

820041

ECONOMICS OF APPROPRIATING B.C. MOLY
FROM KENNECOTT COPPER BY KERR ADDISON MINES LIMITED

- 32,000,000 tons of mineable ore is the premise as economical at this point; 1.18 to 1, waste-to-ore ratio; 0.16% M_0S_2 , as cut-off grade; 0.205% M_0S_2 , average grade provision to the mill.
- annual treatment, 3,200,000 tons (approx. 9,000 tons per day, 355 days per year)
- operating costs per ton milled:

Direct mining	0.97	(\$0.445 per ton of removal)
Direct milling	0.95	
Depreciation of all mobile equipment	0.16	
All general supporting costs	1.00	
	<u>3.08</u>	
- 90% mill recovery with premium product
- M_0S_2 sale price per lb., \$1.05 Canadian dollars
- gross recovery per ton at 90%
 $(90 \times 4.1 \times 1.05) = \3.86
- operating profit per ton
 $3.86 - 3.08 = \$0.78$
- annual operating profit
 $3,200,000 \times 0.78 = \$2,500,000$
- capital outlay at outset:

\$3,700,000 for immediate improvements
<u>5,000,000 cash payment to Kennecott</u>
<u>\$8,700,000</u>
- 10-year mine life
- 8% interest on the loan
- payback period would be 4 years and 1 month
- P.V. on operating profit at 8% would be \$8,409,000 (approx. 96% of original outlay)

Handwritten calculations:
 1.72
 $\frac{60}{10320}$
 $\frac{3.08}{16} = 2.92$

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

To..... Mr. J. H. Stovel From..... Peter Stym

Subject..... Appropriation of B.C. Moly from Kennecott by Date..... April 2, 1971
Kerr Addison Mines Limited

- At 8000 tons per day, 355 days per year, utilizing the same figures of mineable ore tonnage, waste-to-ore ratio, cut-off grade, mill-feed grade, operating costs, the annual tonnage treatment would be 2,840,000 tons and the annual operating profit \$2,217,000.

- Payback period with an original capital outlay of \$8,700,000 at 8% interest on the loan would be 4 years and 10 months.

- P.V. on operating profits at 8% discount (at end of 11th year + 3 months) would be \$7,724,000. The above P.V. on profits would amount to 88.7% of the original outlay.

(Note: An additional outlay of \$1,000,000 at the outset would extend payback into the 7th or 8th month of the 6th year for the 8000-ton daily treatment.)

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To..... Mr. J. H. Stovel From Peter Stym

Subject..... Appropriation of B.C. Moly from Kennecott by Date April 2, 1971
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- At 7000 tons per day, using the same parameters as the 8000-ton projection except the operating cost has been increased by \$0.25 per ton (\$0.07 for mining; \$0.07 for milling; \$0.11 for general supporting costs), the operating profit per ton would be \$0.53.

- Annual operating profit would be \$1,317,000.

- The payback period would be 9 years.

- P.V. of profit would be \$2,044,000 for a mine life of 13 years.