

FRED J. HEMSWORTH  
MINING ENGINEER

TELEPHONE MUTUAL 4-7734

616 CREDIT FONCIER BLDG.  
850 WEST HASTINGS STREET  
VANCOUVER 1, B.C.

1707 B

PART 2

MAGNETOMETER REPORT

on the

LEX-B GROUP OF MINERAL CLAIMS

FOUR MILES SOUTH of GREENWOOD, B.C.

49° 118° S.E.W

FIELD WORK DONE FOR

LEXINGTON MINES LTD.

between

APRIL 25 - AUGUST 15, 1968.

by

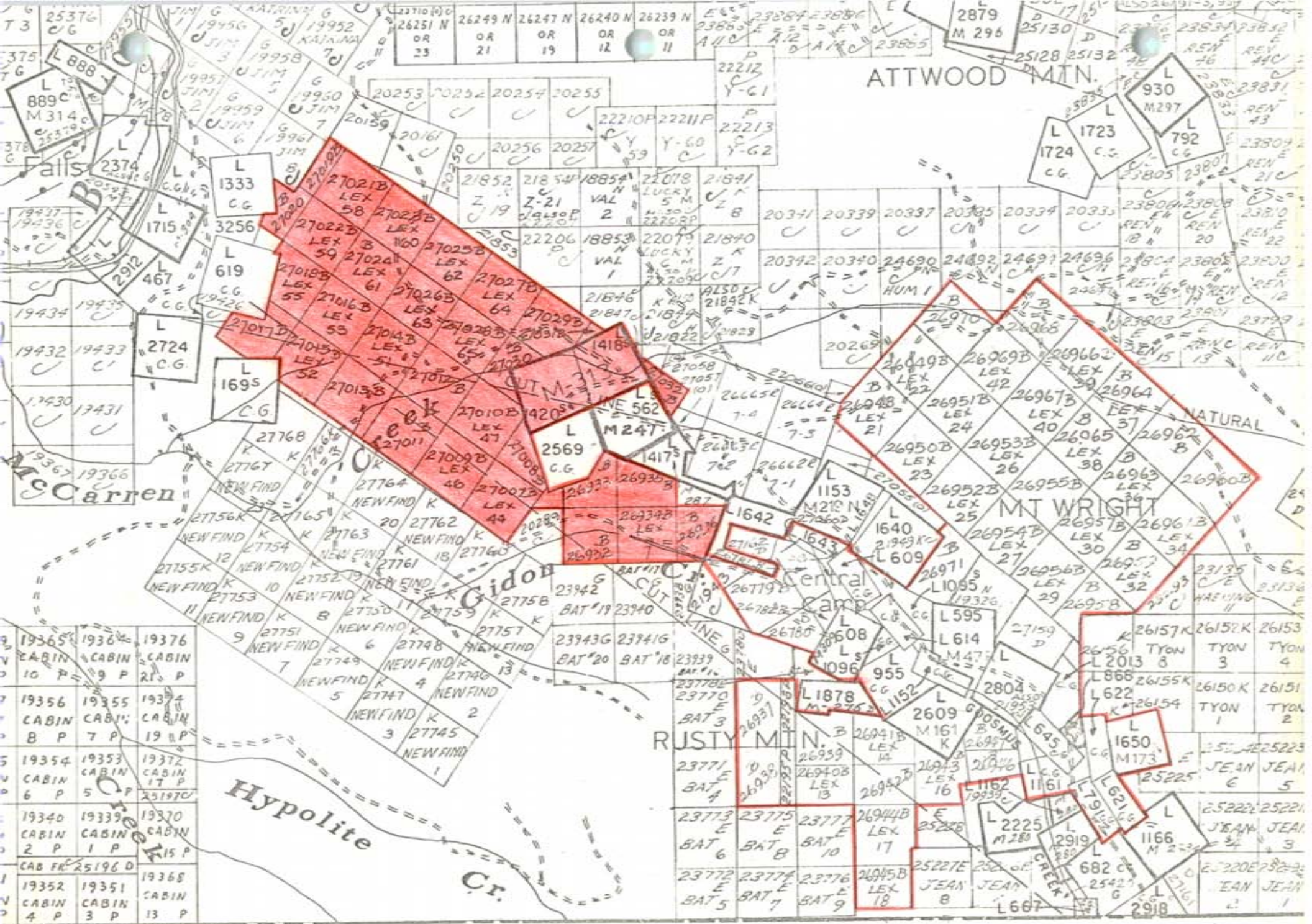
F.J. HEMSWORTH, P.ENG.

November 18, 1968.

F.J. Hemsforth, P.Eng.,  
Consulting Mining Engineer.

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International Boundary

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**REPORT**  
**on the**  
**MAGNETOMETER SURVEY**  
**of the**  
**Lex-B Group**  
**LEXINGTON MINES LTD.**  
**GREENWOOD, B.C.**

**INTRODUCTION**

A magnetometer survey was carried out on the Lex-B group of mineral claims at Greenwood, B.C., for Lexington Mines Limited, during the 1968 field season. The company retained the writer to supervise the field work and to prepare the maps and reports on the survey.

Magnetometer work was done as part of an exploration program aimed at finding bodies of copper mineralization. Over 25 million tons of copper ore have been mined from the Greenwood-Phoenix camp. Most of the orebodies were associated directly or indirectly with magnetite. In addition it was felt that a magnetic survey would be of assistance in plotting the geology of areas covered by overburden.

This report on the magnetic survey, and the accompanying map, are submitted in compliance with the Mineral Act, claiming magnetometer work for assessment purposes on the group of claims outlined in the text of the report.

LOCATION

The Lexington Mines property is situated at the headwaters of McCarren creek, between one and three miles east of Boundary Falls, B.C. The Lex-B group of claims are at an elevation of between 3,000-4,000 feet above sea level. Logging roads provide access to all sections of the property. The geographical position is Latitude 49°02' North, Longitude 118°40' West.

PROPERTY

Particulars of the claims are as follows:

<u>LOCATED CLAIMS</u>	<u>RECORD NOS.</u>
Lex 5-9	26932-26936
Lex 44-68	27007-27031
Lex 70	27032
<u>CROWN GRANTS</u>	<u>LOT NOS.</u>
55	1420 (M-313)
66	1418 (M-313)

All claims are contiguous and are situated in the Greenwood Mining Division.

The old survey posts of Lot 1418s and Lot 1420s, held by Lexington Mines under Mineral Lease M-313, were not found, and their position is not shown on the plan. Similarly the posts for Lot 2569, Lot 562 and Lot 1417s, not held by the Company, were not found, and consequently could not be shown on the plan. However, it is considered that these old crown-grants are situated in the middle of the Lex-B group and are totally encompassed by the Lex claims.



## GEOLOGY

Argillaceous sediments and volcanics have been intruded by bands of serpentine and stocks of granodiorite along a northwest strike. On other parts of the property these bands of serpentine have shown erratic magnetic highs.

There are two types of mineralization, quartz-talc veins, containing precious metals, which occur along contacts of serpentine and granodiorite, and disseminations of copper and iron sulphides which occur in dacite and in the serpentine close to the dacite contacts.

## MAGNETOMETER SURVEY

### Survey of Claims and Grid

The location lines of the claims, which run in an east-west direction, were cut out and surveyed with Brunton compass and chain. Survey stations were established at 200-foot intervals along these baselines. At each station, sidelines were run north and south to the property boundaries. Magnetometer readings were taken at 200-foot intervals along these north-south sidelines, and marked with flagging tape on which was printed the station number. The grid thus formed had 200-200 foot intervals as shown on the magnetometer survey plan which accompanies this report.

### Instrument

A Sharpe magnetometer, model A2, was used for this survey. This is a precision instrument having a sensitivity of about two gammas, and incorporating a built-in aligning compass and temperature compensating device.

The instrument was set-up, levelled, oriented to magnetic north, and a reading taken at every 200-foot station throughout the claims. A total of 1,460 magnetometer field readings were taken. Readings were taken from a base station, morning and evening, and all readings were corrected for day to day variations in the earth's magnetic field. No diurnal corrections were made as these were not considered significant. Magnetic intensities were

calculated by multiplying the readings by 20.2 gammas per scale division, the constant for this instrument. As some of the readings were minus, an arbitrary figure, 2,000 gammas, was added to all readings for convenience in mapping.

### Mapping

The results of the magnetometer survey are shown on the 300 feet to one inch magnetometer map, enclosed in the report envelope. The map was colored in order to emphasize the distribution of readings which might indicate anomalies.

Readings of less than 2,000 gammas have been colored yellow. Since 2,000 gammas were added to all readings, the yellow portions were negative or minus readings and represent magnetic lows.

Readings between 2,000 gammas and 4,000 gammas were not colored and show white on the map. These are the normal readings for the area and are considered as average background.

The higher readings are distinguished by pink and purple colors. From 4,000 to 6,000 gammas are colored pink, and readings over 6,000 gammas or magnetic highs are colored purple.

### Interpretation

A band of west-striking anomalous magnetic highs occur on the east section of the map, with a few spotty highs on the remainder of the claims. The interesting area covers about five mineral claims, the Lex 5 - Lex 9.

The magnetic highs are unlikely to be caused by bodies of magnetite since magnetite would give higher readings, in the 10,000 to 30,000 gamma range.

The following conclusions can be drawn from the results of the magnetometer survey:

1. There are no large bodies of magnetite iron ore on the claims.

2. There are no large amounts of accessory magnetite associated with copper sulphides within the claim boundaries.


3. The magnetic highs probably represent lenses of Mesozoic serpentine which intrudes Paleozoic greenstones and greywackes. On other sections of the Lexington Mines property bodies of serpentine have been responsible for readings of similar amplitude. In these places copper mineralization has been found in the andesite (dacite), and in the serpentine near the contact with the volcanics.

RECOMMENDATIONS

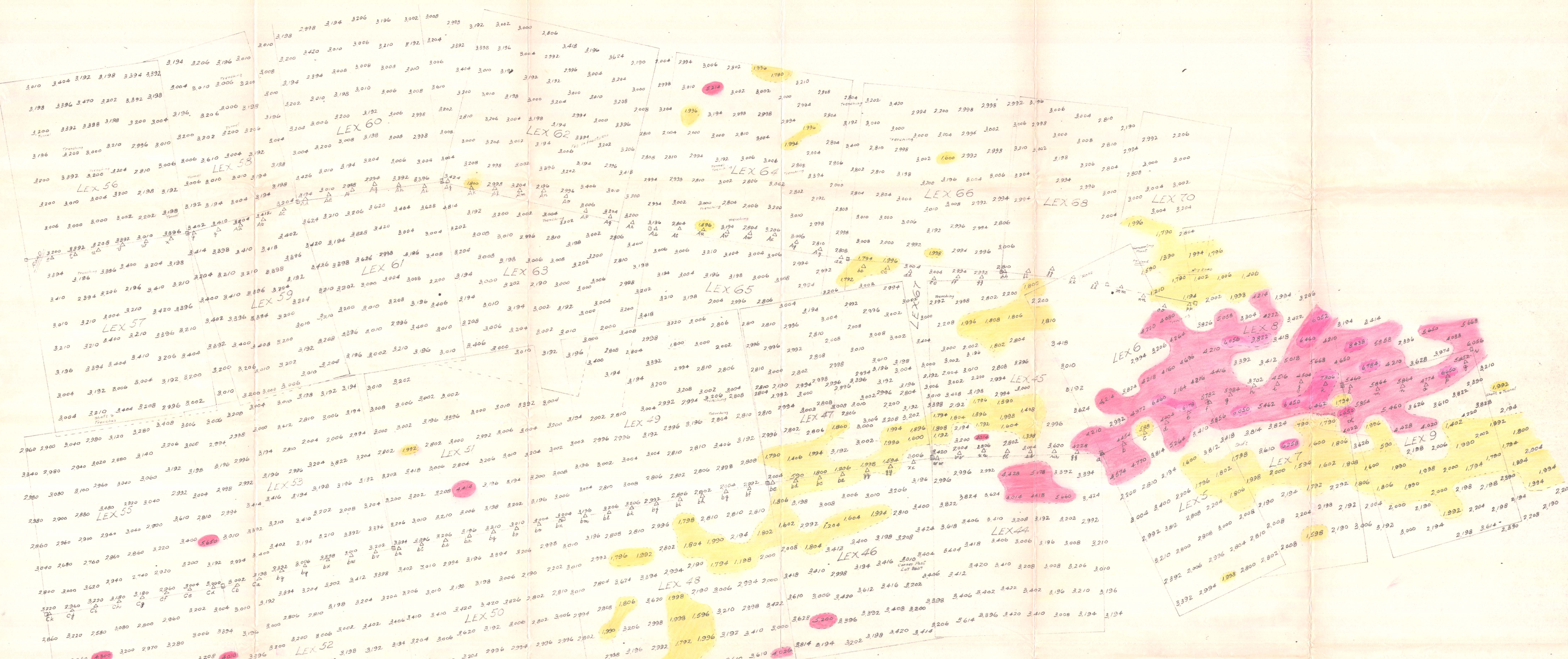
Geological mapping of the rock outcrops on Lex 5-9 claims is recommended. If the magnetic highs are associated with a serpentine-dacite contact, a bulldozer should be employed to trench and strip the overburden to search for bodies of copper mineralization.

Respectfully submitted,

November 18, 1968.

  
F. J. Hensworth, P. Eng.,  
Consulting Mining Engineer.





MAGNETOMETER SURVEY  
 LEXINGTON MINES LTD  
 GREENWOOD, B.C.  
 SCALE 1 in = 300 ft.      NOVEMBER, 1968

COLOR LEGEND  
 LESS THAN 2,000 GAMMAS - YELLOW  
 2,000 GAMMAS TO 4,000 GAMMAS - WHITE  
 4,000 GAMMAS TO 6,000 GAMMAS - PINK  
 GREATER THAN 6,000 GAMMAS - PURPLE

NOTE: 2,000 GAMMAS HAS BEEN ADDED TO ALL READINGS TO ELIMINATE NEGATIVE VALUES.

Department of  
 Mines and Petroleum Resources  
 ASSESSMENT REPORT  
 NO. 1707 MAP. 1  
 PART 2

TO ACCOMPANY REPORT OF J.F. HEMDEWORTH, P.E.N.G.

1707