for now is to be able to find and mine enough sulphide ore to keep the mill running at little or no profit.

Since the mine is not owned but is only on a lease and bond with a very high bond price for a mine with limited tonnage of $10.00 ore, the proposition of raising more capital for equipment to continue mining and possibly milling should be scrutinized closely.

Mr. Lackay states that he considers $25,000.00 is necessary for new equipment and mine development, to assure ore for the 50-ton mill. He presented no budget or well outlined mining campaign for this expenditure; but in general he plans on mining equipment in the way of pumps, hoist, headframe, compressors, and drills of sufficient capacity to pump out the water in the mine to the 130' level, and to carry on development on that level while at the same time mining and milling 50 tons a day. He is very confident or optimistic that large tonnages of sulphide ore of profitable grade will be found and developed.

Much of this optimism is based upon maps and reports showing wide widths of sulphide ore developed in lenses along a length of over 200 feet on the 135' level at the #1 shaft with the ground beneath the oxidized ore bodies on the tunnel level beyond #2 shaft still unexplored on the 135' level. One of these reports is that of Mr. L. E. Snider whose estimates of tonnages and values of oxidized ore have been found to be greatly exaggerated, therefore little faith can be placed in his claim for large tonnages of sulphide gold and copper ore that at present prices of $35.00 for gold and 15¢ for copper, would average $10.00 - $15.00 in gross value.

However another engineer by the name of A. Syverson reported in 1930 that he sampled this sulphide ore on the 130 level and his assays averaged, over widths of around 15 feet, about 1/10 oz. of gold and 2.2 % copper. At depression prices of $20.67 an ounce for gold and 7¢ for copper, this would figure but an unattractive $5.00 ore, but at the present high prices for gold, which will continue, and the present high price for copper which, I judge, may average 15¢ in the future, this ore would have a gross value of $10.00

In the widths given as sampled, and capable of probably being mined cheaply (by Shrinkage stope method) there is the probability of being able to mine and mill 100 tons a day if it would prove to be of this grade, at a profit of $2.00 to $3.00 a ton above all expenses including royalty. The lease on royalty payment appears much more attractive than purchase under the present bond price unless large reserves of sulphide ore should be blocked out.

Since Mr. Syverson states that he checked closely to Mr. Snider's sampling, I have a great fear that he is also a great optimist, but I do, however, have sufficient faith in the possibilities of the 130' level as now developed and to be developed out under the present oxidized ore bodies, to recommend that the level be unwatered as soon as possible for sampling

and that development work be pushed out to the West under the oxidized ore as rapidly as possible.

My recommendation as to proceedure, would, however be much more conservative than Mr. Lackey's plan. Instead of buying new equipment in order to both mine and mill 50 tons of ore a day and develop the 150' Level at the same time, I recommend that the present equipment with the smallest possible additions be used primarily to develop the 150' Level, and mill only that ore broken in development work or that can be mined without interfering with development. This amount of mill ore, I would estimate to be sufficient to run the mill at least on day shift, which, besides giving an accurate sampling and test work on the sulphide ore, would yield a little profit toward the monthly minimum royalty payment.

If, say four months, development work, disclosed sufficient tonnage of profitable grade ore, then the mine and mill equipment could be installed for a 100-ton a day capacity with reasonable expectations of repayment of the capital investment and a chance of several years operation with the development of profitable sulphide ore on deeper levels.

If the sampling of the present workings and the new development work on the 150' Level under the oxidized ore, proves unfavorable, the property could be abandoned without the present contemplated expenditure for new equipment that would have but a low resale value.

With present equipment and on a 50-ton basis the costs of mining and milling are so high as to leave no profit on the expected grade of ore in the sulphide zone. Even with new equipment, but on a limited 50-ton per day basis the necessarily high management and overhead costs per ton would cut sharply into the profits, and the total profits per month gross so small for all the worries, and work connected with its operation.

However, if sufficient tonnage of $10.00 ore was assurred, to justify a 100-ton a day production, the cost to enlarge would not be excessive, as you now have ample power and water facilities and much of the equipment

for a 100-ton a day production.

The possible profits due to treating 100 tons at a reduced cost would be very attractive, and a worth while venture.

As to your request as to my opinion of the present management I was favorably impressed with the personality of both Mr. Lackey and his assistant Mr. Burton. However neither are technically trained mining engineers, such as real mining capital long since has demanded as an absolute requirement of their responsible employees. Even trained engineers make enough mistakes without taking risks on "practical mining men" or young men without technical training.

The Company should at least have a consulting engineer in Indiana that they have confidence in his integrity and ability, who should pass upon written recommendations for the mine, and inspect it on occasional visits.

You did not give me data as to capitalization of the Company, your holdings, and the proposition made to you for additional capital. However with the data I have given you, you can apply your good business judgment on the offered terms of additional investment.

Yours sincerely,

Jay A. Carpenter, E.M.

March 17, 1937

Mr. E. R. Carpenter,
Los Angeles, Calif.

Dear Sir:

Inclosed herewith my report to you on the Buckskin Mine of the Ambassador Gold Mine, Ltd., for which I have received your check.

I am inclosing duplicate copies, as you may wish to send one to the main company.

If you should wish to know my experience and standing as a mining engineer I refer you to "Who's Who in Engineering" and "Who's Who in America."

Briefly it is a record of 20 years practical experience in mining and milling, from shiftboss to manager to consulting work.

The last ten years I have held the professorship of mining at the University of Nevada, along with consulting work and ownership in and operation of mining properties.

With the aid of two senior mining students, I collected a great deal of data not included in my report.

If there is additional information or advice that you wish, please feel free to call upon me.

Thanking you for this opportunity of being of service to you, I am,

Yours sincerely,

Jay A. Carpenter, E.M.