

LOG NO:	1021	RD.
ACTION:		
FILE NO:		

GEOPHYSICAL REPORT
ON THE
NINA LAKE PROPERTY
(NL 2-8, 14, 15, 16, 25, 26 Mineral Claims)

Omineca Mining Division

N. T. S. 093 N/15

FILMED

Located at Co-ordinates: 125° 45' W
55° 57' N

NORANDA EXPLORATION COMPANY, LIMITED
(NO PERSONAL LIABILITY)

BY: MIKE SAVELL
LYNDON BRADISH

G E O L O G I C A L B R A N C H
A S S E S S M E N T R E P O R T
SEPTEMBER, 1988

17,867

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SUMMARY:

The NL claims are located in north central British Columbia within a belt of Middle-Cambrian limestones. The property was staked to cover a high Pb-Zn-Ag silt anomaly which was part of the government geochem release of the 93N map sheet in 1984.

Prospecting and reconnaissance silt-soil sampling during July, 1985 located an area on NL 6 and 8 which is strongly anomalous in Pb-Zn, +/- Ag, +/- As. A grid was surveyed and soil samples collected over the anomalous area in September, 1985, in order to define the source, however, the proposed grid was not fully completed due to early snowfalls.

This work partially outlined a strong coincident Pb and Zn soil anomaly approximately 200 meters wide, 300 meters long and open to both the north and south. Values of up to 1100 ppm Pb and 1300 ppm Zn were obtained. Nearby exposures consist of grey crystalline limestone. No mineralization was observed.

In 1986, the grid was extended north and south and further sampling completed. A geological and lithogeochemical survey were also undertaken. This work defined a strong, coincident Pb-Zn-Ag soil geochem anomaly approximately 1000 meters long and 25 to 200 meters wide with values up to 2400 ppm Pb, 2300 ppm Zn, and 1.6 ppm Ag. However, no mineralization was observed and lithogeochemical results do not explain the anomaly. The source of the anomaly is presumed to be at depth.

This report describes geophysical surveys (I.P., mag) performed over the geochem anomaly. The I.P. survey has mapped two major targets that warrant further evaluation. The mag survey has mapped several breaks or faults which parallel and cross cut the bedding trend. These targets should be tested by diamond drilling.

INTRODUCTION:

The NL 1-24 claims were staked in June 1984 to cover a high Pb-Zn-Ag silt anomaly. The silt sample had been collected for the B. C. Government as part of a regional sampling program, the results of which were released on June 27, 1984. No mineral showings are known to occur in the immediate vicinity of the silt anomaly although there are several Pb-Zn occurrences several kilometers to the west and south.

The NL 25 and 26 claims were staked in July, 1988 and enclosed the NL 1, 9-13, 17-24 claims which were subsequently dropped.

All work reported here has been performed by employees of Noranda Exploration Company, Limited.

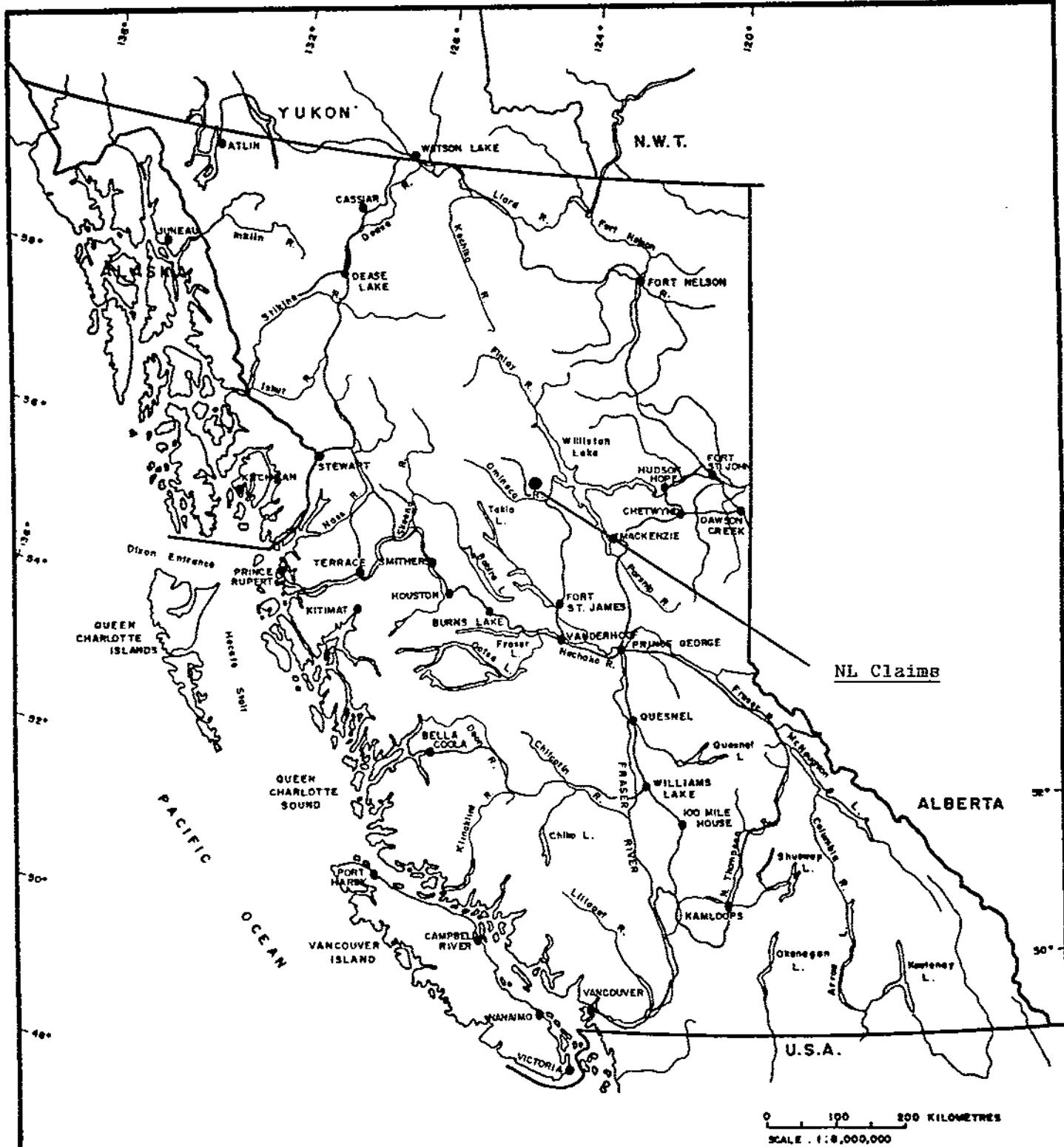
LOCATION AND ACCESS:

The property is located approximately 20 kilometers north of Germansen Landing (Figure 1). Access to the property is via the Omineca Mining Road from Germansen Landing. From Germansen Landing, travel 9 km west to where a narrow road heads north. Follow this road for approximately 20 km and from there it is a 1 km hike east to the property.

PHYSIOGRAPHY AND VEGETATION:

Elevations on the property range from 1350 m to 1700 m. The property is dominated by two NW-SE trending ridges.

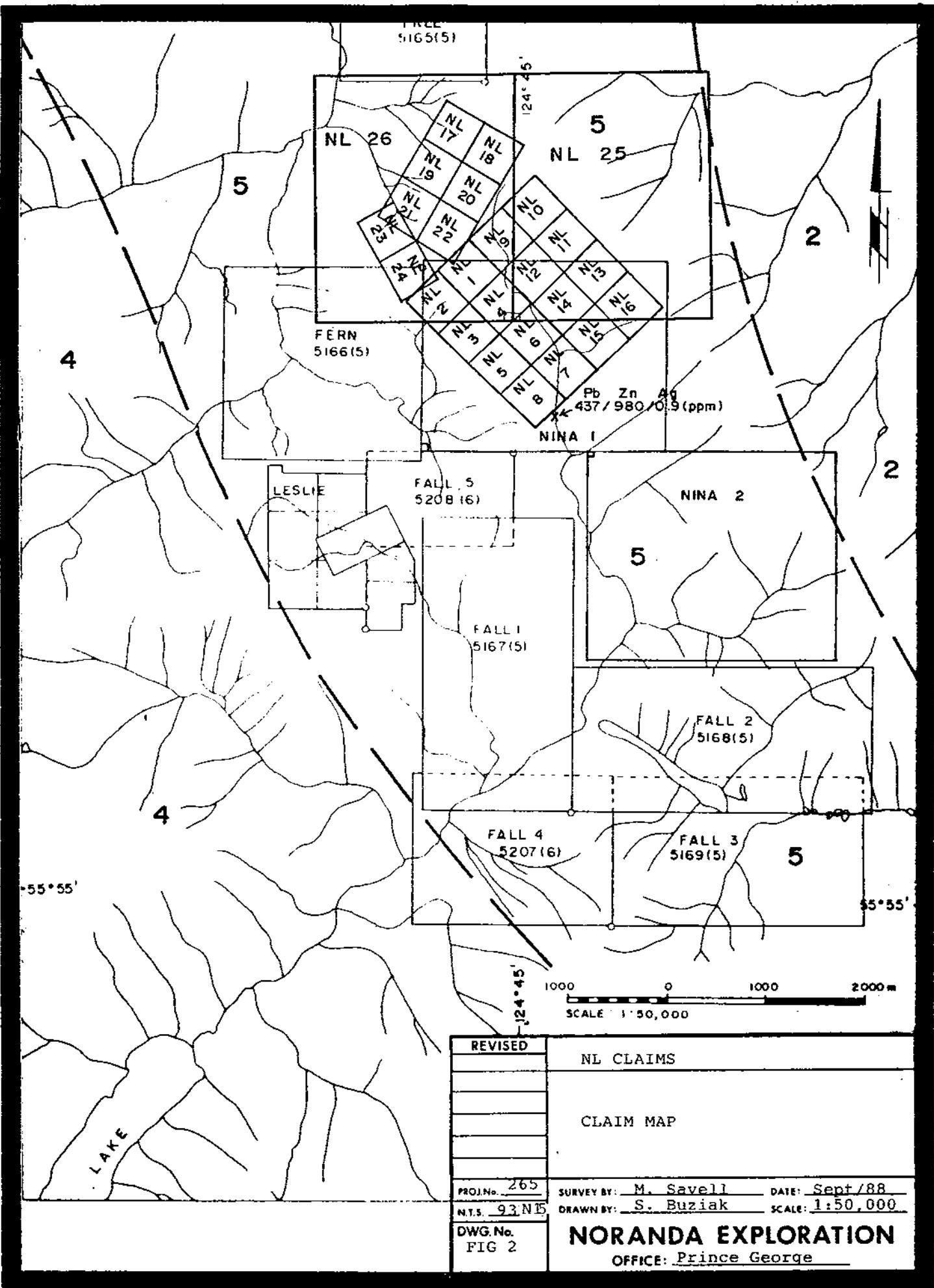
Vegetation on the property consists of equal amounts of spruce and fir with only minor undergrowth. Treeline is at approximately 1650 meters.



NL Claims

0 100 200 KILOMETRES
SCALE: 1:8,000,000

REVISED	NL Claims	
	<u>Location Map</u>	
PROJ No. 265- N.T.S. 93N/1 DWG No. 1		
	SURVEY BY: M. Savell	DATE: Sept 88
	DRAWN BY: S.K.B.	SCALE: 1:8,000,000
NORANDA EXPLORATION OFFICE: PRINCE GEORGE, B.C.		



CLAIM STATISTICS:

The property is comprised of ten 2-post claims and two modified grid claims as listed below (Figure 2). Upon acceptance of this report, the claims will be in good standing until the expiry date below.

Name	Record #'s	Record Date	Units	Expiry Date
NL 2	6508	July 26, 1985	1	July 26, 1990
NL 3	6509	July 26, 1985	1	July 26, 1990
NL 4	6510	July 26, 1985	1	July 26, 1990
NL 5	6511	July 26, 1985	1	July 26, 1990
NL 6	6512	July 26, 1985	1	July 26, 1990
NL 7	6513	July 26, 1985	1	July 26, 1990
NL 8	6514	July 26, 1985	1	July 26, 1990
NL 14	6520	July 26, 1985	1	July 26, 1990
NL 15	6521	July 26, 1985	1	July 26, 1990
NL 16	6522	July 26, 1985	1	July 26, 1990
NL 25	?	July 14, 1988	20	July 14, 1990
NL 26	?	July 14, 1988	20	July 14, 1990

PREVIOUS WORK:

There is no previous recorded work on the property prior to staking, although there are signs of previous activity. The results of the July, 1985 stream sediment and soil sampling program have been reported in "Geochemical Report on the NL 1-24 claims", by Robert J. Baerg, submitted for assessment credit. The results of the September 1985 soil sampling program have been reported in "Geochemical Report on the NL 1-24 Claims" by M. Savell and R. Baerg, submitted for assessment credit. The 1986 soil and geology survey is documented in the "Geological and Geochemical Report on the NL 1 to 24 Claims" submitted for assessment credit.

REGIONAL GEOLOGY:

The area is underlain by carbonate and clastic sedimentary rocks which have been assigned to various ages and groups in the past, including Cache Creek (Permian-Pennsylvanian), Ingenika (Hadrynian) and Mc dame (Cambrian-Mississippian). The most recent G.S.C. geology map (open file #1565) assigns these rocks to the Middle Cambrian Gog tectonic assemblage which is contained within the Cassiar Terrane. These consist of rifted and passive continental margin sediments. A few kilometers east of the property, these sediments are in contact with sedimentary rocks of the Windermere tectonic assemblage of Upper Proterozoic age which consist of clastic continental margin sediments. West of the property, the Cassiar Terrane is in contact with oceanic and marginal basin volcanics and sediments of the Devonian to Triassic Slide Mountain Terrane.

PROPERTY GEOLOGY:

The geological plan is presented on Figure #3. The most abundant rock type exposed on the property consists of medium to pale grey, massive to thickly bedded, finely crystalline limestone. It is usually laced with a network of thin, fracture filling calcite veinlets of variable intensity. Lesser quantities of grey to black, laminated micrite and grey-brown crystalline dolomite are also observed. In the northeast corner of the grid a distinct, grey-brown, fissile silty dolomite unit was mapped.

Strike directions are fairly consistent, ranging from about 155 to 175 degrees, except on the northernmost grid area where the strike is about 180 degrees. Dips are generally steep and westward, except for some reversals observed on the easternmost grid area which suggest local tight folding. Fractures are generally steep to vertical and tend to strike in one of three directions, roughly at 020, 050 and 145 degree azimuths. These same trends also define the major air photo lineaments which are defined by drainage directions, gullies, and scarps.

INDUCED POLARIZATION SURVEY:

The Frequency Domain I.P. survey was completed over four selected lines of the grid totaling 3.2 km. The survey utilized a 25 meter dipole-dipole array with readings recorded down to n=4. The results of the survey are plotted in pseudo-section form at a scale of 1:2500 (Figures 4 to 7) and the interpretation is complied with the magnetic data in plan (Figure 9).

The I.P. survey was completed on four lines covering a distance of about 800 meters on each line. These lines were cut with a chainsaw to speed up daily production.

Line 10900N: A clearly defined PFE high and resistivity low anomaly is mapped between 9800E and 9887.5E. Of interest here is that this WEST anomaly occurs entirely within a very high resistivity package and that the source is enclosed within a weak but wide (400 meters) PFE envelope. A somewhat subtler EAST anomaly is partially mapped at the extreme east end of the IP line.

Line 10600N: The high amplitude West anomaly continues to this line and is defined between 9725E and 9925E. On this line it is somewhat wider and has a more complex resistivity pattern whereas the narrow intense resistivity low is very similar to that mapped on Line 10900N. Centered at 10200E the subtle East anomaly mentioned above is detected and on this line is of higher PFE and lower resistivity providing an attractive combination. The PFE background is fairly high on this line of data.

Line 10400N: The two anomalies mapped on the above lines continue to this line and both exhibit increased 'strength' or amplitude.

Line 10200N: The West IP anomaly continues to this line, however, its amplitude or 'strength' has decreased and the uniformity or smoothness of the anomaly is pronounced which would suggest that the termination of the source may be very close to this line - north or south. The character of the East anomaly has also changed considerably suggesting that it may be caused by a different source.

MAGNETOMETER SURVEY:

A total of 18.0 km of grid lines were surveyed. The existing grid was re-flagged and several new lines added. The mag survey employed an EDA Omni 4 system consisting of two field mags and one recording base station. The survey recorded the Total Field magnetic values at 12.5 meter intervals and all applicable corrections were applied to the data. The results of the survey are plotted on contoured plan form at a scale of 1:2,500 (Figure 9). Numerical values are plotted on Figure 8.

The Magnetometer survey has mapped three distinct magnetic domains whose contacts are as shown on the magnetic compilation map. Several features stand out particularly the 300+ meter wide band of high amplitude/low frequency response which extends in a NNE-SSW direction from the NE corner of the grid. The East IP anomaly is parallel and coincident with the NW contact. This IP anomaly is mapped over a distance of 500 meters, the limit of the coverage.

South-east of the above unit an area of low and uniform magnetic susceptibility is mapped whereas to the north west a large package of high amplitude/high frequency magnetics is mapped over the remainder of the grid.

Limited structure has been mapped by the magnetic survey and those breaks that can be identified are illustrated on the compilation map. Two structural directions of 165 degrees and 215 degrees have been observed.

CONCLUSIONS:

The IP survey has mapped two major targets that warrant further evaluation. The west anomaly lies within a very resistivity host and has a broad but discrete signature and size. The East anomaly lies at a magnetic contact and is classified as 'narrow' and of low amplitude. Both of these zones should be evaluated in conjunction with geochemical and geological information in order to prioritize them. Based solely on the geophysical results, however, the East anomaly rates a higher priority.

Based on geochemical and geological information the East IP anomaly appears more favourable as it is upslope from the strongest geochem responses. Surface exposures do not explain either anomaly, thus it is assumed the source is buried.

RECOMMENDATIONS:

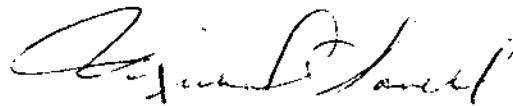
The most favourable targets should be drill tested. A tote road should be constructed to provide truck access to the claims.

APPENDIX I

STATEMENT OF QUALIFICATIONS

I, Michael J. Savell of the City of Prince George, Province of British Columbia, do certify that:

1. I am a geologist residing at 3507 Rosia Road, Prince George, British Columbia.
2. I am a graduate of Dalhousie University with a Bachelor of Science (Honors) in Geology.
3. I am a member in good standing of the Geological Association of Canada, Canadian Institute of Mining, Prospector's and Developer's Association and the B.C.-Yukon Chamber of Mines.
4. I presently hold the position of Project Geologist with Noranda Exploration Company, Limited and have been in their employ since 1980.



Michael J. Savell
Geologist
Noranda Exploration Company, Limited
(No Personal Liability)

APPENDIX I

STATEMENT OF QUALIFICATIONS

I, Lyndon Bradish of Vancouver, Province of British Columbia, do hereby certify that:

1. I am a Geophysicist residing at 1826 Trutch Street, Vancouver British Columbia.
2. I am a graduate of the University of British Columbia with a B.Sc. (geophysics).
3. I am a member in good standing of the Society of Exploration Geophysicists, Canadian Institute of Mining and the Prospector's and Developer's Association.
4. I presently hold the position of Division Geophysicist with Noranda Exploration Company, Limited and have been in their employ since 1973.



L. Bradish.

APPENDIX II

NORANDA EXPLORATION COMPANY, LIMITED
STATEMENT OF COSTS

DATE: July 15, 1988

PROJECT: NL CLAIMS

REPORT TYPE: GEOPHYSICAL

a) WAGES:

No. of Days - 52
Rate per day - \$116.60
Dates from - June 1 - July 15, 1988 \$ 6,063.20

b) FOOD & ACCOMMODATION:

No. of Days - 52
Rate per day - \$35.58
Dates from - June 1 - July 15, 1988 \$ 1,850.16

c) Transportation:

No. of Days - 52
Rate per day - \$46.15
Dates from - June 1 - July 15, 1988 \$ 2,399.80

d) COST OF PREPARATION OF REPORT:

Author	\$ 400.00
Drafting	\$ 150.00
Typing	\$ 50.00

	\$ 600.00

TOTAL COST: \$10,913.16

APPENDIX III

INSTRUMENTATION

I.P. SURVEY


The I.P. survey employed a Frequency Domain system manufactured by Phoenix Geophysics of Toronto, Ontario. The transmitter and generator have a capacity of 1.2 kilowatts although this amount of power is rarely used. The survey parameters employed for this survey were as follows:

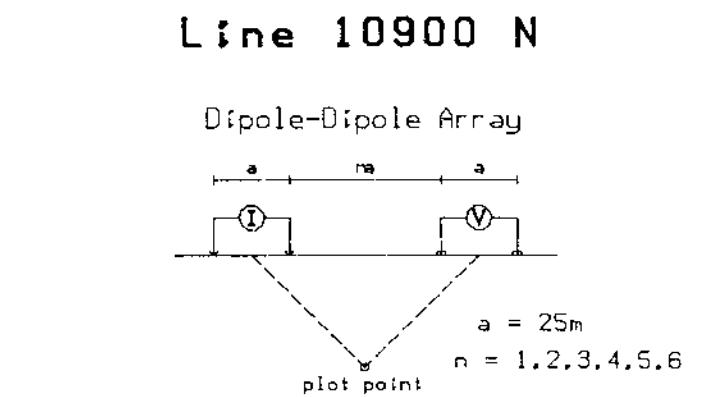
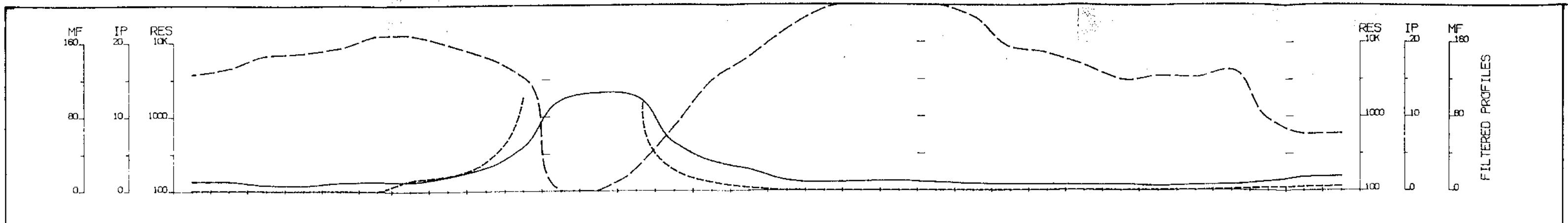
Dipole array	: Dipole-Dipole
Dipole length	: 25 meter detail
	: 50 meter 'recon'
Separations	: n=4 on detail
	: n=3 on recon
Frequencies	: 0.25 and 4.0 Hertz
Parameters recorded	: Percent Frequency Effect (PFE) & Resistivity (ohm-meters)
I.P. transmitter	: Phoenix IPT-1 and MG-1
I.P. received	: Phoenix IPV-1

A fixed transmitter setup using up to four Tx dipoles on either side of the transmitter was used throughout the survey. The recorded resistivities indicate that EM coupling was negligible.

MP-3 MAGNETOMETER SYSTEM

Magnetometers manufactured by Scintrex Ltd. of Concord, Ontario were employed for these surveys. The MP-3 total Field Magnetometer System consists of one or more field units and a base station. Diurnal and day to day variations are automatically corrected at the end of the survey by the built in microprocessor giving the data a usable accuracy of 1 gamma.





INTERP

Filtered Profiles

filter *
Resistivity ----- * *
Polarization ————— * * *
Metal Factor - - - - - * * * *

RESISTIVITY (ohm.m)
BRANCHES
LOGARITHMIC COLOURS 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instrument : PHOENIX
Frequency : 0.25/4.0 Hz
Operator : W.K.T.C

- INTERPRETATION**
- Strong increase in polarization
 - Moderate increase in polarization
 - △ Pronounced resistivity increase
 - ▼ Pronounced resistivity decrease

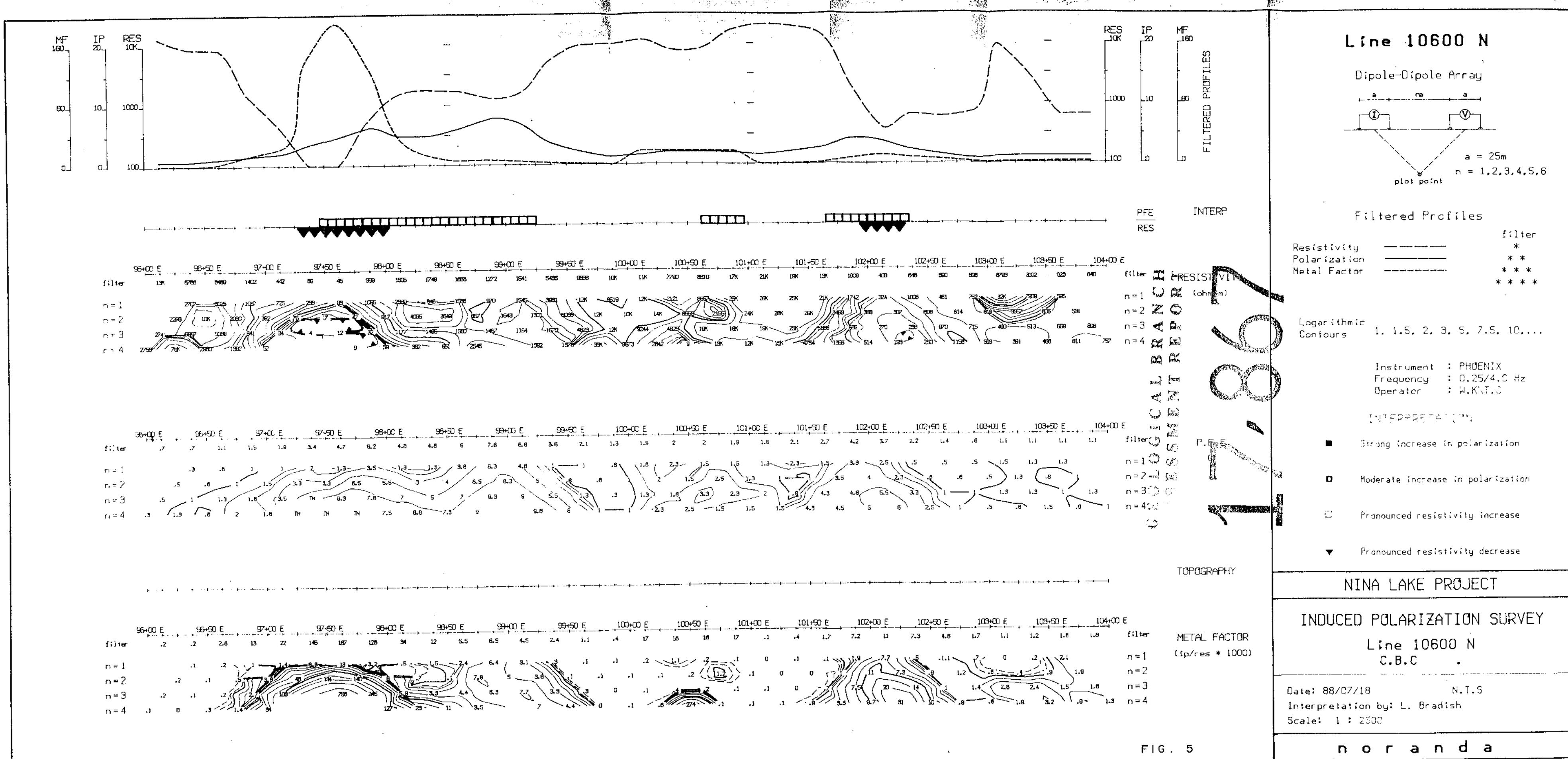
NINA LAKE PROJECT

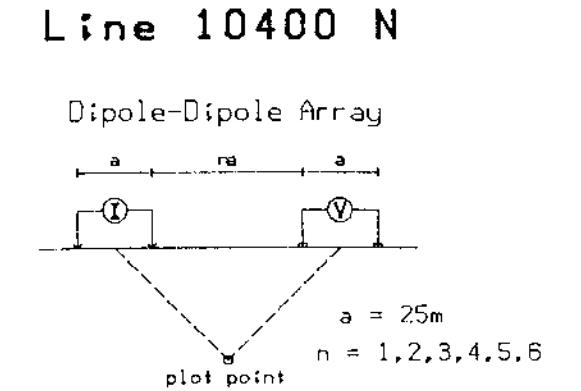
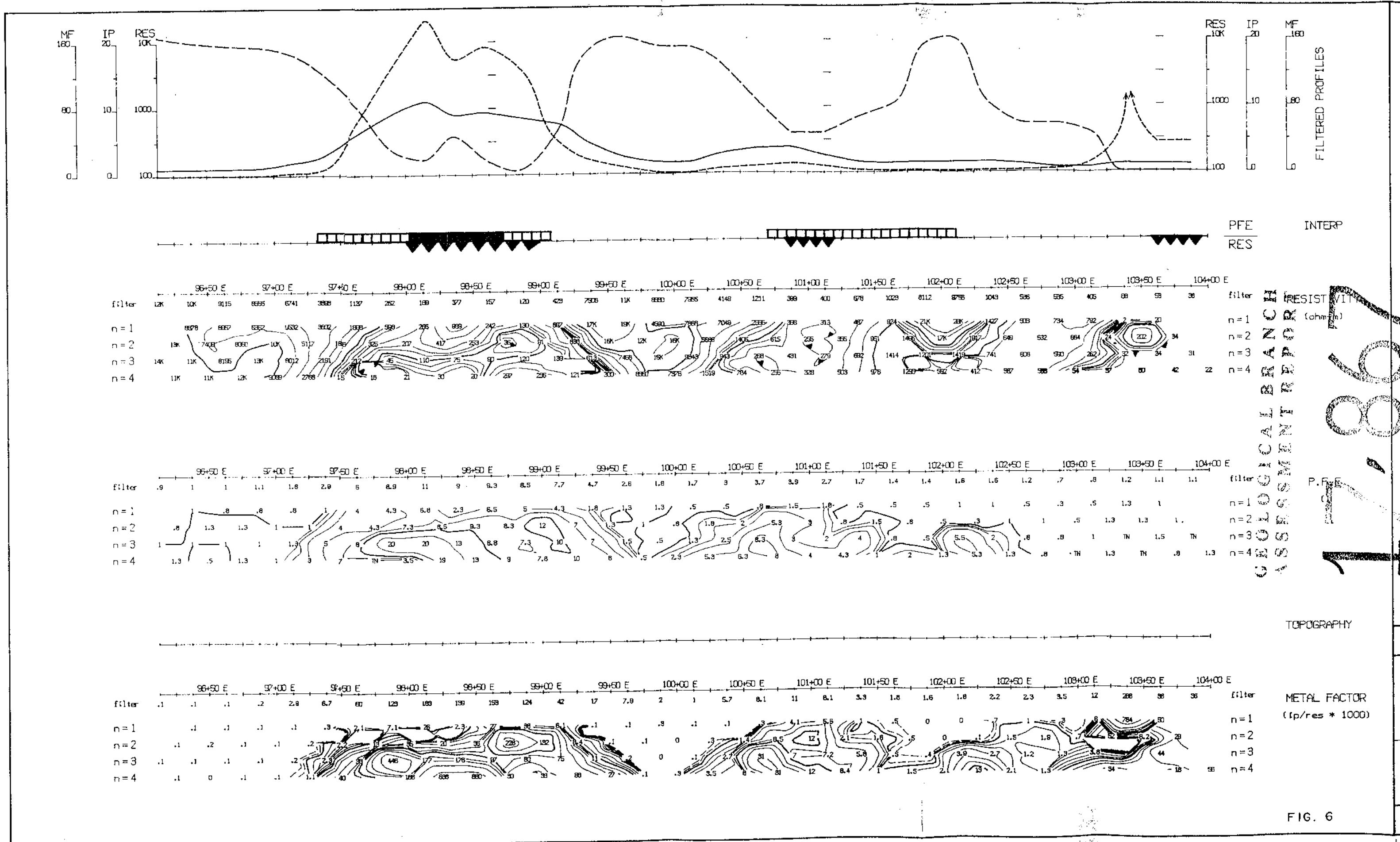
INDUCED POLARIZATION SURVEY
Line 10900 N
C.B.C

Date: 88/07/18 N.T.S
Interpretation by: L. Bradish
Scale: 1 : 2500

noranda

FIG. 4





Filtered Profiles

Resistivity	filter *
Polarization	filter * *
Metal Factor	filter * * *
	filter * * * *

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instrument : PHOENIX
Frequency : 0.25/4.0 Hz
Operator : W.K.T.C

- INTERPRETATION**
- Strong increase in polarization
 - Moderate increase in polarization
 - Pronounced resistivity increase
 - ▼ Pronounced resistivity decrease

NINA LAKE PROJECT

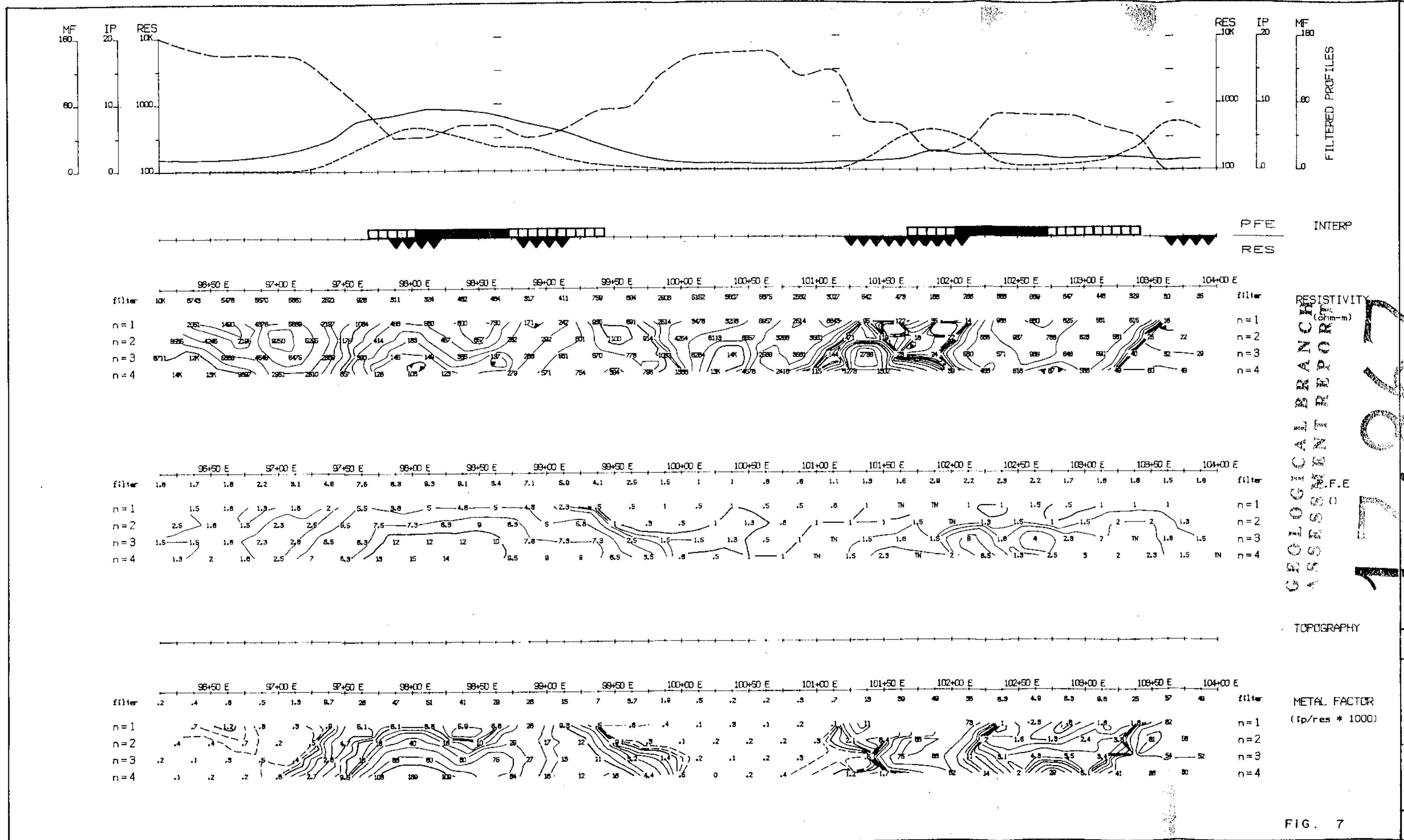
INDUCED POLARIZATION SURVEY
Line 10400 N C.B.C.

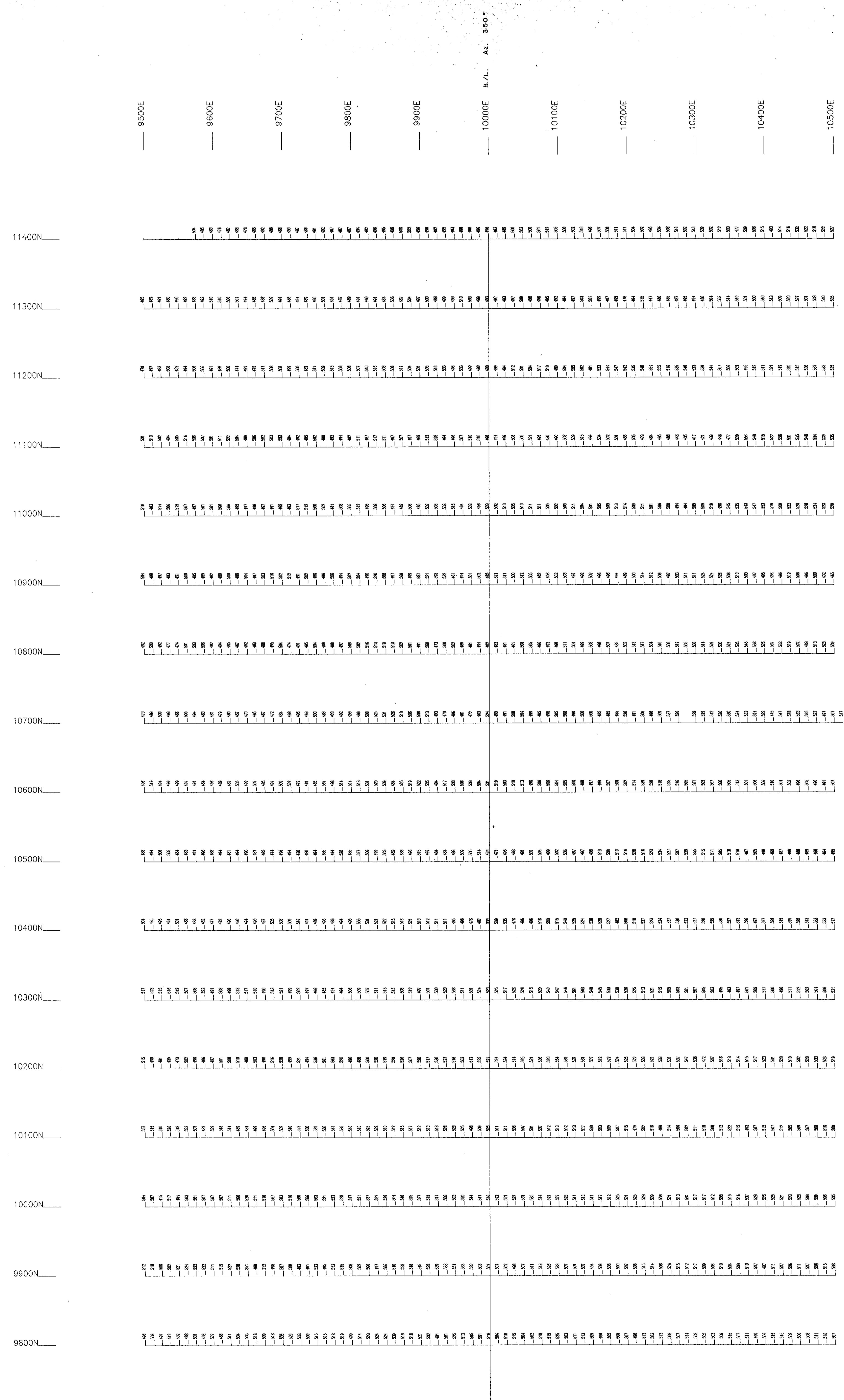
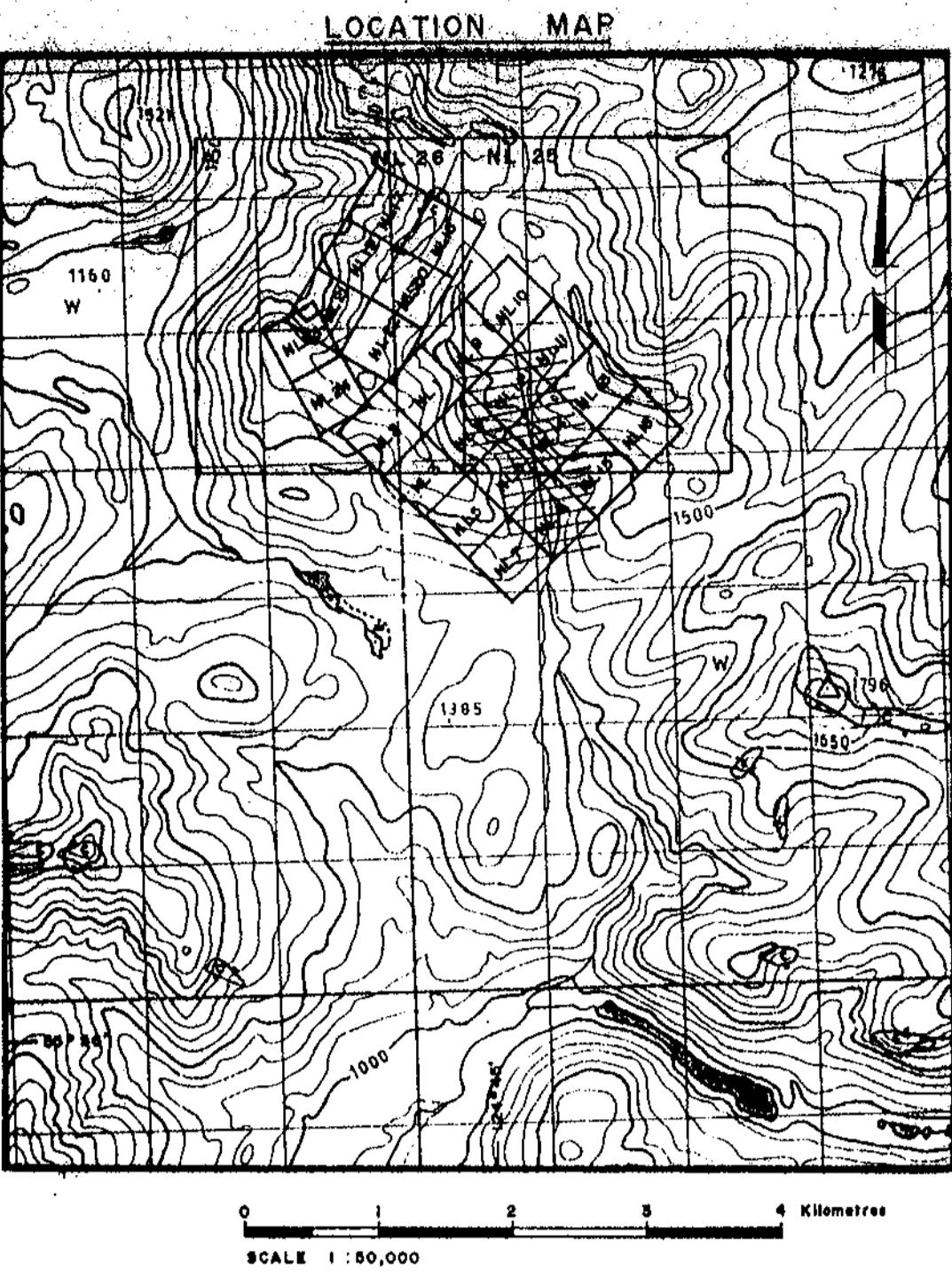
Date: 88/07/18 N.T.S.

Interpretation by: L. Bradish

Scale: 1 : 2500

noranda



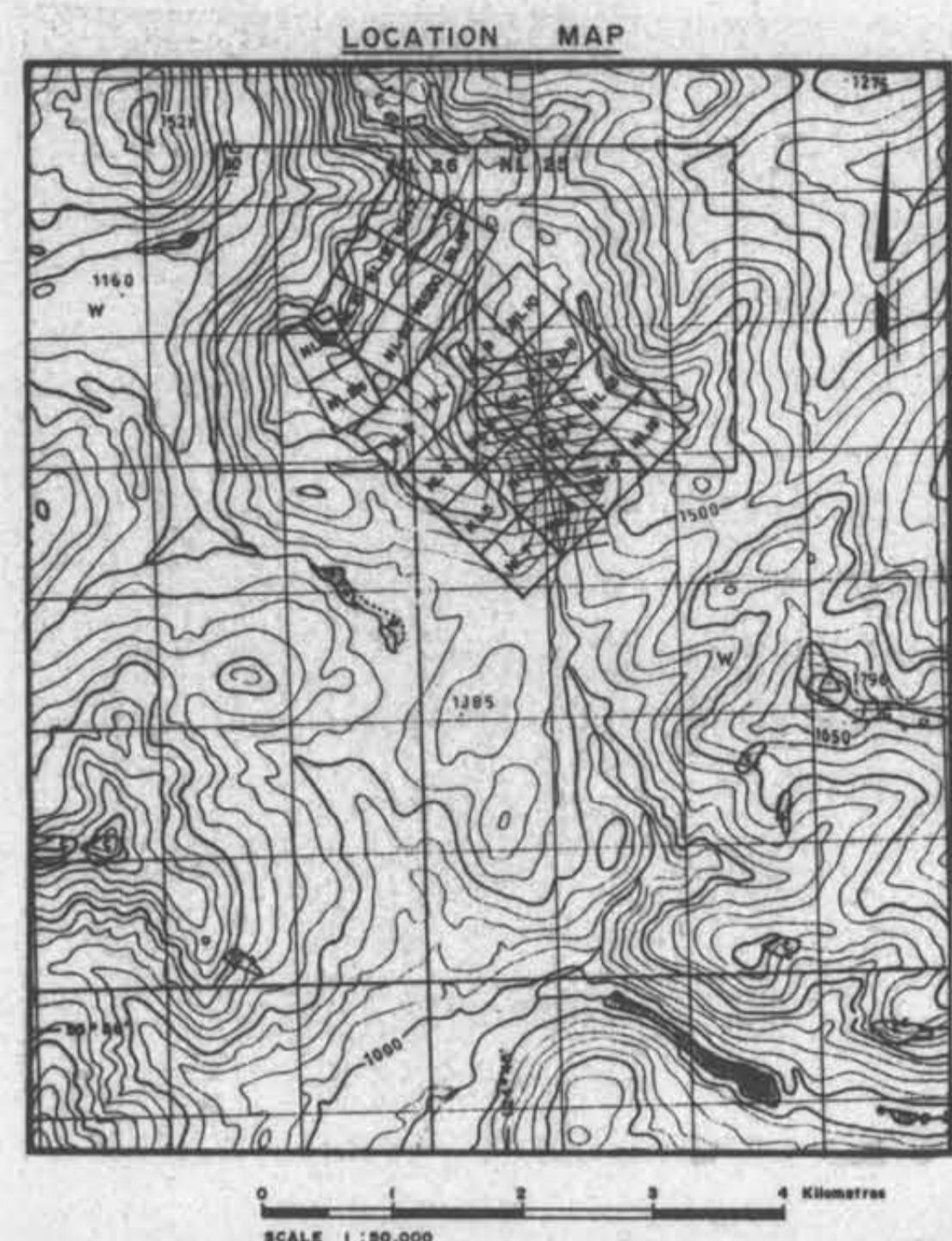
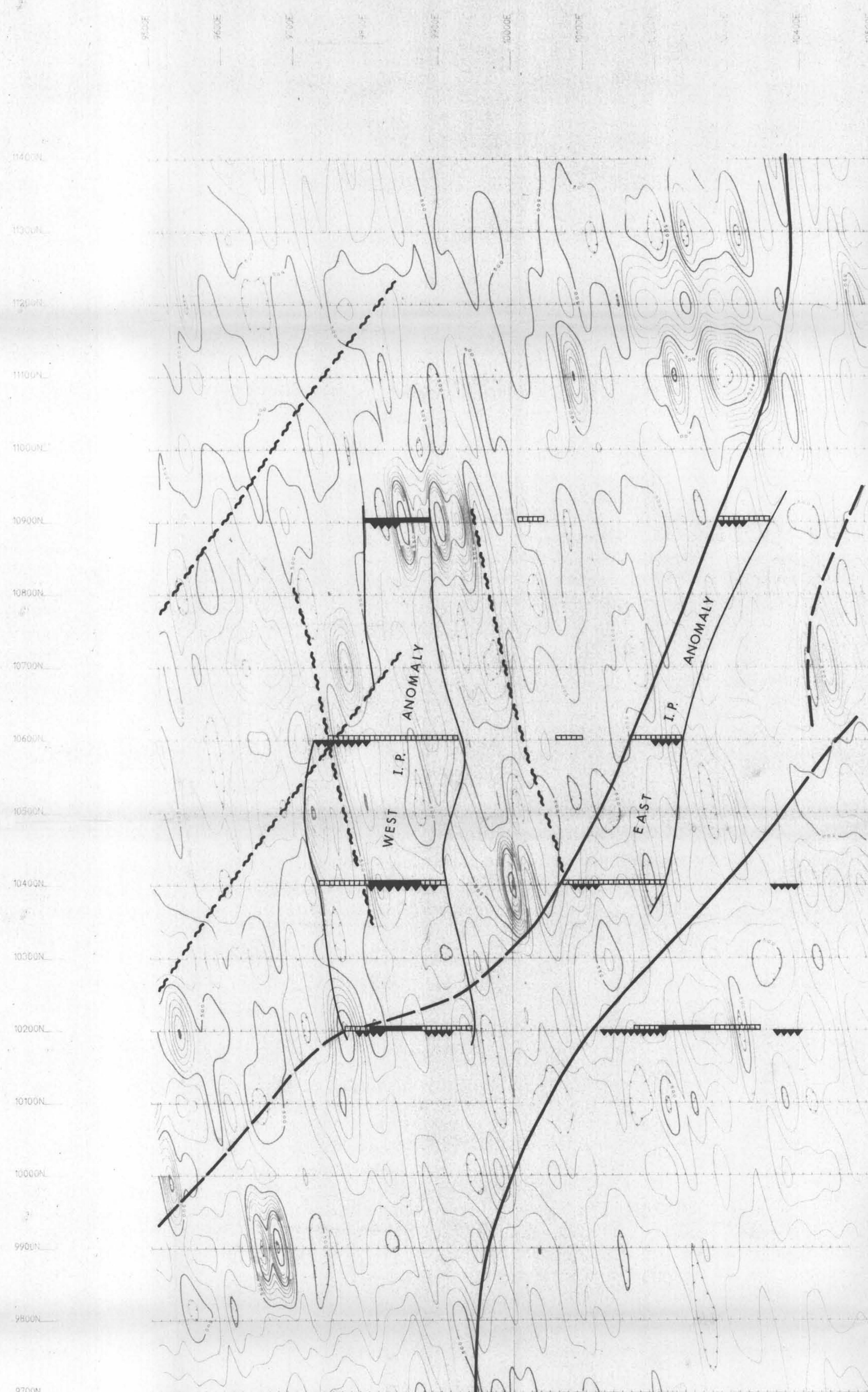


GEOLOGICAL BRANCH
ASSESSMENT REPORT

17-867

Instrument : TOTAL
Field : TOTAL
Datum : 57500.0 nT
Contour Interval :
Conductor Axis :
10m 20m 30m 40m 50m 60m 70m 80m

NINA LAKE	
MAGNETOMETER SURVEY	
PROJECT NINA LAKE PROJECT # : 265	
BASELINE AZIMUTH : 180 Deg.	
SCALE = 1 : 2500	DATE : 7 / 188
SURVEY BY : WK	NTS :
FILE: M265MAG	
NORANDA EXPLORATION	



GEOLOGICAL BRANCH
ASSESSMENT REPORT

17-867

Instrument	:	TOTAL
Field	:	ST5000.0 nT
Datum	:	
Contour Interval	:	10.0 nT
Conductor Axis	:	

NINA LAKE	
MAGNETOMETER SURVEY	
PROJECT: NINA LAKE PROJECT # : 265	
BASELINE AZIMUTH : 180 Deg.	
SCALE = t 2500	DATE : 7/ 1/88
SURVEY BY : WK	NTS :
FILE: M265MAG	
FIG. 9 NORANDA EXPLORATION	

- I.P. ZONES
- MAGNETIC BREAKS
- MAGNETIC CONTACTS