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BOB CREEK PROPERTY

HOUSTON, B. C.

by: G. R. Hilchey, P. Eng.

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BOB CREEK PROPERTY**HOUSTON, B. C.****by: G. R. Hilchey, P. Eng.****MAP REFERENCE: 93-L-7 LAT 54° 20'N LONG 126° 40'W****LOCATION AND ACCESS**

The property lies on Bob Creek about eight miles south of Houston, B. C. Houston lies on the Canadian National Railway (Jasper to Prince Rupert line) and is also served by Highway No. 16. A logging road running south from Houston skirts the western side of the property.

PROPERTY

The property consists of 4 full-sized claims and one fractional claim, held by location. The owners of the claims are Lorne Hansen of Vancouver and Tofino, B. C. and the estate of George Smith.

HISTORY

Placer gold deposits were discovered and worked before 1900 on Buck Creek and its tributary Bob Creek. There is no record of the production. Prospectors have long recognized that the source of the placer gold lies in the rocks of Bob Creek canyon. These rocks constitute the principal showings on the prospect.

In 1936 George Smith drove an adit and reportedly milled 85 tons of ore from which he obtained 12 tons of concentrates.

Little work has been done on the property since 1936 except for seven or eight holes drilled by Denison Mines Ltd. in 1961. Seven "N"-size holes were completed and one was abandoned without reaching bedrock. The total footage drilled was 504 feet. Denison Mines' geologist considered that the indicated value of the ore was too low to be commercial and work was terminated.

GEOLOGY

The rock in the canyon of Bob Creek is an altered, mineralized tuff. Available published and unpublished maps and other data indicate that the geologic environment is as described below.

The altered tuff is of presumably Hazelton (Juro-Cretaceous) Age. To the west it is bounded by much-less altered Hazelton volcanics with occasional stringers of sulphides. The Hazelton Group rocks are intruded by mineralized plutons some of which are approximately diabase in composition. Overlying the Hazelton rocks to the east are moderately dipping basaltic flows of probable Miocene Age. The basalts appear to be postmineral.

MINERALIZATION AND ALTERATION

Mineralization consists of pyrite, sphalerite, galena, and arsenopyrite carrying low but significant gold and silver values.

Small amounts of cadmium and copper were also detected in spectrographic analysis.

Bleaching is the most obvious aspect of the alteration. The mineralogical changes can be determined only with a microscope although some carbonate is known to be present.

SAMPLING

Sampling has long been considered to be the major problem of the property. As previously noted, George Smith mined and milled 85 tons of the mineralized rock in 1936. The 85 tons of rock is reported to have yielded 12 tons of table concentrates which have been sampled by at least three geologists or engineers who reported as follows:

	<u>McC</u> CORD	<u>RADISICS</u>	<u>WOOLLETT</u>	<u>AVERAGE</u>
Gold (oz/ton)	0.45	0.48	0.43	0.453
Silver (oz/ton)	7.0	8.15	6.5	7.09
Zinc %	8.0	8.30	7.7	8.0

This would give an average for the rock milled of:

Gold - 0.065 oz/ton; Silver - 1.01 oz/ton; Zinc - 1.13%. In addition Smith reported that he recovered about \$1.00 worth of free gold per ton off the table. *with a loss of 60^t in tailings AU only*

In 1952 McCord examined and mapped the property for Transcontinental Resources but is reported to have considered the cost of sampling to be prohibitive.

In 1956 Tidsbury is reported to have done some drilling and sampling but there is no record available of this work.

In 1961 Woollett of Denison Mines supervised the drilling of eight "N" diamond drill holes. Core recovery varied from 62% to 89% and averaged 74-1/2%. Careful scrutiny of Woollett's results by statistical and other methods indicates that, in general, Woollett's sampling was well and conscientiously done.

Assaying, however, left something to be desired. Critical analysis of the assay results indicates that most zinc assays are reasonably good in spite of an occasional bad assay. Gold and silver assay results, on the other hand, indicate that these were handled carelessly and the results, especially on the core assays, should not be considered accurate.

Precious metal assays of the sludges were somewhat better. Comparison of the weighted average of all the diamond drill sludge assays of all holes, and assays of the 85 ton bulk test show a rather good correlation between gold and zinc.

<u>ALL DIAMOND DRILL SLUDGE</u>		<u>BULK SAMPLE</u> (reduced)
Gold	0.0553 oz	0.065 oz.
Zinc	0.92%	1.13%
Silver	0.307 oz	1.01 oz

The gold-zinc ratio is remarkably close.

Sludge: 0.060 oz. gold per unit of zinc.

Bulk Sample: 0.0575 oz. gold per unit of zinc.

Since the table concentrates and the diamond drill sludge are the results of completely independent methods of sampling by different men over two decades apart in time, they lend each other strong mutual support.

TONNAGE POTENTIAL

No reserve figures can be given at the present time. The drill sampling done by Denison Mines extends along the canyon of Bob Creek for 800 feet and sampled a width of 200 feet. Mineralized rock extends for a known minimum distance east and west of 1500 feet. No other limits to the mineralization are known. It is evident that the tonnage potential is very large-ranging into the tens of millions of tons.

ECONOMICS

On the basis of the bulk sample and ignoring the free gold recovered the ore would have a value of about \$3.60 per ton in gold and silver alone.

This compares favorably with the value of Granisle ore ~~of~~ ^A.

CONCLUSIONS AND RECOMMENDATIONS

It is evident that there is a very large tonnage potential of low grade ore - possibly tens of millions of tons.

There is considerable reason to believe that the average value from the diamond drill core is incorrect and probably low. On the other hand, the average value from the bulk sample should be indicative of the true average value. This indicated grade is comparable to that of Granisle Copper Mine.

The location with respect to transportation, power, and other facilities is considerably more favorable than Granisle. Conditions are good for a large low-cost open pit operation.

It is recommended that a sampling and evaluation system be designed and a drill program be carried out to establish tonnage and grade.

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North Vancouver, B. C.
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