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Cerna Copper
(Cowichan Copper,
Jordan River)

April 21st, 1969.

Mr. B.I. Nesbitt,
President,
Largo Mines Ltd. (N.P.L.),
505 Burrard St.,
Vancouver, 1, B.C.

Dear Mr. Nesbitt:

As requested by Mr. Bartholomew, reference is made to our report entitled "Cerna Copper Mines Limited" concerning certain "assumptions". (See Page 2 of "Summary, Conclusions & Financial".)

To confirm or disprove these assumptions, it is recommended that the following be completed:

(1) Ore Reserves

Mr. Delane and I made, during our visit to the mine, a one-hour cursory examination of the information concerning "Group" ore zones. The economic success of the proposed operation, to a considerable degree, involves mining enough Group 1 ore to bring up the average grade of ore milled from the 0.972% copper expected from the Cave zone to the estimated overall 1.103% copper to the concentrator.

Correspondingly, there are many variations possible concerning the source of mill feed, i.e. all the way from mining no Group 1 ore to mining say 18,000 tons per month.

In view of the short time available for the preparation of our report, the middle point, or 9000 tons per month from Group 1 ore zones was chosen.

It is felt that some Group 1 ore should be included, however, in the mining plan to provide more working places and hence greater flexibility and ore grade control.

To determine all these factors properly, it is recommended that a more thorough study be made along these lines. Such a study will involve a trip to the property by a competent engineer familiar with underground stoping for say four days at the mine, followed by four days calculation and preparation of cost estimates. One further day should be spent determining mine equipment requirements.

Estimated cost 10 days (including one day travel time) @ \$150/day - \$1500.

(2) Concentrator

(a) A thorough inspection of all the presently installed mill machinery as to condition and repair cost required should be made by a highly experienced man. Cost estimates should be prepared in detail.

Studies should be made regarding the substitution of other units in the grinding circuit. This should include locating, but not necessarily inspecting during the preliminary stages, used ball and/or rod mills in good condition.

Should the project go ahead and the decision be made to purchase and install such grinding units, inspection and choice of such units can then be made.

Estimated cost 10 days @ \$100/day \$1000.

(b) Concurrently, a man thoroughly experienced in industrial electrical systems should investigate similarly all aspects of this very vital part of the concentrator.

It is understood, that although a lot of work was performed toward electrical reinstallation and maintenance after the "flood", there are still many weak spots, some of which may or may not be serious.

Estimated cost 10 days @ \$100/day \$1000.

(3) "Caved Stope" Area

A properly measured survey should be made concerning the amount of broken rock required to fill the remainder of the hole, and cost estimates prepared, including provision for sealing the top surface.

The various bulkheads should once again be inspected carefully. Mr. Fringle believes these to be in good shape and adequate; his experience and judgment in such matters are unquestionably sound, but an up-to-date examination should be made.

Mr. Chwojka of Cerna Copper Mines perhaps could complete the survey, and the senior engineer carrying out the recommendations concerning No. 1 above could conduct the bulkhead examination and make the filling and sealing cost estimates.

Estimated cost 3 days @ \$150/day \$450.

(4) Metallurgy

Proper representative samples should be obtained from the "Cave" zone and submitted for metallurgical test work. Since all of the diamond drill core was used for assay, this representative sample may be difficult to obtain unless the core rejects are still available. Otherwise, chip samples from the 5130 elevation and from the limited amount of drawpoint-sub-level areas constitute the next best available source.

Estimated cost

(a) Sampling (Chwojka) 7 days @ \$30/day	\$210.
(b) Test work - unless problems are encountered	<u>490.</u>
	\$700

SUMMARY

<u>Description</u>	<u>Suggested Source</u>	<u>Estimated Cost</u>		
		<u>Fees & Wages</u>	<u>Expenses</u>	<u>Total</u>
(1) Ore Reserves	Bacon & Crowhurst	\$1500	\$200	\$1700
(2) Concentrator				
Mechanical	Bacon & Crowhurst	1000	300	1300
Electrical	Elec. Power & Equipt.	1000	300	1300
(3) "Caved Stope" area	Bacon & Crowhurst	450	50	500
(4) Metallurgy	Chwojka & Britton Research Laboratories, Vancouver	700	100	<u>800</u>
			TOTAL	\$5600
		Plus contingencies @ 10%		<u>600</u>
		- say		\$6200

I trust this will give you the required information. Please contact me should you need anything further.

Yours truly,

BACON & CROWHURST LTD.

J.J. Crowhurst

JJC/ic

cc: Mr. B.F. Bartholomew