

GEOCHEMICAL & GEOPHYSICAL REPORT

on the

SILVA 2 GROUP

NAHWITTI LAKE (127°45' : 50°41')

by

IRA S. ROTE, B.S.C., (GEOLOGIST)

Endorsed by

W.E. CLARKE, B.S.C., P.ENG.

for

GIANT EXPLORATIONS LIMITED (NPL)

P.O. BOX 10010 - 700 WEST GEORGIA ST.

VANCOUVER 1, B.C.

92L/12W

OCTOBER 15, 1972

3954

3954

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Department of Mines and Petroleum Resources ASSESSMENT REPORT NO. 3954 M.P.
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MAPS ACCOMPANYING REPORT

With Text:

MAP NO.

Nahwitti Lake

- #1 Index Map
- #2 Area Map
- #3 Claims & Grid Location

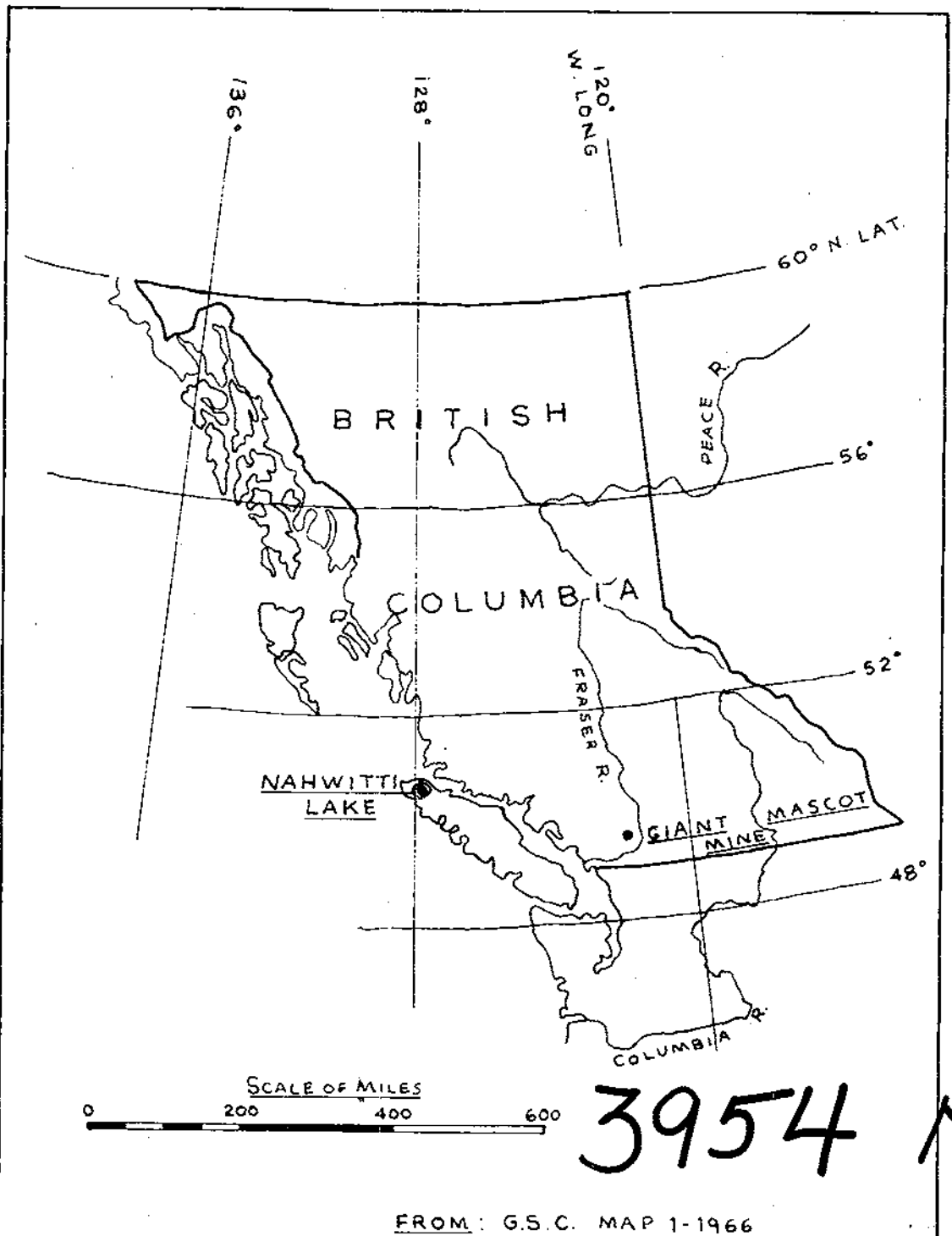
ST-00-1
ST-00-2
ST-00-3

In Pocket:

Nahwitti Lake

- #4 Magnetometer Survey
- #5 Ronka-16 EM Survey
- #6 Ronka-16 EM Survey
- #7 Silva Grid PPM Pb
- #8 Silva Grid PPM Zn

ST-00-4
ST-00-5
ST-00-6
ST-00-7
ST-00-8



FROM: G.S.C. MAP 1-1966

To Accompany
 Geochemical & geo-
 physical report by I. S.
 ROTE, B.Sc. on the
 SILVA-2 Group at Nah-
 witti Lake, in the
 NANAIMO Mining Div.
 dated October 15th, 1972.

GIANT EXPLORATIONS LTD.

NAHWITTI LAKE

INDEX MAP

SCALE AS SHOWN
 DRAWN I. S. R.

CHECKED
 DATE Oct 10, 1972

DWG. NO.

ST-00-1

Department of
Mines and Petroleum Resources

ASSESSMENT REPORT

NO. **3954** MAP **#1**

INTRODUCTION

In 1965, a program of reconnaissance soil sampling, and geological mapping was conducted on the Giant Explorations Nahwitti Lake property. Following the initial exploratory work, known showings, such as the HPH Main, and Contact Creek showing, were diamond drilled. The Dorlon showings (lead, zinc and gold mineralization) occurring in the eastern half of the property were not drilled, and had not been explored in detail as of 1972. They were covered, however, by the airborne mag. and E.M. survey of 1969.

Airborne geophysics did not disclose any anomalous condition directly over the Dorlon area; nevertheless, an EM conductor trending WNW was detected 1500' NE of the workings and has since been investigated.

The survey outlined in this report was performed in order to further investigate the Dorlon showings, and to locate drill targets indicative of more substantial mineralization than that exposed in the various open cuts. A magnetometer and a portable Ronka-16 EM instrument were used during the present survey. Soil samples for geochemical purposes were also collected. The work was done during the interval September 29th, to October 5th, 1972.

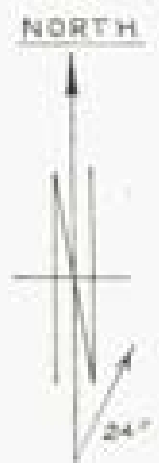
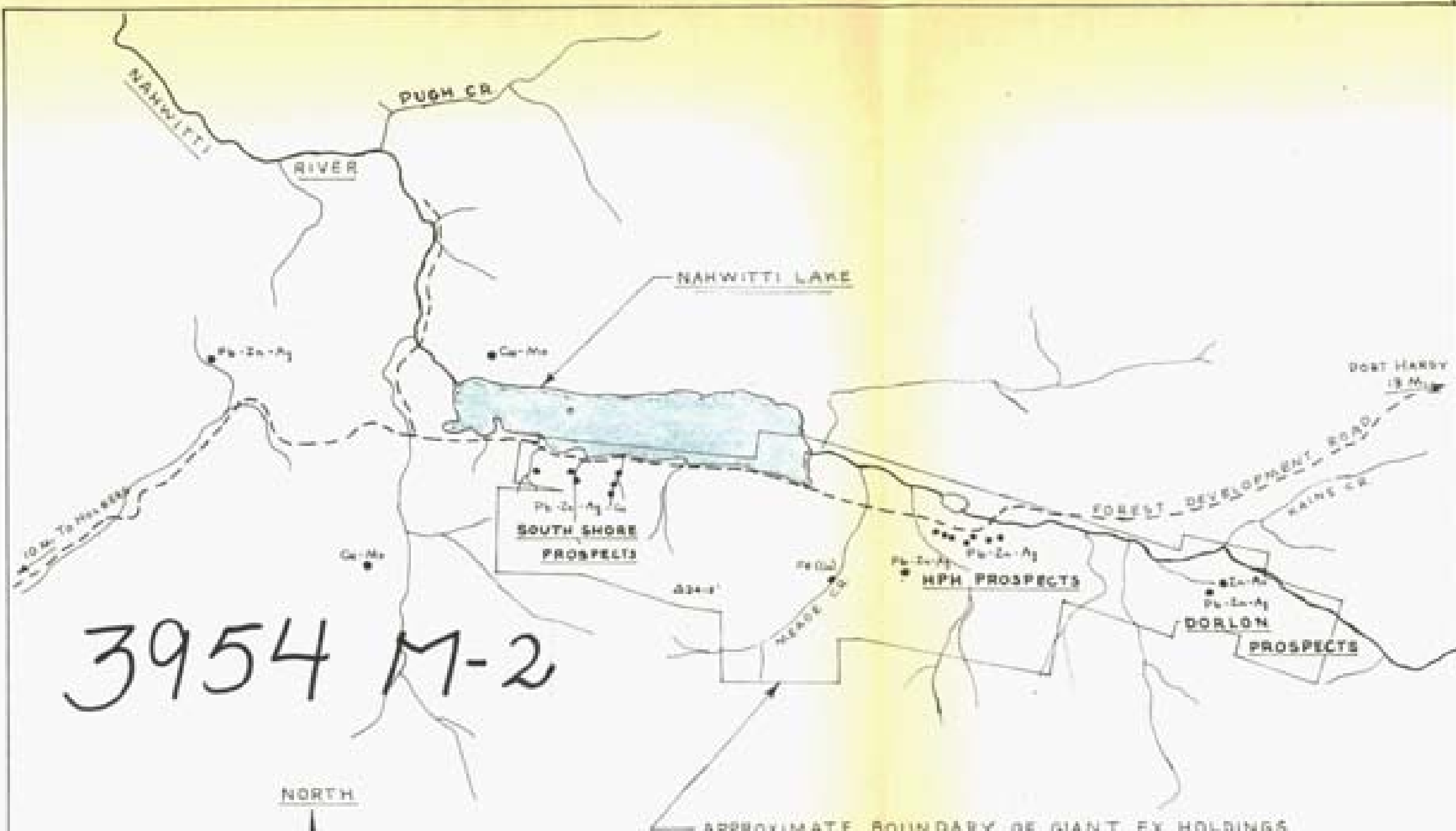
LOCATION & ACCESS

Nahwitti Lake is situated 18 miles west of Port Hardy, a small town in the north-central part of Vancouver Island. The Holberg road parallels the northern boundary of the Nahwitti Lake claims, and provides convenient access to the property. A network of logging roads allows one to drive to most of the claims comprising the Silva 2 Group.

PROPERTY

The claims covered by the survey described by this report are:

<u>Name</u>	<u>Record No.</u>
Rain 1	18213
Rain 2	18214
Rain 3	18215
Rain 4	18216



To Accompany
 Geochemical & geophysical
 report by I. G. ROTE, B.Sc.,
 on the SILVA-2 Gp., at Nahwitti
 Lake, in the NANAIMO Mining
 Division, dated October 15th, 1972.

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NAHWITTI LAKE AREA

SCALE 1:50,000
 DRAWN I. S. R.
 CHECKED
 DATE Oct 10, 1972

DWG. NO.
 ST-00-2

FROM: NAT. TOPOG. SYSTEM SHEET 92 4/52 WEST.

GENERAL GEOLOGY

The Nahwitti Lake property is underlain by sediments and volcanic rocks of the Vancouver Group, subdivisions of which are: the Karmutsen Group, the Quatsino Formation and the Bonanza Group.

The Karmutsen Group occurs in the northern part of the property and consists mainly of andesite.

The Quatsino Limestone is a light to dark grey rock which serves as a marker horizon, and is found in the central portion of the property.

All the known mineral showings in the Nahwitti Lake area are located in, or near, the Quatsino Limestone.

The Bonanza Group is made up of interbedded argillites and limestones, which contact the Quatsino Formation. The argillites and limestones are overlain by andesites comparable to those of the Karmutsen Group.

Faulting is widespread in the Nahwitti Lake area and trends WNW to NW. The bedded rocks generally dip 20 - 50° south and may represent the south limb of a broad, westerly-trending anticlinal fold.

GEOLOGY AND MINERALIZATION--SILVA GRID.

The grid is under lain by limestone of the Quatsino Formation and rocks of the lower Bonanza Group-- banded limestone, argillite and intercolated volcanics.

Mineralization on the Rain claims is hosted by the Quatsino Limestone and consists of massive veins of galena and sphalerite. A stripped area 650' west of the Rain 1 and 2 initial post has exposed a number of 18" veins which are steeply dipping and strike in a northerly direction. The veins pinch out and are only about 20 feet in length. Significant gold values encountered in the Nahwitti Lake area, have come solely from these last-mentioned veins. Values in gold have been in the order of $\frac{1}{2}$ oz. per ton, with the highest assay being 0.94 oz./ton. The lead content of the veins is generally low, whereas an assay of somewhat greater than 30% zinc is not uncommon.

Siliceous siver-lead-zinc is exposed by stripping at two locations southwest from the zinc-gold prospect, and similar mineralization occurs about 130 feet east-northeast of the stripped area. These latter exposures are separated by banded volcanics of the lower Bonanza Group, which strike northwesterly and dip south west. The Bonanza volcanics are associated with the zinc-gold showing.

The mineralized zones described above are grouped near the intersection of two major fault sets, which trend NNE and ENE. There is some evidence (eg. strike and dip of the veins) to suggest that mineralization and large scale faulting are interrelated.

SURVEY GRID

A survey grid was laid out as shown on Map ST-00-3. The grid consists of eleven chain and compass cross lines to give approximately 3.8 line miles. The base line was blazed and flagged along a bearing of 285° (true) with crosslines spaced every 200' for the magnetometer survey, and every 100' for the EM survey. The cross lines were blazed and flagged with stations every 50 feet throughout, but at 25 foot intervals where the Ronka-16 was employed.

The base line was surveyed in with respect to the location of the Rain 1 and 2 initial claim post.

MAGNETOMETER SURVEY

A Scintrex Fluxgate Magnetometer, model MF-2 was used for this survey. The MF-2 is a hand-held instrument which requires only coarse leveling, and therefore, can be used rapidly and efficiently.

The magnetometer measures the vertical component of the earth's magnetic field to 5 γ on the lowest scale range. Full scale ranges vary progressively from a minimum of 1000 γ to a maximum of 100,000 γ .

Temperature compensation has been built directly into the instrument so that the only corrections of the readings necessary are those for diurnal variation. The variation for each survey loop was assumed to be linear, and was determined by subtracting initial and final readings taken on the base line and/or control station. The correction added (or subtracted) with respect to each reading in the loop, is the product of the time elapsed up to the moment of the reading, over the total time for the loop times the total diurnal variation for the loop.

Each morning, the instrument was set to 5000 γ at a control station picket situated near the Rain 1 & 2 initial claim post. In the evening the control station reading was taken. During the day a base line station was selected and read at the end of each loop traverse.

The diurnal variation encountered during this survey ranged from virtually nil, to as much as 2000 γ for one particular day.

The elevation for each 50' station was recorded. 100 ft. stations were read on lines 4 and 6E, due to active logging.

ELECTROMAGNETIC SURVEY

The Ronka EM-16 instrument was used for the electromagnetic survey. NPG Seattle (18.6 kilocycles) bearing
.....7

approximately 144° (true) was the transmitting station utilized. Readings (In Phase & Quadrature) were taken at 25 foot intervals on crosslines 1100 feet in length. The instrument was orientated facing approximately 234° (true). Significant topographic and drainage features were noted. The electromagnetic survey aggregated 1.9 line miles.

GEOCHEMICAL SURVEY

The Dolorn area was grid soil-sampled every hundred feet on cross lines spaced 200 feet apart.

The samples were assayed by Fraser Laboratories Limited, 1175 West 15th Street, North Vancouver, B.C.

A one gram portion of the dried and screened sample (-80 mesh) was heated in a test tube over an open flame to remove organic matter. The organic-free material was then digested with nitric acid for one and a half hours in a hot water bath, followed by cooling, mixing, and settling. Values for lead and zinc were obtained with an atomic absorption machine.

Samples were labelled in the field with the station identity as per the established grid, eg. the sample collected at crossline two west 50 feet south, was marked XL2W- $\frac{1}{2}$ S, at 100 south, XL2W-1S, etc.

Metal values in PPM are shown on Maps ST-00-7 & 8.

INTERPRETATION OF RESULTS

Magnetometer Survey

Contouring of the corrected magnetometer values yields a pattern which does not differentiate between the two main rock types found in this survey area.

A prominent magnetic high occurs in the northwest corner of the grid and is represented by values up to 10,000 γ , which is twice the general background. The above anomaly forms part of a series of higher-than-background values trending east-west, near the northern boundary of the grid.

The anomalous high is centered on the logging road and peaks at XL4W-4 $\frac{1}{2}$ 5N. This writer noted that a large quantity of road ballast (andesite?), which was moderately magnetic, had been used to fill a shallow gulley at the above location. Spot reading with the magnetometer at ten foot intervals along the road, and on each side of the cross line, indicated that the response was due to a small body, 10' wide, centered on the road at XL4W-4 $\frac{1}{2}$ N.

The high reading at XL4W-5N was checked and remained consistent, although values dropped to background, 10' from the station.

Cultural interference makes the above-described anomaly difficult to assess. No mineralization was observed in nearby bedrock, and therefore, one is not encouraged to feel that the high values represent a near-surface sulphide body. If a more deeply buried mass is being detected, then its magnetic expression is being confused by the presence of the ballast used in road building.

Electromagnetic Survey

The In Phase and Quadrature profiles reflect the local topography, drainage features, and horizontal conductors (clay) present in glacial overburden. A mineralized conductor may have been detected.

The crossovers on cross lines 4E and 3E represent a response to the creek, and the profile variation on line 2W was due to an east-west fault. The crossovers were verified with a first derivative analysis of the In Phase readings. (Map ST-00-5 & 6.)

The Ronka-16 EM survey was extended north on XL4W to cover the mag high mentioned previously. The instrument indicated a crossover in the vicinity of XL4W-4½N. The character of the profile suggests a vertical sheet conductor with the center of the body at 75-100 feet below surface.

Remarks in connection with above crossover are diminished in importance by the presence of the mineralized road ballast, and by the fact that the small gully may represent a local structural feature, ie., a fault.

No significant E.M. response was detected in the area outlined by geochemical anomaly B (mentioned below under Geochemical Survey).

Geochemical Survey

Plotted values in lead and zinc, as shown on Maps ST-00-7 & 8, generally reflect known mineralization in the Silva-Grid area.

The most anomalous values in PPM lead are centered on the Dorlon showings. Threshold plus, and moderately anomalous values, occur northeast and southwest of the Dorlon workings.

The highest values in PPM zinc occur in the immediate vicinity of the showings, and to the southwest.

Anomaly A (Pb and Zn) results from the mineralization exposed in the Dorlon workings. the west-northwest trend of the anomaly is due to drainage.

Anomaly B, delineated by zinc values in the "most anomalous" category, is elongated west-northwest, and this configuration could also result from the local drainage pattern. However, it is of importance to bear in mind that Pb-Zn mineralization in the Nahwitti Lake camp occurs along contacts between Quatsino Limestone and Bonanza Volcanics, and that this type of contact lies just south of anomaly B.

In addition, a major fault--a possible locus of mineralization--strikes west-northwest and parallels the anomaly.

The presence of known mineralization immediately west of Anomaly B (XL00 5 1/4S), plus the favourable geological features (contact and strong faulting) serve as evidence for the notion that HPH-type zinc mineralization underlies the B Anomaly.

RECOMMENDATIONS

Anomaly B constitutes a target for additional exploration, and should be investigated via detailed prospecting, hand trenching, and possibly x-ray diamond drilling.



I.S. Rote, Geologist

Endorsed by:



W.E. Clarke, B.Sc., P.Eng.

CERTIFICATE

I, Ira S. Rote, of the City of Vancouver in the Province of British Columbia hereby certify:

1. That I am engaged in work as a Geologist and reside at #205 - 1717 Comox Street, Vancouver 5, British Columbia.
2. That I am a graduate of the University of Guelph with an Honours Bachelor of Science degree.
3. That I have done two years work towards an M.Sc. in Geology at the University of British Columbia.
4. That I have practiced as an exploration Geologist for three years.
5. That I have personally done work on the claims mentioned in this report.
6. That I am presently employed by Giant Mascot Mines Limited.

DATED this fifteenth day of October, 1972

Signed,



Ira S. Rote, Geologist

APPENDIX 1

PERSONNEL & EXPENDITURES

PERSONNEL

From September 29th to October 5th, 1972, work on the Silva grid was carried out under the writer's supervision. The personnel were as follows:

Ira S. Rote	#205 - 1717 Comox Street, Vancouver 5, B.C.
Joe Sawatzky	Box 18, Black Creek, B.C.
John Koopmans	R.R.#1, Black Creek, B.C.
Henry Nickel	R.R.#1, Black Creek, B.C.

EXPENDITURES

A cost statement with regard to work done on the Silva group is given below:

Crew:

I. Rote	Period: September 29 - October 5, incl. October 10 - October 12, incl. Days worked: 10 days @ \$50/day	\$500.00
J. Sawatzky	Period: September 29 - October 5, Incl. Days worked: 7 days @ \$30/day	210.00
J. Koopmans	Period: September 29 - October 5, Incl. Days worked: 7 days @ \$30/day	210.00
H. Nickel	Period: September 29 - October 5, Incl. Days worked: 7 days @ \$30/day	210.00
		<u>\$1,130.00</u>

INSTRUMENT RENTAL

Scintrex MF-2 Magnetometer 2 weeks rental and insurance	170.00
Ronka EM-16 Instrument 10 days @ \$10/day	<u>100.00</u>
	\$270.00

VEHICLE RENTAL

Chev. 3/4 ton truck with canopy
7 days @ \$20/day \$140.00

CAMP OPERATION AND ACCOMMODATION

4 men for 7 days - room @ \$31.50/day 220.50
4 men for 7 days - meals @ \$40.00/day 280.00
500.50

ENGINEERING SUPPLIES

75.00

GEOCHEMICAL ASSAYING

150 samples @ \$1.25/sample 136.25

TOTAL EXPENDITURES \$ 2,251.75

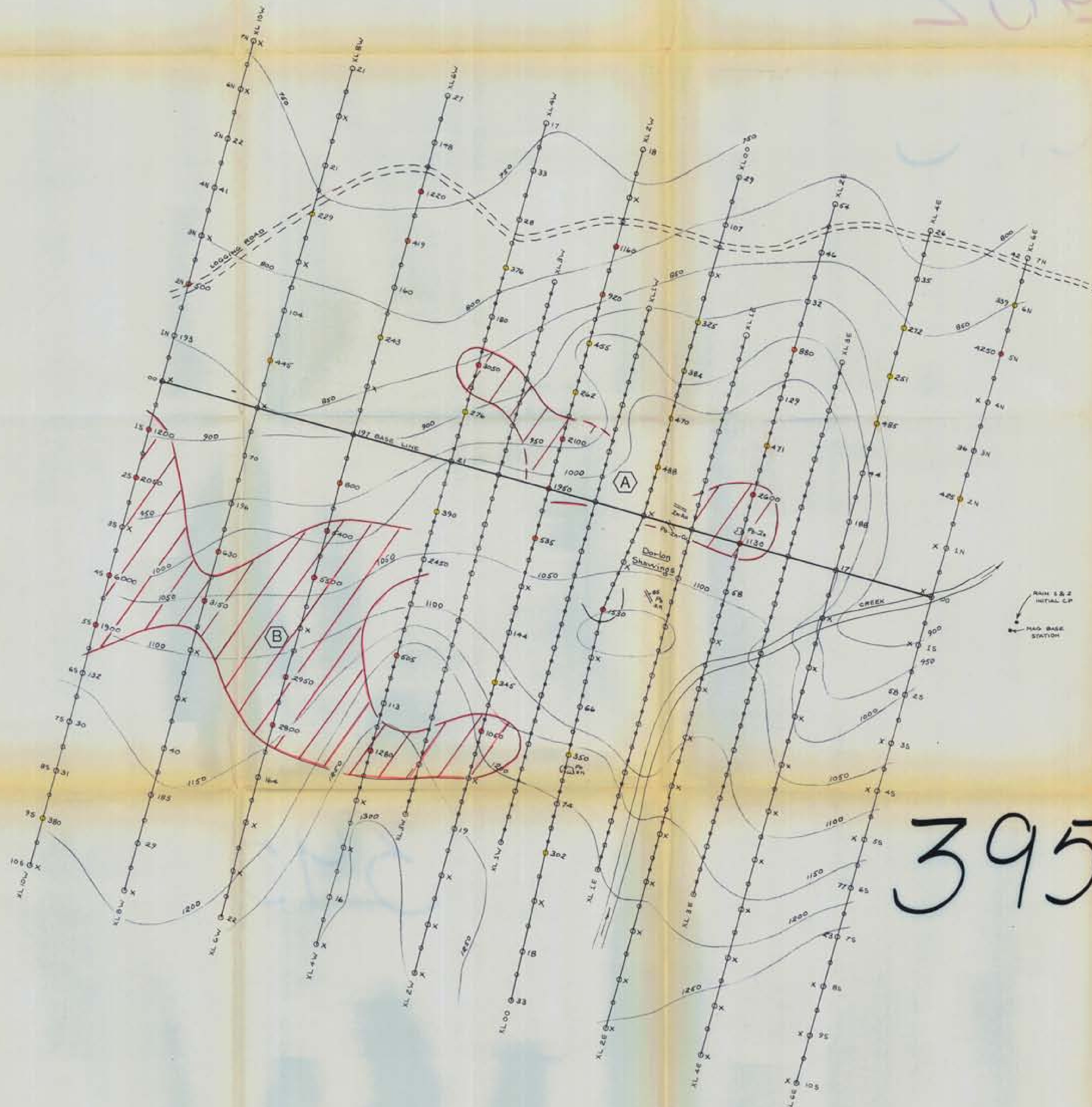
Declared before me at the City
of Nanaimo, in the
Province of British Columbia, this 26
day of Oct 1972, A.D.

I.S. Rote
I.S. Rote, Geologist

John Lunn
A Commissioner for taking Affidavits within British Columbia
A Notary Public in and for the Province of British Columbia

SUB-MINING RECORDER

W.E. Clarke
W.E. Clarke, B.Sc., P.Eng.



To: Mr. J. H. ...
 From: ...
 Date: ...

- LEGEND**
- - Threshold* (200-500 PPM)
 - - Anomalous (500-1000 PPM)
 - - Most Anomalous (1000+ PPM)
 - - Anomaly
 - Topographic contours @ 50' intervals.
 - x - organic sample - no assay.

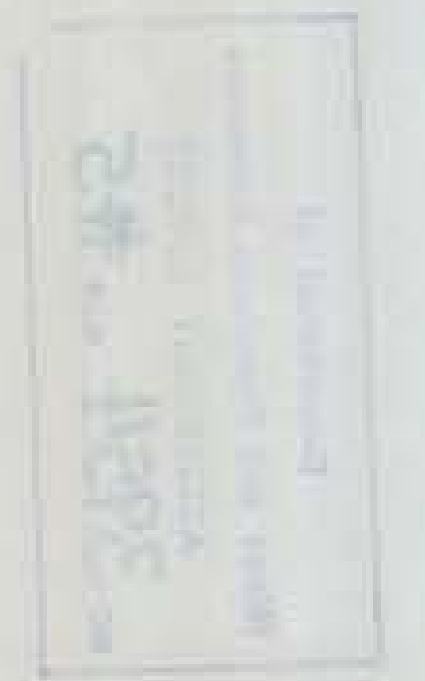
3954 M-8

To Accompany Geochemical & geophysical report by I. S. ROTE, B.Sc., on the SILVA GROUP, at Nahwitti Lake, in the Nahwitti Mining Division, dated October 15 th , 1972. <i>J. H. Rote</i>	
GIANT EXPLORATIONS LTD.	
NAHWITTI LAKE SILVA GRID PPM Zn	
SCALE 1" = 100'	DWG. NO.
DRAWN 1/26/72	ST-00-8
CHECKED	
DATE Oct 12/72	

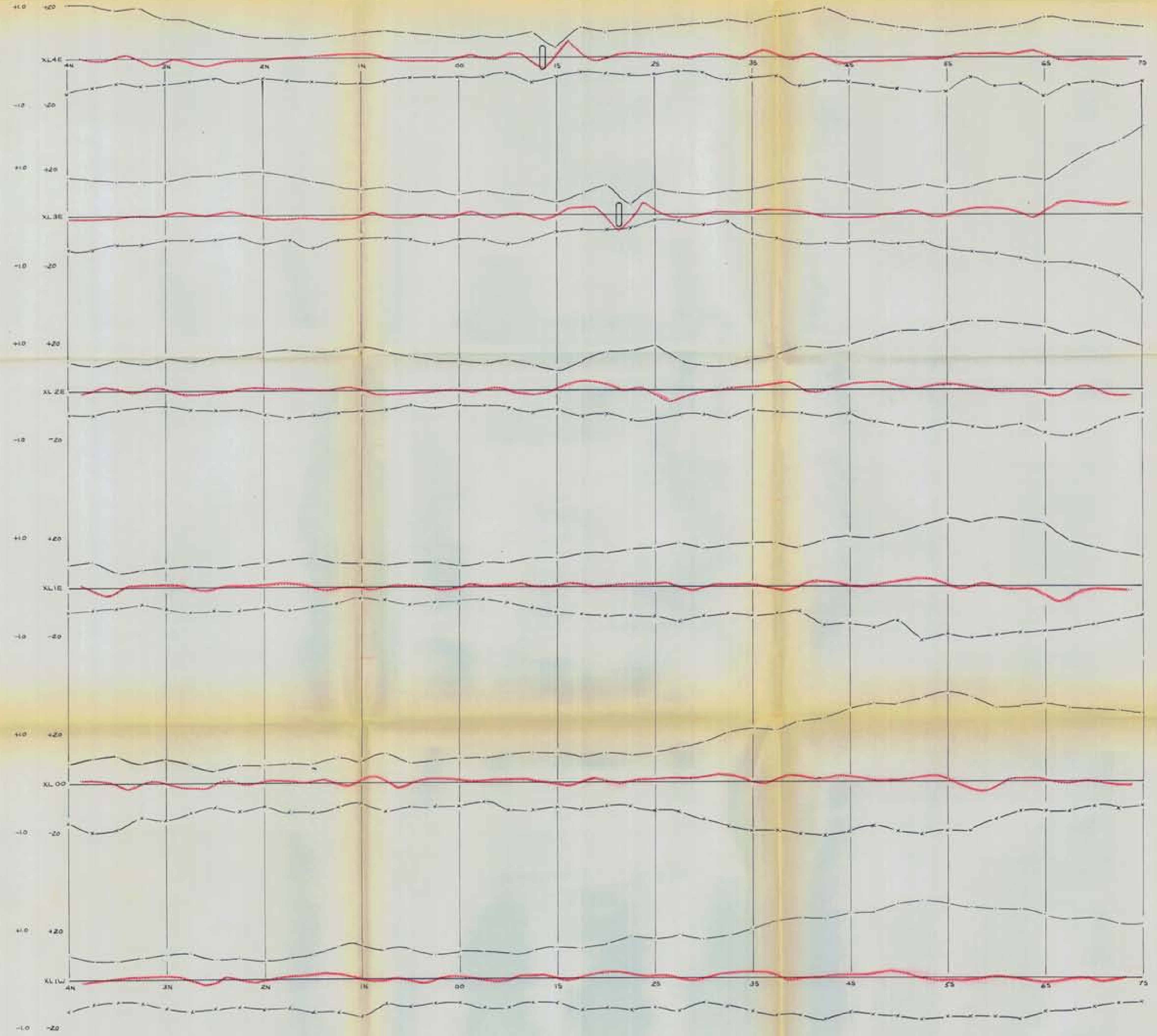
Nahwitti Lake

3954

M-5



$\frac{dA}{dt}$ In Ph
30 S O
DRA/FT DEG



LEGEND
— In Phase
-x-x- Quadrature
- First Derivative, $\frac{dA}{dt}$
○ - Crossover

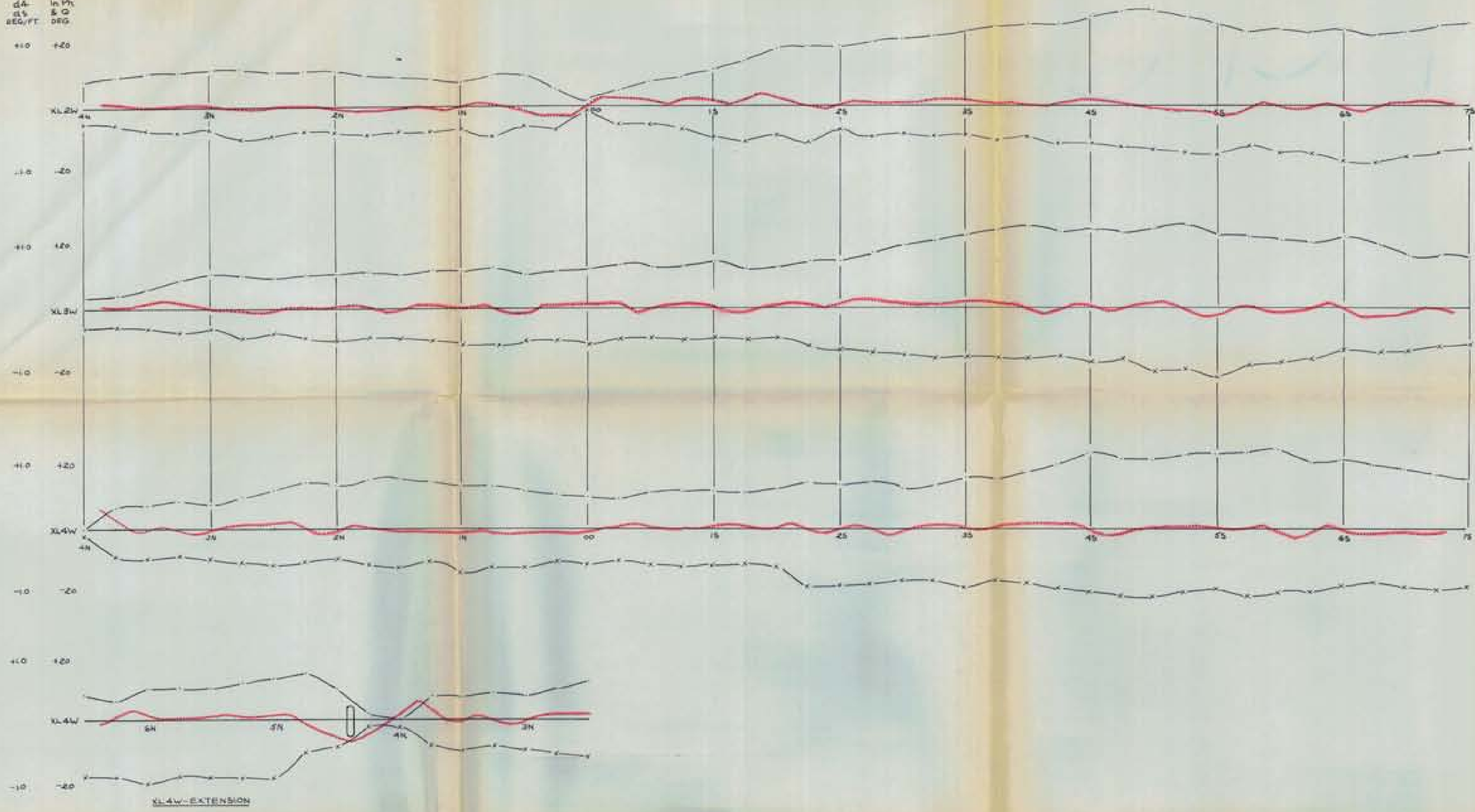
3954

M-5

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Division, dated October 15th, 1972.
I. S. Rote
GIANT EXPLORATIONS LTD.
NAHWITTI LAKE
Ronka-16
Electromagnetic Survey
SCALE 1" = 50'
DRAWN I.S.R.
CHECKED *[Signature]*
DATE Oct 1972
DWG. NO.
ST-00-5

Nahwitti Subarea

EA In Pt
 25 S O
 200/FT DRG

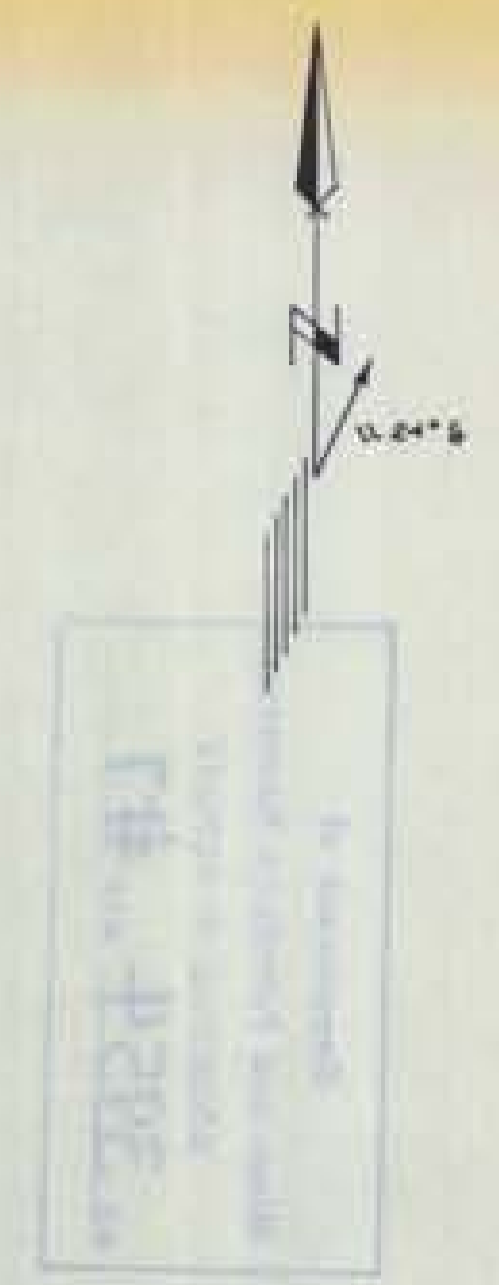
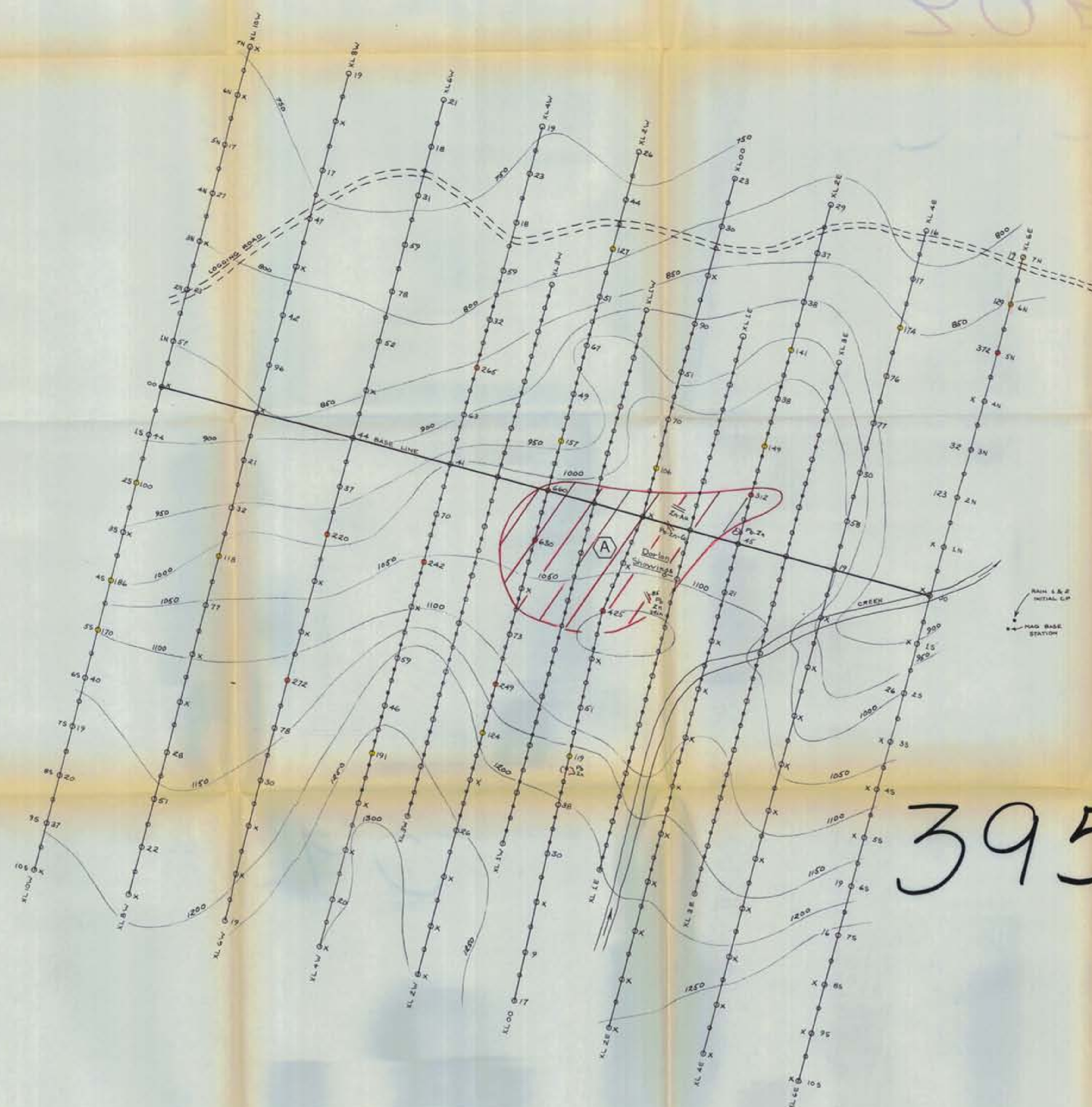


LEGEND
 - - - In Phase
 -x- Quadrature
 — First Derivative, $\frac{dI}{dx}$
 U Crossover

3954 M-6

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I. S. Rote
 GIANT EXPLORATIONS LTD.
 NAHWITTI LAKE
 Ronka-16
 Electromagnetic Survey
 SCALE 1"=50' DWG NO.
 DRAWN I. S. R. ST-00-6
 CHECKED I. S. R.
 DATE Oct 1972

Nahwitti Lake

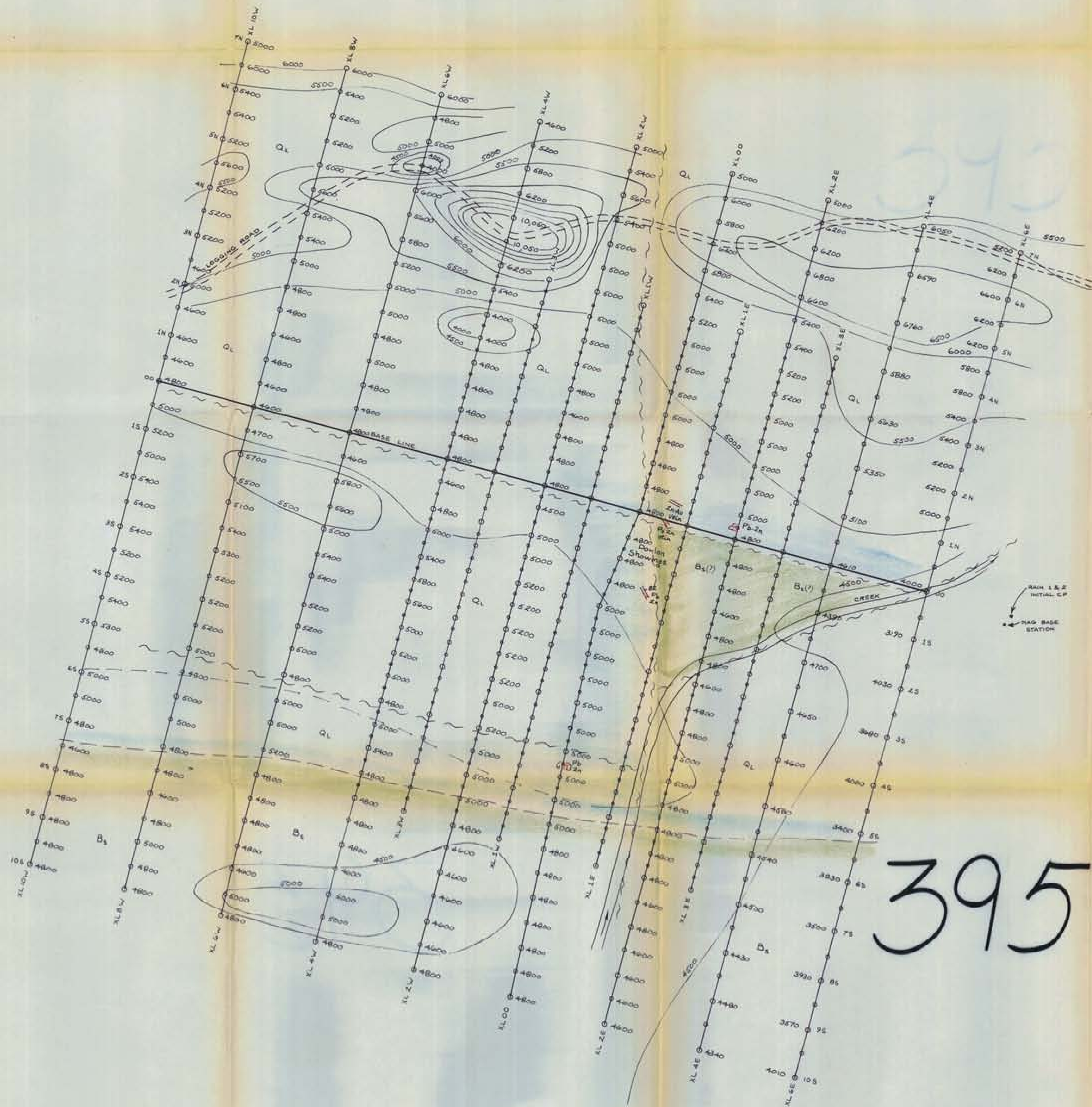


- LEGEND**
- - Threshold+ (100-200 PPM)
 - - Anomalous (200-300 PPM)
 - - Most Anomalous (300+ PPM)
 - ⊖ - Anomaly
 - Topographic contours @ 50' intervals.
 - x - organic sample - no assay.

3954 M-7

To Accompany Geochemical & geophysical report by I. S. ROSE, B. Sc., on the SILVA GROUP, at Nahwitti Lake, in the Nahwitti Mining Division, dated October 15 th , 1972. <i>I. S. Rose</i>	
GIANT EXPLORATIONS LTD.	
NAHWITTI LAKE SILVA GRID PPM Pb	
SCALE 1" = 100'	DWG. NO.
DRAWN 1/80 FR	ST-00-7
CHECKED <i>[Signature]</i>	
DATE Oct 12/72	

Master Explorations



- LEGEND**
- B₁ - Lower Bonanza Gp., banded limestone, argillite & intercalated volcanics.
 - Q₁ - Qualsino Formation Limestone
 - Mag contour, 500' interval
 - - - Geological contact approximate
 - - - Fault, assumed
 - Pb-Zn - Open cut, lead-zinc mineralization

3954 M-4

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GIANT EXPLORATIONS LTD.	
NAHWITTI LAKE Magnetometer Survey	
SCALE 1" = 100' DRAWN I.S.R. CHECKED J.S. DATE Oct 12/72	Dwg. NO. ST-00-4

Walter S. Clark