VAL D GÉOPHYSIQUE

010

GEOPHYSICAL SURVEYS
Property of
HEMLO GOLD MINES INC.
NEWMAN-TODD and [redacted]
RED LAKE Project
Todd and [redacted] Townships
Province of Ontario
April 1995

P. Boileau D. Lapointe

95-1188

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SUMMARY

In February 1995, magnetic and induced polarization surveys were performed on behalf of **HEMLO GOLD MINES INC.** on the **NEWMAN-TODD and MILES Grids** of the **RED LAKE Project** located in Todd and Ball Townships, Northwestern Ontario.

The induced polarization survey detected at least two major anomalous zones with close magnetic association on the **NEWMAN-TODD Grid**, whereas not less than six principal anomalous zones were outlined on the **MILES Grid.**

Recommendations for further work include detail geological mapping, complementary IP profiles and diamond drilling to test the best induced polarization responses.

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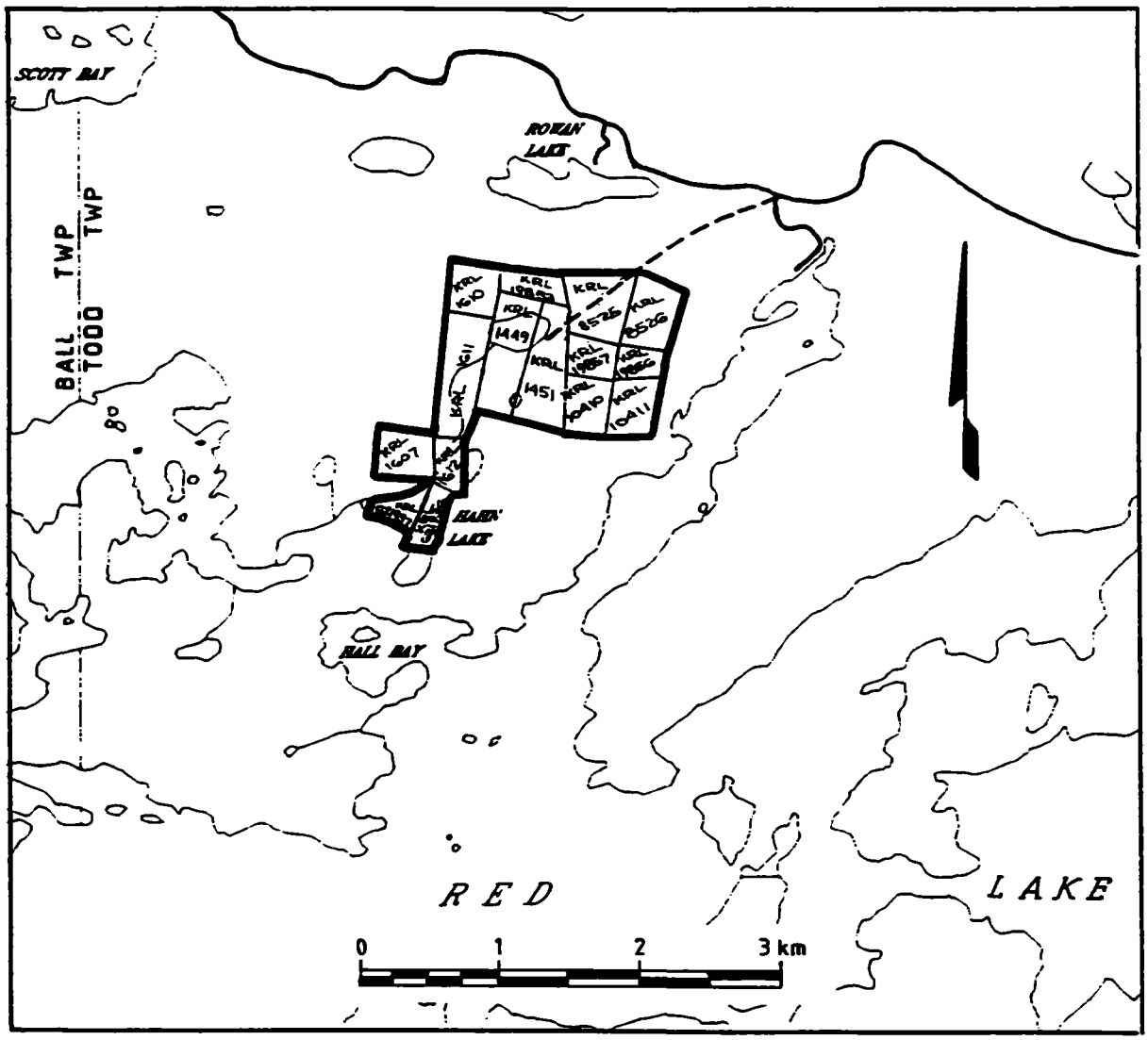
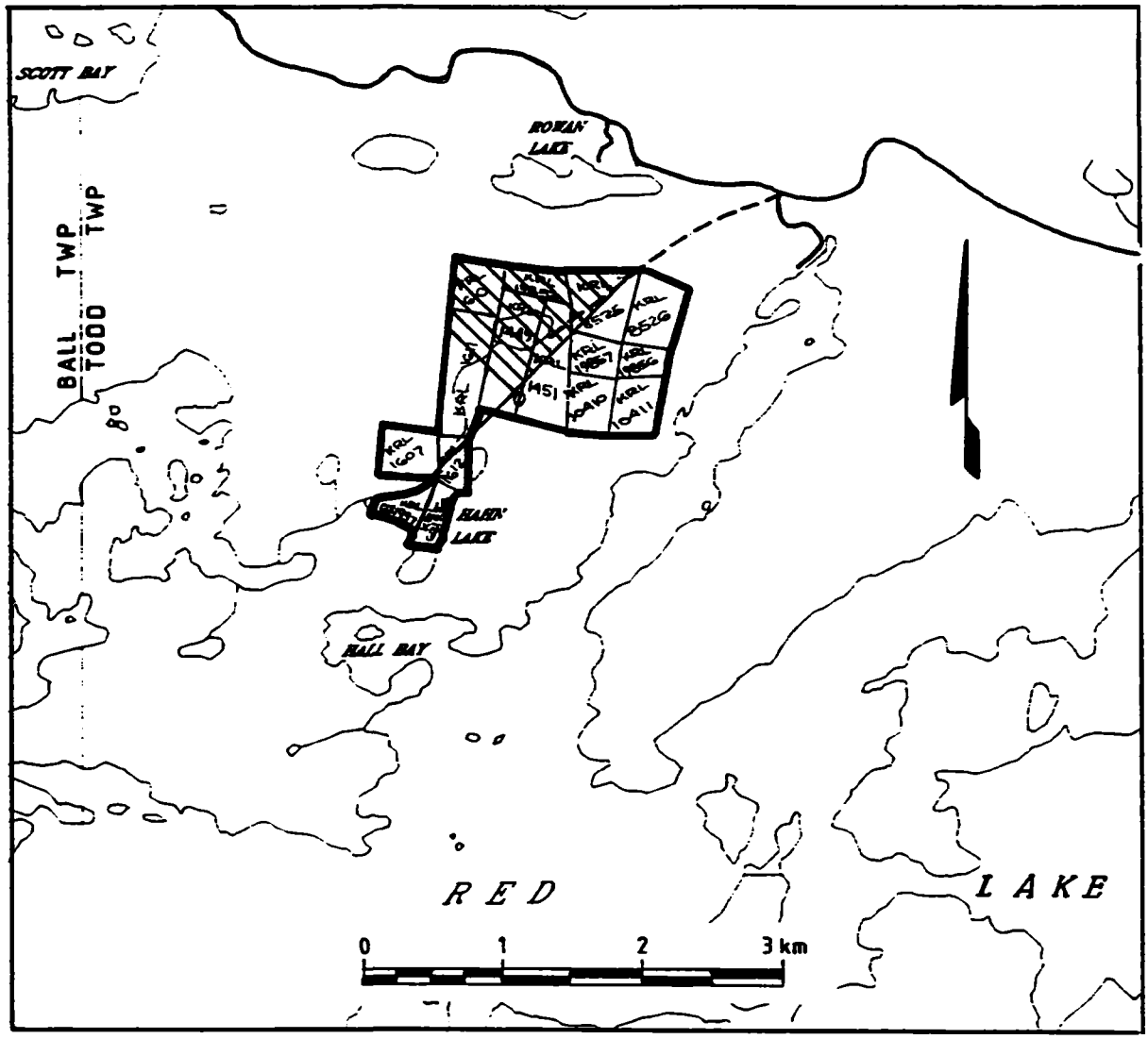


HEMLO GOLD MINES INC.

Figure #1: Index of claims (NEWMAN-TODD Grid)



HEMLO GOLD MINES INC.

Figure #2: Survey area (NEWMAN-TODD Grid)

INTRODUCTION

In February 1995, magnetic and induced polarization surveys were carried out on two claim blocks owned by **HEMLO GOLD MINES INC.**, **NEWMAN-TODD** [redacted], **RED LAKE Project** in Todd and [redacted] Townships, Province of Ontario.

These surveys were designed to locate horizons and/or structures favorable to the presence of base metals and/or gold mineralization.

PROPERTY, LOCATION AND ACCESS

The properties are located 21 km [redacted] respectively to the West of the town of Red Lake, in Todd [redacted] Townships, Northwestern Ontario.

The access is from Red Lake via old mine roads and then by snowmobile to the claim blocks.

The property claims have been registered with the Ministry of Northern Development and Mines of Ontario; their numbers and the areas surveyed are presented in figures #1, #2 [redacted]

GEOPHYSICAL WORK

From February 11th to 25th, 1995, a total field magnetic survey and an induced polarization survey were carried out on the **RED LAKE Project.**

In total, 7.35 line-km of magnetic survey and 6.0 line-km of induced polarization survey were executed on the **NEWMAN-TODD Grid** [redacted]

SURVEY SPECIFICATIONS

The geophysical surveys were carried out along two networks of NW-SE and NE-SW picket lines cut at a 100 metre interval. The lines were chained and stations marked every 25 metres.

The magnetic readings were taken on the **NEWMAN-TODD Grid** with an EDA ONMI-PLUS proton precession magnetometer recording the value of the total magnetic field with a precision of 0.1 nanoTesla (nT). The height of the sensor was 3.2 metres above the ground. The readings were taken systematically every 12.5 metres. A base station magnetometer measuring the variations of the total magnetic field at 20 seconds intervals was used as a reference for correction of the diurnal variation.

The induced polarization surveys were done on both grids with an IP-6 time-domain receiver and with a Phoenix IPT-1 transmitter using a 1.0 kw motor-generator. A dipole-dipole array was used with an electrode spacing (a) of 25 metres and dipole separations (n) of 1 to 6. Primary voltages and chargeability effects were measured with a precision of 0.1 mV and 0.1 mV/V, respectively, every 25 metres along selected grid lines.

RESULTS AND INTERPRETATION

A) MAGNETIC SURVEY

The area covered by the **NEWMAN-TODD Grid** presents a moderate to locally strong magnetic relief where total field intensities fluctuate from 56 500 to 60 000 nanoTeslas (locally, up to 66 500 nT). The magnetic relief is mainly characterized by the existence in the SE part of the grid of a NE-SW oriented zone of high magnetic susceptibility which often reaches 2 000 to 5 000 nT and which could likely be explained by high concentrations of magnetite in the underlying rocks. Also, the sudden break noticed on L 11 300E along this magnetic feature could possibly be due to a N-S oriented fault. Elsewhere on the grid, the relief is more homogeneous with a smooth increase of about 200 to 300 nT to the North.

B) INDUCED POLARIZATION SURVEY

The apparent resistivities measured on both grids are quite variable with values ranging from less than 100 ohm.m in presence of conductive overburden and lakes to more than 100 000 ohm.m where the rock outcrops, particularly on the **NEWMAN-TODD Grid**. Nevertheless, the narrow and well-marked resistivity decreases encountered on both grids are likely related to bedrock EM conductors.

On the other hand, the chargeability effects collected on both grids show in areas of high resistivities a moderate background of 5 to 10 mV/V which decreases close to zero in very low resistivity media.

The survey detected several anomalous responses on both grids. The best responses are often characterized by strong chargeability effects of 15 to 40 mV/V, and locally to more than 50 mV/V, usually associated with a weak to locally strong apparent resistivity decrease; this type of response, which sometimes correspond with an EM conductor, could be explained by massive to semi massive mineralization (graphite, sulphides ?).

On the **NEWMAN-TODD Grid**, the best anomalous responses seem to constitute two major anomalous zones following an NE-SW trend. These two zones are closely but not always directly associated with the strong magnetic anomaly described previously; they could not then be completely explained by the only presence of magnetite. The survey also detected on this grid three weaker anomalous zones mainly characterized by weak to moderate chargeability effects (disseminated mineralization ?).

[redacted]

CONCLUSION AND RECOMMENDATIONS

The induced polarization surveys executed on the two grids of the **RED LAKE Project** detected several anomalous reponses which were grouped to constitute at least two major anomalous zones on the **NEWMAN-TODD Grid** [redacted] The best responses found are usually characterized by moderate to strong chargeability effects often associated with apparent resistivity decreases.

It is recommended to execute on both grids a detail geological mapping, particularly in areas of very high resistivity (bedrock), in order to try to explain some of the anomalous zones.

[redacted]

Recommendations for further work should also include diamond drilling to test the best unexplained IP responses.

Respectfully submitted,
VAL D'OR GEOPHYSICS LTD

By: Pierre Boileau, P.Eng.
Consulting Geophysicist

And by: Daniel Lapointe, M.Sc.
Geologist

CERTIFICATE

I, undersigned, Pierre Boileau, P.Eng., certify that:

I reside at 1725 Duchesne, Val d'Or, Quebec, since 1981.

I am a graduate of Ecole Polytechnique, Universite de Montreal, Quebec where I have obtained a B.Sc.A. in Geological engineering in 1971.

I have been engaged in Exploration Geophysics since 1968 and have been practicing as a professional engineer since 1971.

I am a member of the Ordre des Ingenieurs du Quebec, the Quebec Prospector Association, the Prospector & Developers Association of Canada, the Society of Exploration Geophysicist and the Canadian Institute of Mining & Metallurgy.

This report is based on the information contained in the survey described. The interpretation of the data was made using methods known in the literature and based on my personal experience.

I have not received, nor do I expect to receive directly or indirectly any interest in the property that belongs to **HEMLO GOLD MINES INC.**

Signed in Val d'Or, this April 21th, 1995.

Pierre Boileau, P.Eng.
Consulting Geophysicist

CERTIFICATE

THIS IS TO CERTIFY THAT:

I have resided at 603 du Portage, Val d'Or, Province of Québec since 1989.

I am a qualified Geologist, having received my academic training at the University of Ottawa in Ottawa, Ontario (B.Sc.H. 1982) and Université Laval in Ste-Foy, Québec with an M.Sc. degree (1985).

I am a member of the Association Professionnelle des Géologues et Géophysiciens du Québec (APGGQ), the Prospectors Association of Québec (APQ) and the Geological Society of America.

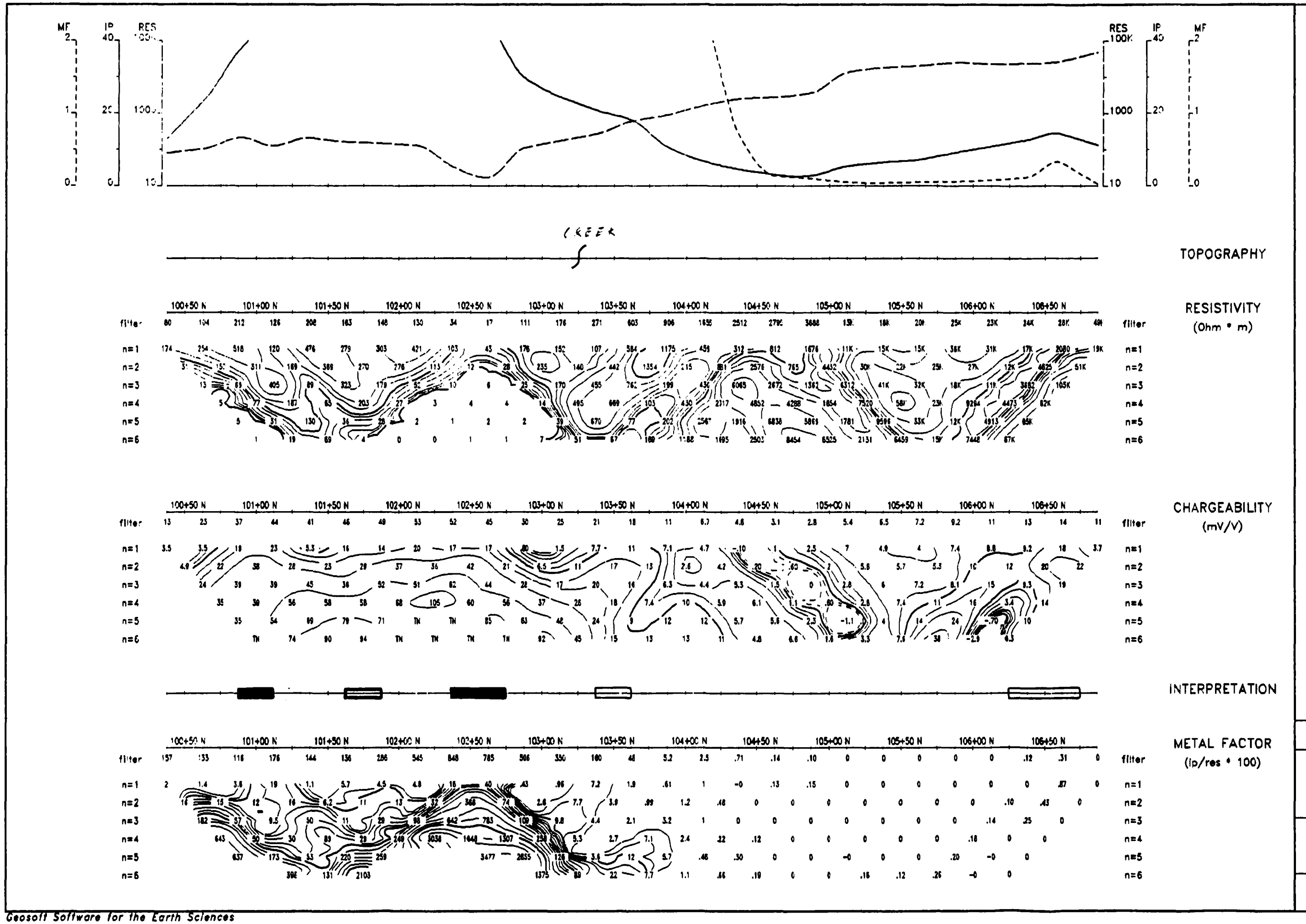
I have been engaged in my profession for the 9 years.

I have not received or expect to receive an interest, direct or indirect, in the property of **HEMLO GOLD MINES.**, nor beneficially own, directly or indirectly, any securities of that company. I am not an insider or a company having an interest in the subject property nor any other property in the immediate area.

Signed this April 21, 1995.

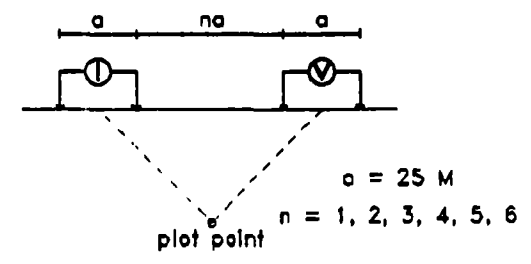
Daniel Lapointe, M.Sc.
Geologist

GÉOLOGUE ♦ GEOLOGIST
No 826
QUÉBEC ♦ CANADA



Line 10700 E

Dipole-Dipole Array



Filtered Profiles

Resistivity
Polarization
Metal Factor

Filter

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

Instrument: PHOENIX IPT1,BRGM IP-6
Time cycle: 2 sec.
Operator: Gérard Couture

INTERPRETATION

- ■ Increase in polarization associated to a relative decrease in apparent resistivity.
- ◘ Increase in polarization with little or no associated decrease in apparent resistivity.
- □ Weak or poorly defined polarization anomaly,no resistivity signature.
- ▼ Low resistivity feature.Bedrock valley or thick overburden.Structural causes?

Induced Polarization Survey

HEMLO GOLD MINES INC.

Newman – Todd Project
Todd Township

Date: 95/03/07
Interpretation by: P. Bolleau, P. Eng.
Scale 1 : 2500

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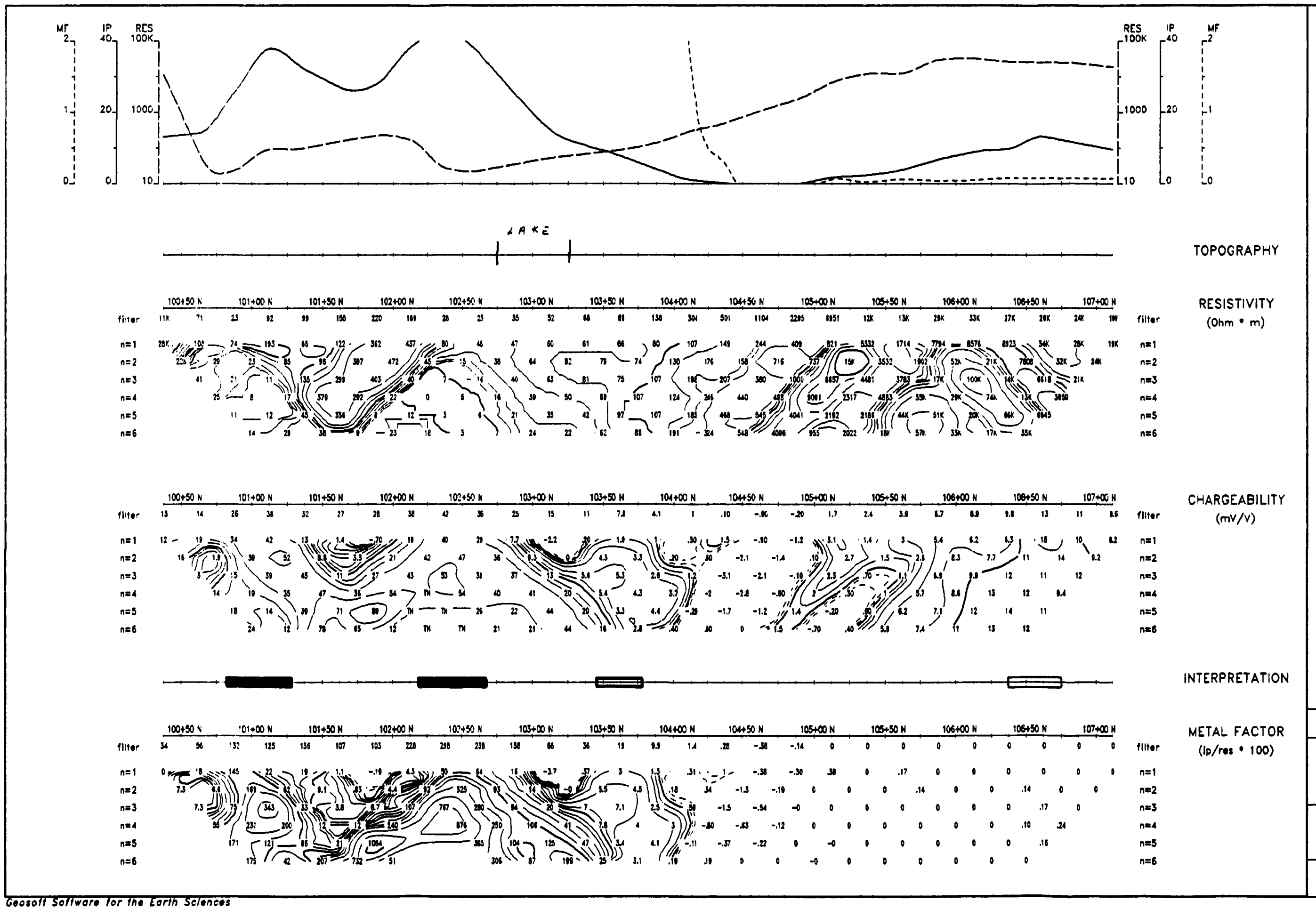

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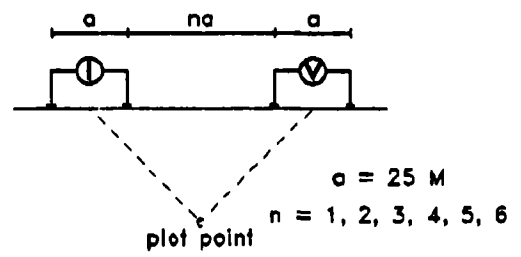

a = 25 M
n = 1, 2, 3, 4, 5, 6

Filtered Profiles

Filter

Resistivity
Polarization
Metal Factor

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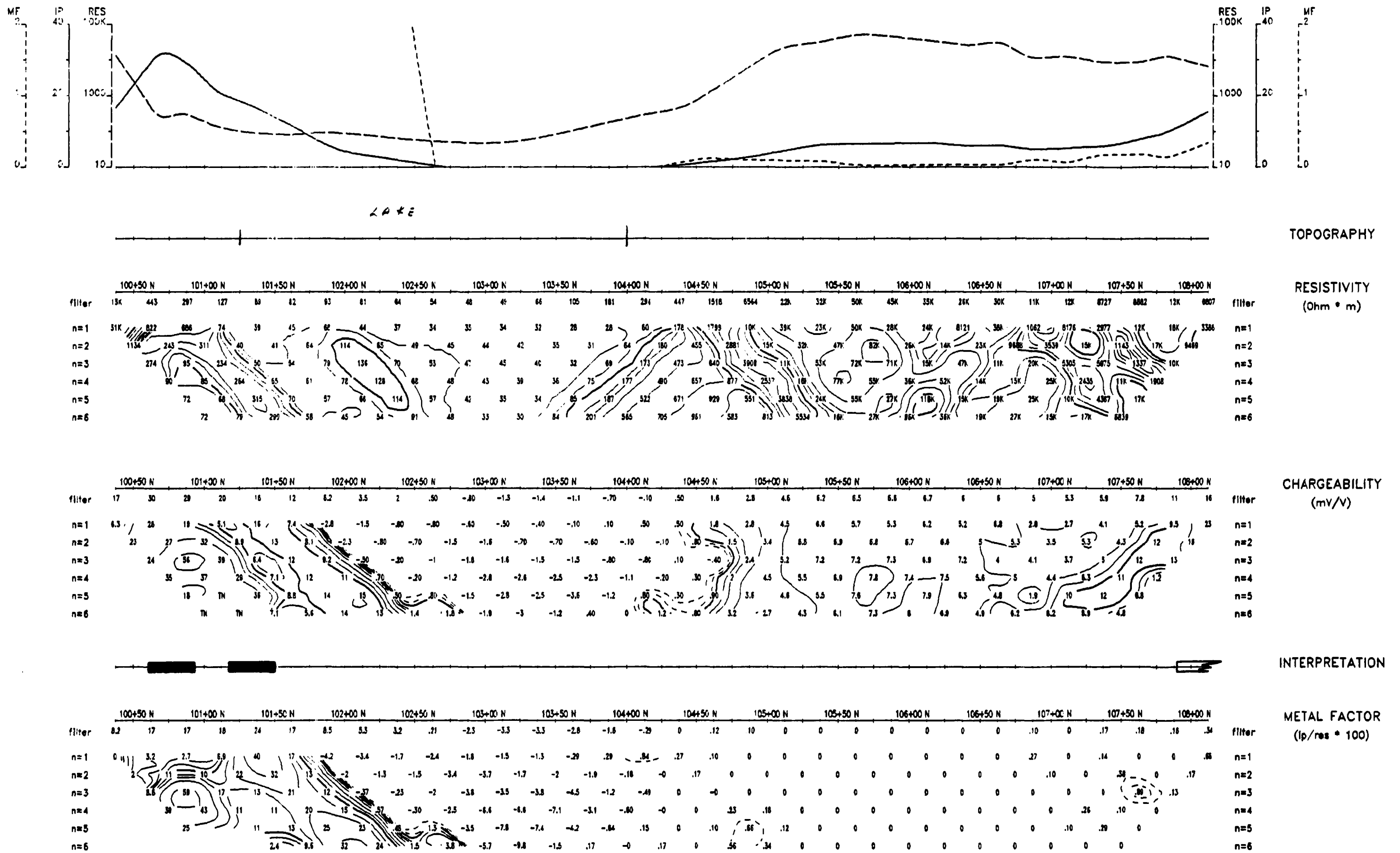
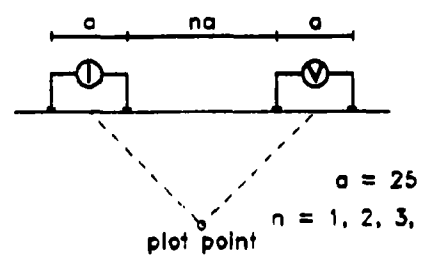


Line 10900 E

Dipole-Dipole Array



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Polarization
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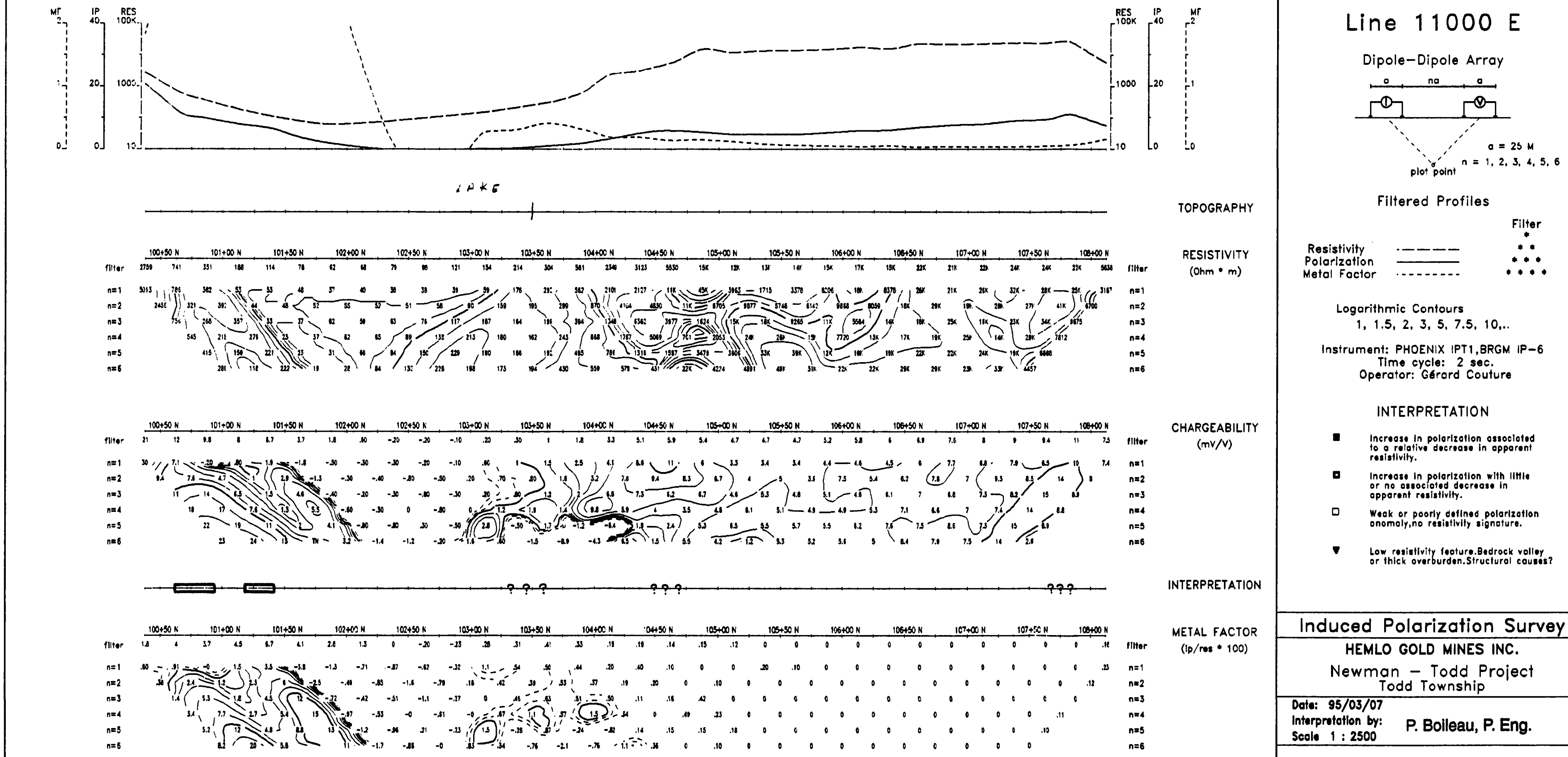

Line 11000 E

Dipole–Dipole Array

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Resistivity
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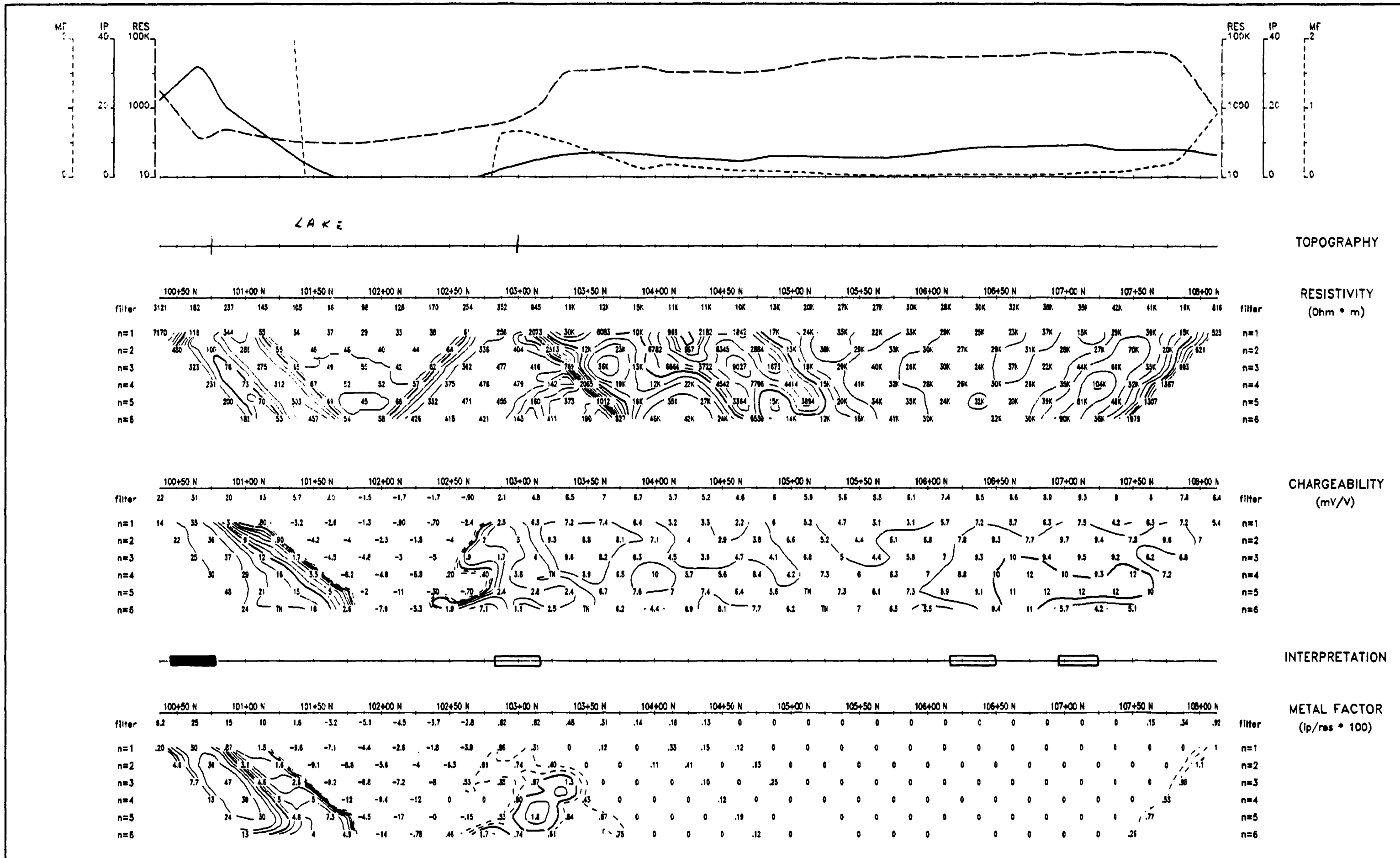
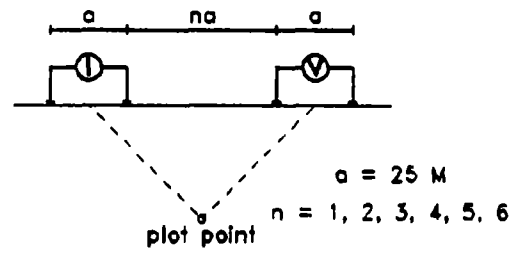


Line 11100 E

Dipole–Dipole Array



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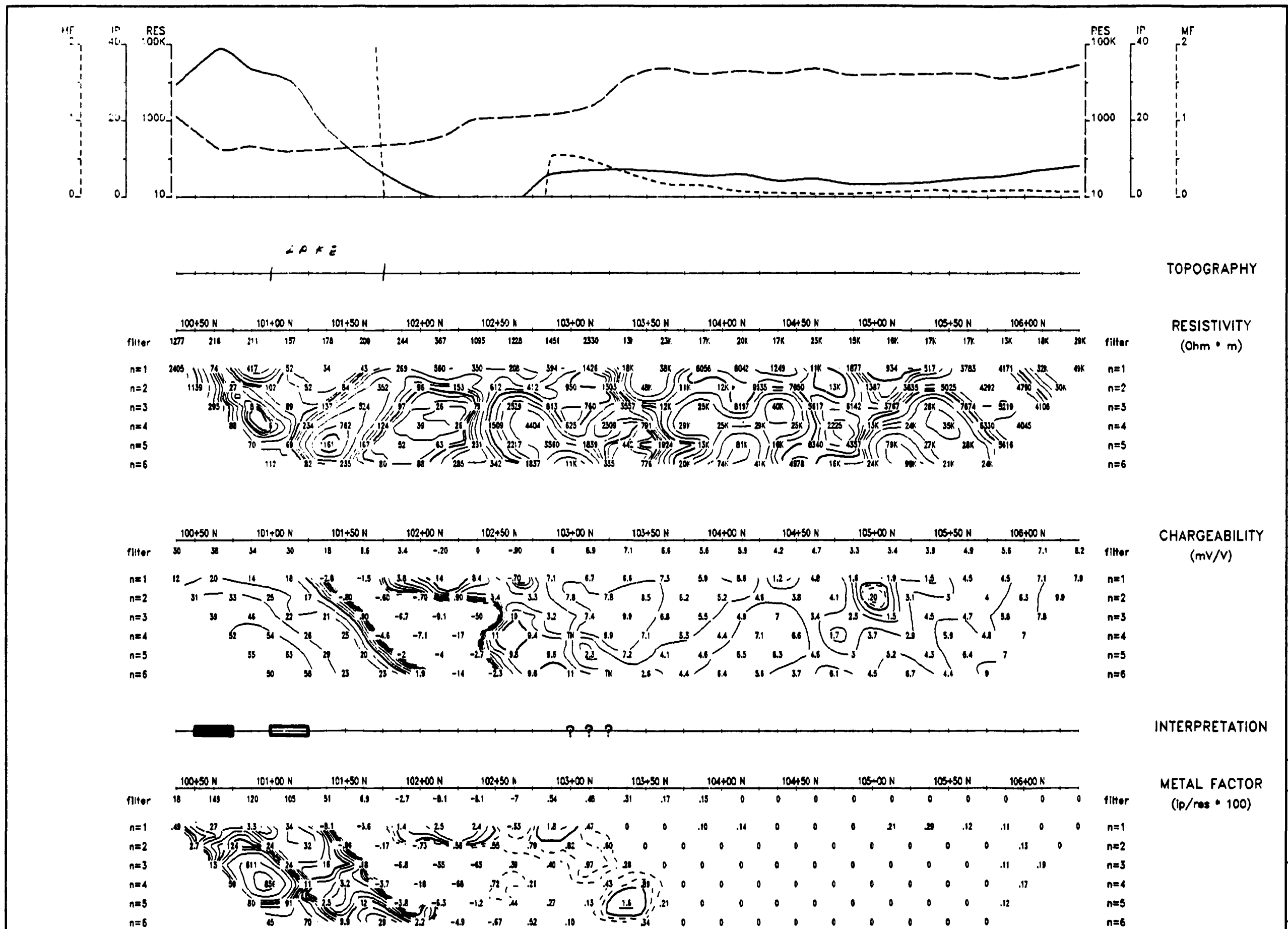
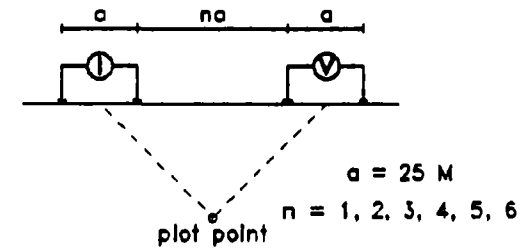


Line 11200 E

Dipole–Dipole Array



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Polarization
Metal Factor

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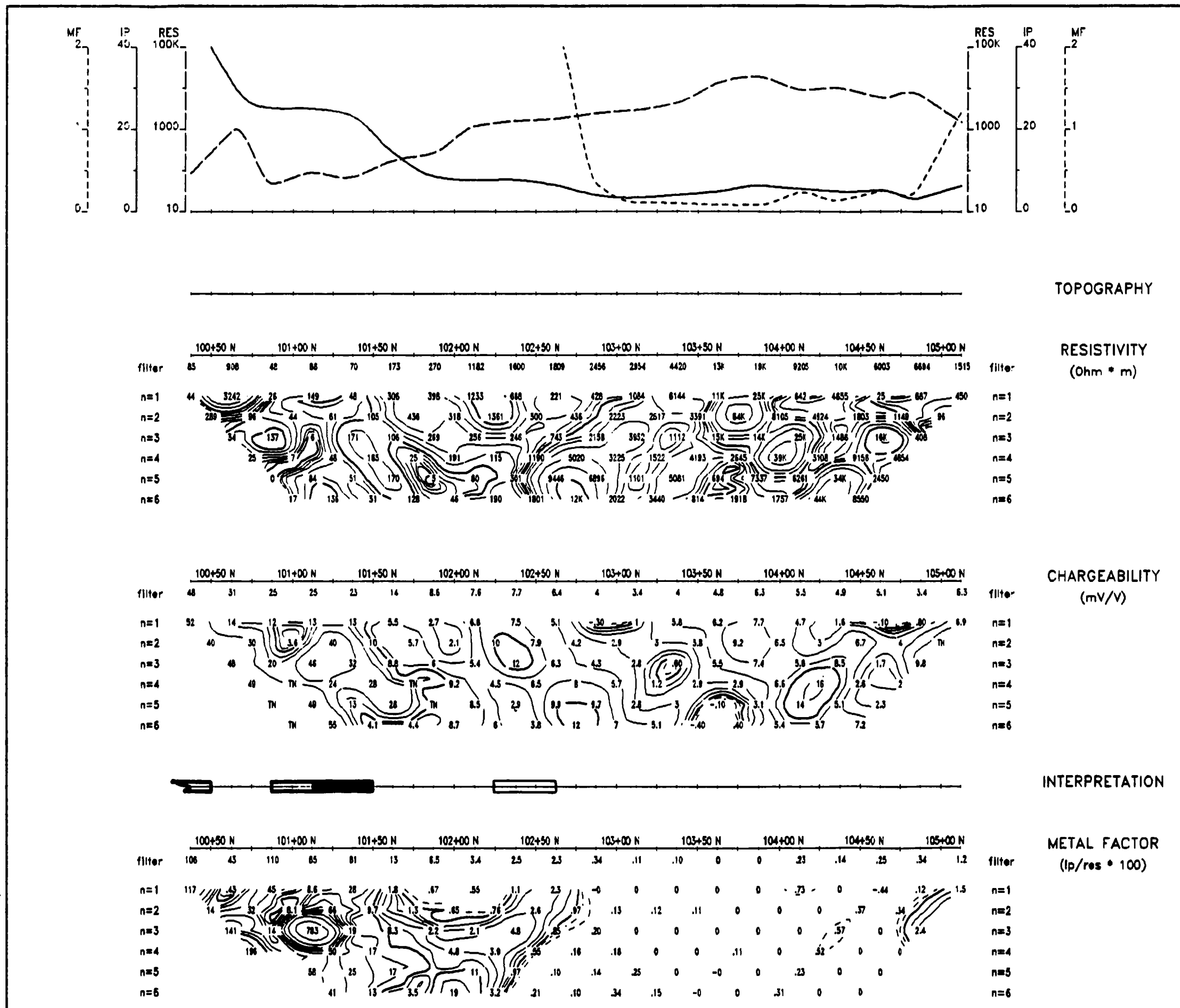

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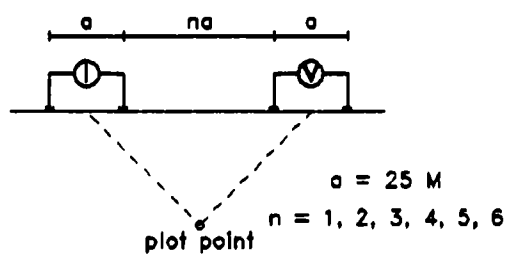
Dipole–Dipole Array



Filtered Profiles

Resistivity
Polarization
Metal Factor

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Logarithmic Contours
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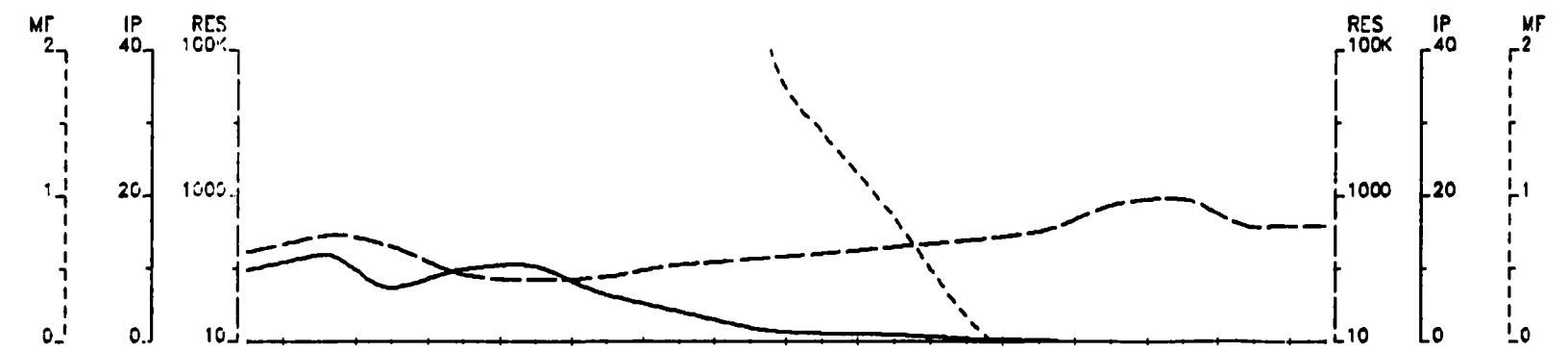
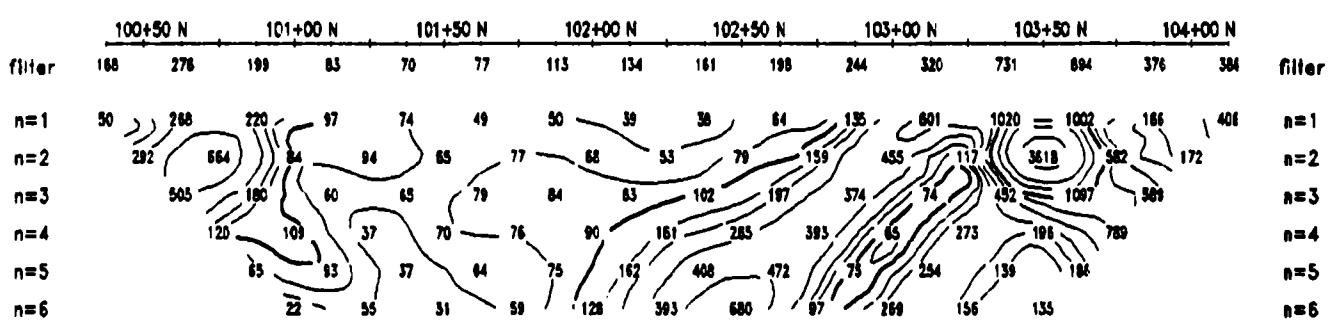
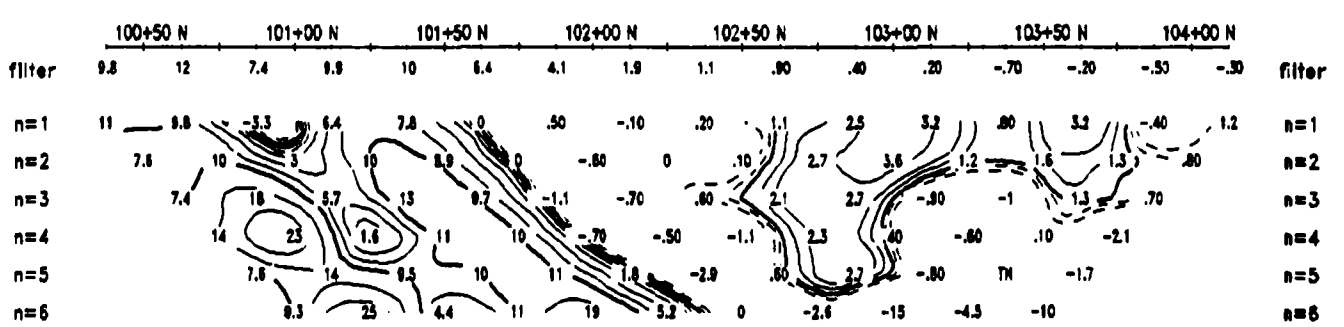
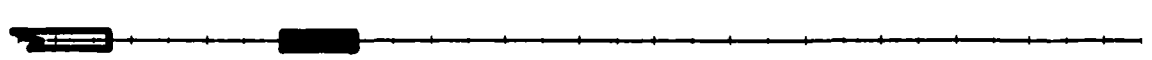
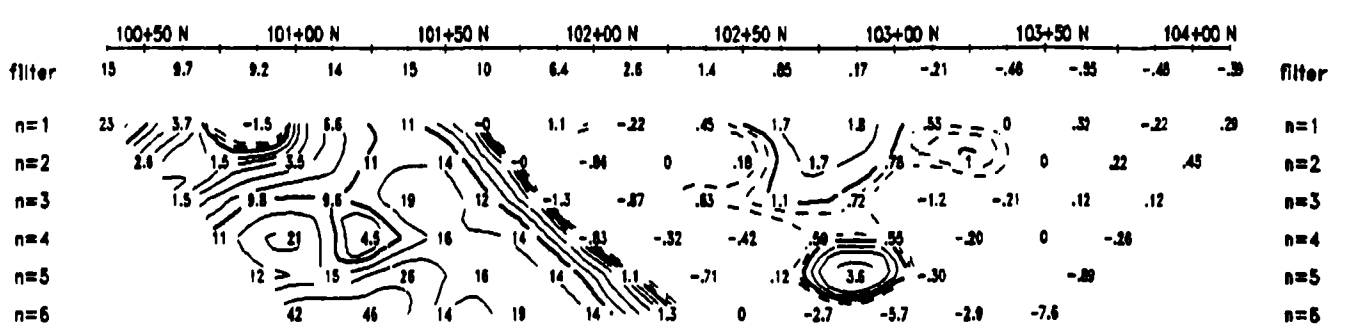




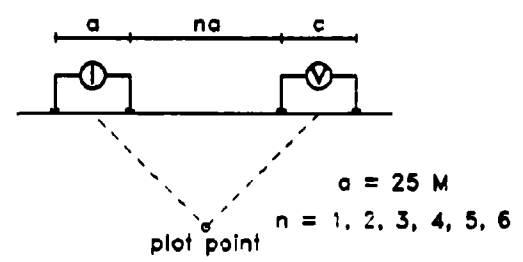






Line 11400 E

Dipole–Dipole Array



Filtered Profiles

Filter

Resistivity
Polarization
Metal Factor

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

Instrument: PHOENIX IPT1,BRGM IP–6
Time cycle: 2 sec.
Operator: Gérard Couture

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Induced Polarization Survey

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Newman – Todd Project
Todd Township

Date: 95/03/07
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Scale 1 : 2500

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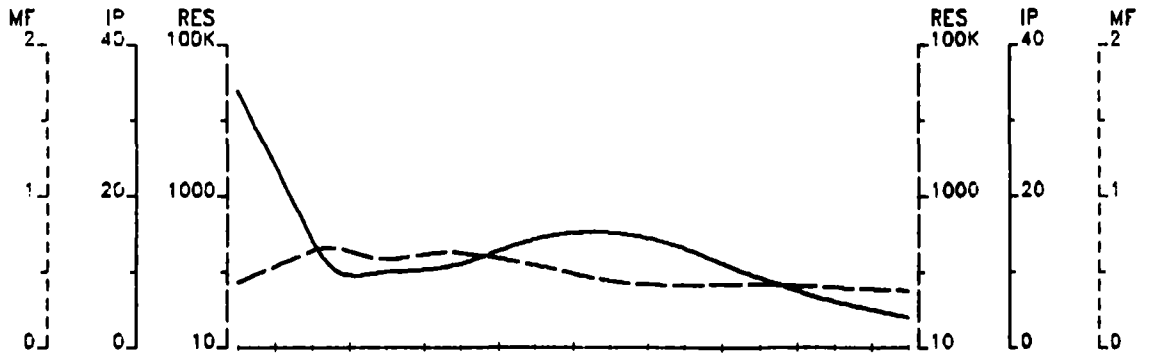
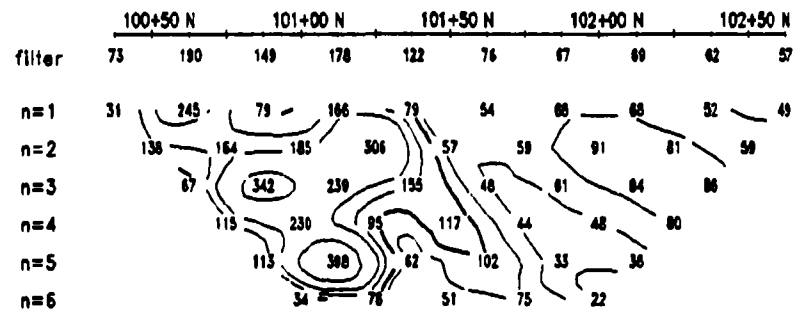
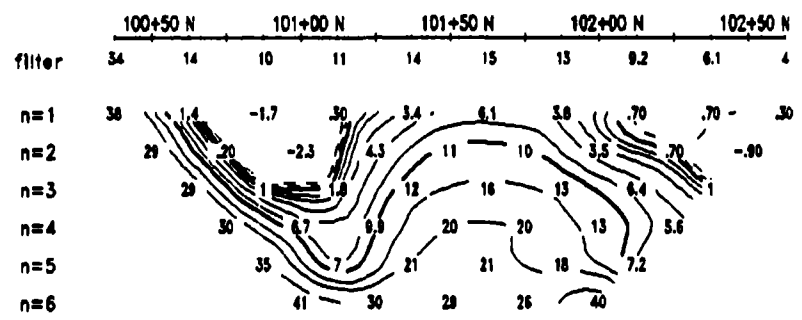
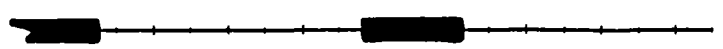




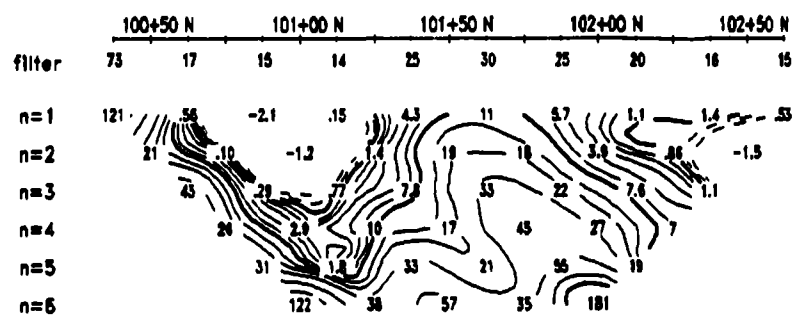
RESISTIVITY
(Ohm * m)



CHARGEABILITY
(mV/V)



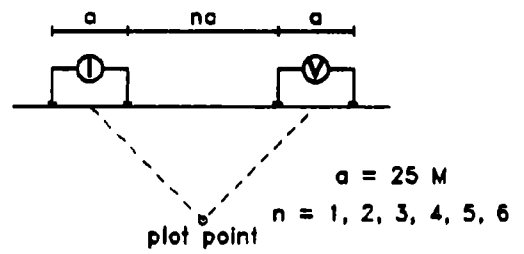
INTERPRETATION



METAL FACTOR
(ip/res * 100)

Line 11500 E

Dipole–Dipole Array



Filtered Profiles

Filter

Resistivity
Polarization
Metal Factor

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

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- ■ Increase in polarization associated to a relative decrease in apparent resistivity.
- ◘ Increase in polarization with little or no associated decrease in apparent resistivity.
- □ Weak or poorly defined polarization anomaly,no resistivity signature.
- ▼ Low resistivity feature.Bedrock valley or thick overburden.Structural causes?

Induced Polarization Survey

HEMLO GOLD MINES INC.

Newman – Todd Project
Todd Township

Date: 95/03/07
Interpretation by: P. Boileau, P. Eng.
Scale 1 : 2500

VAL D'OR GEOPHYSICS LTD

Geosoft Software for the Earth Sciences

95-1188

JUN. -12' 95 (MON) 08:25 MINING/GEOLOGY-KEN

JUN. -12' 95 (MON) 08:03 MINING-RECORDER--RL

Lands

52M01SE0003 2.16053 TODD

900

Ministry of Northern Development and Mines
Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: W9520. 00029

2.16053

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
- A separate copy of this form must be completed for each Work Group.
- Technical reports and maps must accompany this form in duplicate.
- A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s): Hemlo Gold Mines Inc. / Noranda Inc.		Client No.: 143550 / 176211
Address: c/o PO Box 1205, 60 Shirley St. South, Timmins, Ont P4N 7J5		Telephone No.: (705) 263-9600
Mining Division: Red Lake	Township/Area: Todd	M or G Plan No.:
Dates Work Performed — From: February 11, 1995	To: February 25, 1995	

Work Performed (Check One Work Group Only)

Work Group	Type
Geotechnical Survey	Magnetometer, IP
Physical Work, Including Drilling	
Rehabilitation	
Other Authorized Work	
Assays	
Assignment from Reserve	

RECEIVED
JUN 20 1995
MINING LANDS BRANCH

Total Assessment Work Claimed on the Attached Statement of Costs $ 8677.00

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
Val D'Or Geophysics	50 blvd Lemoyne, Val D'Or, Quebec J9P 2H6
Bulany, D. Lapoint (Author)	Ditto

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date: May 25, 1995	Recorded Holder or Agent (Signature): [signature]

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

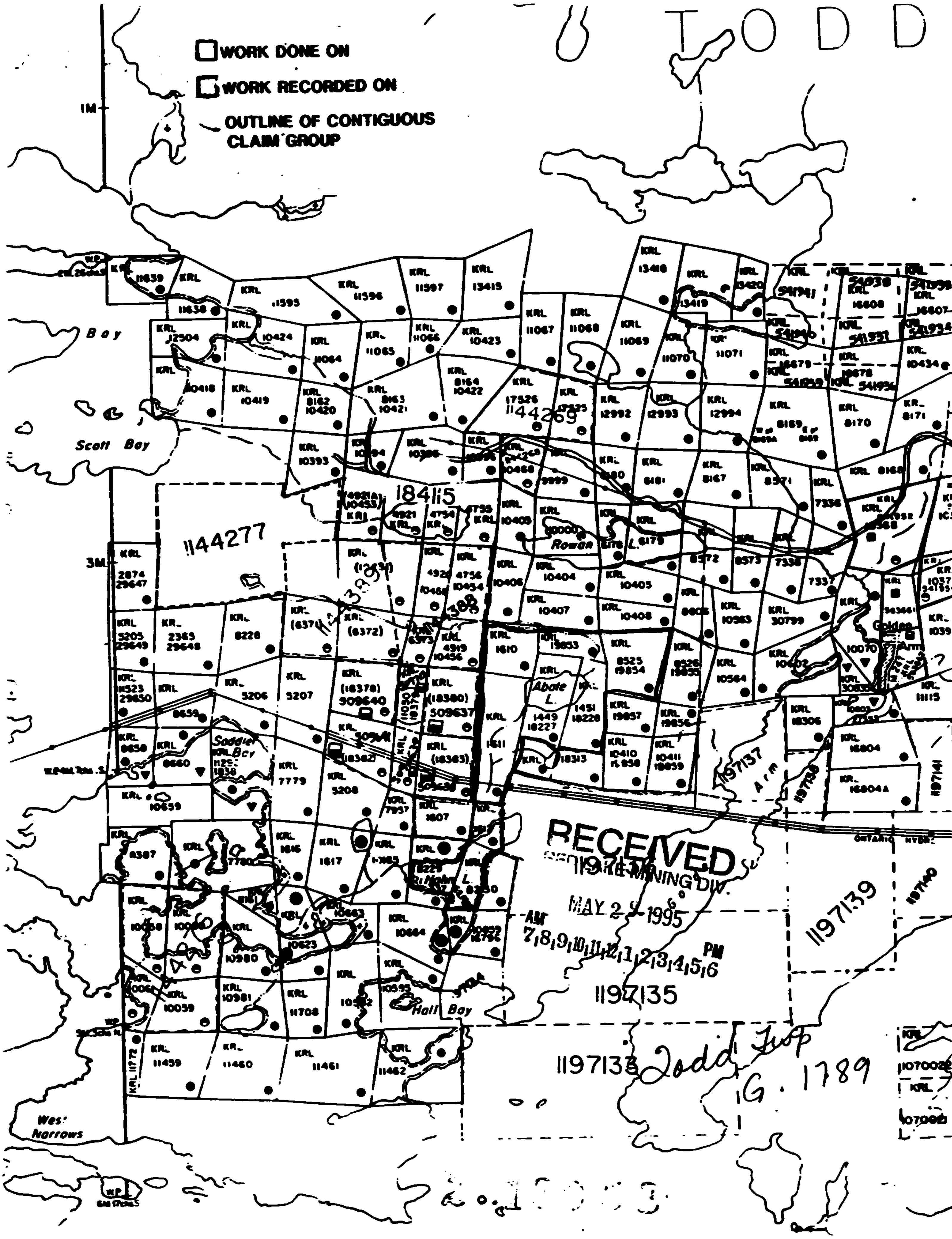
Name and Address of Person Certifying: Wayne Reid c/o PO Box 1205, 60 Shirley St. South, Timmins Ont. P4N 7J5		
Telephone No.: (705) 268-9600	Date: May 25/95	Certified By (Signature): [signature]

For Office Use Only

Total Value Cr. Recorded: $ 8677.00	Date Recorded: May 29, 1995	Mining Recorder: [signature]	Received Stamp
	Deemed Approval Date: Aug 28/95	Date Approved:	
	Date Notice for Amendments Sent:		

RECEIVED
RED LAKE MINING DIV.
MAY 29 1995
AM PM
7,8,9,10,11,12,1,2,3,4,5,6

0241 (03/91)



WORK DONE ON
WORK RECORDED ON
OUTLINE OF CONTIGUOUS CLAIM GROUP
TODD
Bay
Scott Bay
Rowan L.
Saddle Bay
Abate L.
Hall Bay
West Narrows
Arm
Golden Arm
1144277
1144269
1184115
1197137
1197139
1197135
1197133
RECEIVED
KENORA MINING DIV.
MAY 29 1995
AM 7,8,9,10,11,12,1,2,3,4,5,6 PM
Todd Twp
G. 1789

Ministry of Northern Development and Mines
Ontario
Ministère du Développement du Nord et des mines

Statement of Costs for Assessment Credit
État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction
W9520.00024

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4e étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type Magnetometer & IP	8677.00	
			8677.00
Supplies Used Fournitures utilisées	Type		
Equipment Rental Location de matériel	Type		
		Total Direct Costs Total des coûts directs	8677.00

2. Indirect Costs/Coûts indirects

** Note: When claiming Rehabilitation work Indirect costs are not allowable as assessment work.
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type		
Food and Lodging Nourriture et hébergement			
Mobilization and Demobilization Mobilisation et démobilisation			
		Sub Total of Indirect Costs Total partiel des coûts indirects	
		Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)	
		Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs) Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)	8677.00

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit		Total Assessment Claimed
	× 0.50 =	

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation		Évaluation totale demandée
	× 0,50 =	

Certification Verifying Statement of Costs

I hereby certify:
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as Lands Manager (Recorded Holder, Agent, Position in Company) I am authorized

to make this certification

Attestation de l'état des coûts

RECEIVED
... LAKE MINING DIV.
MAY 8 1995
AM 7,8,9,10,11,12,1,2,3,4,5,6 PM

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de ________ je suis autorisé (titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature	Date
[signature]	May 25 1995

0212 (04/91)

Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.

Work Report# for Applying Reserve *	Claim Number (see note 2)	# of Claim Units	Value of Assesment Work Done on this Claim	Value Applied to this Claim	Values Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	KRL 0.001.443	1	2.791.00		2.791.00	
	KRL 0.001.451	1	1.279.00		1.209.00	70.00
	KRL 0.001.610	1	1.746.00			1.746.00
	KRL 0.001.611	1	1.275.00			1.275.00
	KRL 0.008.525	1	542.00			542.00
	KRL 0.019.853	1	1.044.00			1.044.00
	KRL 0.621.936	1	0.00	2.000.00		
	KRL 0.621.937	1	0.00	2.000.00		
	8 Total Number of Claims		**8.677.00** Total Value Work Done	**4.000.00** Total Value Work Applied	**4.000.00** Total Assigned From	**4.677.00** Total Reserve

Credits you are claiming in this report may be cut back. In order to minimize the adverse affects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (x) one of the following:

1. [ ] Credits are to be cut back starting with the claims listed last, working backwards.
2. [ ] Credits are to be cut back equally over all claims contained in this report of work.
3. [ ] Credits are to be cut back as priorized on the attatched appendix.
4. [x] Credits are to be cut back starting with the claims that have reserve credits.

In the event that you have not specified your choice of priority, option one will be implemented.

RECEIVED
MAY 2 9 1995
AM 7,8,9,10,11,12,1,2,3,4,5,6 PM

Note 1: Examples of beneficial Interest are unrecorded transfers, option payments, memorandum of agreements, etc. with respect to the mining claims.
Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.	Signature	Date May 25, 1995

Ontario

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Geoscience Approvals Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853
Fax: (705) 670-5863

July 14, 1995

Our File: 2.16053
Transaction #: W9520.00029

Mining Recorder
Ministry of Northern
Development & Mines
Ontario Government Building
227 Howey Street, Box 324
Red Lake, Ontario
P0V 2M0

Dear Mr. Rivett:

Subject: APPROVAL OF ASSESSMENT WORK CREDITS ON MINING CLAIMS 1449 et al. IN TODD TOWNSHIP

Assessment credits have been approved as outlined on the report of work form. The credits have been approved under Section 14 (Geophysical) of the Mining Act Regulations.

The approval date is July 13, 1995.

If you have any questions regarding this correspondence, please contact Steven Beneteau at (705) 670-5858.

Yours sincerely,

Ron C. Gashinski
Senior Manager, Mining Lands Section
Mining and Land Management Branch
Mines and Minerals Division

SBB/jn

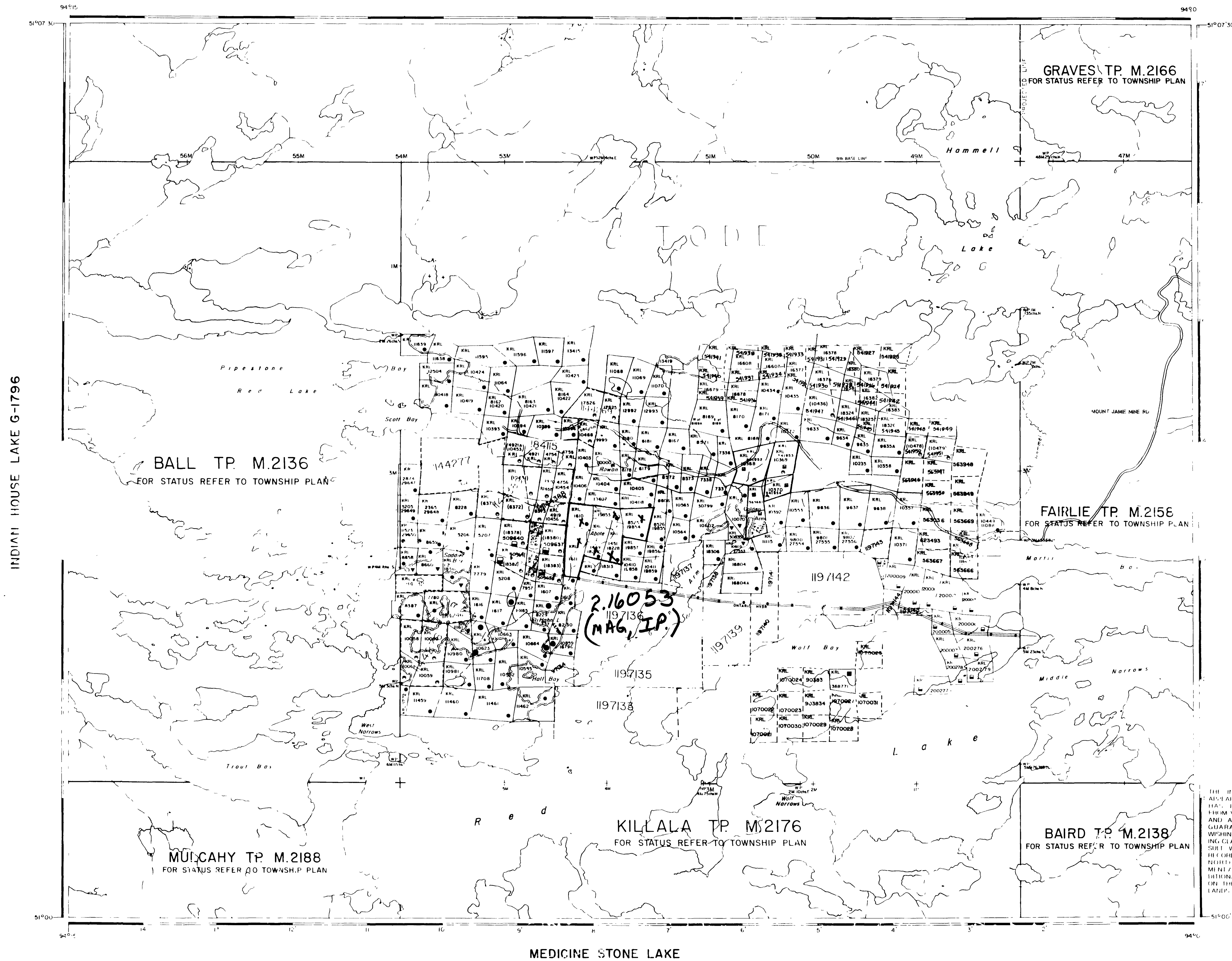
cc: Resident Geologist
Red Lake, Ontario

Assessment Files Library
Sudbury, Ontario

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+S. – MINING AND SURFACE RIGHTS



THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

2.16053

FOREST ACTIVITY INFORMATION

THIS TOWNSHIP/AREA FALLS WITHIN THE
RED LAKE CROWN
AND MAY BE SUBJECT TO FORESTRY OPERATIONS. THE M.N.R. UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT
P.O. BOX 5003
RED LAKE, ONTARIO P0V 2M0

LEGEND

HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES
TOWNSHIPS, BASE LINES, ETC.
LOTS, MINING CLAIMS, PARCELS, ETC.
UNSURVEYED LINES
LOT LINES
PARCEL BOUNDARY
MINING CLAIMS ETC.
RAILWAY AND RIGHT OF WAY
UTILITY LINES
NON PERENNIAL STREAM
FLOODING OR FLOODING RIGHTS
SUBDIVISION OR COMPOSITE PLAN
RESERVATIONS
ORIGINAL SHORELINE
MARSH OR MUSKEG
MINES
TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT — SYMBOL

PATENT, SURFACE & MINING RIGHTS
" , SURFACE RIGHTS ONLY
" MINING RIGHTS ONLY
LEASE, SURFACE & MINING RIGHTS
" SURFACE RIGHTS ONLY
" MINING RIGHTS ONLY
LICENCE OF OCCUPATION
ORDER IN COUNCIL
RESERVATION
CANCELLED
SAND & GRAVEL

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

SCALE 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

AREA

HAMMELL LAKE

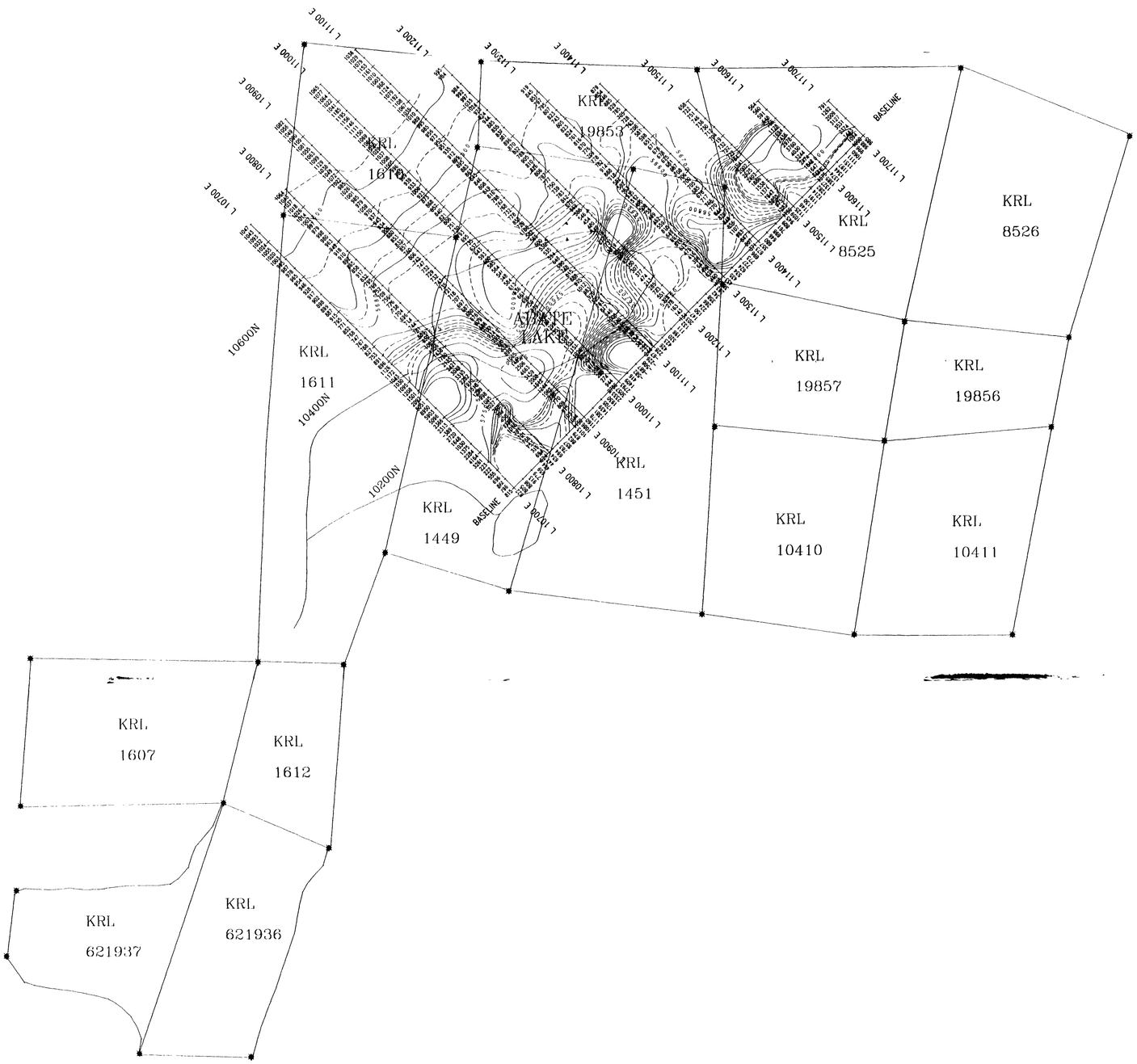
M.N.R. ADMINISTRATIVE DISTRICT
RED LAKE
MINING DIVISION
RED LAKE
LAND TITLES / REGISTRY DIVISION
KENORA / PATRICIA

Ministry of Natural Resources — Land Management Branch
Ontario

Date: FEBRUARY 14, 1987
Number: G-1789

511 941

200



LEGEND

CONTOUR INTERVALS (nanoTesla)

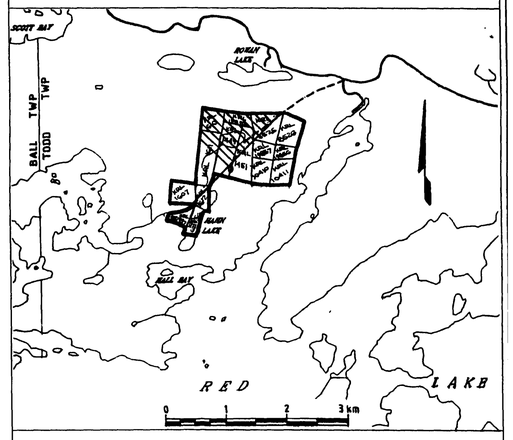
- 50 Between 55800 and 58000 nT
- 100
- 500

Readings: Total field – 56000 nT

Instrument: Magnetometer EDA, OMNI-PLUS

SCALE 1 : 5 000

100 0 100 200 300 400 (meters)



HEMLO GOLD MINES INC.

NEWMAN–TODD PROJECT

2.16053

MAGNETIC SURVEY

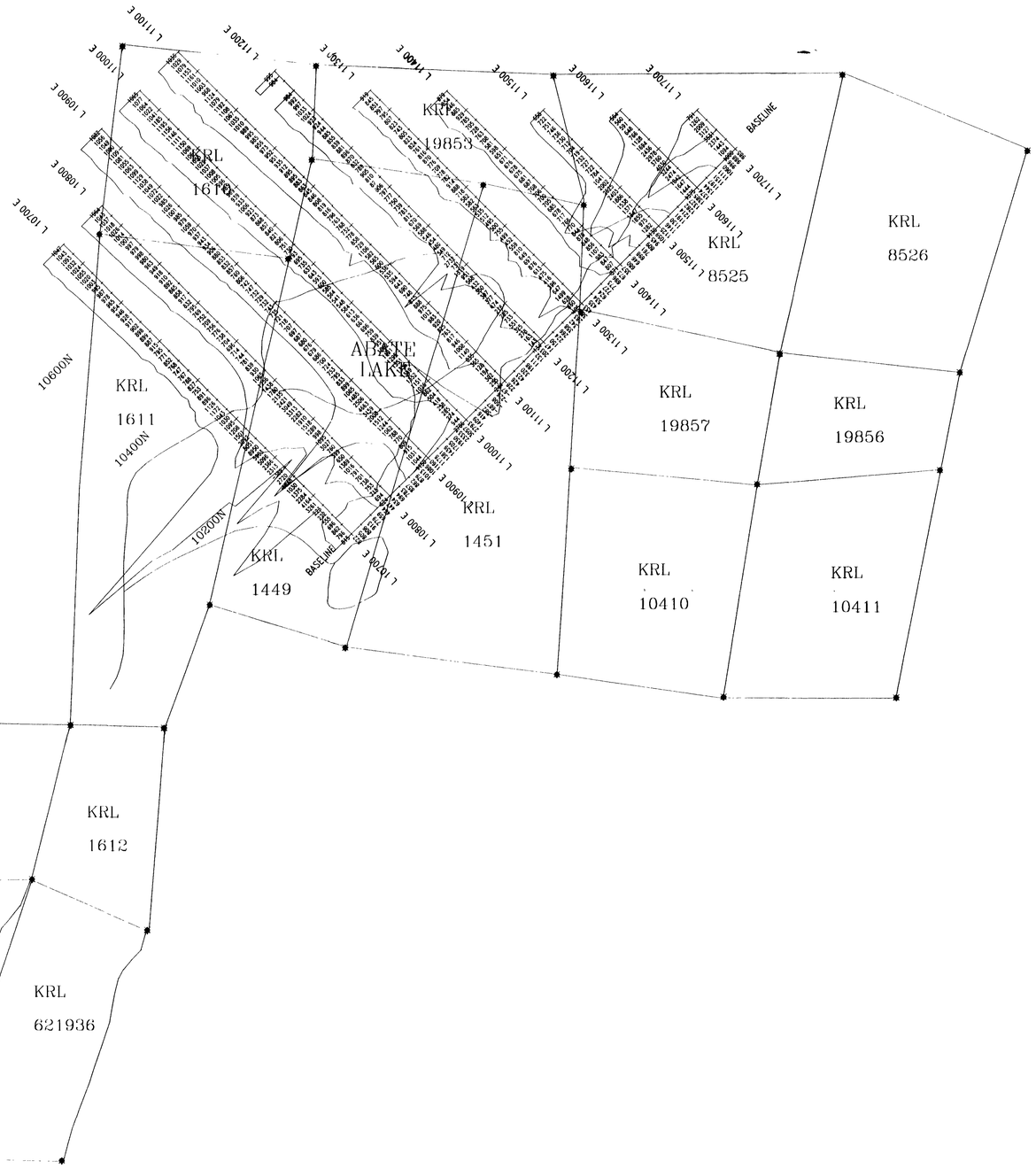
TOTAL FIELD CONTOURS

VAL D'OR GEOPHYSICS LTD

Interpreted by : P. Boileau, P.Eng. Date 04/95

Scale 1 : 5 000 Drawing no. 95–1188–1.1

52M01SE0003 2 16053 TODD



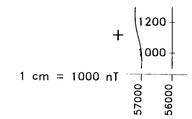
LEGEND

INTERPRETATION

- Lithological unit of hight magnetic susceptibility.
- Lithological unit of low magnetic susceptibility.
- Major contact.
- Depth and dip estimates for magnetic units.
- Interpreted shear zone.
- Interpreted fault.

MAGNETIC PROFILES

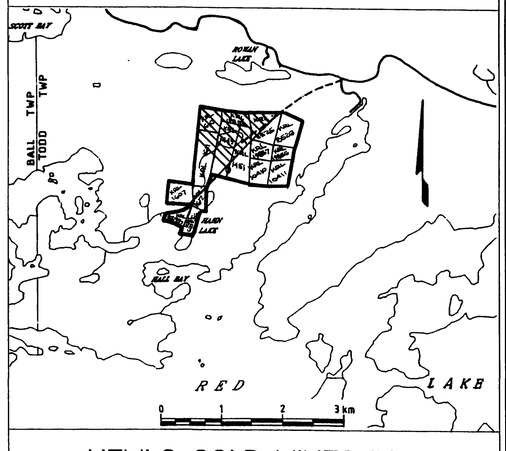
Readings: Total field – 56000 nT



Instrument: Magnetometer EDA, OMNI-PLUS

SCALE 1 : 5 000

100 0 100 200 300 400 (meters)



HEMLO GOLD MINES INC.

NEWMAN–TODD PROJECT

2.16033

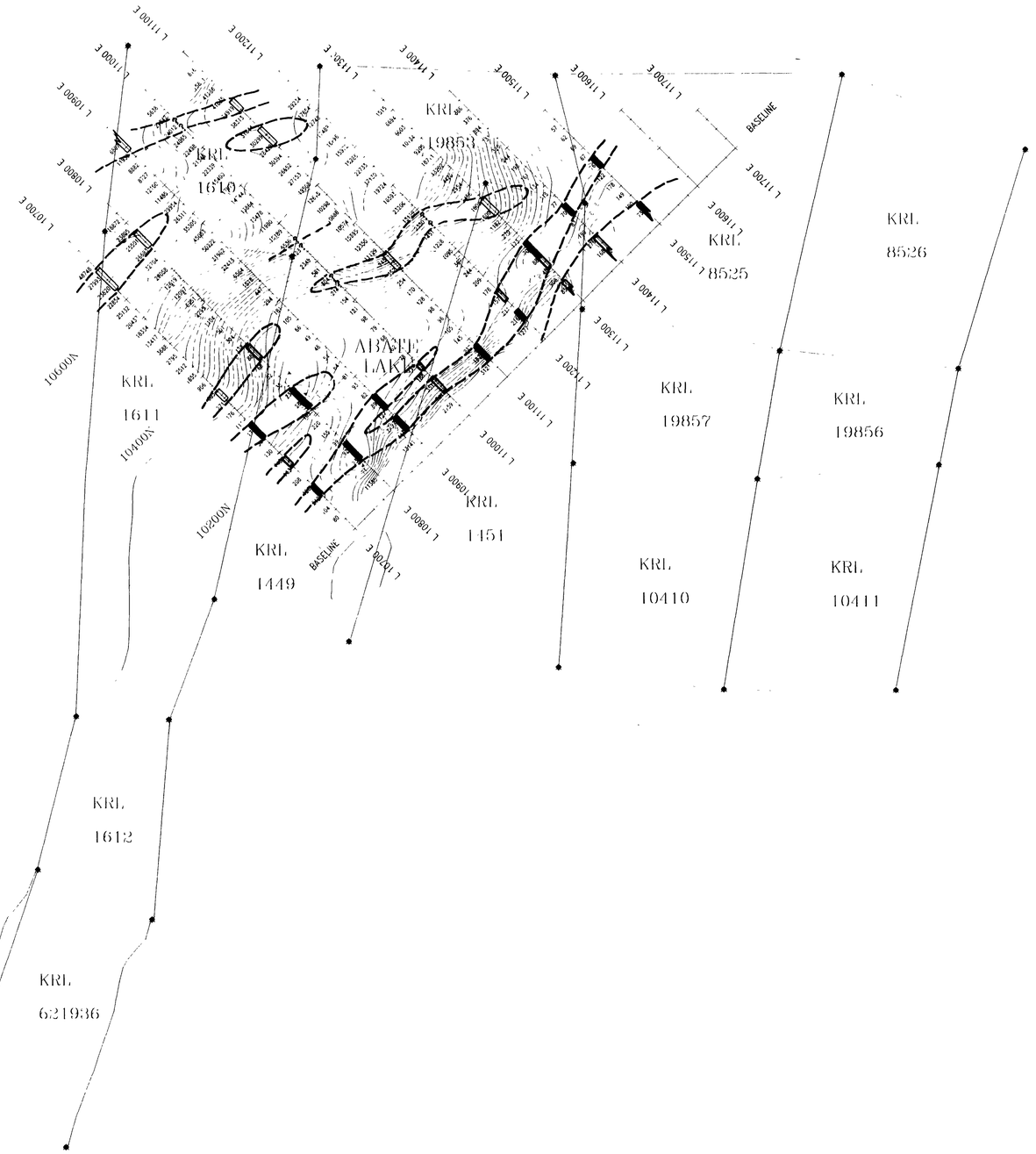
MAGNETIC SURVEY

TOTAL FIELD PROFILES

VAL D'OR GEOPHYSICS LTD

Interpreted by : P. Boileau, P.Eng. Date 04/95

Scale 1 : 5 000 Drawing no. 95–1188–1.2



LEGEND

INTERPRETATION

Unit of higher polarization associated with a relative decrease in the apparent resistivity. Well-connected, conductive metallic minerals. Stringer sulfides in a strongly sheared structure

Unit of higher polarization with little or no associated decrease of the apparent resistivity. Stringer or disseminated, poorly conductive metallic minerals. Massive magnetite. Micaceous minerals.

Weak or poorly defined polarization anomaly with no apparent signature of resistivity. Thin, discontinuous veins of metallic minerals. Magnetite, clay or micaceous minerals.

H H — High resistivity feature. Bedrock ridge, thinner overburden, high resistivity unit.

Low resistivity feature. Bedrock valley, thicker overburden, low resistivity unit. Possible tectonic or structural causes.

GENERAL

Interpreted shear zone.

Interpreted fault.

CONTOUR INTERVALS (Ohm * metre)

Logarithmic contours:

0.1	10,11.2,12.5,14.1,16,18,20,22 ..
0.2	10, 12.5, 16, 20, 25, 32, 40 ..
1 0	10, 32, 100, 320, 1000 ..

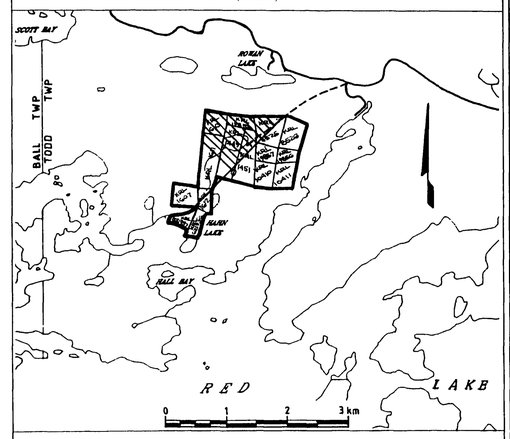
Electrode array: Dipole-dipole
a = 25 m. n = 1,2,3,4,5,6

Instruments: Phoenix IPT1, BRGM IP-6

Time cycle. 2 sec.

SCALE 1 : 5 000

100 0 100 200 300 400
(meters)



HEMLO GOLD MINES INC.
NEWMAN-TODD PROJECT

2.16053

INDUCED POLARIZATION SURVEY
RESISTIVITY CONTOURS (FILTER)

VAL D'OR GEOPHYSICS LTD

Interpreted by : P. Boileau, P.Eng. Date 04/95

Scale 1 : 5 000 Drawing no. 95-1188-4.2