

This is Geophysical Report No. EM-69-102-70  
 for G. Olheiser  
 GO Claims Group  
 in the Highland Valley Area, 8 miles North of  
 Merritt, B.C.  
August 26, 1970 to October 20, 1970. 92 I / 7W

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PLANS

|     |             |                |
|-----|-------------|----------------|
| * 1 | EM Profiles | EM-69-102-70   |
| * 2 | Location    | EM-69-102-70-L |

ELC GEOPHYSICS LTD.  
 250 N. Grosvenor Ave.  
 BURNABY, B. C.  
 Telephone: 298-9619

Department of  
 Mines and Petroleum Resources  
**ASSESSMENT REPORT**  
 NO. 3038 MAP

# elc geophysics ltd.

250 NORTH GROSVENOR, VANCOUVER, CANADA TELEPHONE: (604) 298-9619

ELC GEOPHYSICAL REPORT NO. EM-69-102-70 COVERING  
THE NORTHERN PORTION OF THE GO GROUP OF CLAIMS  
FOR G. OLHEISER. 50°N. - 120°W. HIGHLAND VALLEY  
AREA, NINE MILES NORTH OF MERRITT, B. C.  
AUGUST 26, 1970 TO OCTOBER 20, 1970.

## Purpose:

The purpose of the geophysical ground survey was to determine with an electromagnetic infinite source instrument the extension of anomalous features to the north and east of the GO Claims that were previously surveyed and reported in the Klyceptor Geophysical Report No. EM-69-102. The extension of the baseline to the north with closer spaced gridlines using the same coordinates permits this report to be assessed relative to the results obtained in the southern portion surveyed in 1969.

## Instrumentation:

The survey instrument utilized a type EM-16 Ronka Instrument operating on 18.6 KHZ from

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the signals of the U.S. Navy transmitter NPL located near Arlington, Washington, U.S.A.

The survey was under the supervision of R. Reece, assisted by B. Kolsen and B. Branstetter.

Geological Reference:

Report and Maps issued by the Geological Survey of Canada (Memoir 249, W. E. Cockfield.).

Presentation:

The survey plan is shown on drawing No. EM-69-102-70. The baseline extends nearly magnetically north and south through the centre of the plan. The gridlines are east and west having an average spacing of two hundred and fifty feet with station spacing of one hundred feet.

The two component (in phase and quadrature) readings are plotted in profile form, along the gridlines, and interpretation is determined by the relative phase and amplitude, with respect to the two components, and the neighbouring gridlines.

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Results:

It should be noted the southern portion of the survey has the same control baseline as the survey report No. LM-69-102. It should also be noted that the grid co-ordinate 0+00 is the same location on the baseline in both reports.

The southern portion of the survey indicates the linear anomalous features Cla, L1a and L2a. These are the same features measured in the previous survey shown as Cl, L-1 and L2. This rather prominent anomaly appears to terminate on the fault indicated by the linear line F1. The conductive linear anomaly, striking nearly due north showing two station width, is indicated as CL1 and commences from the fault F1.

The eastern side of the general anomalous area is indicated with the linear anomalies L1, L2 and L3. Coinciding with the strike of L1 are the conductive linear anomalies CL2 and CL3, in the northwest region of the survey. A possible continuation of these anomalies is shown crossing the baseline to the north as CL4. On the eastern

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portion of the survey the buried cable paralleling the road creates a strong anomalous reading, and obscures results that might have been extended from F1 and F2.

Geochemical Survey:

A portion of the EM survey was covered by a geochemical analysis from ground sampling.

A total of 150 samples were taken over the grid as shown on Plan No. EM-69-102-70. The samples were taken from the "B" Horizon, first by removal of any overlying debris, then digging a hole, using a round mouthed spade, approximately fifteen inches below the surface. A sample from the hole was packaged using a standard kraft soil sample bag obtained from TSL Laboratories Ltd. 325 Howe Street, Vancouver 1, B.C. The sample determinations were made by Bondar-Clegg and Company Ltd., 1500 Pemberton Ave. North Vancouver, B. C.

Sampling locations are indicated on the

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plan by the figures showing parts per million of copper. These figures are mostly confined to the southern portion of the survey from 5+00 N to 17+50 S. Baseline samples were taken throughout the length of the baseline at 250 foot intervals. The only gridline in the northern portion that was sampled is 25+00 N.

Results of Geochemical Values:

The average readings are in the vicinity of 30 parts per million. In assessing the results, values of 50 PPM or over are considered to be well above average, and constitute an anomalous feature.

Summation:

The abrupt termination of the Z1a zone at the apparent fault F1 is supported to some extent with the geochemical values on lines 7+50 S and 5+00 S being 82 and 69 respectively although larger values to the east on the southern line are not accounted for. The values on the west end

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of F1 of 72 and 54 PPM may have some significance. The values of 50 and 60 PPM in the CL1 area may indicate some correlation. The L2 anomaly on the west end of lines 2+50 N and 5+00 N show values of 50, 58 and 74 PPM on the downgrade side of L2.

The conductive linear anomalies CL2 and CL3 cross the gridline 25+00 N showing the values of 58 and 74 PPM respectively. A possible continuation of this strike to CL4 crossing the baseline at approximately 42+50 N is substantiated by values ranging from 69, 52, 51 to 69 in a north sequence.

Conclusions:

The northern portion of the survey shows general formational changes, however there is apparently no conductive or linear anomalies. CL1 is perhaps the widest conductive anomaly, although not relatively strong in readings. CL2, CL3 and CL4 seem to be well supported by the few geochemical

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samples that were taken in the vicinity, and these northeast, southwest strike features are the most persistent, determined from the survey. The L1, L2 and L3 may be part of a contact anomaly between formations. The characteristic feature of L1 with an apparent dip to the west, is quite similar to the L1a of the previous survey.

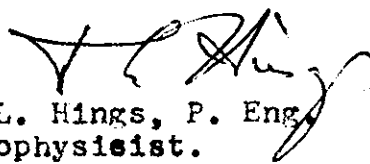
Recommendations;

It would appear L1a and L1 have been faulted in the vicinity of F1. The northwest portion of the survey in the CL2, CL3 area have the most positive indications from both the electromagnetic and geochemical surveys. The closer spacing of this survey plus the additional geochemical information gives more positive information than was obtained from the L1a and C1 contact regions in the previous survey.

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It is recommended that further geological and geophysical investigation is warranted in the northwest area. Geological assessment should be made of the CL1 anomaly.

  
D.L. Hings, P. Eng.  
Geophysicist.

A STATEMENT OF COSTS FOR GEOPHYSICAL AND GEO-CHEMICAL SURVEY COVERING THE GO CLAIMS NORTH OF MERRITT, B. C. BY ELC GEOPHYSICS LTD.  
AUGUST 26, 1970 TO OCTOBER 20, 1970.

Survey Crew:

|                |                   |               |             |
|----------------|-------------------|---------------|-------------|
| R. L. REECE    | 14 days @ \$60.00 | \$ 840.00     |             |
| B. KOLSEN      | 12 days @ \$35.00 | 420.00        |             |
| C. BRANSTETTER | 12 days @ \$35.00 | <u>420.00</u> |             |
|                |                   |               | \$ 1,680.00 |

Transportation:

|             |                   |              |           |
|-------------|-------------------|--------------|-----------|
| 4 x 4 Truck | 14 days @ \$18.00 | \$ 252.00    |           |
| 700 Miles   | @ 10¢ per mile    | <u>70.00</u> |           |
|             |                   |              | \$ 322.00 |

Living Costs:

|            |                   |           |           |
|------------|-------------------|-----------|-----------|
| 38 mandays | @ \$10.00 per day | \$ 380.00 |           |
|            |                   |           | \$ 380.00 |

Instrument:

|                   |  |  |           |
|-------------------|--|--|-----------|
| 14 days @ \$10.00 |  |  | \$ 140.00 |
|-------------------|--|--|-----------|

Misc. Supplies:

|                                   |  |  |           |
|-----------------------------------|--|--|-----------|
| Flagging, lathe, Kraft bags, etc. |  |  | \$ 150.00 |
|-----------------------------------|--|--|-----------|

|                             |  |  |           |
|-----------------------------|--|--|-----------|
| <u>Geochemical Analysis</u> |  |  | \$ 190.00 |
|-----------------------------|--|--|-----------|

Data Processing and Drafting

|                  |  |  |           |
|------------------|--|--|-----------|
| 5 days @ \$60.00 |  |  | \$ 300.00 |
|------------------|--|--|-----------|

D. Cramer

Interpretation and Report

D.L. Hings P. Eng.

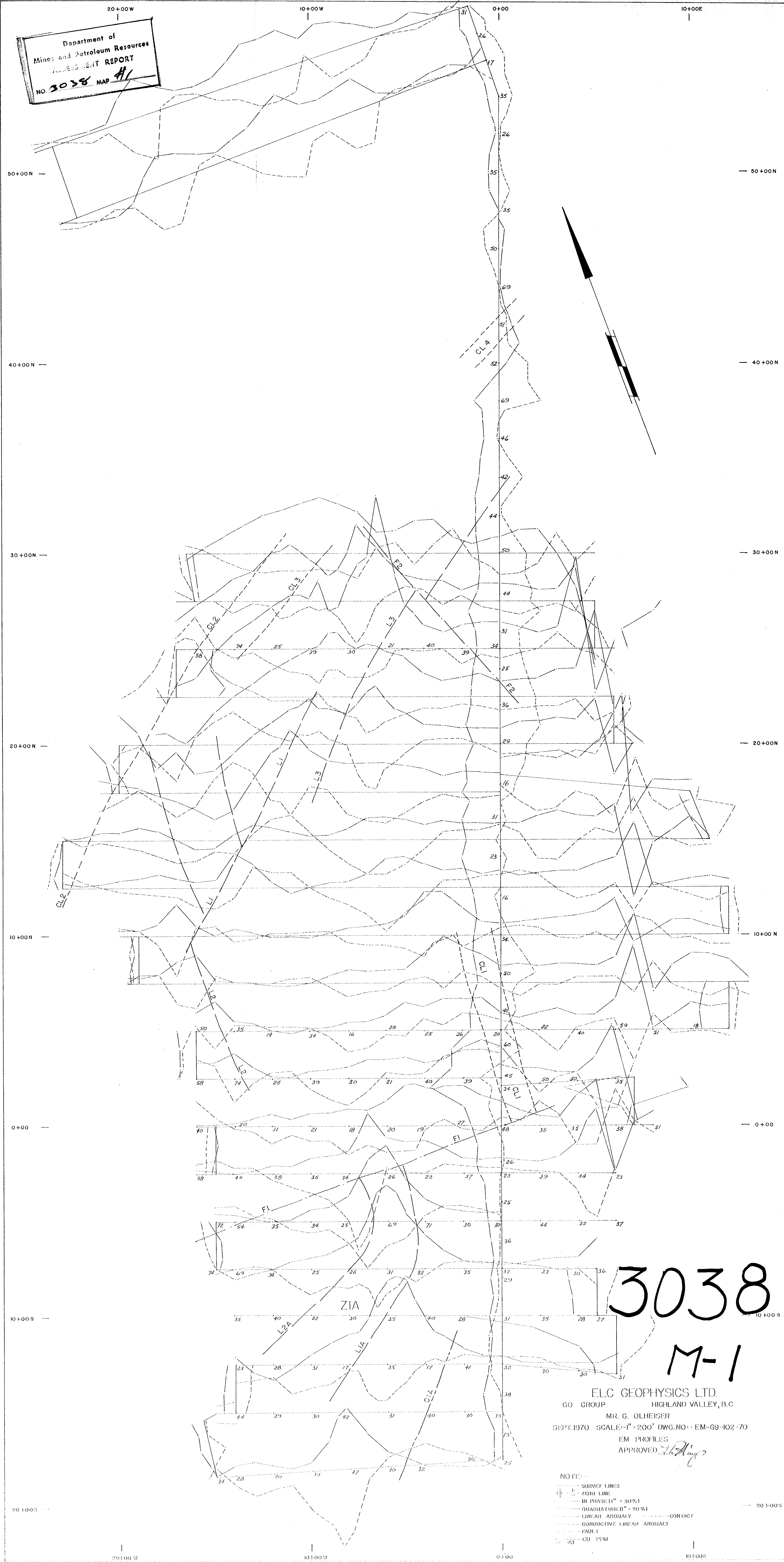
|                   |  |  |          |
|-------------------|--|--|----------|
| 2 days @ \$150.00 |  |  | \$300.00 |
|-------------------|--|--|----------|

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\$ 3,462.00

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Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3038 MAP #1



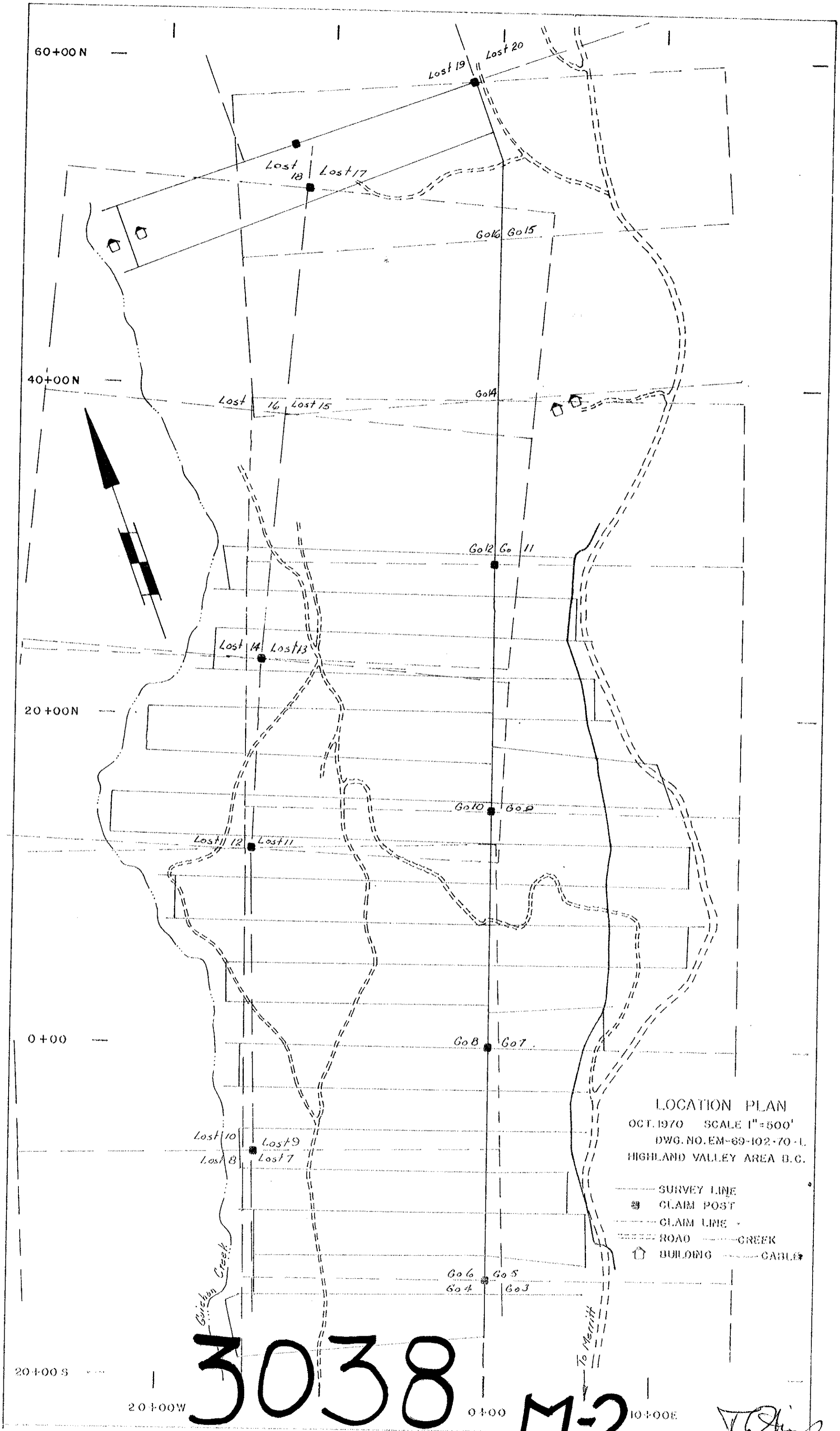
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ELC GEOPHYSICS LTD.  
GO GROUP HIGHLAND VALLEY, B.C.  
MR. G. OLHEISER  
SEPT. 1970 SCALE: 1" = 200' DWG. NO. EM-69-102-70  
EM PROFILES  
APPROVED *[Signature]*

- NOTE:
- SURVEY LINES
  - ZERO LINE
  - IN PHASE (1" = 50%)
  - QUADRATURE (1" = 20%)
  - LINEAR ANOMALY
  - CONDUCTIVE LINEAR ANOMALY
  - FAULT
  - CU PPM

20+00S 10+00S 0+00 10+00N 20+00N 30+00N 40+00N 50+00N

20+00W 10+00W 0+00 10+00E



LOCATION PLAN  
 OCT. 1970 SCALE 1" = 500'  
 DWG. NO. EM-69-102-70-L  
 HIGHLAND VALLEY AREA B.C.

- SURVEY LINE
- CLAIM POST
- - - CLAIM LINE
- == ROAD
- ~ CREEK
- BUILDING
- CABLE

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J. L. King