The President and Directors,
Consolidated Manitoba Mines Lim:
114 East 90th Street,
New York City 10028, New York,
U. S. A.

Gentlemen:

This report describes the results of a program of geophysical survey carried out on your property located in Bond Township, Timmins area, Ontario. The results are depicted on the plan accompanying this report, plotted to a scale 1" = 200'. One copy of the same was submitted to you previously.

PROPERTY, LOCATION AND ACCESS -

The property consists of the following 16 unpatented mining claims:

L-96215 to L-96226, inclusive

L-97634 to L-97637, inclusive

The claim group covers the north halves of Lots 4, 5 and 6, Concession 2, and the south quarter of Lots 4 and 5, Concession 3, Bond Township, Larder Lake Mining Division.

The claim group is located immediately to the south of Moose Lake, at about 27 miles due east of Timmins.

Access was readily had from Matheson on the Ontario Northland Railway and Highway 11, via Highway 101 west for about seven miles, and follow a side road south to Lot 3, Concession 2 of Bond Township. This side road and other bush roads in the area are accessible only by snowmobile in the winter.

GENERAL GEOLOGY -

Geology of Bond Township is little known and gold occurrences are known only in the neighbouring townships. The property is mostly covered by muskeg and clay hills, with a small outcrop of weathered Keweenawan diabase porphyry, and another small outcrop, consisting of altered and schistose Keewatin lavas, cut by two north-south striking dikes of feldspar porphyry. At about one mile to the northeast of the property, there is a small outcrop which consists of greywacke with local bands of conglomerate. The beds are vertical and strike east-west. The Keewatin lavas and associated sediments are profoundly affected by an Algoman granite batholith, located at about five miles to the southeast of Egan Township. The porphyritic and acidic dikes found in the area are the truncated aphophyses of this batholith. In the general area, there are great quantities of granitic material, ephidote and quartz, injected into the sheared zones of the Keewatin lavas.

AEROMAGNETIC DATA -

Aeromagnetic map 294G, G.S.C., showed the occurrence of an elongated magnetic zone, striking northeasterly across several townships. This magnetic zone indicates the occurrence of a sizeable and regional Keweenawan diabase dike. In the property area, the aeromagnetic data showed that the inferred dike is off-set by a series of magnetic depressions which are apparently indicating an east-westerly fault or shear zone. This is the only structure across the dike within

a distance of over 34 miles along the dike from Carman to Beatty Townships. It is probable that this inferred fault or shear zone is pre-Keewenawan, possibly Keewatin.

SURVEY DATA -

The geophysical survey was carried out along picket lines cut at 400 foot intervals, north-south, to cover the claim group. A total of 15.86 miles of picket lines was cut and chained for a combined magnetic and electromagnetic survey, with stations established at 100 foot intervals. A total of 14.35 miles of magnetic survey and the same mileage of electromagnetic survey were carried out.

The details on instrumentation, etc., are given on the appendix accompanying this report.

SURVEY RESULTS AND INTERPRETATION -

The magnetometer survey outlined on the ground the two strong magnetic zones, which registered readings from 1000 gammas to about 3000 gammas against background readings in the order of 600 gammas to 800 gammas. These anomalies are apparently indicating the regional diabase dike which is broken off by east-westerly structures in the area. Weaker magnetic indications indicated the probable occurrence of two small north-southerly diabase dikes between Lines 16W - L20W and L40W - L48W. The areas of background reading are inferred as indicating basic to intermediate volcanics. Most of the magnetic low areas

with readings from 300 gammas to 500 gammas are inferred as indicating the occurrence of intermediate to acidic volcanics. North-southerly striking Algoman feldspar porphy dikes, which occur in numbers to the east of the property, may occur in the north-southerly magnetic low areas such as that outlined between L24W and L28W and along L16W, north of the strong magnetic anomaly.

The electromagnetic survey encountered several strong reverse cross-overs along parts of the south magnetic zone. These are typical of Ronka EM-16 responses over magnetic diabase intruding rocks with different conductivities at shallow depths. The north and weaker magnetic zone is apparently covered by heavy overburden which blanks the electromagnetic responses.

A weak single point electromagnetic conductor, encountered at 275 feet north of L4W, is inferred as indicating a shear or fault structure with some topographic effects and possibly minor conductive minerals within the diabase. Weak magnetic dipole effects, with a slight shift to the north of electromagnetic "reverse cross-overs", are registered to the immediate north and northeast of this weak conducting point.

There is no other electromagnetic conductor encountered by the survey. An electromagnetic anomaly, encountered between 700 feet north to 900 feet north, L48W, is inferred as due to a small north-southerly dike. The negative electromagnetic indications adjoining to the south of this are apparently partly due to topographic effects.

CONCLUSIONS AND RECOMMENDATIONS -

The survey has successfully outlined on the ground the aeromagnetic zones which are due to diabase dikes. In addition to having other indicated small cross-cutting dikes on the property, the geophysical data showed that the country rocks intruded by the diabase dikes have differences in magnetic properties and conductivity. However, there is no indication of a strongly conductive body at shallow depths.

For testing the possibilities of having gold mineralization on the property and for assessment work purposes, the writer recommends to drill a hole at L12W, 250 feet north, drill toward north at 45° dip, to test the geology north of a strongly magnetic diabase and to test a bow shaped low magnetic zone at a considerable depth. This hole may be extended to about 800 feet if interesting rock types are encountered. Other drilling may be designed to test the south contact zone of this large diabase or the magnetic low area located at the southwest part of the property.

Respectfully submitted,

CANA EXPLORATION CONSULTANTS LIMITED

S. S. Szetu, Ph. D.
Consulting Geologist

SSS:rk
Encl.

Toronto, Ontario
April, 1969.

Appendix - Details of Instruments, etc.

(a) Type of instrument:- 1) Electromagnetic survey - Ronka EM-16, Serial #5, manufactured by Geonics Limited of Toronto.

2) Magnetometer survey: Fluxgate MF-1 magnetometer, Serial #30536, manufactured by Sharpe Instruments of Canada Limited, Toronto.

(b) Specifications:- 1) Ronka EM-16 - horizontal primary field from VLF transmitting station NAA, Cutler, Maine, freq. 17.8 kHz, selected by plug-in units; vertical measured field with in-phase and quadrature components with ± 1% accuracy of readings, ± 150% range of measurements for in-phase and ± 40% for quadrature; null-detection by an earphone, real and quadrature components out-put read-out from mechanical dails; size 16 x 5.5 x 3.5 in.; receiver powered by six size AA penlight cells.

2) Fluxgate MF-1 magnetometer - maximum sensitivity = 20 gammas on 1,000 gamma range; ranges ± 1,000, 3,000, 10,000, 30,000, 100,000 gammas; batteries: 12 x 1.5 V flashlight "C" cells.

(c) Survey procedures:- For the Ronka EM-16 survey the proper transmitting station (NAA) was selected with coil parallel to the primary field. On all stations established on the ground, readings were taken with operator facing easterly along lines of the primary field. Both in-phase and out-of-phase readings were taken in percentage.

For magnetic survey, base-check method was used with ten control stations established on the base line and at various locations as shown on the plan.

BOND TOWNSHIP

LARDER LAKE MINING DIVISION

DISTRICT OF COCHRANE

SCALE 40 CHAINS TO ONE INCH

N

STOCK TWP.

VI

V

IV

III

CURRIE TWP.

MACKLEM TWP.

Moose Lake

L 44199

L 96226 L 96225 L 96220 L 96219

L 96222 L 96221 L 96218 L 96217 L 96216 L 96215

L 96224 L 96223 L 97637 L 97636 L 97635 L 97634

L 214093 L 214094

L 214099 L 14100

L 214085 L 214086

L 214089 L 214090

L 214095 L 214096

L 214101 L 214102

L 214087 L 214088

L 214091 L 214092

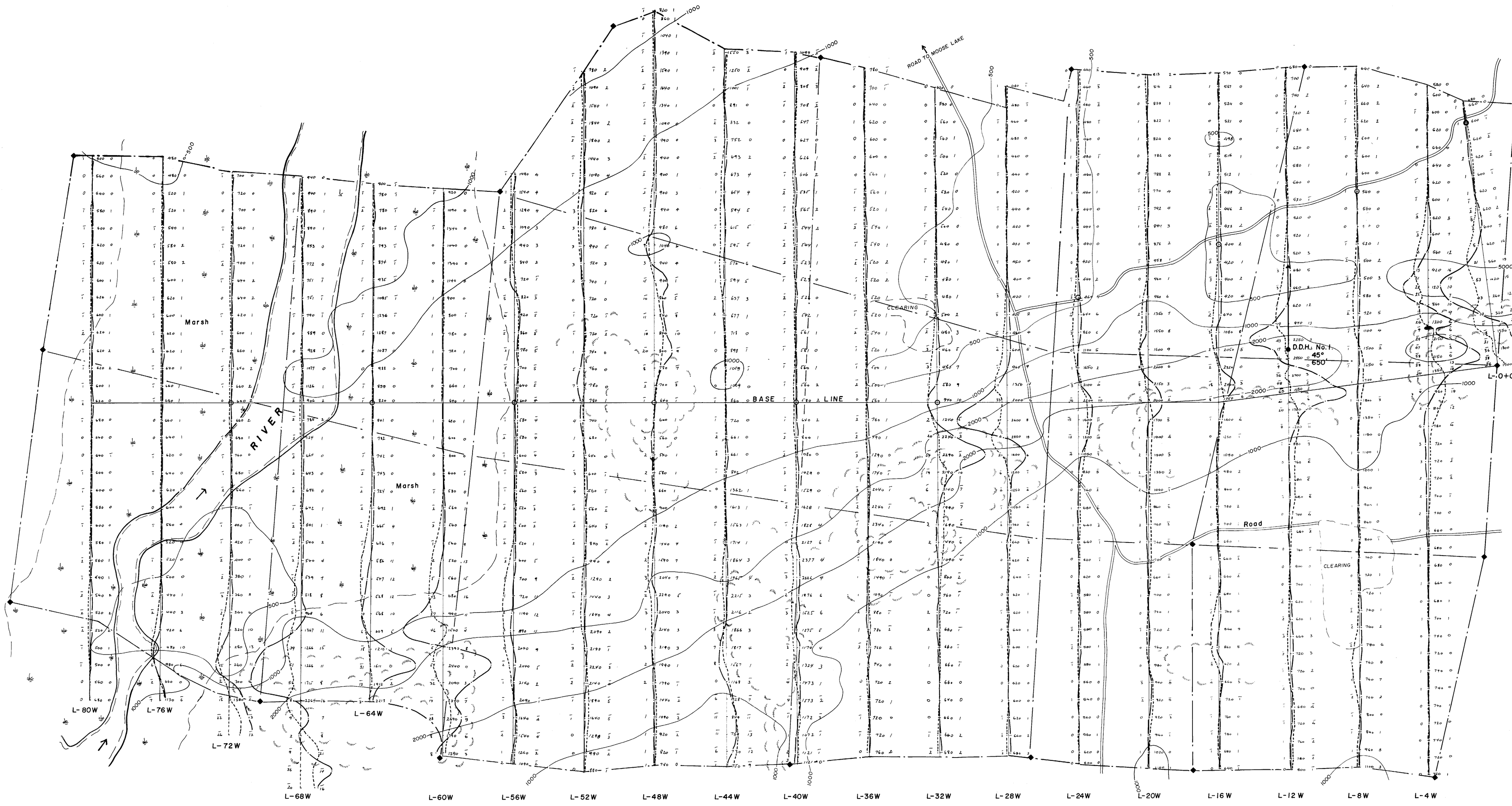
L 214097 L 214098

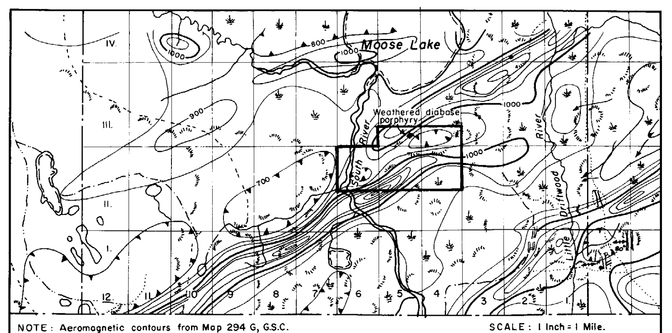
L 214103 L 214104

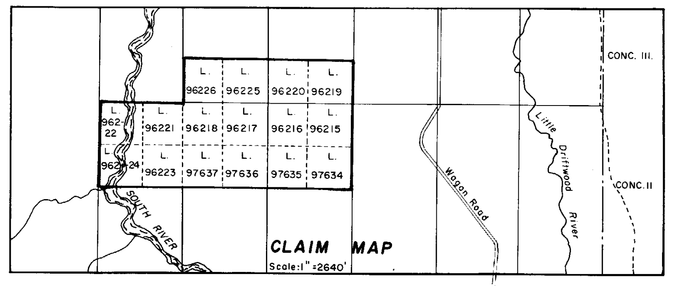
L O 4024

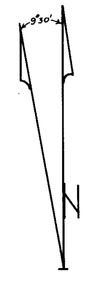
9 8 7 6 5 4 3 2 1

NOTE









LEGEND

- Claim post and claim boundary.
- Higher ground
- Marsh, swamp.
- Picket line cut and chained.
- Magnetic readings obtained and plotted at the east side of picket lines.
- Magnetic control station.
- Magnetic contour.
- Below 500 gammas.
- 500 – 1000 "
- 1000 – 2000 "
- Above 2000 "

- Electromagnetic readings obtained by using a RONKA E.M. – 16 instrument.
- Operator facing north, transmitter station: N.A.A.
- In-phase readings plotted to west, out-of-phase readings plotted to east of picket lines.
- Scale of profile: 1/10" = 4% phase change.
- Electromagnetic conductor.
- D.D.H. Proposed diamond drill hole.

GEOPHYSICAL SURVEY DATA

CONSOLIDATED MANITOBA MINES LIMITED.

BOND TOWNSHIP.

LARDER LAKE MINING DIVISION,
ONTARIO

SCALE: 1"= 200' APRIL 1969

CANA EXPLORATION CONSULTANTS LTD.