PHOENIX COPPER COMPANY LIMITED (N.P.L.)

November	7.	1962	
LAPRICE COLLEGE CONTRACTOR	1 9	side of her time	

TO Mr. P.R. Matthew, Manager

FROM Mr. George Addie, Geologist

801951

SUBJECT General Area: Motherlode and King Mides camps

General:

Road traverses were made to the above camps to obtain the geological settings of the ore bodies.

- The Motherlode, Sunset, Marguerite and Morrison mines all have magnetic ore. The Big Copper, King Soloman, Grayhound, and Buckhorn mines do not seem to have any magnetite.
- The aeromagnetic map does not indicate any of these mines. However, the ground magnetic map of the Motherlode and Sunset mines made by "Surety Gils and Minerals" clearly indicates the ore zones.
- 3. The Lone Star (Washington State, U.S.A.) and Lexington mines both have magnetic ores. (The ground magnetic survey of the Lexington Mine by "King Midas Mines Ltd," shows an anomaly in this area)

Motherlode Mine:

The ore is located between long thin fingers, or apophyses, of granodicrite which has intruded the limestone. These are bodies have 15% to 25% magnetite. (F.H. fredrick's figures) Thus because of the many diorite fingers and the magnetic characteristic of the ore, the chances of finding new ore are good. The Surety Oil ground magnetometer map shows a number of anomalies with proposed drilling, but it is not known if they completed the program. A few drill logs available seem to be very rough, perhaps logged by the driller? However, four of these holes in the railway grade anomaly were all in ore. Taking the anomaly as the length, the ore zone has a strike of N84°E at - 52°N, and using a tonnage factor of 10 (used in all Motherlode ore calculations?) there may be 134,750 tons in a block 700° x 125° x 15.4° grading a little better than 1% Cu.

The depth and West end of this ore zone remains to be proved by drilling. Probably the West end joins the shaft ore body which according to F.H. Fredrick's report has 430,000 tons of 1.02% Cu. (And I understand from the Caretaker that it has not been mined) Thus together there may be 564,700 tons of 1% Cu.

PHOENIX COPPER COMPANY LIMITED (N.P.L.)

November 7, 1962

TO Mr. P.R. Matthew, Manager

FRA Mr. George Addie, Geologist

SIJECT General Area: Motherlode and King Midas camps (Cont'd)

King Midas Camp:

The King Mides Mine has just (Oct 31) intersected a 1.5' wide, well mineralized vein. Assay - Ag. 29.30 oz/T

Au 0.07 oz/T Cu 0.75%

As they are only approximately 25° from surface (the length is not known) the tonnage is expected to be small. No doubt other veins with high grade pockets will be found but still, the tonnage is as yet too small to warrant any active participation by us.

This mine, owned by Mr. Patrick McDonald, controls the "City of Paris", "#7 Mine" and "Lexington" Mines.

The Lexington mine has the same rock types as the Lone Star mine, and, on surface has more copper staining. Magnetite beds and dykes are present. A magnetic dyke in the mine had 0.25% Cu and a magnetic talc schist over the portal assayed 1.12% Cu. Magnetometer, Geochemical and I.P. surveys have been completed by King Midas Mine. I feel that this area warrants further work, certainly the magnetic anomaly at the Lexington mine should be examined and drilled.

Conclusions:

Motherlode Mine: If, 1. The shaft ore block has not been mined

2. We can mine underground 1% Cu.

3. We can get control of the Motherlode Mine under reasonable conditions --- we should do so

Lexington Mine: If the Lexington Mine area has not been thoroughly examined by us, and if we can obtain a reasonable option (perhaps based on development i.e. diamond drilling)—we should do so

New Papers:

"Addendum to Mine Composite Assay Study"

Using the gold and silver graphs from the last paper, the theoretical

PHOENIX COPPER COMPANY LIMITED (N.P.L.)

|--|

TO Mr. P.R. Matthew, Manager

FROM Mr. George Addie, Geologist

SUBJECT General Area: Motherlode and King Midas camps (Cont'd)

silver/gold ratio for each 0.1% Cu. has been found. The resultant curve fits the form of Newton's "law of cooling" equation. It is therefore concluded that the copper grade is directly related to the temperature of deposition. (Note a check on the Motherlode and Summit camps shown a similar relationship between copper and temperature)

Yours very truly,

George Addie, Geologist.

GA/rmt

SCALE !": 2 mi.

OCTOBER VEHICLE TRAVERSES