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VANCOUVER 8, B.C.

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## HARRISON LAKE GOLD PROSPECT

### INTRODUCTION

I inspected this property on the 16th March 1968 accompanied by Mr. G. Schell and under the guidance of Mr. George MacDonald.

### SITUATION

The claims are located on the east side of Harrison Lake due east of the south end of Echo Island and three miles northeast of Harrison Hot Springs.

They are on the steep west side of Bear Mountain and range in elevation from 100 feet to 2000 feet.

### PROPERTY

There are six claims at present for which I saw the common post for two claims near the main showings.

### HISTORY

Two partners were quarrying the side of a logging road in a small way for iron-stained slabs of rock to be used as decorative building stone and uncovered an auriferous vein.

### GEOLOGY

There are good rock exposures alongside the lakeside road and on the old logging roads. The area is underlain by thinly bedded argillites and slates of the Chilliwack Group (Carboniferous) as shown on the Hope sheet of the G S C. There are occasionally more massive, lighter coloured bands of possibly tuffaceous origin. The strike is usually northwest and the dip from 20° to 40° northeast.

On the south side of the main showing there is a dyke 150 feet wide striking about due east and apparently vertical. It is bleached by alteration and appears to have been a gabbro.

The G S C map suggests that a major fault could be present just off-shore on this side of the lake.

#### MINERALIZATION

Throughout the argillites there are lenticular veins and veinlets of quartz that approximately follow the bedding but in some cases there are crossing structures with quartz that link parallel veins together. Steep cross faults are also present that have displacements of several feet.

The area of particular interest is on a logging road cut into the mountain side that climbs to the south on a grade of about 20%. Over a length of about 1000 feet there are zones of flat lying quartz lenses that can be followed for 100 feet or more. They often amount to about 25% of widths of 5 to 10 feet.

The argillite weathers to a rusty colour due to a small content of finely divided pyrite and pyrrhotite. The quartz is usually vuggy and sometimes limonitic. Usually no fresh sulphide is visible.

At the main showing the owners have blasted back sufficiently to expose fresh mineralization that consists of an average of 3% pyrrhotite with specks of chalcopyrite, 2% chlorite and minute specks of gold visible under a hand lens in a nine inch quartz vein. It strikes easterly and dips 20° north over an area about 20 by 10 feet. The vein cuts through a vertical dyke that is 8 feet wide and also enters the large dyke described previously as 150 feet wide but the vein narrows to about 4 inches. In this latter dyke there is a second vein that is from 1 to 4 inches thick and 6 feet below the main vein. Both dykes are mineralized with about 2% finely divided pyrrhotite.



Last year the owners made a shipment of ten tons to the Tacoma smelter from which they netted U S \$87.00 per ton from the gold content. The shipment assayed :  
2.85 oz Au, 0.70 oz Ag, 0.14% Cu, 81.2% SiO<sub>2</sub>, 6.8% Fe, 1.1% CaO, 4.0% Al<sub>2</sub>O<sub>3</sub> and 3.6% S.

This ore came from the west side of the main showing described above. The analysis indicates that it must have contained about 10% pyrrhotite.

Both chemical and spectrographic tests showed that nickel was absent.

### S A M P L I N G

A set of eight samples of the quartz veining were taken at intervals along the logging road to discover how widespread the gold might be. The large dyke that is mineralized with pyrrhotite was also sampled.

The only assay result of note was for the sample taken over a nine inch width of the main showing that gave 3.64 oz Au per ton.

About 600 feet down the road from here at the switch back some fragments taken from an irregular 3 inch quartz vein with a little pyrite and limonite assayed 0.15 oz Au per ton. Similar material at another 300 feet down the road assayed 0.01 oz Au per ton.

The four samples of quartz veining up the road from the main showing as well as the dyke with the pyrrhotite were all barren.

### D I S C U S S I O N

It would appear that the quartz vein may only contain gold where it is close to or in the smaller dyke. Up dip the vein is seen to weaken, at least temporarily, in the main dyke and down dip to pass under the roadway. On the low side of the road there are no outcrops so that it could be present beneath the overburden. Thus, at present, only a length of about 25 feet is known on dip and 20 feet on strike including what was mined. Because of the narrow width this represents only 30 tons of which about 15 tons has been mined.

1. Persists along the strike of the main dyke which could be assumed to extend for a few thousand feet.
2. Continue down dip for say 100 feet or more.
3. Thicken appreciably.
4. Increase in average grade due to richer pockets of gold than known at present.
5. Have several parallel veins above and below it that are also auriferous.

To obtain an idea of the possible economics the following figures have been developed.

I estimate that six man-shifts would produce 10 tons of ore. With supplies and supervision the total cost of mining would be \$30 per ton of ore shipped. Trucking to either Trail or Tacoma would cost about \$20 per ton. These two items amount to \$50 per ton equivalent to a gold content of 1.70 oz per ton after allowing a retention of \$14 per ton by the smelter.

[illegible]

Capital costs have not been considered because the major items of equipment could be rented and have been treated as such in the above figures. They would consist of a compressor, rubber tired haulage equipment underground, three drill machines and a scraper.



Development in ore should almost pay for itself providing the vein is removed separately.

In a year of 300 operating days at 10 tons per day from an average thickness of 9 inches the production would be 3000 tons from an area of 45,000 square feet or say 90 by 500 feet. This is an extremely large projection from the limited exposure available at present.

More assurance is required before starting an underground operation. Diamond drilling is therefore suggested in the hope that the vein is sufficiently regular to give useful results. At the same time it will be possible to test for parallel veins. First a set of say five vertical holes can be drilled down the road at 50 ft intervals to see how far ~~down~~ the vein can be traced away from the dyke. To reach the vein these would all be quite shallow but the first hole should go to say 200 feet to check for parallel veins. Secondly a row of vertical holes at 50 feet apart horizontally should be drilled up the hill along the apparent strike of the dyke. The first of these holes should go to say 250 feet to check for parallel veins. The suggested drilling would total about 1000 feet.

#### N O T E

A problem that presents itself is the presence of a large, new private house a few hundred feet directly below the showing. The owner of the house has already tried to prevent work being done on the vein. Because of the house a disposal area must be found for the relatively large amount of waste rock that would be produced - a possible site is around the hillside to the north.

#### R E C O M M E N D A T I O N S

1. Map the position of the dyke both up and down the hillside with elevations.
2. Set out the drill sites suggested above.
3. Drill the holes A size with a suitable machine.

*A. C. Skerl*

To:

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# Certificate of Assay

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CABLE ADDRESS "ELDRICO"

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DATE March 22, 1968

We Hereby Certify that the following are the results of assays made by us upon submitted ORE samples

MARKED	GOLD		SILVER	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.
	OUNCES PER TON	VALUE PER TON	OUNCES PER TON						
S - 1	Trace	\$ -							
S - 2	Trace	-							
S - 3	Trace	-							
S - 4	Trace	-							
S - 5	Trace	-							
S - 6	3.64	127.40							
S - 6 A	0.15	5.20							
S - 7	0.01	0.35							
S - 8	Trace	-							

/JP

Gold calculated at \$ per ounce

Note. Rejects retained one week.  
 Pulps retained one month.  
 Pulps and rejects may be stored for a maximum of  
 one year by special arrangement.

Unless it is specifically stated otherwise, gold and  
 silver values reported on these sheets have not been  
 adjusted to compensate for losses and gains inher-  
 ent in the fire assay process.

Provincial Assayer