

2.2937



42A11SE0084 2.2937 HOYLE

010

MAGNETOMETER SURVEY OF THE
MURPHY - HOYLE CLAIMS

PORCUPINE MINING DIVISION

by

R.S. Middleton

ROSARIO RESOURCES CANADA LTD.
310 - 55 Yonge St.
TORONTO, Ontario.

March, 1979

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INTRODUCTION

Purpose of Survey

A detailed proton precession total field magnetic survey was conducted on the Murphy - Hoyle claims to help map individual basalt flow units as well as ultramafics and any diabase dikes. The survey was carried out to back up an on going geological mapping program on the property.

Location and Access

The property consists of three contiguous groups of unpatented claims as illustrated on the location map in the Appendix. Grid A is located in Con. I and II, lots 1, 2, 3, and 4 of Murphy Twp. and Con. II, lot 11 and 12 in Hoyle Twp. Grid B is located in central Hoyle, Con. II, lots 6, 7 and 8 and Con. III, lot 7. Grid C is located in Con. III, lot 1 and 2 in Murphy and Con. III, lot 11 and 12 in Hoyle.

Access to the western claims is from a gravel road in Tisdale Twp. which joins Hwy. 655 with the old Broulan Mine (in Whitney Twp.) via the Murphy - Hoyle Twp. line (muskeg road), or via another winter road in lot 3 of Murphy and Tisdale. Access to Grid B is by boat via the Porcupine River or by a muskeg tractor road which originates one mile west of the Porcupine River on the road between the Broulan Reef and the Halnor Mine in Whitney Twp.

Property

The property covered by the magnetic survey consists of 3 groups of unpatented claims as follows:

	<u>Magnetometer Credit</u>
Grid A P. 515775 - P. 515782 incl.	20 days
P. 515785 - P. 515794 incl.	20 days
P. 516152 - P. 516159 incl.	20 days
P. 516309 - P. 516316 incl.	20 days
Grid B P. 508687 - P. 508692 incl.	40 days
P. 515647 - P. 515650 incl.	40 days
Grid C P. 516562 - P. 516565 incl.	20 days
P. 516572 - P. 516575 incl.	20 days
P. 525270 - P. 525277 incl.	20 days

All claims are held by ROSARIO RESOURCES CANADA LTD. Line cutting for grid A and C is being submitted with separate surveys.

Previous WorkGrid A

Magnetometer and vertical loop EM surveys were run in Con. I, lot 3 of Murphy Twp. in the early 1960's (file 63.1466) by Glencona Mines Ltd. Drilling by Glencona in 1967 resulted in 7 holes along a strong EM conductor (massive pyrite & graphite). One drill hole in Con. I, lot 3, N½ of Murphy Twp. has been reported by Coniaurum in 1953, while another hole in lot 3, Con. II, N½ was reported by Inco. Both of these holes can be found in the TIMMINS assessment files only. An EM and magnetic survey was completed on the Hoyle side of Grid A by Copper Reef (file 63.1325) in the 1960's.

Grid C

Magnetometer and Vertical loop for L.P. Industries and R. Allerston has been filed (2.1853, 2.1702). In addition Jaye Exploration did geophysical surveys in Con. 3, lot 1 of Murphy (file 63.1664), and Inco (E. Boureau) did EM in Con. 3, lot 2 of Murphy (file 63.1509). Airborne surveys not filed have been flown for a number of companies in the 1960's.

GEOLOGY

The property is mainly underlain by tholeiitic basalts with interflow graphite-pyrite units and carbonate horizons. Grid C covers a regional contact between the sediments to the north and the volcanics to the south. Grid B is underlain by argillites on the north part and basalt volcanics on the south part. Thin ultramafic units have been noted on grid A. All of these rock units belong to the Tisdale Group of volcanics which host the gold deposits in the Porcupine camp.

INSTRUMENTATION AND SURVEY PROCEDURE

The survey was carried out with a McPhar GP 70 and a Barringer GM 122 proton precession total field magnetometer. The reading accuracy was ± 1 gamma, however the overall survey accuracy is no better than ± 10 gammas due to instrument drift, sensor head orientation problems etc. Specifications for the GP 70 and GM 122 are in the appendix.

Stations were read at 100 foot intervals on 200 and 400 foot lines.

In cases of high gradient, readings at 50 foot intervals were taken.

Base stations were established along all tie lines and base lines. Grids A and C are referenced to 0 + 00 on the Murphy - Hoyle Twp. line, while Grid B is referenced to 32W on the Base line.

The survey of grid A was carried out between August 23 - 31 and September 14 - 21, 1978 by G. Coderre. Grid C was read in January 16, 20, 23 - 27, 29, 1979 by G. Coderre and J. Ward on February 4, 13, 14, 15, 17, 18, 1979. Grid B was read in September 1 - 13, 1978 by G. Coderre and certain parts east of line 16W were re-read by B. Durham on January 20, 1979.

Grid A has 1,785 stations on 32.926 miles of line, while Grid B has 877 stations on 16.51 miles of line and Grid C has 966 stations on 17.746 miles of line for a total of 3,628 stations on 67.182 miles of line.

INTERPRETATIONSheet 1

The geology, as reflected by the magnetic trends, strike east-west. The magnetic susceptibility contrast between the different lava flows is not great, however the massive - gabbroic variety does give a 100 - 200 gamma anomaly above back ground. A well defined magnetic anomaly at 18 S - 20 S between lines 44 W and 80 W correlates with a sulphide horizon containing some pyrrhotite, pyrite and graphite. The strong magnetic low along the Twp. line (lines 60 W - 72W) is a dipole effect from a magnetic high associated with ultramafics to the south. The broad flat nature of the magnetic pattern north of 10 S reflects a broad area of non magnetic mafic tuffs.

Sheet 2 (Grid C & A)

The low relief magnetic pattern north of BL 5280 N is interpreted to reflect metasediments or non magnetic volcanics.

Sheet 3 (Grid A)

A north trending magnetic anomaly on L 48 E, 23 N - 27 N is a diabase dike. Also, on line 12 E a north trending magnetic anomaly is a diabase dike. A broad 200 - 300 gamma magnetic high extending west from 52 E to 28 E at 14 N is interpreted to be a magnetic basalt or an ultramafic at depth.

Sheet 4 (Grid C)

A north trending magnetic anomaly on line 16 E reflects a diabase dike extending from the sheet 3 area. In addition a diabase dike generates a magnetic anomaly on line 52 E. The area is generally underlain by metasediments with zones of volcanics possibly causing local magnetic highs.

Sheet 5

The northern half of the sheet area is interpreted to be mainly underlain by metasediments whereas on claims P. 508688 and P. 508687 are mainly underlain by volcanics. The east west contact between sediments and volcanics roughly

corresponds with the 16 S on claim P. 508688.

A broad magnetic high between 4 W and 20 W, 7 S may reflect a volcanic (or carbonate) zone in the sediments.

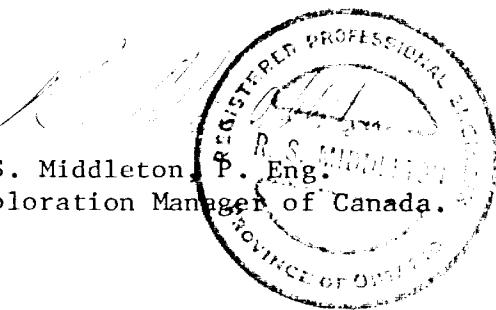
RECOMMENDATIONS AND CONCLUSIONS

The magnetic survey has helped resolve some of the geology however electromagnetic and I.P. surveys are needed to define specific horizons and interflow graphites.

Respectfully submitted,

R.S. Middleton, P. Eng.
Exploration Manager of Canada.

RSM/lyj





Ministry of Natural Resources

File _____

GEOPHYSICAL GEOLOGICAL GEOCHEMICAL
TECHNICAL DATA STATEMENT

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.

Type of Survey(s) *Magnetic*Township or Area *Maple & Bayfield*Claim Holder(s) *Geophysical Resources Canada Ltd.*Survey Company *Geophysical Resources Canada*Author of Report *A. M. McLean*Address of Author *310 5th George St., Toronto*Covering Dates of Survey *January 10, 1968*

(line cutting to office)

Total Miles of Line Cut *17.62*SPECIAL PROVISIONS
CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
Electromagnetic	
Magnetometer	20
Radiometric	
Other	
Geological	
Geochemical	

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

Magnetometer Electromagnetic Radiometric
(enter days per claim)DATE: *7/15/68* SIGNATURE: *A. M. McLean*
Author of Report or Agent

Res. Geol.

Qualifications

Previous Surveys

File No.	Type	Date	Claim Holder
.....
.....
.....
.....
.....

MINING CLAIMS TRAVESED
List numerically*P 516 562*
(prefix) (number)*P 516 563**P 516 564**P 516 565**P 516 566**P 516 567**P 516 568**P 516 569**P 516 570**P 516 571**P 516 572**P 516 573**P 516 574**P 516 575**P 516 576**P 516 577**P 516 578**P 516 579**P 516 580**P 516 581**P 516 583**P 516 584**P 516 585**P 516 586**P 516 587*

If space insufficient, attach list

TOTAL CLAIMS *12*

GEOPHYSICAL TECHNICAL DATA.

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

Number of Stations 766 Number of Readings 966
 Station interval 100' Line spacing 400'
 Profile scale _____
 Contour interval 50 gammas

MAGNETIC
 Instrument McPhar GP70, Barringer GM122
 Accuracy -- Scale constant 1 J
 Diurnal correction method Base Station check.
 Base Station check-in interval (hours) 1 1/2 hr.
 Base Station location and value 0+00, 0+00 - referenced to 53 N/20

ELECTROMAGNETIC
 Instrument _____
 Coil configuration _____
 Coil separation _____
 Accuracy _____
 Method: Fixed transmitter Shoot back In line Parallel line
 Frequency _____
 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 _____



Ministry of Natural Resources

File _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

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.

Type of Survey(s) Magnetic Grid A
 Township or Area Murphy and Hoyle Twp.
 Claim Holder(s) ROSARIO RESOURCES CANADA
 Survey Company ROSARIO RESOURCES CANADA
 Author of Report R. Middleton
 Address of Author 310 - 55 Yonge St. TORONTO
 Covering Dates of Survey August 23-31 /78, Sept. 14-21/78
 (linecutting to office)
 Total Miles of Line Cut 32.93

MINING CLAIMS TRAVESED
List numericallySee attached Lst

(prefix) (number)

SPECIAL PROVISIONS
CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
--Electromagnetic	
--Magnetometer	<u>20</u>
--Radiometric	
--Other	
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)Magnetometer Electromagnetic Radiometric
(enter days per claim)DATE: Apr 20/79 SIGNATURE: R. Middleton
Author of Report or AgentRes. Geol. 2.706 Qualifications _____Previous Surveys

File No.	Type	Date	Claim Holder
.....
.....
.....
.....
.....

TOTAL CLAIMS 34

GEOPHYSICAL TECHNICAL DATA.

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

MAGNETIC

Number of Stations 1785 Number of Readings 1785
 Station interval 100' Line spacing .700' + 200'
 Profile scale _____
 Contour interval 100 gamma

Instrument McPhar GP 70 and GMI 22
 Accuracy -- Scale constant 1 /
 Diurnal correction method Base Station tie in
 Base Station check-in interval (hours) 1 1/2
 Base Station location and value Base Line 0 on every crossline - referenced
to 0+00 / 0+00 and 3 stations to N on L0

ELECTROMAGNETIC

Instrument _____
 Coil configuration _____
 Coil separation _____
 Accuracy _____
 Method: Fixed transmitter Shoot back In line Parallel line
 Frequency _____
 (specify V.L.F. station)

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 _____

<u>Claims</u>	<u>Days Work</u>	<u>Magnetometer</u>
P. 515775	20	
P. 515776	20	
P. 515777	20	
P. 515778	20	
P. 515779	20	
P. 515780	20	
P. 515781	20	
P. 515782	20	
P. 515785	20	
P. 515786	20	
P. 515787	20	
P. 515788	20	
P. 515789	20	
P. 515790	20	
P. 515791	20	
P. 515792	20	
P. 515793	20	
P. 515794	20	
P. 516152	20	
P. 516153	20	
P. 516154	20	
P. 516155	20	
P. 516156	20	
P. 516157	20	
P. 516158	20	
P. 516159	20	
P. 516309	20	
P. 516310	20	
P. 516311	20	
P. 516312	20	
P. 516313	20	
P. 516314	20	
P. 516315	20	
P. 516316	20	



Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

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.

Type of Survey(s) Magnetic

Township or Area Hoy le

Claim Holder(s) ROSARIO RESOURCES CANADA

Survey Company ROSARIO RESOURCES

Author of Report R. Middleton

Address of Author 310 - 55 Yonge St. TORONTO

Covering Dates of Survey September 1-13/78, January 1979
(linecutting to office)

Total Miles of Line Cut 16.51

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	
-Magnetometer	40
-Radiometric	
-Other	
Geological	
Geochemical	

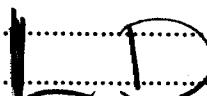
AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer Electromagnetic Radiometric
(enter days per claim)DATE: April 20/79 SIGNATURE: 
Author of Report or Agent

Res. Geol. Qualifications

Previous Surveys

File No. Type Date Claim Holder

MINING CLAIMS TRAVERSED
List numericallyP. 508 687
(prefix) (number)

P. 508 688

P. 508 689

P. 508 690

P. 508 691

508 692

515 647

515 648

515 649

515 650

516 160

516 161

516 162

516 163

516 164

516 165

516 166

516 167

TOTAL CLAIMS 18

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA.

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

Number of Sections 877 Number of Readings 877
 Station interval 100' Line spacing .400'
 Profile scale _____
 Contour interval 100 gammas

Instrument McPhar GP70 - Barringer GM122
 Accuracy - Scale constant 1.8
 Diurnal correction method Base station tie in
 Base Station check-in interval (hours) 1 1/2
 Base Station location and value L 32 W, 0+00 and all stations along
Base line 0

Instrument _____
 Coil configuration _____
 Coil separation _____
 Accuracy _____
 Method: Fixed transmitter Shoot back In line Parallel line
 Frequency _____ (specify V.L.F. station)
 Parameters measured _____

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

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 _____

MAGNETIC

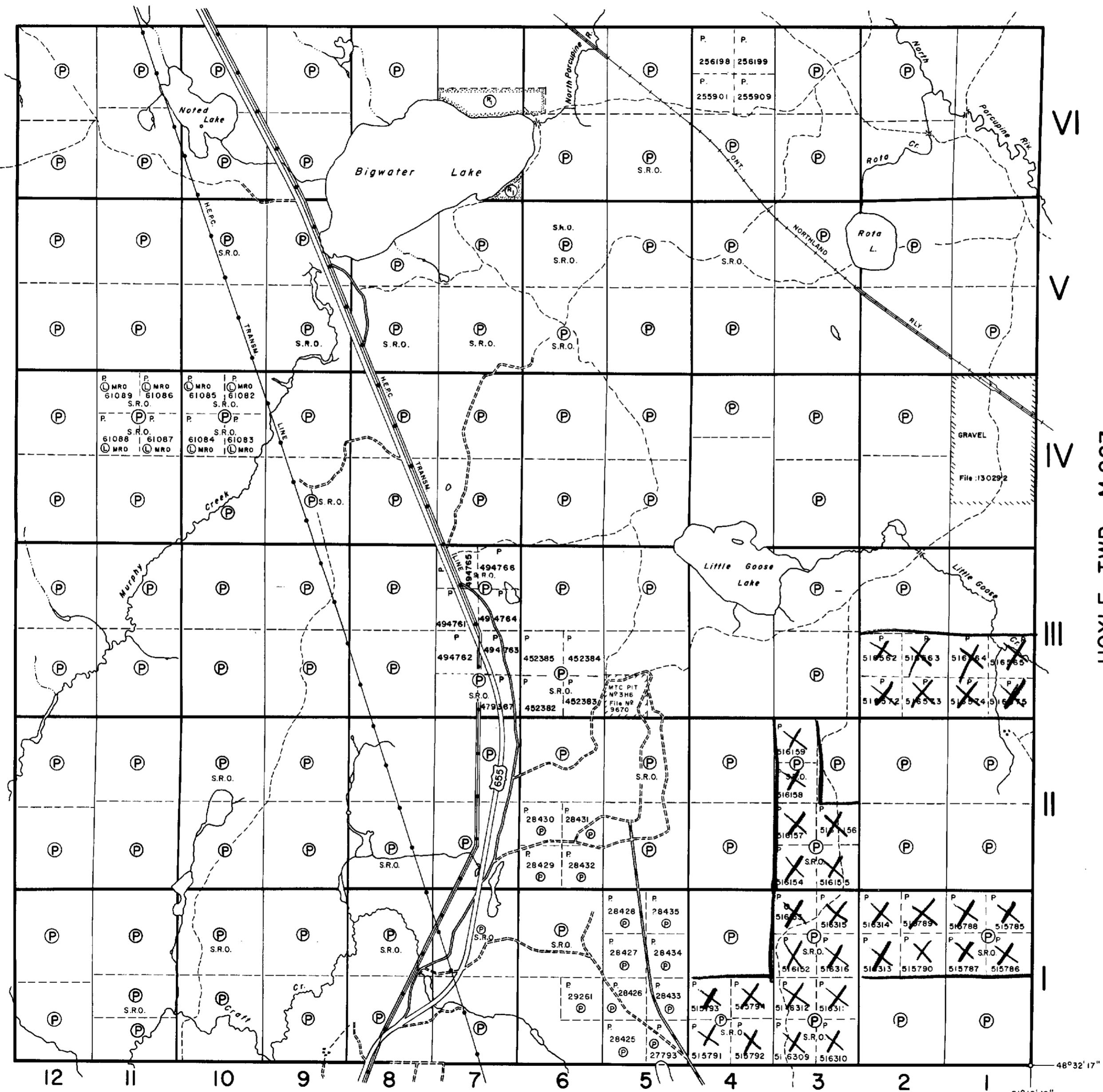
ELECTROMAGNETIC

GRAVITY

RESISTIVITY

JESSOP TWP. - M.289

WARK TWP. - M.317



THE TOWNSHIP
OF

2.2197
MURPHY

DISTRICT OF
COCHRANE

PORCUPINE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

- PATENTED LAND
 - CROWN LAND SALE
 - LEASES
 - LOCATED LAND
 - LICENSE OF OCCUPATION
 - MINING RIGHTS ONLY
 - SURFACE RIGHTS ONLY
 - ROADS
 - IMPROVED ROADS
 - KING'S HIGHWAYS
 - RAILWAYS
 - POWER LINES
 - MARSH OR MUSKEG
 - MINES
 - CANCELLED
 - PATENTED S.R.O.
- (P) C.S.
(L) Loc.
(L.O.) L.O.
(M.R.O.) M.R.O.
(S.R.O.) S.R.O.

NOTES

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

This township lies within the Municipality of CITY of TIMMINS.

Ont. Northland Rwy. spur line R/W for S.R.O.
see file 177607.

RESERVATIONS:

(R) - Reserved for recreational purposes under Sec. 3 P.L.A.
File 188543.

DATE OF ISSUE
APR 25 1979
SURVEYS AND MAPPING
BD MARCH

PLAN NO. M.303

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

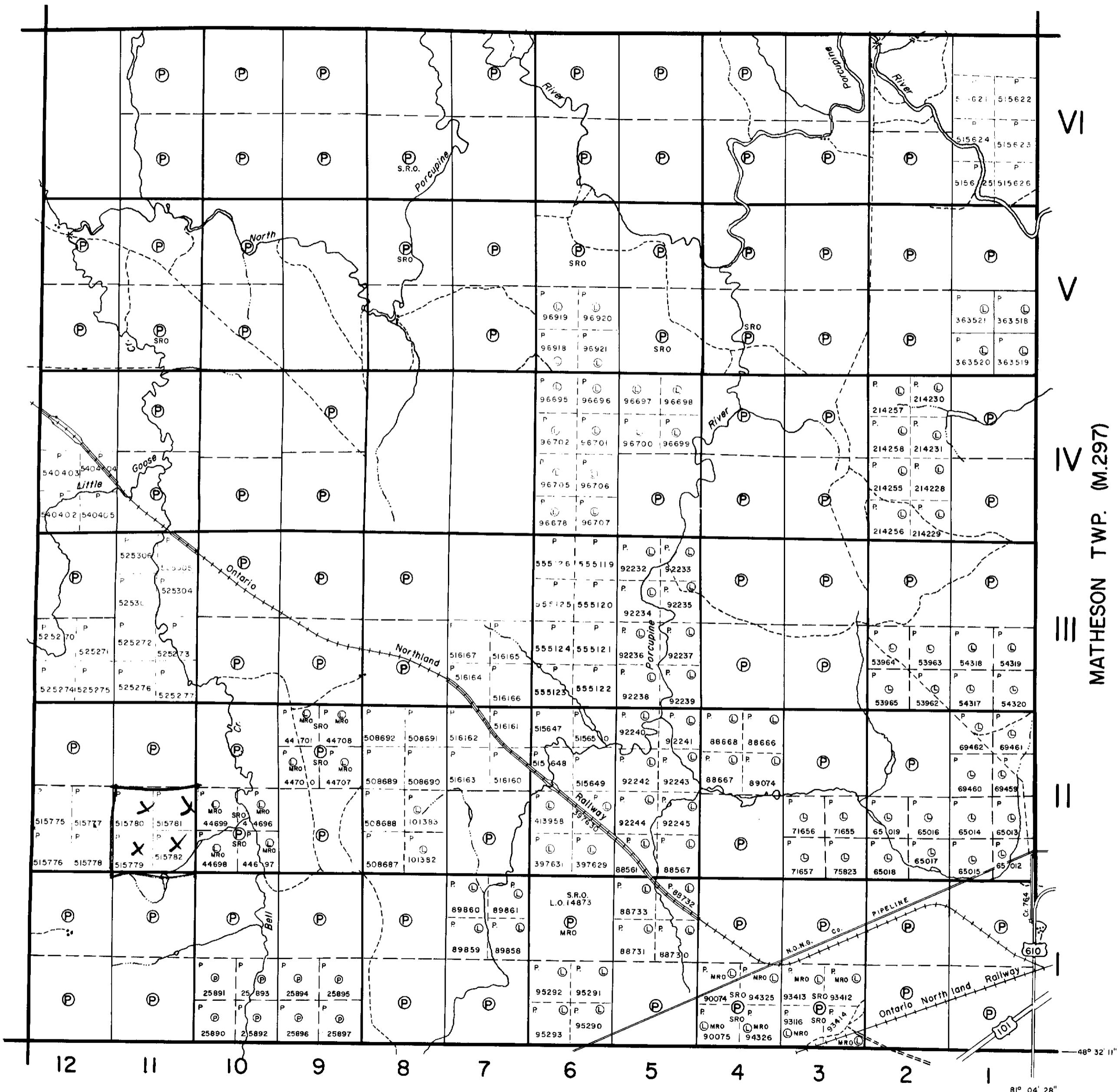


42A11SE0084 2.2937 HOYLE

200

GOWAN TWP. (M.285)

MURPHY TWP. (M.303)



THE TOWNSHIP

OF 2.3289

HOYLE

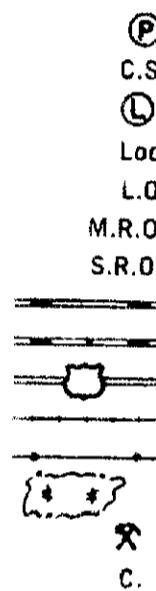
DISTRICT OF
COCHRANE

PORCUPINE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND
CROWN LAND SALE
LEASES
LOCATED LAND
LICENSE OF OCCUPATION
MINING RIGHTS ONLY
SURFACE RIGHTS ONLY
ROADS
IMPROVED ROADS
KING'S HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED



NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers.

This township lies within the Municipality of CITY of TIMMINS.

Ont Northland Rwy spur line R/W patented for S.R.O. File: 177607

DATE OF ISSUE

MAY ~ 6 1980

SURVEYS AND MAPPING

1980

orders

PLAN NO.

M.287

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH



Fawan Twp. (M.285)

HOYLE

**DISTRICT OF
COCHRANE**

**PORCUPINE
MINING DIVISION**

SCALE: 1-INCH -- 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	=====
IMPROVED ROADS	=====
KING'S HIGHWAYS	=====
RAILWAYS	=====
POWER LINES	=====
MARSH OR MUSKEG	=====
MINES	* * *
CANCELLED	X

NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers.

This township lies within the Municipality of CITY of TIMMINS.

Ont Northland Rwy spur line R/W patented for S.R.O.
File 177607

INDEX MAP

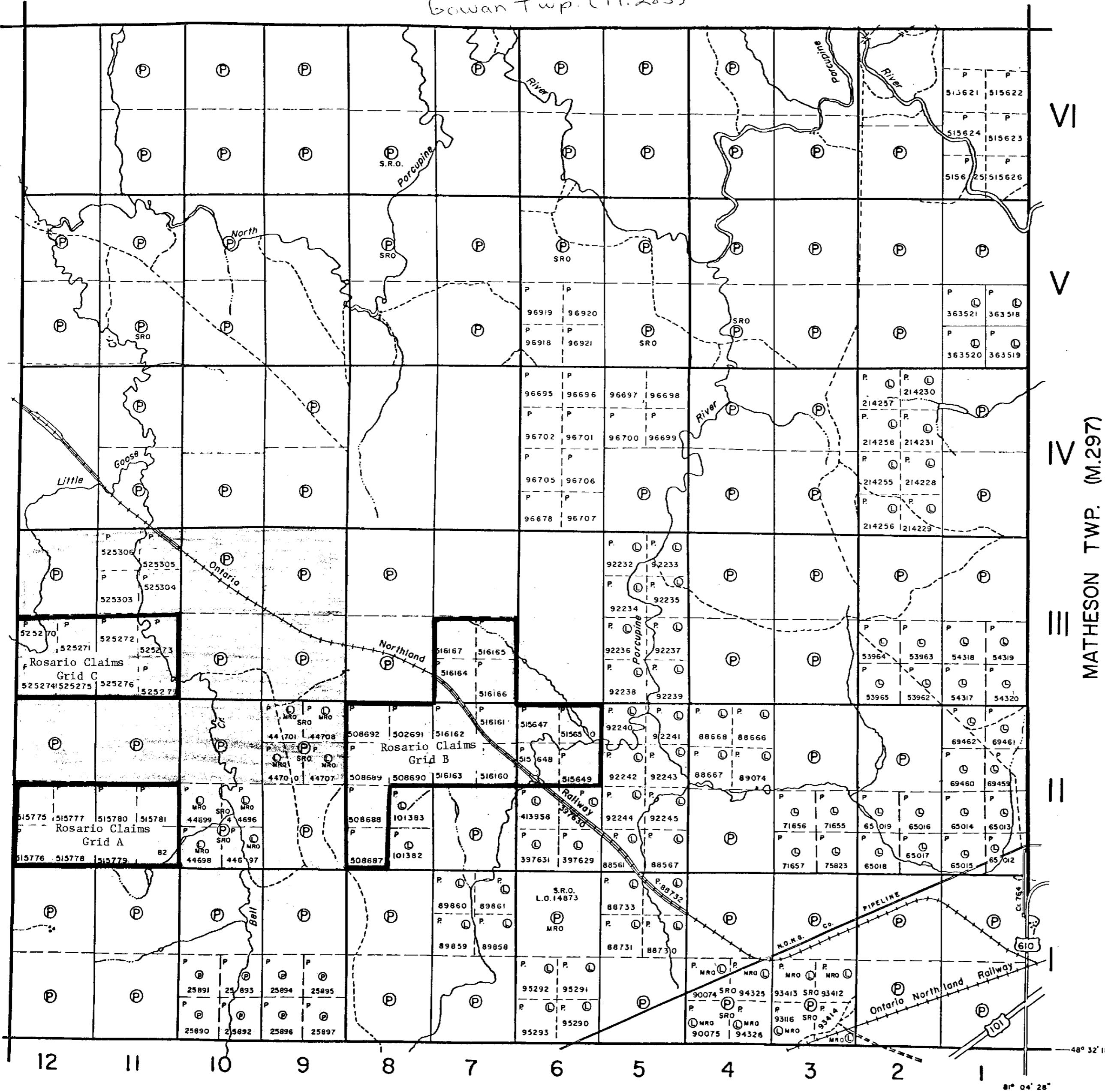
Sheet 3

Sheet 4

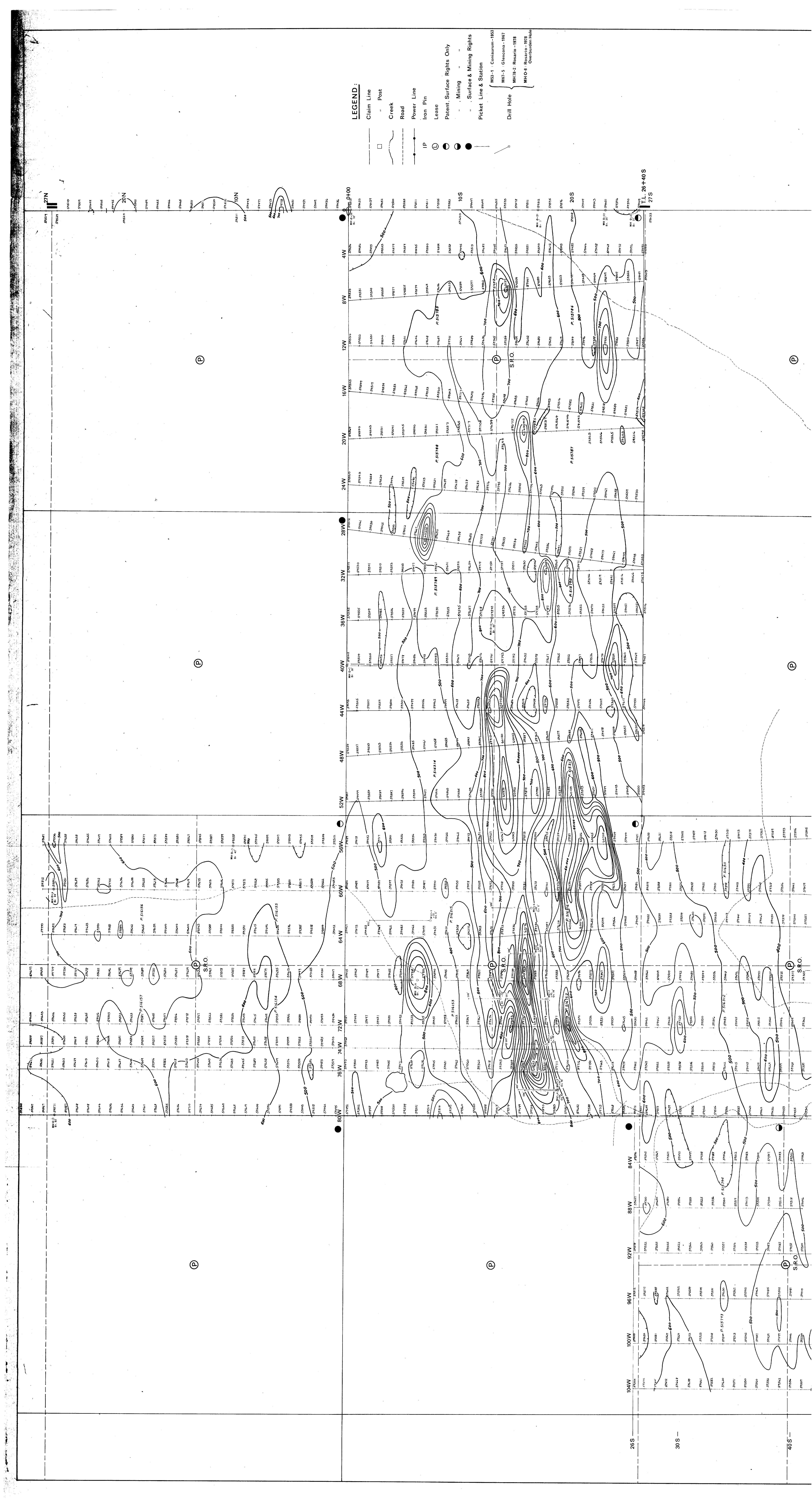
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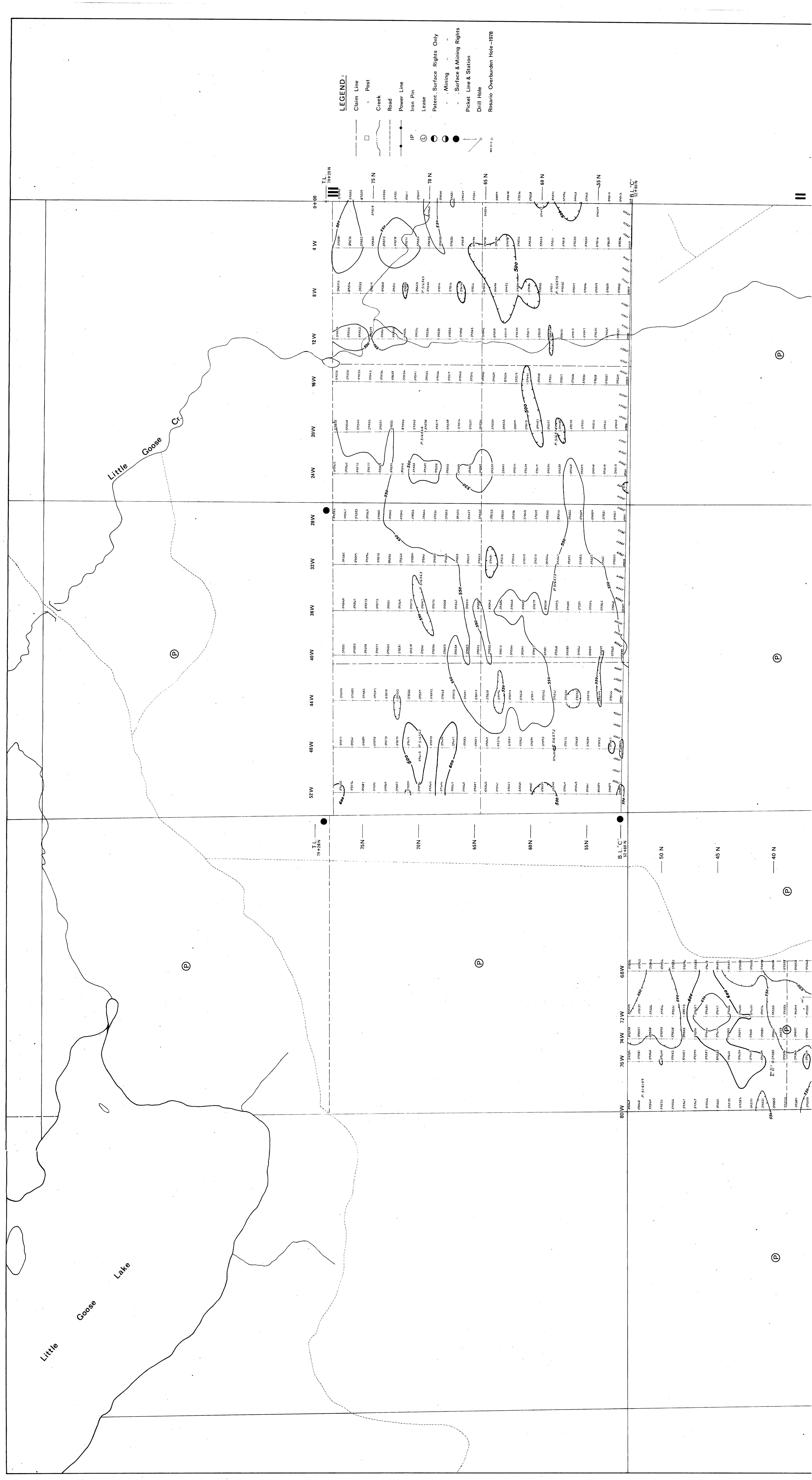
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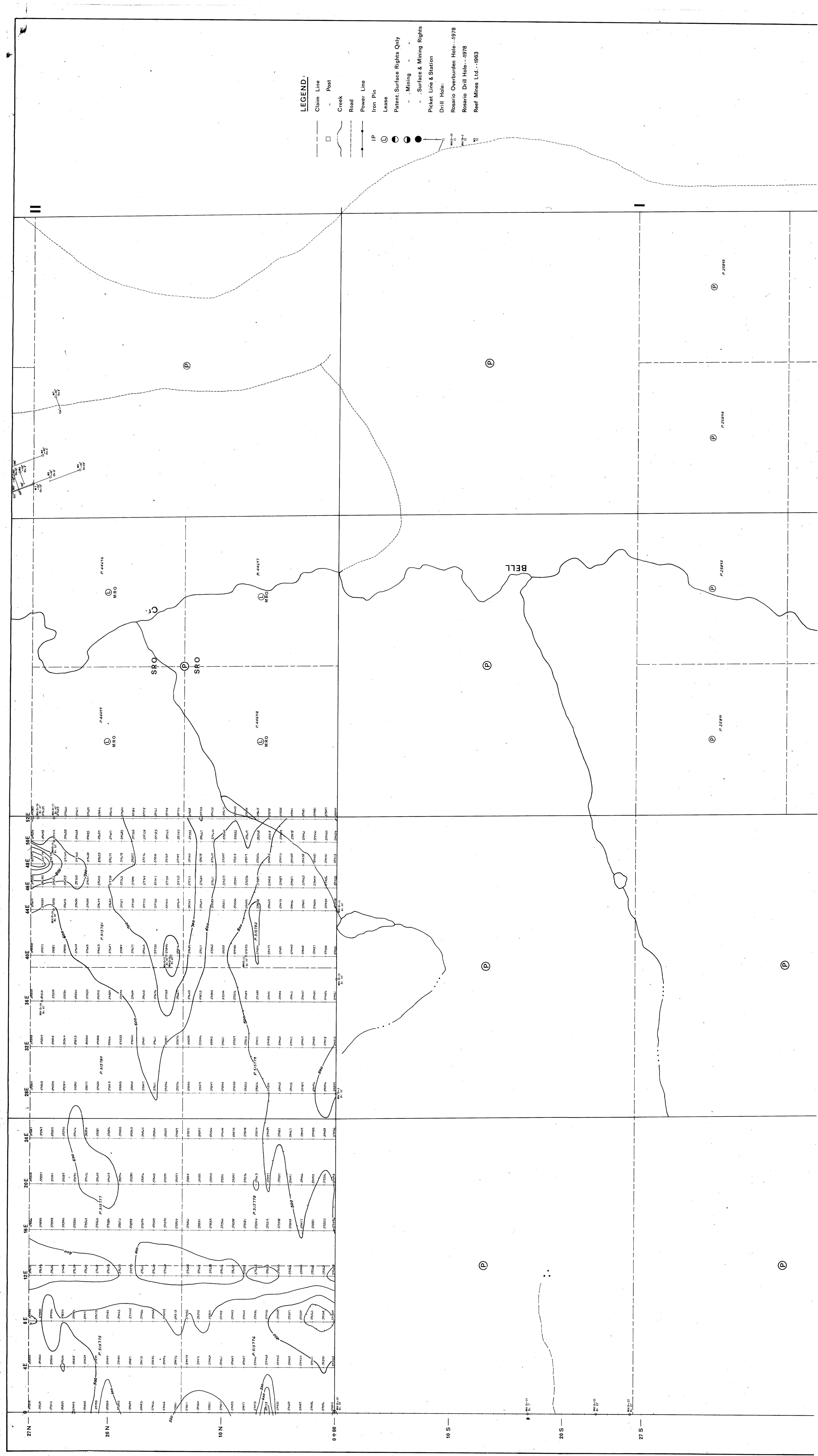
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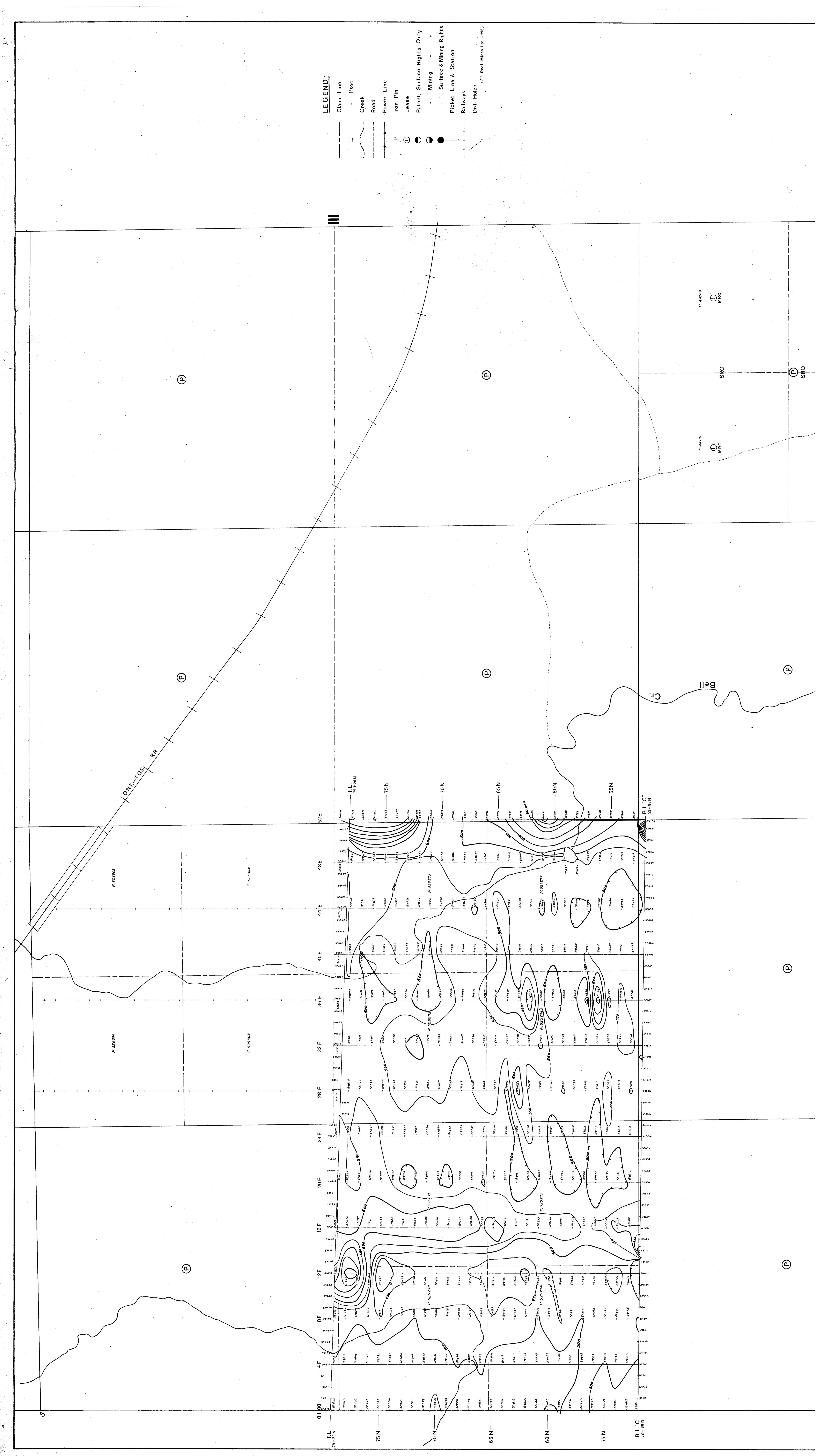


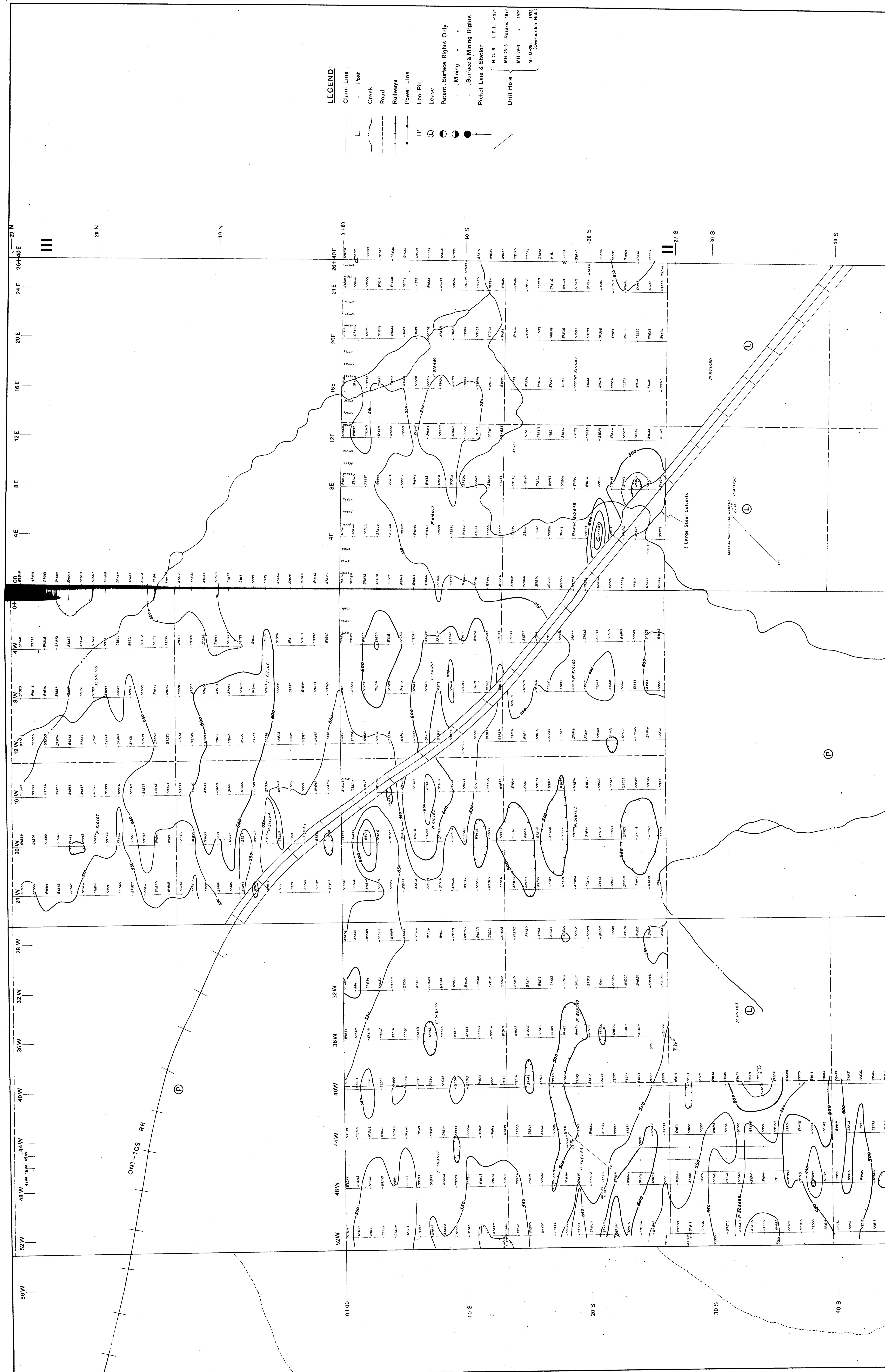
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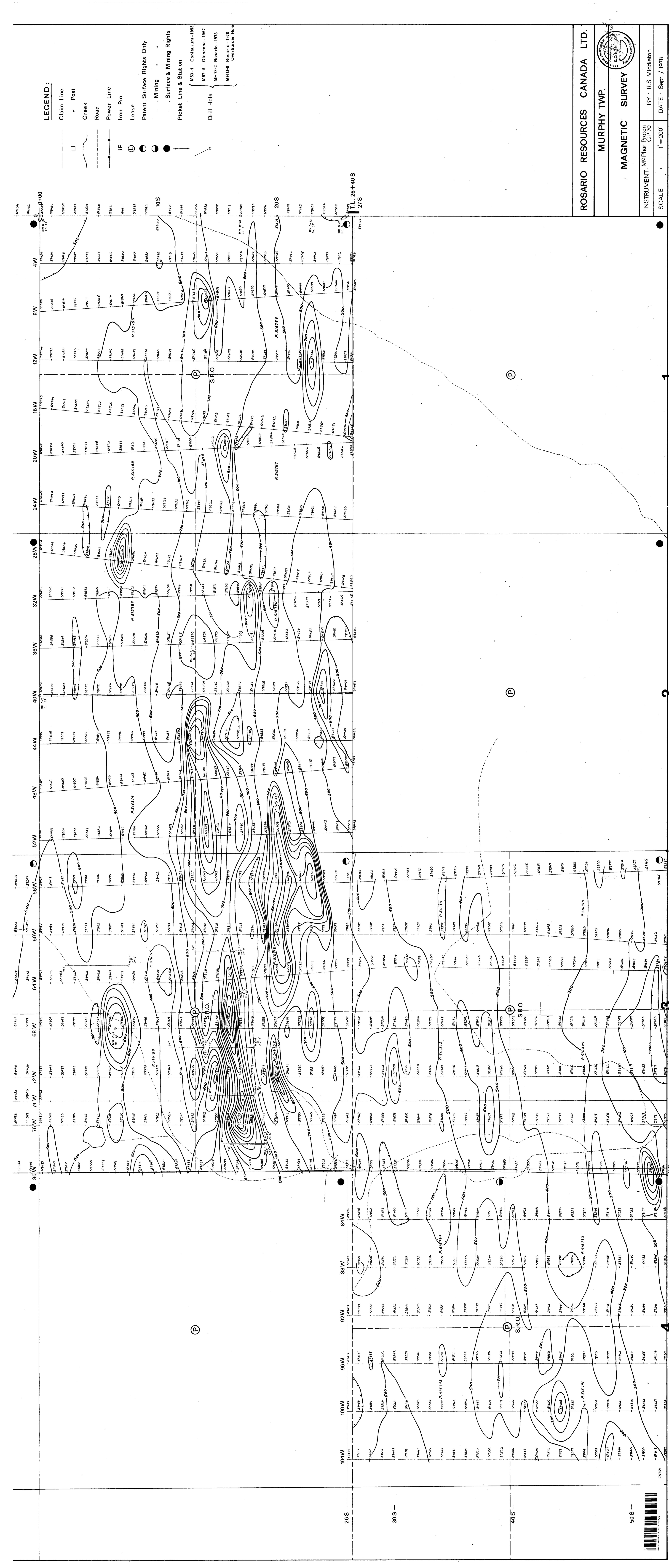


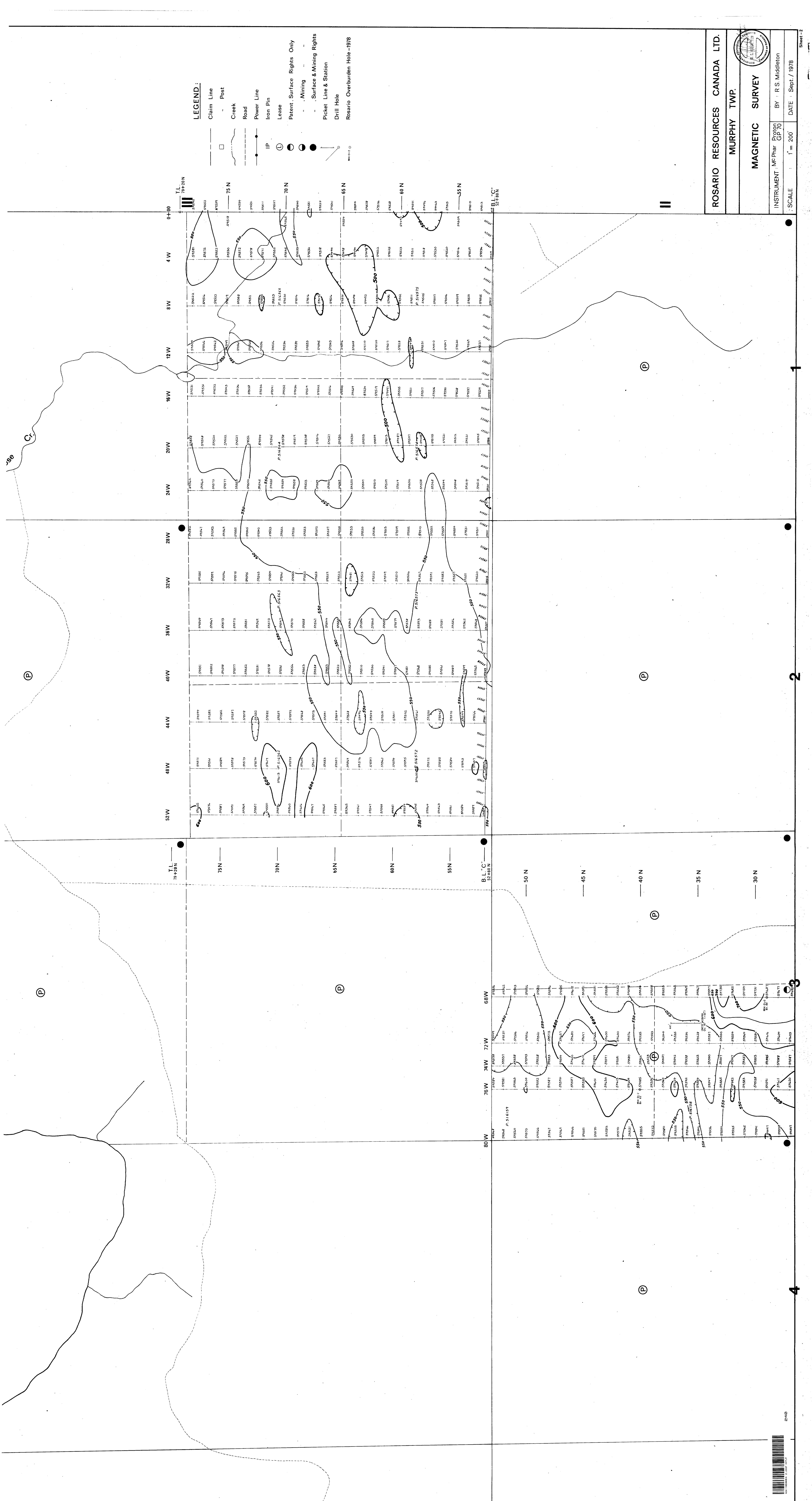


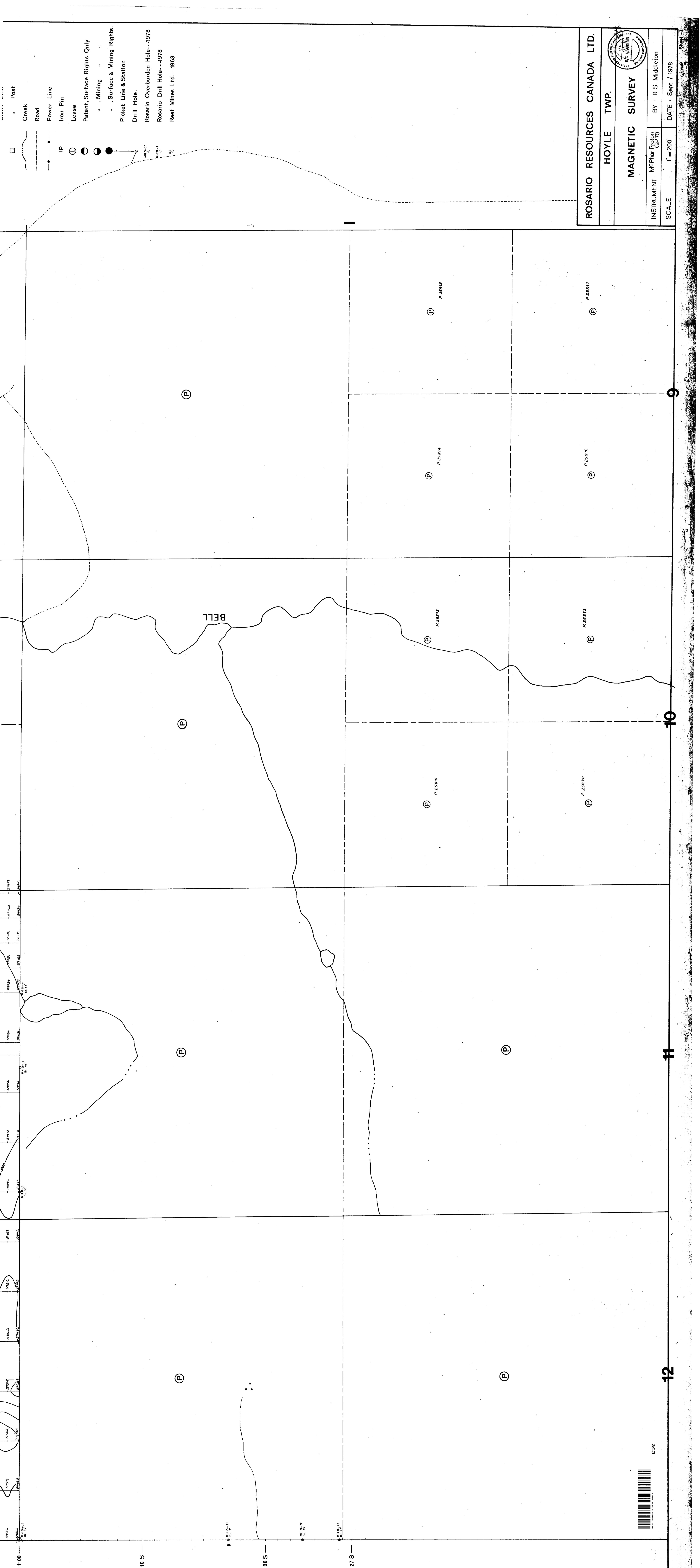


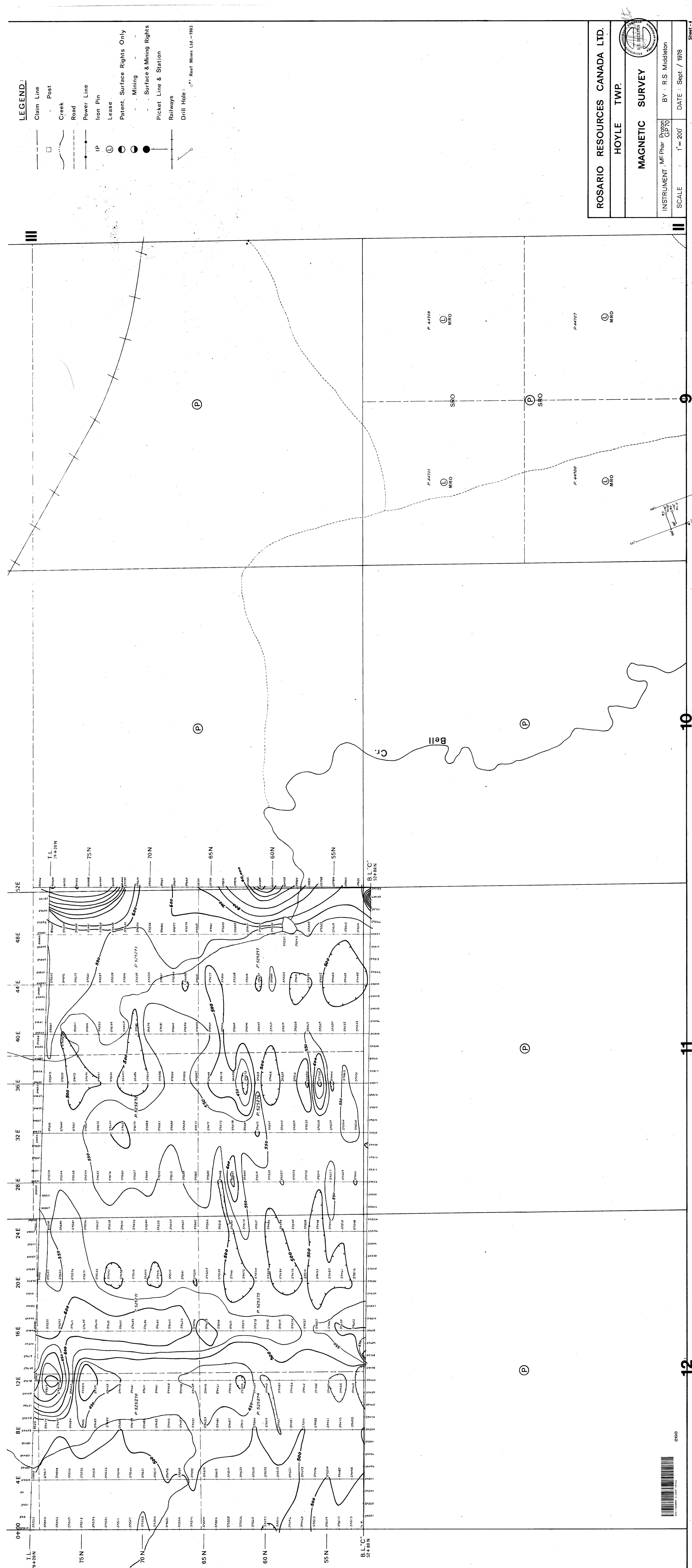


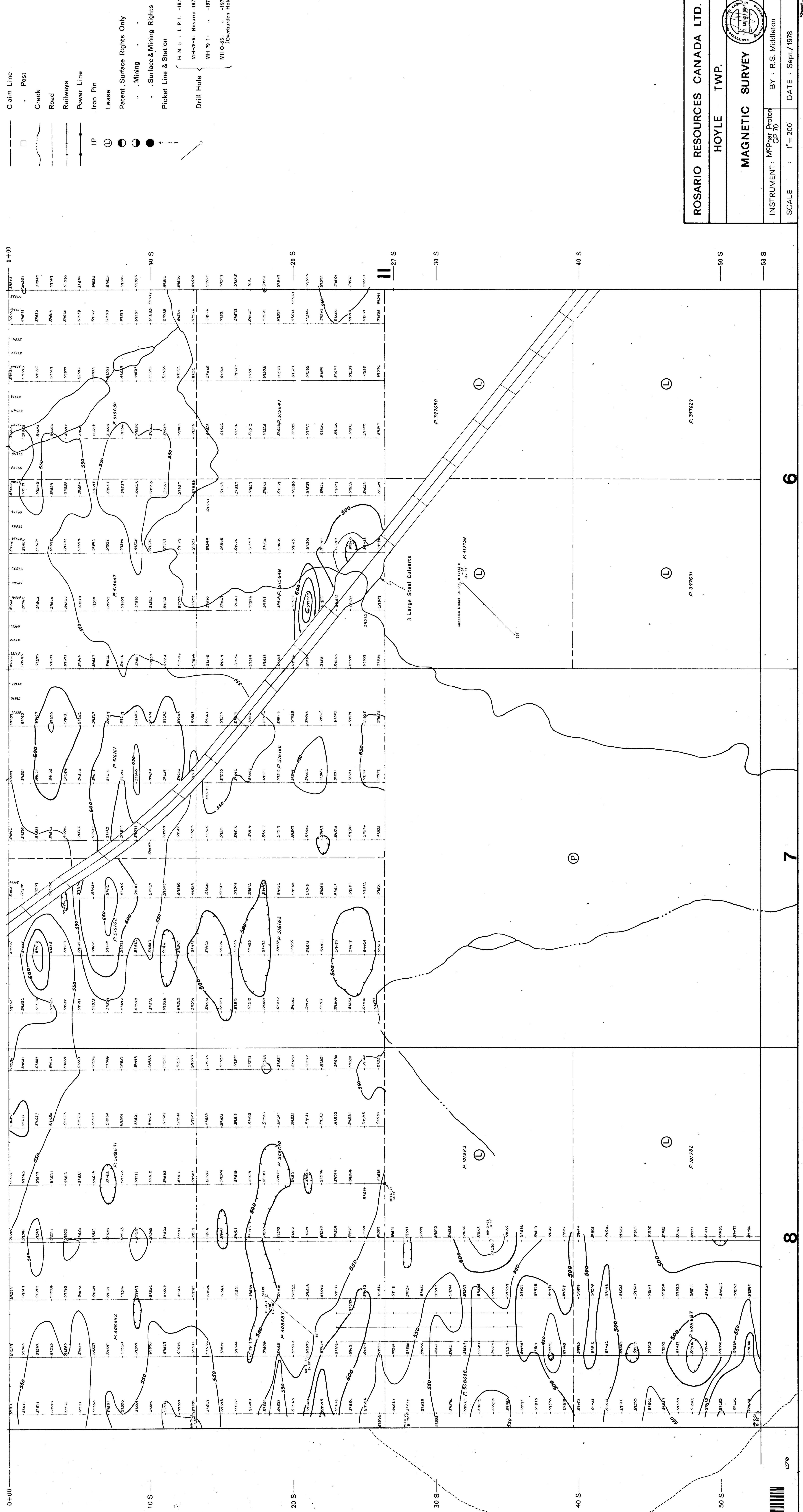












Sheet -