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MINING ENGINEER

TELEPHONE MUTUAL 4-7734

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

1707 A

PART 1

REPORT

on the

GEOPHYSICAL and GEOCHEMICAL SURVEYS

of part of the

LEX-C GROUP of MINERAL CLAIMS

FIVE MILES SOUTH of GREENWOOD, B.C.

49° 118° S.E.^w

FIELD WORK DONE FOR

LEXINGTON MINES LTD.

between

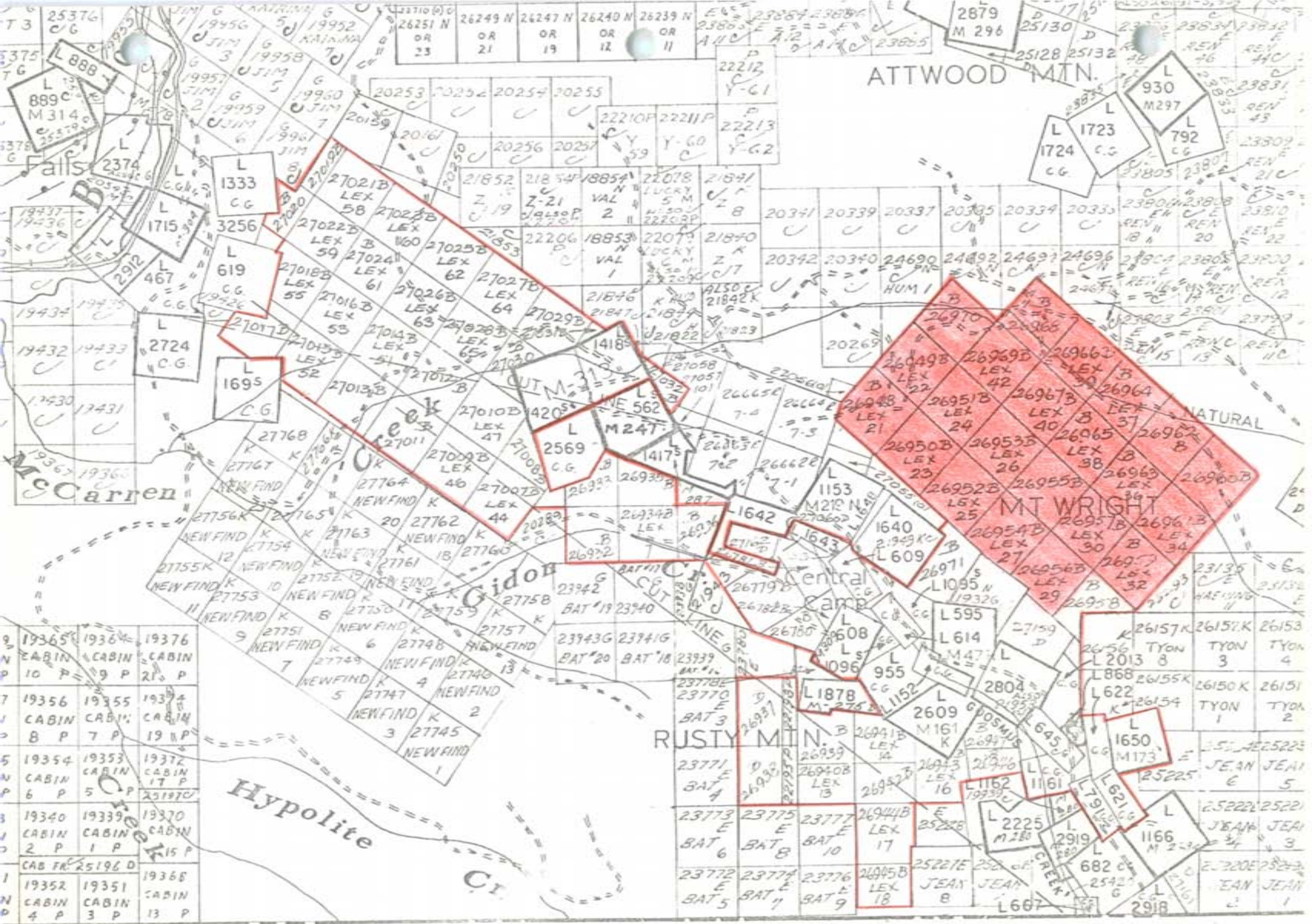
AUGUST 16 - OCTOBER 2, 1968.

by

F.J. HEMSWORTH, P.ENG.

TABLE OF CONTENTS

<u>Subject</u>	<u>Page</u>
CLAIM MAP.....	Frontispiece
INTRODUCTION.....	1
LOCATION.....	2
PROPERTY.....	2
GEOLOGY.....	2
PROCEDURE	
-Survey of Claims and Grid.....	3
-Magnetometer Survey.....	3
-Interpretation of Magnetometer Results.	4
-Soil Sampling.....	4
-Interpretation of Geochemical Results..	5
GEOPHYSICAL SURVEY PLAN.....	Envelope #1
GEOCHEMICAL SURVEY PLAN.....	Envelope #2



International Boundary

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REPORT
on the
GEOPHYSICAL and GEOCHEMICAL SURVEYS
of part of the
Lex-C Group
LEXINGTON MINES LTD.
GREENWOOD, B.C.

INTRODUCTION

During the 1968 field season magnetometer and soil sampling surveys were conducted on part of the Lex-C group of mineral claims near Greenwood, B.C., for Lexington Mines Ltd. The writer, Fred J. Hemsworth, P.Eng., acted as consulting engineer for Lexington Mines Ltd., and examined the property on several occasions during the progress of the work.

It had been intended to cover all the claims in the Lex-C group with the dual surveys. However, due to inclement weather and difficulties with personnel, this was not feasible.

Magnetometer and soil sampling work was done as part of an exploration program aimed at finding bodies of copper mineralization.

This report and the accompanying maps, are submitted in compliance with the Mineral Act, claiming geophysical and geochemical 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 three and four miles east of Boundary Falls, B.C. The Lex-C group of claims are situated on Mt Wright at an elevation of between 3,500-4,500 feet above sea level. Logging roads provide access to most sections of the property. The geographical position is Latitude 49°02' North, Longitude 118°37' West.

PROPERTY

Particulars of the Lex-C group of claims are as follows:

<u>Name</u>	<u>Record Nos.</u>
Lex 21-30	26948-26957
Lex 32-43	26959-26970

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

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 contact.

PROCEDURE

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 claim boundaries. Magnetometer readings and soil samples 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 has 200-200 foot intervals as shown on the plans which accompany this report.

Magnetometer Survey

A fluxgate magnetometer Model MF-1 was rented from Seigel Associates of Vancouver. This is a hand held instrument that needs only coarse levelling and no orientation. Features such as direct reading of gamma values and the possibility of accurate zero setting at base stations assures simplicity of operation. The MF-1 fluxgate type vertical component magnetometer has a maximum sensitivity of 20 gammas per scale division and readability of 5 gammas ($\frac{1}{4}$ scale division), on the 1,000 gamma range.

Since other parts of the property had been surveyed with a Sharpe A-2 magnetometer, it was necessary to take a series of readings from the same stations with both magnetometers to establish a conversion factor. The conversion factor was found to equal MF-1 magnetometer readings plus 700 gammas. Also, since 2,000 gammas had been added to all the A-2 magnetometer readings in order to eliminate minus values, 2,700 gammas were added to all the readings on the magnetometer map.

The results of the magnetometer survey are shown on the 300 feet to one inch plan, 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 4,000 gammas were not colored and appear white on the map. Readings between 4,000-5,000 gammas are colored yellow; 5,000-7,500 gammas pink; 7,500-10,000 gammas red and over 10,000 gammas or magnetic highs are colored purple.

Interpretation of Magnetometer Results

A study of the colored magnetometer survey plan shows generally uniform magnetic intensities of between 2,000-4,000 gammas over most of the map area. Exceptions to this are on the southwest corner and on the eastern end of the claim group. On the southwest corner, the higher magnetic intensities (up to 6,000 gammas) are probably caused by small lenses of serpentine which are sporadically highly magnetic. On the east end of the property there is a large body, almost a mountain of serpentine, which probably accounts for the higher magnetic readings in that area. As both the quartz veins and bodies of copper mineralization are associated with the greenstone and serpentine contacts, prospecting along the borders of this large serpentine stock is recommended. In addition the surveys should be finished and the balance of the claims in the Lex-C group covered, in order to complete the information and give a fuller picture to assist the interpretation.

Soil Sampling

In conjunction with the magnetometer work, soil samples for copper were taken at each station.

At the sample intervals (200 feet) a hole was dug with a garden trowel. The hole was deep enough to get below the surface humus, and to reach the top of a layer of gray clay soil (A3 horizon). This horizon was usually at a depth of six to twelve inches. Extraneous material, such as pieces of root or bark, and small stones, were picked out. About 200 grams of soil was placed in a small bag, and labelled with the station number. At the completion of the job, all the samples were brought to Vancouver, and delivered to Coast Eldridge Laboratories for analyses in parts per million of copper by hot acid extraction and atomic absorption.

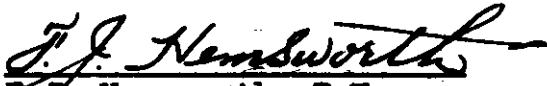
Interpretation of Geochemical Results

The results of the soil sample analyses in parts per million of copper are very low, which is surprising for the Greenwood area. The background average for the 468 samples was only 7.8 p.p.m., and only 10 samples were higher than three times the background. The east end of the claims surveyed shows only low counts which negates any possibilities of bodies of copper mineralization along the serpentine contacts illustrated by magnetic highs on the geophysical plan.

Although the results for copper were generally negative this does not eliminate the possibility of quartz veins carrying values in precious metals with lead or zinc sulphides, as occurred at the No. 7 mine. Soil sampling is effective to a limited depth of overburden, generally about 30 feet. Consequently, this does not preclude the possibility of deep-seated copper mineralization, although the probability of commercial copper orebodies appears remote.

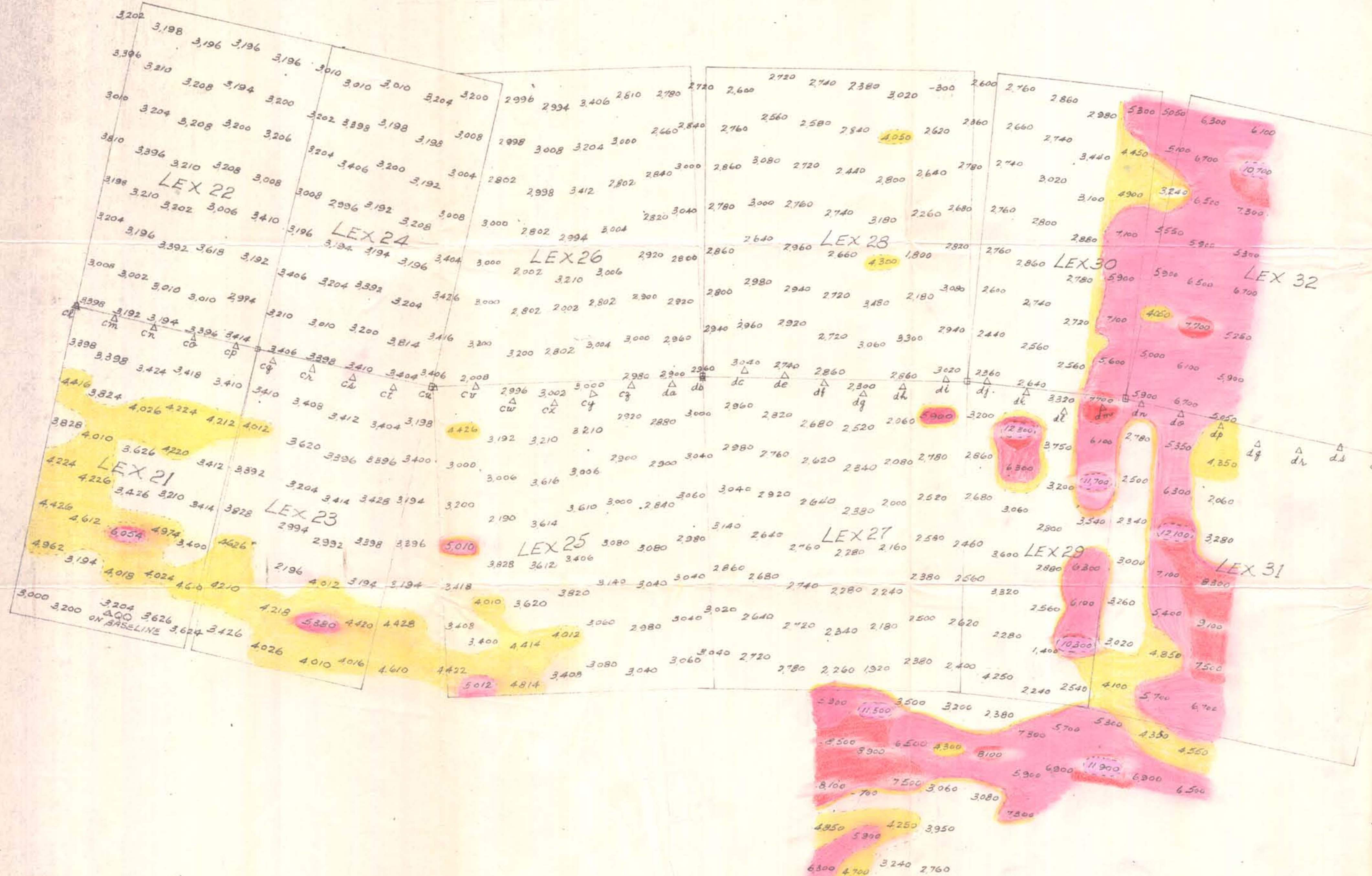
Respectfully submitted,

November 22, 1968.


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

INITIAL POST L 1638 GLASGOW

INITIAL POST LEX 3334



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

MAGNETOMETER SURVEY

LEXINGTON MINES LTD
GREENWOOD, B.C.

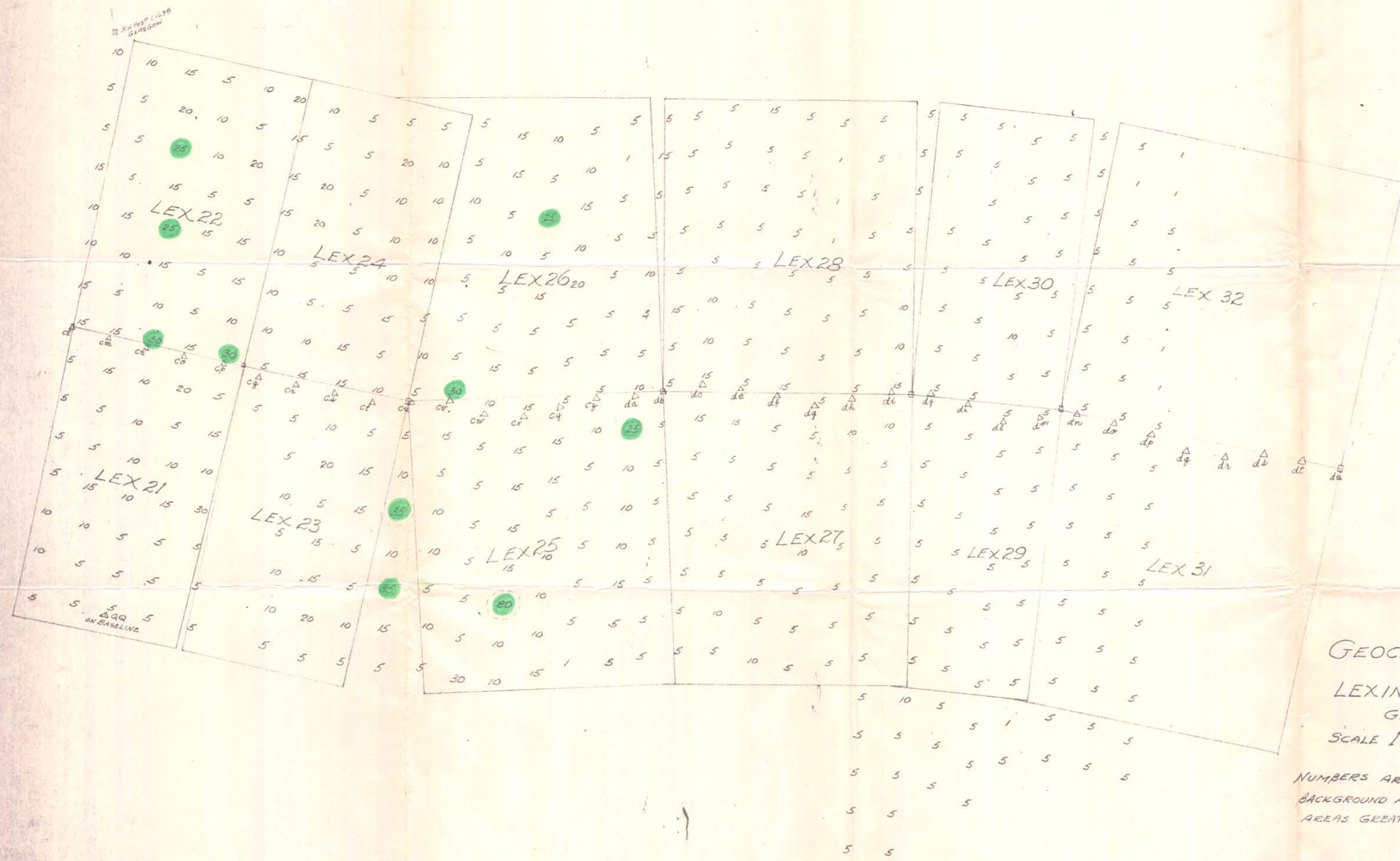
1707

SCALE 1in=300ft

OCT, 1968

COLOR LEGEND
 4,000 GAMMAS - 5,000 GAMMAS YELLOW
 5,000 GAMMAS - 7,500 GAMMAS PINK
 7,500 GAMMAS - 10,000 GAMMAS RED
 OVER 10,000 GAMMAS PURPLE

TO ACCOMPANY REPORT BY J.A. HEMSWORTH P.E.N.G.



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1707 MAP 2
PART 4

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

1707

NUMBERS ARE PARTS PER MILLION COPPER. 5
BACKGROUND AVERAGE EQUALS 78 P.P.M. CU.
AREAS GREATER THAN THREE TIMES BACKGROUND

TO ACCOMPANY REPORT BY J.J. Hemsworth - P.E.N.G.