REEVES-HECLA PROPOSAL

PROPERTY FILE

SUMMARY

There is virtually no proven ore at the operation but there is sufficient probable ore (at 39¢ per pound zinc) to keep the Reeves operation going for several years if the mine were in operating condition for handling of this ore. Indicated and possible ore could keep the operation going for upwards of 8 to 10 years. Beyond that there is good prospecting ground, judging from past experience and knowledge of the local geology.

The price of zinc is forecast to drop from its present price to around 34¢ to 35¢ per pound but forecasting is very difficult. A difference of 1¢ per pound in zinc amounts to around $300,000 over the next 3 years at normal production. (see report by Jurgen Rohwedder appended).

Studies indicate that the content of the Reeves-Hecla proposal is factual and if no relief is forthcoming soon, the mine and project are dead. Studies also indicate that the operation will be marginal even if the British Columbia Government provides assistance.

The Bunker Hill Company stands to be a beneficiary should the operation remain open by virtue of its holding 60% of Reeves Equity, and also because it is the recipient of Reeves concentrates.

The mining operation employs 100 persons and should the operation continue, this employment figure would hold. Indirectly, many more jobs are involved.

Recommendations:

1. The British Columbia Government should take steps to keep the Reeves operation going.
2. The Bunker Hill Company should also take steps, more or less comparable to the British Columbia Government's steps, to keep the operations going.
3. The British Columbia Government should indicate at once that it intends to negotiate with Hecla and Reeves with a view to arriving at a mutually acceptable agreement aimed at keeping the operation alive and well.

4. A new corporation should be brought into being, by agreement, more or less along these lines:
   (1) Reeves to provide mining property, plant, management, and about $250,000.
   (2) Hecla to provide mining property and about $500,000 to the new corporation.
   (3) Bunker Hill to provide a $500,000 unsecured loan to the corporation.
   (4) The British Columbia Government to provide $500,000 to the new corporation in exchange for equity in the corporation.
   (5) As a trial balloon, it is suggested that such an arrangement would provide equity as follows:

Reeves	45 per cent
Hecla	35 per cent
B.C. Government	20 per cent
	100 per cent

   (6) The British Columbia Government should have at least one director on the board of this corporation.
   (7) There are other routes that could be followed to provide encouragement and assistance to keep the operation alive, but it is felt that the foregoing should at least start things off and demonstrate the Government's concern and intent.
   (8) It was suggested to Hecla and Reeves representatives that the royalties would not be forgiven by way of keeping the operation alive.

GENERAL INFORMATION

The Mining Properties

Hecla and Reeves own adjoining properties which are, in reality, a single physical or geological entity. That these two properties should be joined is very obvious and should be encouraged since it will promote the exploitation of the resource at this time. Should the operation at Remac fail now, it will take extraordinary circumstances to get things going once again. Exploration of Hecla ground can only be done reasonably via the Reeves underground workings as has been demonstrated by the drilling of the Red Bird ore zone. Surface exploration could not suffice, so once the workings are abandoned and flooded, further exploration and justification of re-opening would not come about.

Mining costs at the Reeves are considered good, but, in reality, the system of shafts and levels has grown piece-meal as ore was discovered with the net result that ore is handled and rehandled, adding to mining costs. To justify a new mining system, it is suggested that upwards of 5 to 10 years' ore reserves would have to be demonstrated. This is unlikely. Therefore, it appears that the operation, including the Hecla ground, is doomed to being marginal.

On the other hand, should the operation go ahead, Provincial income by way of royalties will amount to around $200,000 per year. (This figure is based on higher yearly production forecasts than those of J. Rohwedder).

Should the British Columbia Government put up $500,000 by way of putting the combined properties into continued operation, it could be argued that the gamble is actually only $5,000 per employee.

THE HECLA-REEVES PROPOSAL

Studies show that this proposal is based on factual data. The unknown and unmentioned detail is the Bunker Hill Company benefits which the writer thinks are considerable. In 1973, for instance, the company shipped concentrates containing $5,000,000 in metals but received only $2,500,000 by way of smelter returns from Bunker Hill. While the Bunker Hill smelter contract is competition, it is suggested that Bunker is doing well by virtue of its association with Reeves, as it would probably do well with the proposed new corporation. The outlook for the availability of zinc concentrates is such that smelters should take steps to assure themselves of supply. The give and take between Hecla and Reeves is not spelled out in their proposal and it should be demonstrated just where they stand in relation to each other.

If the British Columbia Government approached these people and suggested that they come up with a specific proposal, this relationship would be established and the hard bargaining could then start.

GEOLOGY AND MINING POTENTIAL

The geology of the Reeves-Hecla properties is fairly well known as a result of detailed work done by the Department of Mines and Petroleum Resources, and experience gained in operating the area thus far. This information is sufficient to predict ore discovery and mining potential for upwards of 10 years under current economic conditions. Also demonstrated is the unlikelihood of finding a bonanza in the area.

A huge tonnage of oxidized ore exists on Hecla ground and to a lesser extent on Reeves ground. At this time there is no known technology whereby oxide of metals can be recovered economically but such an eventuality must be borne in mind.

The main key to future ore discovery lies in faulting patterns and displacement both of which are well documented. It is suggested that this knowledge will improve over the years and ore discovery will become more routine than in the past.

LABOUR AND MANAGEMENT

Bargaining is presently under way at Reeves but is now in limbo due to the discussions taking place between the Government and the mining companies. The President of Local 901 of the United Steelworkers of America, Mr. Rene Bergeron, was contacted during the recent meetings and a promise was made that he would be informed whether or not the Government would take steps towards continued operations at Remac. This promise must be honoured.

MEETINGS AT REMAC

Representatives of Government and the two companies met at Remac on January 27th and 28th. Discussions were frank and cordial with Government representatives making no proposals as such, but avenues of approach were sounded out. The writer suggested that it was unlikely that royalties would be dropped and further suggested that some other arrangement would have to be considered. It was quickly pointed out that some other arrangement would be fine.

ACKNOWLEDGEMENT

The efforts of Messrs. Lang, Rohwedder, and Addie were much appreciated during talks with the mining companies. Mr. Rohwedder's report is appended herewith.

Respectfully submitted,

P. E. Olson

P. E. Olson, P. Eng.

February 6, 1975.

MEMORANDUM

TO Mr. Phil Olson

Director of Prospectors' Assistance

1837 Fort Street, Victoria, B. C.

FROM THE

JURGEN ROHWEDDER

DEPARTMENT OF MINES AND PETROLEUM RESOURCES

VICTORIA, B.C., February 4, 19 75

WHEN REPLYING PLEASE REFER TO FILE No.

RE: REEVES MacDONALD MINES LTD.

The data as presented in the report by Hecla Mining Company and Reeves MacDonald Mines seem to be based on sound assumptions.

Bunker Hill's Interest in Reeves MacDonald

Bunker Hill owns 60% of Reeves MacDonald's outstanding shares. As of the 31st of December, 1974, Reeves MacDonald had a working capital (current assets less current liabilities) of roughly $300,000. If the trend started in June, 1974, and continued into January, working capital has probably declined to roughly $250,000. Financially, Reeves MacDonald is not in a position to develop any new ore zones and it would have been economically sound for the company to close down in late 1974. The only reasons for keeping Reeves open are:

1. Bunker Hill earns an offsetting profit on the Reeves MacDonald concentrate.

2. If Reeves MacDonald closes down, it will take many years before it becomes economical to reopen it. Bunker Hill receives a needed and a secure supply of zinc concentrate from Reeves.

1. If one assumes that Bunker Hill operates at break-even in charging presently basic smelter charges plus escalators of $85.25 per ton of zinc concentrate, the base adjustment of $27.75 per ton of zinc concentrate would contribute roughly $27,750 per month or $333,000 per year to Bunker Hill's operating income. This is roughly $1.60 per ton of ore milled or 3.2¢ per pound of zinc. At a price of 34.5¢, the base adjustment would be $16.625 per ton of concentrate or 1.9¢ per pound of zinc.

Reeves MacDonald's smelter contract is a competitive one. The open schedule of Cominco is less favourable at the present moment. Cominco's payments are roughly the same. Its basic treatment charges are lower -- $14.50 compared with $79.30 in the Bunker Hill contract. But on top of the basic charge, Cominco charges an additional adjustment of 33 1/3% of zinc payments compared to $1.75 per one cent increase of the price of zinc above 25¢ per pound and $2.00 if the price is above 36¢ per pound.

Since Cominco's zinc price differs from Bunker Hill's price, it is not easy to compare these two contracts. Assuming that the price difference is 1¢ per pound in favour of the American producer price, Bunker Hill's contract is more favourable than Reeves MacDonald if the zinc price exceeds 25¢ per pound. This comparison includes freight savings of roughly $5.00 per ton of concentrate.

2. Presently, Bunker Hill obtains concentrate from mines in Idaho. Western Mines, Reeves MacDonald and Pine Point are the major Canadian producers, shipping concentrate to Bunker Hill. All major U.S. zinc reserves are west of the Mississippi. The zinc ore reserves for the northwestern U.S. are given with 2.59 million tons of zinc by the U.S. Bureau of Mines.[1] This is less than 10% of total U.S. ore reserves. The smelting capacity of the States is 354,000 tons, that is, 65% of U.S. electrolytic zinc plant capacity and 50% of smelter production. If Bunker Hill intends to continue to operate its Silver King plant, it has to obtain long-term concentrate supply. This need for concentrate is the reason for Bunker Hill's strong interest in Reeves MacDonald. Bunker Hill provided financially with a $900,000 loan for the Annex mine. The last installment of the loan was repayed October 1, 1974.

Metal Prices

The Reeves MacDonald project is very sensitive to the price of zinc. Zinc accounts for 78% of the revenue received. A 1¢ change in the price of zinc will change the net smelter return by roughly $70,000 in 1975 and by $100,000 in 1976 and 1977, or for a total amount of $270,000 for the 3 years.

It is very difficult to forecast the metal price. Following, are the price forecasts which have been obtained for the year 1975:

Bunker Hill	34.5¢
Hecla Mining Co.	35.0¢
Sidall (personal)	35.0¢
G. S. Barry (E.M.R.)	35.0¢
Patrick Ryan (U.S.B.M.)	35.0¢
Richardson Securities	35.0¢
R. A. Heindle (U.S.B.M.)	30.0¢
J. Rohwedder	30.0¢
Draper Dobie	28.0¢
Lorne Sivertson	28.0¢
Average	32.6¢

The zinc price will probably be slightly 1¢ to 3¢ higher in 1976 and 1977. Reviewing these independent forecasts, an expected price of 33¢ to 34¢ seems

[1] Mineral Facts and Problems, 1970 Edition, U.S. Department of the Interior, (Washington, 1970) pp 811.

reasonable. 34.5¢ is not too far from this price. The slightly lower price would reduce revenue by roughly $300,000 over the 3-year period.

Royalty

Royalties payable over the life of the project have been overstated. Royalties will only amount to $440,000 in basic royalty and roughly $80,000 in incremental royalties, or to a total of $520,000 against $787,000 as stated in the report. Suspension of the incremental royalty alone would probably not be enough to get the project going. This suspension could be easily accomplished by classifying the new venture a new mine.

Allowing the mining of the "K" ore zone to be classified as a new mine could set a precedent, but it should not be too problematic to classify the mining of the Red Bird orebody as the opening of a new mine.

Economic Considerations

Once the mine is closed, it will be closed for a long time and reopening of the mine would be expensive. It is difficult to estimate the cost of closing but the following major costs are involved:

1. Employee Dislocation

   One hundred employees will lose their work. If on the average, employees will be unemployed for 6 months, $750,000 in wages will be lost and the Government would have to pay $240,000 in unemployment insurance.

2. Loss of Revenue

   No royalties would be paid by the company. This would be a loss of around $150,000 per year. If enough ore is found for another 10 years of operation, the present value of the royalty would be $922,000 at a 10% discount rate.

In short, it can be stated that the cost of closing the mine will be in the order of $1 million with a minimum of $1,162,000. If one assumes that the chance of success is 1 out of 2, a cash investment by the Government should not exceed $530,000.

Alternatives

1. Do nothing.

2. Exempt the mine from basic and incremental royalties.

3. Defer royalty payments or guarantee a secured loan.

4. Exempt the mine from incremental royalty.

5. Give subsidy in the form of exploration support (paying the cost of diamond drilling or similar projects).

6. Give subsidy in paying part of the wages.

7. Lend the company funds in the form of an income loan only repayable from earnings of the Red Bird orebody.

8. Try to obtain funds from other sources.

9. Provide funds by direct investment.

Analysis

1. If nothing is done, the mine will probably close down very shortly after the Government announces its decision to do nothing. The opportunity cost of this decision is in the order of $1 million.

2. To exempt the mine totally from royalties would set a precedent. It is really a hidden subsidy. Direct subsidies are better especially since an additional return could be earned on it.

3. Any form of secured loan is unacceptable to Reeves MacDonald. The present value of the liquidated mine has probably a higher value to the minority shareholders than the joint venture with Hecla.

4. Exemption of the mine from the incremental royalty could be done without setting a precedent by classifying the venture as a new mine.

5. + 6. Any direct subsidy would be helpful to the mine, but Government would loose control over these funds, hence, a direct investment would be preferable.

7. An income loan (bond) is a loan on which interest and the capital is paid from the earnings of the project. If there is no income, no interest liabilities are incurred. The result is similar to a direct investment and may be preferable to it.

8. To try to obtain funds from other sources should prove difficult. Bunker Hill should be required to equal the investment of the British Columbia Government. To obtain funds from DREE or other sources is doubtful.

9. A direct investment (buying shares of the company) has the advantage of gaining control. If a return through future dividends is earned, it is very doubtful.

Recommendations

1. To declare that the mining of the Red Bird and "K" ore zones will be viewed as the opening of a new mine and, hence, obtain the benefit

of new mine incentive. (An increased basic value to 115% in the first, 110% in the second, and 105% in the third year of operation.) This should be enough to forestall immediate closure, but will probably not be enough to forestall mine closure in a future period.

2. A direct investment of $300,000 with a $500,000 upper limit is probably required to keep the mine open. This should be done in the form of an equity investment debt which would be unacceptable to the minority shareholders of Reeves MacDonald. Reeves gains least from the transaction -- Bunker Hill and the British Columbia Government will be the big gainers if the venture is successful. It is very doubtful that Hecla and Reeves will gain any windfall or large profits. So far, no figures have been provided about the project beyond the third year. But, judging from the other orebodies, the cost of mining, and the very limited possibility of cost savings through new technologies, the project will at best be a marginal one.

J. Rohwedder

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JR:ps