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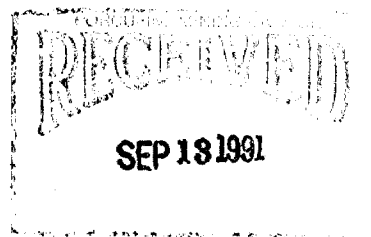
010

Report on
ELECTROMAGNETIC (VLF) SURVEY
McCART TOWNSHIP PROPERTY
McCART TOWNSHIP
PORCUPINE MINING DIVISION, ONTARIO

September 1991
Timmins, Ontario

Qual. 2113416
Kimberly M. Cunnison

2 . 1 4 3 8 1





42A15SW0100 2.14361 MCCART

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Figure 1 - Regional Location

Figure 2 - Location - North and South Claim Groups

Figure 3 - Geological Sketch Map

INTRODUCTION

The property is located approximately 35 miles northeast of the City of Timmins in the Porcupine Mining Division (Figure 1). It consists of two groups of four contiguous claims located in Lot 4, Concession 6 and Lot 6, Concession 5, in McCart Township (Figures 2 and 3). The claim numbers and locations are as follows:

South Claim Group

P-1131544	SW $\frac{1}{4}$	N $\frac{1}{2}$	Lot 6, Concession 5
P-1131545	SE $\frac{1}{4}$	N $\frac{1}{2}$	Lot 6, Concession 5
P-1131546	NE $\frac{1}{4}$	N $\frac{1}{2}$	Lot 6, Concession 5
P-1131547	NW $\frac{1}{4}$	N $\frac{1}{2}$	Lot 6, Concession 5

North Claim Group

P-1131548	SW $\frac{1}{4}$	N $\frac{1}{2}$	Lot 4, Concession 6
P-1131549	NW $\frac{1}{4}$	S $\frac{1}{2}$	Lot 4, Concession 6
P-1131550	NE $\frac{1}{4}$	S $\frac{1}{2}$	Lot 4, Concession 6
P-1131551	SE $\frac{1}{4}$	N $\frac{1}{2}$	Lot 4, Concession 6

Mr. Bruce Raine is the recorded holder of all of the claims.

Both claim groups are readily accessible. An all weather road extends west from Highway 11 along the north boundary of Concession 4, from which a bush road in Lot 5 extends north to both claim groups.

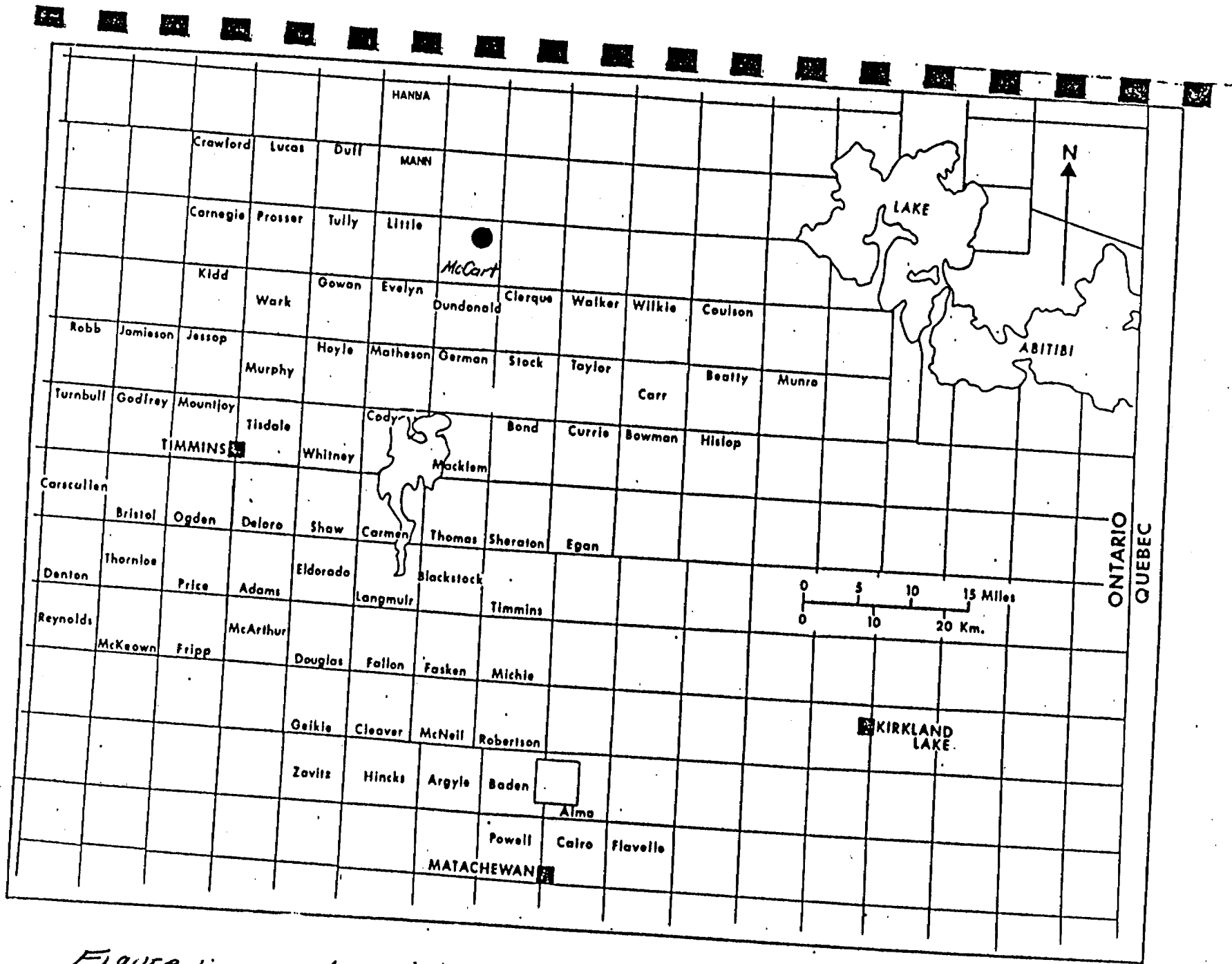
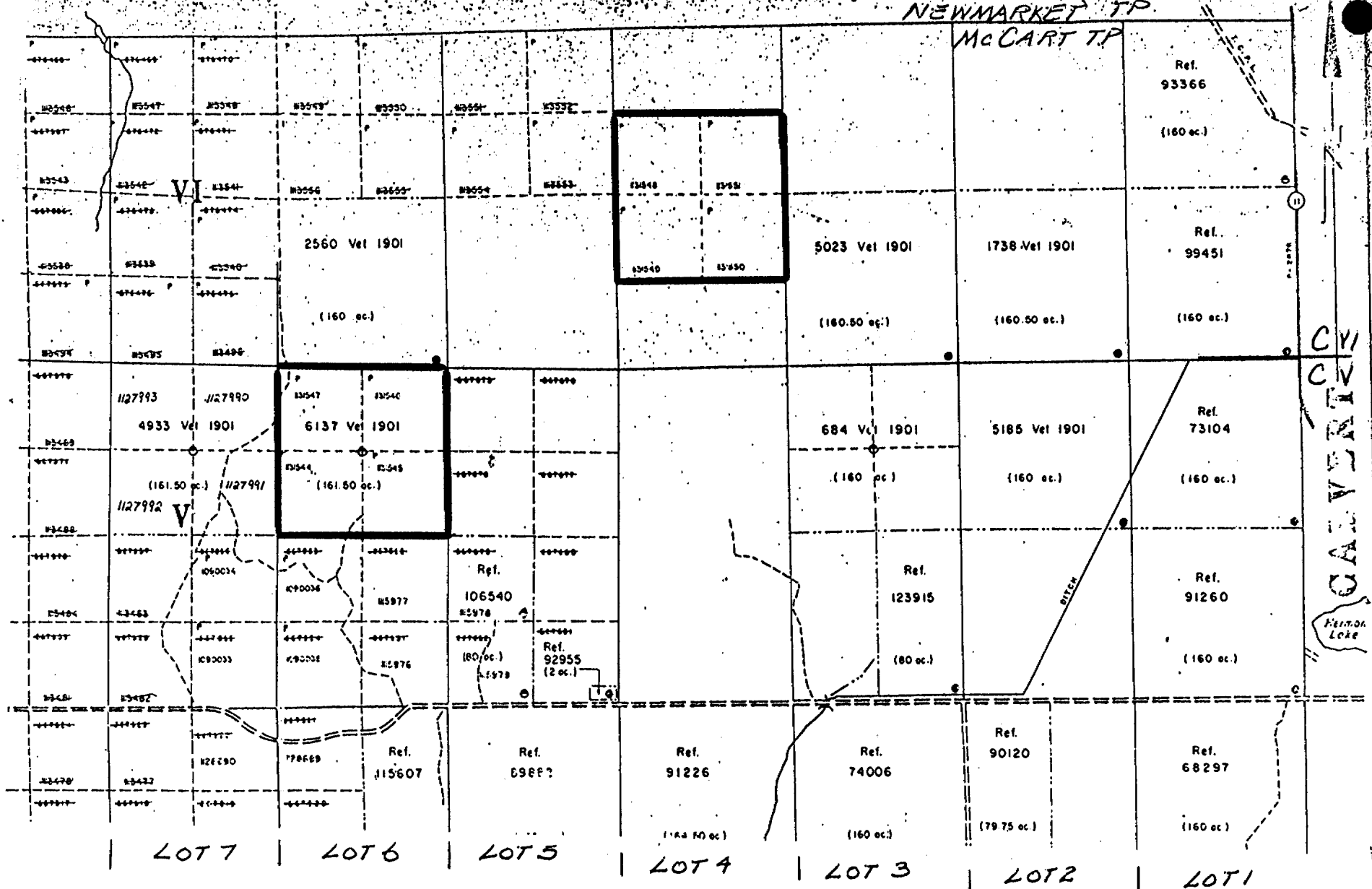


Figure 1: Location Map - McCort Township Property

OF

NEWMARKET

NEWMARKET TP
McCART TP



TOPOGR
LAKES, I
INVENTO

SURVE

TOWNSH
GRIFFIN

WEST LI
LITTLE
O.L.S., IS

EAST LI
CALVER
O.L.S., IS

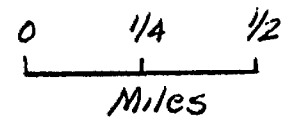
THIRD I
BY WILL
NOTE B

BASE L
T.J. PAT

CVI
CIV
CALVER

Pond
Lake

Figure 2: Showing location north and south claim groups, McCort Township



PREVIOUS WORK

The geology of McCart Township has been compiled by Satterly (1953) at a scale of 1 inch to $\frac{1}{4}$ mile.

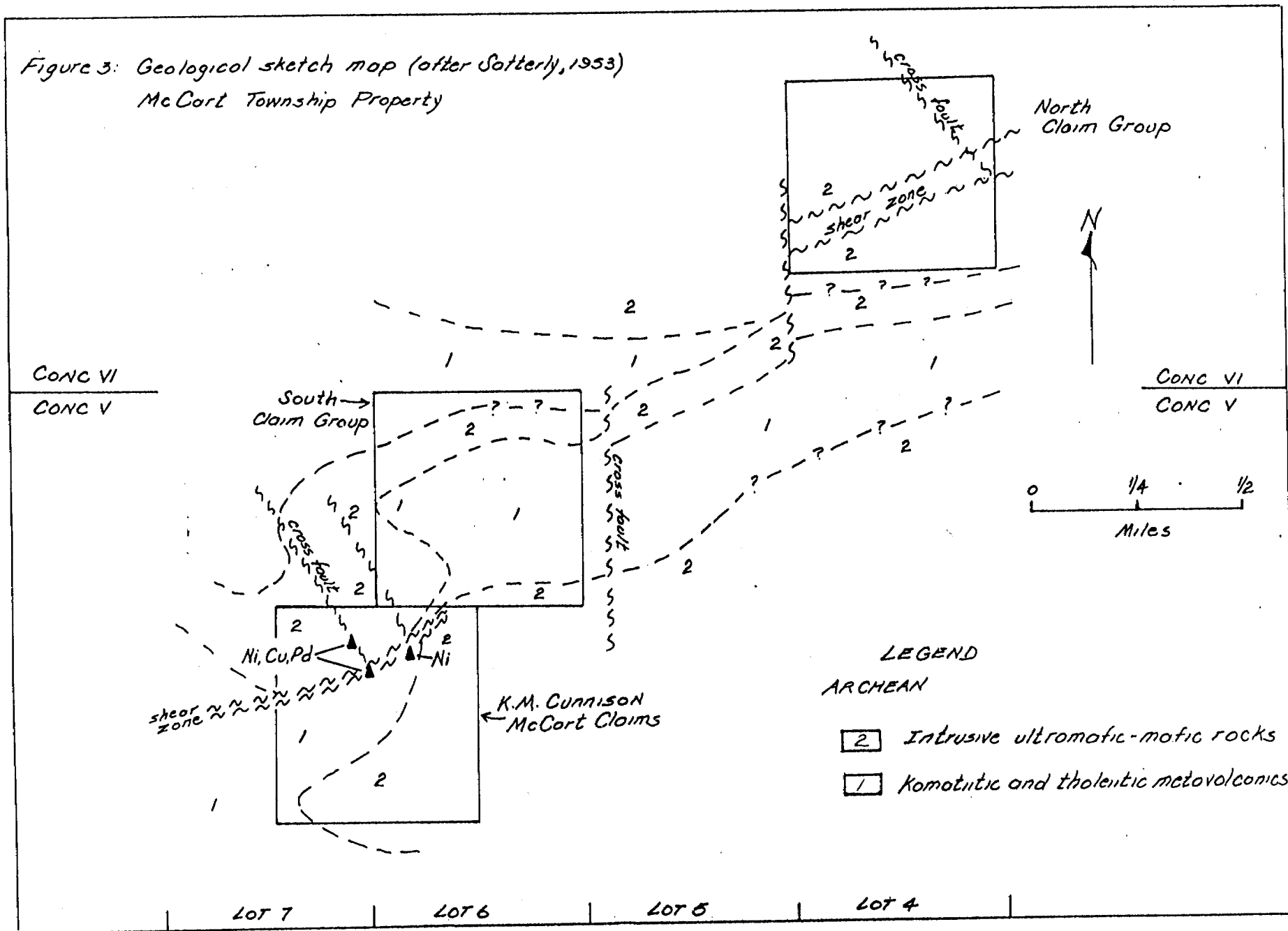
South Claim Group

In 1950, Arrow Timber Co. conducted a magnetic and geological survey over the claim group. The exploration was oriented towards finding commercial asbestos fibre within the ultramafic intrusive rocks. Two diamond drill holes were sunk within the peridotite in the southwest part of the current property.

North Claim Group

In 1950, Dominion Gulf Company conducted magnetic and geological surveys over a large part of the south half of Newmarket Township and a portion of north McCart Township, including the North Claim Group area (File 63.235). From geophysical data, a major shear zone up to 400 feet wide was interpreted to extend northeasterly across the central portion of the property, occurring roughly along the presumed contact between pillowed volcanic flows to the south and intrusive gabbro-peridotite to the north. A cross-fault trending North 40 degrees West was also interpreted from geophysics, occurring in the northeast portion of the claim group (Figure 3.). The recently released airborne survey of the Timmins area (O.G.S., 1988) indicates that there are at least two untested airborne conductors occurring in close proximity to the cross-fault.

Figure 3: Geological sketch map (after Satterly, 1953)
 McCort Township Property



LEGEND

ARCHEAN

2 Intrusive ultramafic-mafic rocks

1 Komatiitic and tholeiitic metavolcanics

In 1980, W.G. Wahl Ltd. conducted a magnetic and VLF-EM survey on a group of 23 claims straddling the Newmarket-McCart Township boundary. Part of the survey covered claims P1131548 and P1131551 (File 2.3570).

PRESENT SURVEY

The present survey was conducted by K.M. Cunnison between September 4 and September 11, 1991. North-south picket lines and 100 metre intervals were utilized for control on the survey; readings were taken at 20 metre intervals.

The VLF - EM coverage was conducted with a Phoenix VLF-2 receiver tuned to NAA transmitting at 24.0 Khz from Cutler, Maine. The VLF-2 receiver measures the in-phase component of the secondary vertical field to an accuracy of about 2% of the primary field (see enclosed specifications). The data collected is presented in profile at a scale of 1:2,500 (Maps 1 and 2). The location of the axis of conductors, as shown, was obtained from Frazer filtering the data.

PROPERTY GEOLOGY

Outcrop on the property is confined to the South Claim Group, where excellent exposures of relatively flat lying flows of basaltic komatiite are intruded by sills of peridotite-dunite. The flows face north, and appear to form the north limb of an east plunging anticline.

The North Claim Group is devoid of outcrop, but regional airborne magnetic data (OGS, 1988) suggests that ultramafic-mafic intrusions dominate this portion of the property.

RESULTS AND RECOMMENDATIONS

There does not appear to be any definite bedrock VLF conductors on the property. The axis of a strong to moderately strong conductor trending east to northeast in the north part of the South Claim Group is largely coincident with a steep slope, demarking the north limit of a large area of extensive outcrop. In part, this also represents a mafic volcanic - peridotite contact and may in part reflect shearing along the interface. As nickel values are known to occur along this contact zone elsewhere in the area (Figure 3), detailed prospecting is recommended along and near the base of the peridotite.

Only one weak anomaly was detected in the North Claim Group even though strong Airborne INPUT conductors are reported in the east half of the property (OGS, 1988). The generally flat VLF response is interpreted to indicate a thick mantle of glacial overburden, probably in excess of 40-50 metres. An HLEM survey is recommended to test the known input conductors.

Timothy M. Cudde

REFERENCES

Ontario Geological Survey (OGS)

1988: Airborne Electromagnetic Survey and Total
Intensity Survey, Timmins Area, McCart Township.
Map 81058. Scale 1:20,000

Satterly, J.

1953: McCart Township. Preliminary Map P.16.
Scale 1 inch to $\frac{1}{4}$ mile.



Report of Work Conducted After Recording Claim

Transaction Number

W9160.00237

Ontario Mining Act

Personal information collected on this form is obtained under the authority of the Mining Act. This collection should be directed to the Provincial Manager, Mining Lands, Mining Division, Sudbury, Ontario, P3E 8A5, telephone (705) 870-7264.



42A155W0100 2.14381 MCCART

900

- Instructions:**
- Please type or print and submit in duplicate.
 - Refer to the Mining Act and Regulations for requirements of mining 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) BRUCE RAINE	Client No. 185565
Address P.O. BOX 390, SCHUMACHER, ONT. P0N 1G0	Telephone No. 705-267-7492
Mining Division PORCUPINE	Township/Area MCCART TOWNSHIP
M or G Plan No.	
Dates Work Performed From: MAY 18, 1991 To: SEPTEMBER 13, 1991	

Work Performed (Check One Work Group Only)

Work Group	Type
Geotechnical Survey	ELECTROMAGNETIC (VLF) SURVEY LINECUTTING
Physical Work, including Drilling	LINECUTTING
Rehabilitation	
Other Authorized Work	
Assays	
Assignment from Reserve	

RECORDED
SEP 13 1991

Total Assessment Work Claimed on the Attached Statement of Costs \$ **2,729** ~~\$3,000~~ **hmc.**

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
K.M. CUNNISON	#2, 17 DEANE ST. LONDON, ONT. N6C 3L1
D.R. PYKE	31 DELAIR CRES, THORNHILL, ONT L3T 2M3
BRUCE RAINE	P.O. BOX 390, SCHUMACHER, ONT. P0N 1G0

(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 Sept. 13/91	Recorded Holder or Agent (Signature) Kimberly M. Cunison
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------	--------------------------------------------------------------------

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 KIMBERLY M. CUNISON		
Telephone No. 519-432-6936	Date Sept. 13/91	Certified By (Signature) Kimberly M. Cunison

For Office Use Only

3000	Date Recorded SEPT 13/91	Mining Recorder [Signature]	<div style="border: 2px solid black; padding: 10px; display: inline-block;"> RECEIVED SEP 13 1991 4:15 pm </div>
	Deemed Approval Date DEC. 24th/91	Date Approved	
	Date Notice for Amendments Sent		



Ontario

Ministry of Northern Development & Mines

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number

W9160. 0228

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. 1438

- 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) Bruce Raine	Client No. 185565
Address P.O. Box 390, Schumacher, Ont. P0N 1G0	Telephone No. 705-267-7492
Mining Division Dorcupine	Township/Area McCart TWP.
M or G Plan No.	
Dates Work Performed From: MAY 18/91	To: SEPTEMBER 13, 1991

Work Performed (Check One Work Group Only)

Work Group	Type
Geotechnical Survey	ELECTROMAGNETIC (VLF) SURVEY + LINECUTTING. ^{WHL}
Physical Work, Including Drilling	LINECUTTING
Rehabilitation	
Other Authorized Work	
Assays	
Assignment from Reserve	

RECORDED
SEP 13 1991

Total Assessment Work Claimed on the Attached Statement of Costs \$ 13,245.00 ~~63,348~~ ^{Amc}

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
K.M. CUNNISON	#2, 17 DEANE ST, LONDON, ONT. N6C 3L1
D.R. PYKE	31 DELAIR CRES, THORNHILL, ONT. L3T 2M3
BRUCE RAINE	P.O. Box 390, SCHUMACHER, ONT. P0N 1G0

(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 Sept 13/91	Recorded Holder or Agent (Signature) <i>Kimberly M. Cunnison</i>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------	---------------------------------------------------------------------

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 KIMBERLY M. CUNNISON	Date September 13/91	Certified By (Signature) <i>Kimberly M. Cunnison</i>
Telephone No. 519-432-6936		

For Office Use Only

Total Value Cr. Recorded 3348	Date Recorded SEPT 13/91	Mining Recorder <i>[Signature]</i>	Recorded Stamp RECEIVED counter SEP 13 1991 4:15 pm <i>alp</i>
	Deemed Approval Date DEC 12/91	Date Approved <i>[Signature]</i>	
	Date Notice for Amendments Sent		



Ministry of
Northern Development
and Mines

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

W110.0238

***McCart Township Property
SOUTH CLAIM GROUP

2.14381

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	\$2200	
	Field Supervision Supervision sur le terrain		\$2200
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert- conseil	Type Geophysical	\$562	
			\$562
Supplies Used Fournitures utilisées	Type Flagging, Paint	\$28	
			\$28
Equipment Rental Location de matériel	Type		
			\$2,790
Total Direct Costs Total des coûts directs			\$2,790

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 Truck	\$1817	
			\$1817
Food and Lodging Nourriture et hébergement	Motel and food costs	\$456.	\$ 456
Mobilization and Demobilization Mobilisation et démobilisation			
Sub Total of Indirect Costs Total partiel des coûts indirects			\$2273
Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)			\$ 455
Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs)			\$3,348
Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)			\$3,348

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
	x 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
	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 Agent 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 Kimberly M. Curran Date Sept. 12/91



Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Mining Lands Branch
Geoscience Approvals Section
159 Cedar Street, 4th Floor
Sudbury, Ontario
P3E 6A5

Toll Free: 1-800-465-3880
Telephone: (705) 670-7264
Fax: (7050 670-7262

December 9, 1991

Our File: 2.14381
Transaction #: W. 9160.00237
W. 9160.00238

Mining Recorder
Ministry of Northern Development
and Mines
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir/Madam:

SUBJECT: APPROVAL ASSESSMENT WORK, GEOPHYSICAL (ELECTROMAGNETIC)
SURVEY ON MINING CLAIMS P1131544 ET AL IN MCCART TOWNSHIP.

The Assessment Work credits for Geophysical Survey, under Section 14 Mining Act Regulations submitted on the above Report of Work have been approved as of the above date.

Please indicate on your records.

Yours sincerely,

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

JLJ/jl
Enclosures:

cc: ✓ Assessment Files Office
Toronto, Ontario

Resident Geologist
Timmins, Ontario

TOWNSHIP OF NEWMARKET

REFERENCES

TOPOGRAPHY
 LAKES, RIVERS, ETC., FROM FOREST RESOURCES INVENTORY SHEETS NO. 468804 AND 467804

SURVEYS
 TOWNSHIP OF McCART SUBDIVIDED BY J.D. GRIFFIN, O.L.S., 1904. FIELD NOTE BOOK 1533.
 WEST LIMIT OF McCART TOWNSHIP (SEE LITTLE TWP) SURVEY BY J.W. FITZGERALD, O.L.S., 1904. FIELD NOTE BOOK 1402.
 EAST LIMIT OF McCART TOWNSHIP (SEE CALVERT TWP) SURVEY BY ALEXANDER BAIRD, O.L.S., 1904. FIELD NOTE BOOK 1009.
 THIRD MERIDIAN (EAST LIMIT OF McCART TWP) BY WILLIAM GALBRAITH, O.L.S., 1904. FIELD NOTE BOOK 2363.
 BASE LINE (SOUTH LIMIT OF McCART TWP) BY T.J. PATTEN, O.L.S., 1903. FIELD NOTE BOOK 2460.

FOR LEGAL AND SURVEY PURPOSES CONSULT THE ORIGINAL SURVEY PLANS AND FIELD NOTES OF RECORD IN THE DEPARTMENT OF LANDS AND FORESTS, TORONTO.

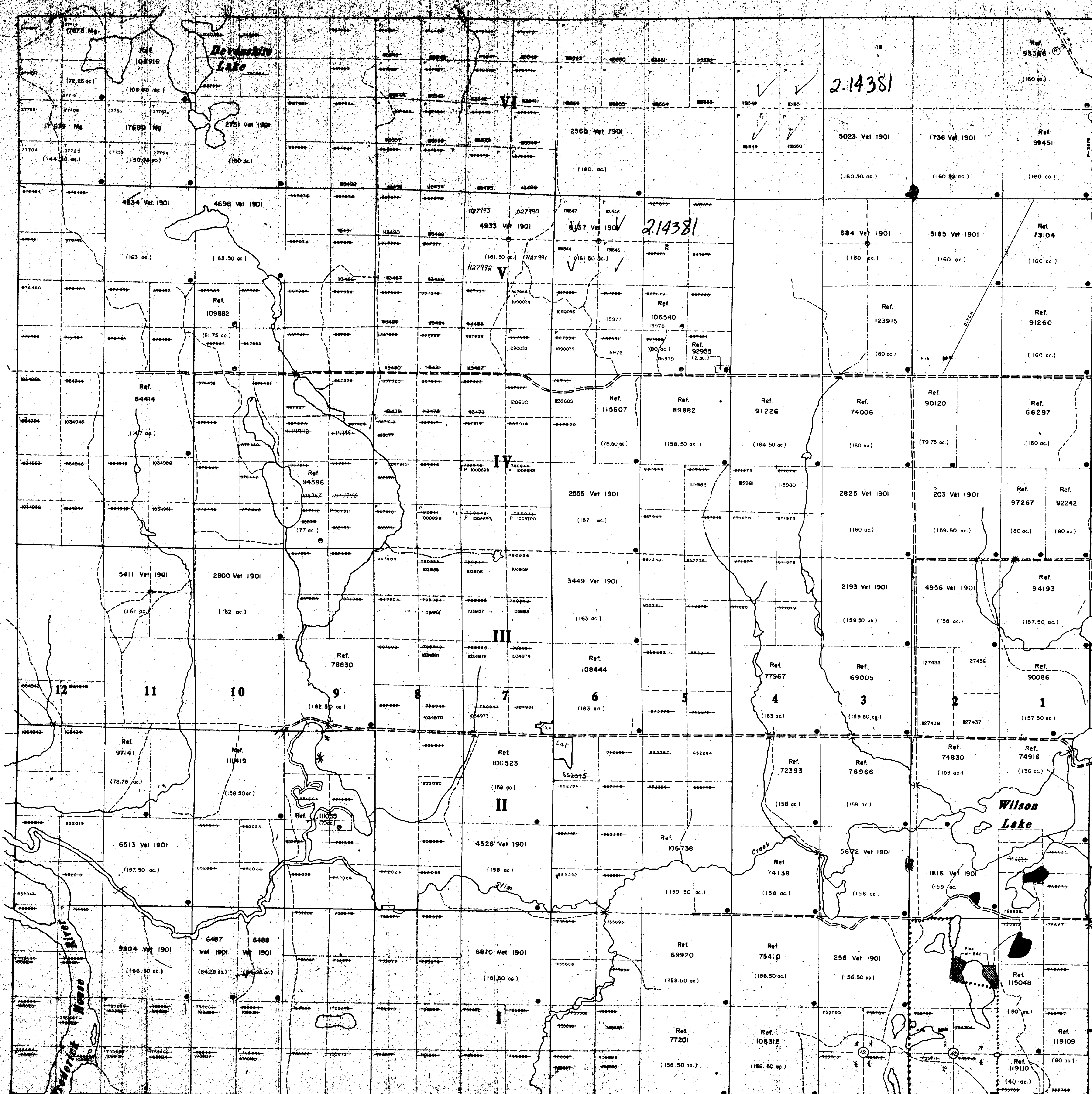
ACRES: SHOWN IN RESPECT OF PATENTED LOTS ARE IN ACCORDANCE WITH AREA GRANTED.

MINING RIGHTS ONLY
SURFACE RIGHTS ONLY
MIXED SURFACE AND SURFACE RIGHTS

Copyrights withdrawn under Sec. 35 of the Copyright Act, R.S.O. 1930, Chapter 104, Section 35, inasmuch as the said Copyrights have been assigned to the Crown of Canada.

LITTLE TOWNSHIP OF DUNDONALD

CALVERT TOWNSHIP



LEGEND

HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIP, 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
AGGREGATE PERMIT	
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	
L. U. P.	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 1, 1913, VESTED IN ORIGINAL PATENTEES BY THE PUBLIC LANDS ACT, R.S.O. 1930, CHAP. 160, SEC. 48, SUBSEC. 1.
 * * * Ski trails within boundary.

SCALE: 1 INCH = 20 CHAINS

FEET 0 1000 2000 4000 6000 8000
 METRES 0 200 400 600 800 1000

TOWNSHIP RECEIVED
McCART DEC 6 1938

M.N.R. ADMINISTRATIVE DISTRICT
COCHRANE
 MINING DIVISION
FORCUPINE
 LAND TITLES / RESERVATION DIVISION
COCHRANE

Ministry of
 Ontario
 Northern Development
 and Mines

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 DEPARTMENT.

TOWNSHIP OF DUNDONALD

TIE LINE 8N —

7N —

6N —

5N —

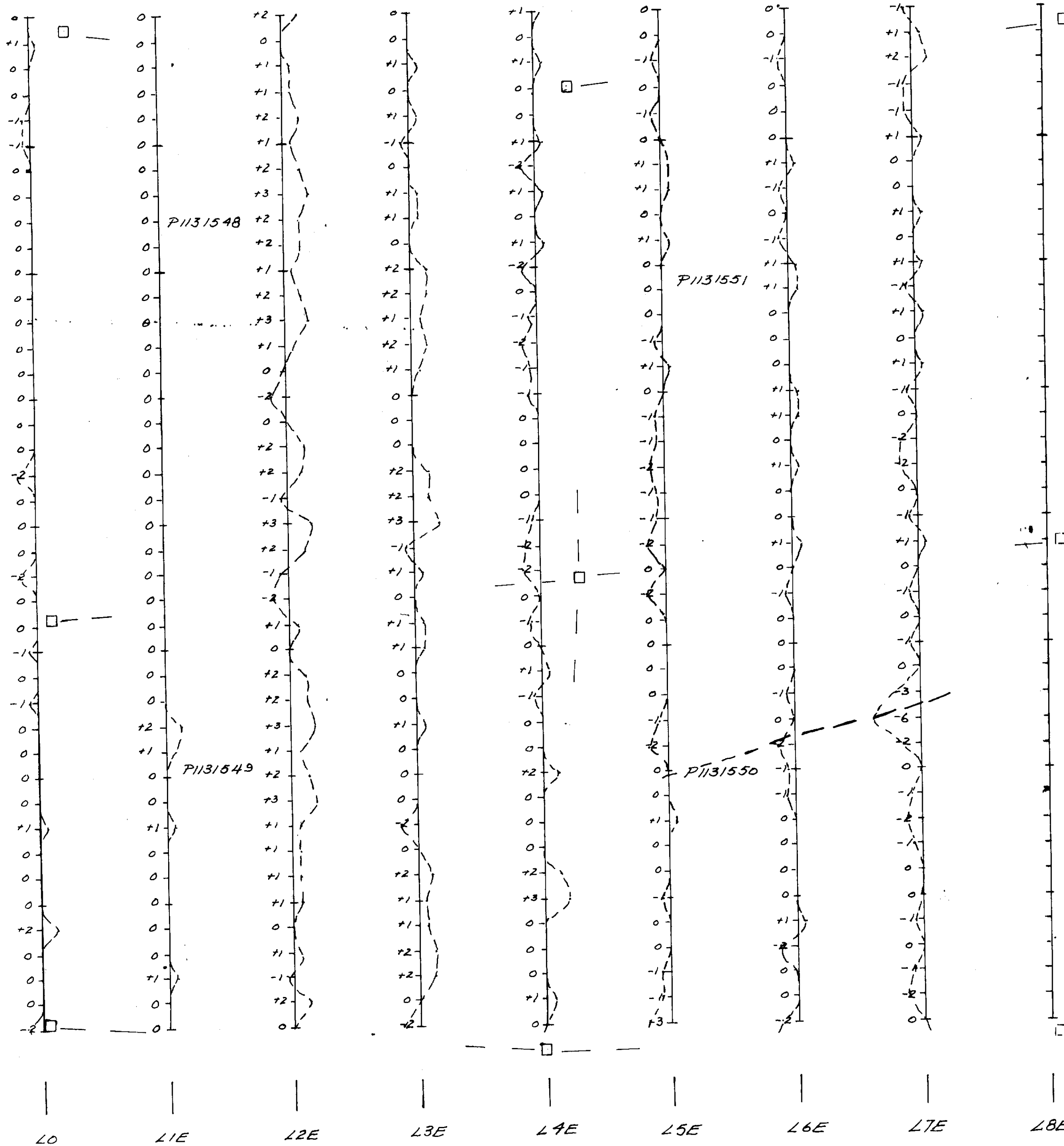
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3N —

2N —

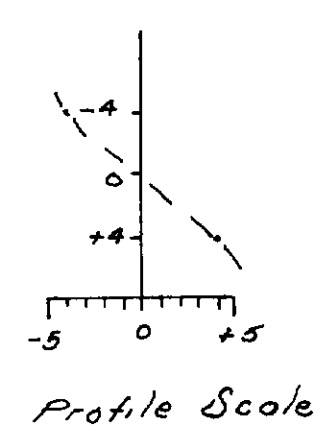
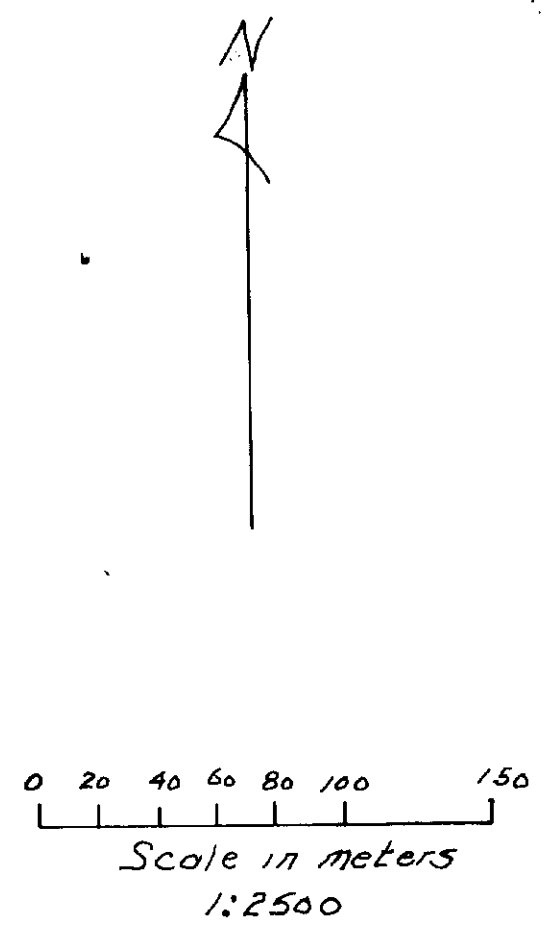
1N —

Base Line 0 —



LOT 5
LOT 4

LOT 4
LOT 3

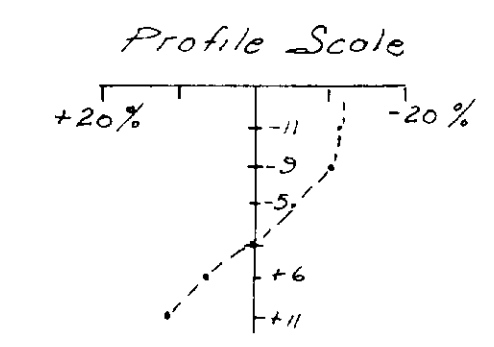
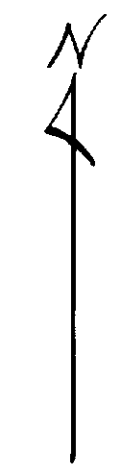
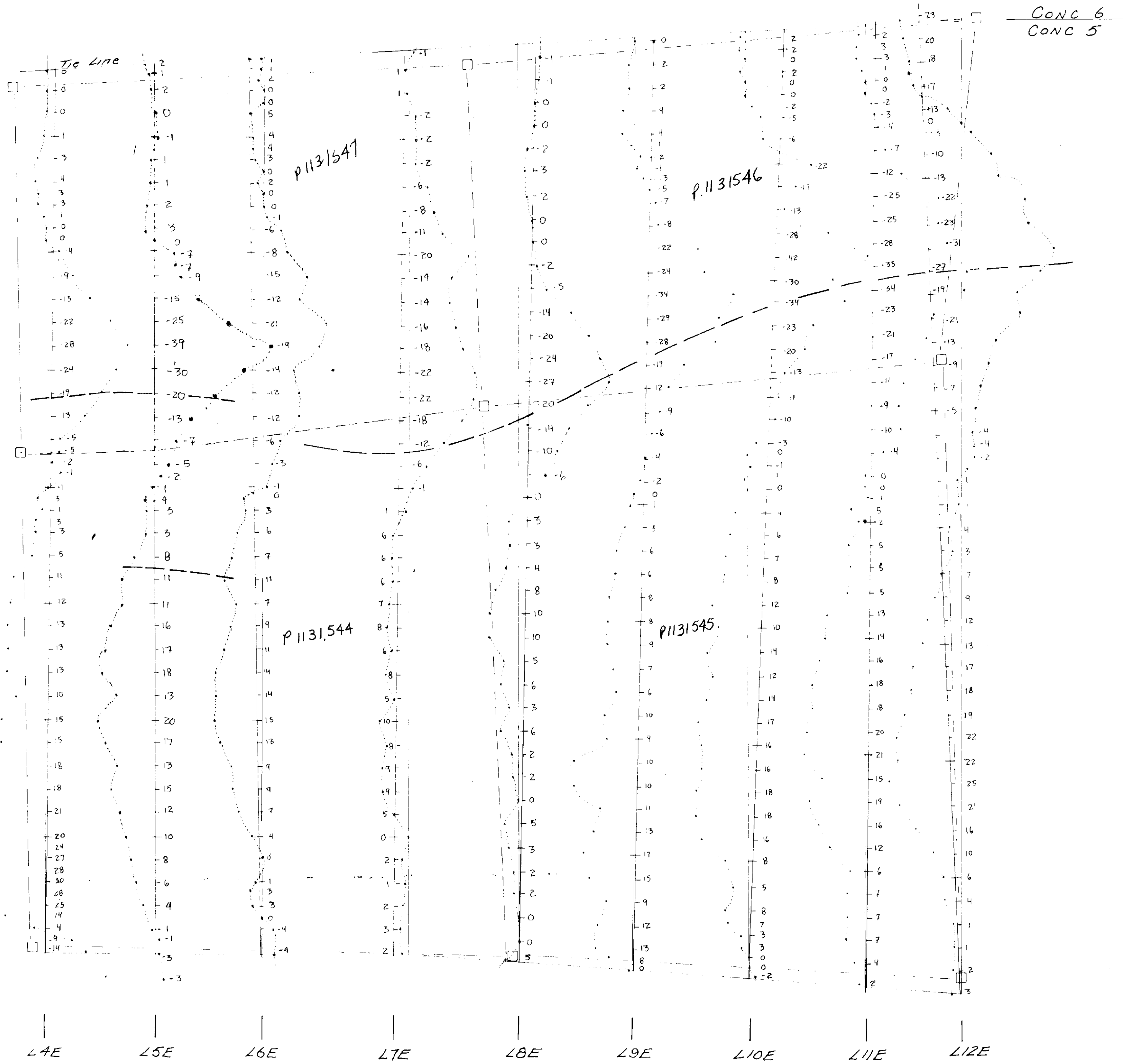


VLF TRANSMITTER CUTLER MAINE - 24.0 KHZ
 INSTRUMENT - PHOENIX, VLF-2
 DATE OF SURVEY - SEPTEMBER/91

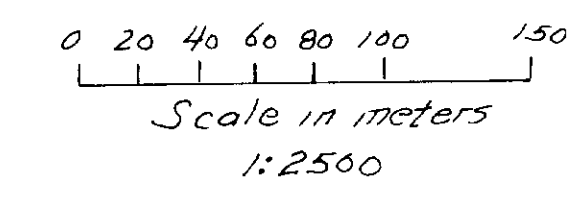
2.14381
 VLF SURVEY
 McCART TOWNSHIP PROPERTY
 LOT 4, CONC 6 *Numbered M. Curran*
 (North Claim Grp)



8N
7N
6N
5N
4N
3N
2N
1N
Base Line 0



VLF TRANSMITTER CUTLER MAINE - 24.0 KHZ
INSTRUMENT - PHOENIX, VLF-2
DATE OF SURVEY - SEPTEMBER/91



2514381

VLF SURVEY
McCART TOWNSHIP PROPERTY
LOT 6, CONC 5
(South Claim Grp)

Handwritten signature: Keith M. Curran

