

2028

REPORT

ON

MAGNETIC AND ELECTROMAGNETIC SURVEY

AMALG 1 - 44 MINERAL CLAIMS

NICOLA M.D.

49°50' N - 120°57' W

OWNER: Dr. F. R. Burton,
1506 - 44 King Street West,
Toronto 1, Ontario.

by

W. M. Sirola, P. Eng.

April, 1969

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Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. **2028** MAP

INTRODUCTION

The Amalg #1 - 36 and #37 - 44 Mineral Claims were staked on November 4th, 1968 and November 5th, 1968 respectively. They were recorded on November 14th, 1968.

The Amalg #1 - 36 claim group is located approximately 8 miles southeast of Aspen Grove on the Princeton - Merritt highway. The Amalg #37 - 44 claim group is located 2 miles southeast of Aspen Grove. Both groups are accessible by logging roads from the main highway and both are located in the Nicola Mining Division. The topography on both groups varies from gently rolling on the west side of each claim group to rocky bluffs on the east side.

During the month of March, 1969 electromagnetic and magnetic work was conducted over both claim groups. The following report is intended to cover work for one year on the Amalg 1 - 36 M.C.'s and on the Amalg 37 - 44 M.C.'s.

SCHEDULE OF CLAIMS COVERED BY THE REPORT

<u>Claim Number</u>	<u>Tag Number</u>	<u>Staking Date</u>	<u>Recording Date</u>	<u>Record Number</u>	<u>Licence Number</u>
Amalg #1	920151	Nov. 4/68	Nov. 14/68	38516	76338
2	920152	"	"	38517	"
3	920153	"	"	38518	"
4	920154	"	"	38519	"
5	920155	"	"	38520	"
6	920156	"	"	38521	"
7	920157	"	"	38522	"
8	920158	"	"	38523	"
9	920159	"	"	38524	"
10	920160	"	"	38525	"
11	920161	"	"	38526	"
12	920162	"	"	38527	"
13	920163	"	"	38528	"
14	920164	"	"	38529	"
15	920165	"	"	38530	"
16	920166	"	"	38531	"
17	920167	"	"	38532	"
18	920168	"	"	38533	"
19	920169	"	"	38534	"
20	920170	"	"	38535	"
21	920171	"	"	38536	"
22	920172	"	"	38537	"
23	920173	"	"	38538	"
24	920174	"	"	38539	"
25	920175	"	"	38540	"
26	920176	"	"	38541	"
27	920177	"	"	38542	"
28	920178	"	"	38543	"
29	920179	"	"	38544	"
30	920180	"	"	38545	"
31	920181	"	"	38546	"
32	920182	"	"	38547	"
33	920183	"	"	38548	"
34	920184	"	"	38549	"
35	920185	"	"	38550	"
36	920186	"	"	38551	"
37	920187	Nov. 5/68	"	38552	"
38	920188	"	"	38553	"
39	920189	"	"	38554	"
40	920190	"	"	38555	"
41	920191	"	"	38556	"
42	920192	"	"	38557	"
43	920193	"	"	38558	"
44	920194	"	"	38559	"

DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of
SUB-MINING RECORDER
RECEIVED
 OCT 28 1969
 M.R. # 34438E \$ 222.00
 VANCOUVER, B. C.

Magnetic and Electromagnetic Survey of:

Amalg #1 - 36 M.C.'s and
 Amalg #37 - 44 M.C.'s

I, William M. Sirola
 of 405 - 1112 West Pender Street, Vancouver 1, B.C.

in the Province of British Columbia, do solemnly declare that the following is a true and accurate statement of costs involved in the survey:

COST STATEMENT

Name	Job	Dates Worked	Total Days	Total Pay
B. Taylor	Geophy. Ass't	Mar. 10 - 29/69	20	\$ 400.00
T. LaRose	Geophy. Op't	Mar. 10 - 29/69	20	550.00
W. Sirola	Supervision	Mar. 10 - 16/69	7	650.00
				<u>\$1,600.00</u>
Administration Fees @ 15%				240.00
				<u>\$1,840.00</u>

SUMMARY OF TOTAL COSTS FOR 44 CLAIM GROUP

Wages and Salaries	\$ 1,840.00
Room and Board	1,200.00
Land Rover Rental & Operating Costs	440.00
Equipment Rental & Purchases (2 E.M. Sets and 1 Magnetometer)	600.00
Drafting & Report Writing	400.00
	<u>\$ 4,480.00</u>

APPORTIONMENT OF TOTAL COSTS TO THE VARIOUS CLAIM GROUPS INVOLVED:

Amalg #1 - 36 M.C.'s:	36/44 x \$4,480.00 =	\$3,665.00
Amalg #37 - 44 M.C.'s:	8/44 x \$4,480.00 =	815.00
		<u>\$4,480.00</u>

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City
 of Vancouver, in the
 Province of British Columbia, this 28
 day of October 1969, A.D.

W. M. Sirola

Joan Turner
 A Commissioner for taking Affidavits within British Columbia or
 A Notary Public in and for the Province of British Columbia.

In the Matter of

Statutory Declaration
(CANADA EVIDENCE ACT)

DOMINION OF CANADA:
 PROVINCE OF BRITISH COLUMBIA.
 To WIT:

In the Matter of

Magnetic and Electromagnetic
 Survey of:
 Amalg #1 - 36 M.C.'s and
 Amalg #37 - 44 M.C.'s

I, **William M. Sirois**
 of **405 - 1112 West Pender Street, Vancouver 1, B.C.**

in the Province of British Columbia do solemnly declare that the following is a true and accurate statement of costs involved in the survey:

COST STATEMENT

<u>Name</u>	<u>Job</u>	<u>Rates Marked</u>	<u>Total Days</u>	<u>Total Pay</u>
B. Taylor	Geophy. Ass't	Mar. 10 - 29/69	20	\$ 400.00
T. LaRosa	Geophy. Op't	Mar. 10 - 29/69	20	550.00
W. Sirois	Supervisor	Mar. 10 - 16/69	7	650.00
				<u>\$1,600.00</u>
		Administration Fees @ 15%		240.00
				<u>\$1,840.00</u>

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Room and Board	1,200.00
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Drafting & Report Writing	400.00
	<u>\$ 4,480.00</u>

APPORTIONMENT OF TOTAL COSTS TO THE VARIOUS CLAIM GROUPS INVOLVED:

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<u>Amalg #37 - 44 M.C.'s:</u>	$8/44 \times \$4,480.00 =$	<u>815.00</u>
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Declared before me at the City
 of Vancouver, in the
 Province of British Columbia, this 28
 day of October 1969, A.D.

Wm. Sirois

Jan Sirois
 A Commissioner for taking Affidavits within British Columbia or
 A Notary Public in and for the Province of British Columbia.

INSTRUMENTATION OF ELECTROMAGNETIC SURVEY

The equipment used was developed by Crone Geophysics Limited, 979 Lakeshore Road East, Port Credit, Ontario in 1957. The basic difference between the Crone Equipment and other portable E.M. equipment is that the Crone design utilizes a "shoot-back" principle which eliminates topographic effects without being too cumbersome or too heavy to pack.

Basically, the equipment consists of two plastic covered coils 14" in diameter which are wound to produce magnetic fields at 480 and 1,800 cycles per second and a second instrument of similar construction has frequencies of 3600 cycles per second and 480 cycles per second. Each coil is plugged into a "black box" which is, in reality, a transistorized transmitter-receiver. The equipment is useful in difficult terrain because there are no connecting wires between the coils. In the transmitter position, the coils energize the ground by induction only. If conductors are present in the ground, a secondary field is induced in the conductor which is picked up by the receiving coil by the usual E.M. process of nulling and reading the dip angle. Two frequencies are used with each instrument because the overburden conductors, such as thick layers of varved clay, produce secondary fields at 1800 cycles per second but in theory, not at frequencies in the order of 480 cycles per second. In practice, the equipment is operated by two men. Each man carries a coil and a transceiver which together weigh approximately 15 pounds.

GEOLOGY

Outcrops were examined in a cursory manner during the course of the electromagnetic survey. All of the rocks seen were Nicola volcanics. These outcrop in the form of bluffs on the east side of the Amalg 1 - 36 Mineral Claims and on the Amalg 37 to 44. In addition it would appear from geophysical surveys that the north half of the area occupied by the Amalg 1 - 36 M.C.'s is also underlain by the same rocks.

ELECTROMAGNETIC SURVEY

Approximately 20 line miles were covered in this survey. The Amalg 1 - 36 M.C.'s were surveyed with the Crone JEM unit utilizing frequencies of 3600 c.p.s. and 480 c.p.s. The lower frequency was used for checking only certain anomalies which were located at 3600 c.p.s.

The Amalg 37 - 44 claim group was surveyed with the Crone 1800 c.p.s. JEM unit.

In carrying out the survey, the two operators traversed the same line, the lines having been cut perpendicular to the average strike of the rocks. Both operators used similar units and kept a

separation distance of 200 feet. At each station, the chief operator first transmitted until the helper operator had oriented his coil and read a dip angle, and then their roles were reversed and the chief operator read a dip angle. The two dip angles read were recorded, and the resultant obtained by adding the two readings was plotted on the station position of the mid-point between the two men.

On the Amalg 1 - 36 claim group some anomalous dip angles were found using the 3600 c.p.s. frequency. These are particularly prominent on Lines 20S and 24S. These negative dip angles cannot however be corroborated at 480 c.p.s. and it is therefore reasonable to assume that the negative anomalies are caused by conductive clay layers. This belief is enhanced by the fact that there are two small ponds and generally low ground in the vicinity of the anomalies.

Two positive anomalies were found on Line 28S near the east end of the line. These are attributed to magnetite in the Nicola volcanics and as such are unlikely to have any economic significance.

On the Amalg 37 - 44 claim group, the strongest negative dip angles occur on Line 8N and on Line 4N. These anomalies are not persistent from line to line and have relatively weak amplitudes (5° or less) and again are thought to result from conductive overburden. Again, where weak positive anomalies occur (such as at the

east end of Line 12N) these are thought to be caused by magnetite in the rocks.

MAGNETIC SURVEY

A hand-held Sharpe Magcrometer, Model ES-180, with a sensitivity of 35 gammas per scale division was used for the entire survey. Approximately 20 miles of traversing was completed on lines 400 feet apart. Readings were taken at 100-foot intervals. The operator holds the instrument in a vertical position in his left hand, faces west, and nulls the magnetic needle by turning a vernier screw at the base of the instrument. The readings obtained are variations in the intensity of the total magnetic field. Diurnal control was exercised by periodic checks at base stations located on the base lines.

On the Amalg 1 - 36 claim group, the contoured magnetics together with the outcrop evidence suggest that the north half of this claim block is underlain by northeasterly trending Nicola volcanics. The magnetic pattern on the south half of the claim block is less definite but the east side of the south half is interpreted to be Nicola volcanics. The southwest portion of the claim block appears to be more heavily overburdened and the magnetic pattern is somewhat obscured. There does not appear to be any reason to suspect

a major change in rock type anywhere on the property.

On the Amalg 37 - 44 claim block, the magnetic pattern is very similar to that of the Amalg 1 - 36 M.C.s and the magnetic picture combined with the outcrop information leads to the conclusion that this claim block also is underlain by Nicola volcanics which have a northeasterly trend. The strongest magnetic highs are found over outcrop or near-outcrop.

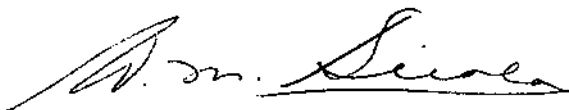
CONCLUSION

The negative electromagnetic anomalies found on the Amalg 1 - 36 and 37 - 44 claim blocks are thought to be caused by conductive overburden. The occasional positive anomaly is believed to result from magnetite in the Nicola volcanics.

The magnetic survey on both claim blocks suggests that there is only one rock type (Nicola volcanics) on both of these groups.

The work done to date has failed to indicate any drilling targets but this is not to suggest that other procedures would not prove useful.

April, 1969


William M. Sirola

QUALIFICATIONS OF GEOPHYSICAL OPERATOR

The geophysical work on the Amalg 1 - 36 and the Amalg 37 - 44 Mineral Claims was performed by Mr. Ted LaRose whose qualifications are as follows:

Frobex Exploration Ltd. - 2 years as field supervisor for airborne radiometric surveys, follow-up ground prospecting and staking, and drill supervision.

Area Mines Limited - 7 years as geophysical party leader for electromagnetic, magnetic and gravity surveys.

Kerr Addison Mines Ltd. - 1½ years as party leader on electromagnetic, magnetic, and I.P. surveys.

SCHEDULE OF ACCOMPANYING MAPS

- | | | |
|----|--|-----------------|
| 1. | KEY MAP | Scale 1:250,000 |
| 2. | MAGNETIC MAP-
Amalg Group, 1 - 36 M.C.'s | " 1" = 200' |
| 3. | MAGNETIC MAP-
Amalg Group 37 - 44 M.C.'s | " 1" = 200' |
| 4. | ELECTROMAGNETIC MAP-
Amalg Group, 1 - 36 M.C.'s | " 1" = 200' |
| 5. | ELECTROMAGNETIC MAP-
Amalg Group 37 - 44 M.C.'s | " 1" = 200' |



Amalg 37-44

Amalg 41-36

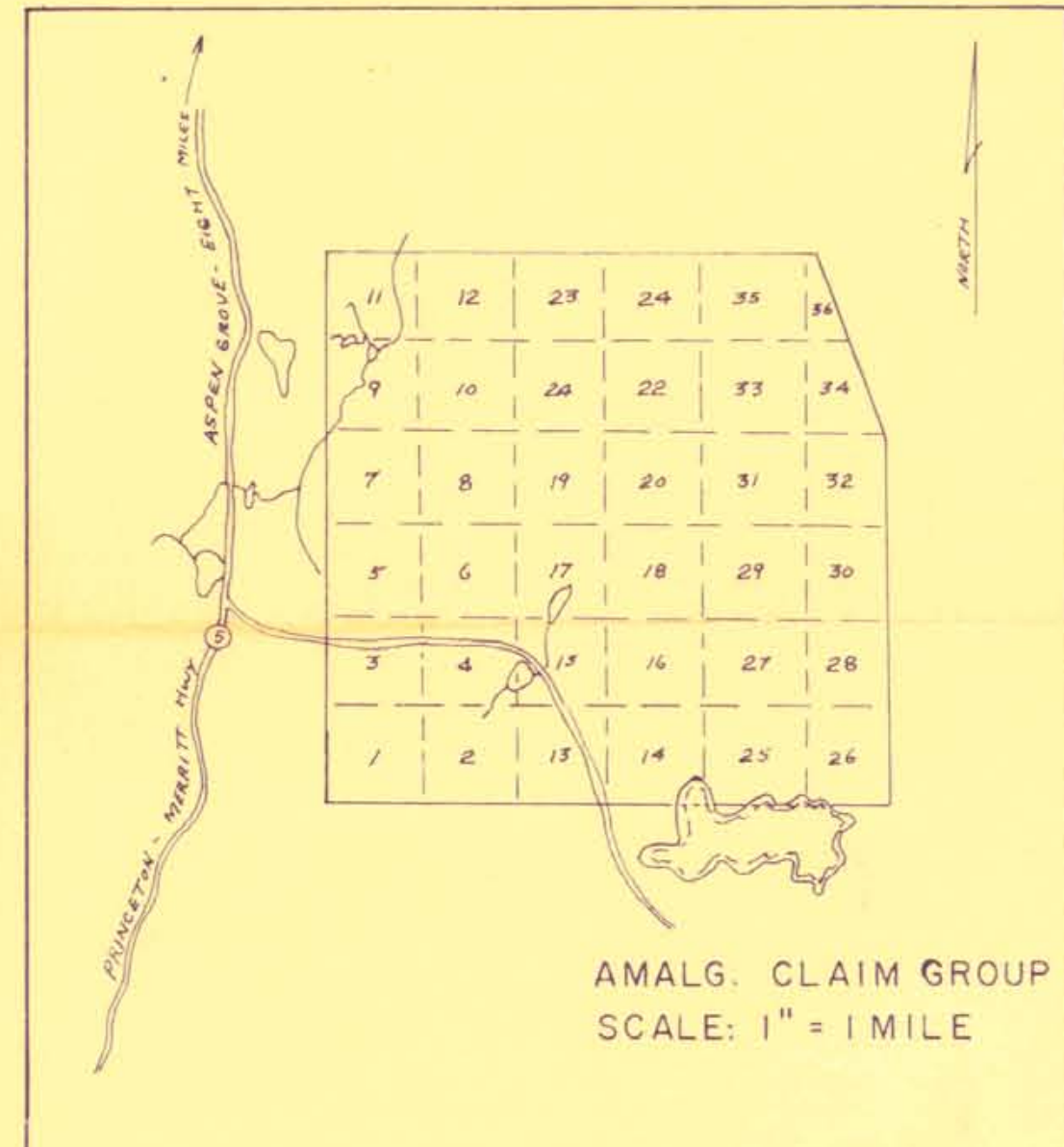
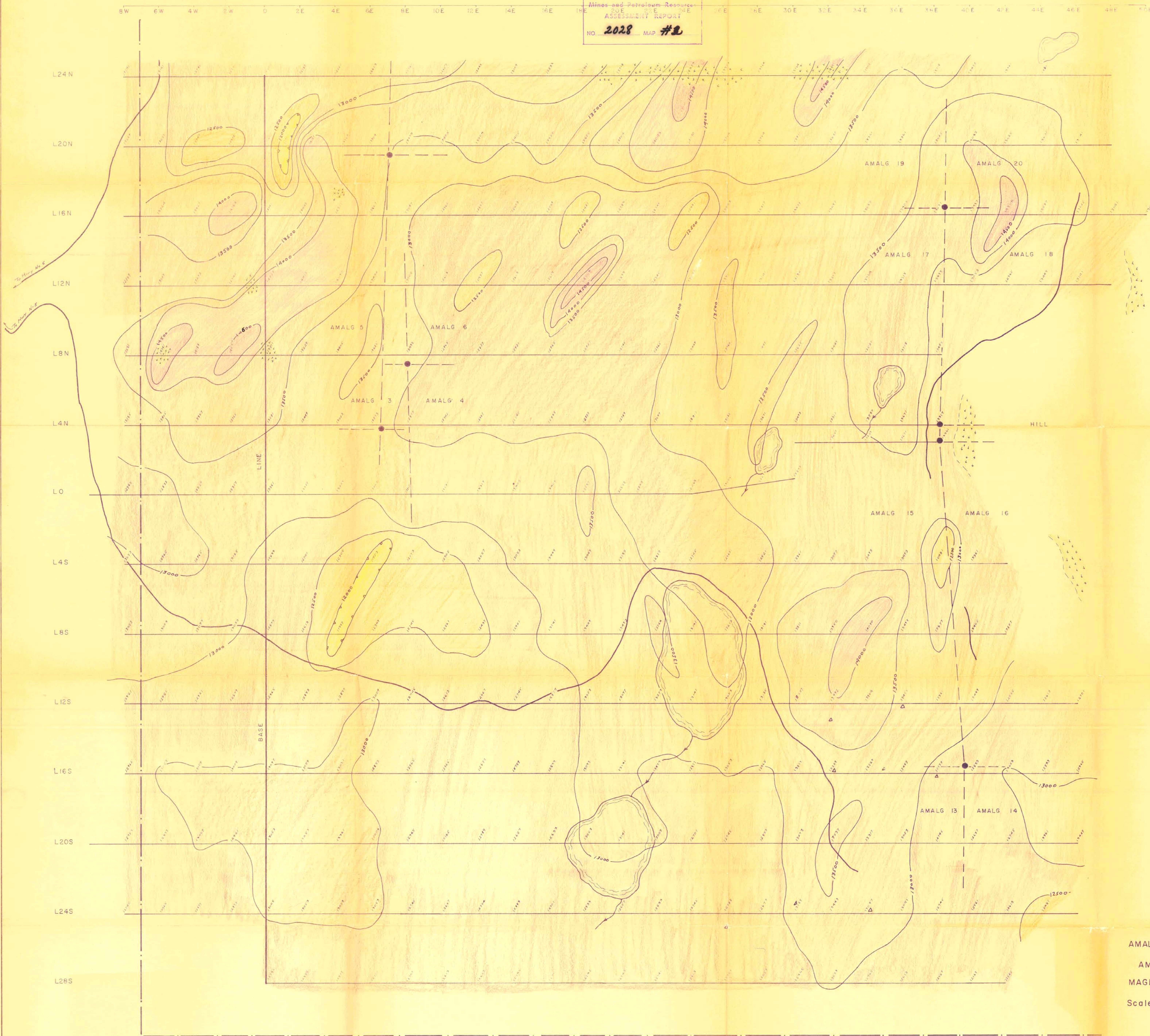
5038

41

KEY MAP
SCALE 1" = 4 MI.

2028

STEMWINDEN
MTN 3066'

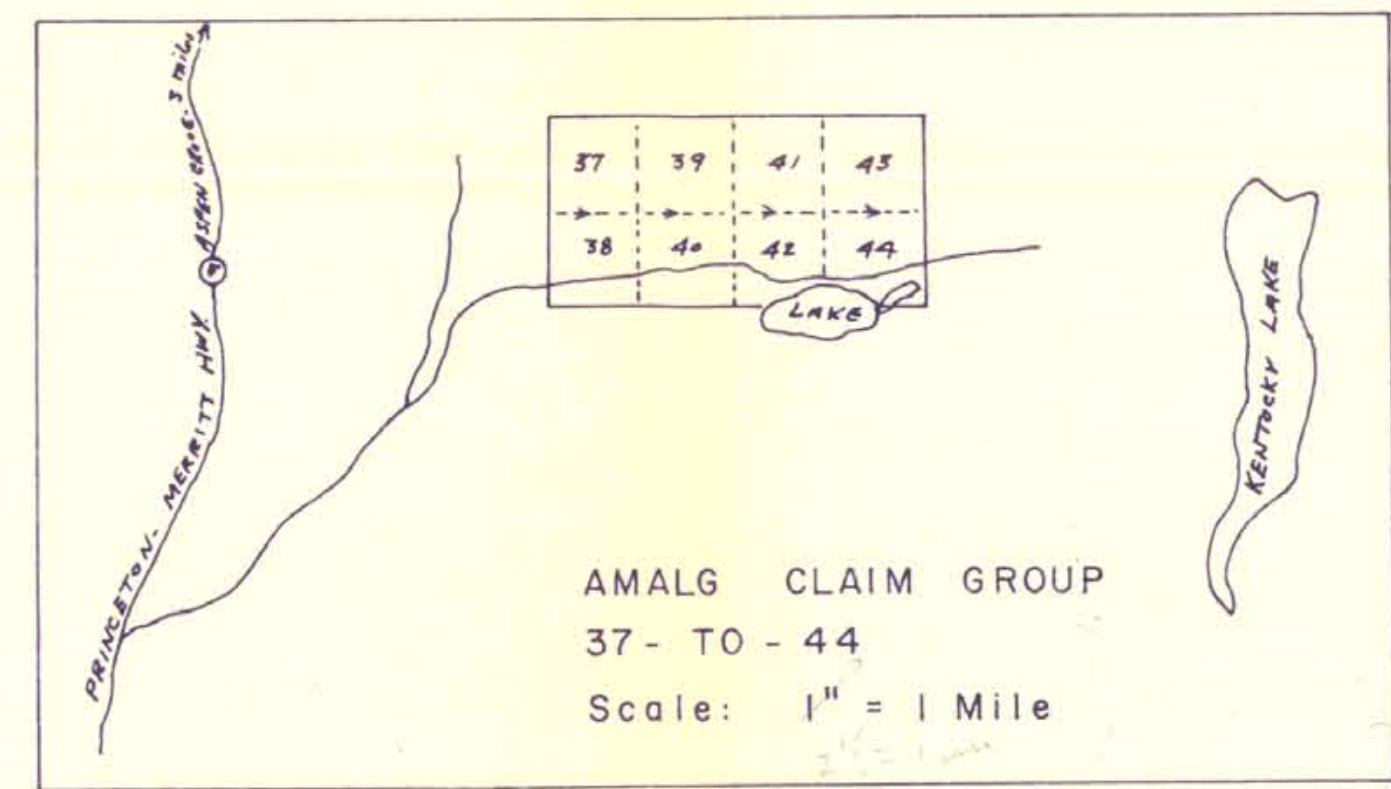
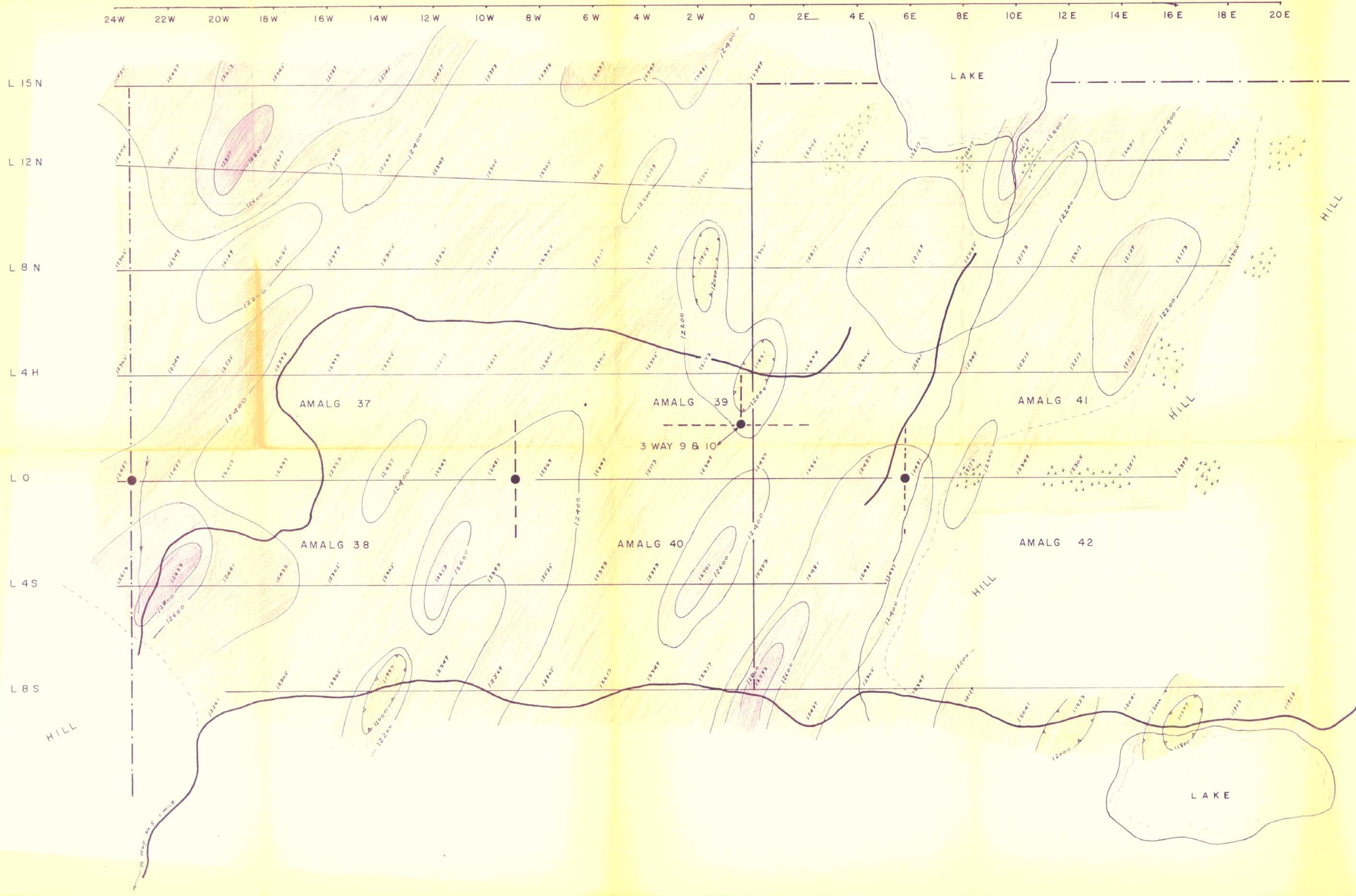


- LEGEND
- OUTCROP
 - ROAD
 - OLD-ORANGE TAPE
 - CLAIM POST
 - CLAIM BOUNDARY
 - INSTRUMENT— MAGCROMETER
 - CONTOUR INTERVAL 500 gms

AMALGAMATED LARDER MINES LTD.
AMALG CLAIM GROUP 1 to 36
MAGNETIC SURVEY
Scale: 1" = 200' Mar. 1969.

2028

John M. ...
Drawn By A. J. ...



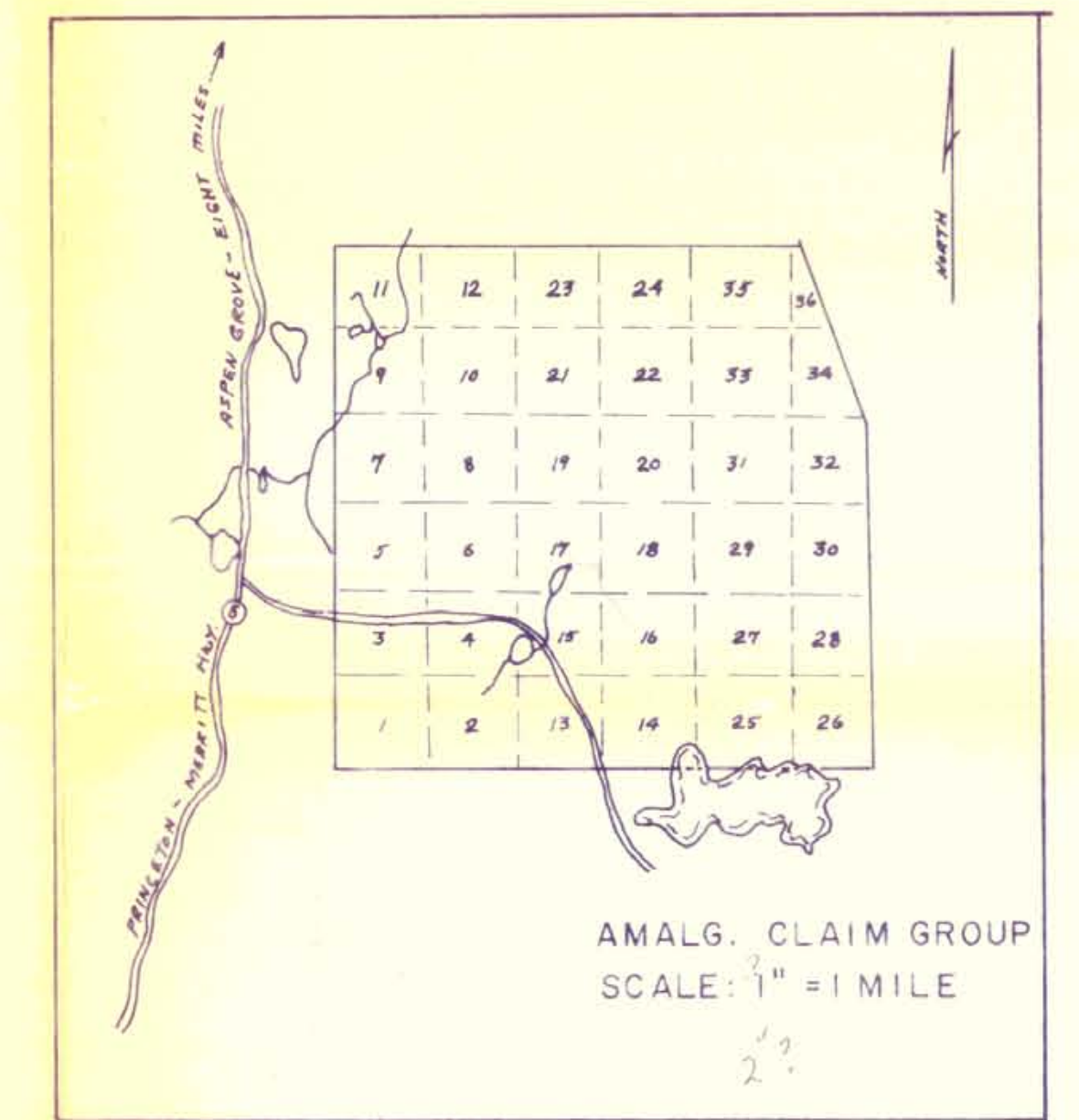
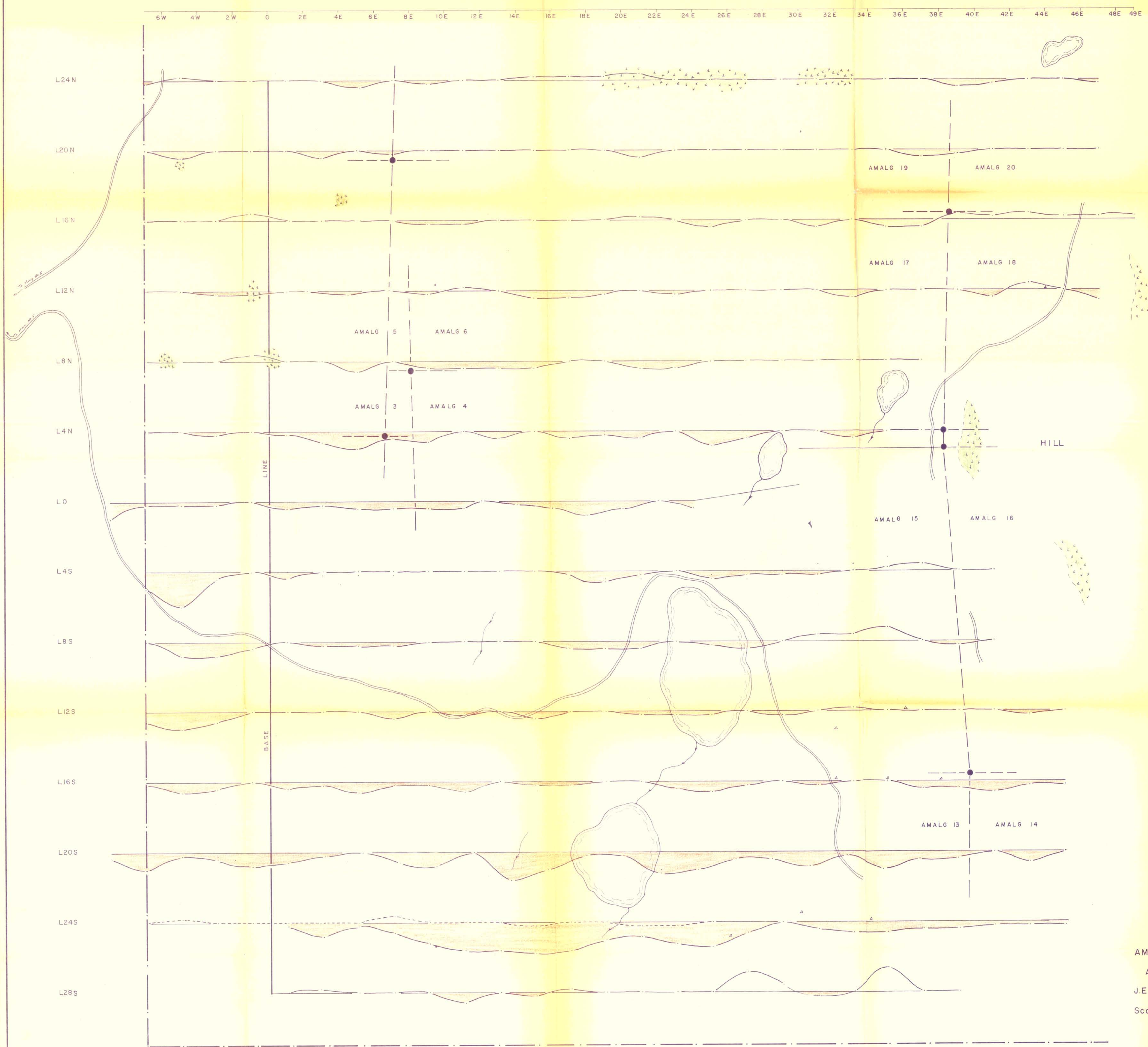
- LEGEND
- OUTCROP
 - ROAD
 - CLAIM BOUNDARY
 - CLAIM POST
 - INSTRUMENT
 - CONTOUR INTERVAL 200 gms.
 - Nicola volcanic rock
 - MAGCROMETER

Department of
Mines and Petroleum Resources
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NO. 2028 MAP #4

AMALGAMATED LARDER MINES LTD.
AMALG CLAIM GROUP 37 to 44
MAGNETIC SURVEY
Scale: 1" = 200' Mar. 1969.

2028

Drawn By A. J. L. L. L.



- LEGEND
- OUTCROP
 - ROAD
 - OLD-ORANGE TAPE
 - CLAIM POST
 - CLAIM BOUNDARY
 - J.E.M. 3600 cps.
 - J.E.M. 480 cps.
- NOTE: L28S RAN WITH 480 cps ONLY

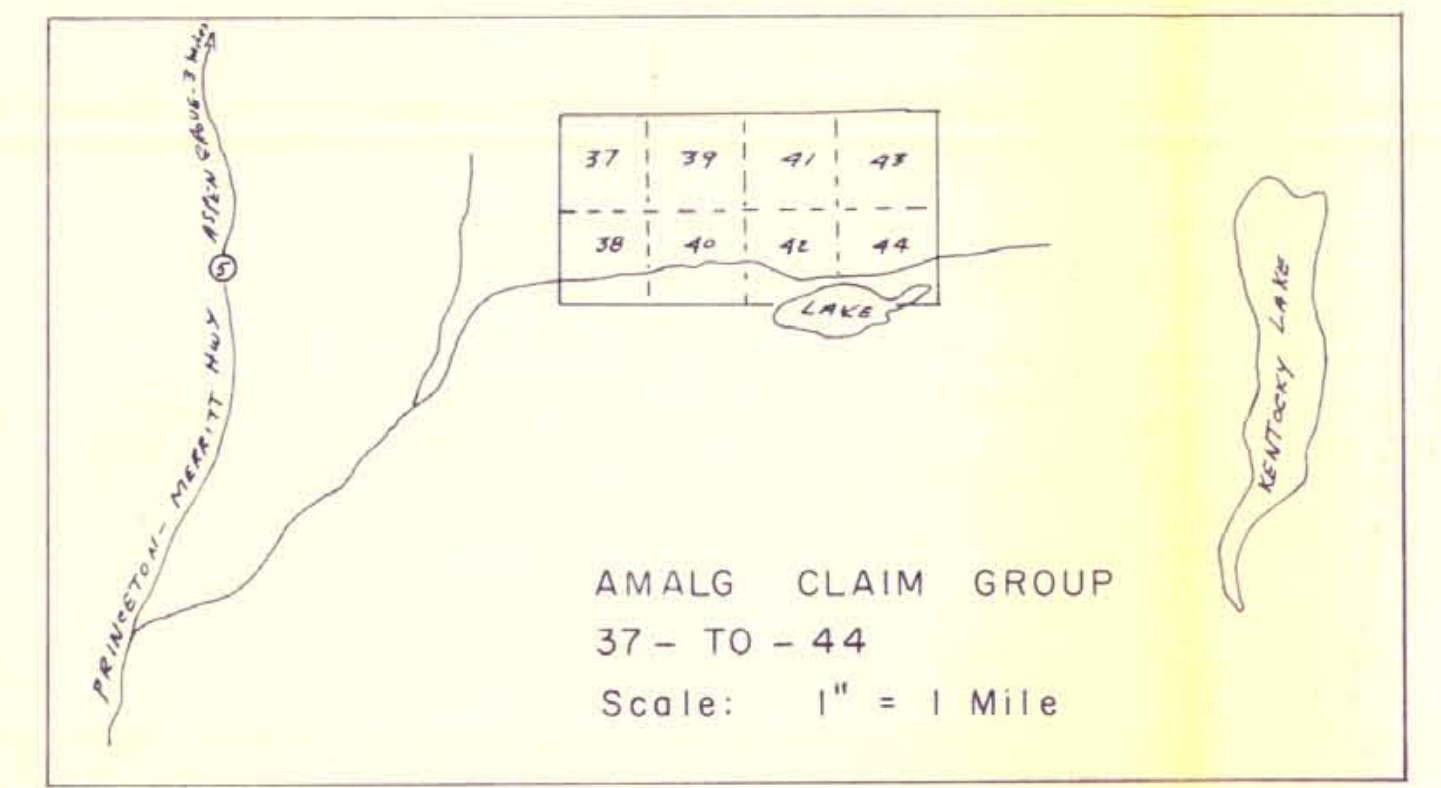
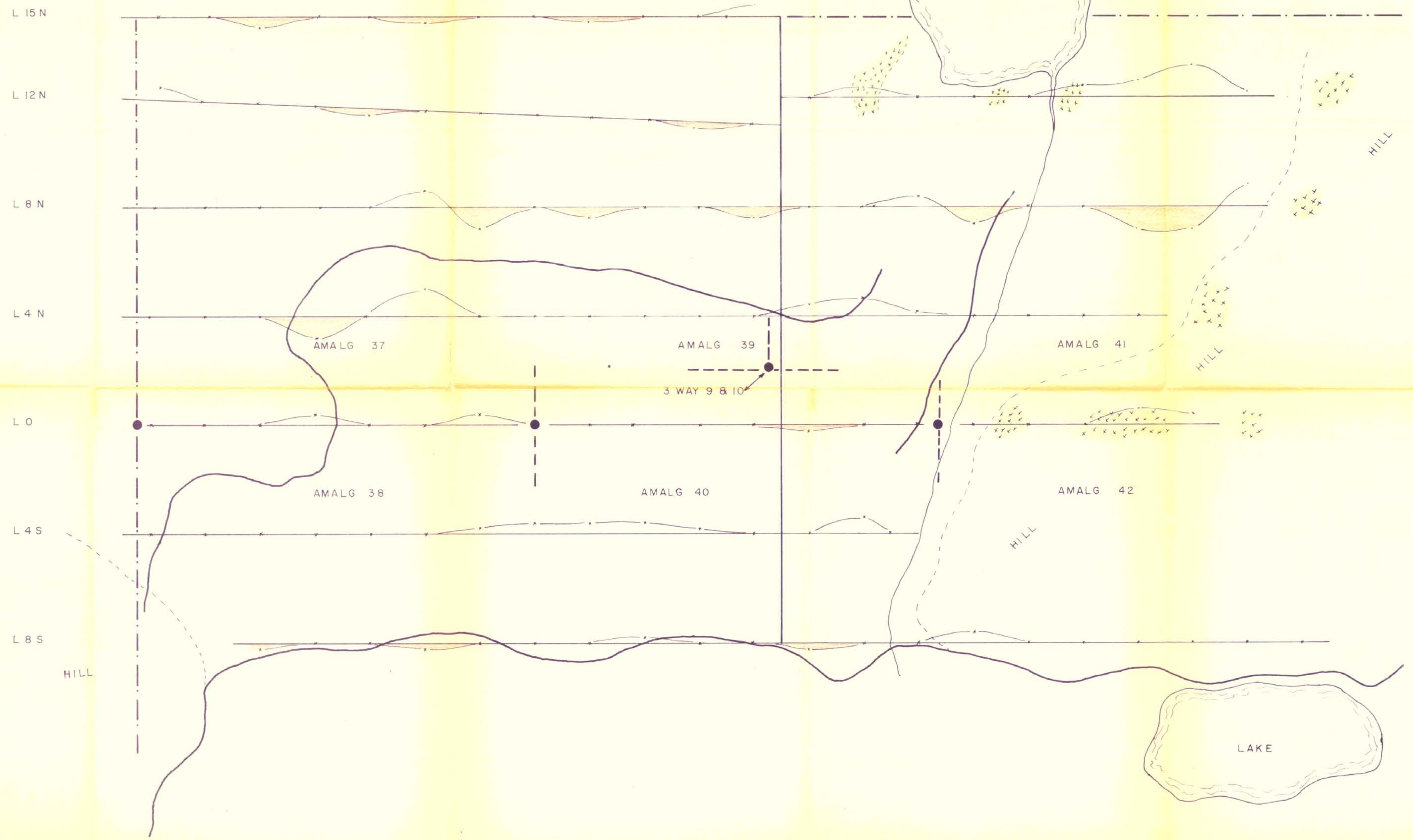
AMALGAMATED LARDER MINES LTD.
 AMALG CLAIM GROUP 1 to 36
 J.E.M. SURVEY - 3600 & 480 cps.
 Scale: 1" = 200' Mar. 1969.
 1" = 10°

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 NO. 2028 MAP #5

Ann M. Sica
 Drawn By: *A. J. Sica*

24W 22W 20W 18W 16W 14W 12W 10W 8W 6W 4W 2W 0 2E 4E 6E 8E 10E 12E 14E 16E 18E 20E



- LEGEND
- OUTCROP (shaded area)
 - ROAD (solid line)
 - CLAIM BOUNDRY (dashed line)
 - CLAIM POST (black dot)
 - INSTRUMENT (solid line with dots)
 - Nicola volcanic rock (hatched area)
 - J.E.M. 1800 cps. (solid line with dots)

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Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2028 MAP #6

AMALGAMATED LARDER MINES LTD
AMALG CLAIM GROUP 37 to 44
J.E.M. SURVEY
Scale: 1" = 200'
1" = 10°
Mar. 1969

2028

David M. Larder
Dennis Bill et al. Larder