

REPORT OF
GEOPHYSICAL AND GEOCHEMICAL SURVEYS
OF THE MOSS CLAIM GROUP

-- MAY 27 TO SEPTEMBER 30, 1966 --

MOSS CLAIMS 1-46 AND 48 & 49, GNAT LAKE, B.C.
by D. W. Asbury, Lytton Minerals Limited

104 I / 4W

Property situated 16 miles south-south
east of Dease Lake, Liard Mining Div'n

(58°14' North Lat., 129°50' West Long.)

845

REPORT OF MAGNETOMETER AND GEOCHEMICAL SOIL SURVEYS
PERFORMED ON THE MOSS CLAIM GROUP
GREAT LAKE, LIARD MINING DIVISION
BRITISH COLUMBIA

1) Introduction

During the 1966 field season magnetometer and geochemical soil surveys were carried out on Moss Claims 1-46 and 48 and 49.

This report describes the procedures used and the results obtained.

2) Property and Location

The portion of the Moss property covered by the surveys consists of 48 contiguous unpatented claims in the Liard Mining Division, as follows:

- Moss claims 1-22, record numbers 19706-19727, recorded November 2, 1965.
- Moss claims 23-46 and 48 and 49, record numbers 23481-23504 and 23506 and 23507, recorded July 15, 1966.

The group, located at 48°14' North latitude and 129°51' West longitude, straddles the Cassiar-Stewart highway, 16 miles south-southwest of Dense Lake and lies at an altitude of 4,000 feet. Road distance northward to Cassiar is about 90 miles. When a 90-mile section of the highway south of the Stikine River is completed, the property will be approximately 190 miles by road from salt water at Stewart.

3) History

Moss claims 1-22 were staked by Lytton Minerals Limited in October, 1965, and the rest of the claims were staked by Lytton in June, 1966.

No previous exploration work has been done on the claim group, although copper mineralization a few thousand feet to the east on the Goat Lake property was investigated by Cassiar Asbestos Corporation in 1960 and by Newcomer Canadian Exploration Limited in 1964 and is currently being drilled by Lytton.

4) Field Programs

Starting on May 27, 1966, line cutting and magnetometer and geochemical soil surveys were carried out on Moss claims 1-22. This work showed an anomalous magnetic trend, with some associated geochemical activity, extending beyond the boundary of the existing claim block and, as a result, additional Moss claims were staked and the surveys were later continued onto this ground.

a) Line Cutting

For survey control the Goat Lake property grid system was extended onto the Moss group. Five east-west base lines, totalling 7.0 miles, were cut, picketed and chained, and from these, picket lines totalling 46.1 miles were turned off at 400-foot intervals and cut, flagged and chained.

b) Magnetometer Survey

A total of 46.1 miles of picket line were surveyed on the property, using a Sharpe MF-1 magnetometer with a sensitivity of 20 gammas.

Readings along the picket lines were taken at 100-foot intervals with areas of magnetic relief being detailed at 50-foot intervals. Exceptions were certain areas of flat relief where an interval of 200 feet was used. All readings were corrected with reference to base stations established at regular intervals and the corrected readings were plotted on the accompanying map (Figure 1) at a scale of 1" = 400 feet.

Chief magnetic feature is a strong anomaly, with relief of from 300 to 2,000 gammas over widths of from 1,000 to 2,000 feet, which extends across the property in a west-northwest direction. As the property is almost entirely covered by overburden, the main evidence for the nature of this anomalous zone comes from a drill hole on the adjoining Gnat Lake property to the east which entered a crystalline magnetite-rich gabbroic rock lying under what appears to be the displaced extension of the same magnetic anomaly. It is therefore probable that the present survey has outlined a large basic intrusive which cuts the predominantly intermediate volcanic rocks of the area.

Other minor magnetic features on line 52+00W between the 0+00 and 34+00S base lines and at the north end of the property, may also be due to small intrusives.

Rock exposures along the property boundary immediately west of Gnat Lake indicate that the two anomalies in this area are caused by outliers of the Gnat Hill granitic batholith which lies to the south and east of the property.

Geochemical Soil Survey

Samples were collected at 100-foot intervals along the 40.1 miles of picket line by means of 1-3/4" augers. An effort was made to collect material from the "B" soil horizon, but in actual fact well established soil horizons are lacking in the area and most of the samples consisted of poorly sorted material with a high gamma content.

The samples were dried in their paper geochemical sample bags, after which a portion of the fines was tested for readily-soluble heavy metals by the standard Bloom method. Samples which were anomalous in heavy metals

were then tested for readily-soluble copper by the method described in Geological Survey of Canada Paper 63-7.

In both procedures the sample is shaken in a test tube with a dilute solution of ammonium citrate to remove the loosely bonded metal. Titration to a green end point with dithionite dissolved in toluene (or preferably benzene for the cold copper test) gives the appropriate amount of heavy metals or copper reacting under the conditions of the test. Selectivity of the reaction depends mainly on the acidity of the ammonium citrate solution which is set at PH 8-5 for the heavy metal test and PH 2 to 3 for the cold copper test.

At the start of the survey tests were run on some hundred samples to determine whether or not sieving was essential for accurate analysis of the types of soils being tested. As there was no appreciable difference, for either heavy metals or coppers, between results from unsieved fractions and from fractions sieved to minus 80-mesh, sieving was discontinued.

On the accompanying map (Figure 2), at 1' - 400 feet, heavy metal results are shown on the right side of the picket lines and copper results on the left, both in millilitres of dithionite solution to end point.

Survey results are inconclusive and difficult to interpret, and it is probable that depth of overburden controls the anomalous pattern to a large extent. On the adjoining Gnat Lake property a soil survey over large areas of low-grade copper mineralization produced what was, in effect, a map of the areas of shallow cover.

Some anomalous heavy metal activity is associated with the north flank of the main magnetic anomaly and with the granite in the southeast corner of the property, but, in both cases, cold copper reactions were obtained over relatively restricted areas. Copper concentrations near the

east property boundary, between 14+00H and 14+00S base lines, are in areas of low magnetic relief and relatively deep overburden.

Conclusions

Magnetometer and geochemical soil surveys of the Moss property show scattered heavy metal and copper activity associated with a strong magnetic anomaly caused by a large gabbroic intrusive. Additional heavy metal and copper values are associated with the contact of the Cahn Hill batholith at the southeast corner of the property and also with an area of flat magnetic relief near the boundary northwest of Goat Lake.

Further investigations are warranted in view of the fact that copper mineralisation on the adjacent Goat Lake property gives similar magnetic and geochemical effects. Work will include detailed magnetometer surveying, an IP survey and possibly a limited amount of diamond drilling.

D. W. Asbury, P. Eng.

October 31, 1966

REPORT OF
GEOPHYSICAL AND GEOCHEMICAL SURVEYS
OF THE MOSS CLAIM GROUP

MOSS CLAIMS 1-46 AND 48 AND 49
GNAT LAKE, BRITISH COLUMBIA

- - -

by D. W. Asbury
Lytton Minerals Limited

Property situated 16 miles south-southeast of Dease Lake
Liard Mining Division

(58°14' North Latitude, 129°50' West Longitude)

Work period: May 27 to September 30, 1966

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Project Personnel
Major Expense Items
Certificate

Maps enclosed in pocket at rear:

Figure 1 - Magnetometer Survey - 1" - 400' # 1
Figure 2 - Geochemical Soil Survey - 1" - 400' # 2

PROJECT PERSONNEL

<u>Name</u>	<u>Address</u>	<u>Period</u>	<u>Type of Work</u>	<u>Rate^a</u>	<u>Gross</u>
D. W. Asbury	20 Rothmere Drive, Toronto 12, Ont.	May 26-27, 30-31 June 1, 20-25 July 12-15 August 2-4 September 6-7 October 25-27	Supervision and report	\$40 per day x 23	920.00
W. C. Morrison	55 Devonshire Ave., Willowdale, Ont.	October 2-4, 24-27	Preparation of maps	\$25.80 per day x 6	154.80
M. Bradford	Box 781, Kimberley, B.C.	May 27-31, June 1-4, 20-24, August 8-27, September 6-24	Magnetometer survey, line cutting and geo- chemical survey	\$17.73 per day x 48	851.13
R. Howland	Box 781, Kimberley, B.C.	May 30-June 25, June 28-July 15, August 1-27, 29, September 6-24	Magnetometer survey, line cutting and geo- chemical survey	\$16.05 per day x 61	1,298.88
G. Knato	Box 781, Kimberley, B.C.	May 28-June 25, June 28-July 16, August 1-27, 29-30, September 6-24	Line cutting and geochemical survey	\$15.97 per day x 84	\$1,341.12
D. Anderson	4506 Ontario, Vancouver, B.C.	June 1-25, July 4-13, August 2-5, 8-31, September 6-10	Line cutting and geochemical survey	\$16.91 per day x 61	1,031.68

-- continued next page

PROJECT PERSONNEL - continued

<u>Name</u>	<u>Address</u>	<u>Period</u>	<u>Type of Work</u>	<u>Rate*</u>	<u>Gross</u>
E. S. Stobbe	Macdonald College, St. Anne de Bellevue, Quebec.	June 1-29, July 4-9, August 2-6, 8-31 September 6-10	Survey	\$19.24 per day x 59	\$1,135.09
					<hr/>
					\$6,732.70

* Rate = including holiday pay,
Unemployment Insurance,
Canada Pension and
Hospitalization.

CERTIFIED CORRECT

L. J. [Signature]
Accountant

MAJOR EXPENSES APPLICABLE TO
MAGNETOMETER AND GEOCHEMICAL SURVEYS

1) <u>Line Cutting</u>		
- wages, camp costs and transportation	-	\$ 3,140.38
2) <u>Magnetometer Survey</u>		
- wages, camp costs and transportation	-	1,573.50
- magnetometer rental - 2 months at \$200 monthly	-	400.00
3) <u>Geochemical Survey</u>		
- wages, camp costs, transportation and chemical reagents	-	2,257.86
		<hr/>
		<u>\$ 7,371.74</u>

CERTIFIED CORRECT



Accountant

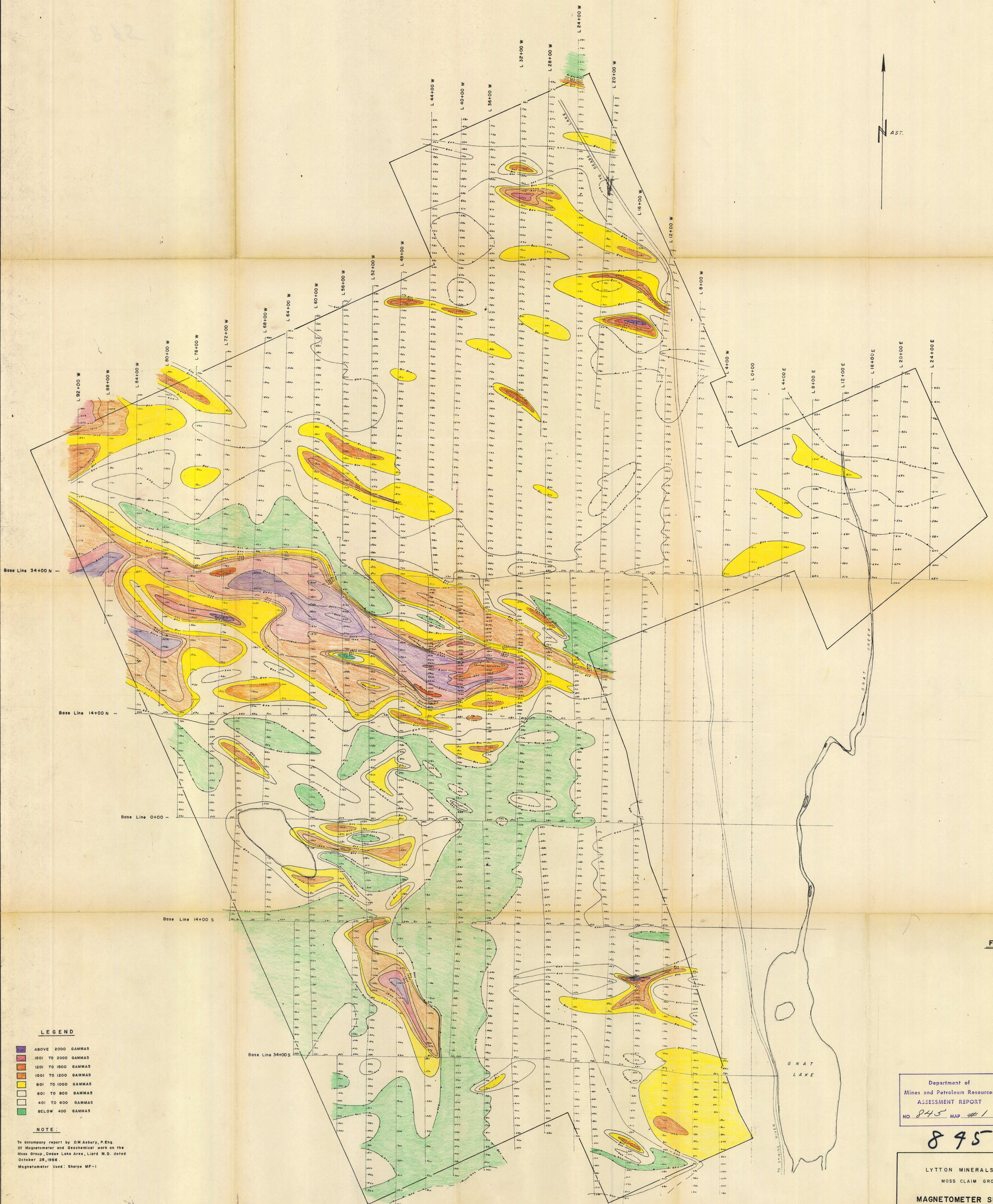
--- CERTIFICATE ---

I, DAVID W. ASBURY, do hereby certify:

- 1) that I am a Geologist, residing at 20 Rotimere Drive, Toronto 12, Ontario;
- 2) that I am a graduate of the University of Western Ontario, with a B.Sc. degree in Honours Geology (1948);
- 3) that I am a registered member of the Association of Professional Engineers of Saskatchewan;
- 4) that as Chief Geologist of the Exploration Department of The Patino Mining Corporation I surveyed the execution of the work herein described by personnel of Lytton Minerals Limited, a subsidiary company of Patino.

Dated at Toronto
October 26, 1966


D. W. Asbury, P. Eng.



Base Line 34+00 N -

Base Line 14+00 N -

Base Line 0+00 -

Base Line 14+00 S

Base Line 34+00 S

LEGEND

- ABOVE 2000 GAMMAS
- 1801 TO 2000 GAMMAS
- 1201 TO 1800 GAMMAS
- 1001 TO 1200 GAMMAS
- 801 TO 1000 GAMMAS
- 601 TO 800 GAMMAS
- 401 TO 600 GAMMAS
- BELOW 400 GAMMAS

NOTE

To accompany report by D.W. Asbury, P. Eng.
Of Magnetometer and Geochemical work on the
Moss Group, Dease Lake Area, Liard M.D. dated
October 25, 1966
Magnetometer Used: Sharpe MF-1

FIG. 1

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 845 MAP # 1

845

LYTTON MINERALS LTD.
MOSS CLAIM GROUP
MAGNETOMETER SURVEY
SCALE 1"=400' SEPTEMBER 1966

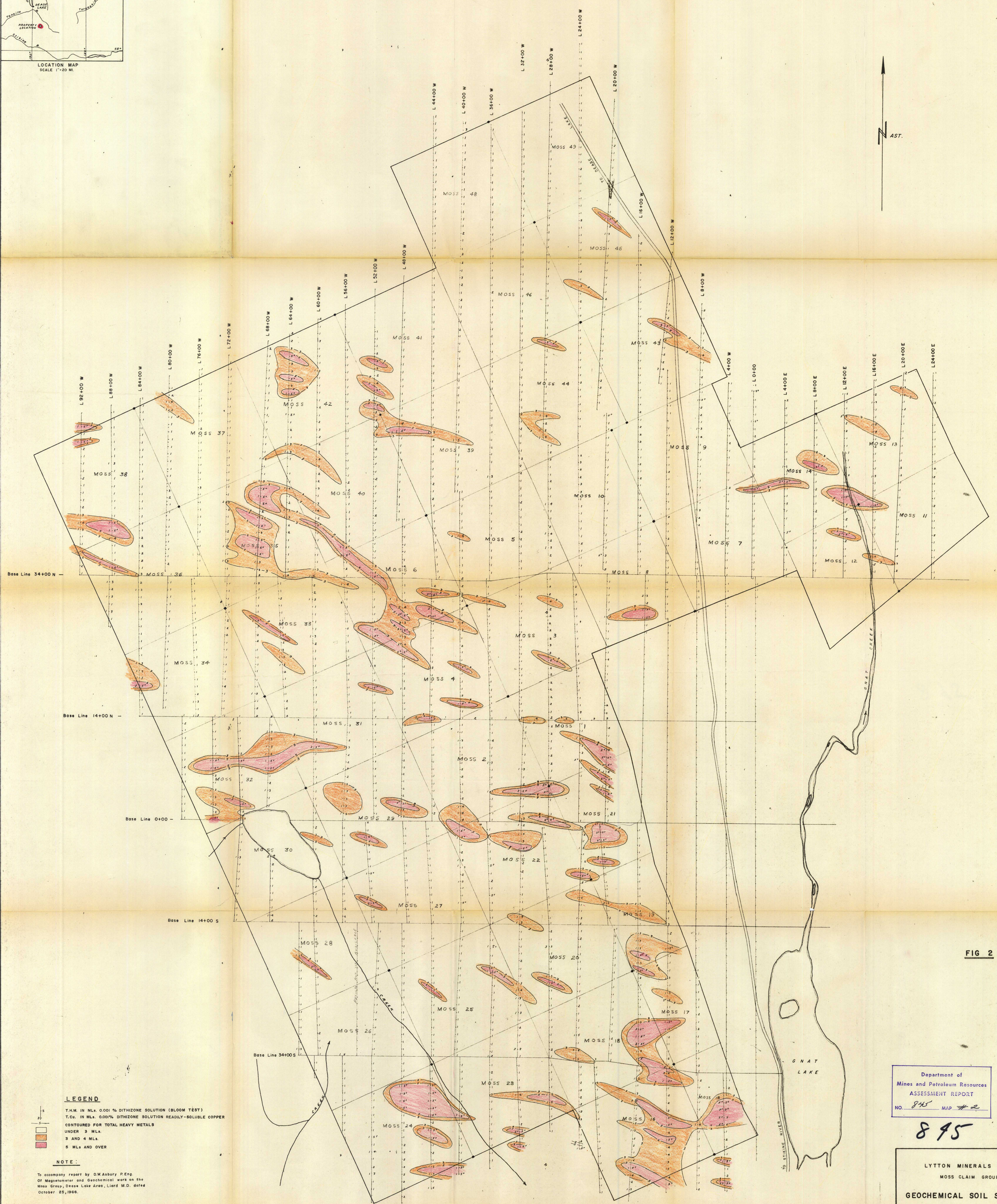
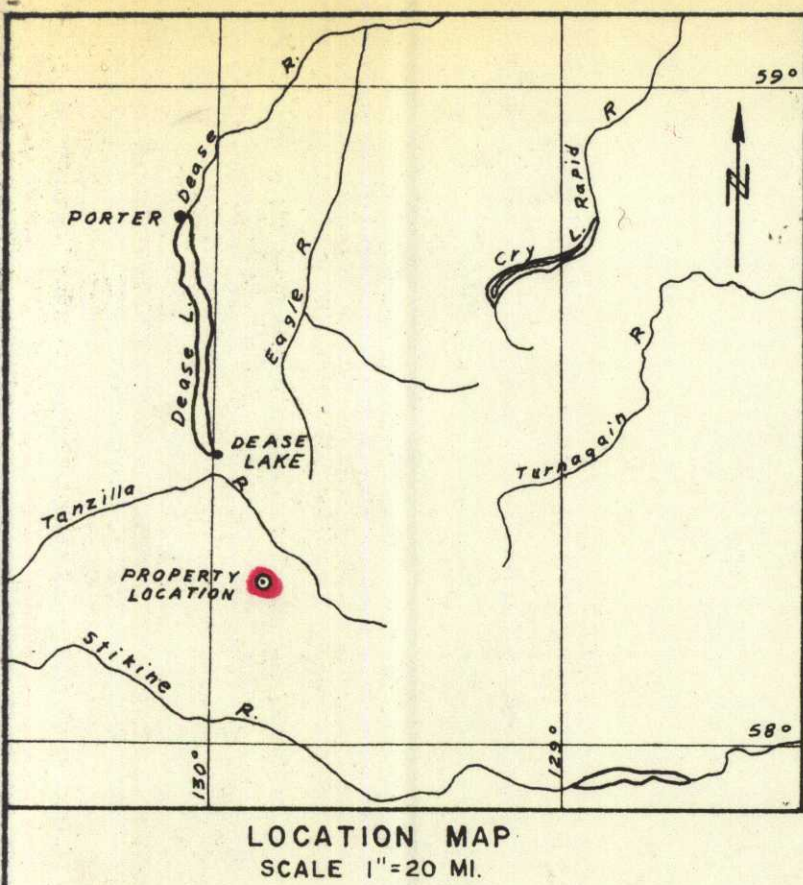


FIG 2

LEGEND
 T.H.M. IN MLs. 0.001% DITHIZONE SOLUTION (BLOOM TEST)
 T.Cu. IN MLs. 0.001% DITHIZONE SOLUTION READILY-SOLUBLE COPPER
 CONTOURED FOR TOTAL HEAVY METALS
 UNDER 3 MLs.
 3 AND 4 MLs.
 5 MLs AND OVER

NOTE:
 To accompany report by D.W. Asbury P. Eng.
 Of Magnetometer and Geochemical work on the
 Moss Group, Dease Lake Area, Liard M.D. dated
 October 25, 1966.

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 895 MAP # 2

895

LYTTON MINERALS LTD.
 MOSS CLAIM GROUP
 GEOCHEMICAL SOIL SURVEY
 SCALE 1"=400' SEPTEMBER 1966