

ELC GEOPHYSICAL REPORT
NO. A-70-100-71
MLM & GCM CLAIMS GROUPS
50° N. - 120° W.
HIGHLAND VALLEY AREA
NORTH OF MERRITT, B. C.
for MAMIT LAKE MINES LTD.
JANUARY 2, 1971 to APRIL 9, 1971

921/100

by DL.HINGS, P. ENG

2982

This is Geophysical Report No. A-70-100-71
for Mamit Lake Mines Ltd.
MLM and GCM Claims Groups
In the Highland Valley Area, North of Merritt, B.C.
50°N - 120° W
January 2, 1971 to April 9, 1971/

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PLANS

<i>A2</i> EM Plan	A-70-100-71-REM
<i>A3</i> Magnetic Plan	A-70-100-71-M1
<i>A11</i> Location Plan	A-70-100-71-REM-L

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BURNABY, B.C.
Telephone: 298-9619

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2982 MAP _____

elc geophysics ltd.

250 NORTH GROSVENOR, VANCOUVER, CANADA TELEPHONE: (604) 298-8619

April 8, 1971

ELC GEOPHYSICS LTD. REPORT NO. A-70-100-71 THIS GROUND ELECTROMAGNETIC SURVEY COVERED THE MLM AND GCM CLAIMS GROUPS IN THE HIGHLAND VALLEY AREA, B.C. 50° N. - 120° W. FOR MAMIT LAKE MINES LTD. JANUARY 2, 1971 to APRIL 9, 1971.

Purpose:

The purpose of this ground geophysical survey is a continuation and extension by radiated electromagnetic and magnetic instrumentation of the previous magnetometer survey No. A-70-100-M, February, 1970 by Klyceptor Geophysical Surveys Ltd.

Location:

The MLM and GCM Claims groups are located one mile north and west of Mamit Lake, north of Merritt, B.C. 50° N - 120° W. Location is referred to on the plan drawing No. A-70-100-71-REM-L.

Instrumentation:

The geophysical instruments comprised of a Ronka type EM16 manufactured by Geonex Ltd., and

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vertical field Fluxgate Magnetometer manufactured by Sabre Electronics, Vancouver, B.C. The REM survey was conducted on a frequency of 18.6 KHZ signals radiated from NPG in Arlington, Washington, USA.

Geological Reference:

The British Columbia Department of Mines and Petroleum Resources bulletin No. 56 of the Guichon Creek Batholith by K.E. Northcoat, 1969.

Presentation:

The surveys are presented on a grid layout plan No. A-70-100-71-REM and drawing No. A-70-100-71-M1. The gridlines are east and west at approximately 200 foot intervals along a centre north-south control line 0+00. Station spacing is varied between 25 and 50 feet relative to the judgement of the operator on the variation in his readings. The vertical and horizontal components are shown in profile form along gridlines. The dashed lines being the horizontal component and the solid lines the vertical component. The value of the EM readings are indicated in percentage according to the scale on the drawing.

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The plan No. A-70-100-71-M1 is a continuation to the east of the previous magnetometer survey A-70-100-M by Klyceptor Geophysical Surveys Ltd., February 1970. These surveys were conducted over the same gridlines and coordinates. The magnetometer portion of the survey is shown in profile form, with 500 gammas being equal to one inch, and the baseline having an approximate value of 55,000 gammas.

Linear anomalous features that correspond in location on both the EM and the previous magnetic surveys have similar identification.

The gridlines traversed a total of approximately 14 miles on the EM survey and 4 miles on the magnetic survey. EM interpretation is based on the profile gradient change and the relative phase with respect to the two components.

Results, EM Survey:

The linear anomalies of principal interest in the EM survey are indicated by the letters CL for Conductive Linear, followed by a number identifying the particular anomaly. The linear anomalies beginning

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with L are those anomalies that coincide in location closely to magnetic anomalies shown on previous surveys, with the corresponding numbers following the letter. For example L1, L2, L3, L4 were also shown on the magnetic survey made approximately a year ago.

The principal area of interest is in the zone marked Z1 wherein the maximum readings occur between the CL1 and CL2 conductive linear anomalies and between the L2 and L4 linear anomalies, terminating on the CL3 anomaly. It will be noted that with the exception of F2 which was also identified in a magnetic survey, all the north-east south-west linear strikes are indicated as conductive linear anomalies, however F2 is also in this category, but for reference purposes was given the same identification as the previous anomaly in this location from magnetics.

All the subsurface linear anomalies are west of the contact C1. The anomalous feature running north and south, east of C1, is attributed to beddings and topography.

Results, Magnetic Survey:

Refer to plan A-70-100-71-M1 with the exception

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of the bedding influence there are only two linear anomalous features. The F2 strike and location appears to be an extension of the magnetic F2 to the southwest from the previous magnetometer survey. This is not supported by the EM survey.

The linear anomaly L5 is shown on the EM survey and extends into the main zone of interest Z1.

Summary:

The anomalous features within zone Z1 are supported both magnetically and electromagnetically showing good conduction between CL1 and CL2. In the early magnetic survey it was believed F2 was the strike of a fault. It now appears the faulting may be associated with the northwest-southeast linears. The CL1, CL2, CL3 northeast-southwest conductive linears maybe the more prominent features from a brecciated area. A geological formation change appears to occur along the C1 contact line.

Conclusions and Recommendations:

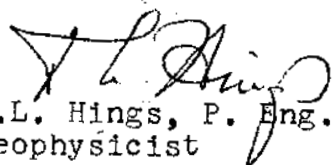
The Z1 zone has responded to an airborne two component magnetometer survey, a ground vertical field

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magnetometer survey and a radiation electromagnetic survey. The magnetic values of the readings do not indicate there is much if any magnetite involved.

The Z1 zone appears to have shearing, faulting and breccia with increased conductive properties extending between CL1 and CL2.

It is recommended that the anomalous area from 20+00 south to 50+00 south between 0+00 and 20+00 west be geologically investigated, possibly by a geochemical survey conducted over the existing grid.


D.L. Hings, P. Eng.
Geophysicist

A Statement of Costs for Geophysical Survey No.
A-70-100-71 covering the MLM and GCM Claims North
of Merritt, B.C. By ELC GEOPHYSICS LTD.
January 2, 1971 to April 0, 1971.

Survey Crew:

R.L. Reece	16 days @ 60.00	\$ 960.00
W. Mather	15 days @ 40.00	600.00
G. Olheiser	15 days @ 40.00	<u>600.00</u>
		\$ 2160.00

Transportation:

4 x 4 Truck	15 days @ 12.00	180.00
Mileage	500 miles @ 10¢	50.00
Snowmobile	15 days @ 15.00	<u>225.00</u>
		\$ 455.00

Living Costs:

Motel	15 days @ 12.00	180.00
Food	45 mandays @ 6.50	<u>292.50</u>
		\$ 472.50

Equipment:

Ronka EM16	15 days @ 10.00	150.00
Sabre Magnetometer	15 days @ 10.00	150.00
Misc. 15 Days @ 5.00		<u>75.00</u>
		\$ 375.00

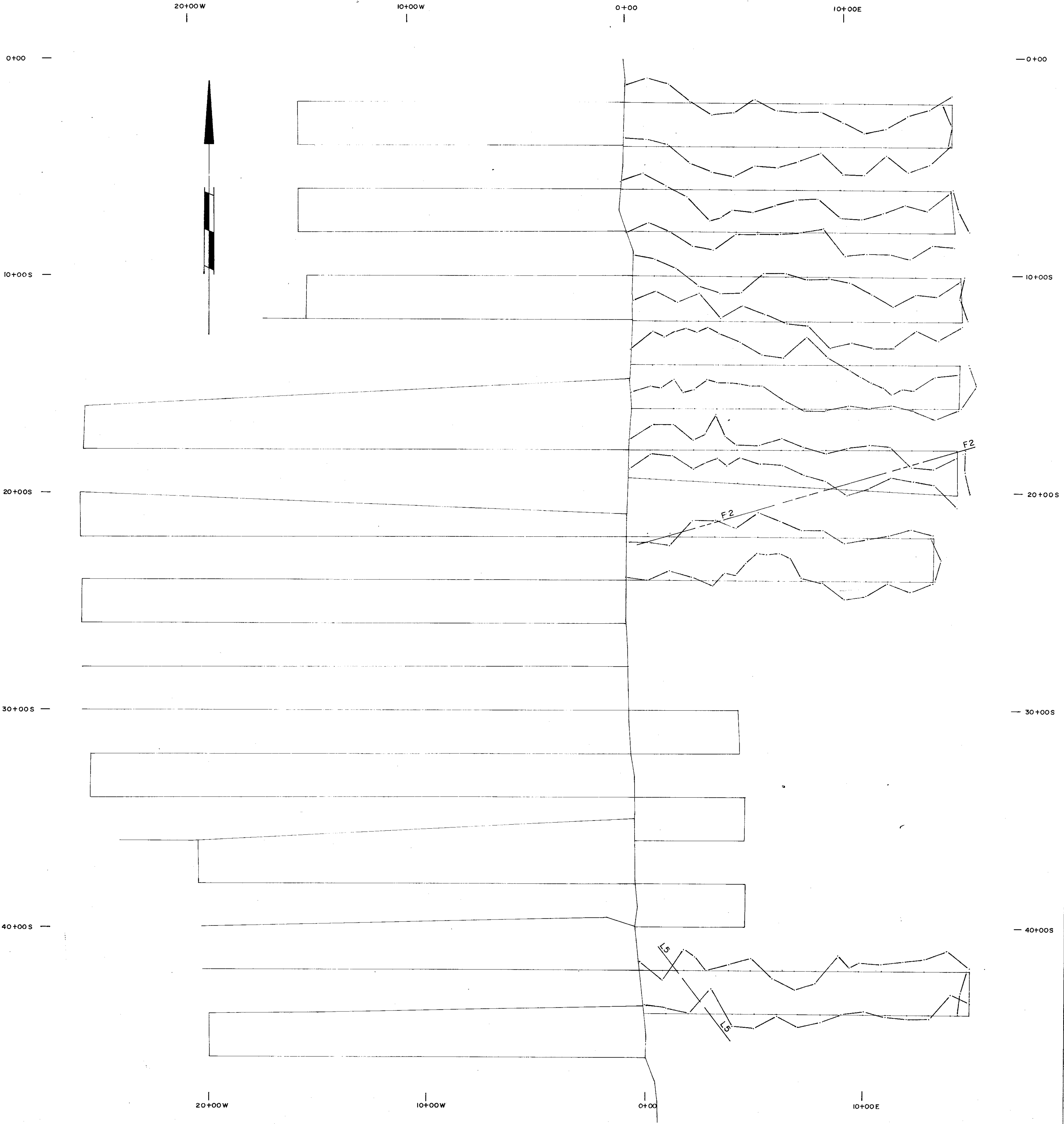
Data Processing & Drafting

D.A. Cramer	6 days @ 60.00	360.00
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Interpretation & Report

D.L. Hings, P.Eng.		<u>350.00</u>
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Total		<u>\$ 4172.50</u>
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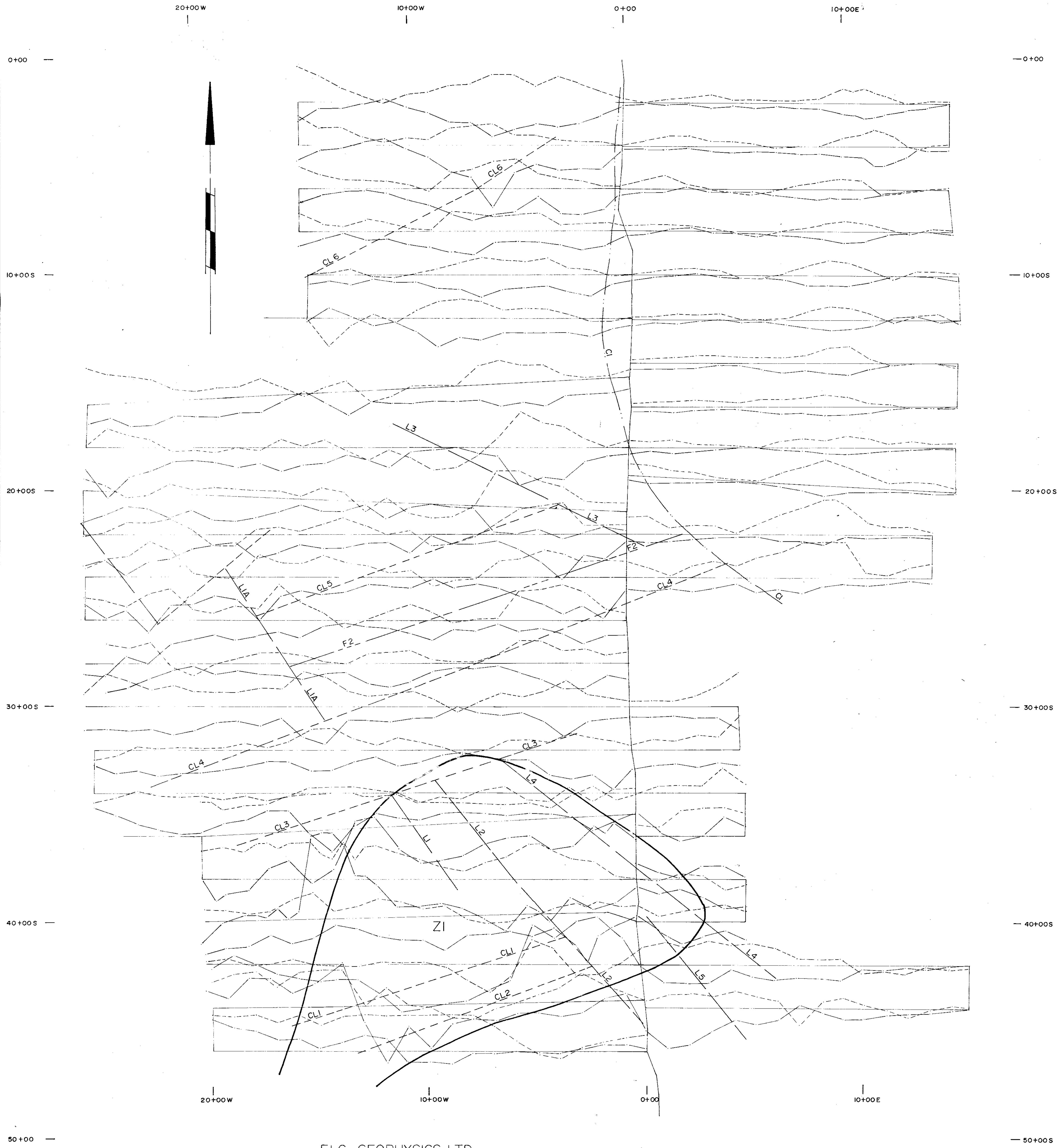


ELC GEOPHYSICS LTD.
 MLM & GCM GROUPS HIGHLAND VALLEY, B.C.
 MAMIT LAKE MINES LTD.
 MAR. 1971 SCALE: 1" = 200' DWG. NO.: A-70-100-71-MI
 MAG. PROFILES
 APPROVED *[Signature]*

NOTE:-
 - - - SURVEY LINES
 - - - 500 GAMMAS (ZERO LINE = 55,000)
 - - - LINEAR ANOMALY
 - - - FAULT

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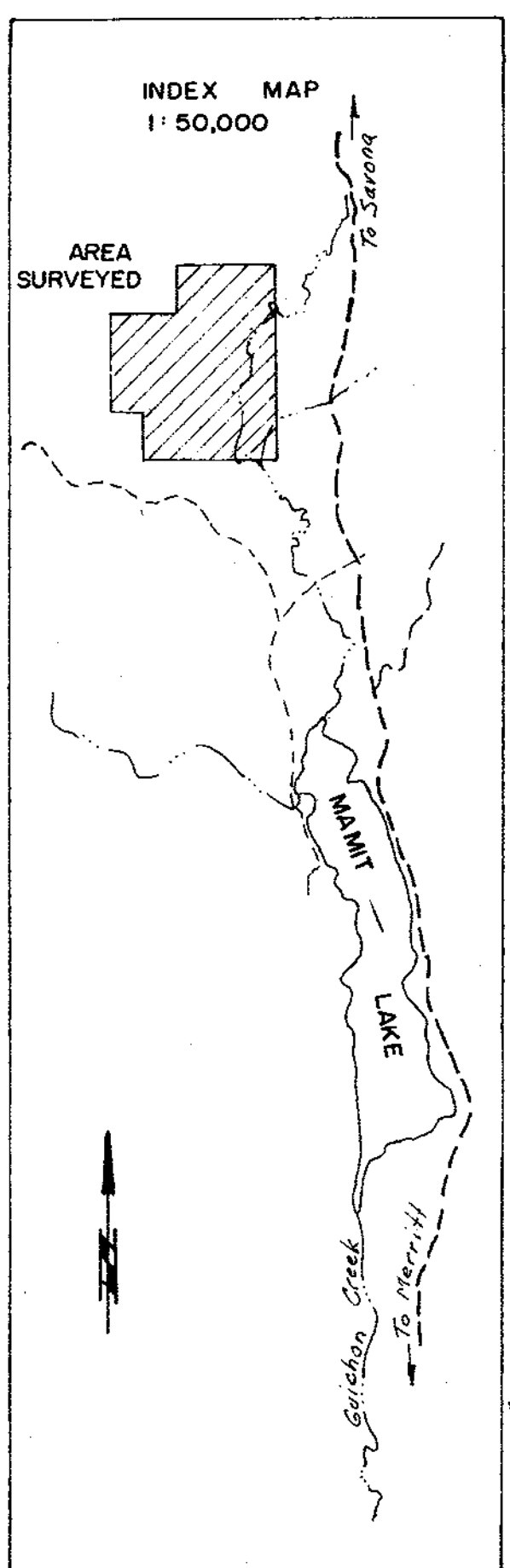


ELC GEOPHYSICS LTD
 MLM & GCM GROUPS HIGHLAND VALLEY, B.C.
 MAMIT LAKE MINES LTD.
 MAR. 1971 SCALE: 1" = 200' DWG. NO.: A-70-100-71-REM
 EM PROFILES
 APPROVED *[Signature]*

NOTE:-
 SURVEY LINES
 ZERO LINE
 IN-PHASE (I" = 100%)
 QUADRATURE (I" = 50%)
 LINEAR ANOMALY
 CONDUCTIVE LINEAR ANOMALY
 FAULT
 CONTACT
 ANOMALOUS ZONE

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ELC GEOPHYSICS LTD.
 MLM & GCM GROUPS HIGHLAND VALLEY, B.C.
 MAMIT LAKE MINES LTD.
 MAR. 1971 SCALE: 1" = 200' DWG. NO.: A-70-100-71-REM-L
 LOCATION PLAN
 APPROVED *[Signature]*

NOTE:-
 — SURVEY LINES
 ● CLAIM POST — CLAIM LINE
 - - - ROAD — CREEK

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