800673

COMPANY: TECK EXPLORATIONS LIMITED

INTER-OFFICE LETTER DATE: December 10, 1980

COPIES TO:

TO: W. MEYER

FROM: P. FOLK

WHEN FEASIBLE, CONFINE LETTER TO ONE SUBJECT

RE: LEXINGTON PROPERTY - GRENOBLE MINES
(82 E/2E)

Location

The property is well located near the U.S.A. border a few miles from Greenwood. Power, water, labour and supplies are readily available. The elevation is about 4,000 feet and access is by road.

Land Status

Sufficient crown grants, reverted crown grants and claims are held to cover the explored part of the deposit but possible untested extensions to the southeast are not held by Grenoble. R. Seraphim has some holdings and W.E. Hallover from Olympia, Washington, owns claims along the possible extension of mineralization at depth. At depth the mineralized zone may cross the U.S. border.

The claim map supplied by the Department of Mines is not satisfactory; a ground search and survey of posts should be done before serious work is done. There is a jumble of crown grants, reverted crown grants and mineral claims in the area.

Survey

There are two sets of conflicting survey data - elevations in particular are in disagreement. Probably the drill holes, underground workings and claim boundaries should be re-surveyed and the data plotted properly.

Geology

A thick band of quartz porphyry (dacite) traceable for 6,000 feet strikes northwest and dips 20° to the northeast. Near the hanging and footwall contacts of this dacite pyrite and chalcopyrite occur on fractures, as disseminations and, to a lesser extent, in quartz stockworks. The "main zone" mineralization takes the form of two layers which join in some locations and in others are connected by fracture zones of more or less mineralized material. The mineralization parallels the footwall dacite-serpentine contact but it is not clear which rock type is the earlier.

The locus of the best mineralization plunges about 22° in the direction S 60 E and so gets deeper to the southeast.

Later pulaskite (syenitic) dykes and sills cut all rock types and mineralization but only at the southeastern extremity of the main zone (section 8 +00N) is there any significant disruption of the mineralization. There is no reason to suspect that mineralization does not continue past this dyke but the zone here exceeds 800 feet in depth and the property boundary is nearby.

There is little information available on alteration and structures and the critical sections of core should probably be re-logged and underground workings mapped. As it stands now the correlation between drill holes is poor and structures (faults) which are undoubtedly present are ill defined. The attitude of the mineralized fracture zone, their thickness and distribution are far from clear. The effect of this lack of correlation is to introduce some doubt as to the legitimacy of the reserve calculations.

Reserves

R.W. Phendler quoted "Drill Indicated Probable" reserves of:

	Tons	%Cu	oz Au/T	
Open pit	113,340	0.92	0.064	4.65:1 strip
Underground	503,670	1.25	0.195	
Total	616,670	1.29	0.171	

Cutting some values, using narrower widths and a tonnage factor of 12 rather than 10 and extrapolating 50 feet or less, I have roughly recalculated reserves of:

	Tons	%Cu	oz Au/T	
Drill probable	118,388	0.88	0.083	
Including open pit	67,390	0.83	0.059	5 or 6:1 strip
Drill possible	122,743	1.3	0.23	
Total	241,131	1.09	0.15	

These figures assume a mining width of 8 feet or more and include 20% dilution at .3% Cu and .02 oz Au/T. Note that the possible reserves are of much better grade than the probable. This reflects some good results in wide-spaced drilling down plunge. An additional 100,000 Tons of similar grade material is possible within the confines of the indicated main zone. Further down plunge extensions are possible and there are anomalies in other parts of the property which have not apparently been tested. An ultimate potential in the 500,000 Ton range is realistic.

Of particular interest are two diamond drill holes 200 feet apart on section 14 +00N and 16 +00N which assay 3.9% Cu, 0.98 oz Au/T over 16 feet and 2.7% Cu, 1.16 oz Au/T over 10 feet. The intercepts appear to line up on strike. Assuming a block 300 x 100 x 13 feet, a block of 32,500 T at about 1 oz Au/T is possible. This possibility definitely warrants testing.

Drill Program

The property contains no reserves that could be classed as proven and it would take considerable exploration probably, including a decline, to bring the deposit to the defined stage. The values are quite erratic and the target zone is fairly small and becoming increasingly deep. Poorly understood post mineral faults and dykes add to the complexity.

A program of 7,200 feet of surface diamond drilling in 10 holes would be the minimum required to test some of the critical areas in the main zone. With luck, this program would double the material in the probable category and indicate an extension to the southeast. Contingent on results further work would be required.

Only sketchy data has been supplied but there may be reason to provide a contingency for drilling some of the areas to the northwest of the main zone where geophysical and geochemical anomalies are present in areas of favourable geology.

Given the restricted nature of the target zone all drilling should be carefully surveyed and property plotted. Down the hole directional surveys would be required.

Conclusions

The deposit has the potential for developing perhaps 500,000 tons of gold-copper ore mineable largely by underground methods with the possibility that small zones

in the 1 oz/T Au range will be located. As a small to moderate sized underground type prospect the deposit has merit.

The deposit is very well located but the land holdings may need to be expanded somewhat.

Recommendations

On the basis of possible reserves, location and exploration potential, the property is recommended with a view to developing a small to moderate sized underground mine.

Specific recommendations are:

1. A close look at land status which will probably include a ground survey to determine claim boundaries and ownership between Grenoble's holdings and the U.S. border.

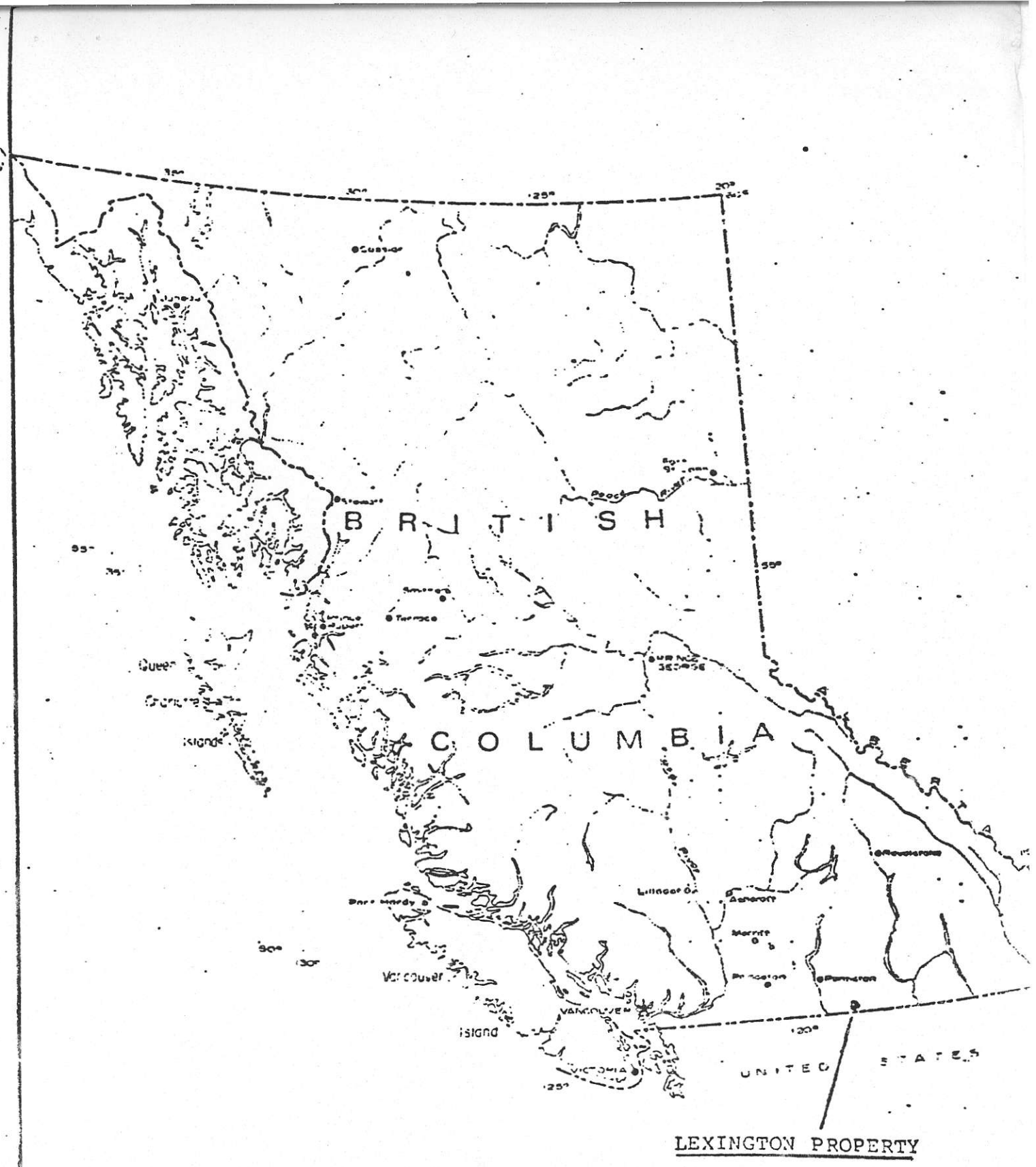
2. Sort out the discrepancies in the engineering data. Resurvey the drill collars and underground workings. Re-log critical portions of core if available and re-map underground workings.

3. Drill 7,200 feet in 10 holes from surface with a contingency for 3 more holes if required.

4. Re-evaluate after the above program is complete.

P. Folk

PF/rm



R.W. Phendler P. Eng

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R.W. PHENDLER
1974

CANNON–HICKS ASSOCIATES L
VANCOUVER B C

Aalenian Resources Ltd

PROJECT: Lexington No. 1

Report by: R.W. Phendl

SCALE: 1" = 136 Mls. DATE Feb/

COMPANY: TECK EXPLORATIONS LIMITED

INTER-OFFICE LETTER DATE: July 31st 1981

COPIES TO:

TO: W. MEYER

FROM: ALAN REED

WHEN FEASIBLE, CONFINE LETTER TO ONE SUBJECT

RE: PRELIMINARY EVALUATION OF GRENOBLE PROPERTY - Job #1282

Splitting and assaying of diamond drill core from the Grenoble property is not yet complete, but a preliminary evaluation of geological and mineable ore reserves has been made.

Geological ore reserves were estimated using the GEOBEX interactive computer program of Geomin Computer Services Corporation. Mineable ore reserves were estimated manually on plans and sections.

GEOLOGICAL ORE RESERVES

Table 1 presents the results of the GEOBEX estimation using the polygon method on horizontal slices of three-metre thinness. The 15-metre polygon influence radius may be a little optimistic according to the available variograms - this will be investigated further, but I think that this is a good estimate because of the thinness (3 metres) of the horizontal slices which enhances the precision of the estimate.

MINEABLE ORE RESERVES

The mineable ore zone is a gently-sinuous ribbon, 375 metres in length, 37 metres average width and 8 metres average thickness, which plunges gently towards the east-southeast. Using a density factor of 2.94 short tons per cubic metre yields 326,340 tons, of which 75% is estimated to be recoverable by blasthole open-stoping resulting in mineable ore reserves of 245,000 tons with an average gross metal content of $86.00 (1.02% copper, 0.160 oz. Au/ton, 0.17 oz. Ag/ton and 0.006% molybdenum).

→ very minor v

↳ virtually no value

....2

326,000 t @ 1.35% Cu, 0.21 oz Au/t

TABLE 1

Geological ore reserves by grade

Cutoff increment:	$20,000
Polygon influence radius:	15 metres
Density:	2.940 short tons per cubic yard.

Cutoff Value (gross metal value/ton) $	Ore Tons ('000)	AVERAGE VALUES — Primary (gross metal value/ton) $	Au oz./ton	Ag oz./ton	Cu oz./ton	Mo oz./ton
20.000	621	67.5883	.1161	.1510	.8401	.0050
40.000	312	108.1514	.2067	.2124	1.2067	.0072
60.000	194	143.6857	.2815	.2444	1.4805	.0133
80.000	107	203.3510	.4119	.2117	1.8671	.0134
100.000	85	234.7488	.4825	.2124	2.0322	.0136
120.000	62	279.1867	.5832	.2662	2.2505	.0144
140.000	54	304.0183	.6345	.2778	2.4693	.0146
160.000	50	314.4143	.6603	.2675	2.4820	.0141
180.000	47	325.2538	.6806	.2674	2.6188	.0137
200.000	43	335.9219	.7088	.2674	2.5827	.0130

W. MEYER July 31st 1981

CONCLUSIONS

The mineable orebody has a gross value of $21,000,000. With mining and milling costs estimated at about $10,000,000, this appears insufficient to warrant the capital expense of production.

Additional ore may be sought in two directions:

a) down the plunge of the orebody onto the claims held under option from Seraphim et al;

b) along the strike of the dacite/serpentenite contact towards the Lexington crown grant.

It is recommended that exploration should continue, and be concentrated in these two directions.

Alan Reed

AR/sp