

255

NORTHWESTERN EXPLORATIONS, LIMITED

Geological, Geochemical, and Geophysical Report

on the

J. B. Group

Nicola M. D., B.C.

2 - 6 miles west and northwest of Mamit Lake

50 - 120 Northwest

*2 copies of 1, 2, 3, 4, 5
copy map 2*

by

Charles S. Ney, P. Eng.

January 26, 1959

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MAPS

- #1. J.B. Claim Map - Scale 1" = 1000'
 - #2. Geological Map - Scale 1" = 1000'
 - #3. Magnetic Survey - Scale 1" = 1000'
 - #4. Geochemical Survey - Scale 1" = 1000'
 - #5. Magnetic Profile line 100 N - Scale 1" = 500' = 1000y
- =====

NORTHWESTERN EXPLORATIONS, LIMITED

Claim No.	Group No.	Tag No.	Distribution of Work			Total
			Geology	Geophysics	Geochem.	
J.B. 76)	1	316276	\$40	\$30	\$40	\$110
77)		316277	40	30	40	110
79)		316279	40	30	40	110
81)		316281	40	30	40	110
83)		316283	40	30	40	110
85)		316285	40	30	40	110
86)		316286	40	30	40	110
87)		316287	40	30	40	110
J.B. 82)	2	316282	45	15	40	100
84)		316284	45	15	40	100
101)		316301	45	15	40	100
102)		316302	45	15	40	100
103)		316303	45	15	40	100
104)		316304	45	15	40	100
126)		316326	45	15	40	100
127)		316327	45	15	40	100
J.B. 78)	3	316278	45	15	40	100
80)		316280	45	15	40	100
96)		316296	45	15	40	100
97)		316297	45	15	40	100
98)		316298	45	15	40	100
99)		316299	45	15	40	100
117)		316317	45	15	40	100
119)		316319	45	15	40	100
J.B. 116)	4	316316	45	35	45	125
118)		316318	45	35	45	125
120)		316320	45	35	45	125
122)		316322	45	35	45	125
141)		316341	45	35	45	125
143)		316343	45	35	45	125
145)		316345	45	35	45	125
147)		316347	45	35	45	125
J.B. 134)	5	316334	45	30	40	115
136)		316336	45	30	40	115
137)		316337	45	30	40	115
138)		316338	45	30	40	115
139)		316339	45	30	40	115
140)		316340	45	30	40	115
142)		316342	45	30	40	115
144)		316344	45	30	40	115

				<u>Distribution of Work</u>				
<u>Claim No.</u>	<u>Group No.</u>	<u>Tag No.</u>	<u>Geology</u>	<u>Geophysics</u>	<u>Geochem.</u>	<u>Total</u>		
J.B. 154)		316354	\$30	\$30	\$40	\$100		
155)		316355	30	30	40	100		
156)		316356	30	30	40	100		
157)	6	316357	30	30	40	100		
179)		316379	30	30	40	100		
180)		316380	30	30	40	100		
181)		316381	30	30	40	100		
209)		316809	30	30	40	100		
J.B. 158)		316358	50	30	40	120		
159)		316359	50	30	40	120		
160)		316360	50	30	40	120		
161)	7	316361	50	30	40	120		
182)		316382	50	30	40	120		
183)		316383	50	30	40	120		
184)		316384	50	30	40	120		
185)		316385	50	30	40	120		
J.B. 162)		316362	50	40	30	120		
163)		316363	50	40	30	120		
164)		316364	50	40	30	120		
165)	8	316365	50	40	30	120		
186)		316386	50	40	30	120		
187)		316387	50	40	30	120		
189)		316389	50	40	30	120		
191)		316391	50	40	30	120		
J.B. 188)		316388	50	30	30	110		
190)		316390	50	30	30	110		
211)		316811	50	30	30	110		
213)	9	316813	50	30	30	110		
215)		316815	50	30	30	110		
217)		316817	50	30	30	110		
219)		316819	50	30	30	110		
J.B. 210)		316810	40	30	30	100		
212)		316812	40	30	30	100		
214)	10	316814	40	30	30	100		
216)		316816	40	30	30	100		
218)		316818	40	30	30	100		
247)		316847	40	30	30	100		
							<u>Road</u>	
J.B. 239)		316839	40	30	30	100	200	
241)		316841	40	30	30	100	200	
243)	11	316843	40	30	30	100	200	
244)		316844	40	30	30	100	200	
245)		316845	40	30	30	100	200	

NORTHWESTERN EXPLORATIONS, LIMITED

J. B. Group

The J.B. claims lie 2 - 6 miles west and northwest of Mamit Lake on the east side of Guichon Creek Batholith. The claims were prospected and mapped by Northwestern Explorations, Limited during the summer of 1958. The work done included geological mapping, geochemical sampling, and magnetic survey. A small amount of access road was constructed.

The geological mapping was done by C.S. Ney, P. Eng., D. Drummond, and J.M. Anderson. The geochemical sampling was done by R. St. Clair-Smith, C. Godwin, C. S. Ney, J. M. Anderson and others. Magnetometer surveys were done by G. Delane, R. Roadhouse, J. Barakso and J.M. Anderson. D. Hansen, geophysicist for Northwestern Explorations, Limited instructed the operators and supervised the work. Surveying and line cutting were done by J. Barakso, R. St. Clair-Smith, A. Bentzen, C. Godwin, H. Hamilton, D. Hale, and others. The road was constructed by G.D. Sanders, Lower Nicola, B.C.

Location:

The claims are located at latitude 50°25' N; longitude 120°52' W. in an area west and northwest of Mamit Lake. The area is drained by Dupuis Creek and tributaries of Cougar Creek, both of which join Guichon Creek. Elevation ranges from 3200 feet to 4700 feet. Topographically the area is characterized by a general steep slope on the east down toward Guichon Creek. Above this is an irregular plateau surface, well dissected by stream valleys. Timber cover is sparse except locally on north-east facing slopes.

Access:

A moderately good jeep road extends from near the north end of Mamit Lake to the Fiddler Prospect on Dupuis Creek, a road distance of 4 miles. This continues as a rather poor road to Billy Lake, an additional 3 miles. A logging road was extended 2½ miles into the south end of the J.B. claims. in August, 1958.

Field Methods:

Surveys: Three north-south lines were run as picket lines corrected at intervals by compass. These were well cut and chained, and used as base lines. The distance from No. 1 to No. 2 baseline is 8600 feet, and from No. 2 to No. 3 is 5800 feet. The central east-west line was cut as a picket line. East-west compass lines were run usually at 1000 foot intervals, except in the northeast and southwest corners of the original group. B.C. Government Interim Maps were enlarged from 2540 scale to 1000 scale, and used as a planimetric base, giving details of the drainage. Those maps are accurate enough to stand such enlargement and still give good results.

Geology: All lines were traversed, and observations were made on the extent of outcrop and the character of the rock. Rock specimens were brought in to camp and in addition to visual petrographic examination, tests were made to determine their magnetic susceptibility.

Magnetic Survey: Readings were taken at 1000 foot intervals along the No. 1 and No. 2 baselines with the A2 magnetometer. These readings were used as a control for the east-west lines, which were run with the A3 magnetometer.

Geochemical Survey: Geochemical work included collection of samples from sediment in streams draining the area and soil samples along grid lines. Several of the tributaries of Cougar Creek and Dupuis Creek were sampled at intervals of 400 feet in an effort to determine the location and character of cutoffs. Fine silt in actual contact with running water was desired for this work. This was not too successful because the streams were locally dried up. Soil samples were taken at 100 foot intervals along the lines of material from a depth of six inches. Organic material was avoided whenever possible. All samples were taken to a field laboratory at Guichon Creek, dried, screened to minus 80 mesh, and tested for exchangeable copper by the procedure of R.H.C. Holman. Some of the samples were tested by a method using hot nitric acid digestion to obtain total sulphide copper.

Geology:

The distribution of outcrop is sharply divided into large areas of relatively abundant outcrop (10%) and smaller areas of no outcrop. The overall percentage is considerably higher than in other parts of the Guichon batholith.

The southeast portion of the area is underlain by fine to medium grained dark colored rocks varying in composition from quartz diorite to olivine gabbro. These rocks are grouped under the heading of "basic complex". It is not known if they are actual intrusives or highly metamorphosed rocks of volcanic origin. No real evidence of original bedding could be found in them. Their uniformity over considerable horizontal and vertical distances is hard to account for if they are altered volcanics.

From the north end of the body of basic rocks, a distinctive band of rock 1 - 2000 feet wide extends out to the northwest beyond the Fiddler Prospect. This has been called granitized sediments. It is a sugary textured low mafic rock similar to quartzite in general appearance but it carries a large percentage of plagioclase feldspar. It grades into a clearly granitic type of rock. Some semblances of bedding have been found in it, and it is regarded as granitized material of possible sedimentary origin.

There are several types of intrusive rocks. On the north and east there is a distinctive very coarse grained type with a normal pinkish color and a composition about that of quartz monzonite. Hornblende is the usual mafic mineral, though biotite is more prominent in the margins of the mass. This unit has been called Gump Lake quartz monzonite.

Along the west and southwest of the area there are several types of moderately coarse grained granodiorite and quartz diorite, all distinctly low in quartz and low in potash feldspar. These are called generally Guichon quartz-diorite. In many cases alternations between granodiorite and quartz diorite were encountered without any actual contacts being observed.

Another distinctive type is characterized by medium and varied grain size, and a poikilitic texture arising from scattered potash feldspar plates. It may be gray or pink, and approximates granodiorite in composition. Dykes and tabular bodies up to 1000 feet wide have been found to intrude the Gump Lake quartz-monzonite and the basic rocks. Other large areas are mapped in the southwest corner of the area with some uncertainty. The characteristic type occurs in a large mass several miles south, and has been called Vimy Granodiorite. It resembles some of the younger intrusives which have been mapped north of Witches Brook.

A mile south of the claims there are a few patches of volcanic rock of probable Miocene age overlying the granitic rocks unconformably.

Geochemistry:

Almost all the stream sediments in the area were found to carry Holman copper values. A rather strong pattern is evident in Dupuis Creek below the Fiddler Prospect. Strong values were also obtained in the north and northwest tributaries of Cougar Creek. These were traced up into areas of outcrop where there was no copper mineralization evident other than a scattered dissemination of very low grade. Creeks in the southwest corner of the area do not carry significant amounts of copper.

Results of soil sampling show that copper is widely distributed in small amounts. There are some groups of fairly high values (4.20 ppm) that are worth further investigation. Some quite high values (100 ppm and over) were found, but in every case they are associated with swampy organic material and are discounted.

Checks on soils made by extracting with hot nitric acid are not shown on the map. In general they give copper values six to ten times greater than the Holman values, except in the case of some of the high swamp values, where the values are only twice the Holman values.

Magnetics:

The data are presented in the form of a contour plan. This was prepared by first plotting the observations in profile form. The profile was rounded off visually to eliminate variations of less than 500 gammas. These are thought to be mainly instrumental in origin. The profile values were adjusted where necessary to fit the values obtained by the A2 magnetometer along the base lines. Intercepts were then read off the corrected and rounded off profile, and these were plotted on the map to form the basis for contouring. Line 100N is isolated from the rest of the area and cannot be contoured, so a profile for this line is submitted.

Values on the plan are in hundreds of gammas. The datum is arbitrary and about 40% of absolute.

The area underlain by the diorite complex is on the average about 2000 gammas higher than the rest, the mean value being about 32,500 gammas. The average values in the various other units of intrusive are about 30,500 gammas, and there are no great differences between them. The Gump Lake intrusive gives a particularly flat magnetic expression.

Within the diorite complex there are many sharp highs and lows of several thousand gammas. These appear to strike about N 15 - 20° E. There is no immediate geological explanation for these effects. They occur in normal basic rocks with no visible mineralization.

Topography strongly influences the contours in the canyons of Dupuis Creek and the head of Cougar Creek. Readings down in the valleys are lower than normal.

Mineralization:

Disseminated chalcopyrite is observed widely in the Vimy and Guichon intrusive rocks west of the diorite complex. In the diorite complex there are a number of small veins generally having an east-west strike and steep dip. They carry chalcopyrite in association with quartz and skarn minerals. Along No. 2 baseline between 10 and 20 north there are a number of skarn inclusions in the quartz diorite carrying a little chalcopyrite.

At the Fiddler Prospect there are linear zones of fracturing in granodiorite associated with bands of quartzite. Chalcopyrite mineralization of fair grade occurs over several tens of feet.

Conclusions:

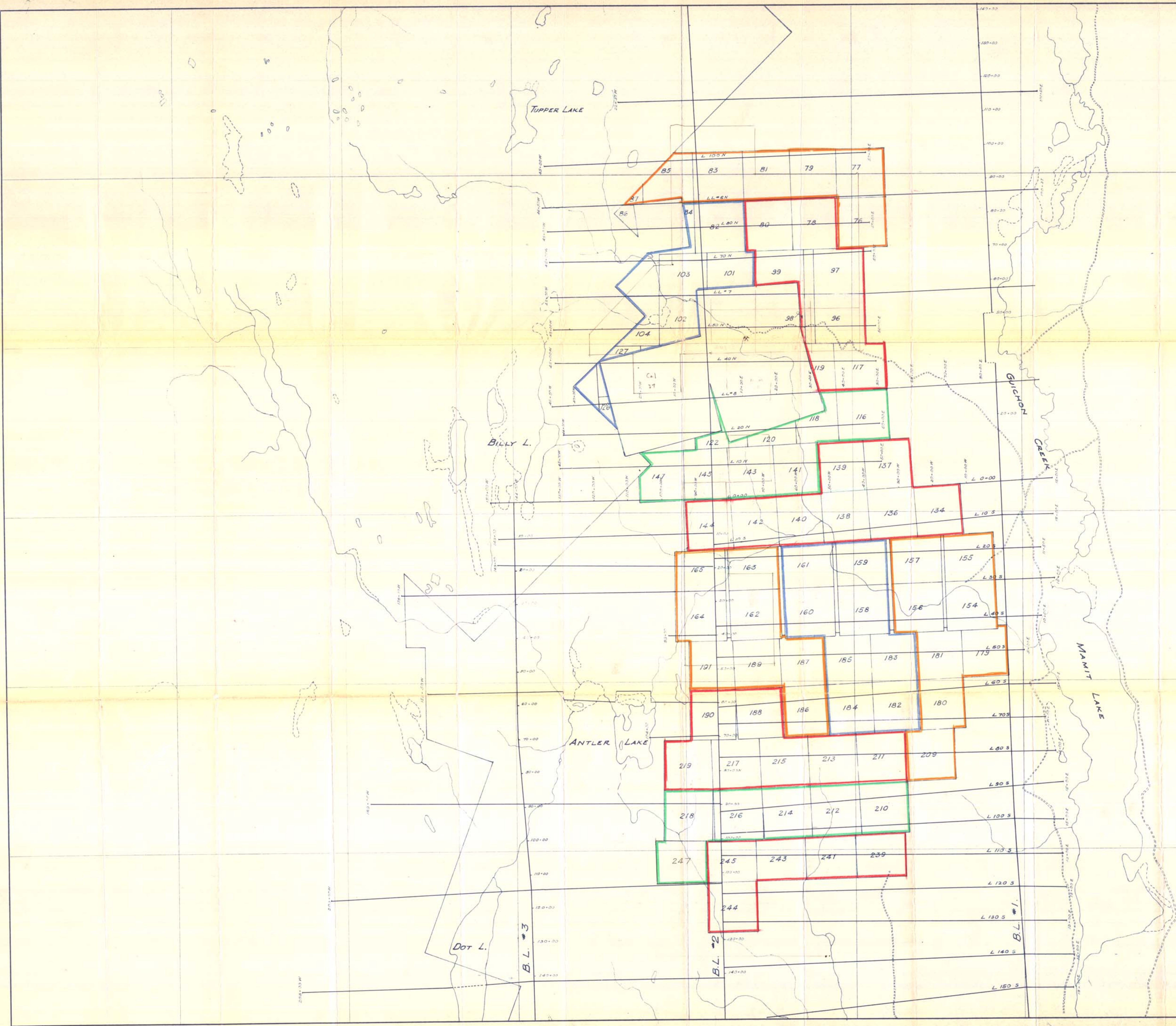
None of the mineral occurrences found so far, apart from that on the Fiddler claims, is of any economic interest. Further study is warranted in areas where positive geochemical information is not yet explained.

Vancouver, B. C.

January 26th, 1959

Charles S. Ney P. Eng.

C. S. Ney



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **255** MAP #1

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NORTHWESTERN EXPLORATIONS LIMITED
J. B. GROUP
NICOLA M.D.
Report 255
CLAIM MAP
DATE: Jan. 1, 1929 DRAWN BY: J. B. GROUP PLATE NO.
REVISED BY: DATE: SCALE: 1" = 1000'
4662 L.V.



LEGEND

- Overburden 6
- Vimy Granodiorite 5
- Gump Lake Quartz-Monzonite 4
- Guichon Quartz-Diorite 3
- Granitized Sediments 2
- Diorite Complex 1

- Copper Mineralization Cu

- Bedding
- Fault Fracture
- Joints
- Rock Foliation

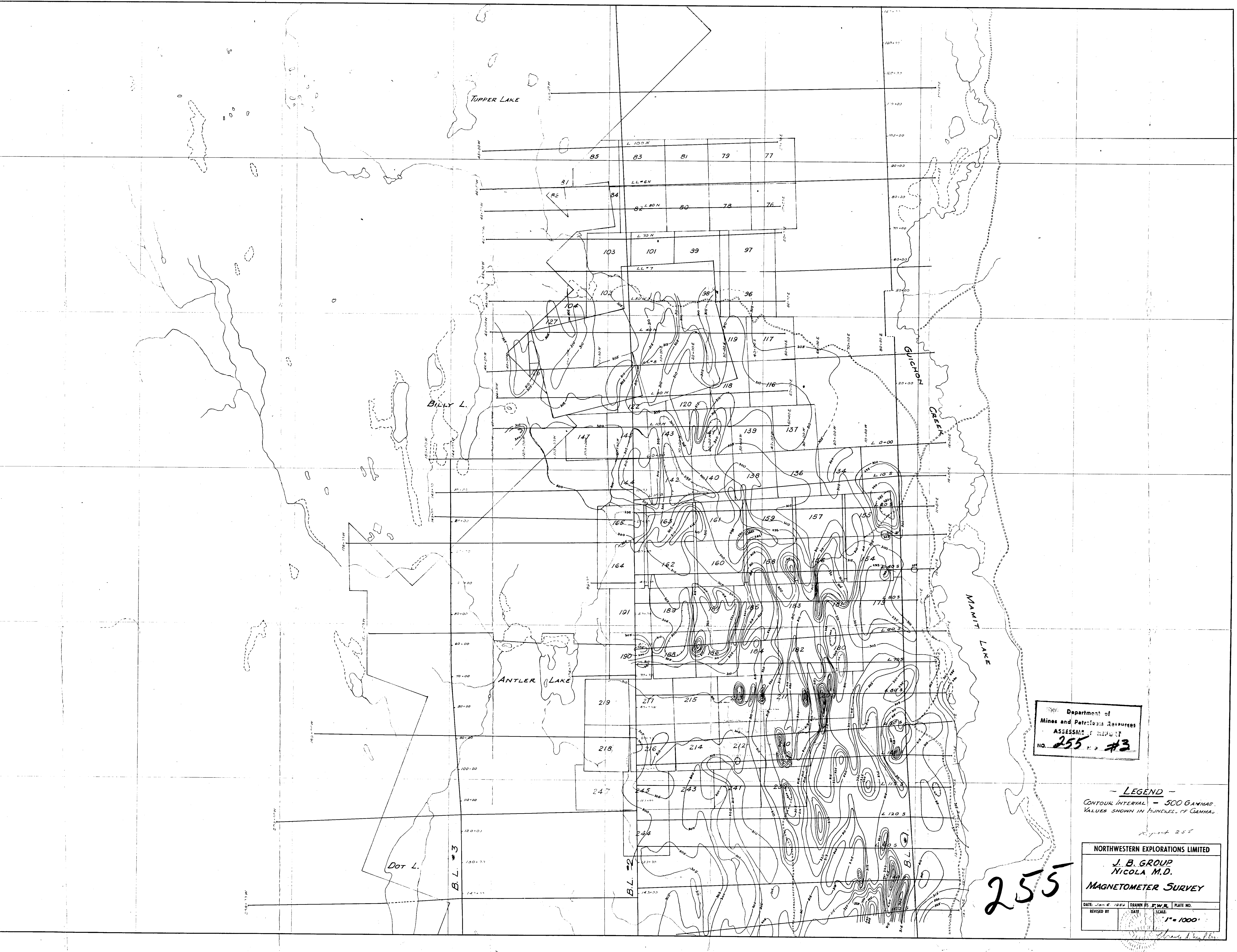
Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 255 MAP #2

NORTHWESTERN EXPLORATIONS LIMITED
 J. B. GROUP
 NICOLA M.D. Report 255
GEOLOGY

DATE: Jan 1962	DRAWN BY: P. Major	PLATE NO. 1
REVISED BY:	DATE:	SCALE: 1" = 1000'

Planned by

255

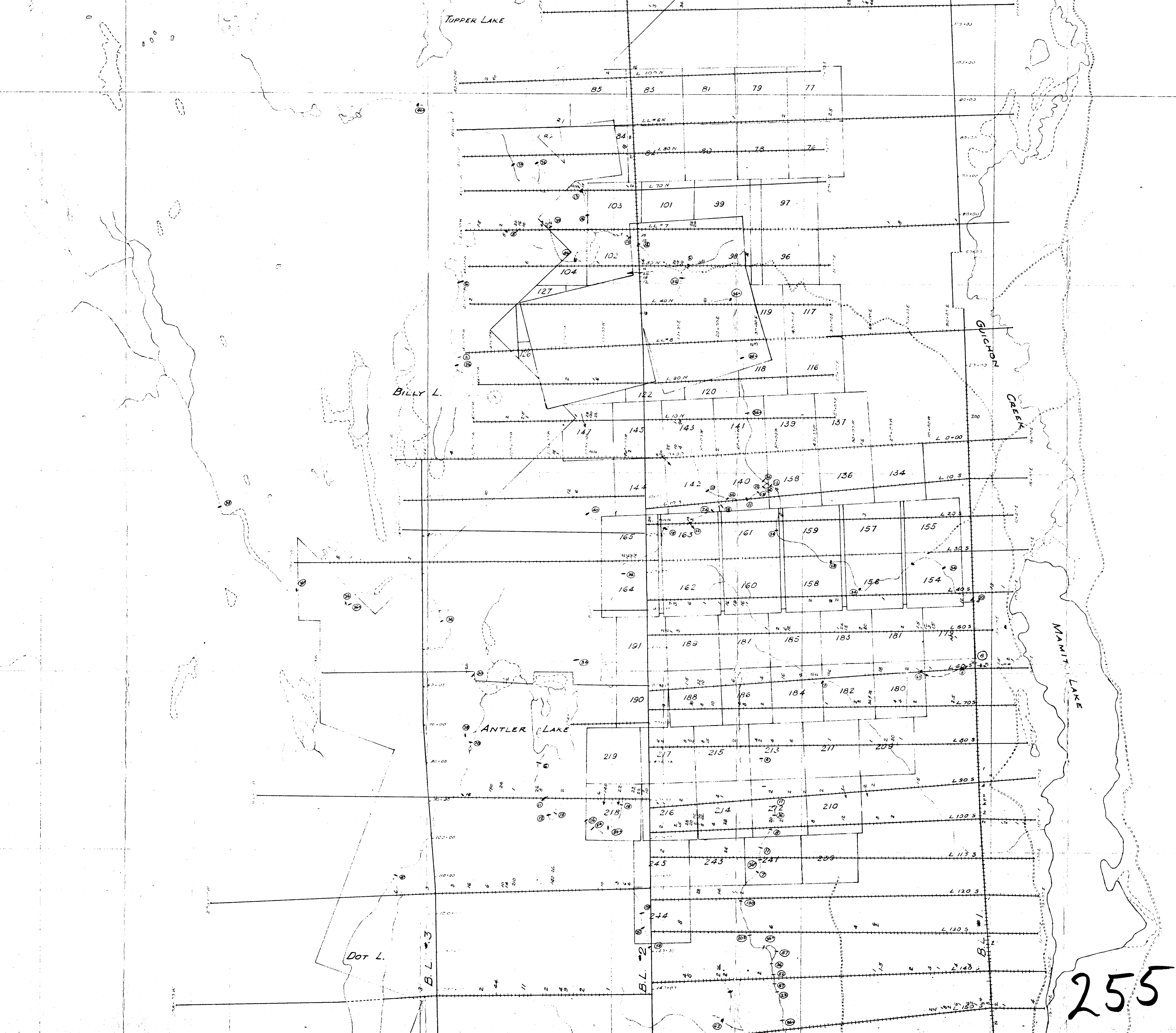


Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **255** #3

- LEGEND -
CONTOUR INTERVAL - 500 GAMMAS.
VALUES SHOWN IN HUNDREDS OF GAMMA.

Report 255
NORTHWESTERN EXPLORATIONS LIMITED
J. B. GROUP
NICOLA M.D.
MAGNETOMETER SURVEY
DATE: Jan 6 1960 | DRAWN BY: F.W.R. | PLATE NO.
REVISED BY: | DATE: | SCALE: 1" = 1000'

255



— LEGEND —
 STREAM SEDIMENT SAMPLE SITES.
 SOIL SAMPLE SITES.
 VALUES IN P.P.M. HOLMAN COPPER.

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **255** MAR #4

NORTHWESTERN EXPLORATIONS LIMITED
 J. B. GROUP
 NICOLA M.D.
 GEOCHEMICAL SURVEY

DATE: 10-1-1982	DRAWN BY:	PLATE NO.
REVISED BY:	DATE:	SCALE: 1" = 1000'

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Report 255

J.B. GROUP

— LINE 100 NORTH —

SCALE: 1 IN = 500 FT = 1000 GAMMAS.

33000

32000

31000

30000

29000

45 W

40 W

35 W

30 W

25 W

20 W

15 W

10 W

5 W

NO 2 BL

5 E

10 E

15 E

20 E

25 E

30 E

35 E

40 E

45 E

Lake

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **255** MAP **#5**

