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## KERR ADDISON MINES LIMITED 92J

(FOR INTER-OFFICE USE ONLY)

To ..... G. M. Hagg ..... From ..... W. M. Sirola .....

Subject ..... BRALORNE RESOURCES LIMITED .....  
 ..... BRIDGE RIVER GOLD PROPERTY, BRALORNE, B. C. .... Date ..... November 19, 1973 .....

I.H.S.

P.M.K.

G.M.H. ✓

R.D.S.

S.C.B.

L.O.B.

M.O.R.

J.H.F.

D.N.H. ✓

E.C.J.

INTRODUCTION

Last month I had a call from Norman C. Croome who is the new Vice-President and General Manager of the mining division of Bralorne Resources Limited. Mr. Croome was aware of the fact that I had discussed the reopening of the Bralorne mine with F. W. Fitzpatrick who is President of that company. Mr. Fitzpatrick had advised that Bralorne was interested only in having another firm put up a million dollars of exploration money in return for which that firm would receive 20-25% interest in the operation. Mr. Croome has a more liberal view and has advised that Bralorne would be interested in a senior partner capable of assuming control if that partner so desired.

BASIS OF REOPENING BRALORNE MINE

Following my meeting with Mr. Croome he gave me a copy of the Bacon and Crowhurst report which established the parameters for the reopening of the Bralorne mine. These parameters are:

- (1) Carry out sufficient exploration in the form of diamond drilling of two established ore zones to indicate presence of 525,000 tons averaging 0.485 oz. Au per ton. This ore would be between the 1600 and 2600 levels and below the 4600 level.
- (2) Having located the ore, re-equip and re-construct the cyanide concentrator to handle 500 tons per day and at the same time provide the necessary plant facilities and do the necessary development work to ready the mine for production.
- (3) The exploration phase would cost \$1,663,100, the preliminary development phase \$912,000 and the third or final stage \$3,175,000 for a total of \$5,750,000.
- (4) The Bacon and Crowhurst study indicates that the project would be viable at an average gold price of \$85.00 per ounce. At a gold price of \$100.00 per ounce the economics are considered by them to be extremely attractive. The figures assume a uniform operating cost of \$28.00 per ton and there is no provision for such items as administration, interest charges or taxes of any kind.

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## MERITS OF REOPENING

The project has in its favour the fact that the Bralorne gold veins have been very persistent both horizontally and vertically. All together the Bralorne-Pioneer group of orebodies have yielded 8 million tons averaging 0.522 oz. Au per ton and the controlling structure has been productive over a length of three miles and a vertical range of 6500 feet.

There are definite ore shoots on two principal veins which are the basis for reopening the mine. In the upper part of the mine on the 16 level the 51 vein has at the far east end an ore shoot 4.5' x 450' averaging 2.68 oz. Au per ton. It has been mined above the level but not below. On the 52 vein there are ore shoots located at the east end of the 20 level and the 26 level. On the 20 level the ore shoot is 5.8' x 240' at 0.55 oz. Au per ton. On the 26 level the ore shoot is 4.2' x 100' at 0.51 oz. Au per ton.

In the lower mine (4600 level) the ore shoot is 6.8' x 530' at 1 oz. Au per ton. This vein has been mined from the 1400 level to the 4600 level but not below the 4600 level.

At the time the property was closed down Bralorne reported sub-marginal reserves of 240,000 tons averaging 0.25 oz. Au in the upper mine and 79,000 tons of the same grade in the lower mine. These figures would translate to 110,000 tons of 0.35 oz. Au in the upper mine and 43,000 tons of the same grade in the lower mine. It might be that these reserves would be mineable at such time as capital costs had been returned. There is also the distinct possibility that additional reserves might be found.

## PROBLEMS IN REOPENING

Some of the problems to be dealt with in the reopening of the mine are as follows:

- (1) The company houses at Bralorne were sold when the mine was closed.
- (2) The hoist from the Crown shaft was sold and the mine was allowed to flood.

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- (3) At the 4600 level the rock temperatures are 103° F. and ventilation there will certainly have to be improved before mining could begin. In addition there are severe rock pressures with the attendant possibility of collapse. To alleviate the temperature problem a series of raises will have to be driven to the 2600 level or alternately large diameter drill holes might be used.
- (4) The process of moving ore from the 4600 level to the 800 (main haulage level) will be cumbersome in the sense that the ore must be lifted first to the 2600 level (possibly by means of a ramp) and then lifted up the Crown shaft to the haulage level.
- (5) There is no assurance that sufficient miners are available under these working conditions.

## ECONOMICS OF REOPENING

The Bacon and Crowhurst report implies that if 525,000 tons with a diluted grade of 0.485 oz. Au per ton can be located a profit would be viable at \$85.00 gold. If we assume that production would ensue three years after the estimated capital costs of \$5,750,000 had been advanced, the present value discounted at 12% compound interest of three years of production at an average gold price of \$90.00 per ton would be 5.7 million, i.e. a break even proposition.

At \$100.00 gold, the present value of three years production would be 7.69 million and the project would be viable.

## CONCLUSIONS AND RECOMMENDATIONS

No attempt has been made to check the Bacon and Crowhurst ore reserves or costs until such time as some indication of interest is received from Toronto. We think we are fully aware of most of the problems involved in the reopening of the Bralorne mine and there is certainly no assurance that an average gold price of \$100.00 per ounce would be attained. The problems of obtaining miners to work in an environment such as can be foreseen in the bottom levels of the mine might well be insurmountable.

We recommend that the attached Bacon and Crowhurst report be perused by the mining department if there is any continuing interest in underground gold mines. Perhaps it should be pointed out that the project is well underway with something in excess of \$500,000 of expenditures to date.

*W. M. Sirola / RB*

W. M. Sirola