



42A15NW0007 2.4373 HANNA

73

010

REPORT ON A GEOPHYSICAL SURVEY  
OF THE CARLSON CLAIMS  
IN  
HANNA AND MANN TOWNSHIPS  
PORCUPINE MINING DIVISION  
DISTRICT OF COCHRANE, ONTARIO

by

H. D. CARLSON, Ph. D., P. ENG.

**RECEIVED**  
NOV 18 1981  
**MINING LANDS SECTION**

## INTRODUCTION

This report describes an electromagnetic (Geonics-E.M.16) geophysical survey which was conducted by the writer over his own (the subject) property, during the months of September, October and December, 1980, and September, 1981.

## PROPERTY, LOCATION AND ACCESS

The property consists of eight (8) contiguous, unpatented mining claims located in Hanna and Mann Townships, Porcupine Mining Division, District of Cochrane, Ontario, which are listed as follows:

### HANNA TOWNSHIP

<u>CLAIM NUMBER</u>	<u>LOCATION</u>
P. 584143	S.E. $\frac{1}{4}$ , S $\frac{1}{2}$ , Lot 6, Concession I
P. 584144	S.W. $\frac{1}{4}$ , S $\frac{1}{2}$ , Lot 5, Concession I
P. 584145	S.E. $\frac{1}{4}$ , S $\frac{1}{2}$ , Lot 5, Concession I
P. 584146	S.W. $\frac{1}{4}$ , S $\frac{1}{2}$ , Lot 4, Concession I

### MANN TOWNSHIP

P. 584147	N.E. $\frac{1}{4}$ , N $\frac{1}{2}$ , Lot 6, Concession VI
P. 584148	N.W. $\frac{1}{4}$ , N $\frac{1}{2}$ , Lot 5, Concession VI
P. 584149	N.E. $\frac{1}{4}$ , N $\frac{1}{2}$ , Lot 5, Concession VI
P. 584150	N.W. $\frac{1}{4}$ , N $\frac{1}{2}$ , Lot 4, Concession VI

The property lies some two and one-half (2 $\frac{1}{2}$ ) miles south of Highway No. 11, which connects with the Town of Cochrane some six (6) miles north of the subject claims. The latter are accessible by a cut-road bush road, some three (3) miles in length, which is passable on foot, or by swamp buggy, tractor, etc., in summer, or via snow machine in winter. This bush road connects with Highway No. 11 about 5 miles south of Cochrane, near a government roadside park on Warwick Lake.

## TOPOGRAPHY AND PLEISTOCENE GEOLOGY

The terrain in Hanna and Mann Townships is, in general, flat and featureless, and except along the courses of the incised

TOPOGRAPHY AND PLEISTOCENE GEOLOGY Continued

rivers and contributory creeks and streams, local relief probably nowhere exceeds perhaps fifty (50) feet. This part of northeastern Ontario was once covered by the waters of Lake Barlow-Ojibway, a Pleistocene body of glacial meltwater which extended over a substantial part of northwestern Quebec and northeastern Ontario. The detrital products of the passage of the continental ice sheets here, and its end results, include boulder-clay ground morains, lacustrine varved clay deposits and sand and gravel outwash deposits exhibited as eskers with associated kettle lakes, kames and related features.

The subject property, across its eastern part, is traversed south to north by Pickerel Creek which flows into the Frederickhouse River some three (3) miles to the northwest; this creek connects with a small pot-hole lake in the centre of the claim group; these water features are incised into glaciofluvial varved clay deposits. East of Pickerel Creek the overburden appears to largely consist of glacial outwash sand and gravel deposits which trend generally north-south and are probably part of an esker extending in the same general direction along the central and east-central parts of Hanna Township. A small sand and gravel pit exists immediately adjacent to claim no. P. 584140 on the east. West of Pickerel Creek the overburden appears to be mainly lacustrine varved clay probably overlying thin screens of boulder-clay ground morains. No bedrock outcrops were seen anywhere on the property by the writer, nor are known, to him, to exist in its immediate vicinity.

HISTORY OF EXPLORATION

The only records known to the writer of any exploration work done on this property may be seen in the office of the Resident Geologist, Ontario Ministry of Natural Resources (O.M.N.R.), Timmins, Ontario. In the period 1972-1975 Noranda Exploration Company held this ground and conducted magnetometer and dual-frequency, vertical loop electromagnetic surveys over the same (see File No. T-1605, O.M.N.R., Timmins). This work was successful in delineating an electromagnetic conductor some 2,800 feet long, which flanks on the north a general east-west trending zone of high magnetic readings

HISTORY OF EXPLORATION Continued

with a maximum relief of some 6,500 gammas. A second electromagnetic conductor, flanking to the north another magnetic high zone with a relief of some 2,300 gammas, and having a length of about 1,600 feet, lies from 1,000 to 1,800 feet north of the first.

In 1977, Ernie Bazinet, P. Eng., conducted a magnetometer survey over that part of this property, which lies west of Pickerel Creek, for Shell Canada Resources Limited (see File No. F-1907, O.M.N.R., Timmins). This work confirmed the existence of the magnetic high zone in the area referred to above.

GEOLOGY

No bedrock outcrops are known to exist on the property, nor to this writer's knowledge, within at least one mile of its boundaries. Therefore all understanding of the nature of the rock formations underlying the overburden cover must be inferred from the extension of the known geological features in the surrounding region, supplemented by such geophysical survey (including airborne) data as are available. This information suggests that the property is mainly underlain by mafic to intermediate volcanic formations which strike roughly east-west, have steep dips and have been intruded by plutons of ultra-mafic to mafic igneous rock.

PRESENT SURVEY

The present survey was conducted by the writer during the last week of September and the first week of October, 1980, the middle of December, 1980, and with further check work done on September 6, 1981. The grid of cut picket lines established by Noranda was followed with some difficulty because of recent underbrush growth and some beaver pond flooding. The instrument used was a Geonics-VLF-EM16 unit tuned to the transmitting station NSS (Annapolis, Maryland) at a frequency of 21.40 KHZ. Stations were read at 100 foot intervals along the traverse lines spaced at 400 foot intervals. All readings were taken facing south.

RESULTS

All readings taken west of Pickerel Creek were low; the majority of the null points were reasonably sharp and clear, although a few were so broad as to be virtually meaningless. No conductor axes were located, even though that indicated by the Noranda survey was rechecked several times at the most prominent localities. In the writer's opinion, the effects of conductive layers in the varved clay overburden beds have effectively masked the presence of any sub-surface bedrock conductors.

The readings taken east of Pickerel Creek, particularly on L24E, L28E and L36E, show much greater diversity and may indicate the presence there of conductors found by the Noranda survey or of their possible extension. The terrain here is covered by outwash sand and gravel deposits. The results of the present survey are shown on the map which accompanies this report.



H. D. Carlson,  
Ph. D., P. Eng.



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205-0990

File \_\_\_\_\_

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NOV 1 8 1981

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT  
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT  
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC

MINING LANDS SECTION

Type of Survey(s) Geophysical  
 Township or Area Hanna and Mann twps.  
 Claim Holder(s) H.D. CARLSON  
 Survey Company Self  
 Author of Report H.D. Carlson  
 Address of Author 40 Martin St, Porcupine, Ont.  
 Covering Dates of Survey Sept., 1980 - Nov., 1981.  
(linecutting to office)  
 Total Miles of Line Cut Nil

MINING CLAIMS TRAVERSED  
List numerically

- P. 584140 ✓  
(prefix) (number)
- P. 584143 ✓
- P. 584144 ✓
- P. 584145 ✓
- P. 584146 ✓
- P. 584147 ✓
- P. 584148 ✓
- P. 584149 ✓

If space insufficient, attach list

**SPECIAL PROVISIONS CREDITS REQUESTED**

ENTER 40 days (includes line cutting) for first survey.  ENTER 20 days for each additional survey using same grid.	Geophysical	DAYS per claim
	-Electromagnetic	<u>20</u>
	-Magnetometer	_____
	-Radiometric	_____
	-Other	_____
	Geological	_____
	Geochemical	_____

**AIRBORNE CREDITS** (Special provision credits do not apply to airborne surveys)

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: 13/11/1981 SIGNATURE: H.D. Carlson  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 63,2574

Previous Surveys

File No.	Type	Date	Claim Holder
			<u>H.D.</u>

TOTAL CLAIMS 8

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

Number of Stations 272 Number of Readings 272  
Station interval 100 ft. Line spacing 100 ft.  
Profile scale one inch equals twenty percent  
Contour interval 0.001M

MAGNETIC

Instrument \_\_\_\_\_  
Accuracy - Scale constant \_\_\_\_\_  
Diurnal correction method \_\_\_\_\_  
Base Station check-in interval (hours) \_\_\_\_\_  
Base Station location and value \_\_\_\_\_

ELECTROMAGNETIC

Instrument Geonics EM-16.  
Coil configuration \_\_\_\_\_  
Coil separation \_\_\_\_\_  
Accuracy \_\_\_\_\_  
Method:  Fixed transmitter  Shoot back  In line  Parallel line  
Frequency 21.40 KHZ (NSS - Annapolis, Maryland)  
(specify V.L.F. station)  
Parameters measured \_\_\_\_\_

GRAVITY

Instrument \_\_\_\_\_  
Scale constant \_\_\_\_\_  
Corrections made \_\_\_\_\_  
Base station value and location \_\_\_\_\_  
Elevation accuracy \_\_\_\_\_

INDUCED POLARIZATION RESISTIVITY

Instrument \_\_\_\_\_  
Method  Time Domain  Frequency Domain  
Parameters - On time \_\_\_\_\_ Frequency \_\_\_\_\_  
- Off time \_\_\_\_\_ Range \_\_\_\_\_  
- Delay time \_\_\_\_\_  
- Integration time \_\_\_\_\_  
Power \_\_\_\_\_  
Electrode array \_\_\_\_\_  
Electrode spacing \_\_\_\_\_  
Type of electrode \_\_\_\_\_

2.4373

1982 11 03

2.4373

Mining Recorder  
Ministry of Natural Resources  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7

Dear Sir:

RE: Geophysical (Electromagnetic) Survey  
on Mining Claims P 584143 et al in the  
Townships of Mann and Hanna

---

The Geophysical (Electromagnetic) Survey assessment work credits as shown on the attached statement have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1380

DW:sc

cc: Mr. Hugh Douglas Carlson  
Porcupine, Ontario

cc: Resident Geologist  
Timmins, Ontario

Encle:



Recorded Holder <b>MR. W.D. CARLSON</b>
Township or Area <b>HANNA &amp; MANN TOWNSHIP</b>

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<b>Geophysical</b> Electromagnetic <u>20</u> days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Section 86 (18) _____ days Geological _____ days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/> <input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	<p><b>P 584143 to 50 inclusive</b></p>

**Special credits under section 86 (15a) for the following mining claims**

**No credits have been allowed for the following mining claims**

<input type="checkbox"/> not sufficiently covered by the survey	<input type="checkbox"/> Insufficient technical data filed
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The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 86(18)-60:



P. 584143

Ministry of  
Natural  
Resources

Notification of recording  
of assessment work credits

**RECEIVED**

**OCT 26 1981**

**MINING LANDS SECTION**

Lands Administration Branch  
Mining Lands Section  
Ministry of Natural Resources  
Room 1617, Whitney Block  
Queen's Park, Toronto  
M7A 1W3

Date of recording of work: September 30, 1981


Recorded holder: Hugh Douglas Carlson  
110 Martin Street, P. O. Box 183  
Address: Porcupine, Ontario

Township or Area: Hanna and Mann Townships

Type of survey and number of Assessment days credit per claim	Mining claims
Geophysical	P-584143 to P-584150 incl.
Electromagnetic <u>20</u> days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Section <sup>22 19</sup> <del>22</del> (22) _____ days	
Geological _____ days	
Geochemical _____ days	
Man days <input checked="" type="checkbox"/> Airborne <input type="checkbox"/>	
Special provision <input type="checkbox"/> Ground <input checked="" type="checkbox"/>	

Notice to recorded holder:

- Survey reports and maps in duplicate be submitted to the Lands Administration Branch, Toronto within 60 days from the date of recording of this work.
- Reports and maps are being forwarded to the Lands Administration Branch with this letter.

  
 Mining recorder  
 c.c. Hugh Douglas Carlson



Ontario

Ministry of  
Natural  
Resources

Geotechnical  
Report  
Approval

File **2.4373**

Mining Lands Comments

*You wanted to see the geotechnical*

To: Geophysics

*Mr Barlow.*

Comments

Approved

Wish to see again with corrections

Date

*Oct 6/82*

Signature

*Ryan [Signature]*

To: Geology - Expenditures

Comments

Approved

Wish to see again with corrections

Date

Signature

To: Geochemistry

Comments

Approved

Wish to see again with corrections

Date

Signature

To: Mining Lands Section, Room 6462, Whitney Block.

(Tel: 5-1380)

1982 07 15

2.4373

Mr. H.D. Carlson  
110 Martin Street  
Porcupine, Ontario  
PON 1C0

Dear Sir:

RE: Geophysical (Electromagnetic) Survey submitted  
on Mining Claims P 584143 et al in the Townships  
of Mann and Hanna

Enclosed are the V.L.F. maps for the above mentioned survey. Please sign these and return them to this office. Also please provide a key map showing the location of the property with respect to township boundaries.

For further information please contact Mr. F.W. Matthews at 416-965-1380.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1380

A. Barr/sc

Encls:

c.c. Mining Recorder  
Timmins, Ontario

*Okay  
received  
Sept 13/82  
J*

Mining Lands Comments

*- maps not signed.*

To: Geophysics

*Mr Barlow.*

Comments

*- all maps not signed*

*- no key maps*

Approved  Wish to see again with corrections

Date  
*JUNE 15/82*

Signature  
*R Barlow*

To: Geology - Expenditures

Comments

Approved  Wish to see again with corrections

Date

Signature

To: Geochemistry

Comments

Approved  Wish to see again with corrections

Date

Signature

To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1981 12 11

2.4373

Mining Recorder's Office  
Ministry of Natural Resources  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7

Dear Sir;

We have received reports and maps for a Geophysical (Electromagnetic) survey submitted under Special Provisions (credit for Performance and Coverage) on mining claims P 584143 et al in the Townships of Mann and Hanna.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone 416/965-1380

J. Skura

cc: Hugh Douglas Carlson  
Porcupine, Ontario

064-M

PT ANAH

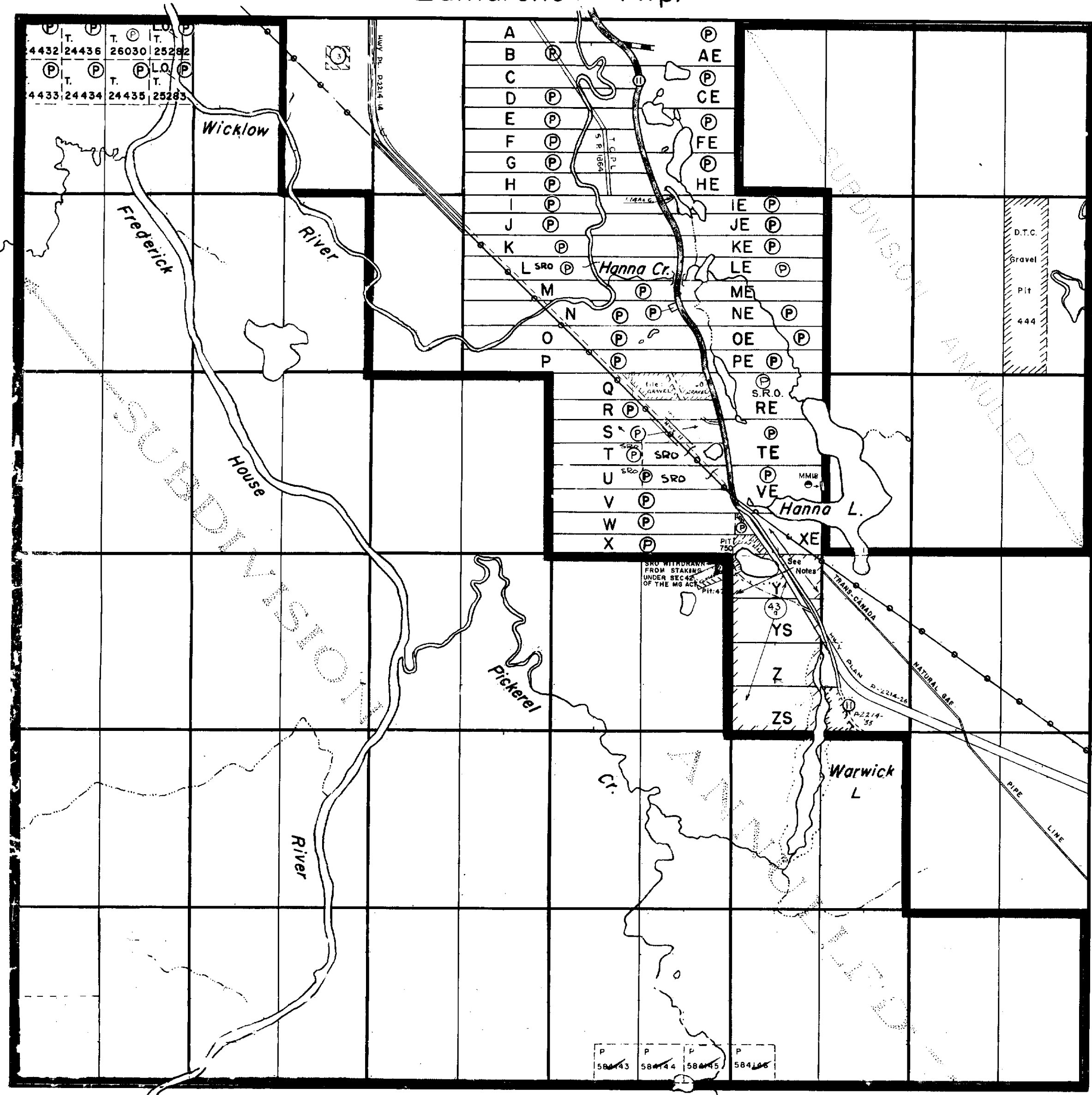
064-M

064-M

HAWA JB

064-M

# Lamarche Twp.



T. P.	T. P.	T. P.	T. P.
4432	24436	26030	25282
T. P.	T. P.	T. P.	T. P.
4433	24434	24435	25283

A	AE
B	CE
C	FE
D	HE
E	IE
F	JE
G	KE
H	LE
I	ME
J	NE
K	OE
L SRO	PE
M	RE
N	TE
O	VE
P	XE
Q	YS
R	Z
S	ZS
T SRO	
U SRO	
V	
W	
X	

VI  
V  
IV  
III  
II  
I

ST. John Twp.

12 11 10 9 8 7 6 5 4 3 2 1  
Mann Twp.

THE TOWNSHIP OF

# HANNA

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

### LEGEND

PATENTED LAND	Ⓟ
CROWN LAND SALE	C.S.
LEASES	Ⓞ
LOCATED LAND	Loc
LICENSE OF OCCUPATION	L.O.
ROADS	—
IMPROVED ROADS	—
RAILWAYS	—
POWER LINES	—
MARSH OR MUSKEG	—
KING'S HIGHWAY	—

### NOTES

400' Surface rights reservation around all lakes & rivers.

REG. PLAN NO.-M. 57 COVERS LOTS "A" TO "S" IN CON. 3 TO CON. 6.

Surface Rights Only reserved in Dept of Lands & Forests shown thus: File 88767

See L.R.F. File: 96605-122598 Re Gravel On Loc. XE & Loc. Y.

Staking under Section 4(1) of the R.S.O. 1970.

W. 54/73	(43) 88773	27/11/73	Disposition
W. 52/74			S.R.O.
			S.R. & M.R.

DATE OF ISSUE  
OCT 22 1982  
Ministry of Natural Resources  
TORONTO

## PLAN NO. - M 490

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEY AND MAPPING BRANCH



42A15N0007 2.4373 HANNA

200

2.4373

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

SAND and GRAVEL

Gravel File 144153

HANNA TP. M.490

DUFF TP. M.466

VI

V

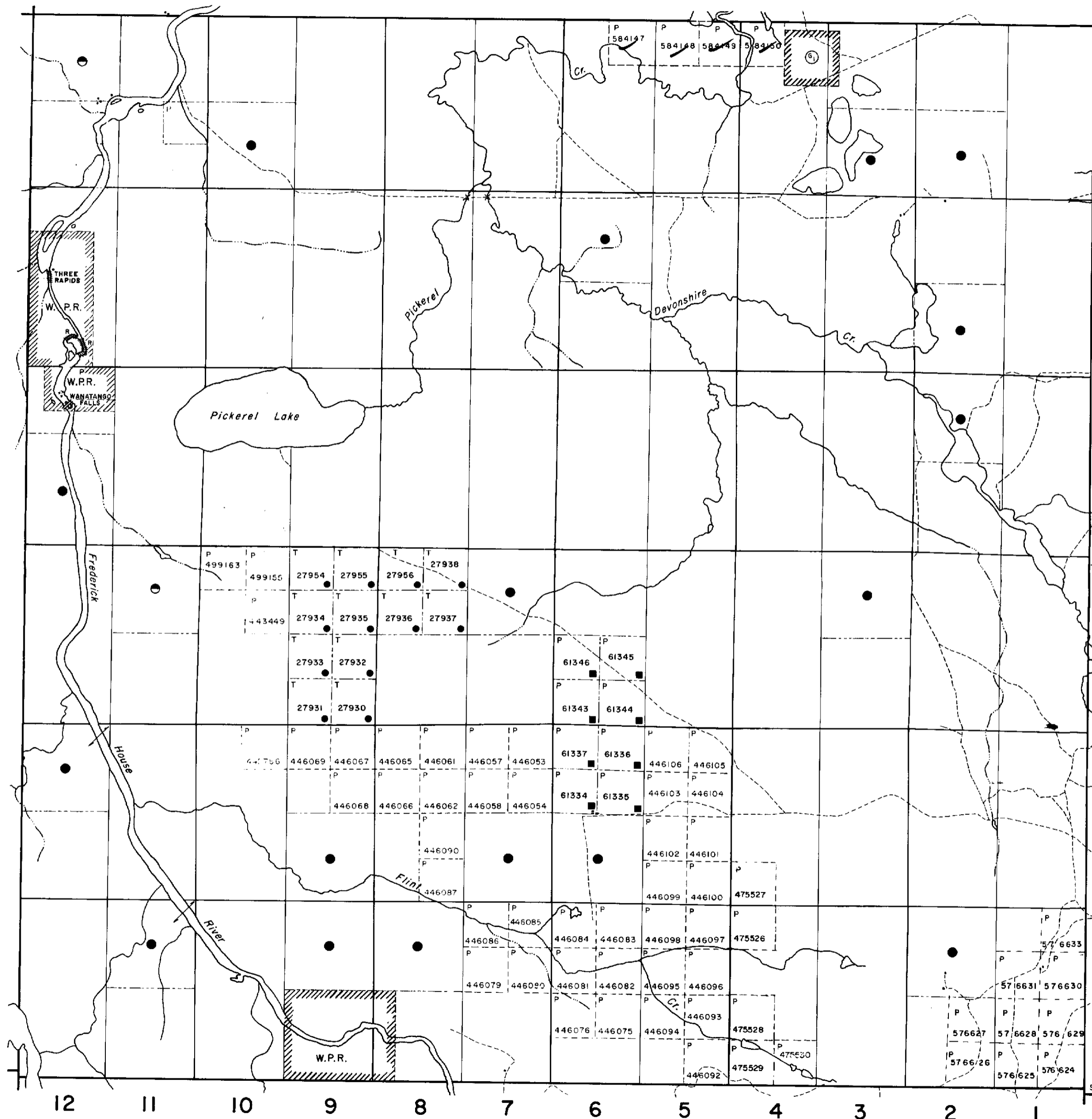
IV

III

II

I

NEWMARKET TP. M.557



LITTLE TP. M.535

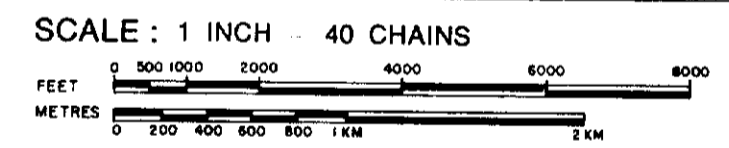
S.E. CORNER CO-ORDINATES (APPROX.)  
LAT. 48° 47' 50"  
DEP. 80° 56' 35"

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
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

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           |        |
| CROWN LAND SALE                 |        |
| ORDER-IN-COUNCIL                |        |
| RESERVATION                     |        |
| CANCELLED                       |        |
| SAND & GRAVEL                   |        |



ACRES	HECTARES
40	16

TOWNSHIP 2.4373

**MANN**

DISTRICT COCHRANE  
MINING DIVISION PORCUPINE

Ministry of Natural Resources

Ontario Surveys and Mapping Branch

Date OCT. 1975

Plan No.

Whitney Block  
Queen's Park, Toronto

**M.541**

DATE OF ISSUE  
OCT 22 1982  
Ministry of Natural Resources  
TORONTO



42A15N0007 2.4373 HANNA

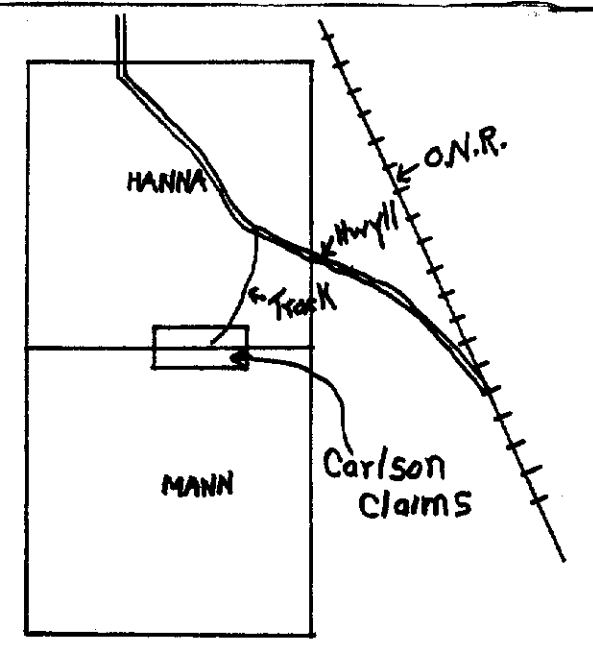
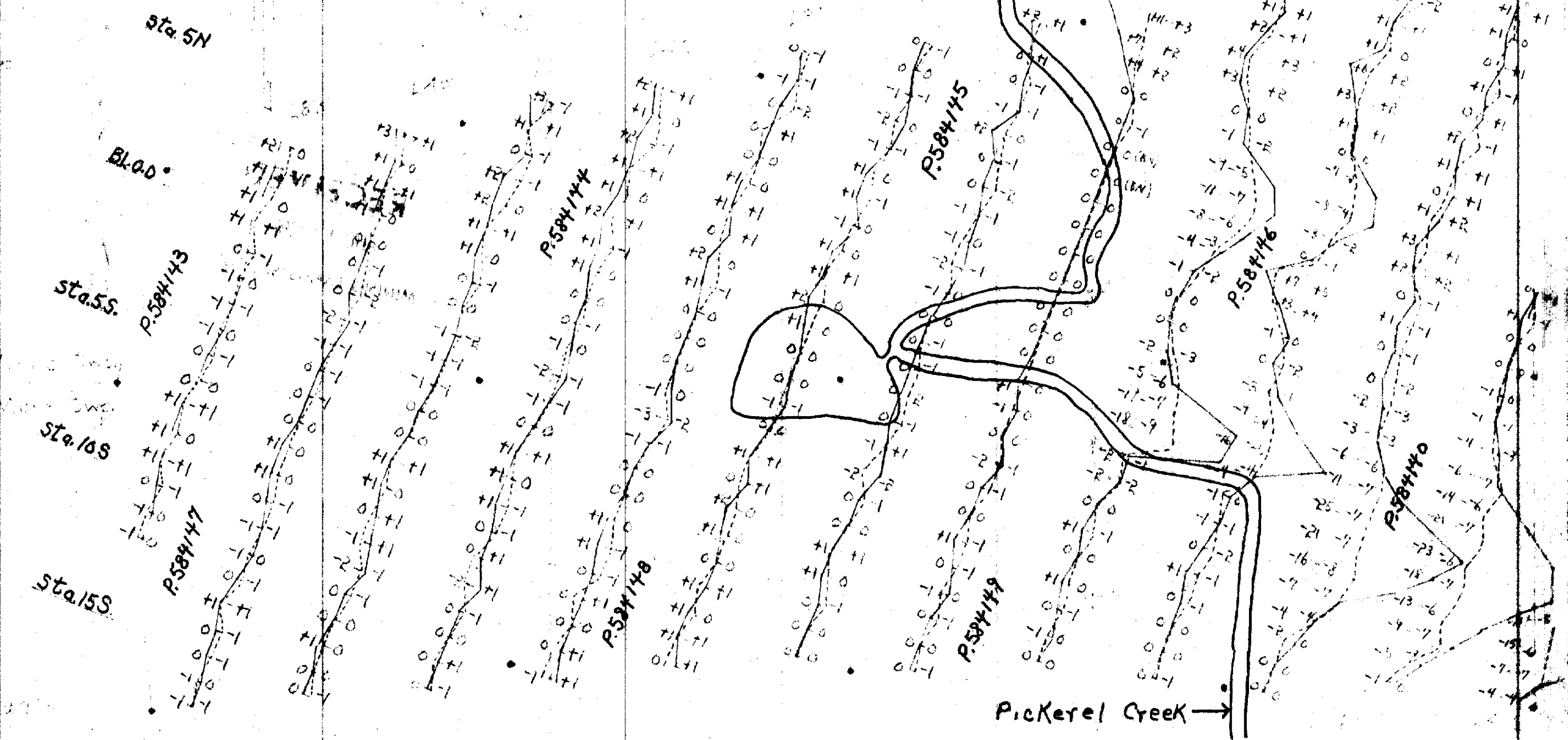


**LEGEND**

Claim post in claim area  
 Instrument - Gravity S.M.  
 Inclinometer - Dip angles  
 in percentages.

Wanderer  
 1234

Reverse list  
 with readings  
 taken at  
 survey stations.  
 In-phase divided on  
 the left, auxiliary  
 on the right. Scale of  
 profile is one inch  
 to 100 feet.



Scale: 1 inch = 4 miles

Terrain east of Pickrel Creek has been lightly covered in the past. Forest cover consists of jackpine, spruce, birch, alders, etc., with some poplars along the creek banks. Terrain west of the creek has been more heavily covered in the past. Forest cover consists of jackpine, spruce, birch, and second-growth poplars, alders, maple, etc.



Carlson Claims  
 P 2.4373  
 showing the Mann Transition  
 Oregon  
 Scale: 1 inch = 4 miles

