

Original notes on file 50-12 - Mr. Mellin's general file.

Report by R. G. Mellin on

BABINE-BONANZA MINING & MILLING CO.

110-18-6
2nd drawer
934/15W
932-127
00050

June 13th, 1928.

Herbert Carmichael, Esq.,
Victoria, B.C.

Dear Sir:

I have reviewed the report of the late Mr. James Cronin on the above property made in December, 1923 and submit as follows my own digest of the situation in the light of the suggestion that we should provide the capital for the equipment and operation of that mine on a milling basis.

Bearing in mind the fact that the late Mr. Cronin was an operator of proved practical ability, one must accept his statement as definite; but the underlying fact remains that his report was not written from a critical viewpoint.

Geology: I have been fortunate in meeting with Dr. George Hanson, of the Geological Survey and a friend of some years standing, who has given me his impression of the nature of the Bonanza deposit. This impression is that the shoots of ore in that mine occur in cross fractures in the Rhyolite zone, and do not extend very definitely beyond it into the surrounding schists. These cross fractures take the form of cooling cracks in the intrusive rocks, and are, of course, of short extent. They might continue to a considerable depth, but the cost of development in such a case would be out of proportion to their value. The average length of the ore shoots explored is only 90 ft.

Tonnage Estimated: The total tonnage available, according to the report, is 46,000 tons, from which we would gather that that tonnage is proved and available for extraction. This is far from being the case, and on analysis of the mine plan indicates that only about 10,000 tons could be considered as being actually proved. The remaining 36,000 tons divide themselves into the categories of probable and possible ore. No work has been done towards preliminary mining in opening up raises and providing chutes.

Grade of Ore and Concentrate: The grade of the ore is taken as being 12% Lead and 18 oz. Silver. There is no information as to the characteristics of the ore; but the wall rock in the stopes is presumably weak and there would therefore be a certain dilution by waste rock. To make a full extraction of 90% the milling practise would include flotation, in which case the whole of the mill feed might as well be on a flotation basis, for in my experience, the economy in marketing a higher grade table concentrate in part does not affect the extra labor and expense involved in producing it. Assuming an average grade of 54% lead float concentrate the ratio of concentration would be 5 to 1. After deducting the cost of sacking, hauling 30 miles, freight and Treatment and ~~tax~~ I estimate the net value of such a concentrate to the mine at \$44.00 per ton or a value of \$8.80 heads at the mill.

Report on Babine-Bonanza Mining & Milling Co. Cont'd. (2)

Cost of Extraction: A recent experience in operating in the same latitude at sea level under favourable conditions in a 36 inch vein has demonstrated that the cost of mining, milling and development is \$6.20 per ton. It is improbable that this could be improved at an elevation of 5,000 ft. and 30 miles from a railway.

Indicated Profit: The indicated recovery is \$8.80 per ton, and the estimated cost is \$6.20 per ton. On the assumption of 46,000 tons the gross profit at \$2.60 per ton would be \$119,600.00.

Expense Involved: It is estimated that to make actual the tonnage which is now only indicated, and to perform the work required in initiating actual mining of ore would require an expenditure of not less than \$20,000. before the work of erecting a mill would be justified. Also that before the mill could run 9000 tons should be stoped in reserve, involving an advance of capital of \$18,000,- making a total preliminary expense in the mine of \$38,000.

To operate the mine and mill on a 100 ton daily basis would involve the development of 325 horsepower, The report states that this may be derived from hydro-electric power in the vicinity, but it is improbable that the installation of this in that area would cost less than \$120. per horsepower, which would make a total cost for the installation of \$39,000.

The simplest form of mill for that tonnage could not be erected for less than \$20,000.

The full mine equipment would require \$10,000. The total of the above items come to \$117,000. As it is proposed to recover this capital in a year and a half, interest for that period must be added, say 10%, which brings the gross total of expense up to \$128,000.

Conclusions: The gross profit anticipated is \$119,600, and it will require an expenditure of \$20,000 to establish that estimate. If the cost of preliminary mining is deducted from the estimate of cost it reduces that estimate to \$110,000, as against the expected profit of \$119,600, and the information available does not promise extension of the ore on the levels opened up. Therefore the advance of capital for the purpose of equipping this property does not look like a legitimate risk. The only legitimate risk is the advance of \$20,000 for the purpose of establishing the ore now indicated, and that risk should be protected by a very material interest in the property, which is at present the only angle from which this proposition can be approached. Otherwise, the idea of advancing \$128,000 for the purpose of securing the treatment of some 91,000 tons of concentrate does not look like good business when definite assurance of its delivery is lacking.

Yours very truly,

"R. G. Mellin"

Letterhead of:

GALE & LIFTON

93L/15W
93L-127

Chester Bldg., Main Street,
SMITHERS, B.C.,

19th November, 1927.

Herbert Carmichael, Esq.,
Director,
Ladysmith Tidewater Smelters, Ltd.,
Pemberton Bldg.,
Victoria, B.C.,

Dear Sir:

With further reference to my letters of the 27th October and 8th November last, regarding the Cronin Mine and other properties in the Babine Range, near Smithers, B.C., I wish to advise that it has come to my knowledge that Mr. J.O. Mathews, who recently arrived in British Columbia from England, and who has opened up an office in Vancouver, is contemplating negotiating for the Cronin Mine. We are given to understand that Mr. Mathews represents the Beit (?) outfit of South Africa.

In view of this I would urge you to approach the owners of this property for an option to permit of inspection the first thing in the spring as soon as the snow goes off, or to get from the owners the privilege of having the first refusal to bond the property.

The Secretary, and main person in connection with the Babine Bonanza Mining & Milling Company is:-

Mrs. Neils J. Anderson,
1322 Eighth Avenue,
Seattle, Wash.,

with whom you can communicate direct.

As the owners of the Highland Basin property and the Victoria Group are all counting on the Cronin Mine being taken up, and know that Mr. Mathews' is contemplating purchase, will be loath to give anyone an option until the spring to permit of inspection.

However, should you get an option on the Cronin Mine, you should immediately get in touch with the owners of these properties advising them of the fact and asking them for options until spring to permit of inspection of their properties. While the underground workings of the Cronin Mine can be inspected at almost any time, the showings of the other properties can not be inspected until the snow is off; the owners are, of course, quite aware of

this, but will not tie up their properties until they are of the opinion that the parties approaching them are in communication with, and contemplate taking over the Cronin Mine.

The owners of the Hyland Basin Group, are:

Messrs. King & Cain,
Smithers, B.C.,

The owners of the Victoria Group are:

Messrs. B. Frank Messner & Jas. Wright,
(and others)
Smithers, B.C.,

The Hyland Basin property can be handled on a bond for \$50,000.00 spread over three years. We have no definite undertaking from the owners of the Victoria Group, but we are of the opinion that this property can be had on similar terms and for a similar amount.

We would appreciate being advised of your actions in these connections, and will co-operate with you in any way you wish.

Yours very truly,

"H.C.Lifton"