# GEOPHYSICAL REPORT

ON A

MAGNETIC SURVEY

OVER THE

MARGIE CLAIM

SCHKAM LAKE, HOPE AREA

NEW WESTMINSTER MINING DIVISION

BRITISH COLUMBIA

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| | |
|---|---|
| PROPERTY | : 1.5 km due north of Hope, B.C. |
| | : 49° 25' N Latitude<br>121° 26' W Longitude |
| | : N.T.S. 92H/6W |
| WRITTEN FOR | : E. AMENDOLAGINE<br>4550 Harriet Street<br>Vancouver, B.C., V6V 4K5 |
| WRITTEN BY | : David G. Mark, Geophysicist<br>GEOTRONICS SURVEYS LTD.<br>#530-800 West Pender St[illegible]<br>Vancouver, B.C., V6C 2[illegible] |
| DATED | : February 18, 1988 |



GEOTRONICS SURVEYS LTD.
Engineering & Mining Geophysicists
VANCOUVER, CANADA

# ARIS SUMMARY SHEET

District Geologist, Victoria — Off Confidential: 89.01.14

ASSESSMENT REPORT 17196 — MINING DIVISION: New Westminster

PROPERTY: Margie
LOCATION: LAT 49 24 20 LONG 121 25 58
UTM 10 5473502 613698
NTS 092H06W
CLAIM(S): Margie
OPERATOR(S): Manny Consul.
AUTHOR(S): Mark, D.G.
REPORT YEAR: 1988, 17 Pages
COMMODITIES SEARCHED FOR: Copper,Lead,Gold
GEOLOGICAL SUMMARY: The property is mainly underlain by volcanics and sediments of Carboniferous and later age. A narrow band of Jackass Mountain Group sediments occur along the western border. Felsic intrusives of Jurassic age intrude the sediments and volcanics. The mineralization occurs on the east side of the property and consists of quartz veins containing pyrite, chalcopyrite, pyrrhotite and sparse galena, as well as possible gold.
WORK DONE: Geophysical
MAGG 1.6 km
MINFILE: 092HSW006

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| At Back of Report | | | Map |
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| Claim Location Map | 1: | 50,000 | 1 |
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NOTE: Map 2 in writer's previous report.

## SUMMARY

A detailed magnetic survey was carried out over a portion of the Margie Claim owned by E. Amendolagine of Vancouver, B.C., during December, 1987. The claim is located on the Fraser River, 1.5 km due north of the town of Hope, B.C. Access is easily gained by a two-wheel drive vehicle. The terrain consists of mainly gentle to moderate slopes forested with moderately dense coniferous trees and thick underbrush. The purpose of the survey was to determine whether the mineralization had a magnetic expression, and if it did, to determine its strike length.

The property is mainly underlain by volcanics and sediments of Carboniferous and Later Age. A narrow band of Jackass Mountain sediments occur along the western border. Acid intrusives of Jurassic Age intrude the sediments and volcanics. The mineralization occurs on the east side of the property and consists of quartz veins containing pyrite, chalcopyrite, pyrrhotite and sparse galena, as well as possibly gold.

The readings were taken every 10 meters on 25-meter separated east-west lines. They were then diurnally corrected, plotted and contoured.

## CONCLUSIONS

1. The main showing occurs within a magnetic low striking N20°E. This low may be reflecting the mineralization therefore suggesting the minimum strike length is 175 m.

2. Much of the western three-quarters of the survey area is underlain by volcanics, posibly a dark green volcanic breccia. The eastern quarter is underlain by a non-magnetic rock-type, possibly sediments or an altered rhyolite.

3. A lineal magnetic low just west of the baseline is suggestive of a fault or lithological contact.

## RECOMMENDATIONS

Mainly because of budget restraints, as has been stated in the writer's previous report, the exploration work has been quite limited so far. The following program is recommended, however, assuming financing is available. (It is essentially the same as the previously recommended program.)

1. The magnetic and VLF-EM survey methods have worked well and therefore should be continued over the rest of the property. The methods aid in mapping the mineralization as well as lithology and geological structure.

2. The soil sampling previously done is very reconnaissance in nature. A more detailed survey should be carried out, say 25-meter samples on 100-m lines. In the previous survey, the gold results were quite minimal which may be a result of screening the soil sample to -80 mesh. Therefore, in the lab, the total sample should be pulverized, and not screened at all in order to preclude the screening out of coarser gold. The anomalous samples should then be followed up by sampling on a tight grid, say 10 m centers on a grid, 200 m square.

3. At the same time, careful geological mapping should be carried out.

4. The defined soil anomalies should then be 'cat' trenched.

5. Resistivity - IP mapping and/or MaxMin EM should then be considered in order to optimize drill targets.

6. Diamond drilling should then be carried out. A large diameter drill and a face discharge bit may be necessary if gold mineralization is expected.

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## INTRODUCTION AND GENERAL REMARKS

This report discusses the survey procedure, compilation of data and the interpretation of a detailed magnetic survey carried out over a portion of the Margie Claim centered around the main showing during the period of November 24th to December 21st, 1987.

The survey was carried out by Geotronics Surveys Ltd. under the supervision of Alain Charest, geophysical technician. A total of 1.6 line km of magnetic survey were done.

The primary purpose of the magnetic survey was to determine whether the main showing of gold/sulphide mineralization had a magnetic response or signature, and then to determine its strike length. Also, it was to delineate geological structure and lithology as an aid in the exploration for the mineralization.

## PROPERTY AND OWNERSHIP

The property consists of one 12-unit claim staked within the New Westminster Mining Division as shown on Map 1 and as described below:

| Claim Name | No. Units | Record No. | Expiry Date |
|---|---|---|---|
| Margie | 12 | 752 | December 12, 1988 |

The expiry date shown takes into account the survey under discussion as being accepted for assessment credits.

The claim is owned by E. Amendolagine of Vancouver, British Columbia.

## LOCATION AND ACCESS

The legal corner post at the southwestern corner of the property is located 1.5 km due north of the town of Hope, B.C. The property is located on the western side of the southerly-flowing Fraser River.

The geographical coordinates are 49° 25' north latitude and 121° 26' west longitude.

Access is gained by a travelling 2.5 km north of Hope on Highway #1 which runs northeasterly through the northern portion of the property. Gravel roads and trails give some access to the rest of the property.

## PHYSIOGRAPHY

The property lies at the southeastern end of the physiographic division known as the Coast Mountains, of which the terrain is fairly rough with mostly steep slopes.

The property itself, however, occurs in an area where the terrain is relatively gentle to moderate. A northeasterly-trending ridge runs through the center of the property.

Elevations vary from 40 meters a.s.l. on the Fraser River at the southeastern corner of the property to 500 meters a.s.l. at the northwestern corner of the property.

The main water sources would be the Fraser River which flows southerly along the eastern part of the property, and Schkam Lake which is located on the western edge of the property.

The forest cover consists largely of coniferous trees which are probably Douglas fir, cedar and possibly hemlock and spruce. The undergrowth is fairly thick.

## PREVIOUS WORK

The property has been described as the "oldest lode deposit known on mainland British Columbia" but was only first reported on in the Minister of Mines reports in 1902. What work has been done prior to Amendolagine's ownership is unknown to the writer, but some trenching has been carried out.

In November of 1980, Amendolagine had 29 percussion holes drilled to a depth of 1.6 meters in the area of the 2 trenches. The cuttings were then assayed for copper, molybdenum, lead, zinc,

silver and gold. Anomalous results were encountered in all six metals.

In the fall of 1981, wide-spaced soil sampling was carried out and the samples tested for gold, arsenic, silver, lead, zinc, copper, molybdenum, nickel and cobalt. Anomalous results were encountered in all these metals as well.

During December, 1984, a small portion of the property was surveyed by the VLF-EM method with the results being reported by the writer.

## GEOLOGY

The geology is taken from the G.S.C. map of the area by Cairnes (Map 737A).

The property is almost entirely underlain by sediments and volcanics of the Chilliwack Group of Carboniferous Age. This group consists of argillite, slate, phyllite, cherty and arenaceous beds, crystalline limestone, conglomerate; intercalated volcanic rocks; micaceous, chloritic and talcose schists. Some of these rocks could also be of the Hozameen Group of Carboniferous or Permian Age which consists of chert, argillite, phyllite, limestone and intercalated volcanic rocks. Amendolagine describes the rocks encountered in the percussion holes as andesite, dark green volcanic breccia, and altered cherty-rhyolite.

These sediments and volcanics occur within a five km band of acid intrusives of Jurassic Age consisting chiefly of gneissicgranite and granodiorite. Small plugs of this group occur throughout the property.

Along the western edge of the Margie Claim is a 300 m band of the Jackass Mountain Group rocks of Upper Jurassic(?) and Lower Cretaceous Age. The rocks are conglomerate, sandstone and argillite.

West of the Jackass rocks is a large acid intrusive of Jurassic (?) and later age. The rocks are granite, granodiorite, quartz diorite and diorite.

The mineral zone is shown on the map as a gold prospect but is simply described by Monger as a quartz vein containing pyrite, chalcopyrite, pyrrhotite and sparse galena with some scheelite. The percussion drilling encountered anomalous gold, but not in significant amounts.

## INSTRUMENTATION AND THEORY

The magnetic survey was carried out with a model MP-2 proton precession magnetometer, manufactured by Scintrex Limited of Concord, Ontario. This instrument reads out directly in gammas to an accuracy of ±1 gamma, over a range of 20,000 - 100,000 gammas. The operating temperature range is -35° to +50° C, and its gradient tolerance is up to 5,000 gammas per meter.

Only two commonly occuring minerals are strongly magnetic, magnetite and pyrrhotite; magnetic surveys are therefore used to detect the presence of these minerals in varying concentrations. Magnetics is also useful as a reconnaissance tool for mapping geologic lithology and structure since different rock types have different background amounts of magnetite and/or pyrrhotite.

## FIELD PROCEDURE

Close to the main showing a 175-meter long north-striking base-line was compassed in, using a hip chain for measurement and flagging for marking. The survey lines were put in at 25-m intervals perpendicular to the base line, that is, east-west, with stations marked every 10 m by blaze-orange flagging.

Readings of the earth's total magnetic field were taken at the 10 m stations along the 8 east-west lines.

The diurnal variation was monitored in the field by the closed loop method to enable the variation to be removed from the raw data prior to plotting.

## COMPILATION OF DATA

An arbitrary value of 56,000 gammas was subtracted from each reading and the residuals plotted along the survey lines on Map 3 at a scale of 1:1,000. The values range from 56,432 to 56,980 gammas, to give a range of 548 gammas. Contours were drawn in at a 50-gamma interval.

## DISCUSSION OF RESULTS

The main showing occurs within a north-striking magnetic low and thus it would appear to have a magnetic signature.

The showing occurs at the south end of the main part of the low as defined by the 550-gamma contour. If this contour defines the strike length of the mineral zone, then its strike length in a north direction is about 100 m. However, the low can be extended

to both the north and the south and open in both directions thus giving a minimum strike length of 175 m. The average strike direction then becomes N20°E.

On the west side of this low occur two stronger lows of 435 and 436 gammas, respectively. It is felt that these are not related to the main part of the low but are only coincidental to it. Rather, these two lows are each part of a dipole anomaly and thus are related to adjacent magnetic highs.

The magnetic pattern suggests much of the survey area, that is, approximately west of 0+50E, is underlain by magnetite-bearing volcanics. The rock-type may be a dark green volcanic breccia as has previously been mapped in the trenches. East of 0+50E, the magnetics suggest the rock-type may be an altered rhyolite such as has been seen on the property, or possibly sediments, or some other non-magnetic rock. This may also be said of the magnetically quiet area centered at 0+40W and extending southwards from 0+75N.

The magnetic high centered at (1+00N, 0+90W) is at the southern end of three highs occurring in a northeasterly-striking direction. This may represent a volcanic flow, or possibly an intrusive dyke. Two other lineations of magnetic highs suggestive of similar geology can also be seen within the survey area.

A north-striking low between two of the highs is suggestive of geological structure such as a fault or contact. The low starts at (0+00N, 0+20W) and extends to (1+75N, 0+20W). It is open to both the north and to the south.

Respectfully submitted,
GEOTRONICS SURVEYS LTD.

February 18, 1988
43/G415

David G. Mark, Geophysicist

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## GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices located at #530-800 West Pender Street, Vancouver, British Columbia.

I further certify:

1. That I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.

2. I have been practising my profession for the past 20 years and have been active in the mining industry for the past 23 years.

3. This report is compiled from data obtained from a VLF-EM survey carried out by Geotronics Surveys Ltd. under the supervision of Alain Charest, geophysical techncian, from November 24th to December 21st, 1987.

4. I have no direct or indirect interest in the property mentioned within this report, nor do I expect to receive any interest as a result of writing this report.

David G. Mark
Geophysicist

February 18, 1988
43/G415

## AFFIDAVIT OF EXPENSES

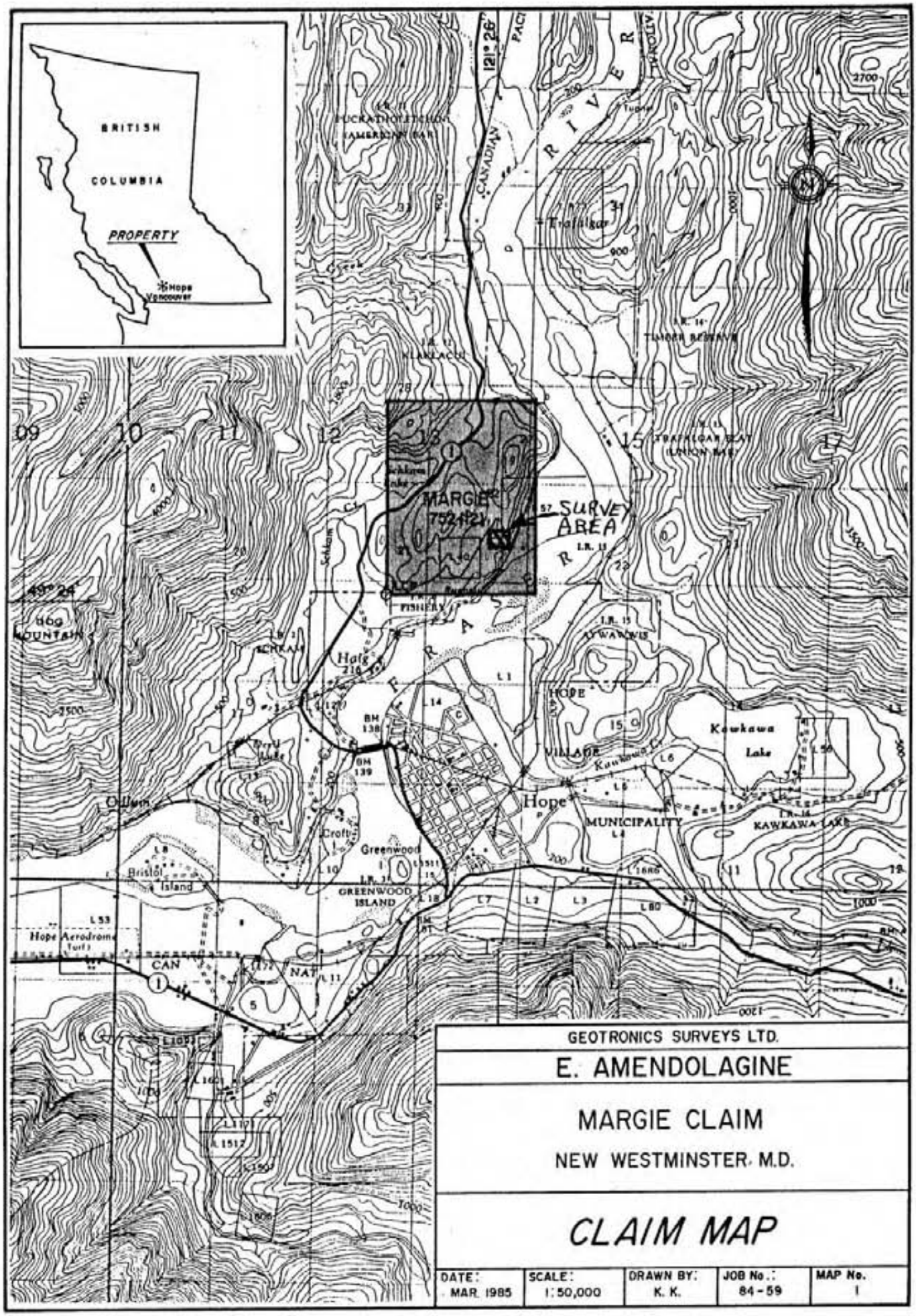
The magnetic survey and grid preparation was carried out during the period oof November 24th to December 21st, 1987, on the Margie claim, Hope area, New Westminster M.D., B.C. to the value of the following:

| | | |
|---|---|---|
| **FIELD** | | |
| Field technician, 1 week at $1,000/week | $ 1,000 | |
| Geophysical technician, 9 hours at $30/hour | 270 | |
| Vehicle rental, including gas, | 150 | |
| Room and board | 200 | |
| Survey supplies | 30 | |
| Magnetometer rental (minimum charge) | 350 | |
| | | $ 2,000 |
| **OFFICE** | | |
| Geophysicist, 7 hours at $45/hour | $ 315 | |
| Geophysical technician, 4 hours at $25/hour | 100 | |
| Drafting and printing | 150 | |
| Typing, compilation and photocoping | 100 | |
| | | 665 |
| | | $ 2,665 |

Respectfully submitted,
GEOTRONICS SURVEYS LTD.

David G. Mark, Geophysicist
Manager

February 18, 1988
43/G415




GEOTRONICS SURVEYS LTD.

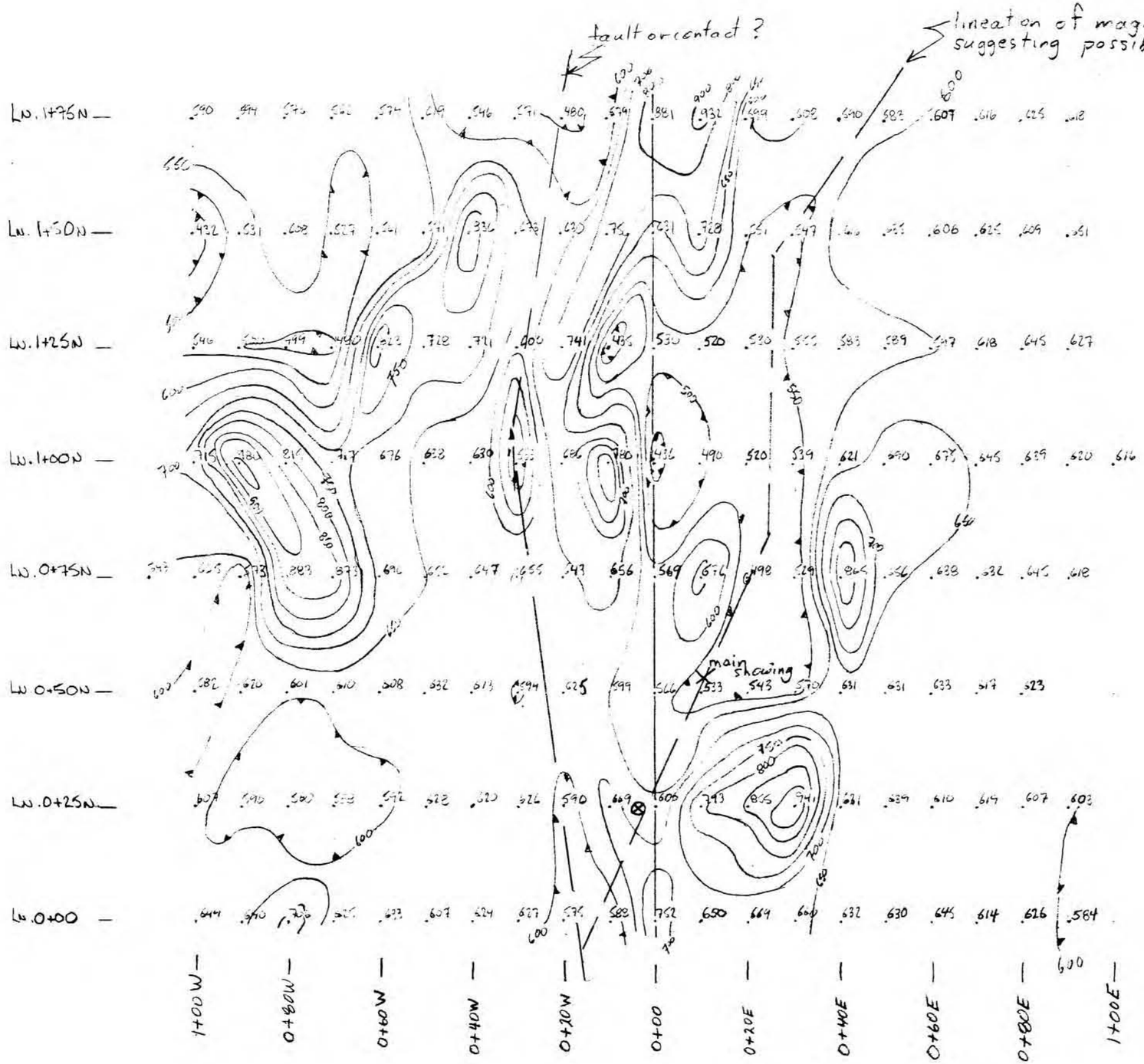
E. AMENDOLAGINE

MARGIE CLAIM

NEW WESTMINSTER M.D.

# CLAIM MAP

| DATE: | SCALE: | DRAWN BY: | JOB No.: | MAP No. |
|---|---|---|---|---|
| MAR. 1985 | 1:50,000 | K. K. | 84-59 | 1 |




N

## LEGEND

CONTOUR INTERVAL : 50 GAMMAS

CONTOUR LOW -

INSTRUMENTATION : SCINTREX PROTON PRECESSION MAGNETOMETER, MODEL MP-2

NOTE : 56,000 GAMMAS HAVE BEEN SUBTRACTED FROM EACH READING.

⊗ flagging from VLF-EM Survey, 1984 Station (14+50E, 0+25S)

METRES
0 10 20 30 60

GEOTRONICS SURVEYS LTD.

E. AMENDOLAGINE

MARGIE CLAIM
NEW WESTMINSTER, M.D.

# MAGNETIC SURVEY

DATA AND CONTOURS

| BY: | SCALE: | N.T.S.: | JOB NO.: | MAP NO.: |
|---|---|---|---|---|
| A.CHAREST | 1:1000 | 92H/6W | 87-35 | 3 |