



31M13NW9701 2.15133 CATHARINE

010

**REPORT ON
GEOPHYSICAL SURVEYS
KOSY-SALO CLAIMS
CATHARINE TOWNSHIP ONTARIO
NTS 31M/13**

2.15133

**CLAIM NUMBERS
1048479,1048480
1048482,1048483
1096877,1096882**

**J. WHELAN
AUGUST 1992**

2.11564
Auth.



31M13NW9701 2.15133 CATHARINE

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Enclosures

Magnetic survey plan	1" = 200'
VLF-EM survey plan	1" = 200'
HLEM survey plans (2)	1" = 200'

INTRODUCTION

During July and August of 1992 the Author conducted MAGNETIC, VLF-EM and HORIZONTAL LOOP EM surveys over 6 contiguous mining claims in Catherine Township, Larder Lake Mining Division . The claims covered by the survey are numbered as follows.

- | | |
|---------|---------|
| 1048479 | 1048483 |
| 1048480 | 1046877 |
| 1048482 | 1096882 |

Robert Kosy and Arvo Salo are the recorded holders.

LOCATION AND ACCESS

The 6 claims covered by the survey are located in the south half of Lot 2 Concession III and the east half of the north half Lot 2 Concession II. Access can be gained via highway 624 and old logging roads. The town of Larder Lake is located roughly 17 km north. (see Fig. 1)

GENERAL GEOLOGY

ODM MAP 2045 shows the area as being underlain by basic to intermediate volcanics (predominantly lavas) and intermediate to acid volcanics (predominantly pyroclastic). On the property the contact between these two rock types is drift covered. Overburden on the property consists of low, rolling sand and gravel ridges in the west, with clay and organic material in the east. Rock exposure on the property is limited to the center of claim 1048480 where shallow overburden permitted extensive stripping, and the middle of

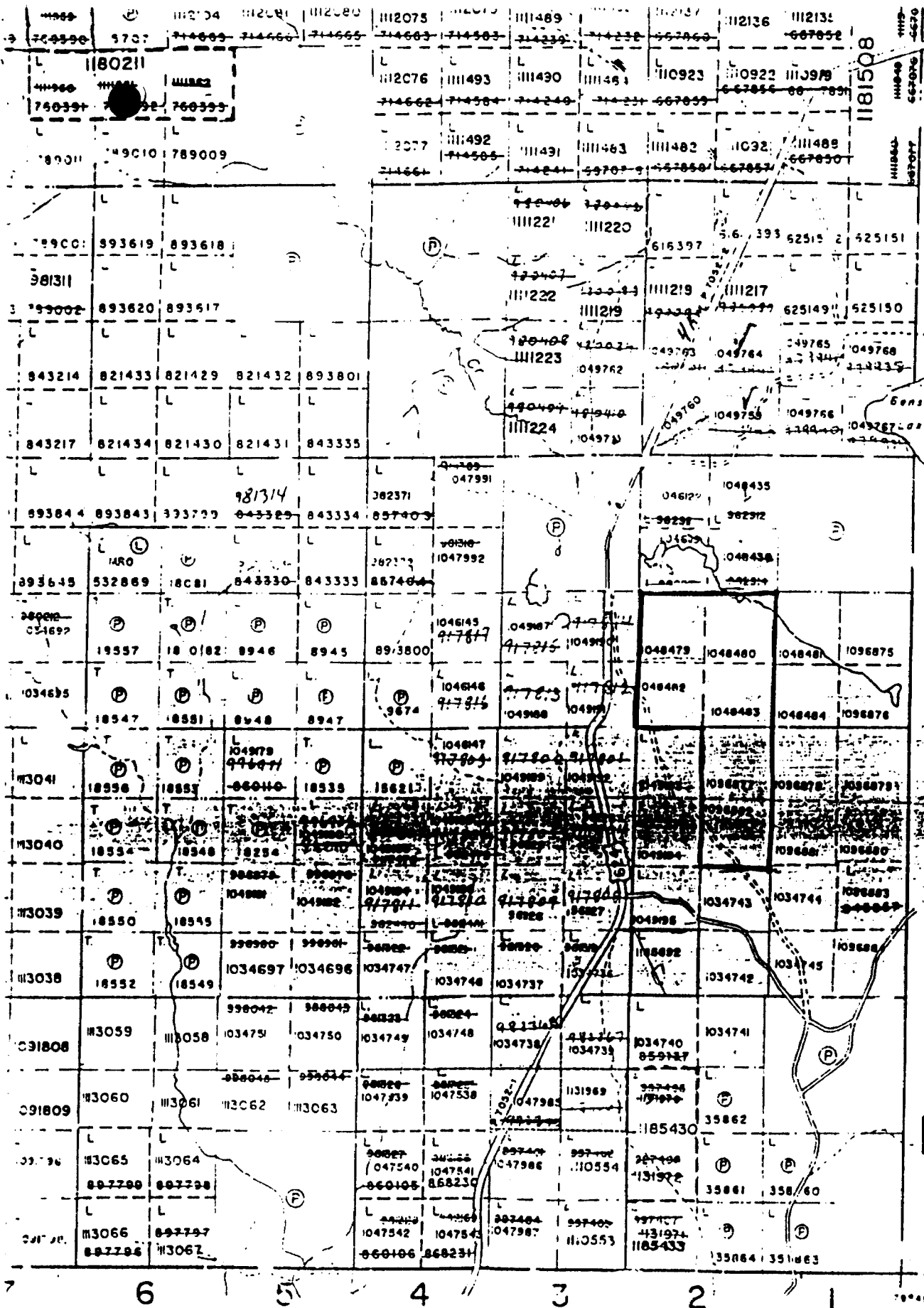


FIG 1 1:316:80

SKEAD

III
IV
V

118150

47°55'00" 79°45'36" Approx

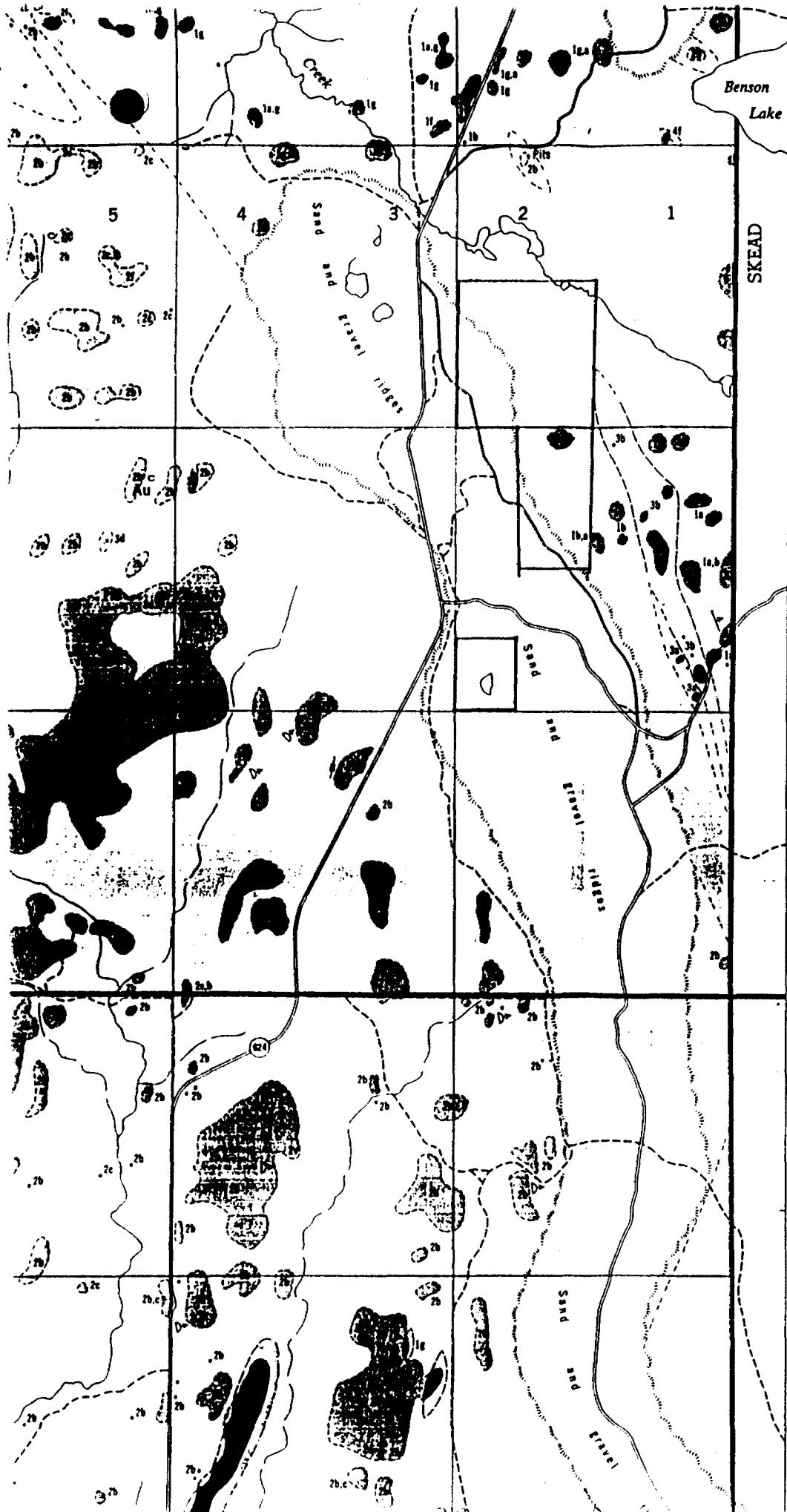













FIG 2
 From
 ODM Geology Map
 1:31680





LEGEND






CENOZOIC*
PLEISTOCENE
Clay, sand and gravel.
GREAT UNCONFORMITY







PRECAMBRIAN**
PROTEROZOIC
KEWEENAWAN

 **6 Diabase.**
 INTRUSIVE CONTACT
HURONIAN
COBALT GROUP
GOWGANDA FORMATION
 **5a Conglomerate.**
 **5b Greywacke.**
 **5c Arkose, quartzite.**
 **5d Argillite.**
 UNCONFORMITY

ARCHEAN
ALGOMAN ?
 **4a Syenite.**
 **4b Granodiorite.**
 **4c Granodiorite gneiss (Round Lake pluton).**
 **4d Albite porphyry, quartz-albite porphyry.**
 **4e Lamprophyre.**
 **4f Felsite.**
 INTRUSIVE CONTACT

POST-KEEWATIN
 **3a Diorite.**
 **3b Gabbro.**
 **3c Serpentinized peridotite.**
 **3d Diorite porphyry, dacite porphy.**
 INTRUSIVE CONTACT

KEEWATIN
BASIC TO INTERMEDIATE VOLCANIC ROCKS
 (predominantly lavas)
 **2b Dacite and andesite, including pillow lavas.**
 **2c Diabase, diorite and gabbro.**
 **2f Sheared volcanic rocks.**
 **2g Fragmental lavas.**
 **2v Variolitic lavas.**

INTERMEDIATE TO ACID VOLCANIC ROCKS
 (predominantly pyroclastic)
 **1a Porphyritic dacite and andesite, mostly crystal tuff.**
 **1b Dacite and andesite, mostly aphanitic tuff.**
 **1d Banded tuff and tuffaceous sedimentary rocks with minor iron formations.**
 **1f Sheared volcanic rocks.**
 **1g Agglomerate.**
 **1r Rhyolite.**

GEOLOGY cont.

the two southern claims where a north trending outcrop ridge is present. (Figure 2)

PREVIOUS WORK

Catharine township has been the sight of fairly extensive prospecting dating back to the early part of the century. Several gold and copper showings are located in the township, with some of the showings being the sight of considerable work. The Cathroy Larder property located near the north boundary of the township saw limited production in the 1930's and 40's.

Work conducted on the property to date includes the following Diamond drilling (5 holes, total of approximately 2500') on claims 1048479, 1048480, 1048481. Power stripping, washing and sampling on claim 1048480. Anomalous gold was reported in grab samples from the stripped area and in drill core.

An airborne magnetic and vlf-em survey was flown over 29 claims including the 6 covered by this report. The flight line direction for the airborne survey was north-south. Several east trending vlf-em anomalies are shown on the airborne survey plan, two of which are in the area covered by this report, with one being located on claims 1048479 and 1048480 near the diamond drilling and stripping and the other is located near the north boundary of claim 1096877.

SURVEY PROCEDURE

Line cutting: The baseline was turned at an azimuth of 153 degrees from the south west corner post of claim 1048482.

Cross line were cut 90 degrees to the base line at 300 foot intervals. All chainages are in feet.

VLF-EM: Inphase and quadphase values were recorded at 50 foot intervals on cross lines, using the transmitter at Annapolis Maryland, the operator faced east. Values were recorded at 100 foot intervals on the baseline using the transmitter at Cutler Maine with the operator facing north. Survey results are presented as profiles at a horizontal scale of 1"=200' and a vertical scale of 1" 50%.

Horizontal Loop: Inphase and Quadrature values were recorded at 100 foot intervals using an Apex MAXMIN II EM system in the horizontal loop mode. Two frequencies were read, 444 kHz and 1777 kHz Proper coil geometry was maintained using a hand held inclinometer and a programable calculator. The coil separation was 100 meters (328 feet). Results are presented as profiles at a horizontal scale of 1"=200' vertical scale 1" = 25%

Magnetic: Total field magnetic values were recorded at 50 foot intervals on cross lines and 100 foot intervals on the baseline using a Geometrics 826A proton precession magnetometer. Diurnal control was maintained by periodic checks at a base point established at baseline 0+00, 14+00 SE (58200 gammas) and secondary controls stations established at baseline - crossline

SURVEY PROCEDURE cont.

intersections. Geomagnetic activity during the survey period was minimal. Survey results are presented as contours of the total magnetic field at a scale of 1" = 200'.

SURVEY RESULTS

VLF-EM : 3 anomalous zones were detected by the VLF-EM survey. Anomaly A is a weak 2 line anomaly in the vicinity of a fault mapped in on the stripped area.

Anomaly B is in a low flat area no HLEM response was observed over this anomaly and it is likely a surficial response.

Anomaly C is located 100 to 200 feet east of the east edge of a outcrop hill and roughly parallel to the hill it is likely a surficial response. Also two weak crossovers were detected on the survey conducted over the baseline, these crossovers roughly correspond with anomalies detected by the airborne vlf-em survey

MAGNETIC : A magnetic high west of the baseline, trending at roughly north 25 degrees west was detected by the magnetic survey This eastern edge of this magnetic high likely marks the basic/ intermediate volcanic contact , with the basic volcanics being in the west.

HORIZONTAL LOOP : No anomalies were detected by the HLEM survey. At the coil separation used it is unlikely that any conductive zones would be masked by overburden. Complete coverage of the eastern VLF-EM anomalies was not possible on some lines due to line lengths

RESULTS cont.

and the coil seperation.

CONCLUSION AND RECOMMENDATIONS

Based on the HLEM survey results, it would appear that the eastern VLF-EM anomalies are surficial responses. The magnetic survey was successful in determining the location of the contact indicated on ODM map 2043. Further work conducted on the property should include, prospecting of the outcrop located in the southern two claims and two to three lines of a more sophisticated EM survey over the eastern VLF-EM anomalies to determine if they are in fact surficial responses.

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right.

REFERENCES

ODM Geological report No. 18 Catharine and Marter Townships
1963 and map 2043 1:31680 by J.A. Grant

OGS Gold Deposits of Ontario part 2 by J.B. Gordon, H.L.
1972 Lovell, Jan de Grijs and R.F Davie 1979

GSC An Ontario Kimberlite Occurrence Discovered By The
1968 Application of The Glacifocus Method To A Study Of
The Munro Esker. by H.A. Lee

Unpublished reports and maps Kirkland Lake Resident
Geologists Office Assessment Files

APPENDIX

EXPENDITURE BREAKDOWN

LINECUTTING	6.84 MILES @ \$450/MILE	3078
MAGNETIC	6.84 MILES @ 125/MILE	855
VLF-EM	6.84 MILES @ 125/MILE	855
HLEM	5.85 MILES @ 320/MILE	1872
	TOTAL	\$6660.00



31M13NW9701 2.15133 CATHARINE

900

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

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

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

November 10, 1993

Our File: 2.15133
Transaction #: W9380.00196

Mining Recorder
Ministry of Northern
Development and Mines
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2

Dear Sir/Madam:

**subject: APPROVAL OF ASSESSMENT WORK CREDITS ON MINING CLAIMS
L1048479 ET AL IN CATHARINE TOWNSHIP**

The assessment work credits for Geophysics, Section 14 of the Mining Act Regulations, have been approved as outlined on the original submission.

The approval date is November 8, 1993.

If you have any questions regarding this correspondence, please contact Lucille Jerome at (705) 670-5855.

Yours sincerely,

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

LJ/lb

cc: Resident Geologist
Kirkland Lake, Ontario

✓ Assessment Files Library
Toronto, Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number
W 93 80.00196

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.

2.15133

- 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) ARVO SALO - ROBERT KOSY	Client No. 191038 - SAL 153735 - KOSY
Address #3 - 25 TWEEDSMuir ROAD KIRKLAND LAKE, ONT. P2N3M8	Telephone No. 709 PLACE HURTUBISE SUDBURY, ONT. P3A2G5 SALO - 705-567-18 KOSY - NONE
Mining Division LADDER LAKE	Township/Area CATHERINETOWN
M or G Plan No. 6-3615	
Dates Work Performed From: JULY 1/92 To: AUG 30/92	

Work Performed (Check One Work Group Only)

Work Group	Type
<input checked="" type="checkbox"/> Geotechnical Survey	MAGNETIC SURVEY VLF-EM, HLEM
<input type="checkbox"/> Physical Work, including Drilling	
<input type="checkbox"/> Rehabilitation	
<input type="checkbox"/> Other Authorized Work	
<input type="checkbox"/> Assays	
<input type="checkbox"/> Assignment from Reserve	

RECEIVED
 AUG 17 1993
 MINING LANDS BRANCH

Total Assessment Work Claimed on the Attached Statement of Costs \$ **6660⁰⁰**

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
JAMES WHELAN (WHELAN)	114 MAIN STREET KIRKLAND LAKE ONT P2N 3E8

(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: **Aug 12, 93** 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: **ROBERT KOSY**

Telephone No.: **524-8054** Date: **Aug 12, 93** Certified By (Signature): *[Signature]*

For Office Use Only

Total Value Cr. Recorded \$6660 RESERVE	Date Recorded August 13/93	Mining Recorder <i>[Signature]</i>	Received Stamp 53 AUG 13 AM 11 50
	Deemed Approval Date NOVEMBER 11/93	Date Approved 11/93	RECEIVED
	Date Notice for Amendments Sent		

Statement of Costs
for Assessment Credit

Transaction No./N° de transaction

W9380.00196

État des coûts aux fins
du crédit d'évaluation

Mining Act/Loi sur les mines

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, 4^e 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		6660.00
	Type		
Supplies Used Fournitures utilisées	Type		
	Type		
Equipment Rental Location de matériel	Type		
	Type		
Total Direct Costs Total des coûts directs			6660.00

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)			

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

- Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.
- 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
	x 0.50 =

Remises pour dépôt

- Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.
- 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
	x 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 Recorded Holder I am authorized
(Recorded Holder, Agent, Position in Company)

to make this certification

Attestation de l'état des coûts

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.

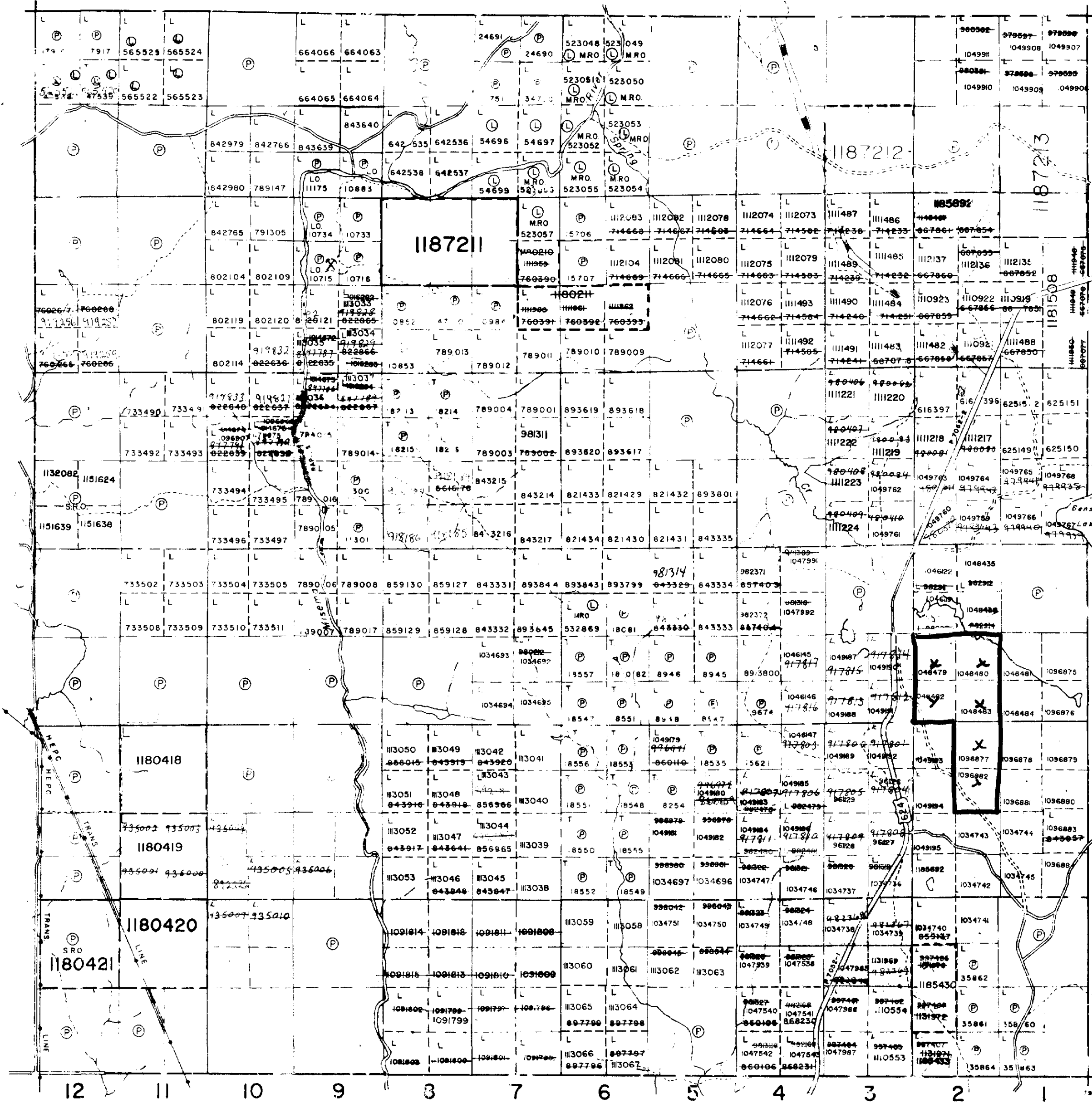
Signature [Signature] Date Aug 13/93

MJELROY TP

PACAUD TP

MARTER TP

COPY OF THIS MYLAR
ARCHIVED NOV 12/91



4.0 surface rights...
la. e. n. v. s.

AREAS WITHDRAWN FROM DISPOSITION

- M.R.O. - MINING RIGHTS ONLY
 - S.R.O. - SURFACE RIGHTS ONLY
 - M.+S. - MINING AND SURFACE RIGHTS
- | Description | Order No. | Date | Disposition | Title |
|-------------|-----------|------|-------------|-------|
| | | | | |

NOTICE OF FORESTRY ACTIVITY

THIS TOWNSHIP / AREA FALLS WITHIN THE _____
TIMISKAMING MANAGEMENT UNIT
AND MAY BE SUBJECT TO FORESTRY OPERATIONS.
THE MNR UNIT FORESTER FOR THIS AREA CAN BE
CONTACTED AT: P.O. BOX 129
SWASTIKA, ONT.
POK ITO
705-642-3222

LEGEND

- PATENTED LAND
- PATENTED FOR SURFACE RIGHTS ONLY
- LEASE
- GRANT
- CHOWI LAND SALES
- LOCATED LAND
- CANCELLED
- MINING RIGHTS ONLY
- SURFACE RIGHTS ONLY
- HIGHWAY ROUTING
- ROADS
- TRAILS
- RAILWAYS
- POWER LINES
- MARS OR MUSKIEG
- MINES

TOWNSHIP OF

CATHARINE

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1 INCH = 40 CHAINS (1.2 MILE)

SR. NO. 1000
DATE JULY 1991
PLAN NO. G-3615

Ministry of
Natural Resources
Ontario

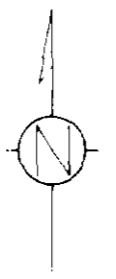
Ministry of
Northern Development
and Mines

DATE OF ISSUE
MAY 29 1991
LARDER LAKE
MINING DIVISION

THE INFORMATION THAT
APPEARS ON THIS MAP
HAS BEEN COMPILED
FROM VARIOUS SOURCES,
AND ACCURACY IS NOT
GUARANTEED. THOSE
WISHING TO STAKE MIN-
ING CLAIMS SHOULD CON-
SULT WITH THE MINING
RECORDER, MINISTRY OF
NORTHERN DEVELOP-
MENT AND MINES, FOR AD-
DITIONAL INFORMATION
ON THE STATUS OF THE
LANDS SHOWN HEREON.

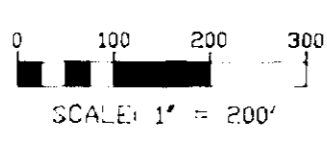


CON III
 CON II
 LOT 2
 LOT 3



INSTRUMENT: GEOMETRICS 826A Proton Precession Magnetometer
 BASE STATION: BL 0+00,14+00 SE
 DATUM: 58000 gammas
 CONTOUR INTERVAL: 50 gamma

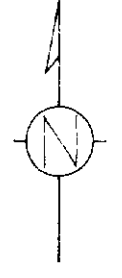
KOSY-SALO PROPERTY
 CATHERINE TOWNSHIP ONTARIO
 NTS 31 M/13
 MAGNETIC SURVEY



2.15193

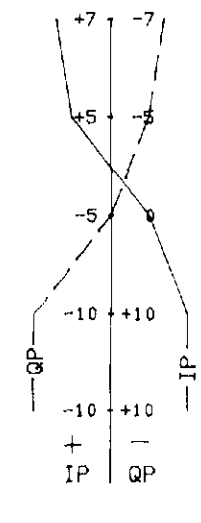


CDN III
CDN II
LOT 2
LOT 3



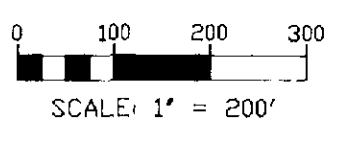
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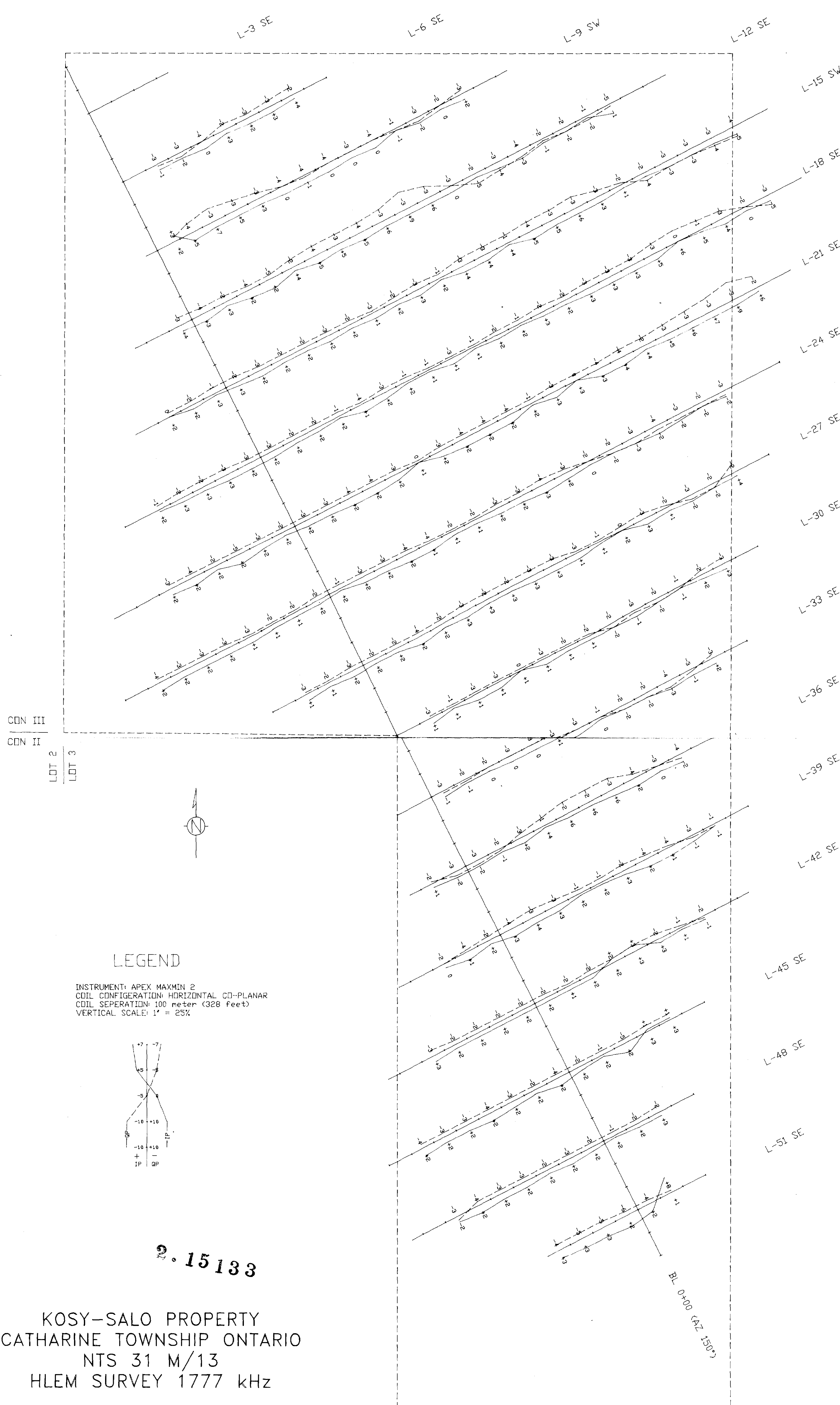
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COIL CONFIGURATION: HORIZONTAL CO-PLANAR
COIL SEPERATION: 100 meter (328 feet)
VERTICAL SCALE: 1" = 25'



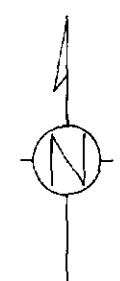
KOSY-SALO PROPERTY
CATHARINE TOWNSHIP ONTARIO
NTS 31 M/13
HLEM SURVEY 444 kHz

2.15133



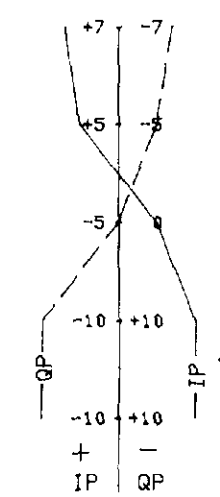


CON III
 CON II
 LOT 2
 LOT 3



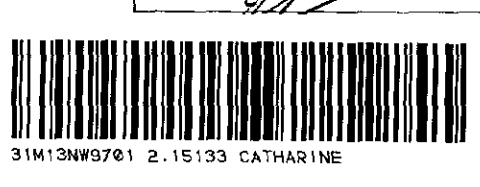
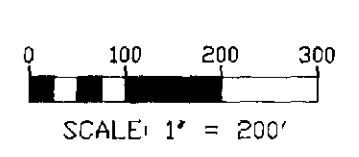
LEGEND

INSTRUMENT: APEX MAXMIN 2
 COIL CONFIGURATION: HORIZONTAL CO-PLANAR
 COIL SEPARATION: 100 meter (328 feet)
 VERTICAL SCALE: 1" = 25'

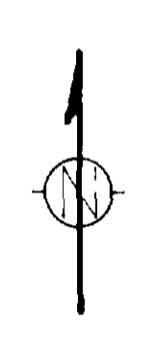


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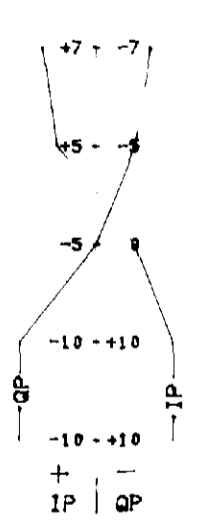
KOSY-SALO PROPERTY
 CATHARINE TOWNSHIP ONTARIO
 NTS 31 M/13
 HLEM SURVEY 1777 kHz



CDN III
 CDN II
 LOT 2
 LOT 3

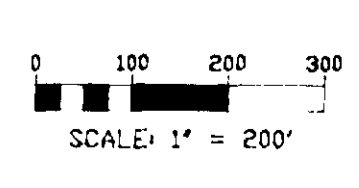


INSTRUMENT: GEDNICS EM-16
 TX: CUTLER MAINE (BASELINE)
 TX: ANNAPOLIS MARYLAND (CROSSLINES)
 OPERATOR FACING: NORTH (CUTLER), EAST (ANNAPOLIS)
 VERTICAL SCALE: 1" = 50'



KOSY-SALO PROPERTY
 CATHARINE TOWNSHIP ONTARIO
 NTS 31 M/13
 VLF-EM SURVEY

2.15133



Handwritten signature/initials

