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**THE MAGINO JOINT VENTURE**

**GEOLOGICAL SURVEY**

**OF THE**

**A, B, C**

**CLAIM GROUP**

**FINAN TWP. ONTARIO**

**RECEIVED**

10/20/82

**MINING LANDS SECTION**

**BY: DAVID PARBERY  
RAYMOND J. MONGEAU**

**October, 1982**

## INTRODUCTION

This report summarizes the geological survey carried out on claims, held by The Magino Joint Venture, in the Goudreau area of Northern Ontario.

## LOCATION & ACCESS

Access to the claim group is from Highway 17, (40 km north of the City of Wawa) along a gravel road that leads south east of the town of Dubreuilville to the Goudreau Lochalsh road. The claims area located 8 km west from the above intersection in Finan Township (District of Algoma). The Algoma Central Railway line passes through the Community of Goudreau. The Goudreau-Lochalsh road cuts across the southern portion of the claim group.

## PREVIOUS WORK

The area around the Community of Goudreau has been prospected for iron and gold since about 1916. Gold was discovered in 1918 and mining continued sporadically until 1940 at the Magino gold mine.

## CLAIM GROUP

The claim which makes up this property consists of the following claims (see Location Map):

S.S.M. 581490 - 581503 inclusive  
581565 - 581583 inclusive  
581667 - 581672 inclusive  
581948 - 581953 inclusive.

## PRESENT WORK

The 46 claims as described above have been geologically mapped on a scale of 1" equal to 200' (1:2400). A grid with cross lines spaced 400' and totalling 40 line miles covers this claim group. The mapping was carried out by Mr. David Parbery and supervised by Mr. Ray Mongeau.

## PRESENT OWNERS

These claims are held as to 50/50 by 108898 Canada Limited, a wholly owned subsidiary of Cavendish Investing Ltd. at 130 Adelaide Street West, Suite 2210, Toronto, Ontario and McNellen Resources located at 18th Floor, 100 Front Street West, Toronto, Ontario.

## GEOLOGY

The major rock types found on the claim block are illustrated in Figure 2 and include felsic and intermediate volcanics which are

FIG. 1  
LOCATION MAP

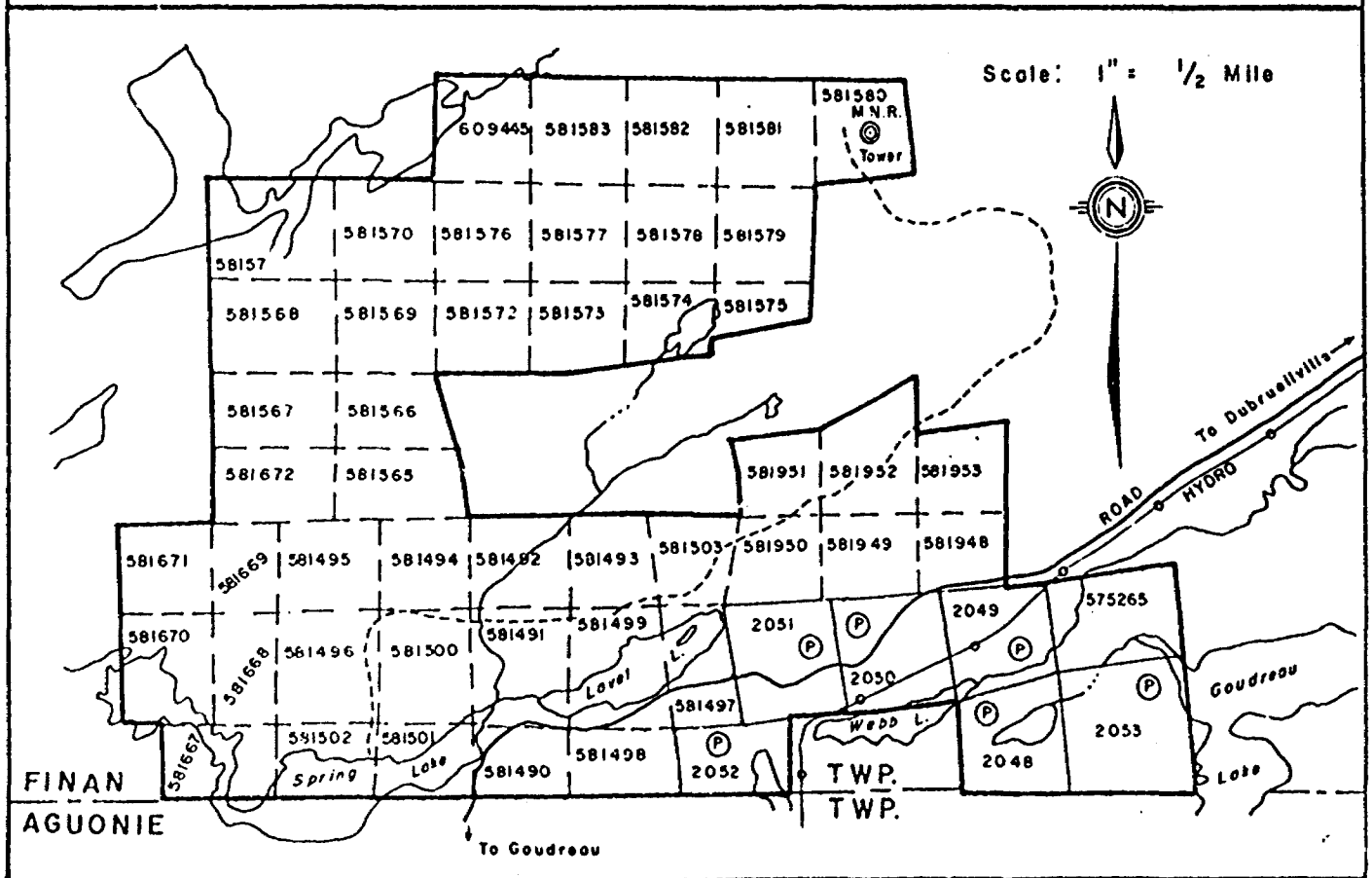
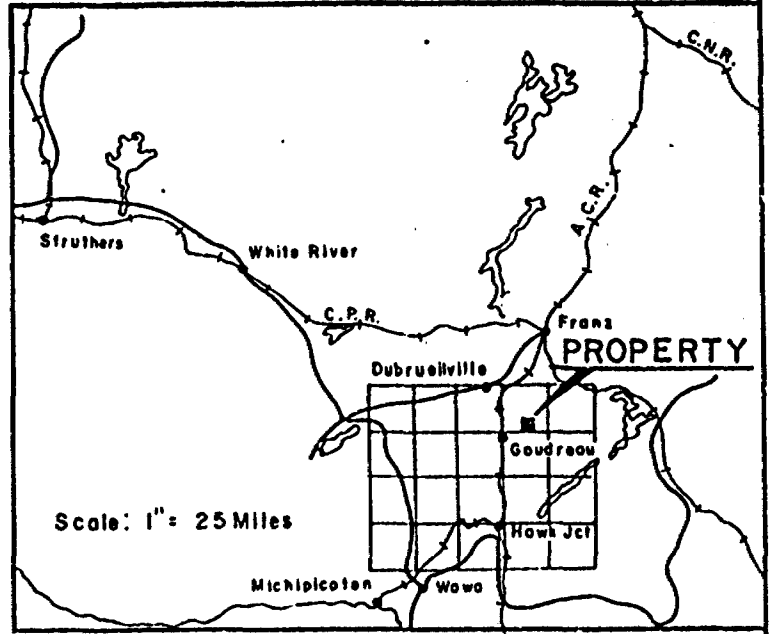
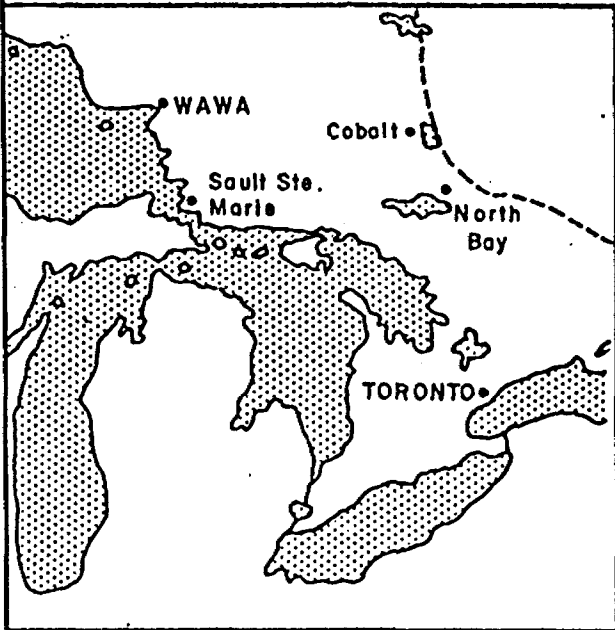
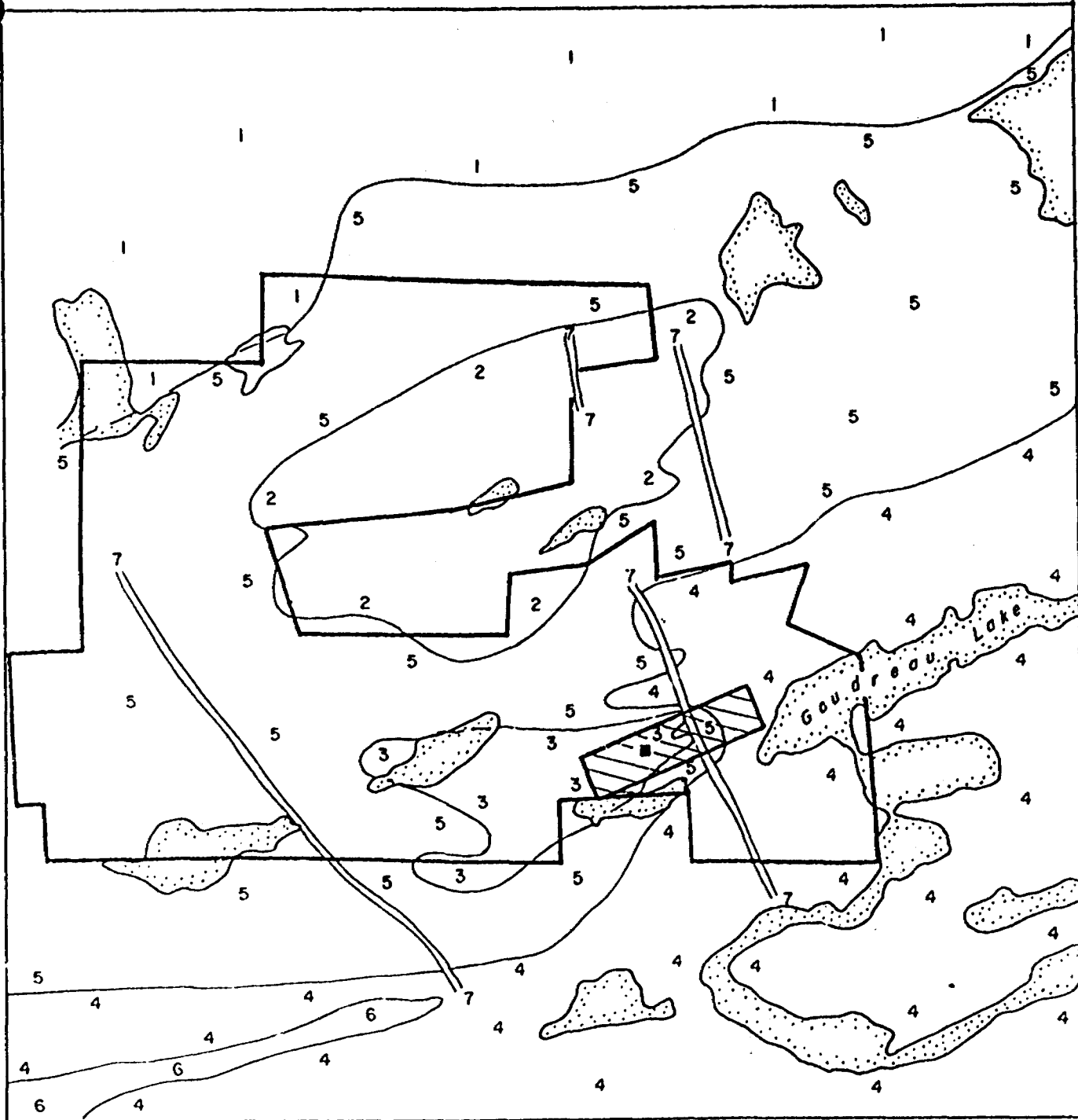


Fig. 2  
REGIONAL GEOLOGY



**LEGEND**

- 1 Granite
- 2 Diorite
- 3 Granodiorite
- 4 Rhyolite
- 5 Andesite
- 6 Iron Formation
- 7 Diabase Dyke

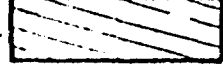


SCALE: 1 inch = 1/2 mile

MAGINO JOINT VENTURE PROPERTY



DEVELOPMENT AREA



SHAFT



intruded by felsites, granodiorites and diorites. Later intrusive diabase dykes cut all other formations. Detailed descriptions of rock types found are given in the following paragraphs, and outcrop locations are presented on the accompanying geological maps.

### TABLE OF FORMATIONS

<u>Rock Type</u>		<u>Map Code</u>
Felsic volcanics	- porphyry	1a
	- fragmental	1b
Intermediate volcanics	- massive	2a
	- pillowed	2b
Diorite		3
Granodiorite		4
Felsite		5
Diabase		6

#### Felsic Volcanics

Two types of felsic volcanic rocks are found in the area. The most common type is an aphanitic to fine-grained porphyritic acid volcanic. Its quartz phenocrysts are blue, rounded, average less than 2mm in diameter and generally constitute less than 2% of the rock. The feldspar phenocrysts are cream-white to buff-yellow in colour, 2-5mm in length with a length to width ratio of 2:1 - 4:1. The feldspar phenocrysts are mostly sheared and sericitic, making up 10 - 15% of the rock. This rock is referred to as a quartz-feldspar porphyry (QFP) in the field.

The second felsic volcanic rock type is a fragmental (likely pyroclastic), and is found in two locations. It consists of grey to white 20 x 3 cm clasts, elongate in the direction of foliation in a darker grey-green (mineralogically similar) groundmass. The clasts constitute 30% of the rock.

#### Intermediate Volcanics

The intermediate volcanics are dominant in the north and west sections of the claim group. These rocks are divided into 2 categories; "massive" and "pillowed". The pillowed volcanics consist of very fine-grained to aphanitic somewhat chloritic ellipsoids averaging 60 x 20cm in size. Tops directions are to the northwest.

The "massive" variety may also be pillowed, but, due to strong alterations, jointing, and overburden, discrete pillows are difficult to recognize. The intermediate volcanics are more chloritic, darker in colour and have a wider grainsize range (aphanitic to medium-grained) than do the felsics.

In some localities, the coarser-grained (massive) volcanics are difficult to distinguish from the diorite.

### Diorite

The diorite intrudes the intermediate volcanics in the north and north-east sections of the claim group. The highest ground in the area is made up of the diorite. This intermediate intrusive consists of plagioclase, pyroxene (altering to an amphibole with chlorite). In some samples, less than 2% quartz has been seen. Fresh rock is dark-green, while in out crop it is a brown-green. The diorite is mostly medium-grained with a sub-ophitic texture.

### Granodiorite

A large mass of granodiorite outcrops immediately to the south of the grid area (see Figure 2). The Magino Gold Mine is located within this granodiorite plug. Few, isolated outcrops occur along the Goudreau road, south of Lovel Lake and on the north west shore of that same lake. The latter outcrop is extensively trenched. A feldspathic/sericitic phase of the granodiorite is located some 1,600' south of Lovel Lake, on the Township line.

The granodiorite is light grey and shows considerable variation in texture. The variation is due to shearing of parts of the stock. Major minerals are plagioclase, quartz, k-feldspar and chlorite (from amphiboles). The rock is mostly medium-grained except where sheared. Shearing has altered the feldspars to secondary sericite and epidote. Chlorite often occurs as 2.5 x .5cm wispy stringers or veinlets, subparallel to the east-west foliation.

Quartz-tourmaline veins cut the intrusive along fractures that are parallel and sub-parallel to the plane of the foliation. Later quartz-tourmaline veins strike due north and displace the westerly veins. These veins are up to 35cm in thickness but average 1cm.

Many areas of the granodiorite are intensively silicified. The silicified zones occur with the westerly trending quartz-tourmaline veins and carry about 2% sulphides.

### Felsite

Felsite sills are found in the north west section of the claim group. They are aphanitic to very fine-grained, grey-coloured on fresh surfaces and white on weathered surfaces. The sills are less than 70' in width and are heavily jointed.

### Diabase

Diabase dykes are fairly common in the area. They strike northerly, cutting across the regional trend. They have widths of less than 100' and are continuous for long distances. They are fine-to-medium-grained with much of the pyroxene altered to hornblende.

### Recent and Pleistocene

Unconsolidated gravels and sands are found throughout the area. They are the result of deposition by glaciers and outwash of material from moraines. Most of the area covered by poplar and birches are underlain by gravels and sand, whereas that of swamps and pines by clay and mud.

### STRUCTURAL GEOLOGY

The felsic volcanics of the area are considered to represent the core of an anticline with the younger intermediate volcanics lying above them. (ODM Report, Vol. XLIX, Part III 1940 - Geology of the Goudreau - Lochalsh Area). This stratigraphy is supported by the presence of pillowed intermediate flows with a tops direction to the north - the felsics being to the south-east of these flows. Contacts on the north limb of the anticline dip to the north.

Regional metamorphism has imposed a foliation ( $050^{\circ}$  -  $070^{\circ}$  with a steep northerly dip) on all of the volcanics and corresponds with the general strike of the major anticline.

In a few locations, small scale kink-folding, contained by the plane of the foliation, is found in the felsic volcanics.

Previous geology map shows prominent northerly faulting. The northerly striking diabases and quartz-tourmaline veins may be a result of fracture-filling of some of the those faults. Random quartz veining is found throughout the area with most veins averaging 10cm in width.

### HISTORICAL GEOLOGY

The oldest rocks of the claim group area are felsic volcanics. Some of these are of definite pyroclastic origin. The rest are probably pyroclastic in origin, likely being water lain tuffs. Pillowed volcanics of intermediate composition were extruded over the felsics.

Following the volcanic activity, large scale folding took place. It is at this time that the volcanics were regionally metamorphosed and folded. The folded volcanics were then intruded by granodiorite and diorite.

The granodiorite plugs have been intruded by quartz-tourmaline veins and silicified in westerly trending zones up to several feet in thickness. The silicification is restricted to the granodiorite and the immediately adjacent volcanics.

The diorite seems unaffected by any process other than jointing.

Late diabase dykes appear to have followed pre-existing faults.

The area has undergone erosion and glaciation with the deposition of glacial sands and gravels, giving rise to the topography seen today.

#### ECONOMIC GEOLOGY

The only mineral of economic importance in the claim group and adjacent area is gold. Gold was mined at the Magino Gold Mine during the 1935-1940 interval. It is associated with the east-west striking quartz-tourmaline veins and silicified zones. Some of the surrounding greenstones are also silicified. The silicified rock occurs in zones up to 1m wide, but pinches and swells along strike, in some places disappearing altogether, (visual inspection).

The silicification of the granodiorite took place before the intrusion of the diabase dykes. The siliceous zones are likely the result of intrusion of silica-rich, gold-bearing fluids into fractures and shears of the granodiorite.

Sand and gravel is abundant and used locally for road construction.

#### SUMMARY

Geological and geophysical surveys have been carried out over 46 claims held in the Goudreau area of Northern Ontario during the period June 16 - August 27. Able assistance was given by S. Mongeau and N. McDonald.

Data collected during that time is summarized above and on the accompanying maps.

Geologically, the Goudreau area consists of Pre-Cambrian metavolcanics, intruded by several felsic to intermediate stocks and cut by north trending diabases. Gold mineralization in the granodiorite stocks is evidenced by silicified zones and quartz tourmaline veining.

Approved by:

Raymond J. Mongeau, Manager

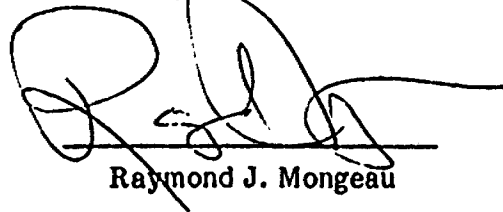


**CERTIFICATE**

I, Raymond J. Mongeau, of the City of Mississauga of the County of Peel of the Province of Ontario, do hereby certify that;

1. My name is Raymond J. Mongeau with offices at Suite 2210, 130 Adelaide Street West, Toronto, Ontario M5H 3P5;
2. I am a graduate of St. Frances Xavier University Antigonish, Nova Scotia, with a B.Sc. in Geology and I have been practicing my profession for 21 years.
3. The work described herein was carried out under my supervision and I made visits to the property to inspect work on June 25, July 7, August 16, and August 26, 1982.

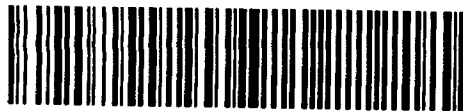
DATED AT Toronto, Ontario this 16th Day of November, 1982.



Raymond J. Mongeau

**DAVID PARBERGY, B.Sc., Geology**

Mr. Parbery is a graduate of the University of Western Ontario. He has carried out field geological mapping with Esso Minerals, Shell Minerals, and Manitoba Mines Branch during the 1977 - 1981 period.



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**RECEIVED**

NOV 20 1981

**MINING LANDS SECTION**

**BY: RAYMOND MONGEAU**

## 1.0 SUMMARY

A magnetic and electro-magnetic survey were carried out over the entire group of unpatented claims held by the Magino Joint Venture. The results, when compared with known geology have shown the following:

- (a) There are no electromagnetic conductors of significance on the entire claim group.
- (b) Magnetic anomalies are found over known shear zones associated with granodiorite on the north shore of Lovel Lake. Gold mineralization is found in shear zones in the Webb Lake Stock. A detailed magnetic survey may be usefull in extrapolating known mineralized shear zones beyond the limits of the Magino Mine.
- (c) There is no further interest in claim block 'C' and the western half of claim block 'B'.

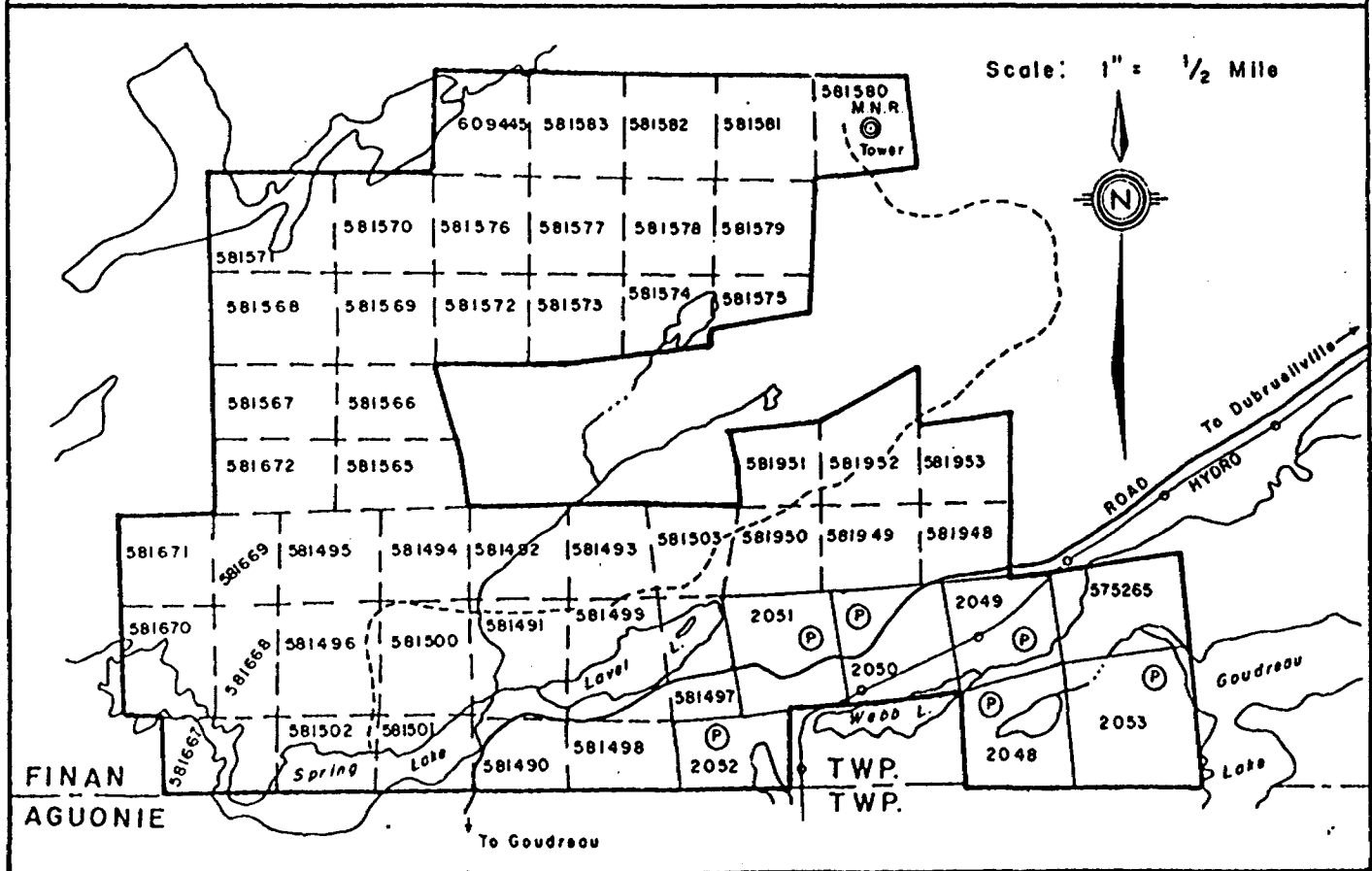
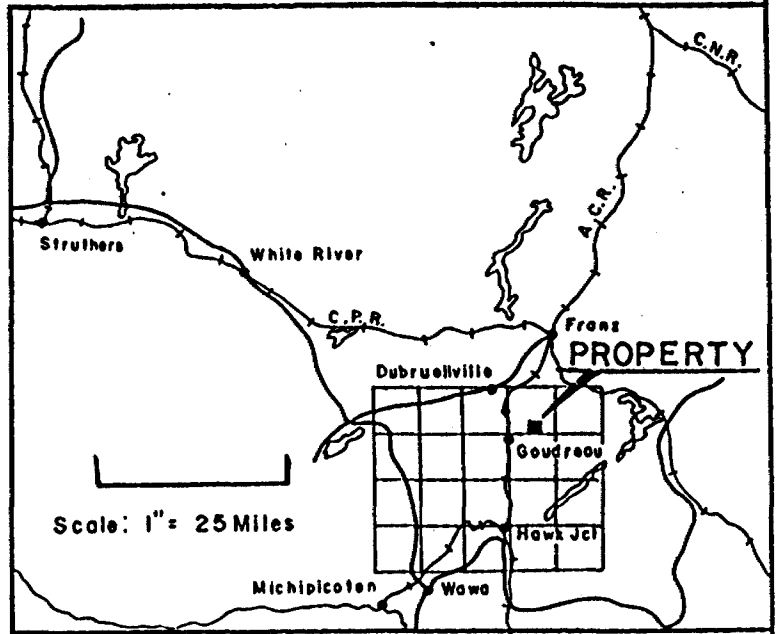
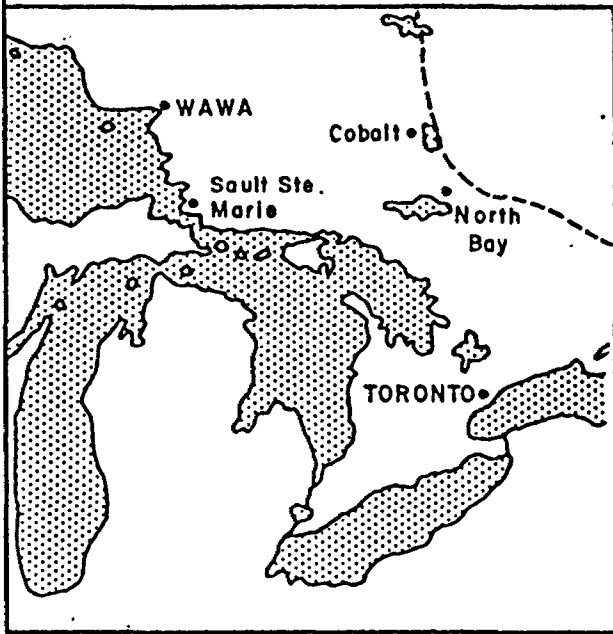
## 2.0 INTRODUCTION

### Location and Access

The Magino Joint Venture Project is located in the southern half of Finan Township in the District of Algoma, 30 miles north east of Wawa, Ontario (Figure 1). The property can be reached by road from Wawa or alternatively, by rail from Wawa/Sault Ste. Marie, to Goudreau Station and a short drive (4 miles) to the mine site.

The quality of road access within the area of the claim group is good. The gravel road from Highway 17 through Dubreuilville and to the Goudreau-Lochalsh road is generally in good condition except during spring break up.

FIG. 1  
LOCATION MAP



The claim block covered by the geophysical surveys discussed in this report and outlined in Figure 1 is jointly held by:

McNellen Resources Ltd.  
18th Floor, Royal York Hotel  
100 Front Street  
Toronto, Ontario

- and -

108898 Canada Ltd.  
Suite 2210, 130 Adelaide Street West  
Toronto, Ontario M5H 3P5

This report on geophysical surveys was prepared by the Magino Joint Venture.

The work covered in this report was carried out on the 47 unpatented claims shown on Figure 1 and listed in Table 1.

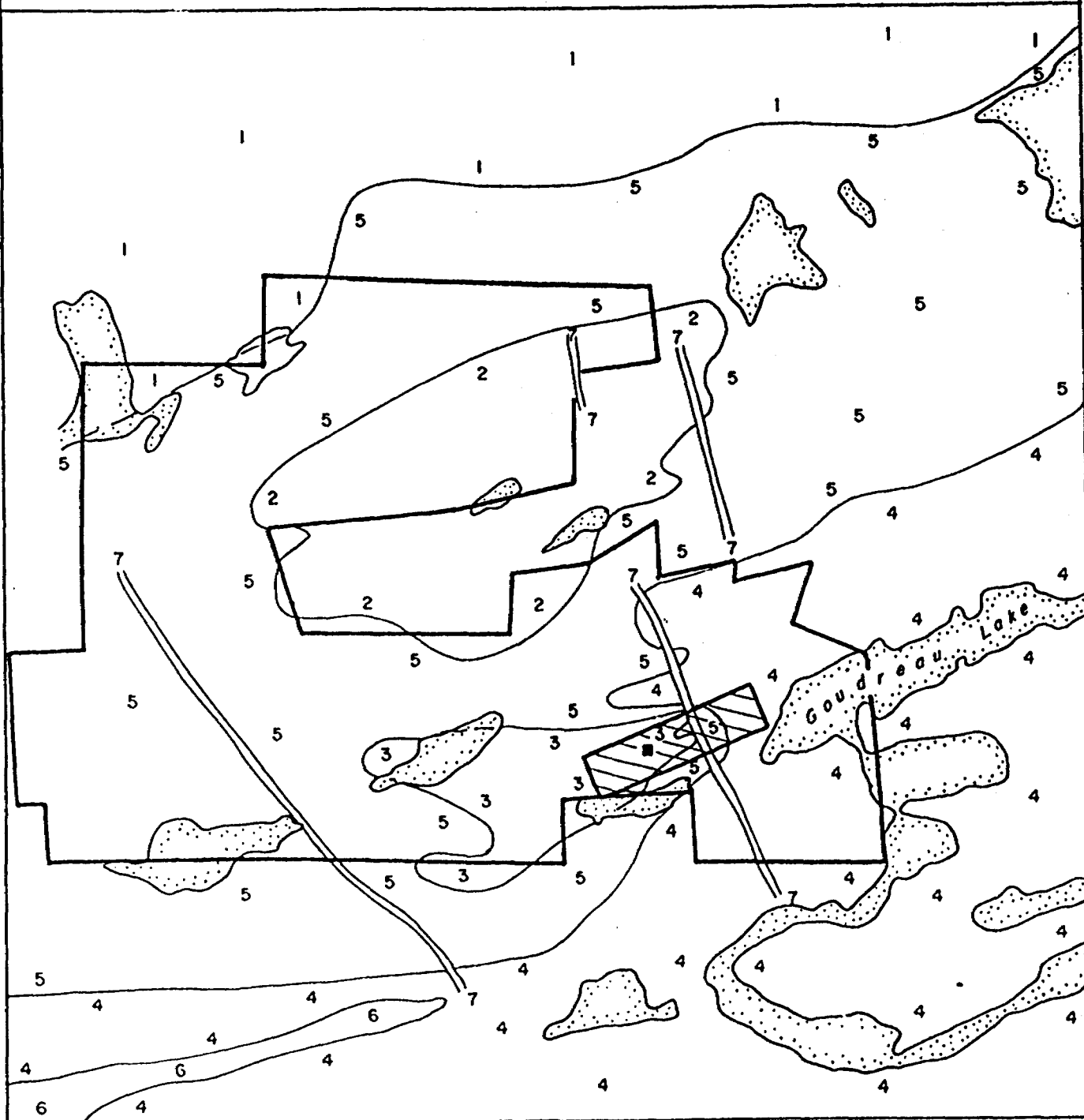
The surveys were carried out over a period of 8 weeks between June 25, 1982 and August 15, 1982.

### 3.0 PREVIOUS WORK AND SCOPE OF PRESENT WORK

The Magino Joint venture is currently evaluating the Magino Gold Mine (located on claim SSM 2049, Figure 1) and has been discussed in a report entitled 'The Magino Gold Mine, A Technical and Economic Evaluation'. With the exception of some trenching on the north shore of Lovel Lake (claim no. SSM 581499, Figure 1), there is no known previous work on the unpatented claims covered in this report.

The general geology of the area covered by this geophysical survey is illustrated in Figure 2 and is discussed in a report by R. Mongeau

Fig. 2  
REGIONAL GEOLOGY



**LEGEND**

- 1 Granite
- 2 Diorite
- 3 Granodiorite
- 4 Rhyolite
- 5 Andesite
- 6 Iron Formation
- 7 Diabase Dyke

SCALE: 1 inch = 1/2 mile

MAGINO JOINT VENTURE  
PROPERTY

DEVELOPMENT

AREA

SHAFT



and D. Parbery entitled 'The Magino Joint Venture: Geological Survey of the A, B, C Claim Groups, Finan Twp., Ontario'.

The geophysical surveys carried out were on 39.4 line miles of cut survey line. The geophysical surveys covered in this report are: (1) magnetometer, and, (2) Very-Low-Frequency (V.L.F.) electro-magnetometer (E.M.).

In total, there are 1,698 stations at which there were readings taken. These are illustrated on maps accompanying this report.

#### 4.0 TYPES OF INSTRUMENTS USED

The type of instruments used and their method of operation are described in manufacturer's manuals found in Appendix 1.

The electromagnetic survey was carried out using a Scintrex Scopas SE-81 V.L.F. Receiver tuned to frequency 17.8 k HZ with transmitting station located at Cutler Maine.

The magnetometer used for the survey was a Scintrex MP-2 Proton Precision magnometer.

#### 5.0 RESULTS OF PRESENT SURVEY

The electromagnetic survey failed to locate any strong electrical conductors that would signify the presence of any more occurrences of sulphide mineralization. Some minor cross overs (changes from negative to positive) are found throughout the claim block, however their amplitude and strength are weak and would suggest the presence of phenomena such as water filled shear zones and/or swampy wet ground.

The magnetic survey located and highlighted the presence of felsic volcanic rocks on claim SSM 581952. These volcanic rocks have a

low magnetic signature and are illustrated as mag. lows on the accompanying maps to this report.

Of particular economic significance is the magnetic anomaly located on the north shore of the Webb Lake stock. This anomaly is located over an area of sheared granodiorite which is a similar geological environment in which the gold mineralization of the Magino Mine is found.

A 4,000 gamma anomaly located between the road and the southern boundary of claim, SSM581949 is also located over granodiorite and has a linear trend that is consistent with the strike of gold bearing shear zones of the Magino Mine.

#### 6.0

#### RECOMMENDATIONS

- (a) The magnetic survey carried out over claim block should be extended onto the patented ground in the vicinity of the mine and over Lovel Lake. Further, readings should be taken every 25 feet to insure that any shear zone or multiple of shear zones be picked up and extended beyond the limits of the mine.

Upon completion of this extension of the present magnetic survey, a comparison of the results should be made with the location of known gold bearing zones, and tested with a minimum of 3 diamond drill holes.

- (b) Very Low Frequency (V.L.F.) electromagnetic surveys should be discontinued as their results are generally inconclusive.
- (c) Results obtained from geophysical and geological surveys carried over claimblock A, B, and C suggest that no further work be carried out on claim block C and the western half of claim block B.




**CERTIFICATE**

I, Raymond J. Mongeau, of the City of Mississauga of the County of Peel of the Province of Ontario, do hereby certify that;

1. My name is Raymond J. Mongeau with offices at Suite 2210, 130 Adelaide Street West, Toronto, Ontario M5H 3P5;
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DATED AT Toronto, Ontario this 16th Day of November, 1982.

  
Raymond J. Mongeau

**APPENDIX 1**

**DESCRIPTION OF GEOPHYSICAL EQUIPMENT USED**

SCOPAS\* VLF RECEIVER  
SE-81  
OPERATING MANUAL

SCOPAS\* VLF RECEIVER  
SE-81  
OPERATING MANUAL

INTRODUCTION

The SCOPAS\* (Single Coil Phase, Amplitude and Strike) receiver employs as a source the field of VLF (very low radio frequency) transmitters in the 15-25 kHz band.

The electromagnetic waves generated by these transmitters propagate through the sub-surface and are subject to local distortion by conductivity contrasts in this medium. These distortions indicate variations in geo-electrical structure which may be related to contacts, faults, mineralized bodies, overburden, etc.

In undisturbed conditions the magnetic component of the VLF field lies in a horizontal plane, perpendicular to the line connecting the selected transmitting station and the observation point.

The presence of a conductor creates a local secondary field, which gives rise to a vertical component and changes in amplitude, direction and possibly phase of the field. Measurement of these changes may permit locating the conductor and perhaps determine some of its characteristics.

Table 1 gives, for the most important VLF radio frequency stations around the world, their location, operating frequency and radiated power. Any of these stations may be used for SCOPAS measurements if their field strength is of adequate strength and orientation.

FIELD OPERATION

A. GENERAL

1. Switch the SCOPAS "on" (Figure 1, J) and check the batteries (K).
2. A VLF transmitter is selected which has:
  - (a) a sufficiently strong field in the area of investigation (refer to coverage map, Figure 4)

\* Canadian Patent 678765

and

- (b) a field direction as nearly as possible perpendicular to the structural trends of the investigation area. In many areas one station may be so strong that other stations cannot be readily resolved from it and only the strong station can be used.

3. The receiver coil is oriented in the horizontal plane, approximately in the direction of the maximum horizontal component. The receiver is then carefully tuned to maximum signal by means of the Coarse and Fine tuning controls (Figure 1, A and B). The tuning conditions may change somewhat with temperature during the day so that for careful, quantitative work it should be checked periodically.

4. Rotate the receiver in the horizontal plane, with its coil axis horizontal until maximum signal is observed on the meter (C). Adjust the amplifier gain control (F) until the meter reads between 30 and 100. This ensures adequate amplifier gain for most types of measurements. On higher channels (24.8-25.8 kHz) ensure that the gain is not so high that oscillation occurs.

## B. MEASUREMENTS

It is possible to measure a large number of characteristics of the VLF fields with the SCOPAS SE-81 receiver, including vertical and horizontal amplitudes, tilt angle, azimuth and relative phase angles. In practice, it is usual to measure only one characteristics, diagnostic of the presence of sub-surface conductors and restrict other measurements to anomalous areas. It is the tilt angle measurement (#3 below) which is commonly used for such reconnaissance coverage (in general, marked by "cross-overs" directly over conductor axis). The following additional data are usually of value, azimuth (#1), horizontal amplitude (#4) -- both of which peak directly over the conductor axis, phase angle of the vertical component (#5) and the vertical component (#2).

### 1. AZIMUTH

This is the orientation of the VLF horizontal field.

Adjust the moveable compass dial (E) until  $90^{\circ}$  lies opposite the small white mark on the case. Rotate the coil in the horizontal plane until the minimum signal is obtained.

It is easier to get an accurate orientation from the minimum rather than the maximum VLF signal. The azimuth of the VLF field is  $90^{\circ}$  from the minimum signal. Since the compass dial has been set to read  $90^{\circ}$  from the coil axis the apparent compass azimuth may now be read directly (0- $180^{\circ}$  only). Near a strong conductor axis the VLF field tends to point at right angles to the strike of the body. The azimuth disturbance will be a maximum immediately over the conductor axis.

## 2. VERTICAL COMPONENT

For fast reconnaissance it is sufficient to only measure the vertical component. Turn the SCOPAS in the horizontal plane until a maximum is obtained. Set the amplifier gain control (F) until the meter reads 100, or if the signal is not strong enough, to whatever value it reaches at maximum gain. Rotate the SCOPAS upward through  $90^{\circ}$ . The face of the unit is then toward your body. Note the amplitude of the vertical component on the meter. This will read directly in percent of the normal horizontal field (if the meter setting was 100%) or else can be considered as a relative value only. If the field is undisturbed this amplitude will be nearly zero. Conductors are indicated by the presence of a vertical field, usually of amplitude equal to at least 5% of the maximum horizontal field and forming a double peaked curve with the central dip located directly over the conductor axis. If the conductor is close to surface the peak separation may be so close together that the dip may be missed (e.g. Figure 3).

## 3. TILT ANGLE

The most commonly employed reconnaissance technique consists in measuring tilt angles. This is done by tilting the coil from the vertical position (in the vertical plane of the maximum direction) to the position of minimum signal, and measuring the tilt (from the vertical) on the clinometer (H). The SCOPAS axis at the minimum points downwards towards the conductor axis.

Conductors are indicated by a "cross-over" on the dip angle curve and are located directly below the inflection point, usually, but

not always, a zero tilt point.

#### 4. HORIZONTAL AMPLITUDE

Over conductor axes, the maximum horizontal amplitude will increase, often over the original deflection obtained under A (4). Note this reading and divide by the original deflection. If the deflection exceeds full scale then note the setting of the gain control pot (F) and decrease this setting until the meter reads 100 once again. Note the new setting. The observed amplitude is then obtained from the ratio of  $\frac{\text{old setting}}{\text{new setting}}$  x value obtained under A (4)

The amplitude will be maximum immediately over the conductor axis.

#### 5. PHASE ANGLE OF VERTICAL COMPONENT

When the horizontal field amplitude has been adjusted to 100, the value Z of the vertical component is then expressed in percent of the horizontal. From this value the tilt angle D the phase angle  $\theta$  may be calculated.

The phase angle is significant in giving information on the conductivity of a conducting body. For very low conductivity the phase angle is  $90^\circ$  (mainly out-of-phase) and for a very high conductivity the phase angle is  $0^\circ$  (mainly in-phase). Thus, a knowledge of the phase angle gives some indication of the conductivity of the disturbing body. This is helpful, for example, in differentiating overburden from bedrock (sulphide and graphite conductors). The former are generally more poorly conductive than the latter and thus give rise to a larger phase angle. The phase shifts in overburden are, due to the relatively high operating frequency (15-25 kHz), stronger than those obtained employing conventional low frequency moving source EM systems (e.g. vertical loop and horizontal loop). A 50 ft. layer of relatively non-conductive ( $\sigma = 10^{-3}$  mhos/m) overburden gives a  $10^\circ$  phase shift employing a 20 kHz transmitting signal. The depth penetrations are strongly reduced as well (see N.R. Paterson, V. Ronka, "Five Years of Surveying with the VLF-EM Method", 1969 SEG Annual Meeting).

The phase angle  $\theta$  can be calculated from:

$$\cos \theta = \frac{1}{2} \left( \frac{1}{Z} - Z \right) \tan 2D$$

The accompanying chart (Figure 2) shows a plot of  $\theta$  (between 0 and 90°) versus Z and D from which  $\theta$  can be obtained.

A series of typical results across a known conductor are shown in Figure 3.

#### 6. STRONG FIELD REGIONS

In some areas a strong field from one transmitter precludes the use of other stations. The strong field may be oriented normally at a small angle to the strike direction of the conductors in the area. The procedure of B (4) above should be employed but, instead of seeking the horizontal maximum the SCOPAS unit is oriented by the compass in the horizontal direction at right angles to the probable local strike. Over conductor axes this amplitude will increase to a maximum.

Strong conductors will tend to rotate the VLF field to be perpendicular to their strike, thus making this measurement a particularly sensitive one.



## OPERATING HINTS

1. This unit has extremely high gain and when used with gain control set at maximum gain on high frequency channels (23.4-25.8 kHz) it may oscillate.
2. The oscillating condition will show up in one of the following ways:
  - (a) Needle will seem to stick at one setting, for example say at 80. Setting will stay at 80 regardless of reorienting unit in any direction.
  - (b) Needle will slam over past 100 and gain control will have no effect.
3. To remedy, switch off unit and recommence at a lower gain setting.

TABLE 1

## LIST OF TRANSMITTERS

Station	Location	Frequency kHz	Radiated Power (kW)
GBR	Rugby GBR 01W11 52N22	16.0	500
UMS	Moscow U.S.S.R. 37E18 55N49	17.1	1000
NAA	Cutler, Maine, U.S.A. 67W17 44N39	17.8	1000
NLK	Jim Creek, Wash., U.S.A. 48N12, 121W55	18.6	300
PKX	Malabar, Java Indonesia	18.98	162
NSS	Annapolis, Md. U.S.A.	19.0	100
WWVL	Boulder, Colo. U.S.A.	20.0	40
UFT	Sainte Assise, Paris France	20.7	61
NWC	North West Cape, Australia 21S49; 114E10	22.30	1000
NPM	Lualuaki, Hawaii 21N25, 158W09	23.40	300
LPZ	Marte Grande, Buenos Aires Argentina	23.6	72
NBA	Balboa, Canal Zone 09°N03, 79W39	24.0	150

NOTE: The above radio stations can be out of order for maintenance at regular or irregular intervals.

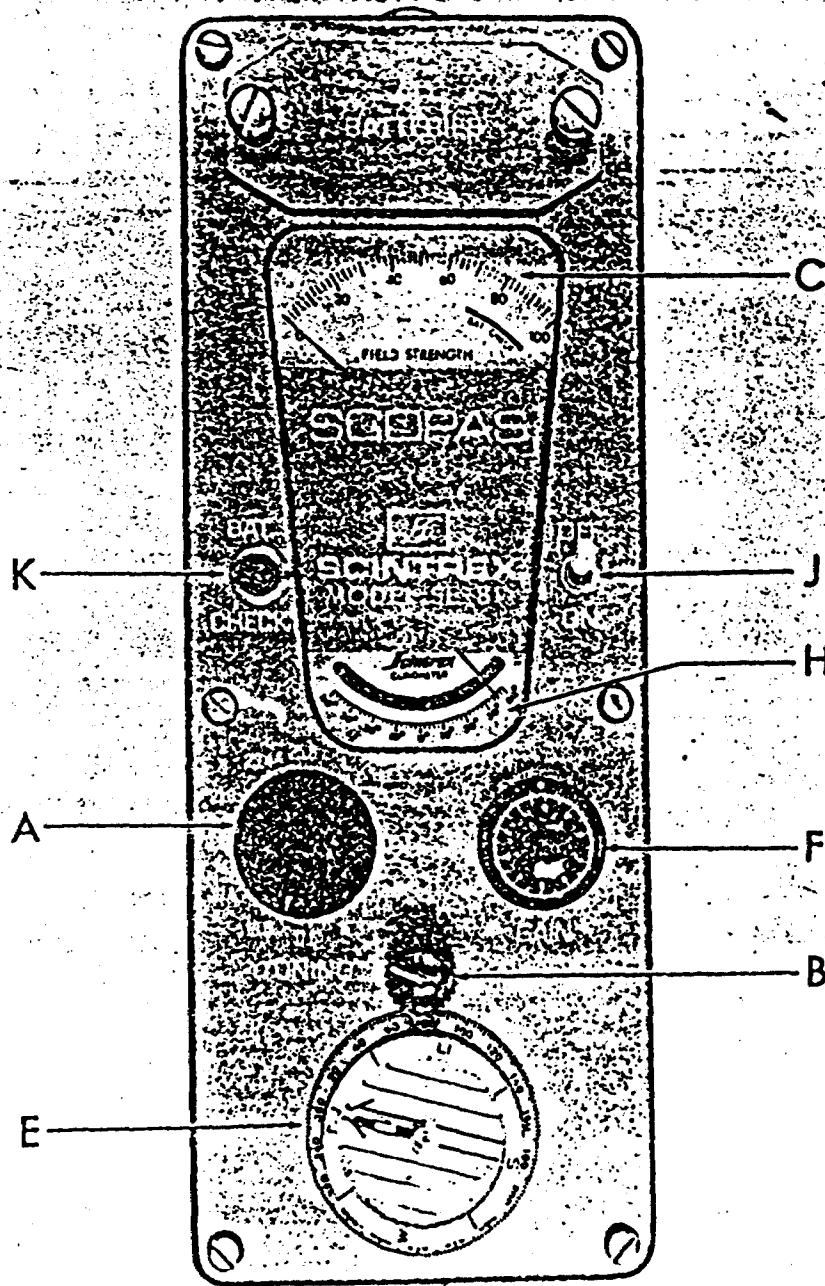
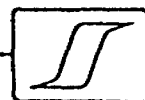


Fig. 1 - SCOPAS SE-81 RECEIVER



# SCOPAS SE-81 RECEIVER

## PHASE CALCULATION CHART

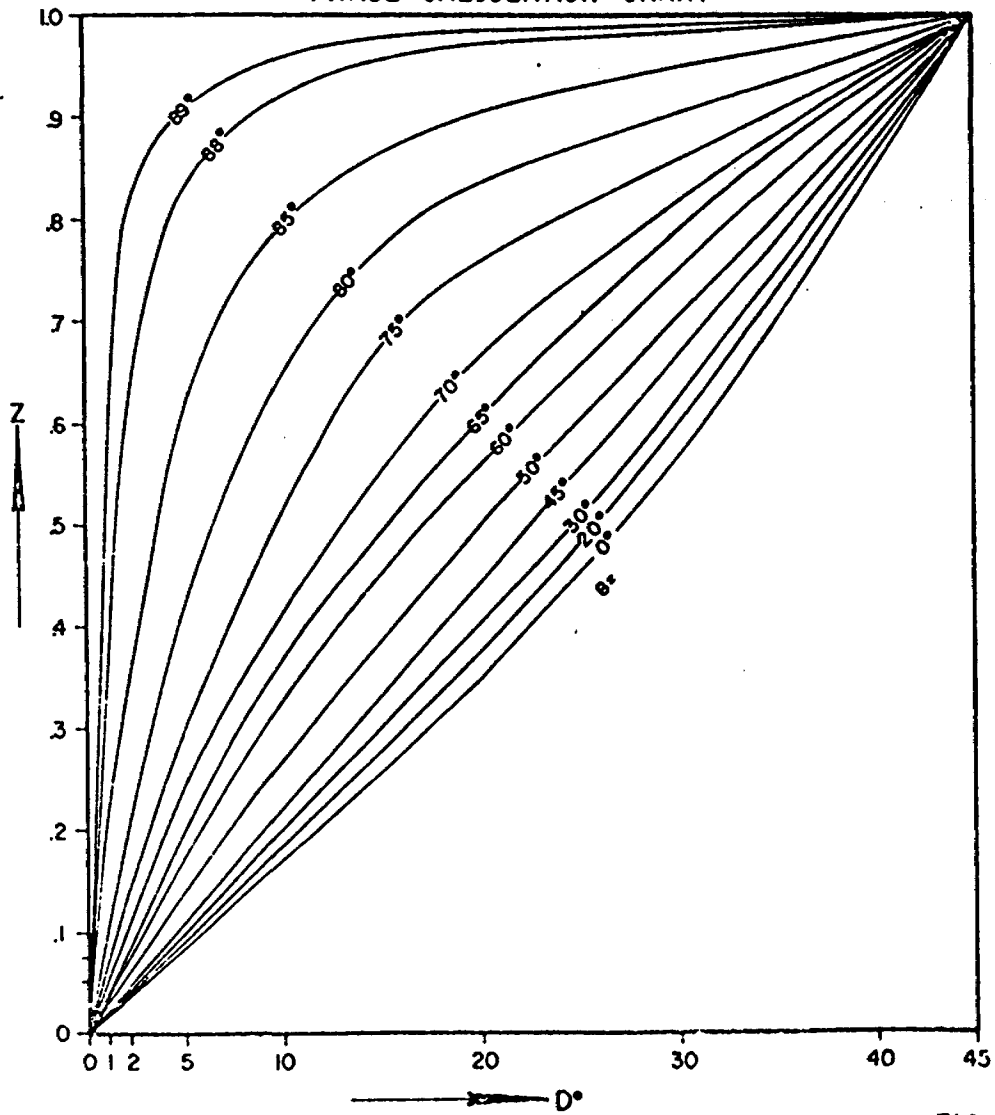
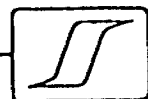
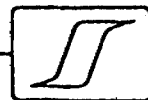
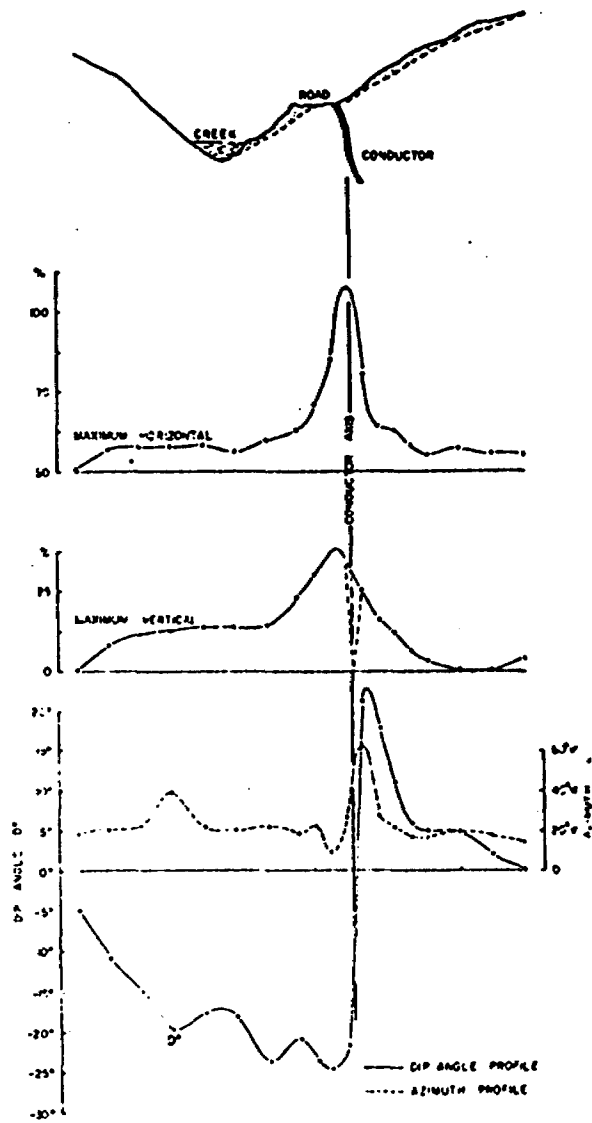


FIG. 2



# SCOPAS SE-81 RECEIVER

FIG. 3



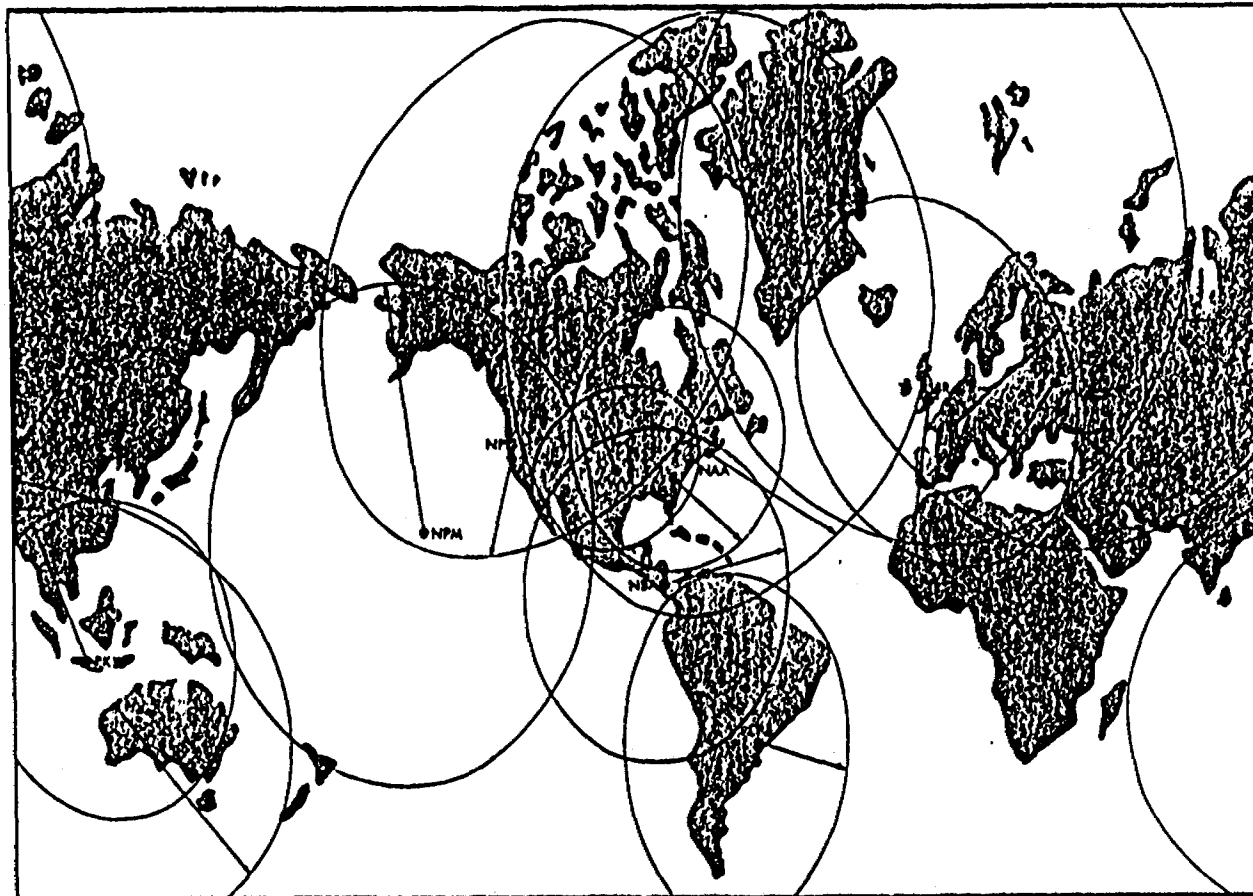


Figure 4: Coverage shown only for most powerful stations.  
Many others exist for reliable operation.





42C06SW0232 0024 FINAN

900

File \_\_\_\_\_



Ministry of Natural Resources

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL  
TECHNICAL DATA STATEMENT

S. S. MARIE  
MINING DIV.

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 1982  
71819, 10, 11, 12, 1, 2, 3, 4, 5

Type of Survey(s) GEOLOGICAL & GEOPHYSICAL  
Township or Area FINAN  
Claim Holder(s) 108898 CANADA LTD & MAGINO  
M'NEILLEN RESOURCES } JOINT VENTURE  
Survey Company MAGINO JOINT VENTURE  
Author of Report R. J. MONGEAU  
Address of Author 2210-130 ROSAIDE ST. W.  
Covering Dates of Survey 06/25/82 - 08/15/82  
(linecutting to office)  
Total Miles of Line Cut 39.4

MINING CLAIMS TRAVERSED  
List numerically

- SSM: 581948
  - (prefix) (number)
  - SSM 581949 SSM 581669
  - 581950 581670
  - 581951 581671
  - 581952
  - 581953
  - 581954
  - 581496
  - 581497
  - 581498
  - 581499
  - 581900
  - 581501
  - 581902
  - 581503
  - 581667
  - 581490
  - 581491
  - 581492
  - 581493
  - 581494
  - 581668
- TOTAL CLAIMS \_\_\_\_\_

If space insufficient, attach list

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

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)  
Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)  
DATE: NOV. 18 / 82 SIGNATURE: [Signature]  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 2.241

Previous Surveys

File No.	Type	Date	Claim Holder

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 1698  
Station interval 100 FEET Line spacing 400 FEET  
Profile scale \_\_\_\_\_  
Contour interval \_\_\_\_\_

MAGNETIC

Instrument SHARP MP-2 PROTON PRECISION  
Accuracy - Scale constant ±1 GAMMA  
Diurnal correction method BASELINE(S) TIED INTO BASE STATION  
Base Station check-in interval (hours) CHECKED IN AT BEGINNING & END OF DAY  
Base Station location and value LOCATED AT CAMP SITE CLAIM 2050

ELECTROMAGNETIC

Instrument SCOPAS V.L.E SE-81  
Coil configuration \_\_\_\_\_  
Coil separation \_\_\_\_\_  
Accuracy \_\_\_\_\_  
Method:  Fixed transmitter  Shoot back  In line  Parallel line  
Frequency N/A CUTLER MAINE U.S.A. 12.8 KHZ  
(specify V.L.F. station)  
Parameters measured DIP ANGLE

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 \_\_\_\_\_





Ontario

Ministry of  
Natural  
Resources

# Technical Assessment Work Credits

Date  
1983 08 09

File  
2.5239  
Mining Recorder's Report of  
Work No. 69-82

Recorded Holder: 108898 CANADA INC & McNELLEN RESOURCES

Township or Area: FINAN TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<b>Geophysical</b> Electromagnetic _____ 17 days Magnetometer _____ 17 days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological _____ 40 days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/> <input checked="" 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.	<u>FOR ELECTROMAGNETIC &amp; MAGNETOMETER</u> SSM 581491 to 497 inclusive 581499 to 503 inclusive 581565 to 83 inclusive 581667 to 72 inclusive 581948 to 53 inclusive 609445  <u>FOR GEOLOGICAL ONLY:</u> SSM 581490 to 500 inclusive 581503 581565 to 73 inclusive 581575 to 83 inclusive 581667 to 72 inclusive 581948 to 53 inclusive 609445

Special credits under section 77 (16) for the following mining claims

FOR GEOLOGICAL ONLY:

20 DAYS CREDIT  
 SSM 581501-02  
 581574

No credits have been allowed for the following mining claims

not sufficiently covered by the survey       Insufficient technical data filed

FOR ELECTROMAGNETIC & MAGNETOMETER ONLY:

SSM 581490  
 581498

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 77(19)—60:



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

REPLACEMENT

Instructions

Please type or print.  
If number of mining claims traversed  
exceeds space on this form, attach a list.  
Only days credits calculated in the  
"Expenditures" section may be entered  
in the "Expend. Days Cr." columns.  
Do not use shaded areas below.

The Mining Act

Type of Survey: **Geological and Geophysical.**  
Claim: **108898 CANADA INC. & McNELLEN RESOURCES**  
Address: **40, 2210-130 ADELAIDE ST. W. TORONTO, ONTARIO**  
Survey Company: **THE ABOVE**  
Name and Address of Author (of Geo-Technical report): **R. MONGEAU AT THE ABOVE ADDRESS**  
Date of Survey (from & to): **25 06 82 15 08 82**  
Total Miles of line Cut: **39.4**  
Prospector's License No.: **FINAN TWP T 1219 MSH3PS**

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

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

Man Days	Geophysical	Days per Claim
Complete reverse side and enter total	Electromagnetic	
	Magnetometer	
	Radiometric	
	Other	
	Geological	
	Geochemical	

Airborne Credits	Geophysical	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.
SSM	581490	30.54	SSM	581574	30.54
	581491	30.54		581575	30.54
	581492	30.54		581576	30.54
	581493	30.54		581577	30.54
	581494	30.54		581578	30.54
	581495	30.54		581579	30.54
	581496	30.54		581580	30.54
	581497	30.54		581581	30.54
	581498	30.54		581582	30.54
	581499	30.54		581583	30.54
	581500	30.54		581667	30.54
	581501	30.54		581668	30.54
	581502	30.54		581669	30.54
	581503	30.54		581670	30.54
	581565	30.54		581671	30.54
	581566	30.54		581672	30.54
	581567	30.54		581948	30.54
	581568	30.54		581949	30.54
	581569	30.54		581950	30.54
	581570	30.54		581951	30.54
	581571	30.54		581952	30.54
	581572	30.54		581953	30.54
	581573	30.54		609445	30.54

**RECEIVED**  
MINING DIV.  
NOV 23 1982

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

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.

Total number of mining claims covered by this report of work: **46**

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
3,680	Nov 23/82	M. St. Jules
	Date Approved as Recorded	Branch Director

Date: **Nov 18 '82**

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: **R. MONGEAU, 108898 CANADA INC. 40, SUITE 2210-130 ADELAIDE ST. W. TORONTO ONT. M5H3PS**

Date Certified: **Nov 18/82**

Certified by (Signature): *[Signature]*



Mining Lands Comments


To: Geophysics Mr. Barlow

Comments

<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date <u>July 26/03</u>	Signature <u>Douglas H. Pritchard</u>
--	---	------------------------	---------------------------------------

To: Geology - Expenditures

Comments

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

To: Geochemistry

Comments

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

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



Mining Lands Comments

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

To: Geophysics *W/R Bissel*

Comments

\_\_\_\_\_

\_\_\_\_\_ *- ULF maps should contain  
profile data* \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Approved

Wish to see again with corrections

Date

*May 2/83*

Signature

*R. Bissel*

To: Geology - Expenditures *W/R Kustira*

Comments

\_\_\_\_\_

\_\_\_\_\_ *Maps should have been colored -  
otherwise OK* \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Approved

Wish to see again with corrections

Date

*March 23/82*

Signature

*C. Kustira*

To: Geochemistry

Comments

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Approved

Wish to see again with corrections

Date

Signature

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

(Tel: 5-1380)

1982 12 02

2.5239

Mrs. M.V. St. Jules  
Mining Recorder  
Ministry of Natural Resources  
75 Elgin Street  
Box 669  
Sault Ste. Marie, Ontario  
P6A 5N2

Dear Madam:

We have received reports and maps for a Geological and a Geophysical (Electromagnetic and Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims SSM 581948 et al in the Township of Finan.

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

DW:sc

cc: 108898 Canada Inc & McNellan Resources  
c/o 2210 - 130 Adelaide Street West  
Toronto, Ontario  
M5H 3P5  
Attn: R. Mongeau.

**Cavenish Investing Ltd.**

Suite 2210  
130 Adelaide Street West  
Toronto, Ontario M5H 3P5  
Canada  
(416) 367-9285

25239.

April 29, 1983

**RECEIVED**

MAY - 2 1983

MINING LANDS SECTION

Mr. F.W. Mathewes  
Room 60452  
Whitney Block  
Queens Park  
Toronto, Ontario  
M7A 1W3

Dear Mr. Mathewes:

Re: Mining Claims SSM581490 ✓ SSM581503 Inclusive  
SSM581565 - SSM581583 Inclusive  
SSM581667 ✓ SSM581672 Inclusive  
SSM581948 ✓ SSM581953 Inclusive  
SSM609445

We have, of this date, not received any confirmation of approval for work performed in 1982 for these claims. Should the credits requested per claim not be approved then we will be in forfeiture.

This letter will serve as notice that, until we have had reasonable notice to the contrary, these claims will remain in good standing until April 22, 1984.

Trusting that you will find all in order, I remain,

Yours very truly,



Bryan Wilson

BW/bao

cc: Mr. A. Patte - McNellen Resources  
Mrs. St. Jules - Mining Recorder, Sault Ste. Marie

1983 05 06

2.5239

108898 Canada Incorporated &  
McNellen Resources  
Suite 2210  
130 Adelaide Street West  
Toronto, Ontario  
M5H 3P5

Dear Sirs:

RE: Geological & Geophysical (Electromagnetic  
& Magnetometer) Survey submitted on Mining  
Claims ~~581490~~ 581490 et al in the Township of  
Finan.

---

Enclosed are the plans, in duplicate, for the above mentioned  
survey. Please provide the following:

- a) all maps must be signed by the author of the  
report.
- b) on the geological maps the outcrop must be designated  
by colour and by a letter or number corresponding to  
the rock type as listed in the legend.
- c) the VLF maps must contain profiled data.

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:

cc: Mining Recorder  
Sault Ste. Marie, Ontario



Ministry of  
Natural  
Resources

Aug 30, 1983

Your file: 69-82

Our file: 2.5239

1983 08 09

Mrs. M.V. St. Jules  
Mining Recorder  
875 Queen Street East  
P.O. Box 669  
Sault Ste. Marie, Ontario  
P6A 5N2

Dear Madam:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, 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: 416/965-1316

R. Pichette:mc

108898 Canada Incorporated &  
McNellen Resources  
Suite 2210  
130 Adelaide Street West  
Toronto, Ontario  
M5H 3P5

cc: Mr. G.H. Ferguson  
Mining & Lands Commissioner  
Toronto, Ontario



1983 08 31

2.5239

Mrs. M.V. St. Jules  
Mining Recorder  
Ministry of Natural Resources  
875 Queen Street East  
P.O. Box 669  
Sault Ste. Marie, Ontario  
P6A 5N2

Dear Madam:

RE: Geological & Geophysical (Electromagnetic & Magnetometer)  
Survey on Mining Claims SSM 581490 et al in the Township  
of Finan.

---

The Geological & Geophysical (Electromagnetic & Magnetometer) Survey  
assessment work credits as listed with my Notice of Intent dated  
August 9, 1983 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

R. Pichette:sc

cc: 108898 Canada Incorporated  
& McNellen Resources  
Toronto, Ontario

cc: Resident Geologist  
Sault Ste. Marie, Ontario



Ministry of  
Natural  
Resources

Ontario

Notice of Intent  
for Technical Reports

1983 08 09

2.5239

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Lands Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.

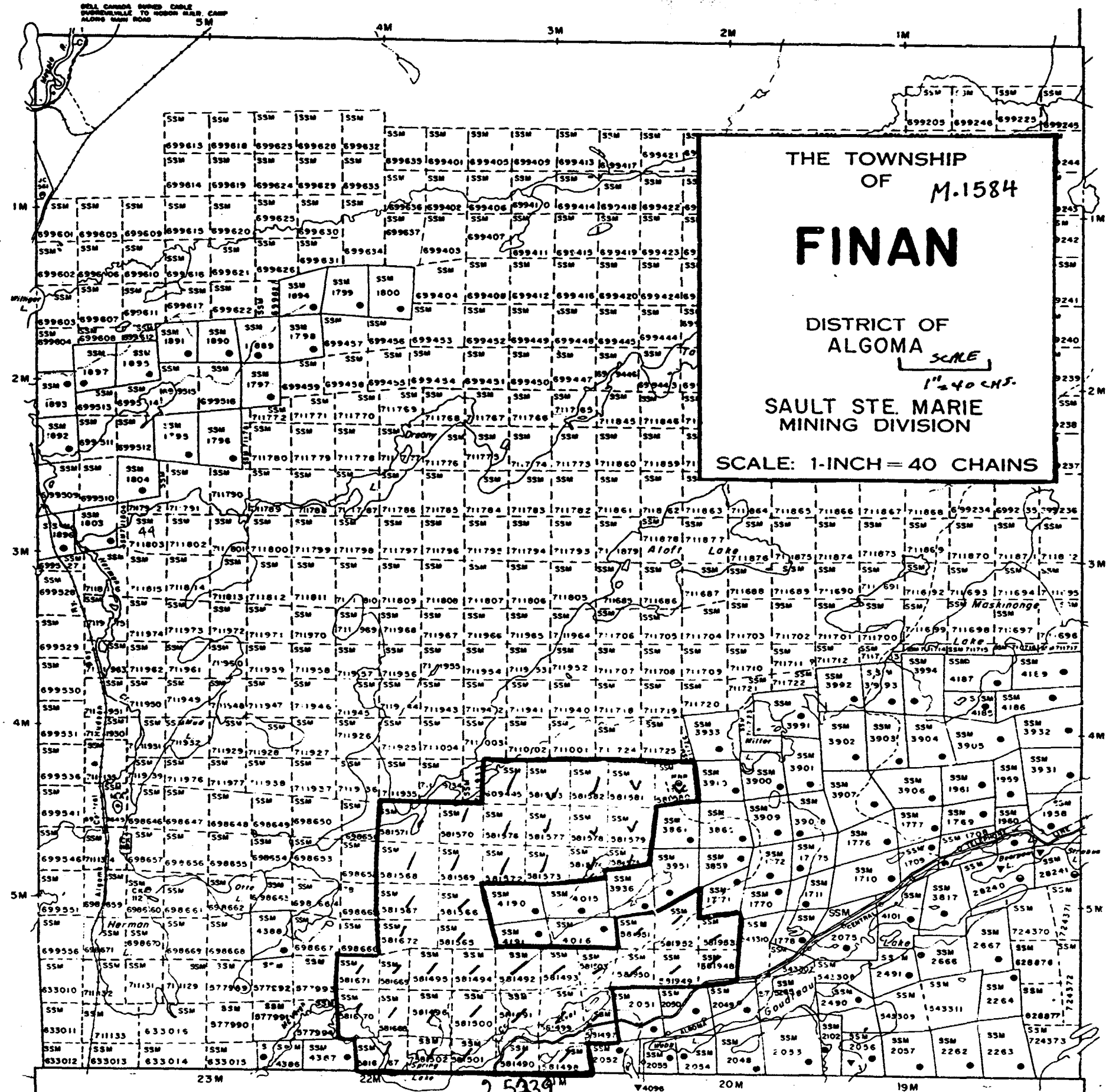
File no 25389

	Em.	mag.	bed.		Em.	mag.	bed.
SSM 581490	0	⊕	✓	574	1/2	1/2	1/2
491	1/4	1/4	✓	575	✓	✓	✓
492	✓	✓	✓	576	✓	✓	✓
493	✓	✓	✓	577	✓	✓	✓
494	✓	✓	✓	578	✓	✓	✓
495	✓	✓	✓	579	✓	✓	✓
496	1/4	1/4	1/4	580	1/2	1/2	1/4
497	3/4	3/4	1/4	581	✓	✓	✓
498	0	0	✓	582	✓	✓	✓
499	1/2	1/2	1/4	583	1/2	✓	✓
500	✓	✓	✓	667	3/4	3/4	✓
501	1/2	1/2	1/2	668	✓	✓	✓
502	3/4	3/4	1/2	669	✓	✓	✓
503	✓	✓	✓	670	1/4	1/4	1/4
565	⊕ 1/2	1/2	✓	671	✓	✓	✓
566	1/2	1/4	✓	672	✓	✓	✓
567	✓	✓	✓	948	✓	✓	✓
568	✓	✓	✓	949	✓	✓	✓
569	✓	✓	✓	950	✓	✓	✓
570	✓	✓	✓	951	✓	✓	✓
571	1/4	1/4	1/4	952	✓	✓	✓
572	✓	✓	✓	953	✓	✓	✓
573	✓	✓	✓	609445	1/4	1/4	1/4
					17	17	13

File no 25389

74	1/2	1/2	1/2
75	✓	✓	✓
76	✓	✓	✓
77	✓	✓	✓
78	✓	✓	✓
79	✓	✓	✓
80	1/2	1/2	1/4
81	✓	✓	✓
82	✓	✓	✓
83	1/2	✓	✓
84	3/4	3/4	✓
85	✓	✓	✓
86	✓	✓	✓
87	✓	✓	✓
88	✓	✓	✓
89	✓	✓	✓
90	1/4	1/4	1/4
91	✓	✓	✓
92	✓	✓	✓
93	✓	✓	✓
94	✓	✓	✓
95	1/4	1/4	1/4
96	1/4	1/4	1/4
97	1/4	1/4	1/4
98	1/4	1/4	1/4
99	1/4	1/4	1/4
100	1/4	1/4	1/4

DUNPHY Tp. M-1537



THE TOWNSHIP  
OF  
**M.1584**  
**FINAN**  
DISTRICT OF  
ALGOMA  
SCALE  
1" = 40 CHS.  
SAULT STE. MARIE  
MINING DIVISION  
SCALE: 1-INCH = 40 CHAINS

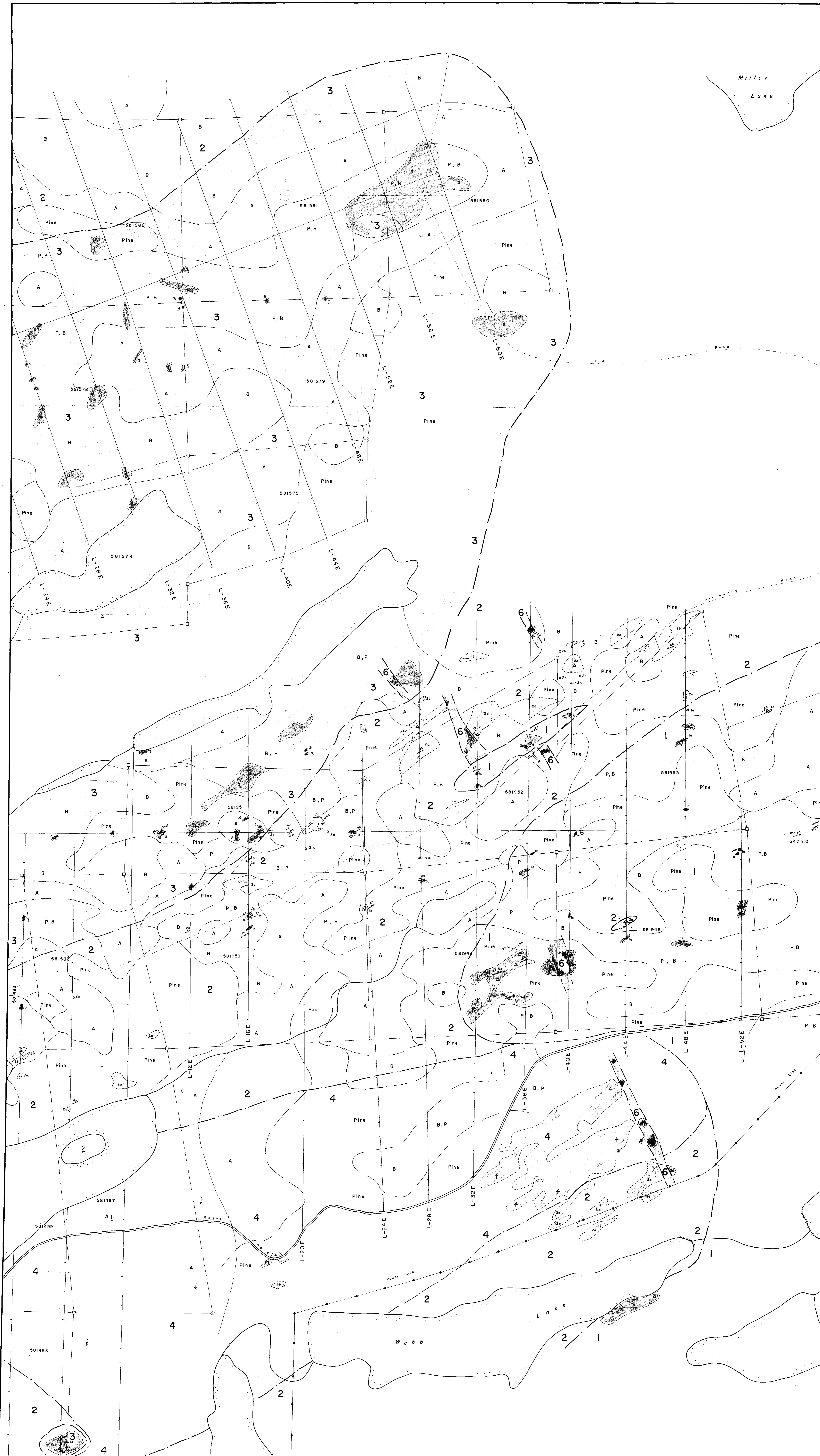
JACOBSON Tp. M-1583

FOR ADDITIONAL

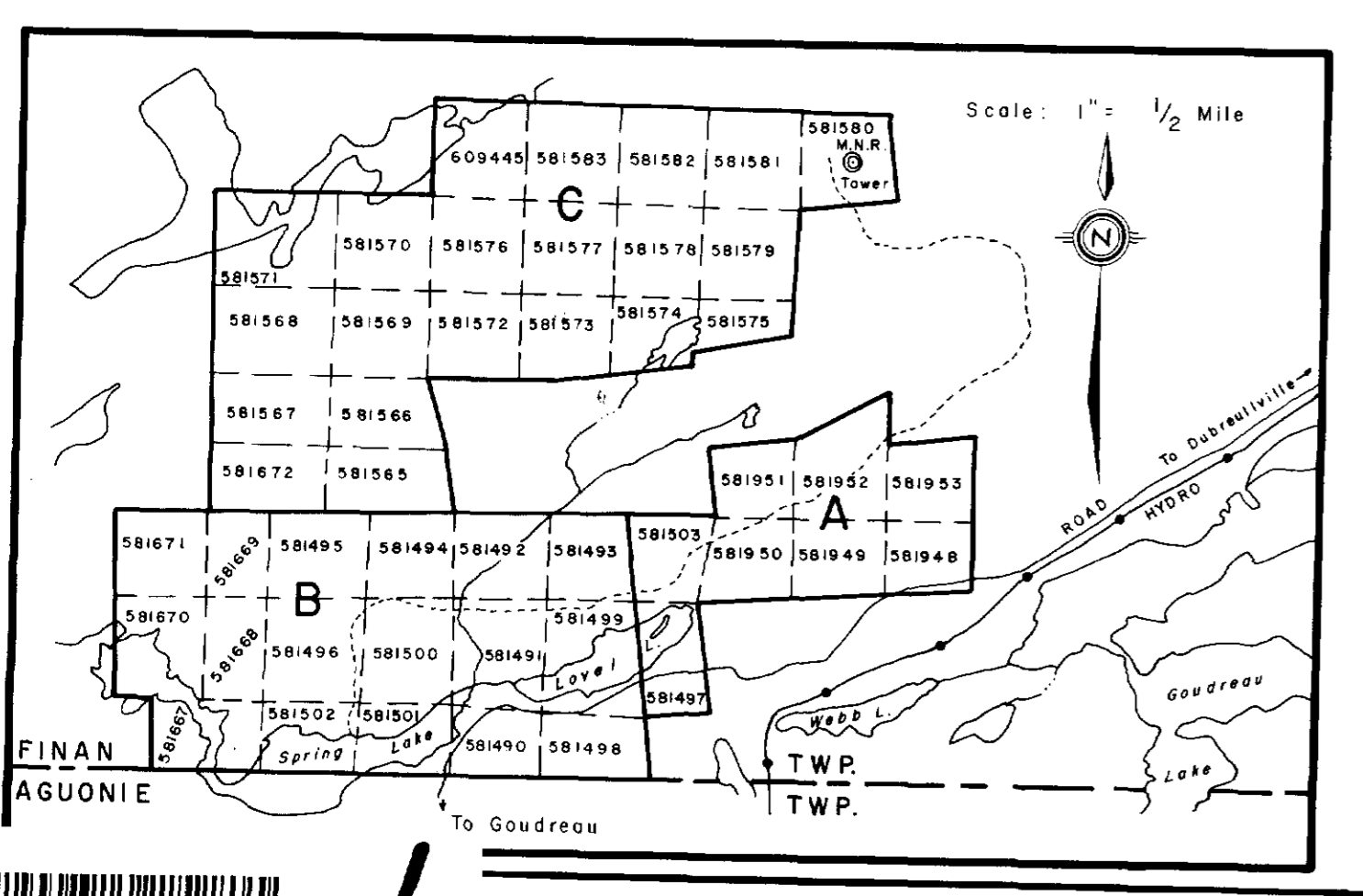
INFORMATION

SEE MAPS:

FINAN-0024 # (1-6)



(FINAN) TWP. 49  
(AGUONIE) TWP. 27

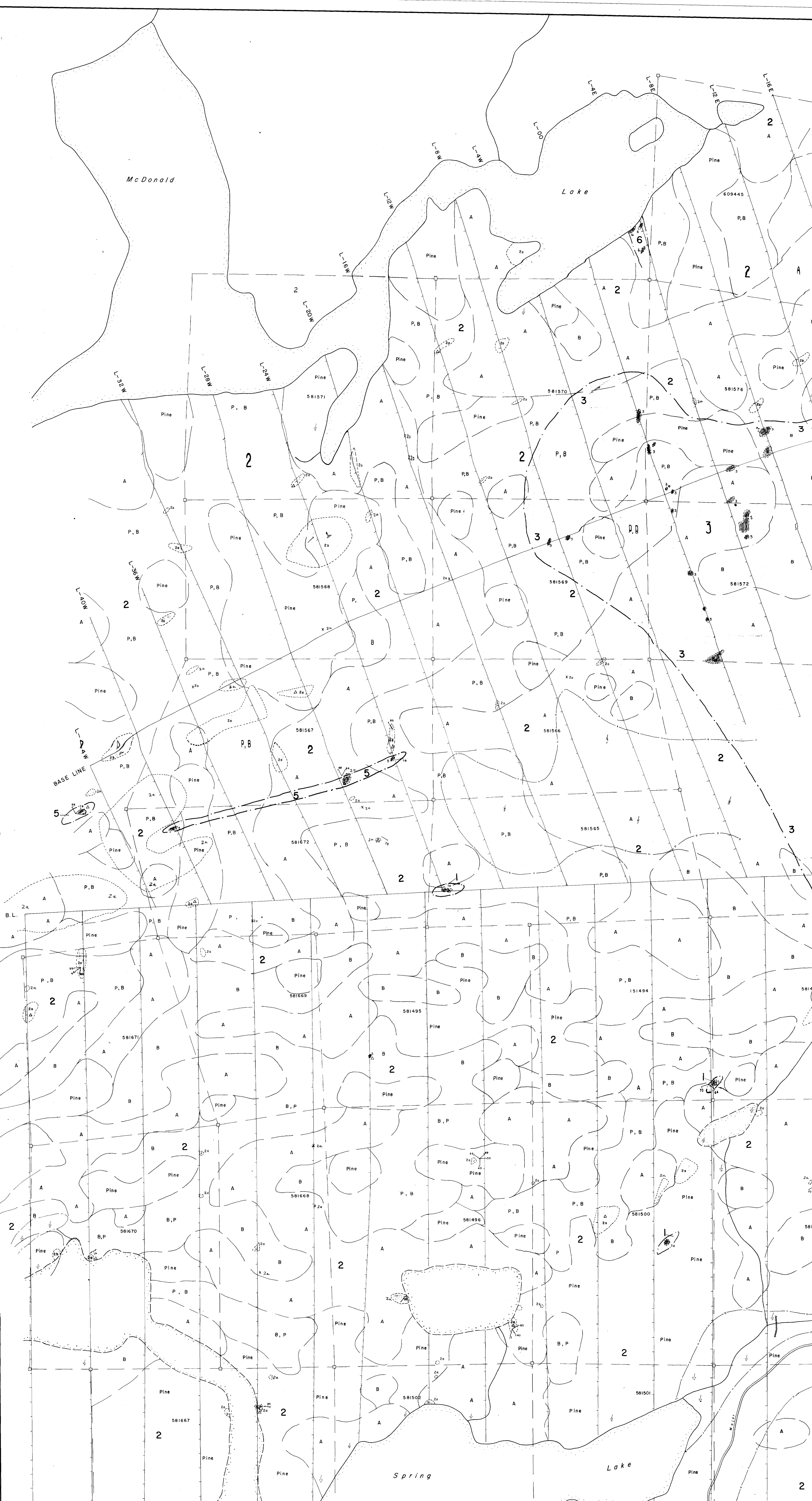


**SYMBOLS**

- Swamp
- Beaver dam
- Seasonal lake
- Outcrop boundary
- Geologic boundary
- Pitrows
- Pitrows with tops
- Foliation
- Joint
- Vein
- Quartz vein
- Plunge of mineral lineation
- Plunge of linear fold
- Pit
- Trench
- Sample location
- Forestry boundaries
- Poplar
- Birch
- Alder

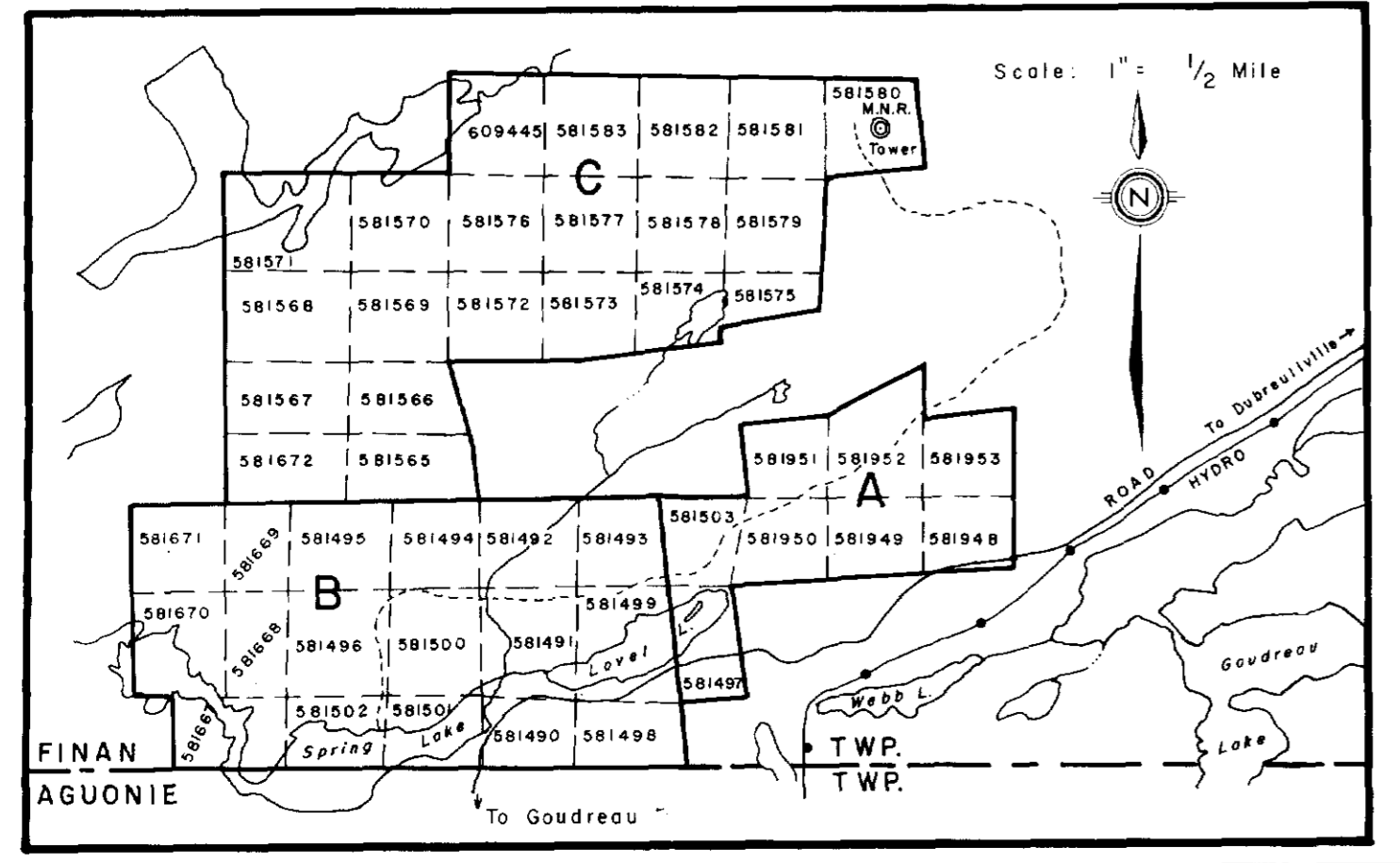
**LEGEND**

- PLEISTOCENE**
- Sand and gravel cover.
- PRE-CAMBRIAN INTRUSIVES**
- 6 Diabase
  - 5 Felsic
  - 4 Gneiss
  - 3 Diorite
- VOLCANICS - INTERMEDIATE**
- 2a Massive
  - 2b Pillowed
- FELSIC**
- 1a Porphyritic
  - 1b Fragmental

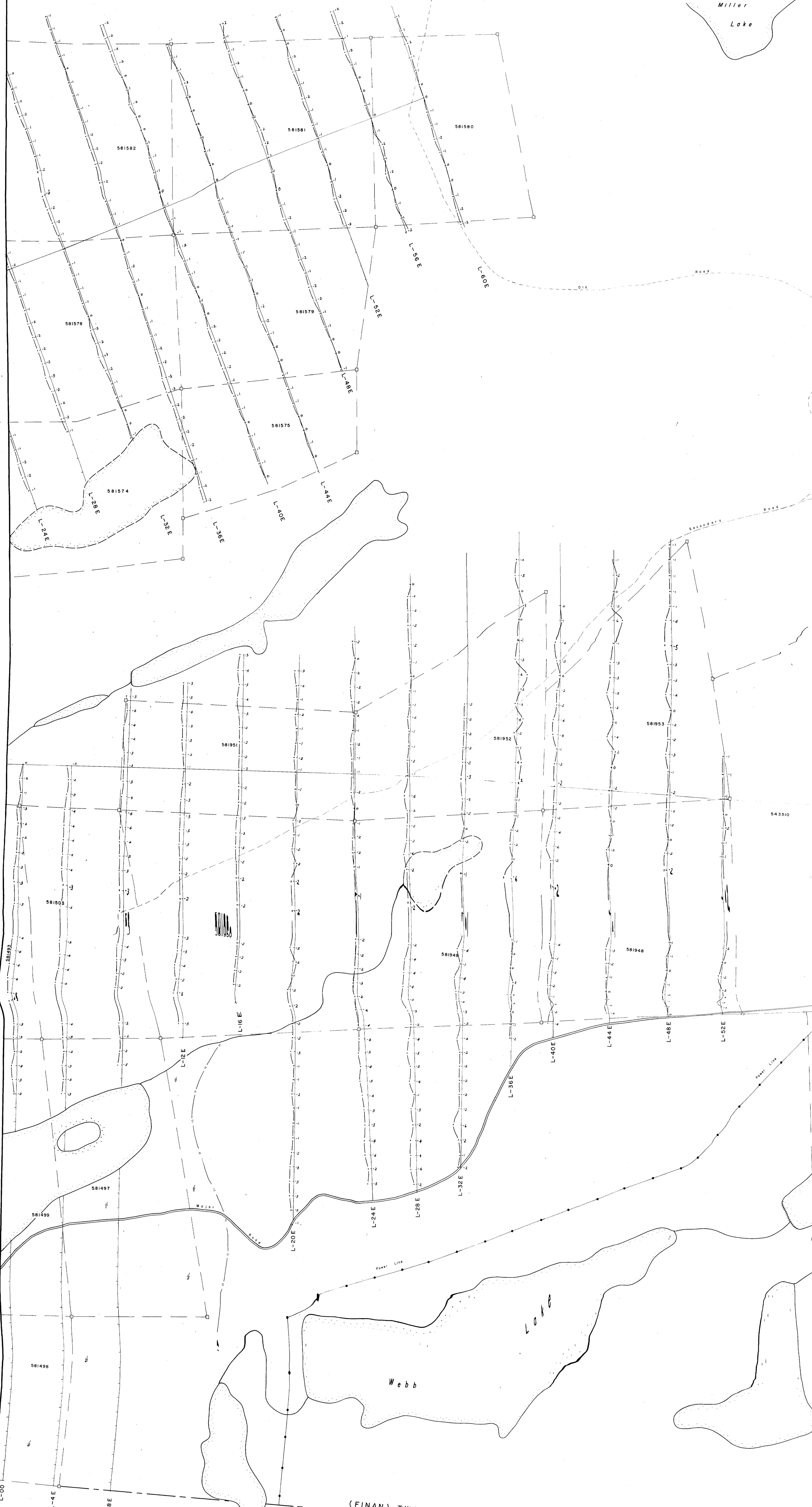


(FINAN) TWP. 49  
(AGUONIE) TWP. 27

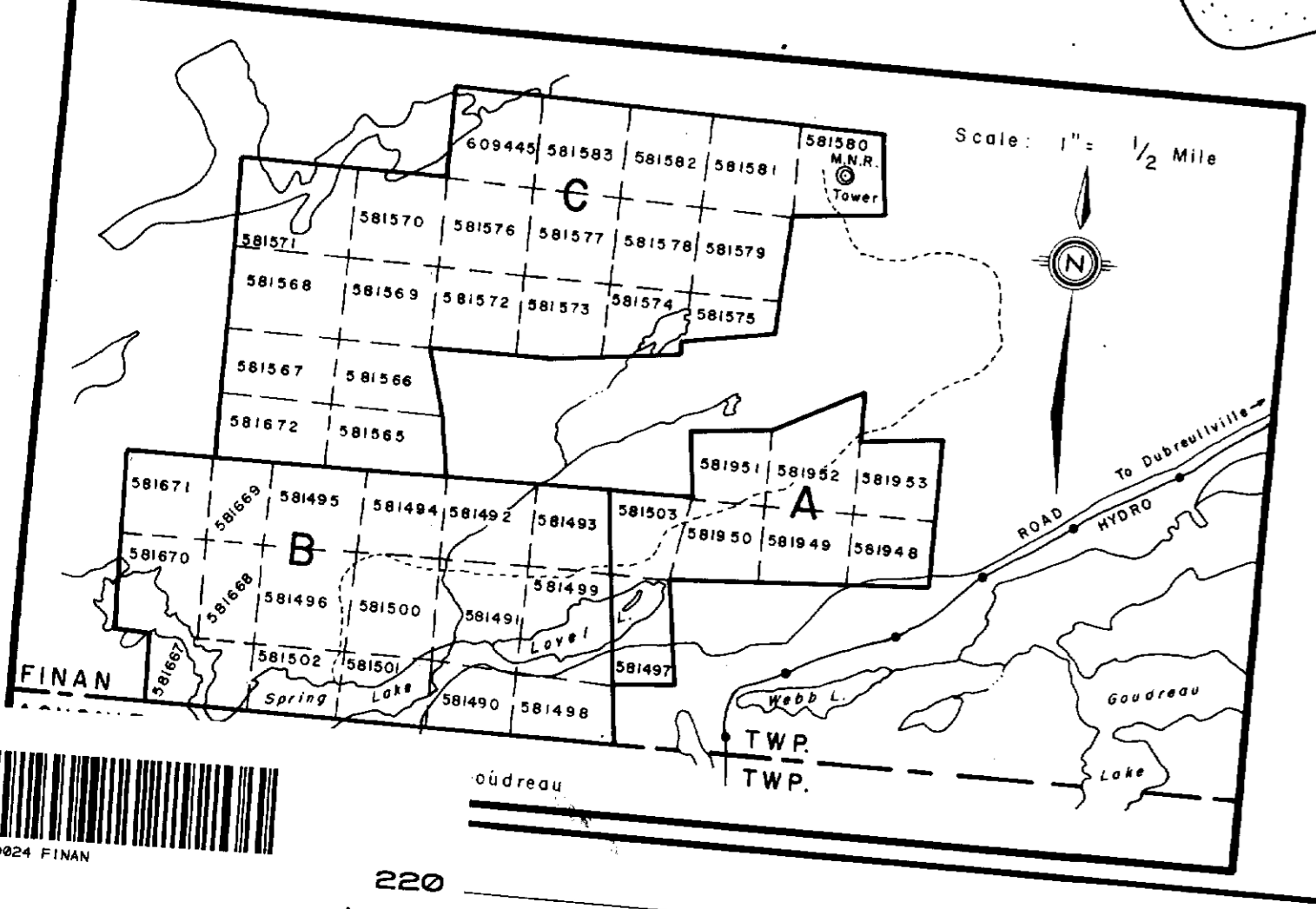
L-72 W L-68 W L-64 W L-60 W L-56 W L-52 W L-48 W L-44 W L-40 W L-36 W L-32 W L-28 W L-24 W L-20 W



Miller  
Lake



(FINAN) TWP. 49  
(AGUONIE) TWP. 27



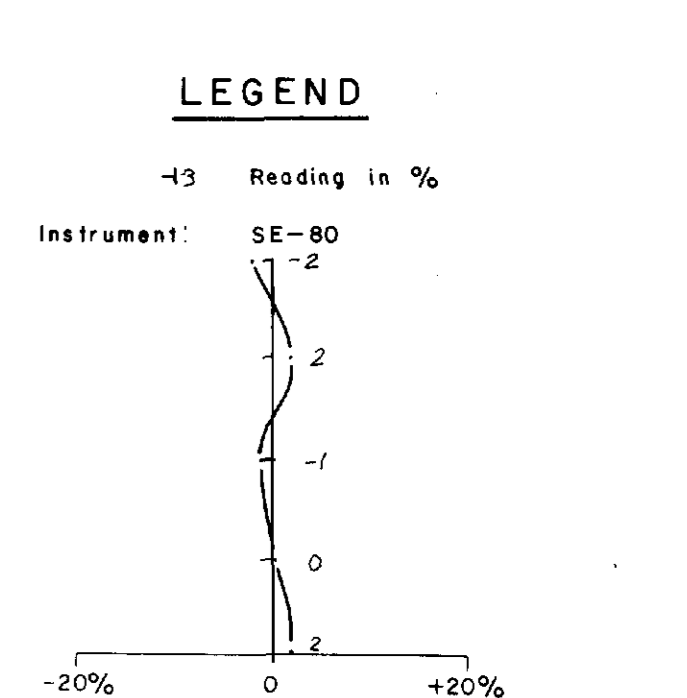
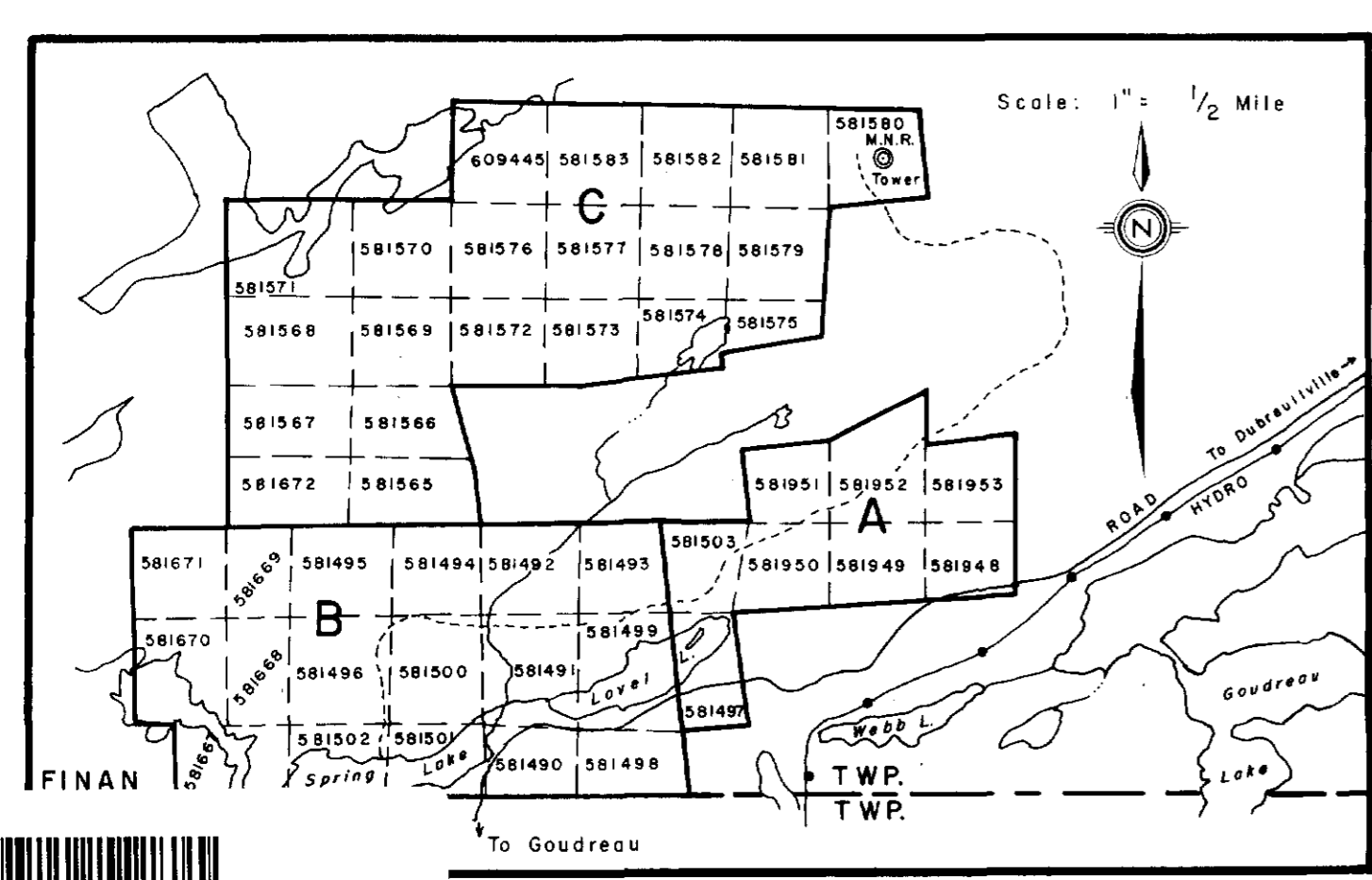
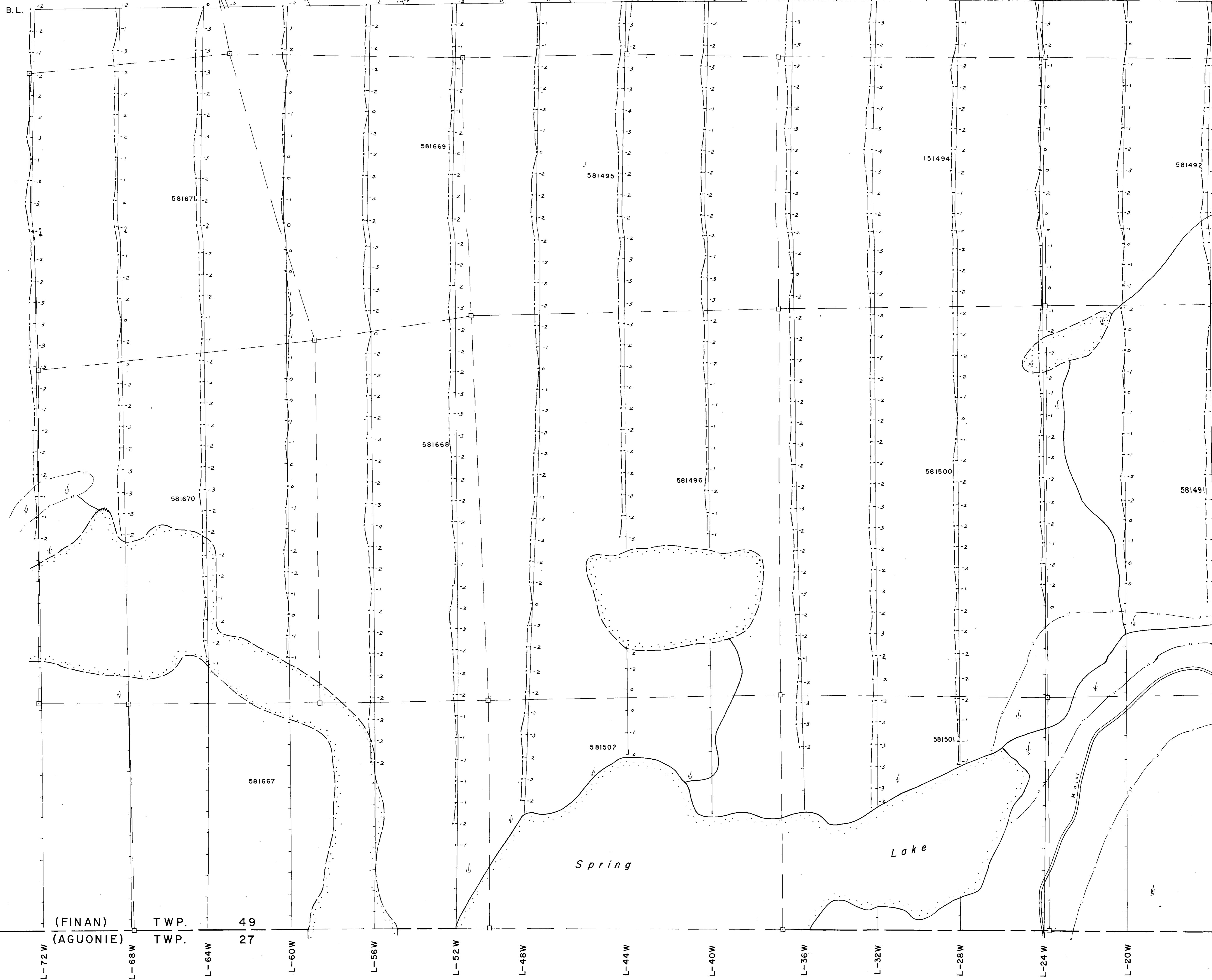
**LEGEND**

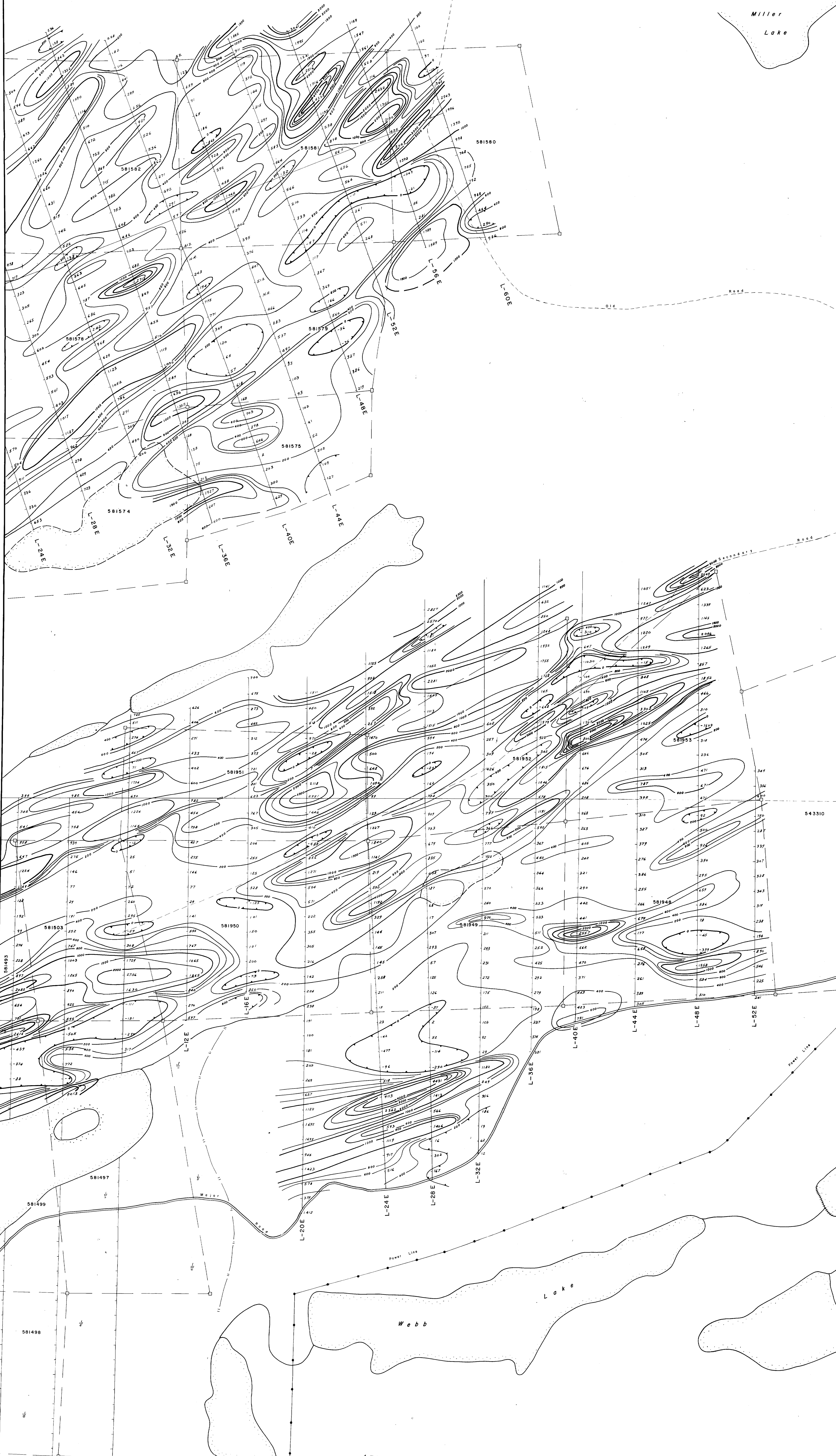
—+— Reading in %

Instrument: SE-80

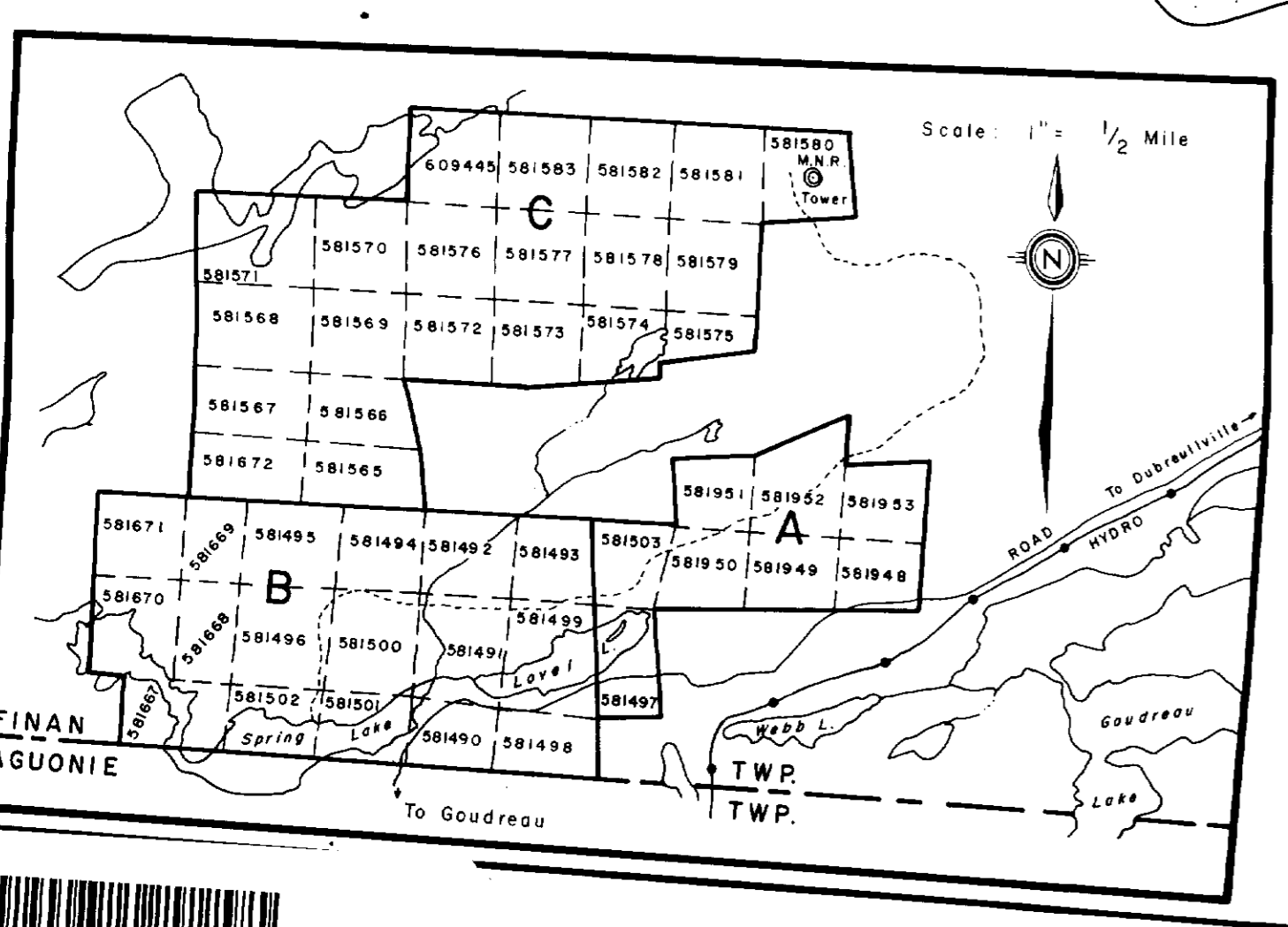
1" = 1/2 Mile





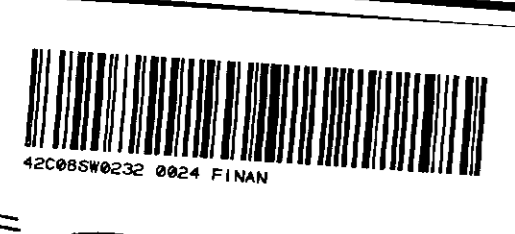


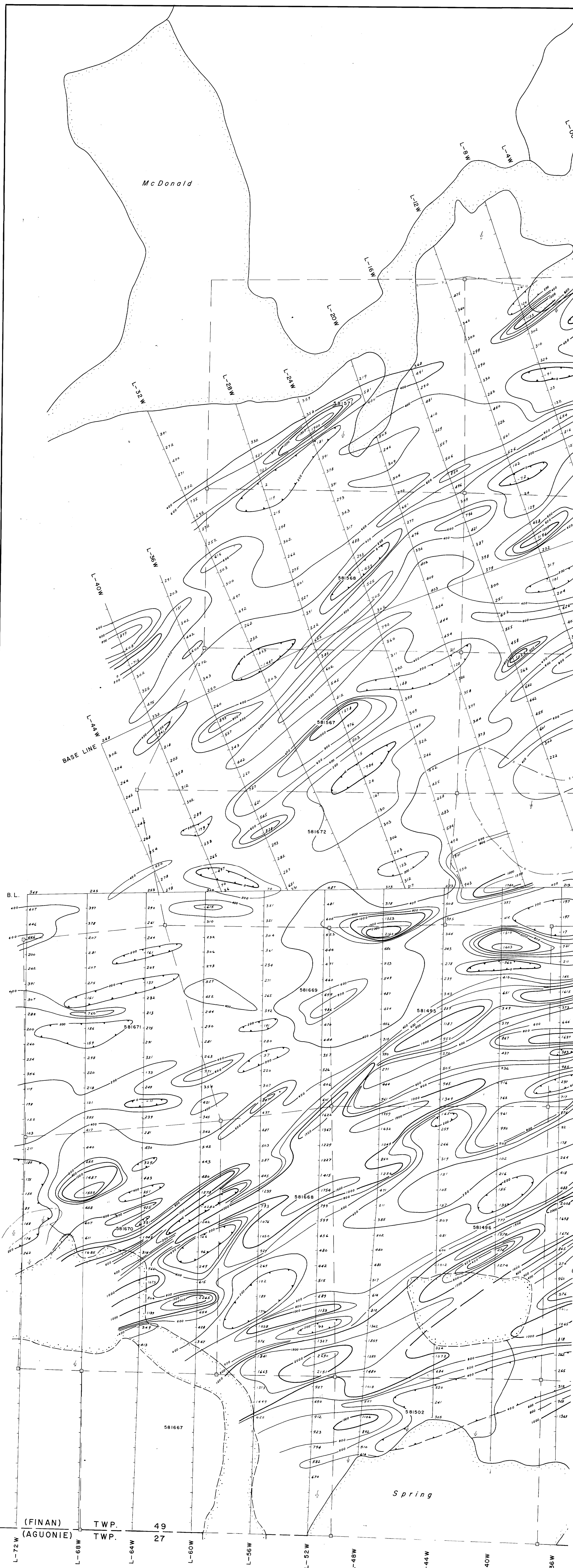
(FINAN) TWP. 49  
 (AGUONIE) TWP. 27



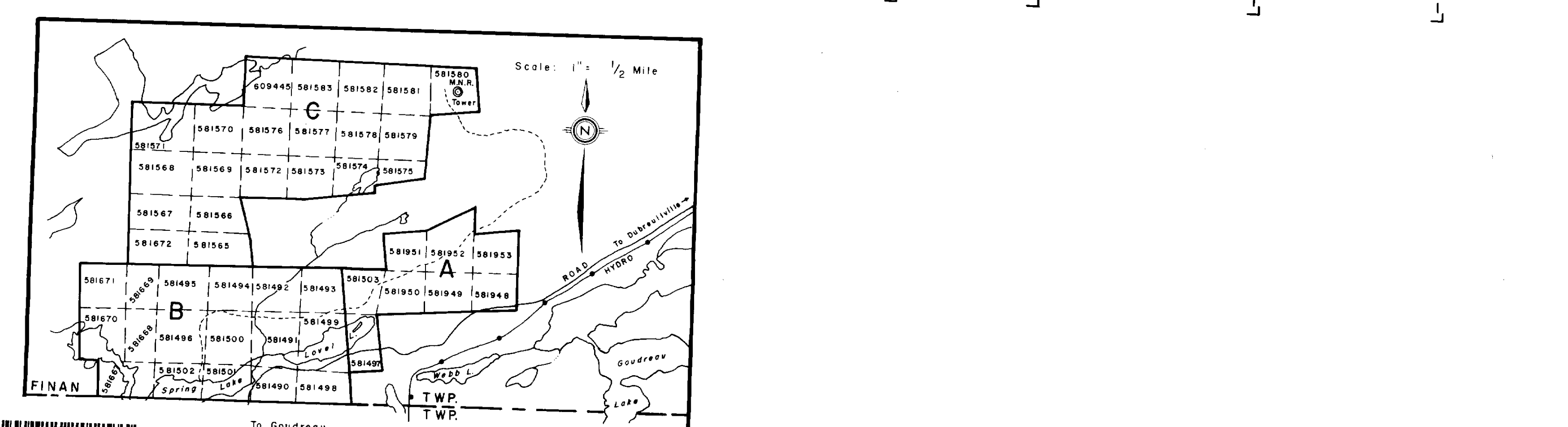
**LEGEND**

- Values in gammas
- Contour intervals
- 200 gammas to 1000
- 500 gammas to 5000
- Not Contoured below 0
- Map low
- Base values 50,000 gammas
- Instrument MP-2 (Portable proton precision mag)

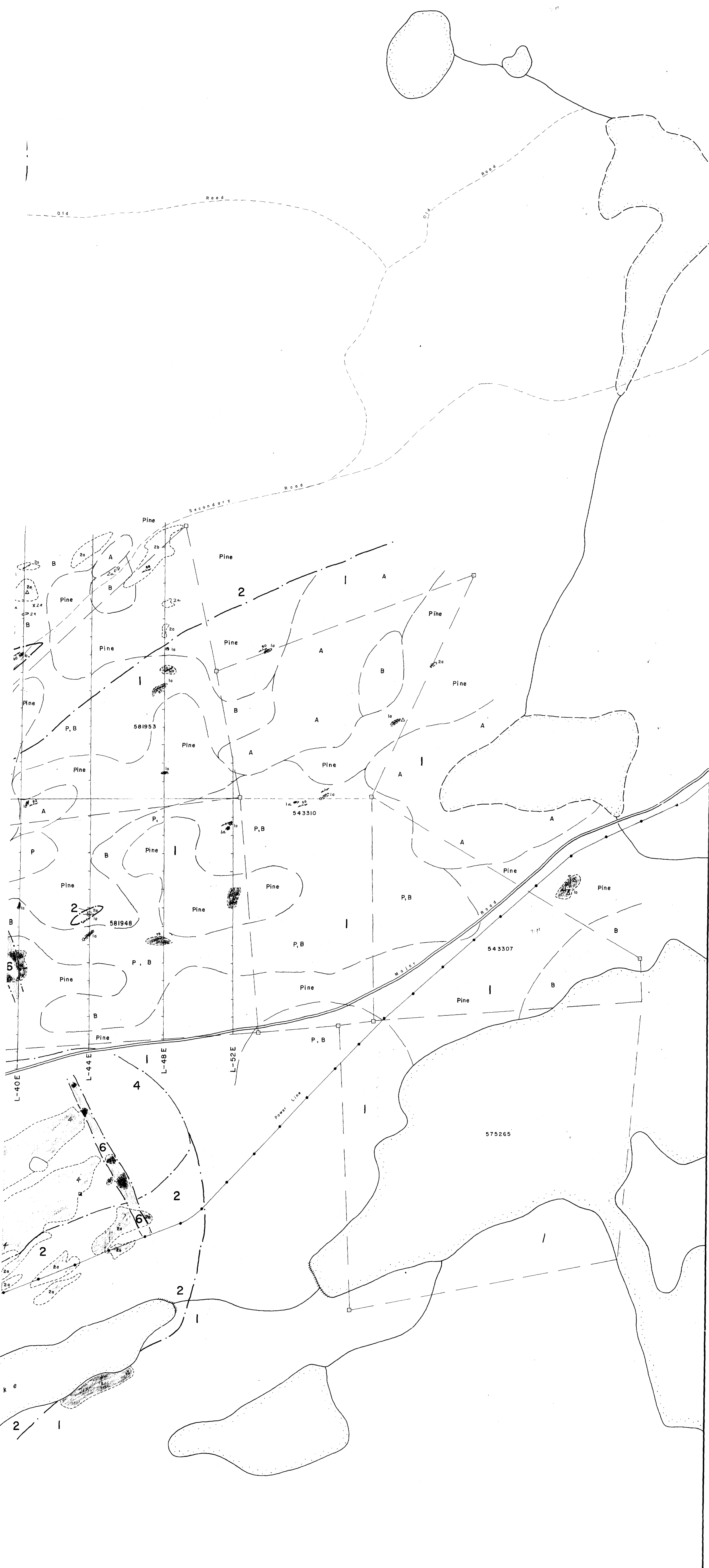




(FINAN) TWP. 49  
 (AGUONIE) TWP. 27



Miller  
Lake



**SYMBOLS**

	Swamp
	Beaver dam
	Seasonal lake
	Outcrop boundary
	Geologic boundary
	Pillows
	Pillows with tops
	Foliation
	Joint
	Vein
	Quartz vein
	Plunge of mineral lineation
	Plunge of minor fold
	Pit
	Trench location
	Sample location
	Forestry boundaries
	Poplar, Birch
	Alder

**LEGEND**

PLEISTOCENE  
Sand and gravel cover.

PRE-CAMBRIAN  
INTRUSIVES

6	Diabase
5	Felsic
4	Granodiorite
3	Diorite

VOLCANICS: INTERMEDIATE

2a	Massive
2b	Pillowed

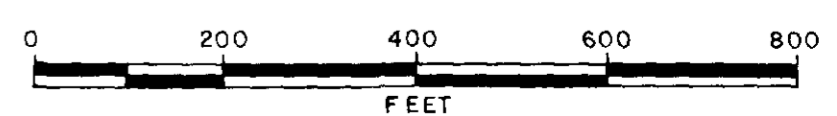
FELSIC

1a	Porphyritic
1b	Fragmental



**KEY**

WEST	EAST
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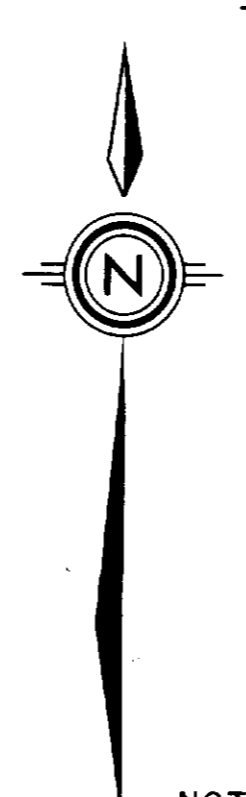
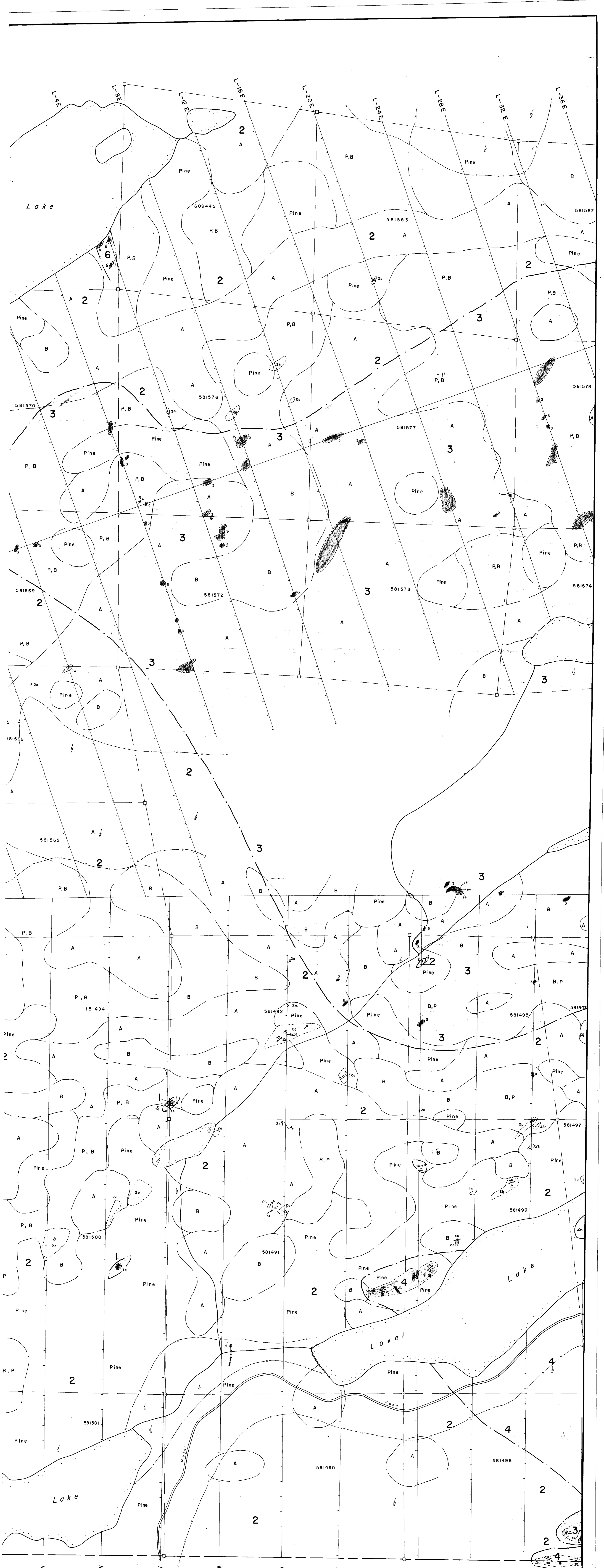
MAGINO JOINT VENTURE  
MAGINO GOLD MINE PROPERTY  
FINAN TWP., ALGOMA MINING DIVISION  
DISTRICT OF SAULT STE. MARIE ONT.

**GEOLOGICAL MAP**

*R. Mongeau*

DATE: Sept. / 82 BY: R. Mongeau DWG. No. S-1

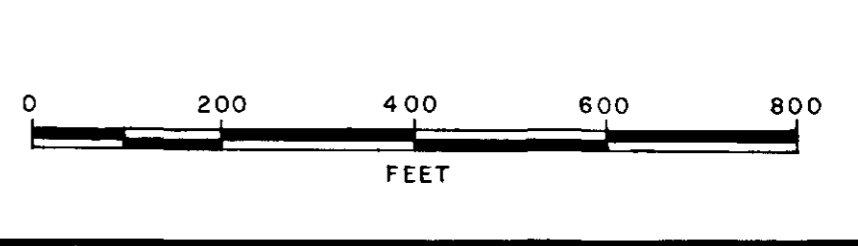
FINAN-0024 #1  
25289 Supplement



KEY

WEST	EAST
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NOTE: For legend see east sheet.

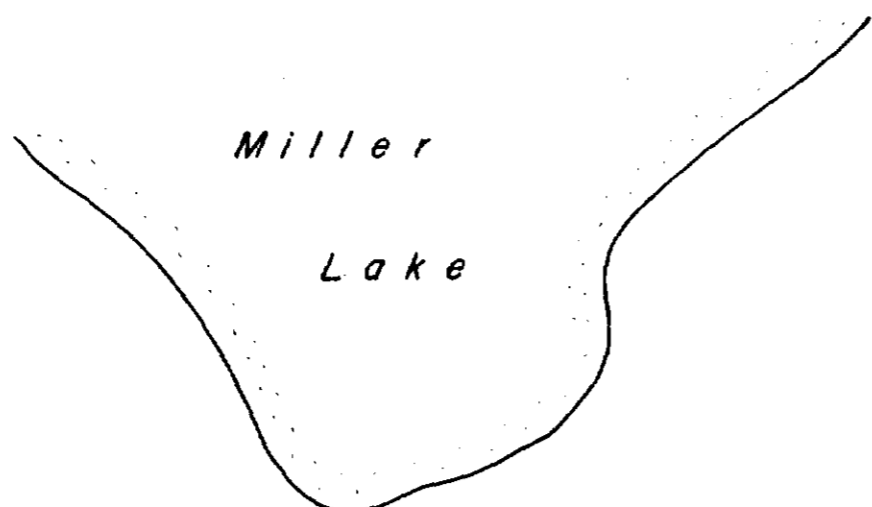


MAGINO JOINT VENTURE  
 MAGINO GOLD MINE PROPERTY  
 FINAN TWP., ALGOMA MINING DIVISION  
 DISTRICT OF SAULT STE. MARIE ONT.  
 GEOLOGICAL MAP

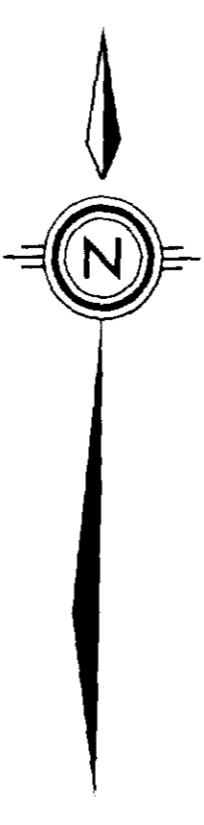
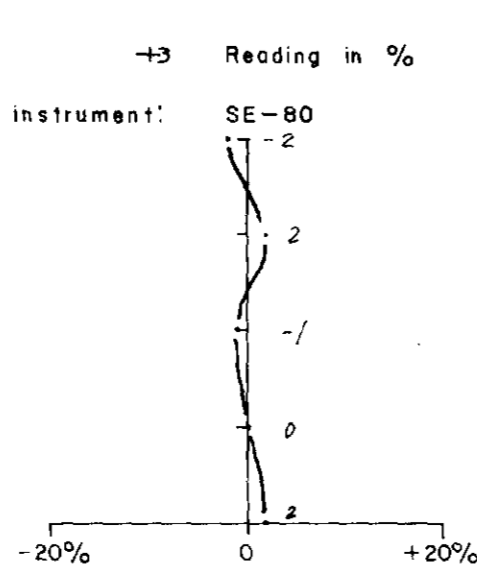
DATE: Sept. / 82 BY: R. Mongeau DWG. No. S-2

FINAN-0024 #2

2.5331 No. photo



**LEGEND**



**KEY**

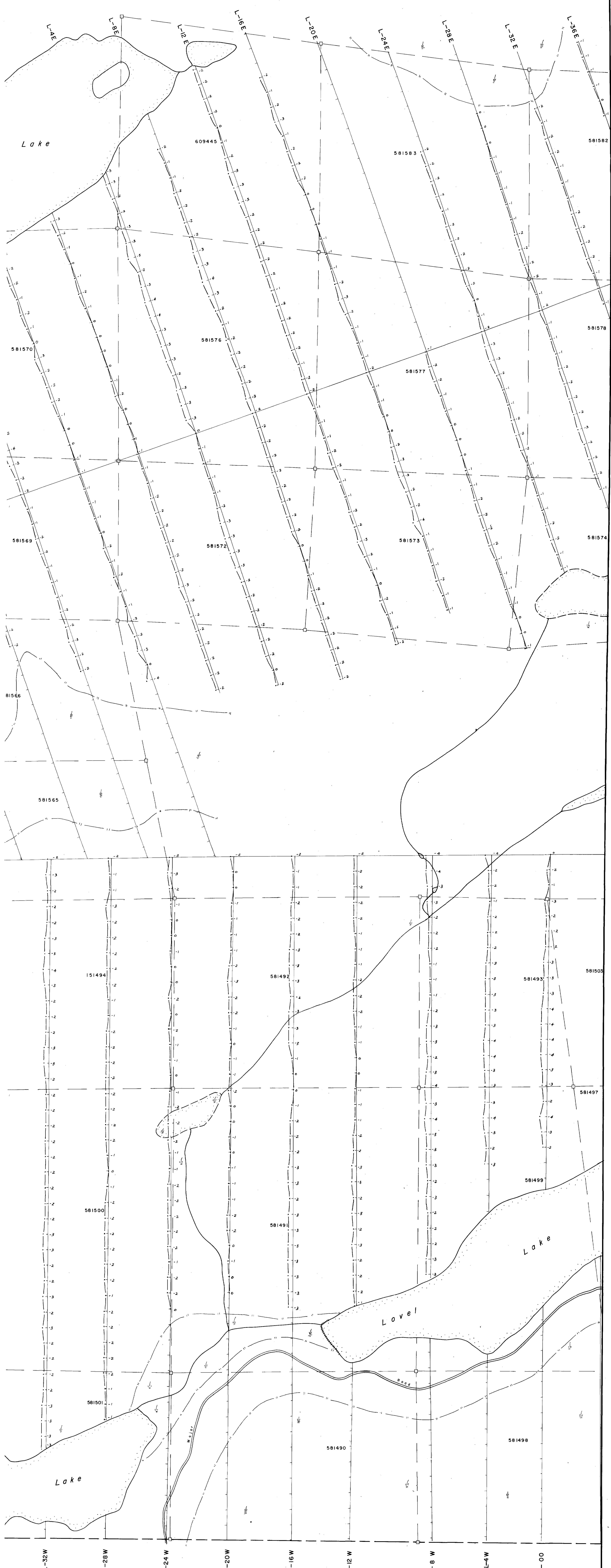


*R. Mongeau*  
2-5839  
Duplone



MAGINO JOINT VENTURE		
MAGINO GOLD MINE PROPERTY		
FINAN TWP., ALGOMA MINING DIVISION		
DISTRICT OF SAULT STE. MARIE ONT.		
LOW FREQUENCY		
E.M. SURVEY		
DATE: Sept. /82	BY: R. Mongeau	DWG. No. S-3

FINAN-0024 #3



**LEGEND**

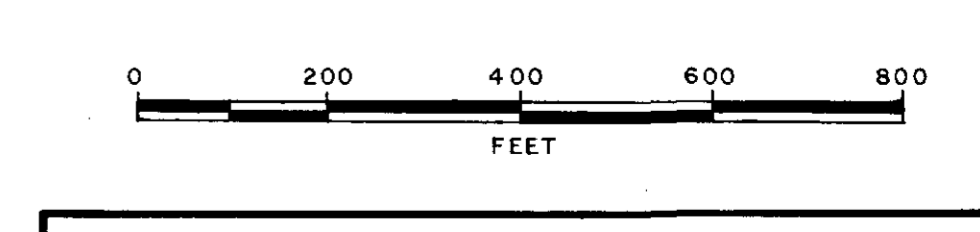
-13 Reading in %  
 Instrument: SE-80  
  
 -20% 0 +20%



**KEY**

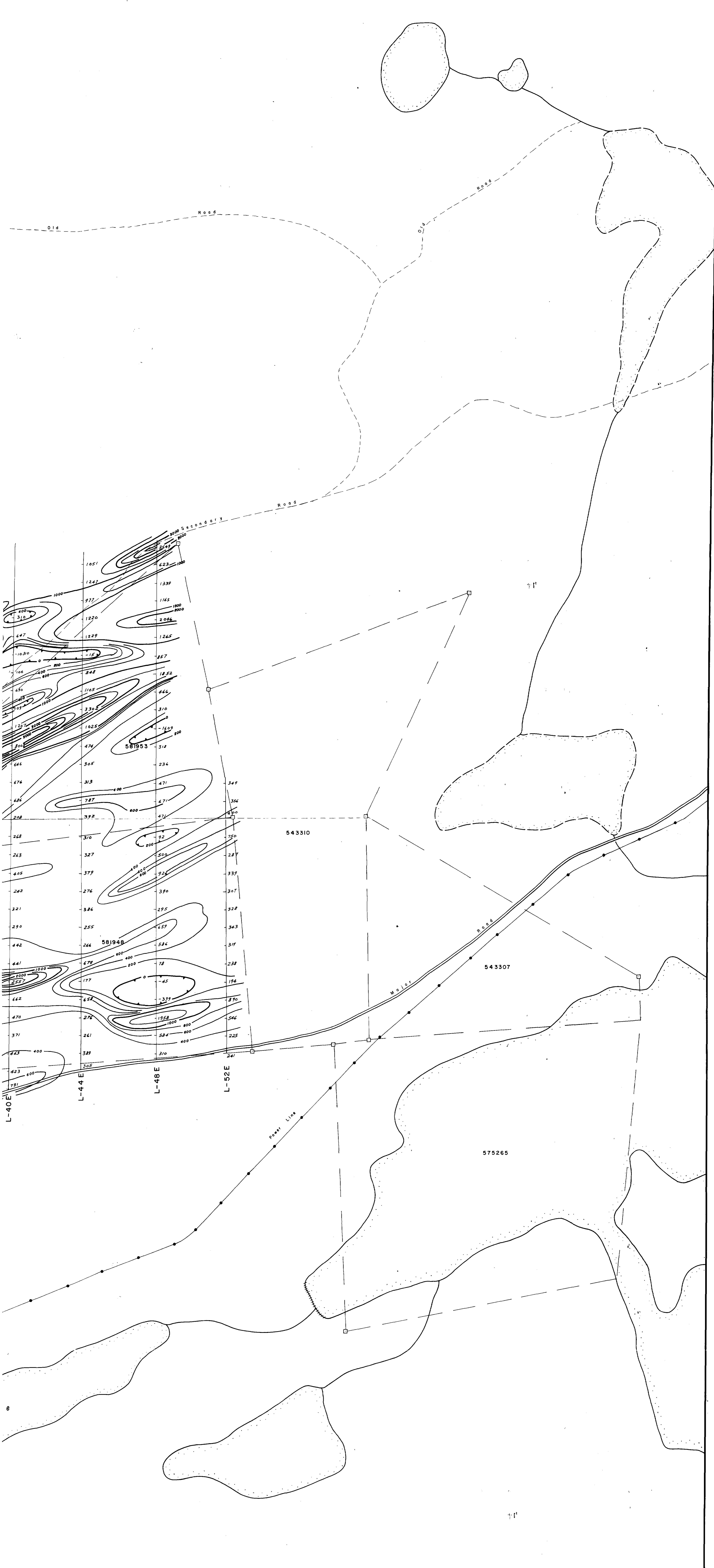
WEST	EAST
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*R. Mongeau*  
 2-5234 Duplicate



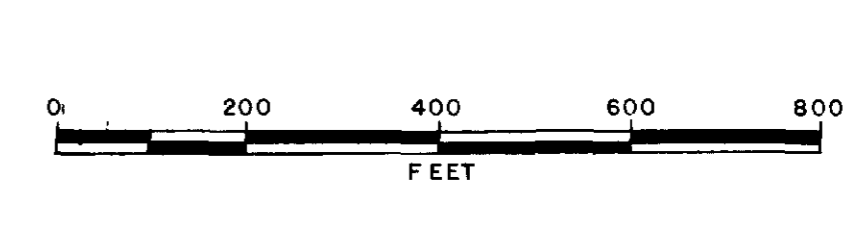
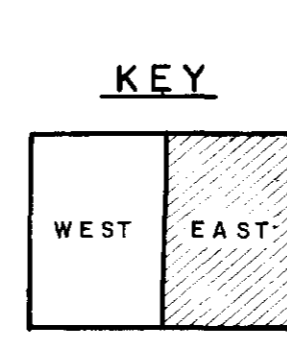
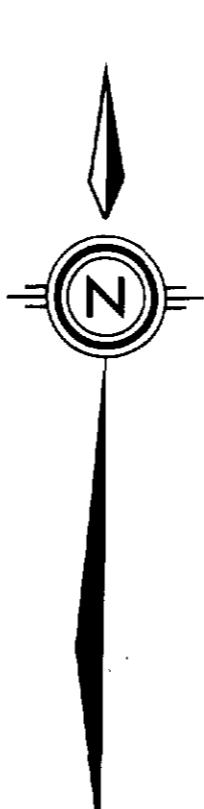
MAGINO JOINT VENTURE	
MAGINO GOLD MINE PROPERTY	
FINAN TWP., ALGOMA MINING DIVISION	
DISTRICT OF SAULT STE. MARIE ONT.	
<b>LOW FREQUENCY</b>	
<b>E.M. SURVEY</b>	
DATE: Sept. / 82	BY: R. Mongeau
DWG. No. S-4	

Miller  
Lake



**LEGEND**

- Values in gammas
- Contour intervals
- 200 gammas to 1000
- 500 gammas to 5000
- Not Contoured below 0
- Mag low
- Base values 50,000 gammas
- Instrument MP-2 (Portable proton precision mag)



MAGINO JOINT VENTURE	
MAGINO GOLD MINE PROPERTY	
FINAN TWP., ALGOMA MINING DIVISION	
DISTRICT OF SAULT STE. MARIE ONT.	
MAGNETOMETER SURVEY	
DATE: Sept. / 82	BY: R. Mongeau
DWG. No. S-5	

FINAN-0024 #5  
25239 Duplicate





L-52W L-48W L-44W L-40W L-36W L-32W L-28W L-24W L-20W L-16W L-12W L-8W L-4W L-00

L-20W L-16E L-12E L-8E L-4E L-00E

Spring Lake Lake Level

581577 581568 581567 581570 581569 581572 581576 581573 581577 581578 581574 581565 581566 581569 581495 581494 581492 581493 581503 581668 581496 581500 581491 581497 581502 581501 581490 581498 581499

609445

KEY

WEST EAST

NOTE: For legend see east sheet.

0 200 400 600 800 FEET

MAGINO JOINT VENTURE  
MAGINO GOLD MINE PROPERTY  
FINAN TWP., ALGOMA MINING DIVISION  
DISTRICT OF SAULT STE. MARIE ONT.

MAGNETOMETER SURVEY

DATE: Sept./82 BY: R. Mongeau DWG. No. S-6

FINAN-0024 #6.5239 Duplicate