

2.3384

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MINING LANDS SECTION



42A06NE0037 2.3384 WHITNEY

010

HELICOPTERBORNE MAGNETIC SURVEY OF
WHITNEY - SHAW PROPERTY
PORCUPINE MINING DIVISION

by

R.S. Middleton

Rosario Resources Canada Ltd.

1407 - 7 King St. E.

TORONTO, Ontario

June 30, 1980

INTRODUCTION

A helicopterborne magnetic survey was flown over Rosario claims in Whitney and Shaw Twps. in October - December 1979 by Aerodat Ltd. This survey corresponded with a regional survey flown for Amax Minerals Exploration and that survey has been reported on separately by T. Watts.

The survey covered the southern part of Whitney Twp. as well as most of Shaw Twp. which are located 6 miles southeast of Timmins. The location of the claims is given on the attached location map.

Previous Airborne Surveys

Southern Whitney Twp. has been surveyed in the early 1970's by Canadian Aero using the Otter, EM and magnetic package and the results of this survey are filed for assessment under the name of Oro Mines Ltd. The same area has been flown by Dighem Ltd. for Cominco using the Dighem II - magnetometer package. This data has been filed under Rosario's name. No airborne surveys are on file for the Shaw claim area.

Property

The claims covered are all held by Rosario Resources Canada Ltd.'s license or by registered option. These claims are:

<u>Whitney Twp.</u>		<u>Shaw Twp.</u>	<u>Brown McDade Option</u>
P. 500922	P. 522270	P. 528600	P. 500971
P. 500923	P. 522271	P. 528601	
P. 500924	P. 522272	P. 528602	P. 500904
P. 500925	P. 522273	P. 528603	P. 500905
P. 500926	P. 522274	P. 528604	P. 500906
P. 500927	P. 522275	P. 528605	P. 500907
	P. 522276	P. 528606	P. 500908
P. 516795	P. 522277	P. 528607	P. 500909
P. 516796	P. 522278	P. 528608	P. 500910
P. 516797	P. 522279	P. 528609	P. 500911
	P. 522280		P. 500913
P. 522256	P. 522281	P. 528853	P. 500914
P. 522257	P. 522282	P. 528854	P. 500915
P. 522258		P. 528855	
P. 522259	P. 536528	P. 528856	
P. 522260	P. 536529	P. 528857	
P. 522261	P. 536530	P. 528858	
P. 522262		P. 528859	
P. 522263		P. 528860	
P. 522264		P. 528861	
P. 522265		P. 528862	
P. 522266			
P. 522267		P. 539931	
P. 522268			
P. 522269			

SURVEY PROCEDURE AND INSTRUMENTATION

The survey was flown by Jet Ranger helicopter using a Barringer AM 104 proton precession total field magnetometer. The current to the towed sensorhead was cycled every 1 second thus giving a data point every 130 - 140 feet. The sensor was towed 50 feet below the helicopter. Lines were flown at 1/8 mile spacing northeastward in Shaw and northwestward in Whitney. The data was contoured at Data Plotting in Toronto at a scale of 1:15,000 with contours at 20 gamma intervals. Flight path recovery was accomplished using a 35 mm camera on board the helicopter and plotting locations on photo mosaics. The total line mileage flown over each claim groups is as follows:

✓ P. 522256 - 522282	14.3 miles
P. 500922 - 500925	1.9 miles
P. 500926 - 500927	1.2 miles
P. 536528 - 536530	1.34 miles
P. 516795	0.96 miles
P. 516796 - 516797	<u>1.15 miles</u>
	<u>20.85 miles</u>

INTERPRETATION

The Shaw claims covered by the survey contain two major magnetic features, a narrow northeast trend that corresponds to a ENE type diabase dike and a broad, high intensity northwest trend that corresponds to an oxide iron formation. The low gradient magnetic pattern northeast of the iron formation trend corresponds to an area of felsic rocks (quartzey rhyolite) - mainly extrusive tuffs etc. with possible high level intrusive components. On the Whitney - Shaw township line near the lot 3 - 4 line a small area of magnetic relief corresponds to thoeilite basalt rocks. Another anomaly with no known outcrop for correlation occurs on the southeast corner of the claims and is interpreted to be caused by ultramafic rocks which are relatively unaltered.

In Whitney Twp. the areas of broad low gradient corresponds to felsic tuffs while the high intensity trends correspond to iron formation or ultramafic rocks.

North south diabase dikes are rare but one can be seen in the Whitney -
Cody Twp. line magnetic pattern.

The main structure in Whitney is a northeast trending anticlinal feature
that causes repeating rock trends.

CONCLUSIONS

The helicopterborne magnetic survey has delineated the main stratigraphic
units such as iron formations and ultramafics. Detailed ground surveys
are required to outline small narrow features.

Respectfully submitted,



R. Middleton
Exploration Manager

RM/lyd

GEOPHYSICAL TECHNICAL DATA



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

Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

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

ELECTROMAGNETIC

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



SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) Magnetic
Barringer AD1104
(specify for each type of survey)

Accuracy 1 ft
(specify for each type of survey)

Aircraft used Helicopter

Sensor altitude 150 ft

Navigation and flight path recovery method 35 mm camera on photo mosaic

Aircraft altitude 200 ft Line Spacing 1/8 mile

Miles flown over total area _____ Over claims only 16.5

SEAL TWP. AIRBORNE MAGNETICS

<u>Claim No.</u>	<u>Days Credit</u>	<u>Claim No.</u>	<u>Days Credit</u>
P. 500904	20.00 days	P. 528858	20.00 days
P. 500905	20.00 days	P. 528859	20.00 days
P. 500906	20.00 days	P. 528860	20.00 days
P. 500907	20.00 days	P. 528861	20.00 days
P. 500908	20.00 days	P. 528862	20.00 days
P. 500909	20.00 days	P. 539931	20.00 days
P. 500910	20.00 days		
P. 500911	20.00 days		
P. 500913	20.00 days		
P. 500914	20.00 days		
P. 500915	20.00 days		
P. 500971	20.00 days		
P. 528600	20.00 days		
P. 528601	20.00 days		
P. 528602	20.00 days		
P. 528603	20.00 days		
P. 528604	20.00 days		
P. 528605	20.00 days		
P. 528606	20.00 days		
P. 528607	20.00 days		
P. 528608	20.00 days		
P. 528609	20.00 days		
P. 528853	20.00 days		
P. 528854	20.00 days		
P. 528855	20.00 days		
P. 528856	20.00 days		
P. 528857	20.00 days		

16.50 mi. x 40 = 660 ÷ 33 claims = 20.00 days

GEOCHEMICAL SURVEY – PROCEDURE RECORD



Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
 p. p. m.
 p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, (circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

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

ELECTROMAGNETIC

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

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____ *MAGNETIC*

Instrument(s) _____ *Barringer AM104*

(specify for each type of survey)

Accuracy _____ *± 1 gamma*

(specify for each type of survey)

Aircraft used _____ *Just Ranger*

Sensor altitude _____ *200*

Navigation and flight path recovery method _____ *35 mm film*

Aircraft altitude _____ *250* Line Spacing _____ *1/8 mile*

Miles flown over total area _____ Over claims only _____ *1.15 miles*



Ministry of Natural Resources

File _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

RECEIVED

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.

JUL 21 1980

MINING LANDS SECTION

Type of Survey(s) AIR MAGNETIC
Township or Area Whitney
Claim Holder(s) ROSARIO RESOURCES CANADA
1407 - 7 King St. E. TORONTO
Survey Company Aerodat
Author of Report R. Middleton
Address of Author 1436 Ontario St. Burlington
Covering Dates of Survey Oct. - December 1979
(linecutting to office)
Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED
List numerically

P. 516.795
(prefix) (number)

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

ENTER 40 days (includes
line cutting) for first
survey.
ENTER 20 days for each
additional survey using
same grid.

Geophysical
- Electromagnetic _____
- Magnetometer _____
- Radiometric _____
- Other _____
Geological _____
Geochemical _____

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

Magnetometer 38.4 Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: June 30, 1980 SIGNATURE: R. Middleton
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 1

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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



Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

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

ELECTROMAGNETIC

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

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____ MAGNETIC

Instrument(s) _____ Barringer AM 104
(specify for each type of survey)

Accuracy _____ ± 1 gamma
(specify for each type of survey)

Aircraft used _____ Jet Ranger

Sensor altitude _____ 200'

Navigation and flight path recovery method _____ 35mm film

Aircraft altitude _____ 250' Line Spacing _____ 1/8 mile

Miles flown over total area _____ Over claims only _____ 0.96

GEOCHEMICAL SURVEY – PROCEDURE RECORD



Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
 p. p. m.
 p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____



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) AIR MAGNETIC
Township or Area Whitney
Claim Holder(s) ROSARIO RESOURCES CANADA
1407 - 7 King St. E. TORONTO
Survey Company Appadat
Author of Report R. Middleton
Address of Author 1436 Ontario St. Burlington L7S 1G4
Covering Dates of Survey Oct - Dec 1979
(linecutting to office)
Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED
List numerically

P. 536 528-
(prefix) (number)
P. 536 529-
S 1G4 P. 536 530-

SPECIAL PROVISIONS
CREDITS REQUESTED

DAYS
per claim

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

ENTER 20 days for each
additional survey using
same grid.

Geophysical
-Electromagnetic _____
-Magnetometer _____
-Radiometric _____
-Other _____
Geological _____
Geochemical _____

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

Magnetometer 17.57 Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: June 30, 1980 SIGNATURE: R. Middleton
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 3

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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



Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

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

ELECTROMAGNETIC

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

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____ Helicopter MAGNETIC

Instrument(s) _____ Barringer AM 104
(specify for each type of survey)

Accuracy _____ ± 1 gamma
(specify for each type of survey)

Aircraft used _____ Jet Ranger

Sensor altitude _____ 200'

Navigation and flight path recovery method _____ 35mm film

Aircraft altitude _____ 250' Line Spacing _____ 1/8 mile

Miles flown over total area _____ Over claims only _____ 1.34 miles



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) AIR MAGNETIC
Township or Area Whitby
Claim Holder(s) ROSARIO RESOURCES CANADA
1407 - 7 King St. E. TORONTO
Survey Company Aerodat
Author of Report R. Middleton
Address of Author 1436 Ontario St. Burlington
Covering Dates of Survey October - December, 1979
(linecutting to office)
Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED	
List numerically	
P. <u>500 922</u>	(prefix) (number)
P. <u>500 923</u>	
P. <u>500 924</u>	
P. <u>500 925</u>	
TOTAL CLAIMS	<u>4</u>

<u>SPECIAL PROVISIONS CREDITS REQUESTED</u>	DAYS per claim
Geophysical	
-Electromagnetic	_____
-Magnetometer	_____
-Radiometric	_____
-Other	_____
Geological	_____
Geochemical	_____

ENTER 40 days (includes line cutting) for first survey.
ENTER 20 days for each additional survey using same grid.

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer 19 Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: June 30/80 SIGNATURE: R. Middleton
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

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



Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

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

ELECTROMAGNETIC

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

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____ MAGNETIC

Instrument(s) _____ Barringer AM104
(specify for each type of survey)

Accuracy _____ ± 1 gamma
(specify for each type of survey)

Aircraft used _____ Jet Ranger

Sensor altitude _____ 200'

Navigation and flight path recovery method _____ 35 mm Film

Aircraft altitude _____ 250' Line Spacing _____ 1/8 mile

Miles flown over total area _____ Over claims only _____ 1.9 miles



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) AIR MAGNETIC
Township or Area Whitney
Claim Holder(s) ROSARIO RESOURCES CANADA
140? 7 King St. E. TORONTO
Survey Company Aerodat
Author of Report R. Middleton
Address of Author 1436 Outpost St. Burlington
Covering Dates of Survey October - December 1979
(linecutting to office)
Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED
List numerically

P. 500926 ✓
(prefix) (number)
P. 500927 ✓

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

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

Magnetometer 24 Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: June 30/81 SIGNATURE: R. Middleton
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 2

OFFICE USE ONLY

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

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

ELECTROMAGNETIC

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

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____ MAGNETIC

Instrument(s) _____ Barringer AM 104
(specify for each type of survey)

Accuracy _____ ± 1 gamma
(specify for each type of survey)

Aircraft used _____ Jet Ranger

Sensor altitude _____ 200'

Navigation and flight path recovery method _____ 35 mm film

Aircraft altitude _____ 250' Line Spacing _____ 1/2 mile

Miles flown over total area _____ Over claims only _____ 1.2 miles



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) AIR MAGNETIC
Township or Area Whitney
Claim Holder(s) ROSARIO RESOURCES CANADA
1407 - 7 King St. E. TORONTO
Survey Company Aerodat
Author of Report R. Middleton
Address of Author 1436 Ontario St. Burlington
Covering Dates of Survey October - December, 1979
(linecutting to office)
Total Miles of Line Cut _____

MINING CLAIMS TRAVERSED
List numerically

..... see Attached list
(prefix) (number)

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

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

Magnetometer 19.52 Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: June 30/80 SIGNATURE: R. Middleton
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

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

TOTAL CLAIMS 27

OFFICE USE ONLY

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

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

ELECTROMAGNETIC

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

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

Magnetic
Barringer AM '04
1 ft
Helicopter
150 ft
35 min into photo mosaic
200 ft. *1/8 mile*
12.6

UNIT NO. ALLIANCE MATR. CENTER

<u>Claim No.</u>	<u>Days Credit</u>
P. 522256	19.52 days
P. 522257	19.52 days
P. 522258	19.52 days
P. 522259	19.52 days
P. 522260	19.52 days
P. 522261	19.52 days
P. 522262	19.52 days
P. 522263	19.52 days
P. 522264	19.52 days
P. 522265	19.52 days
P. 522266	19.52 days
P. 522267	19.52 days
P. 522268	19.52 days
P. 522269	19.52 days
P. 522270	19.52 days
P. 522271	19.52 days
P. 522272	19.52 days
P. 522273	19.52 days
P. 522274	19.52 days
P. 522275	19.52 days
P. 522276	19.52 days
P. 522277	19.52 days
P. 522278	19.52 days
P. 522279	19.52 days
P. 522280	19.52 days
P. 522281	19.52 days
P. 522282	19.52 days

GEOCHEMICAL SURVEY – PROCEDURE RECORD



Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
p. p. m.
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

HOYLE TWP M-287

THE TOWNSHIP OF
OF
WHITNEY

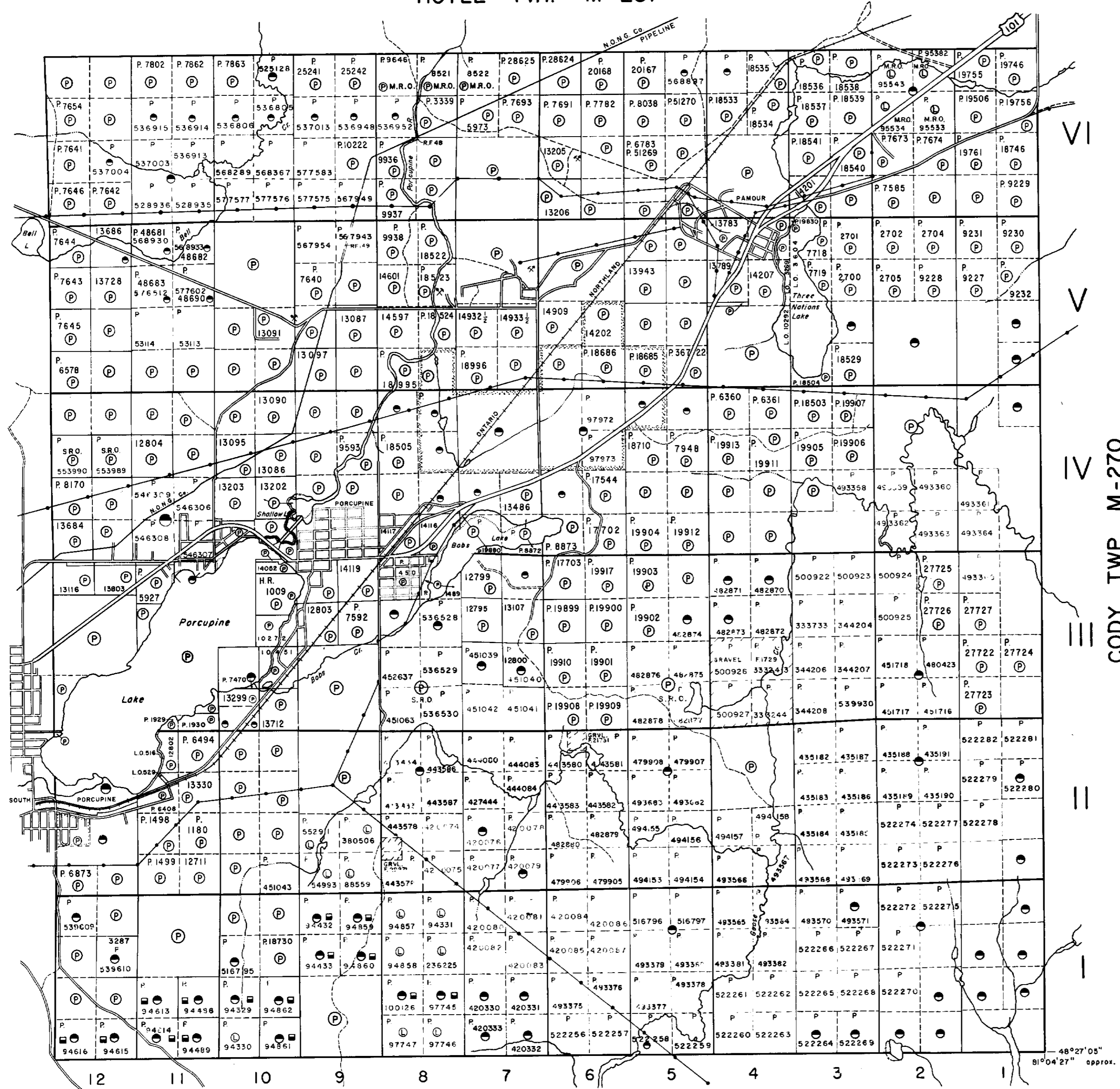
2.3384 DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

TISDALE TWP. M-315

CODY TWP. M-270



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 (—)
- S.R.O. PATENTED (—)
- M.R.O. LEASED (—)

NOTES

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

This township lies within the Municipality of CITY of TIMMINS.

No disposition of sand and gravel on lands north of O.N.Ry. from May 8, 1964 until further notice. Form D.O.M. file 550.13

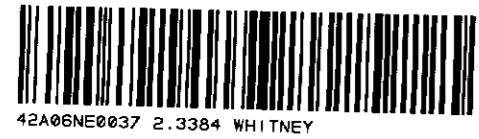
Any restakings within stippled area in Lots 5,6,7,8 Con 4 and 5 subject to rights and privileges granted to Pamour Porcupine Mines Ltd. for tailings disposal.

DATE OF ISSUE
JUL 24 1980
SURVEYS AND MAPPING
BRANCH

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

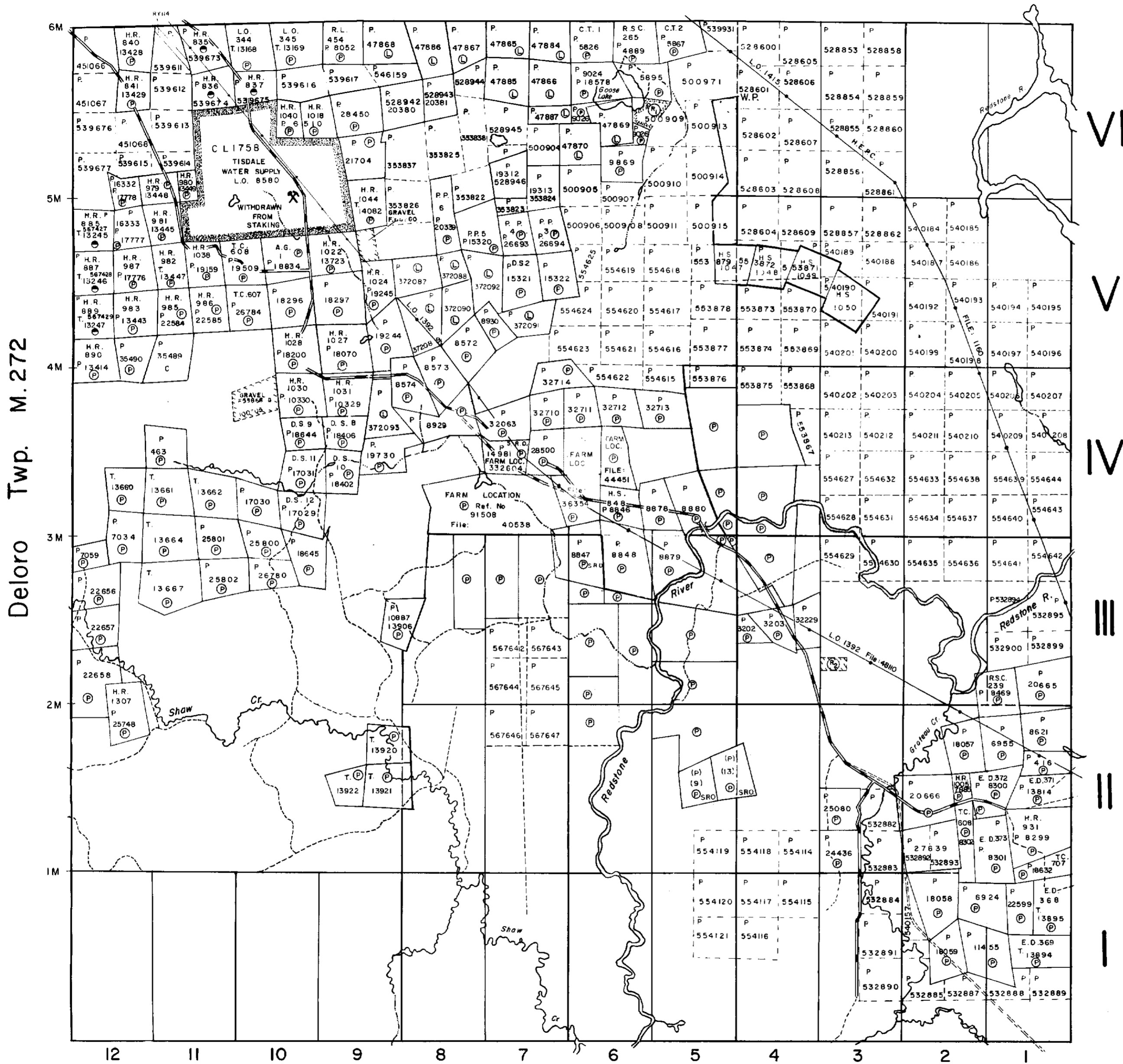
Date 10th. JULY 1974 (Rev.)

M.319



SHAW TWP. M-311

Whitney Twp. M.319



THE TOWNSHIP OF COCHRANE

SHAW
2.3384
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 (C.C.)
- PATENTED S.R.O. (P.S.R.O.)

NOTES

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

Unpatented Mining Claims in the Subdivided Portion of Shaw TP. are subject to Section 118 of the Mining Act M. of N. R. File No. 83.5

This Township lies within the Municipality of CITY of TIMMINS.

RESERVATIONS:

(R) Reserved for recreational purposes under Sec. 3 P.L.A. File 189543

Drawn from staking under Section 118 Mining Act (R.S.O. 1970).

File	Date	Disposition
W.97/77	86555	15/12/77 S.R.O.

DATE OF ISSUE
JUL 24 1980
SURVEYS AND MAPPING
BRANCH

PLAN NO.-M.311

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH



42A06NE0037 2.3384 WHITNEY

Eldorado Twp. M.276

TISDALE TWP. M-31



THE TOWNSHIP
OF
WHITNEY

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.
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	Ⓞ
S.R.O. PATENTED	Ⓟ
M.R.O. LEASED	Ⓛ

NOTES

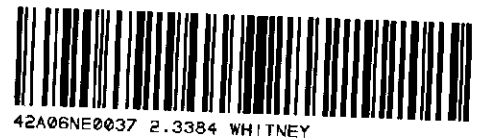
400' Surface rights reservation along the shores of all lakes and rivers.
This township lies within the Municipality of CITY of TIMMINS.

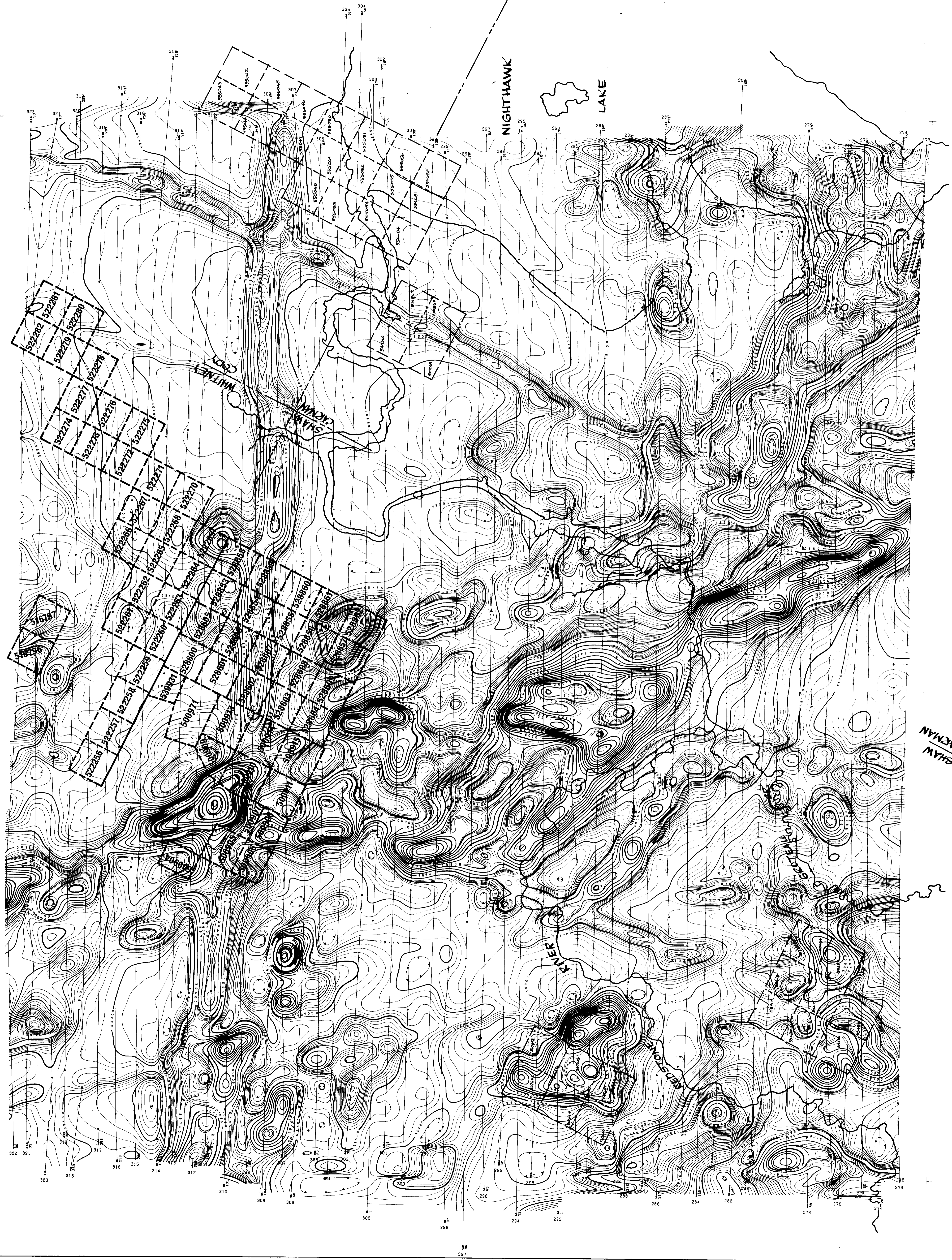
THE TOWNSHIP
OF
SHAW

INDEX MAP

of
Shaw & Whitney Twps.
Porcupine Mining Division
District of Cochrane, Ont.
Scale: 1 inch = 40 chains

- Ⓟ Rosario claims..... Shaw Twp.
- Ⓛ Rosario claims..... Whitney Twp.





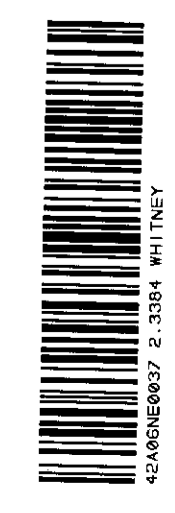
AMAX MINERALS EXPLORATION
 SHAW, CARMAN & CODY TOWNSHIPS, ONTARIO
 TOTAL FIELD AEROMAGNETIC SURVEY
 CONTIGUOUS PLAN MAP
 1:15,000

Flown by Aerodak - October 1979
 Contour Interval - 20 metres
 Instrument - Barringer AM 104 Proton Precession Magnetometer

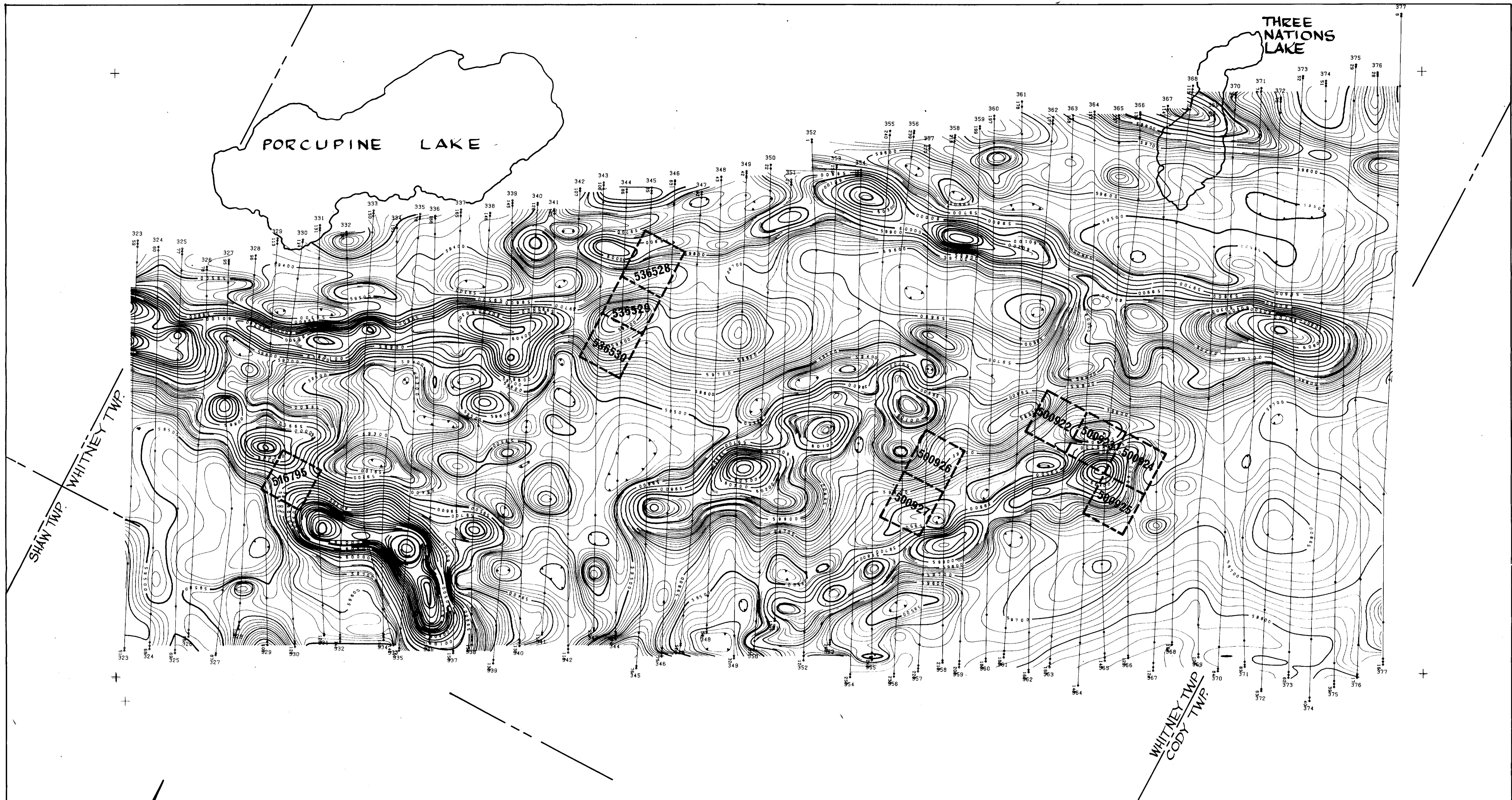
ROSARIO RESOURCES CANADA LTD.
 SHAW & WHITNEY TOWNSHIPS

June/1980

Map 5



230



AMAX MINERALS EXPLORATION
 WHITNEY- CODY TWP., ONTARIO
 TOTAL FIELD AEROMAGNETIC SURVEY
 CONTOUR PLAN MAP
 1: 15,000

Flown by Aerodat October 1979
 Contour Interval - 20 gammas
 Instrument - Barringer AM 104 Proton Precession Magnetometer

ROSARIO RESOURCES CANADA LTD.
 WHITNEY TWP.

June / 1980
R. H. ...

