

To: Mike Nicholson

cc. John Maissan

Dick Hogan

From: Robin Tolbert

Date: April 12, 1985

Subject: Low Grade Stockpile

Attached is my estimate of the value of the 'low grade stockpile' located near Zone II based on the following parameters :-

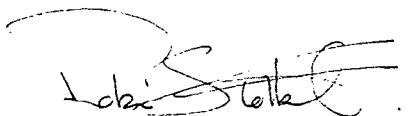
- 1) approximate present metal values.
- 2) John Maissan's metallurgical recovery factors.
- 3) In lieu of any official cost estimates -- my estimates of costs .
My rationale behind these is attached. Rick's numbers can always be plugged in once you receive them.
- 4) Estimated stockpile grade of :- 1.12%Pb, 1.88%Zn, 14.6g/mtAg
- 5) Exchange rate of C\$1.38 = US\$1.00

John Maissan in his memo of April 8, 1985 states that fixed costs should not be included in any value estimation since this stockpile material would be used as fill-in in any possible ore gap.

Under the present 6% plan there would be stockpiled material in the 4% - 6% Pb+Zn category. This material amounting to approximately 7 million tonnes and probably averaging 5% Pb+Zn would be used to fill any possible future ore gap before the 'low grade stockpile' material.

Therefore it would be expected that the 'low grade stockpile' would be used at end of mine life rather than as fill-in and thus all the fixed costs should be used in a value estimation.

There are no taxes, capital costs etc. included in this estimation.



R.S. Tolbert
District Geologist

LOW GRADE STOCKPILE
VALUE ESTIMATION
(Reduced to \$/tonne ore)

Metal/tonne of Ore

Pb	1.12 x 2204 x 65 = 16.04 lbs.	(grade x lbs./tonne x mill rec.)
Zn	1.88 x 2204 x 65 = 26.93 lbs.	-----"
Ag	14.6 x 0.0292 x 45 = 0.19 ozs.	(grade x ozs./tonne x mill rec.)

n.b. per J.Maissan's memo of April 8, 1985 this produces concentrate grades as follows:- Pb conc. grade 50%, 451g/t Ag
Zn conc. grade 46%

Exchange Rate

C\$1.38 = US\$1.00

Metal Prices

Pb US\$0.20 = C\$0.276
Zn US\$0.40 = C\$0.552
Ag US\$6.50 = C\$8.97

Gross Value Before Costs

Pb	16.04 x 95% x 0.276 = \$ 4.21	(metal content x smelter deductions
		x price)
Zn	26.93 x 83% x 0.552 = \$12.34	
Ag	0.19 x 93% x 8.97 = \$ 1.58	

TOTAL		\$18.13

n.b. This does not include smelter penalties for low grade concentrates nor for contaminants.

Costs

Rehandling ore	\$1.50	
Milling	\$7.93	per J.Maissan's memo
Land transport	\$1.15	50% of 1981 cost
Ocean transport	\$0.92	1981 cost
Terminal	\$1.80	twice 1981 cost
Smelter	\$6.72	1981 cost - includes smelter admin.

TOTAL	\$20.02	

'Before fixed cost'
value \$(1.89)

Fixed Costs

Coal	\$0.57	1981 costs
Electrical	\$1.21	half 1981 costs
Office	\$2.00	reduced from 1981 costs
Minesite	\$3.00	75% of 1981 costs
Townsite	\$1.25	half 1981 costs

TOTAL	\$8.03	

Minesite Value \$(10.91)