

P. Conder

004854

New Imperial Mines Ltd.

Mine Office: P.O. Box 2380, Whitehorse, Yukon Territory
tel. (403) 668-2171 — telex 049 8218

MEMORANDUM

Date: April 23rd, 1971

TO: P. Steen
FROM: W. A. Dean
RE: Mining of Cowley Park

A recent re-assessment and new pit design on the Cowley Park orebody indicates that it contains 1,200,000 tons of ore grading 0.87% Cu (15% dilution) with \$0.50 per ton in recoverable gold and silver values.

We are in the process of evaluating the economics of mining this orebody in conjunction with Keewenaw. The plan is to mine and stockpile the ore in the vicinity of the pit and have it delivered to the crusher area by a contractor.

Preliminary results indicate that an operating profit of \$0.21 per ton milled can be generated based on \$0.50 per pound of copper. We estimate an additional profit of \$0.70 per ton milled can be made on the underground development ore starting in June 1971.

Before any firm decision can be considered we must:

1. Carry out additional diamond drilling in questionable sections of the orebody to confirm predicted tonnages and grade.
2. Establish firm prices with contractors on:
 - (a) Ore haulage costs
 - (b) Road construction and stripping costs
3. Outline a mining schedule that will reduce our costs to the lowest level. This is complicated by the fact that stripping ratios on the initial benches of Cowley Park are extremely high.

The success of this plan is highly dependent upon our ability to maintain our equipment in good operating condition.

The attached information summarizes some of the pertinent details.

We will carry on with the detailed evaluation of this plan.

W. A. Dean
W. A. Dean
Mine Manager

c.c. P. Golledge, P. Conder, P. Percival

Appendix I

PRELIMINARY SUMMARY OF RESULTS

Tons of ore as of May 1st Keewenaw & Cowley Park	1,620,568 tons
Average % Cu	0.93% Cu
Average recoverable gold	\$0.63 per ton
Average recovery	84%
Average concentrate grade	33%
Average stripping ratio	1.68 to 1
Milling rate per calendar day	2,375 tons
Duration of mill feed	22.5 months
Average tonnage per month	72,000 tons
Revenue per ton milled @ \$0.50 Cu	<u>\$7.18</u>
Cost per ton milled	<u>\$6.97</u>
Operating Profit	<u>\$0.21</u>

SUMMARY OF KEEWENAW AND COWLEY PARK ORE

Ore Body	Tons	% Cu	Tons X % Cu	Rec.	Tons X Rec.	P. Metals	Tons X P. Metals
Keewenaw	396,306	1.11	43,989,966	81%	31,100,786	\$1.05	416,121
Cowley Park	1,224,262	0.87	106,510,794	86%	105,306,532	\$0.50	612,131
Totals	1,620,568		150,500,760		136,407,318		1,028,252
Average	1,620,568	0.93		84%		\$0.634	

- NOTE:
1. Tonnage in Keewenaw based on a 0.50% cut-off grade and 25% dilution with barren waste.
 2. Tonnage in Cowley Park based upon a 0.50% cut-off grade and 15% dilution with barren waste.
 3. Waste in Keewenaw estimated as of May 1st - 880,000 tons.
 4. Waste in Cowley Park - 1,853,854 tons.
 5. Total waste for both pits - 2,733,854 tons which gives us a stripping ratio of 1.68 to 1.