



*J. P. Sheridan, P.ENG.*  
MINING GEOPHYSICIST

October 15, 1981

President and Directors  
Diepdaume Mines Limited  
Suite 1500  
4 King Street, West  
TORONTO, Ontario.  
M5H 1B6

**RECEIVED**

NOV - 21981

**MINING LANDS SECTION**

REPORT - Geophysical Exploration Programme  
Timmins Area Property  
Porcupine Mining Division, Ontario.

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During the months of November and December, 1980 and January, February and March, 1981, an Electromagnetic Survey was carried out on your Timmins area property located in the Township of Deloro in the Porcupine Mining Division of Ontario.

Summary of Results of the Exploration Programme

The Electromagnetic Survey revealed several Conductors of possible importance, the conductors representing zones of poor to moderate conduct and are similar to the response expected over zones carrying in the neighbourhood of 5 - 10% sulphides.

In general, the Conductors are long continuous zones which also could represent structural features of major amounts for exploration. One of the Conductors has old trenches located immediately south of the indicated conductor.

Summary of Recommendations

It is recommended that the property be held in good standing and that a future exploration programme on the property consist of prospecting in detail in the vicinity of the indicated Conductors, together with detailed mapping of any known out-crops and trenching of the Conductor zones where over-burden conditions permit to be followed by drilling if indications are positive.

### Terms of Reference

This survey was carried out by agreement with Diepdaume Mines Limited during November and December, 1980 and January, February and March, 1981. The area surveyed covered the complete area of Claims, numbered 540233 to 540245 inclusive. The survey was carried out on the north-south lines spaced 400 feet apart with a control base line named Base Line "A" crossing the centre of the property and located on Claims, number 540233 and 540239-41 inclusive. This survey was carried out under the direct field supervision of Philippe Roby of Senneterre, Quebec.

The total mileage surveyed was approximately 13 line miles and the total mileage of line cut was approximately 14.5 line miles.

### Methods Used and Presentation of Results

#### Electromagnetic Survey

The Electromagnetic survey employed the Sheridan-Kelk Dual Frequency Magniphase Electromagnetic Instrument operated in the horizontal coil configuration with a transmitter-receiver separation of 200 feet. In general, readings of amplitude and phase of the resultant field at the high frequency (2400 cps) were recorded at station intervals of 100 feet.

The results of the survey, as plotted on the accompanying map, show only the profile of the high frequency phase.

In general, any areas considered of interest, the station interval was reduced to 50 feet.

#### Discussion of Results

The main feature revealed by the survey is a long Conductor trenching east to north-east and has been indicated on the map as Conductor "A". This Conductor appears to be of a continuous strike length of approximately 5,000 feet. The Conductor reaches its strongest intensity in the neighbourhood of lines 32E and 36E on the base line and 150 feet north of the base line, respectively. A series of smaller conductors have also been noted with the same general strike direction.

In the immediate area of this property and particularly on the properties adjoining to the north, namely the Augdome Property and the Preston East Dome Property, gold mineralization has been found in significant commercial quantities associated with sulphide mineralization and frequently sulphide in the range of 5% total sulphide contained have been associated with the known ore zones on these properties.

The Conductors indicated on the accompanying map are of the order of magnitude which would generally be expected over zones in the 5 - 10% sulphide range. We, therefore, consider that the zones merit further exploration in the form of prospecting, trenching, mapping etc. to be followed by diamond drilling where the preliminary examinations of the area have failed to eliminate the conductors as a possible zone of commercial mineralization.

#### Conclusions and Recommendations

It must be concluded that the programme executed has discovered certain areas of possible mineralization located in favourable geology. The size of the indications is such that should gold mineralization be associated with the sulphides the structures could possible represent ore zones of commercial size.

It should also be borne in mind in conducting the follow-up work recommended that the nature of deposits in this area is generally a series of ore zones with short strike lengths individually (sometimes in the neighbourhood of 100 - 150 feet) with a number of these ore zones lining up a major structural feature. The survey, therefore, may have outlined one or more of these major structural features and the ensuing problem is now to delineate, if ore zones are located along these features.

All of which is respectfully submitted.



J.P. Sheridan, P.Eng.  
President.

JPS/jlm



**Report of Work**  
(Geophysical, Geological,  
Geochemical and Expenditures)

*Deloro Twp*

*# 451*

Instructions: - Please type or print.  
- If number of mining claims traversed exceeds space on this form, attach a list.

*P-540234*

The Mi



42A06NE0420 2.4236 DELORO

900

Type of Survey(s)  
**HORIZONTAL COIL ELECTROMAGNETIC SURVI**

Claim Holder(s) **DIEPDAUME MINES LIMITED**  
**RECORDED IN THE NAME OF J.P. SHERIDAN, P.ENG., M 15350**

Survey Company **DIEPDAUME MINES LIMITED**

Survey Dates (linecutting to office) **1 11 80 15 10 81** Total Miles of line Cut **13 1/5**

Name and Address of Author (of Geo-Technical report)  
**J.P. SHERIDAN, P.ENG., SUITE 1500, 4 KING ST. W., TORONTO, ONT. M5H 1B6**

**Special Provisions Credits Requested**

Instructions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	<del>40</del>
For each additional survey: using the same grid: Enter 20 days (for each)	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

**Mining Claims Traversed (List in numerical sequence)**

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
P	540234	40			
	540235	40			
	540236	40			
	540237	40			
	540238	40			
	540239	40			
	540240	40			
	540241	40			
	540242	40			
	540243	40			
	540244	40			
	540245	40			

**Man Days**

Instructions	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	(E.M.) Electromagnetic	40
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

**Airborne Credits**

Note: Special provisions credits do not apply to Airborne Surveys.

Instructions	Days per Claim
Electromagnetic	
Magnetometer	
Radiometric	

**Expenditures (excludes power stripping)**

Type of Work Performed **RECEIVED**

Performed on Claim(s) **OCT 30 1981**

**7 8 9 10 11 12 1 2 3 4 5 6**

**Calculation of Expenditure Days Credits**

Total Expenditures \$  + **15** =

Total Days Credits

**Instructions**  
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

**Report Completed**

Date of Report **Oct. 29, 1981**

Recorded Holder or Agent (Signature) *[Signature]*

**Certification Verifying Report of Work**

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying  
**J.P. Sheridan, P.Eng., Suite 1500, 4 King Street, West**

Date Certified **Oct 29 1981** Certified by (Signature) *[Signature]*

**RECORDED**  
OCT 30 1981  
Receipt No. ....

**RECEIVED**  
NOV 6 1981  
MINING LANDS SECTION

**For Office Use Only**

Total Days Cr. Recorded **480** Date Recorded **Oct 30/81** Mining Recorder *[Signature]*

Date Approved as Recorded **83.01.25** Regional Branch Director *[Signature]*

Total number of mining claims covered by this report of work. **12**



Mining Lands Comments


To: Geophysics *Mr. Barlow.*

Comments

<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date <i>Jan 3/83</i>	Signature <i>[Signature]</i>
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To: Geology - Expenditures

Comments

<input type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date	Signature
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To: Geochemistry

Comments

<input type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date	Signature <i>LD</i>
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To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1982 10 29

2.4236

Mr. J.P. Sheridan  
Suite 1500  
4 King Street West  
Toronto, Ontario  
M5H 1B6

Dear Sir:

RE: Geophysical (Electromagnetic) Survey submitted  
on Mining Claims P 540234, et al in the Township  
of Deloro

Thank you for the information concerning the instrumentation used for your survey delivered this morning by Mr. Pearson. However, we still require the duplicate set of maps we returned to you with our letter dated July 9, 1982. Upon receipt of these maps, a statement of assessment work credits will be issued.

For further information, please contact Mr. F.W. Matthews at 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

July 9, 1982

2.4236

Mr. J.P. Sheridan, P. Eng.  
Suite 1500  
4 King Street West  
Toronto, Ontario  
M5H 1B6

Dear Sir:

Re: Geophysical (Electromagnetic) Survey submitted  
on Mining Claims P 540234 et al in the Township  
of Deloro

Enclosed are the plans (in duplicate) for the above-mentioned survey. H.L.E.M. maps need the readings i.e., raw data at each station marked on the maps. Also the inphase and out of phase readings must be plotted.

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

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1316

AJBarr/amc

Encl.

cc: Mining Recorder  
Timmins, Ontario

October 19, 1982

Mr. Roger Barlow  
Geophysicist  
Ministry of Natural Resources  
Land Management Branch  
Whitney Block Room 708  
Queen's Park 77 Greville St  
Toronto, Ontario  
M7A 1W3

RE: Geophysical (Electromagnetic) Survey submitted on  
Mining Claims P 540234 et al in the Township of Deloro.  
Your file: 2.4236.

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Dear Mr. Barlow,

Further to our discussion today, let me explain that our instrument, the Magniphase E.M. Instrument, measures essentially phase and amplitude of the resultant phase at the receiver position. The transmitter and receiver are, of course, operated in a horizontal loop configuration.

With our unit the out-of-phase component is measured on a scale on which 100 units equals 30 degrees and thus 3.3333 units equals 1 degree of phase component or approximately 1% out-of-phase component for small anomalies. The unit is sensitive to changes in the out-of-phase component of one unit. We thus have a theoretical capability of measuring an anomaly as small as .333% of out-of-phase component.

This survey is carried out to detect very small conductors of very poor conductivity. We are looking for targets as small as 5 ft. in width with total sulphide content of 5% or 10 ft. width with total sulphide content of 3%.

We are using a frequency of 2400 cps.

At these parameters and with a target in mind as stated, the plotting of the amplitude becomes redundant and misleading. In addition, the plotting of the actual field reading may also be misleading and we have for the past many years followed a process of plotting the readings in profile form, out-of-phase only, in order to best outline any very small conductors.



In the event that a major conductor is encountered, readings at two frequencies (800 cps. and 2400 cps.) are then recorded and the ratio of the two out-of-phase responses is then indicative of the conductivity of the conductor.

In this survey no major conductors were encountered and none were expected.

At the sensitivity and frequency employed in the survey, the amplitude responses from topographical effects, short cable effects etc. greatly exceed the responses from the small poor conductors we are seeking. Hence the writer believes, the plotting of the amplitude or any reference to the amplitude would tend to mislead rather than inform the observer.

I wish to thank you for your consideration of this matter.

Yours very truly,

J. P. SHERIDAN, P. Eng.

GEOTECHNICAL REPORT APPROVAL

MINING LANDS COMMENTS:

L.D.

- no readings on the map  
- anything else.



GEOPHYSICS

Mr. Bailow

4/6/82 Map - needs readings  
Must plot surface and out of phase readings  
ONLY OUT OF PHASE Plotted!

DATE:

JUNE 15/82

APPROVED

SIGNATURE:

Ry [Signature]

WISH TO SEE AGAIN WITH CORRECTIONS



GEOLOGY - EXPENDITURES

DATE:

APPROVED

SIGNATURE:

WISH TO SEE AGAIN WITH CORRECTIONS



GEOCHEMISTRY

DATE:

APPROVED

SIGNATURE:

WISH TO SEE AGAIN WITH CORRECTIONS

2.4236

1981 11 04

Deepdaume Mines Limited  
4 King St. W.,  
Toronto, Ontario  
Attn; Mr. J.P. Sheridan

Dear Sir;

Re: Geophysical (Electromagnetic) survey on mining claims P 540233  
et al in the Township of Deloro.

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Enclosed is the above report in duplicate. This is the third and  
fourth copy that you have sent us and we already have a complete  
report on file 2.4236.

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;

1981 11 02

2.4236

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 540234 et al in the Township of Deloro.

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

Joan Skura

cc: Diepdaume Mines Limited  
Toronto, Ontario  
Attn: J.P. Sheridan

OFF : 363-4477  
RE : 447-7566

15TH FLOOR  
4 KING ST. WEST, TORONTO

*J. P. Sheridan*, P.ENG.  
MINING GEOPHYSICIST

October 26, 1981

Ministry of Natural Resources  
Mining Recorder's Office  
60 Wilson Street  
TIMMINS, Ontario.  
P4N 2S7

Dear Sirs:

Re: Electromagnetic Survey  
Diepdaume Mines Limited

Please find enclosed herewith two copies of a report on an Electromagnetic Survey for Diepdaume Mines Limited together with a Geophysical-Geological-Geochemical Technical Data Statement, filed in duplicate.

Kindly record the assessment work carried out on these claims.

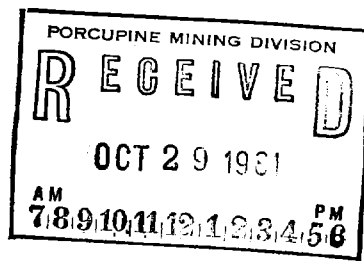
Yours very truly,

J.P. Sheridan, P.Eng.



JPS/jlm

Enc.



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NOV - 2 1981  
MINING LANDS SECTION  
MINING LANDS SECTION



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.

RECEIVED

NOV - 2 1981

MINING LANDS SECTION

Type of Survey(s) Horizontal Coil Electromagnetic Survey

Township or Area Deloro Township

Claim Holder(s) Diepdaume Mines Limited

Recorded in the name of J.P. Sheridan, P. Eng.

Survey Company Diepdaume Mines Limited

Author of Report J.P. Sheridan, P. Eng.

Address of Author 4 King St. W., Toronto, Ontario.

Covering Dates of Survey November 1980 - October 1981  
(linecutting to office)

Total Miles of Line Cut 14 1/2 miles

MINING CLAIMS TRAVERSED  
List numerically

P	540233
(prefix)	(number)
P	540234
P	540235
P	540236
P	540237
P	540238
P	540239
P	540240
P	540241
P	540242
P	540243
P	540244
P	540245

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 40

-Magnetometer \_\_\_\_\_

-Radiometric \_\_\_\_\_

-Other \_\_\_\_\_

Geological \_\_\_\_\_

Geochemical \_\_\_\_\_

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

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

DATE: Oct. 26, 1981 SIGNATURE: [Signature]  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 63.1104

Previous Surveys

File No.	Type	Date	Claim Holder

RECEIVED  
OCT 29 1981  
12:34:50 PM

TOTAL CLAIMS 13

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 725 Number of Readings 725
Station interval 100 feet Line spacing 400 feet
Profile scale One inch = 100 units = 30%
Contour interval n/a

MAGNETIC

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

ELECTROMAGNETIC

Instrument Sheridan-Kelk Magniphase E.M. Unit
Coil configuration Horizontal
Coil separation 200 feet
Accuracy +/- I Unit (+/- 1/3 of 1%)
Method: [ ] Fixed transmitter [ ] Shoot back [X] In line [ ] Parallel line
Frequency 2400 CPS (specify V.L.F. station)
Parameters measured In phase and out of phase components of resultant field (out of phase only plotted).

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

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             | (—)     |
| PATENTED S.R.O.       | (—)     |

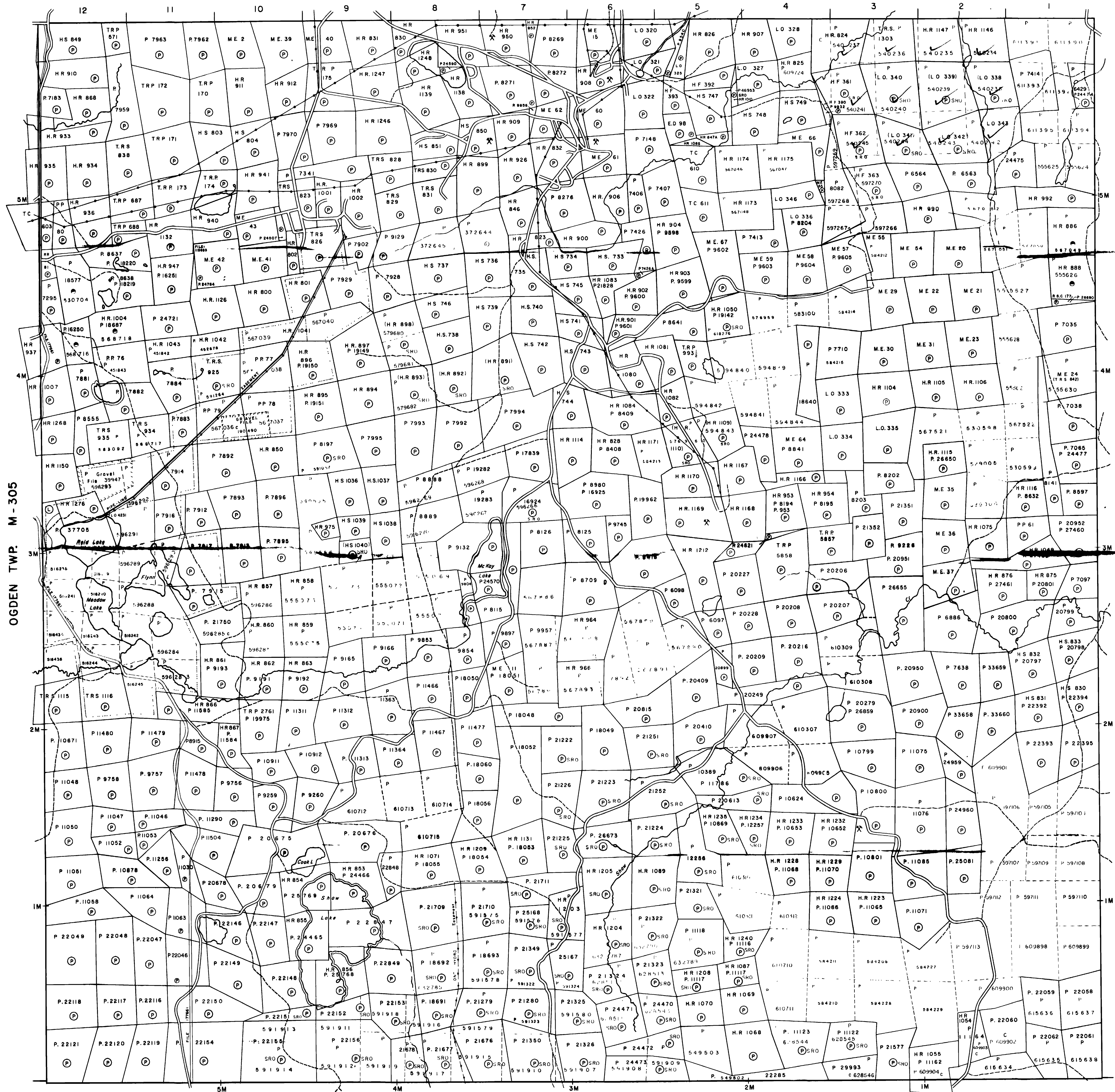
NOTES

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

For status of fraction situated between Mg. Claims: HR.1132; HR.947 & M.E.42 see File No.119653

Mining claims within the area shown thus are subject to rights & privileges granted under an Easement Order dated May 19,1937 to Delinte Mines Ltd

This township lies within the Municipality of CITY OF TIMMINS.



24236

DATE OF ISSUE

DEC - 2 1981

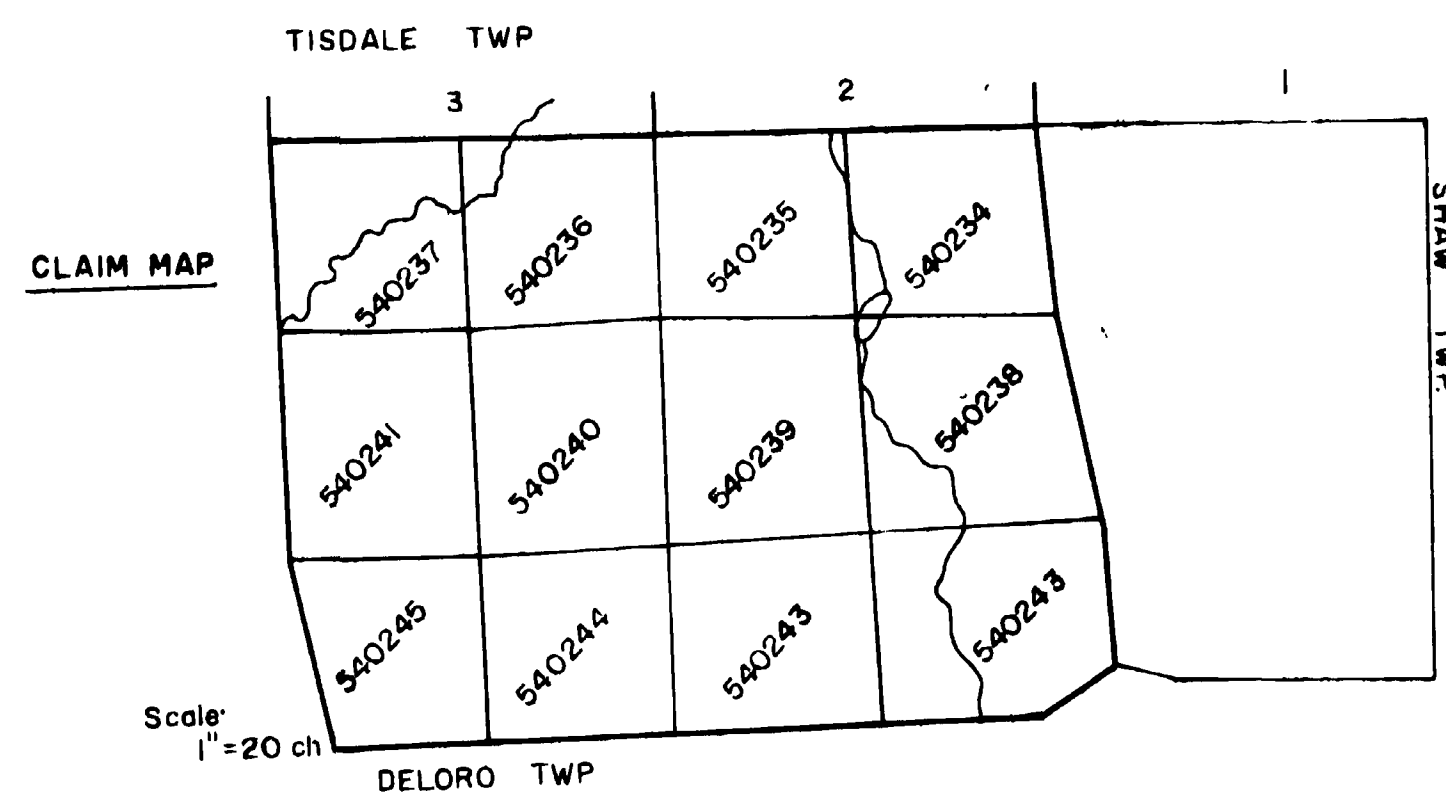
Ministry of Natural Resources  
TORONTO

PLAN No. - M-272

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH







CHEVALIER GROUP PRESOR (DELORO TWP)

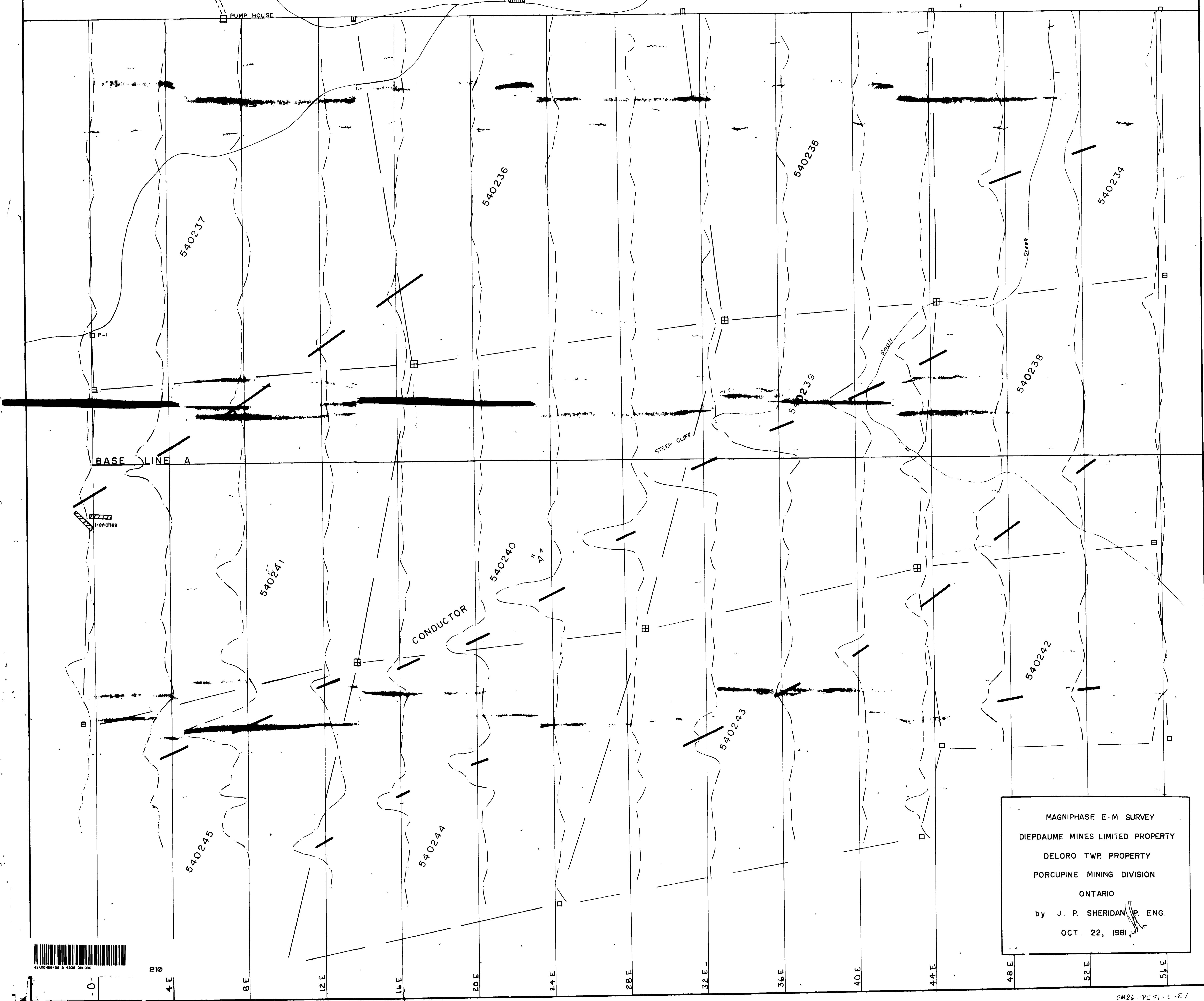
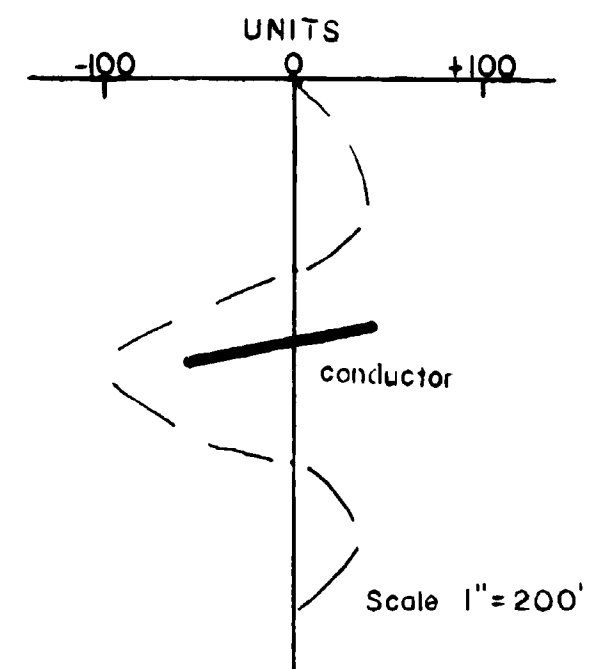
E. M. MAGNIPHASE

200' CABLE

B. G. AMP - 190

PHASE - 180

SCALE 1" = 200'  
1" = 100 units



MAGNIPHASE E-M SURVEY  
DIEPDAUME MINES LIMITED PROPERTY  
DELORO TWP. PROPERTY  
PORCUPINE MINING DIVISION  
ONTARIO  
by J. P. SHERIDAN P. ENG.  
OCT. 22, 1981

