# 092) January 28, 1971.

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# ASSESSMENT OF THE HARRISON PROPERTY

of

## PINE LAKE MINES LTD. DWL CREEK, B.C.

## INTRODUCTION:

The Dwl Creek property consists of 146 claims located in the Pemberton section of the Lillooet Mining Division. They form a northwesterly oriented block straddling Dwl Creek, five miles north and northeast of Pemberton, B.C.

Pine Lake Mines Ltd. hold by location the following claims. (From W. Bacon's report dated March 3, 1970.) (Map 1.)

Name of Claim	Record Number	Expiry Date
Dwl 1 & 2 Dwl 3 Dwl 4 Dwl 5 Dwl 6 Dwl 7-8 D.C. 1-6 D.C. 43-48 K.B. 1-8 K.B. 9-14 D.L.N. 1-16 D.L. 1-2 D.L. 3-12 D.C.S. 1-12 D.L.S. 3-12 D.L.S. 13-30 D.L. 13-22	30908-30909 28053 30910 28055 30911 28057-28058 23736-23741 23847-23852 23853-23860 23887-23892 29614-29629 29588-29589 30888-30897 29597-29608 30898-30907 31957-31974 31975-31984	August 11, 1970 June 20, 1971 August 11, 1970 June 20, 1971 August 11, 1970 June 20, 1971 May 13, 1970 June 18, 1970 June 18, 1970 July 15, 1970 December 29, 1969 November 13, 1969 August 11, 1970 November 23, 1970 September 23, 1970
B.O. 1-12 O.C.S. 15-17	31195-31197	September 26, 1970
D.L. 3-12 D.C.S. 1-12 D.L.S. 3-12	30888–30897 29597–29608 30898–30907	August 11, 1970 November 27, 1969 August 11, 1970
B.O. 1-12	31985-31996	September 23, 1970
D.C.S. 18-19	32215-32216	September 26, 1970

#### ACCESS and TOPOGRAPHY:

Access is by 5.5 miles of dirt road that extends up Owl Creek from the Pemberton-D'Arcy highway, 7 miles from Pemberton.

Owl Creek follows a deeply incised valley in rugged coast range topography. Vegetation is dense and extensive. Relative relief on the claim group is about 4,000 feet. Near Little Owl and Owl Lakes, north of zone C shown on Map 2, the relative relief is 500 to 700 feet. Outcrops, according to W. Bacon, are scarce except in the creek bottom.

#### WORK TO DATE:

Mineralization on the A zone (originally the Copper Queen) is recorded as first being discovered in 1913. Between this date and 1928 an adit was driven 217 feet at N 50° E beneath the exposed copper mineralization. In 1928-29 Britannia Mining and Smelting Co. drilled three short holes on the Copper Queen. In 1963 the Mining Corporation of Canada Ltd. staked claims to cover the known mineralization on Owl Creek and built a road to the property. In addition, a program of geological mapping, trenching and silt sampling was completed. In 1967 the claims were turned over to the staker, L.R. Harrison of Garibaldi.

Pine Lake Mining Co. Ltd. optioned the property from L.R. Harrison and J.S. Scott in 1968. Since acquiring the ground this company has added to its holdings, completed one 958 foot drill hole on zone A and 10 holes totaling over 6,500 feet on zone C, as well as a soil, magnetometer and I.P. survey on the C and D zones. -2-

#### **RESULTS OF WORK TO DATE:**

The drill hole on zone A returned 600' of 0.2% Cu. Channel sampling by Mining Corp. in the adit gave values of 0.33% Cu across 217', of which 90' averaged 0.41% Cu. The terrain is steep and values low, precluding the possibility of open pit mining, thus eliminating the A zone as containing a potential orebody.

Drilling on the C zone indicates the presence of a zone 1,200' X 200' with an average grade of about 0.26% Cu and less than 0.01% MoS\_. D.D.H. C-1 had 330' of 0.399% Cu between 320' and 650'. Sections sampled in D.D.H. C-2 between 150'-220' and 560'-690' gave values of 0.402% Cu and 0.539% Cu respectively. The vertical extent has not been established, however, drill holes C-1, 9 and 10 indicate a shallow northeasterly dip to the mineralization and a marked decrease in width with depth. Drill holes C-7 and C-4 essentially delineate the horizontal limits of the zone. This drilling apparently was done to test an I.P. anomaly that was in part coincident with a geochemical anomaly. Since the ground slopes are not particularly steep, the geochem anomaly should not be displaced appreciably down slope from the source. The drilling was done within the 100 ppm Cu contour. It might, therefore, be considered to have tested source of the copper. There are two parallel I.P. highs about 1,200 feet apart, trending in a northwesterly direction and lying on the east side of Owl Creek. The lower anomaly, which is coincident with a geochemical anomaly, has been drilled and found to be mineralized. The more easterly lying anomaly has not been tested. It is coincident with a magnetically higher zone and may be related to a perticular rock type rather than sulphide mineralization. There is no coincident or adjacent geochem anomaly with

this high I.P. zone, with the exception of scattered highs. There does not appear to be any further targets here for investigation.

On the D zone there is a geochem copper anomaly that has not yet been tested by drilling. Adjacent and uphill from the copper high area is a northwest trending I.P. anomaly. This is a potential target that warrants investigation by diamond drill. The high copper values in the soils, although similar in value to those on zone C, are more persistent over a broader area. Width of the I.P. anomaly is between 200'-400' averaging about 300'. This zone has an indicated length of 1,600' and is open to the southeast. Pyrite is likely the greatest contributor to the high I.P. values. However, the presence of copper is indicated by the geochem anomaly, the amount of which can best be found by drilling.

## GENERAL GEOLDGY:

Very briefly the geology consists of a northwesterly trending belt of volcanic rocks with minor intercalated sedimentary units. These are enclosed by diorite and quartz diorite rocks that form part of the coast range intrusive complex. Remnants of a sedimentary unit form a discontinuous belt to the southwest of the area being explored. The volcanic rocks dip steeply to the northeast.

From mapping by Pine Lake Mining Co. Ltd. silicification and dioritization of volcanic rocks is prevalent, epidote and chlorite is common. The diorite is silicified, and cut by numerous quartz veins; epidote and chlorite alteration is evident.

Mineralization consists of pyrite (10 times as prevalent as chalcopyrite) and chalcopyrite as disseminations and bunches on

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fractures and with quartz. Molybdenite is sporadic and weak, bornite is very minor.

Owl Creek is a topographic feature that is an expression of a northwesterly fault zone. This is confirmed by drilling. North of Little Owl Lake there is a marked E-W feature that may well represent a second fault direction. A third Northerly set is indicated by topographic lineations and has been mapped by J.S. Scott, Consulting Geologist. These three projected faults intersect between Little Owl and Owl Lake and should provide a favourable site for mineral deposition. No work has been done in this region - a combined soil sampling program and magnetometer survey is warranted.

### **RECOMMENDATIONS:**

Work to date juatifies further investigation along this mineralized belt. As the next phase in exploration, the following is recommended:

- 1. Geological mapping 1"=400' of the claim block.
- 2. A-zone no further work.
- B-zone no further work until a detailed geological investigation has been made here.

4. C-zone - no work.

5. D-zone - two 800' B.Q. wireline drill holes located at 11 NW - 16 SW and 19 NW - 16 SW, inclined at -45° to -55° and drilled southwest. This would test both the I.P. and geochem anomalies. Other holes would be planned if initial holes returned favourable assays. -5-

6. Northwest zone between D-zone and Dwl Lake: Complete a

soil and magnetometer survey on a 3,000' by 8,000' grid with lines spaced 400' apart and stations at 200' intervals. The base line should be well cut with cross lines flagged. Any anomalous areas picked up by the soil survey could then have lines cut and an I.P. survey completed.

7. Complete road up to the D-zone.

## Estimated Cost of Program:

1.	Geological Mapping & Supervision	\$ 3,000
2.	Geochemical Survey Clearing & Flagging lines Soil Sampling Testing Samples	450 300 600
З.	Geophysics Magnetometer 12 line miles I.P. Survey: assume some targets from Geochem work	300 5,000
4.	Diamond Drilling 2 - B.Q. holes - 800† long	24,000
5.	Road Rehabilitation & Camp Maintenance	3,000
6.	Contingencies	3,665
	Total	\$ 40,315

It is recommended that we approach Pine Lake Mining Ltd. and propose an arrangement whereby the first year's payment would be the above program. Other terms could be negotiated on the basis of their proposal, providing the cost of Clause 1 of their proposal is not too high.

John & Rund

John C. Lund, P. Eng.

JCL/jm