1982 March 23

830590

To: Bob Rosse
From: Jeffrey Lacy

Baker Mine - Operating Options

Dave has responded to my memorandum of 1982 March 15, which defined operating options for Baker to be used by Lopener in an economic study, by asking for an explanation of the metal differences versus the original project. These differences are:

	Au ounces	Ag ounces
project	88,000	1,798,000
less 1981 production	(8 955)	(157,022)
less forecast 82/84 reserves	(47 159)	(907,171)
Balance to explain	31,886 (36.2%)	733,807 (40.8%)

I feel it logical to explain these differences under the three factors that impact on metal production:

(i) recoveries
(ii) grade
(iii) ore

(i) Recoveries: The project assumed recoveries at ≈ 95.4% for gold and ≈ 93.2% for silver. Actual 1981 recoveries and estimated 1982 to 1984 recoveries were lower. These differences accounted for:

	Au		Ag	
1981	8955 @87.7%	9741 @ 95.4	157,022 @ 77.4	189,076 @93.2
1982	22,478 @90.0%	23,827	396,270 @85.0	434,498
1983	17,403 @ 92.0%	18,046	351,961 @86.0	381,428
1984	7278 @ 93.0%	7,466	158,940 @86.0	172,247
TOTAL	56,114	59,080	1,064,193	1,177,249
Δ	Δ = 2966	(3.37%)	Δ = 113,056	(6.29%)

(ii) Grades: after much discussion I chose to use the 85% factor for the gold content of the vein. That is, our experience predicted that, the project reserves estimated at 103,664 tons at 0.89 oz/ton gold and 18.6 oz/ton silver, were actually lower at 0.76 oz/ton gold and 15.8 oz/ton silver. This difference accounts for

13,200 oz gold (15%) 269,700 oz silver (15%)

Does our 1982 experience to-date continue to support the 85% gold & silver content factor?

(iii) Ore: In my logic, this factor must account for the balance of the difference, which is;

15,720 oz gold (17.9%) 351,051 oz silver (19.52%)

This is the most significant factor of the three. At this point I recognized I needed your assistance and understanding. At our meeting on February 10th you discussed the results of a reserve review you had completed, which generated the following numbers;

in the 55 level, 22,540 tons @ 1.24 Au, 23.45 Ag
in the 54 level, 29,350 tons @ 0.65 Au, 15.38 Ag

both with no dilution. When I increased the dilution to 38% and added in the stockpile I came up with the 83,500 tons @ 0.62 oz/ton gold and 12.65 oz/ton silver.

What I recollect from that meeting, was that you had left out blocks of ore in your study that may have been included in the project study. The reasons

for leaving out the blocks were:
(a) higher cutoff @ 0.3 oz/Ton Au equivalent
(b) feeling that the Kiern's projections were too optimistic.

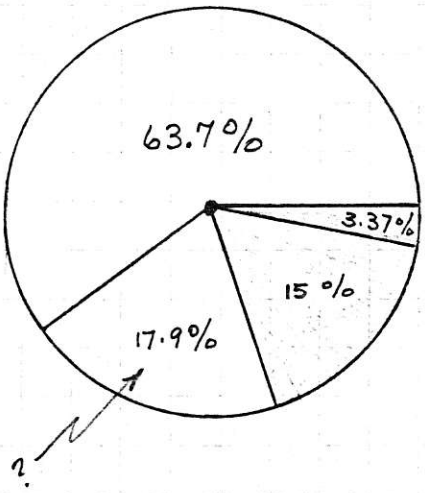
Bob, could you please have another look at this question? How much ore (and metal) was dropped out because of the higher cutoff? How much was dropped out because of (b) above? I'm sorry to pass the buck on this one, but it's a worthwhile planning exercise. Recognize that if my March 15th memorandum is in error, I'm prepared to reissue it!

I'd like to discuss this one next week when I visit Baker.

Thanks

Jerry.

GOLD



SILVER