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OCCIDENTAL INTERNATIONAL

COPPER CREEK

Ore Reserves
and
Financial Analysis

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COPPER CREEK

Ore Reserves & Financial Analysis

The ore reserve calculations made previously for Copper Creek have been revised to include minable reserves for various pit configurations. Table 1 summarizes the ore reserves for five pits and two cut-off grades. The pit configurations are shown in Appendix B.

The mining sequences were investigated in order that the stripping ratio is as low as possible initially and then fairly uniform for the life of the property, yielding an optimum stripping ratio balance. Table 2 presents the results of various mining sequence alternatives. Notice that plan 4 yields the most desireable results.

A comparison was made for a fixed pit design for the high and low cut-off grades using the following cost factors:

Production cost for ore per # recovered Cu: 15¢, 20¢, 25¢, & 30¢

Waste stripping cost per ton: 25¢

Plant costs: Previously stated.

The computatuons are shown in Table 4.

Table 1

COPPER CREEK

Pit Design

Pit	Cut-Off Grade, % Cu							
	0.15				0.30			
	Ore Tonnage	Ore Grade	Waste Tonnage	Stripping Ratio	Ore Tonnage	Ore Grade	Waste Tonnage	Stripping Ratio
A	620,636	0.361	193,162	0.311	328,775	0.418	485,023	1.475
B	947,458	0.321	367,836	0.388	328,775	0.418	986,519	3.001
C	1,465,183	0.291	4,181,606	2.854	-	-	-	-
D	3,264,873	0.258	4,823,055	1.477	-	-	-	-
E	3,780,791	0.245	5,765,010	1.525	933,409	0.464	8,612,392	9.227

Table 2

COPPER CREEK

Mining Sequences

1. Normal Pit Expansion

Pit	Sequence Stripping Ratio
A	0.311
A-B	0.534
B-C	7.366
C-D	0.356
D-E	1.826

2. Removal of Sequence (Pit) D

Pit	Sequence Stripping Ratio
A	0.311
A-B	0.534
B-C	7.366
C-E	0.684

3. Removal of Sequence (Pit) C

Pit	Sequence Stripping Ratio
A	0.311
A-B	0.534
B-D	1.922
D-E	1.826

4. Removal of Sequence (Pit) C and D

Pit	Sequence Stripping Ratio
A	0.311
A-B	0.534
B-E	1.904

Table 4

COPPER CREEK

Comparison of Cut-Off Grade

For Fixed Pit Limits (E)

	Cut-Off Grade 0.15	0.30
# Cu:	18,549,085	8,662,036
Production Cost/# Cu		
45¢/ton 15¢ ;	2,778,881	0.90 1,299,305
20¢ ;	3,705,175	1,732,407
25¢ ;	4,631,469	2,165,509
90¢/ton 30¢ ;	5,557,762	1.80 2,598,611
Stripping Cost (25¢/ton):	2,153,098	1,441,253
Summary:		
Prod. Cost / Total Cost		Total Cost
15¢	$4,931,979	$2,740,558
20¢	5,858,273	3,173,660
25¢	6,784,567	3,606,762
30¢	7,710,860	4,039,864
Mine Life≅ 4.5 years:		
Gross Value:	7,410,350	3,464,184
Minus Plant Cost:	1,000,000	550,000
	6,410,350	2,914,184

Conclusions

1. Leaching with LIX-64 is more economic than one may think intuitively. (see Appendix A).
2. The Copper Creek deposit as drilled to date would pay for a $1,000,000 plant (4,000,000 # Cu per year). However, a larger tonnage would ensure a substantial profit for many years with a resulting higher rate of return.

Table 4, Cont'd

COPPER CREEK

Prod. Cost	Cu Price		
20¢	40¢	5,858,273	3,173,660
		$ 552,077	$ --- loss
15¢	40¢	1,478,371	173,626
15¢	50¢	3,330,959	1,040,460
20¢	50¢	2,404,665	607,358

The next step is to select a plant capacity so that a feasible mine life results. In Table 3, notice:

LIX-64 Plant Cost	Mine Life for Cut-off Grades	
	0.15	0.30
$1,000,000	4.6315 yrs.	
550,000		4.331 yrs.

The summary of gross profit is shown in Table 5 for 40 and 40¢ copper. It must be realized that the powder copper produced by LIX-64 is in high demand and can be sold up to $1.00 per pound. However, at 40¢ per pound, and 15¢ metal production cost per pound yields $1.478 million over 4.6 years. Notice that in Appendix A any size plant $125,000 to $10,000,000 will pay for itself in about one year, so production rate is independent of pay-out time, which is very useful.

The balanced (stripping ratio) pit mining sequences are shown in Table 6. If Copper Creek would be mined, this would be the optimum sequence.

A description of LIX-64 and patent information leaching is found in Appendix C.

Table 3

COPPER CREEK

Oxide Mine Life vs. Leaching Plant Costs

LIX-64 Plant Cost	Oxide Mine Life (+ 0.15)	Oxide Mine Life (+0.30)
$ 125,000	51.460	24.061
275,000	18.530	8.662
550,000	9.263	4.331
1,000,000	4.6315	2.1655
5,000,000	2.31575	1.08275
10,000,000	1.657875	0.541375

Note:

At a 0.15% cut-off, a $1,000,000 plant would have a feasible mine life and using a 0.30% cut-off, a $550,000 plant would produce a feasible mine life.

Table 5

COPPER CREEK

Summary of Gross Profit

Production Cost/ # Cu	Copper 40¢	Price 50¢
0.15 % Cut-Off		
15 ¢	$1,478,371	$3,330,959
20 ¢	552,077	2,404,665
0.30 % Cut-Off	- - - - -	- - - - -
15 ¢	173,626	1,040,460
20 ¢	-- loss	607,358

Table 6

COPPER CREEK

Yearly Production Schedule

(4,000,000 # Cu/Yr)

Year	Pit	Ore Tonnage	Average Ore Grade
1	A	554,017	0.361
2	A	66,619	-
	B	326,822	-
	E	435,814	-
		829,255	0.247
3	E	909,091	0.220
4	E	909,091	0.220
4.637	E	579,338	0.220