CORPORATION FALCONBRIDGE COPPER

DATE:	February 24, 1984
À TO:	M. J. Knuckey
COPIES À COPIES TO:	C. Carbonneau, A. J. Davidson
DE FROM:	D. H. Watkins
SUJET SUBJECT:	REA GOLD OPTION, ADAMS LAKE AREA, B. C.

824597

Summary and Recommendations

Recent drilling on the Rea property has established a small, high grade mineral inventory of massive sulphide mineralization amenable to open pit mining.

Mineral Inventory

	Metric Tonnes	% Cu	% Zn	% Pb	Ag g/t	Au g/t
undiluted	121,298	0.78	4.13	3.51	139.1	17.1
diluted(15%)	139,493	0.68	3.59	3.05	121.0	14.9

	Short Tons	% Cu	% Zn	% Pb	Ag oz/t	Au oz/t
undiluted	133,670	0.78	4.13	3.51	4.06	0.499
diluted(15%)	153,763	0.68	3.59	3.05	3.53	0.435

An opportunity presently exists to purchase(from Dekalb Mining)a mill and mining equipment located about 100 miles from the Rea property. Acquisition of the plant and equipment would enable the Rea property to be placed into production for a minimal capital outlay and preproduction expenditure, thus creating potential for an outstanding rate of return.

Rate of return, before taxes by the DCF method is estimated at 310%. The net present value of the project discounted at 12% is $12,302,160.

The potential of the Rea property is sufficiently well established to initiate the following actions:

1) a full feasibility study

2) negotiations with Dekalb to acquire the plant and equipment (asking $1.7m; would probably settle for $1.4-$1.5m; carrying costs are about $15,000/mo)

3) negotiations with Hilton to purchase the 5% NSR royalty (value approx. $1.3m; $NPV_{12\%,3yrs}$ = $0.93m).

Geology and Mineralization

Massive sulphide mineralization occurs in an overturned sequence of cherty exhalitive tuffs that form a unit of variable thickness at the contact between felsic lapilli tuffs in the stratigraphic footwall and argillaceous mafic tuffs in the hangingwall. The footwall felsic tuffs are intensely and pervasively altered to a quartz-sericite-pyrite assemblage with lesser talc and carbonate.

Massive sulphides commonly form a sulphide breccia and are locally well bedded. The minerals in order of abundance are pyrite-arsenopyrite-sphalerite-galena-chalcopyrite-tetrahedrite. Massive sulphides are interbedded locally with massive barite, which also hosts ore grade mineralization. The best Au and base metal values come from massive sulphides; the best Ag values from barite rich ore.

The style of mineralization and the geological environment are similar to the Japanese "Kuroko" type of ores. It is therefore probable that other lenses of ore ranging in size from several thousand tons up to 3 million tons will occur in the area. In this context, it is worth noting that the mineralization and setting at Kamad's Homestake mine about 3km to the south is almost identical.

Mineral Inventory

Near surface mineral inventory was estimated using the polygonal method and a modified Buffam method based on 5 drill intersections and 2 surface exposures.

Polygonal method:

	tonnes	% Cu	% Zn	% Pb	g AG/t	g Au/t	S.G.
drill indicated:	104,046	0.61	4.07	3.22	134.3	1.7	4.41
surface exposures:	17,252	2.65	4.47	5.30	167.8	3.9	4.30
SUB TOTAL	121,298	0.78	4.13	3.51	139.1	17.1	4.41
dilution (15%)	18,195	0	0	0	0	0	
TOTAL	139,493	0.68	3.59	3.05	121.0	14.9	

Buffam method:

	tonnes	% Cu	% Zn	% Pb	g AG/t	g Au/t
Drill indicated:						
Proven (10m block)	36,211	0.64	4.21	3.32	136.3	14.2
Probable (25m block)	54,806	0.61	4.23	3.37	135.7	13.4
Possible interpreted	10,697	0.60	4.68	3.80	140.0	1.8
SUB TOTAL	101,714	0.62	4.27	3.40	136.4	13.5
Surface exposures:						
Proven (10m block)	4,472	2.65	4.33	5.48	173.7	38.1
Probable (25m block)	19,637	2.65	4.37	5.43	171.9	38.1
SUB TOTAL	24,109	2.65	4.37	5.44	172.3	38.1
undiluted TOTAL	125,823	1.01	4.29	3.79	143.2	18.2
dilution (15%)	18,873	0	0	0	0	0
TOTAL	144,696	0.88	3.73	3.30	124.5	15.8

General Comments

1) cut-off and ore limits based on geological criteria. Ore cut-offs are sharp.

2) true thickness varies from 1m to 8.2m. Average thickness of drill intersecions is 4.1m.

3) specific gravity is estimated for surface outcrops and RG-25, but determined in the Lab for all other assay intercepts (RG-25 determinations are pending).

4) check assays were incomplete at the time of calculation.

Economic Evaluation

The value of the deposit is estimated using the relatively more conservative mineral inventory figures from the polygonal calculation:

DCF ROR 310%

$NPV_{12\%}$ $12,302,160

The following assumptions were made to arrive at the above figures:

Metal	Recovery %	Smelter Charge $CAN.	Price $CAN.
Cu	80	0.42/lb	0.80/lb
Zn	80	0.25/lb	0.64/lb
Pb	80	0.15/lb	0.30/lb
Ag	80	3.50/oz	12.00/oz
Au	80	50.00/oz	480.00/oz

Capital and preproduction expense: $3,000,000/1yr.

(assumes purchase of Dekalb mill and mining equipment for $1,700,000)

Pit stripping ration 10:1

Mine operating rate and life 70,000 tpy/2yrs

Operating cost:

stripping and mining $2.00/t	=	$20 at 10:1
trucking to Dekalb		15
milling		10
trucking to smelter		10
miscellaneous		5
TOTAL		60

Net smelter royalty (5%) $1,302,922 (2 yrs at $651,461/yr)

Taxes - assumed none will be payable because of accelerating exploration expenditures.

Current Work

Additional work planned to substantiate the mineral inventory will be done in May after the snow melts, and will consist of stripping, washing, mapping, and sampling the surface where the ore is inferred to sub crop. This will have the objective of determining grade, width, continuity, and the extent of structural disruption of the ore sub crop.

Additional diamond drilling is not recommended because it would be too costly to provide significant benefit relative to the overall size and value of the ore lens. To tighten the drill spacing to 12.5m from the present 25m. spacing would require an additional 850m. of drilling at an all in cost of about $75,000. Because of the small size of the lenses it is important to keep costs to a minimum.

Sample rejects from all the ore grade intercepts were sent to Lakefield for metallurgical bench testing.

Drill hole collars and topography are being surveyed to provide exact control for open pit design.

A base line water quality monitoring program and environmental studies are being discussed with the appropriate governmental agencies.

D. H. Watkins