



MAGNETIC and ELECTROMAGNETIC SURVEYS

on the

WILLIAM SIMS PROPERTY

in

KEEFER TOWNSHIP

AND

HILLARY TOWNSHIP

PORCUPINE MINING DIVISION

DISTRICT OF COCHRANE

ONTARIO

OPAP File Number OP89-239

by

Kian A. Jensen ^{2 3969}
Consulting Geologist/Geophysicist

January, 1990



42A05SW0054 2.13179 HILLARY

010C

Table of Contents

	Page
Title Page	i
Table of Contents	ii
Introduction	1
Location and Access	2
Property	2
General Geology	5
Previous Exploration Activities	7
Geophysical Survey	8
Introduction	8
Magnetic Survey	9
Electromagnetic Survey	9
Interpretation	10
Conclusions	11
Recommendations	12
Certificate	
Appendix	

List of Figures

Figure 1: Location Map	3
Figure 2: Claim Map and Property Location Map	4
Figure 3: General Geology of the William Sims Property	6
Figure 4: Magnetic Survey Contour Map	folder
Figure 5: VLF-EM Survey - Profile Map, Cutler, Maine	folder
Figure 6: VLF-EM Survey - Profile Map, Annapolis, Maryland	folder

INTRODUCTION

During January, 1990, a total of 13.79 miles or 22.2 kilometers of grid was established and, a total field magnetic survey and a VLF-EM survey were completed on the 16 contiguous unpatented mining claims and 4 patented mining claims known as the William Sims Property in Keefer and Hillary Townships, Porcupine Mining Division, District of Cochrane, Ontario.

A total of 888 magnetic readings and 888 VLF-EM readings were observed during the survey period from January 18 to 23, 1990. The line cutting, magnetic and electromagnetic surveys, data reductions and drafting were completed by personnel of Trans Cambrian Exploration Limited from January 22 to 24, 1990. The interpretation and report were completed by the author from January 22 to 26, 1990.

The project area is located in the southwestern portion of Keefer Township and the northwestern portion of Hillary Township. It is located approximately 15 miles west of the junction of Highways 101 and 144 and about 27 air miles from the Timmins city center.

The above project has been applied for and accepted under the OPAP. The OPAP File Number is OP89-239.

The purpose of the survey was to identify the lithological units and contacts, structural features and geophysical anomalies favourable for gold mineralization.

LOCATION AND ACCESS

The project area is located in the southwestern portion of Keefer Township and the northwestern portion of Hillary Township. It is located approximately 15 miles west of the junction of Highways 101 and 144 and about 27 air miles from the Timmins city center as shown in Figure 1.

Access to the project group is via Highway 101 west of Timmins and about 15 miles west of the junction of Highway 101 and 144. A bush road in Hillary Township travels northwards from the M.T.C. gravel pit for about 1 mile. A short walk of about 1000 feet is require to reach the southeastern corner of the property. A four wheel drive vehicle is required during most of the year and skidoo during the winter.

Additional access is from Keefer Township via the various bush roads and logging roads leading westwards to Opising Lake about 1/2 mile north of the Keefer-Hillary Township boundary. This road access the northern part of the claim group and the patented mining claims.

PROPERTY

The property of Mr. William Sims consists of 16 contiguous unpatented mining claims recorded on August 14, 1989 and 4 patented mining claims known as the William Sims Property in Keefer and Hillary Townships, Porcupine Mining Division, District of Cochrane, Ontario.

The property consists of the following mining claims held 100% by Mr. William Sims and as illustrated in Figure 2:

P-28779 to P-28782	inclusively	Patented	Keefer Township
P-1116879 to P-1116881	inclusively	Staked	Keefer Township
P-1115550 to P-1115555	inclusively	Staked	Keefer Township
P-1115583 to P-1115584	inclusively	Staked	Keefer Township
P-1115556 to P-1115559	inclusively	Staked	Hillary Township

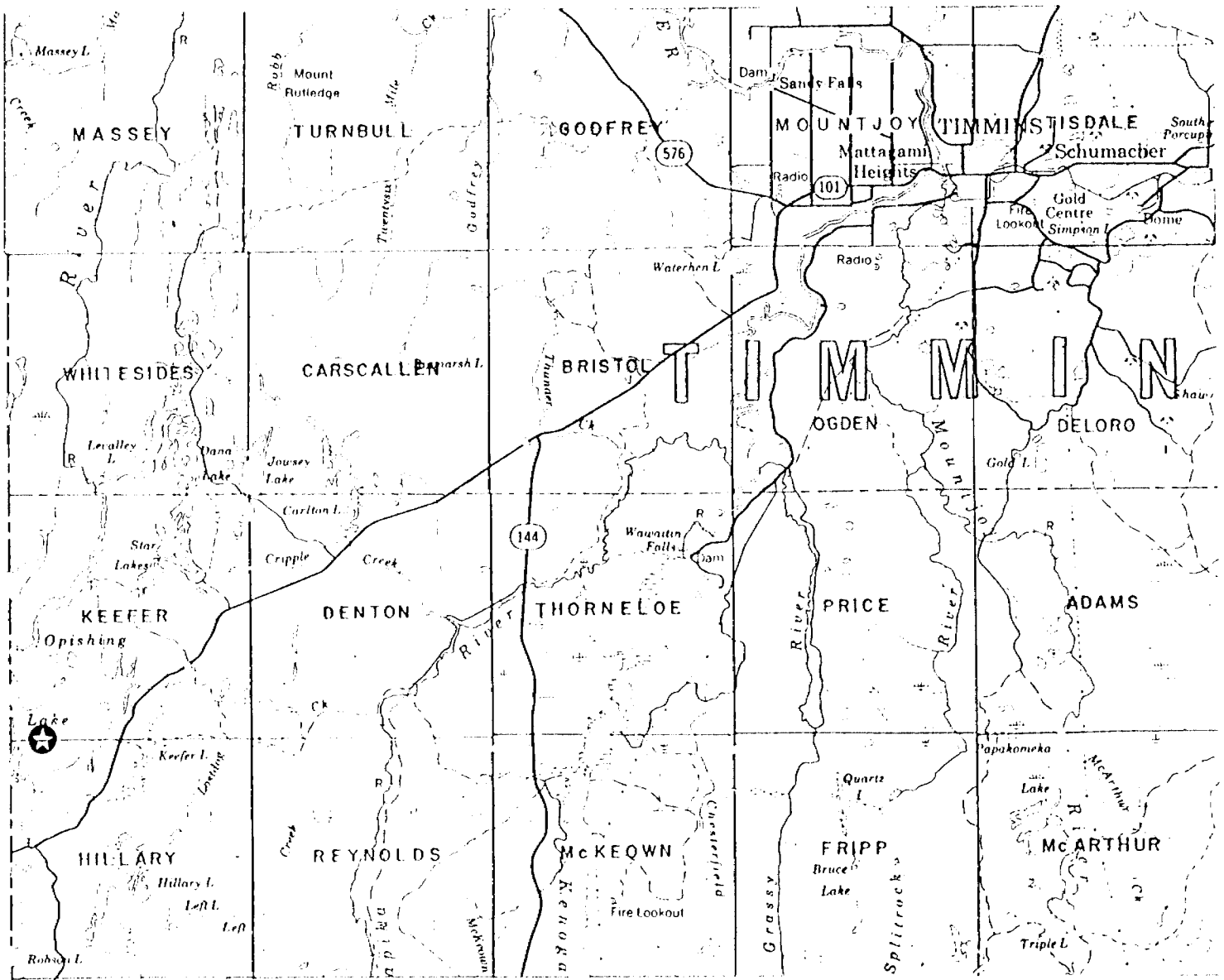


Figure 1: Location Map of the Timmins Area, and the William Sims Property in Keefer and Hillary Townships, Porcupine Mining Division, Ontario. Scale 1 inch to 4 miles.

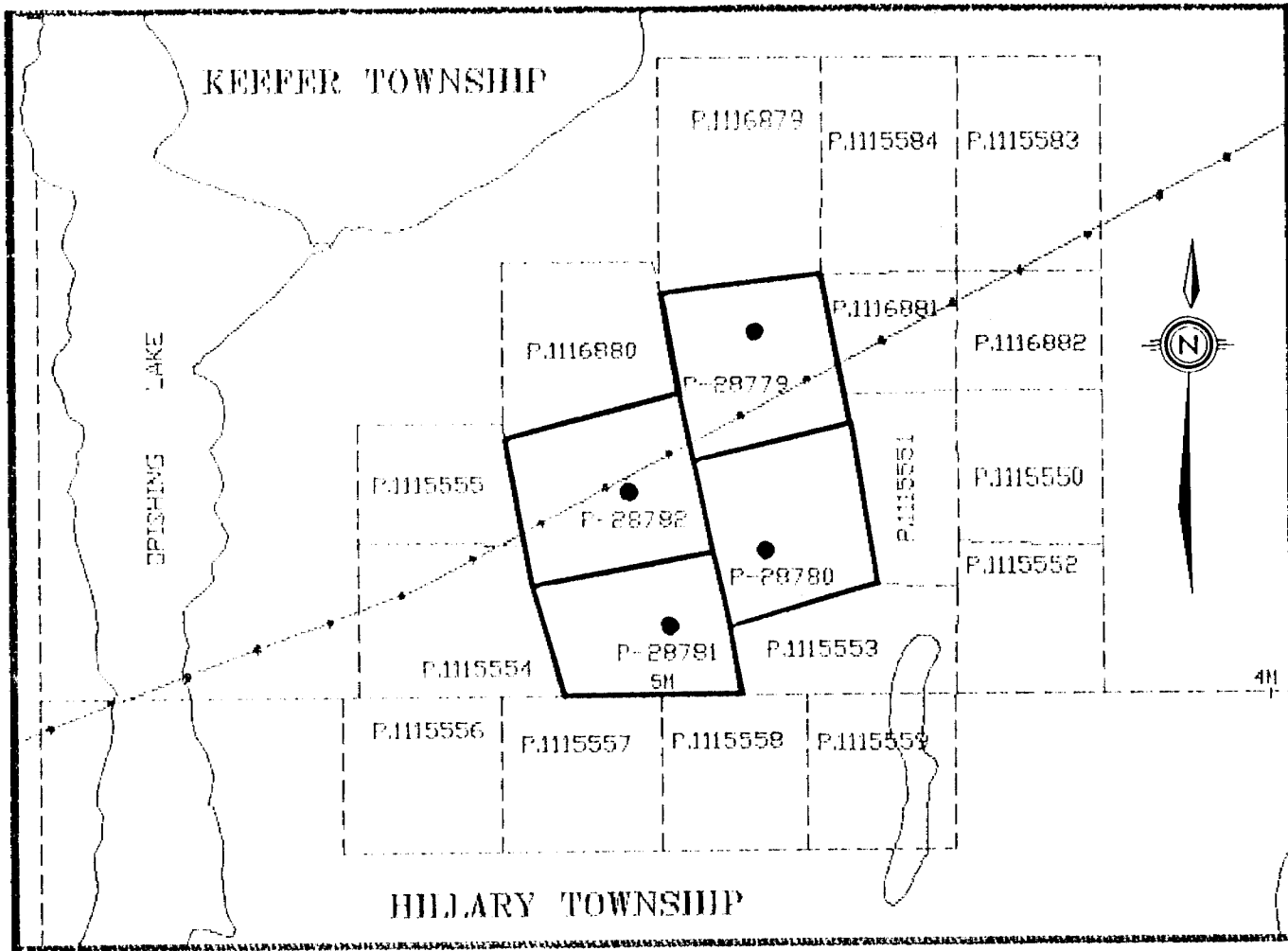


Figure 2: Claim Map and Property Map of the William Sims Property in Keefer and Hillary Townships, Porcupine Mining Division, Ontario. Scale 1 inch to 1/4 mile.

The bedrock in the area consists of an early Precambrian metavolcanic-metasedimentary sequence and has been intruded by granitic rocks.

The rock units strike in a northeast to east direction. The oldest rocks appear to be pale colour ultramafic flows which are intercalated with metasediments. In isolated areas these rocks grade into a massive flow consisting of serpentinized peridotitic komatite. These rock are overlain by basaltic komatite and/or Mg tholeiites. The above rocks are succeeded upwards by Fe tholeiite, calc-alkalic basalt, intermediate to felsic metavolcanics and clastic metasediments.

The intermediate to felsic metavolcanics consist of tuffs, breccia and foliated to massive flows. This unit grades into metasediments and clastic metasediments. Within isolated areas the metasediments contain a zone of chert and magnetite iron formation.

The above lithological units are intruded by gabbroic to dioritic rocks. The felsic intrusives appear to have three stages, being: quartz diorite to tonalite, porphyritic granodiorite and a medium grained granodiorite.

Metamorphism in the area is of the greenschist facies. Rocks near the late intrusive have been altered to an epidote amphibolite to amphibolite facies.

Intruding all the above lithological units are north to northerly trending diabase dikes.

The structure in the area appears to be dominated by north northwest trending transverse faults, several are filled by the later diabase dikes. Several northeast trending shear zones are located within the area.

Figure 3 illustrates the generalized geology of the William Sims property. The known gold and silver mineralization is associated with whitish grey quartz carbonated veins with sulphide mineralization consisting of pyrite, chalcopyrite and a grey metallic mineral suspected to be galena. The showings are within the metavolcanic sequence either at or near the metavolcanic - felsic intrusive contact.

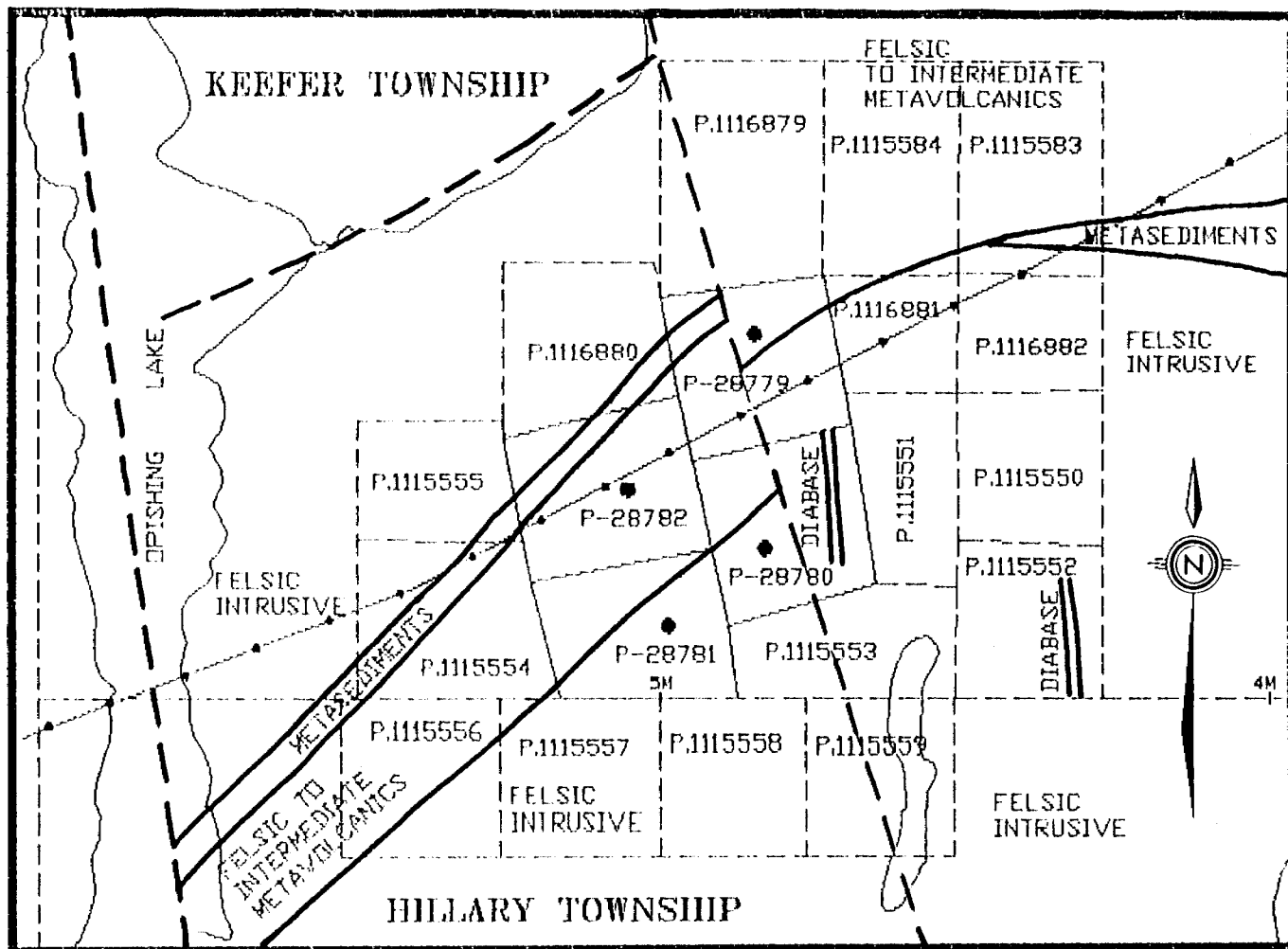


Figure 3: General Geology (after A.G. Choudhry, 1981) of the William Sims Property in Keefer and Hillary Townships, Porcupine Mining Division, Ontario. Scale 1 inch to 1/4 mile.

PREVIOUS EXPLORATION ACTIVITIES

The earliest reported work within the area of the present mining claims was in the 1930's. The Moore group consisted of 22 mining claims in the southwestern corner of Keefer Township. Stripping and trenching discovered a vein zone about 2 to 5 feet wide within the metavolcanics. The zone contained folded quartz veining and conformed with a northeastward pitching drag fold. Stripping, trenching and diamond drilling was completed in 1933 by Goldale Mines Limited.

The Nixon-Bartleman property consisted of 25 mining claims. It appears that most of the exploration work in the area was completed by this property holder. Geological mapping along the claim lines was completed in 1946. Trenching of the vein systems and sampling was also completed in 1946.

Two veins were located at post 2 of P-28782 which strikes North 35 degrees East and dips steeply to the southeast. The north vein assayed 0.83 opt Au and 2.20 opt Ag over 0.5 feet. Hollinger sampling averaged 0.197 opt Au over 1.7 feet. The south vein sampled by channel samples assayed 0.84 opt Au and 2.04 opt Ag over 4.0 feet and contained Visible Gold, and 0.47 opt Au and 0.88 opt Ag over 2.5 feet. Two bulk samples returned values of 1.08 opt Au and 3.28 opt Ag, and 1.14 opt Au and 2.84 opt Ag.

About 250 feet northwest of post 2 of P-28782, 3 parallel to sub-parallel veins occur striking from North 60 to 70 degrees East and dipping steeply south. The northern vein assayed 0.15 opt Au over 1.2 feet and 0.01 opt Au over 2.5 feet. The middle vein located between 25 to 30 feet south of the north vein returned values of 0.36 opt Au and 1.28 opt Ag over 4.0 feet. A grab sample from a pit on the middle vein assayed 0.16 opt Au. The third vein or south vein is located about 50 feet south of the middle vein. A pit in the south vein assayed 0.70 opt Au and 2.50 opt Ag over 0.7 feet. Values from a trench located 100 feet west of the pit on the south vein returned values of 0.56 opt Au and 1.82 opt Ag over 1.0 foot.

During 1946, 6 drill holes were completed in the vicinity of the gold showings, with a total of 2404 feet drilled. The drill logs and sections are on file at the Resident Geologists office.

During August to October, 1961, Hollinger Mines Limited conducted a 5 hole diamond drilling program totalling 3973.9 feet. The drilling targets were the down dip extensions of the gold and silver showings within mining claims P-28780, P-28781 and P-28782.

During 1971 and 1972, Sturgex Mines Limited held 21 mining claims. No work is on file at the Regional Geologists office.

Noranda Incorporated held parts of the eastern portion of the claim group and also conducted exploration work over the majority of the present claim group. Their activities included geological mapping in 1983, humus geochemical sampling program in 1985, a magnetic and VLF-EM survey on a flagged grid in 1986. The claim group to the east of the present claims were surveyed with an airborne magnetic and electromagnetic survey in 1987 after the property was mapped in 1986.

GEOPHYSICAL SURVEY

INTRODUCTION:

During January 2 to 18, 1990, a total of 13.79 miles or 22.2 kilometers of grid was established and, a total field magnetic survey and a VLF-EM survey were completed on the 16 contiguous unpatented mining claims and 4 patented mining claims known as the William Sims Property in Keefer and Hillary Townships, Porcupine Mining Division, District of Cochrane, Ontario.

The above project has been applied for and accepted under the OPAP. The OPAP File Number is OP89-239.

The base line was established on the Keefer-Hillary Township boundary. The grid lines were established every 200 meters along the base line. Tie lines were established at 400m North, 800m North and 1400m North for grid control. The base line, all tie lines and all grid lines were picketed at 25 meter intervals. The 5 mile post on the township boundary is located on the Base Line at 400 meters West. All claim posts were located.

A total of 888 magnetic readings and 888 VLF-EM readings were observed during the survey period from January 18 to 23, 1990. The line cutting, magnetic and electromagnetic surveys, data reductions and drafting were completed by personnel of Trans-Cambrian Exploration Limited from January 22 to 24, 1990. The interpretation and report were completed by the author from January 22 to 26, 1990.

The purpose of the survey was to identify the lithological units, structural features and geophysical anomalies favourable for gold mineralization.

MAGNETIC SURVEY:

The total field magnetic survey was conducted from January 18 to 23, 1990, by G. Thibault using a Geometric G-816 Proton Procession Magnetometer. The instrument specifications are located in the appendix. The staff height was 8 feet.

The magnetic base station was established on the Base Line at 0400 with an average base value of 59,090 gammas. The east-west base line and all the tie lines were surveyed at 25 meter intervals in a looping fashion to establish accurate control stations for each grid line. The north-south grid lines were surveyed at 25 meter intervals.

The data was corrected for the daily drift and the tie-ins at the control stations. A base level of 58,000 gammas has been removed from all the observed readings.

The corrected data was plotted on a base map with a scale of 1:5000. The corrected numerical data is plotted on the base map. The data was contoured at 100 gamma intervals wherever possible as shown in Figure 4.

ELECTROMAGNETIC VLF-EM SURVEY

The VLF-EM survey was conducted from January 18 to 23, 1990, by M. Caron using a Geonics EM-16 unit. The instrument specifications are located in the appendix.

The EM-16 unit measures the vertical in-phase component of the secondary electromagnetic field and the vertical out of phase or quadrature component of the secondary electromagnetic field.

The transmitter station used for the surveying on the north-south grid lines was Cutler, Maine, with a frequency of 24.0 kHz. All readings were collected facing north at 25 meter separations along the grid lines. The profile data for the in-phase and quadrature are plotted on a base map with a scale of 1:5000 as shown in Figure 5.

The transmitter station used for the surveying of the base line and the tie lines was Annapolis, Maryland, with a frequency of 21.4 kHz. All readings were collected facing east at 25 meter separations along the base line and the tie lines. The profile data for the in-phase and quadrature are plotted on a base map with a scale of 1:5000 as shown in Figure 6.

The interpretation of the magnetic and electromagnetic surveys were difficult due to the line separation. Also, the high voltage power transmission line traversing the property has affected both the magnetic and electromagnetic readings. The VLF-EM has been affected to up to 400 feet on both sides of the transmission line.

The high magnetic features trending in a northerly direction are probably due to diabase dikes in-filling old fault or shear zones.

Additional high magnetic zones area probably due to different magnetic composition of the mafic metavolcanics. The western portion of the claim group appears to have the south and north contacts from Line 600m West at 400m South to Line 200m East at 200m North and from the south side of the power line from Line 1200m West at 175m North to Line 0 at 800m North, respectively. This unit is terminated on the eastern side by a fault zone trending in at north-northwesterly direction. The eastern portion of the metavolcanics has been faulted northwards and the south and north boundaries are from Line 0 at 1000m North to Line 600m East at 1175m North and Line 0 at 1375m North due east to Line 600m East, respectively.

The remainder of the claim group is suspected to be underlain by felsic intrusives.

The VLF-EM surveys located numerous anomalies. The anomalies indicated on Figure 6 are probably caused by north-northwest trending shear and/or fault zones and edge effects of the diabase dikes. The anomalies in the vicinity of the power line are suspect. Also, the separation of the tie lines make the interpretation difficult.

The anomalies indicated on Figure 5 are all generally trending from a east to northeast direction. The majority of the anomalies are concentrated within the suspected metavolcanic sequence and probably indicates sulphides or graphitic material at flow contacts and within the metasediments. Additional extensions of some of the above anomalies trend into the suspected felsic intrusives. Some of these anomalies may be due to local shearing.

CONCLUSIONS

The geophysical surveys technically obtained the objectives. The claim group is underlain by a northeast to east northeast trending metavolcanic-metasedimentary sequence intruded on the north and south sides by felsic intrusive bodies. Due to the orientation of the diabase dikes and the line separation, it was difficult to accurately locate them.

The property has a major north-northwest fault bisecting the claim group. The VLF-EM survey has located several anomalies which are parallel to sub-parallel to this feature.

The remainder of the electromagnetic anomalies are parallel to the strike of the metavolcanics and may represent either flow contacts with sulphide mineralization and/or graphitic layer or shearing. The latter case is probably due to some of the anomalies traversing the north-northwest fault zone and extending into the felsic intrusives.

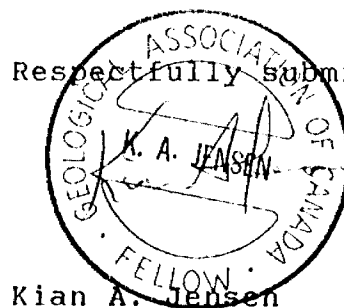
RECOMMENDATIONS

Based upon the previous exploration activities conducted on the property and the results of the present surveys, it is the author's opinion that the following recommendation be completed:

- 1) Establish additional fill-in grid lines so the overall grid separation is 100 meters.
- 2) Survey the above new grid and correlate the survey data to the data covered by this report. Surveys should consist of the total field magnetic and VLF-EM surveys.
- 3) Favourable VLF-EM anomalies should be surveyed with either HLEM or IP to provide additional information on the anomalies.
- 4) The property should have a geological survey completed. The old patent posts, former diamond drill sites, and all former trenches must located and be tied into the grid.
- 5) The known zones of gold mineralization should be stripped, detail mapping and intense assaying across the veins for the entire strike length. Also, other areas of gold mineralization should be trenched, mapped and sampled.
- 6) Based upon the results of all the above recommended work, a limited diamond drilling program may be warranted.

Dated at Timmins, Ontario
January 26, 1990

Respectfully submitted,



Kian A. Jensen

CERTIFICATE

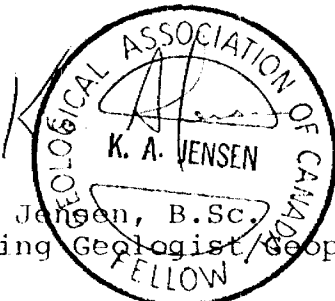
With reference to my report on the magnetic and electromagnetic surveying on the William Sims Property in Keefer and Hillary Townships for Mr. William Sims, Dated January 26, 1990

I, Kian A. Jensen, of the City of Timmins, Ontario, do hereby certify the following to be true and accurate to the best of my knowledge:

- 1) That I received an Honour B.Sc. degree in Earth Science, Geology Major from the University of Waterloo in 1975,
- 2) That I have been employed as a geologist and/or geophysicist by various exploration companies and consulting companies since 1978,
- 3) That I have been and still am a member in good standing in the following associations:
 - a) Society of Exploration Geophysicists - Associate, 1981
 - b) Geological Association of Canada - Fellow, 1983
- 4) That I am the author of the corresponding report, and have been actively exploring and prospecting in the Timmins area since 1981,
- 5) That I have no interest, directly or indirectly in the property, or adjacent property, or in any mining or exploration company.

Dated the 26th day of January, 1990
Timmins, Ontario

Kian A. Jensen, B.Sc.
Consulting Geologist/Geophysicist

A circular stamp from the Geological Association of Canada. The outer ring contains the text "GEOLOGICAL ASSOCIATION OF CANADA" at the top and "FELLOW" at the bottom. In the center, the name "K. A. JENSEN" is printed. A handwritten signature is written over the name and the center of the stamp.

1.0 GENERAL INFORMATION

1.1 INTRODUCTION

The Model G - 826 Portable Proton Magnetometer is a complete system designed for man-carry field applications requiring simple operation and stable measurements of the total intensity of the earth's magnetic field. The G - 826 is accurate and has a sensitivity of ± 1 gamma over a range from 20,000 to 90,000 gammas. Since the instrument measures total field intensity, the accuracy of each measurement is not affected by sensor orientation. The inherent simplicity of the G - 826 proton magnetometer allows rapid, accurate measurements to be obtained from a rugged, compact field instrument. This is a precision instrument and reasonable attention must be given to handling, battery condition, and magnetic environment.

1.2 MAGNETIC ENVIRONMENT

It is important that the earth's magnetic field is not perturbed by allowing unwanted magnetic objects to come close to the sensor. Such objects include rings, keys, watches, belt buckles, pocket knives, metal pencils, zippers, etc. When the sensor is used on the staff, one gamma surveys are easily performed provided the sensor is kept at a distance of three feet from the operator. When the sensor is used in the backpack, certain articles of clothing and some types of batteries within the console will cause a five to ten gamma heading error in the readings. The G - 826, however, still provides one gamma sensitivity and repeatability despite the presence of such a base line shift. The backpack feature is recommended for use in difficult terrain where "hands free" operation is required.

Prior to survey use, objects that are suspected to be magnetic may be checked in the following manner:

1. Attach sensor to staff and connect coiled signal cable to console. Sensor should not be moved or turned during the test, and the suspected article should be far away initially.
2. Cycle the magnetometer a few times by depressing the READ button--releasing--and waiting for a reading each cycle.

Operating Manual

Model G - 826

Portable Proton Magnetometer

3. Observe measurement readings. Each reading should repeat to ± 1 gamma. (A slow shift may occur over several minutes due to a diurnal change in the earth's field.)
4. Place the suspected article at the distance from the sensor expected during actual survey operation.
5. Cycle magnetometer several times and note the readings.
6. Remove the article and repeat steps 2 and 3 to check for diurnal shifts in the earth's field. If a diurnal shift is present, repeat entire test.
7. If the readings obtained in step 5 differ by more than ± 1 gamma (\pm one count) from those obtained in steps 3 and 6, then the article is magnetic.

IF THE ARTICLE IS HIGHLY MAGNETIC, OR IF THE SENSOR IS INSIDE OR NEAR A BUILDING OR VEHICLE, THE PROTON PRE-CESSION SIGNAL WILL BE LOST, GIVING COMPLETELY ERRATIC READINGS AND LOSS OF ± 1 COUNT REPEATABILITY.

The magnetometer should not be operated in areas that are known sources of radio frequency energy, power line noise (transformers), in buildings or near highly magnetic objects. The sensor should always be placed on the staff above the ground, or in the "backpack." The sensor will NOT operate properly when placed directly on the ground.

1.3 SPECIFICATIONS

Sensitivity:	± 1 gamma throughout range
Range:	20,000 to 90,000 gammas (worldwide)
Tuning:	Multi-position switch with signal amplitude indicator light on display
Gradient Tolerance:	Exceeds 800 gammas/feet

Operating Manual
 Model G-826
 Portable Proton Magnetometer

Sampling Rate: Manual push button, one reading each six seconds.

Output: Five digit numeric display with readout directly in gammas.

Power Requirements: Twelve 1.5 volt "D" cell universally available flashlight-type batteries. Charge state or replacement signified by flashing indicator light on display.

Temperature Range: Console and sensor: -40° to $+85^{\circ}$ C.
 Battery pack: 0° to $+50^{\circ}$ C (limited use to -15° C; lower temperature battery belt operation — optional).

Accuracy (Total Field): ± 1 gamma through 0° to $+50^{\circ}$ C temperature range.

Sensor: High signal, noise cancelling, mounted on staff or attached to backpack.

Size: Console: 3.5 x 7 x 11 inches
 (9 x 18 x 28 cm)
 Sensor: 3.5 x 5 inches (9 x 13 cm)
 Staff: 1 inch diameter x 8 ft. length
 (3 cm x 2.5 m)

Weight:

	Lbs.	Kgs.
Console (w/batteries):	5.5	2.5
Sensor and signal cable:	4	1.8
Aluminum staff:	2	.9
	11.5	5.2

VLF EM



EM16

One of the most popular and widely used electromagnetic instruments, the EM16 VLF receiver makes the ideal reconnaissance EM. This can be attributed to its field reliability, operational simplicity, compactness and mutual compatibility with other reconnaissance instruments such as portable magnetometers and radiometric detectors.

The VLF method of EM surveying, pioneered by Geonics, has proven to be a simple economical means of mapping geological structure and fault tracing. The applications are many and varied, ranging from direct detection of massive sulphide conductors to the indirect detection of precious metals and radioactive deposits.

FEATURES

- The EM16 is the only VLF instrument that measures the quad phase as well as the in phase secondary field. This has the advantage of providing an additional piece of data for a more comprehensive interpretation and also allows a more accurate determination of the tilt angle.
- The secondary fields are measured as a ratio to the primary field making the measurement independent of absolute field strength.
- The EM16 is the only VLF receiver that can be adapted to measure VLF resistivity.

Specifications

MEASURED QUANTITY	In phase and quad phase components of vertical magnetic field as a percentage of horizontal primary field. (i.e. tangent of the tilt angle and ellipticity)
SENSITIVITY	In phase : $\pm 150\%$ Quad phase : $\pm 40\%$
RESOLUTION	$\pm 1\%$
OUTPUT	Nulling by audio tone. In phase indication from mechanical inclinometer and quad phase from a graduated dial.
OPERATING FREQUENCY	15-25 kHz VLF Radio Band. Station selection done by means of plug in units.
OPERATOR CONTROLS	On/Off switch, battery test push button, station selector switch, audio volume control, quadrature dial, inclinometer.
POWER SUPPLY	6 disposable 'AA' cells
DIMENSIONS	42 x 14 x 9 cm
WEIGHT	Instrument : 1.6 kg Shipping : 4.5 kg

VLF RESISTIVITY METER



EM16R

A simple, button attachment to the EM16 converts it to a direct reading terrain resistivity meter. The EM16R attachment interlaces a pair of potential electrodes to the EM16 enabling the measurement of the ratio of, and the phase angle between, the horizontal electric and magnetic fields of the plane wave propagated by distant VLF radio transmitters.

The EM16R is direct reading in ohm meters of apparent ground resistivity. If the phase angle is 45° , the resistivity reading is the true value and the earth is uniform to the depth of exploration (i.e. a skin depth). Any departure from 45° of phase indicates a layered earth. Two layer interpretation curves are supplied with each instrument to permit an interpretation based on a two layer earth model.

This highly portable resistivity meter makes an ideal tool for quick geological mapping and has been used successfully for a variety of applications.

- Detection of massive and disseminated sulphide deposits
- Overburden conductivity and thickness measurements
- Permafrost mapping
- Detection and delineation of industrial mineral deposits
- Aquifer mapping

Specifications

MEASURED QUANTITY	<ul style="list-style-type: none"> • Apparent Resistivity of the ground in ohm-meters • Phase angle between E_x and H_y in degrees
RESISTIVITY RANGES	<ul style="list-style-type: none"> • 10 — 300 ohm-meters • 100 — 3000 ohm-meters • 1000 — 30000 ohm-meters
PHASE RANGE	0-90 degrees
RESOLUTION	<ul style="list-style-type: none"> • Resistivity : $\pm 2\%$ full scale • Phase : $\pm 0.5^\circ$
OUTPUT	Null by audio tone. Resistivity and phase angle read from graduated dials.
OPERATING FREQUENCY	15-25 kHz VLF Radio Band. Station selection by means of rotary switch.
INTERPROBE SPACING	10 meters
PROBE INPUT IMPEDANCE	100 M Ω in parallel with 0.5 picofarads
DIMENSIONS	19 x 11.5 x 10 cm. (attached to side of EM16)
WEIGHT	1.5 kg (including probes and cable)



Northern Development and Mines

REPORT OF WORK
(Geophysical, Geological, Geochemical and Expenditures)

Mining Act



42A055W0054 2.13179 HILLARY

900

Type of Survey(s)
MAGNETIC AND ELECTROMAGNETIC SURV

Claim Holder(s)
WILLIAM SIMS

Address
392 PAISLEY BLVD. E. MISSISSAUGA, ONT. L5B 2A6

Survey Company
TRANS-CAMBRIAN EXPLORATION LIMITED

Name and Address of Author (of Geo-Technical report)
KIAN A. JENSEN P.O. BOX 37, SOUTH PORCUPINE, ONTARIO P0N 1H0

Date of Survey (From & to)
Day | Mo. | Yr. | Day | Mo. | Yr. **02 01 90 | 26 02 90**

Total Miles of this Claim
22.2 Km.

1 A-45473
272-4983

MINING LANDS SECTION

April 3

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	20
	- Magnetometer	40
For each additional survey: using the same grid. Enter 20 days (for each)	- Radiometric	
	- Other	
Main Days	Geophysical	Days per Claim
	- Electromagnetic	
Complete reverse side and enter totals here	- Magnetometer	
	- Radiometric	
Airborne Credits	Geophysical	Days per Claim
	- Electromagnetic	
Note: Special provisions credits do not apply to Airborne Surveys.	- Magnetometer	
	- Radiometric	

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.
P	1116879	/			
	1116880	/			
	1116881	/			
	1116882	/			
	1115550	/			
	1115551	/			
	1115552	/			
	1115553	/			
	1115554	/			
	1115555	/			
	1115583	/			
	1115584	/			
	1115556	/			
	1115557	/			
	1115558	/			
	1115559	/			

RECORDED
FEB - 2 1990

Expenditures (excludes power stripping)

Type of Work Performed
DIAGNOSTIC

Performed on Claim(s)
1115550

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. **16**

For Office Use Only

Total Days Cr. Recorded **900**

Date Recorded **FEB 2/90**

Date Approved & Recorded **900**

Ministry of Northern Development and Mines
Whit
Mining Recorder
Branch Director

Date **FEBRUARY 2/1990**

Recorder/Holder of 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
KIAN A. JENSEN, P.O. BOX 37, SOUTH PORCUPINE, ONTARIO P0N 1H0

Date Certified **Jan 27/90**

Certified by (Signature)
[Signature]



Date May 11, 1990

File 2.13179

Mining Recorder's Report of Work No. W9006.6092/08

Recorded Holder
WILLIAM SIMS

Township or Area
KEEPER AND HILLARY TOWNSHIPS

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ 10 _____ days Magnetometer _____ 30 _____ days Radiometric _____ days Induced polarization _____ days Other _____ days	P 1116879 to 881 incl. 1115550 to 559 incl. 1115583 - 84
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical _____ days	
<input type="checkbox"/> Man days <input type="checkbox"/> Airborne <input type="checkbox"/> <input type="checkbox"/> Special provision <input type="checkbox"/> Ground <input type="checkbox"/>	
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	
Half credits have been awarded for the VLF survey because the line spacing is 200m. For full credit the line spacing must be 100m. Only one quarter of the credits have been deducted from the magnetometer survey because of readings taken along the tie lines.	

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

[Empty box for special credits]

No credits have been allowed for the following mining claims

not sufficiently covered by the survey insufficient technical data filed

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.



File 2.13179

Date May 11, 1990

Mining Recorder's Report of Work No. W9006.60292

Recorded Holder WILLIAM SIMS

Township or Area KEEPER TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed	
Geophysical	P 1116882	
Electromagnetic _____ 10 _____ days		
Magnetometer _____ 30 _____ days		
Radiometric _____ days		
Induced polarization _____ days		
Other _____ days		
Section 77 (19) See "Mining Claims Assessed" column		
Geological _____ days		
Geochemical _____ days		
Man days <input type="checkbox"/> Airborne <input type="checkbox"/>		
Special provision <input type="checkbox"/> Ground <input type="checkbox"/>		
<input type="checkbox"/> Credits have been reduced because of partial coverage of claims.		
<input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.		

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

Empty box for special credits under section 77 (16).

No credits have been allowed for the following mining claims

not sufficiently covered by the survey insufficient technical data filed

Empty box for no credits allowed for the following mining claims.

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.



Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines



Mining Lands Section
880 Bay Street, 3rd Floor
Toronto, Ontario
M5S 1Z8

Tel: (416) 965-4888

Your File: W9006.60292/081
Our File: 2.13179

June 11, 1990

Mining Recorder
Ministry of Northern Development & Mines
60 Wilson Avenue
TIMMINS, Ontario
P4N 2S7

Dear Sir/Madam:

Re: Notice of Intent dated May 11, 1990 for Geophysical
(Electromagnetic & Magnetometer) Survey submitted on Mining
Claims P 1116879 et al in Keefer & Hillary Townships.

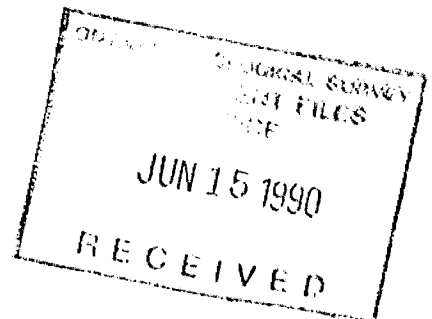
The assessment work credits, as listed with the above mentioned
Notice of Intent, have been approved as of the above date.

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

Yours sincerely,

W. R. Cowan
Provincial Manager, Mining Lands
Mines & Minerals Division

JS:zm
Encl:



cc: Mr. W. D. Tieman
Mining & Lands Commissioner
Toronto, Ontario

Resident Geologist
TIMMINS, ONTARIO

William Sims
Mississauga, Ontario

K. Jensen
South Porcupine, Ontario

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

- M.R.O. - MINING RIGHTS ONLY
- S.R.O. - SURFACE RIGHTS ONLY
- M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
① SEC. 43/70	W.26/77	11/3/77	S.R.O.	188543
② SEC. 42/60		FEB. 3/66	M.+S.	171506
③ SEC. 42/60		7/10/66	M.+S.	149113
④ DANA AND JOWSEY LAKES PARK RESERVE			S.R.O.	
SEC. 36/80	W.66/83		M.R.O.	

⑤ DUMPING STATION

SAND AND GRAVEL

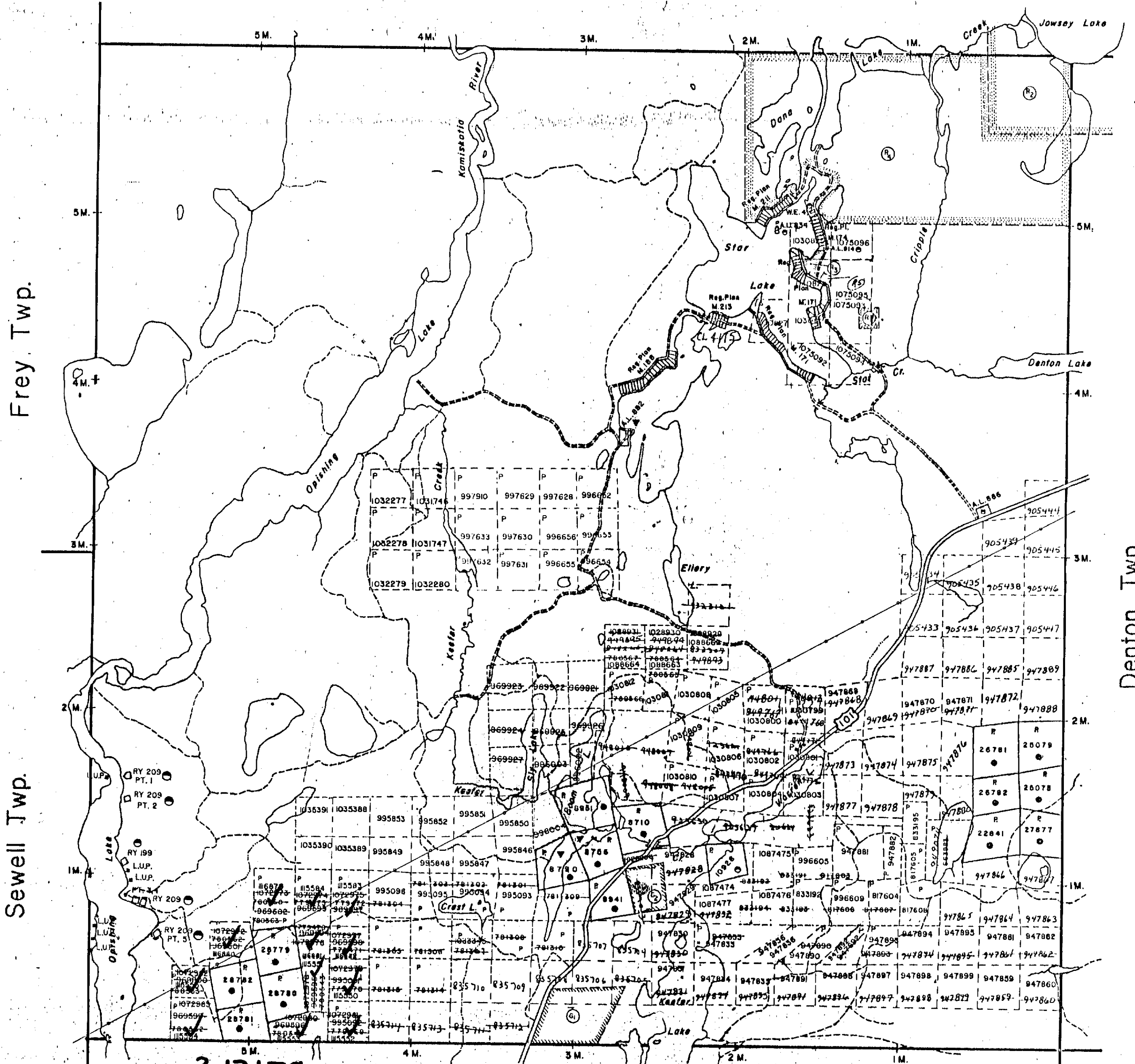
- ① M.T.C. PIT 1593
- ② GRAVEL FILE 44986

IMPORTANT NOTICE

This township forms part of the WAFERBOARD FOREST MANAGEMENT AGREEMENT - The 1985/86 Annual Plan, on file in The Mining Recorders Office shows the area to be affected in the next year - If this plan affects you, further information may be obtained from:

Mr. Malcom Kilgour - Unit Forester
 Ministry of Natural Resources
 896 Riverside Drive, Timmins Ont.
 Telephone: 267-7951
 and/or
 Mr. Pierre Corbeil
 Waferboard Group
 Telephone: 268-1462

Whitesides Twp.



2.13179

Hillary Twp.

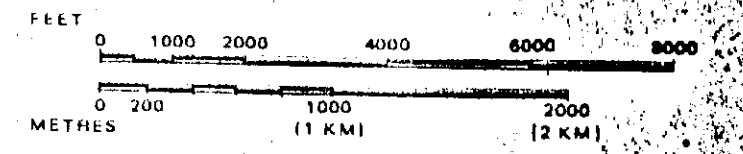
LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
 - TOWNSHIPS, BASE LINES, ETC.
 - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
 - LOT LINES
 - PARCEL BOUNDARY
 - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKIEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
" SURFACE RIGHTS ONLY	
" MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER-IN-COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	
L.U.P. LAND USE PERMIT	

SCALE: 1 INCH = 40 CHAINS



TOWNSHIP
KEEFER
 M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
 MINING DIVISION
PORCUPINE
 LAND TITLES / REGISTRY DIVISION
COCHRANE

Ministry of Natural Resources
 Land Management Branch
 Ontario

Date: MARCH, 1985
 Rec'd Am. 4/85 checked A.H.
 Number: **G-3237**

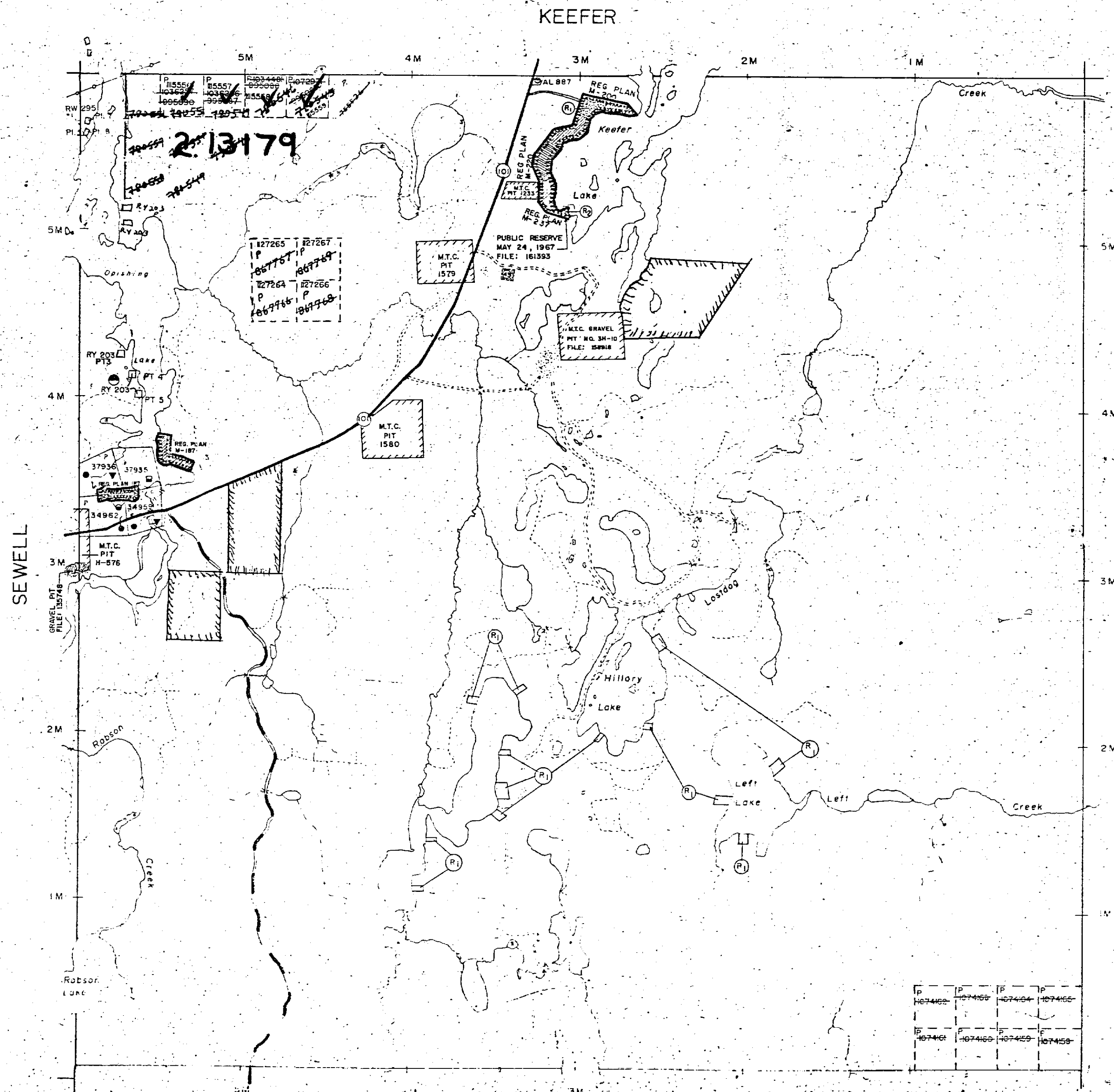


RECEIVED
 NOV 7 1989

REFERENCES

Areas withdrawn from staking under Section 43 of the Mining Act (R.S.O. - 1970)

File	Date	Disposition
164584	17/5/72	S.R.O.
169839	12 6 70	SRQ. PUBLIC ACCESS RES.
172556	24 6 70	S.R.O. PUBLIC ACCESS RES.



NOTE

P 1 - PROPOSED COTTAGING AREAS
NOTICE RECEIVED DEC. 22/88

LEGEND

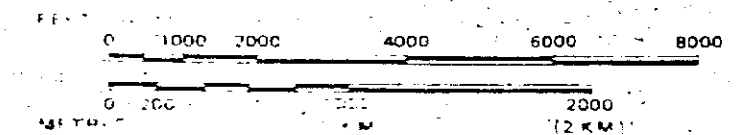
HIGHWAY AND ROUTE NO.	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIPS, BASE LINES ETC.	
LOTS, MINING CLAIMS PARCELS, ETC.	
UNSURVEYED LINES	
LOT LINES	
PARCEL BOUNDARIES	
MINING CLAIMS ETC.	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON PERENNIAL STREAM	
FLOODING OR FLOODING RIGHTS	
SUBDIVISION OR COMPOSITE PLAN	
RESERVATIONS	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	
TRAVERSE MONUMENT	
REGISTERED PLAN OF SUBDIVISION	

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LEASE SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER IN COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913 VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970 CHAP. 380, SEC. 63, SUBSEC. 1.

SCALE: 1 INCH = 40 CHAINS
MNR May 2/83



TOWNSHIP

HILLARY TWP.

M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS

MINING DIVISION
PORCUPINE

LAND TITLES / REGISTRY DIVISION
TIMISKAMING



Ministry of Land Management
Natural Resources Branch
Ontario

Date: May 4, 1982

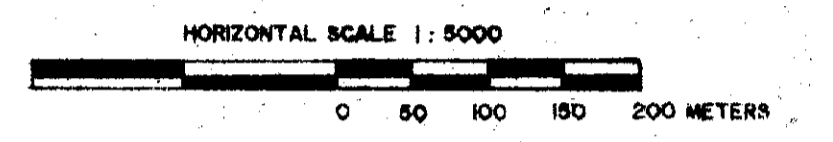
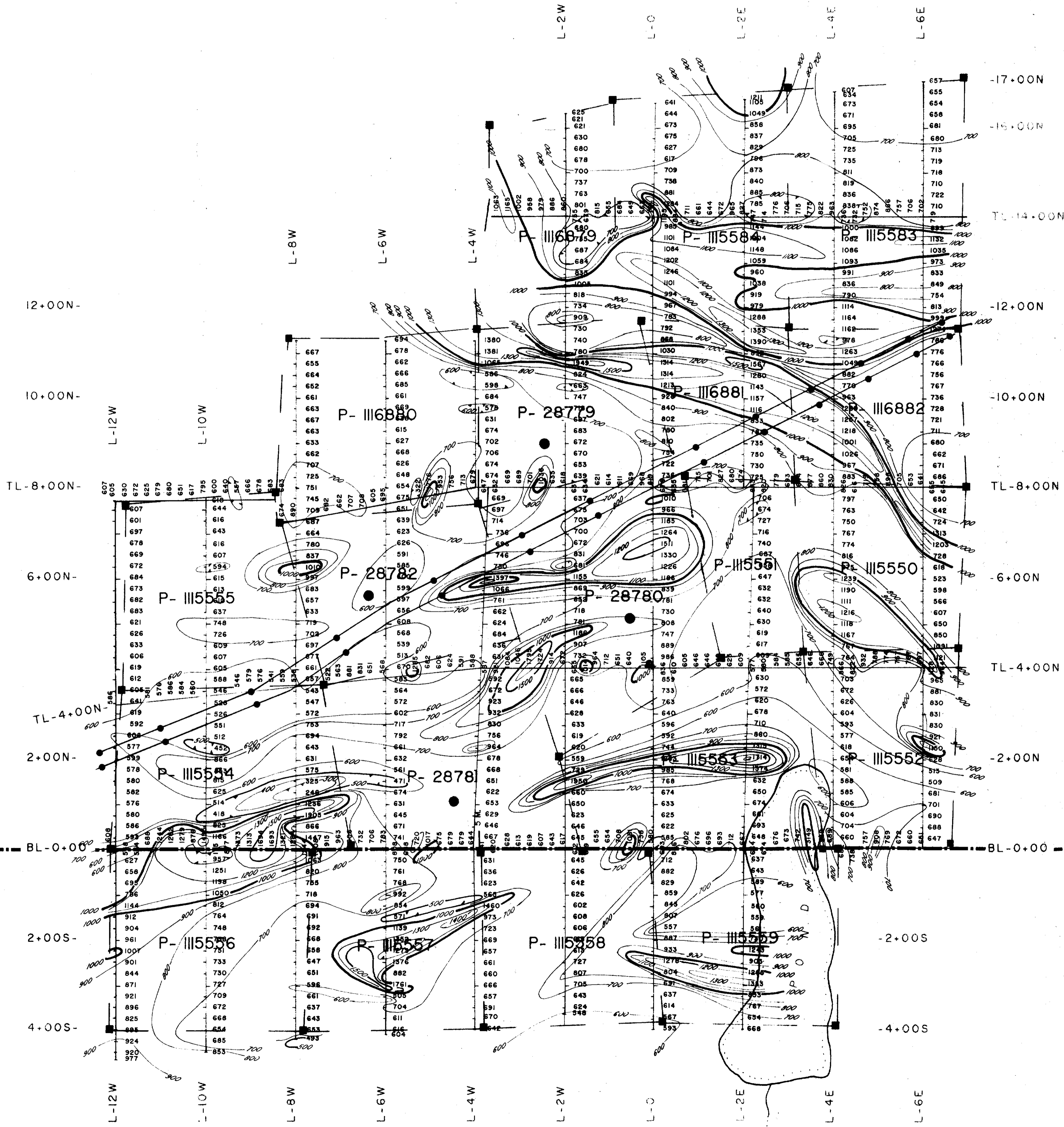
Number:

G-1075



42A65W0054 2.13179 HILLARY

RECEIVED
MAY 22 1982



TOPOGRAPHIC

- Trail portage
- == Bush road
- ==== Good driving road, Highway
- Railroad
- Claim post located
- Claim post assumed location
- □ WP Witness post
- ~ Creek, River
- ~ Lakeshore
- Swamp, Bog
- Property boundary Line
- Power line

MAGNETIC SURVEY

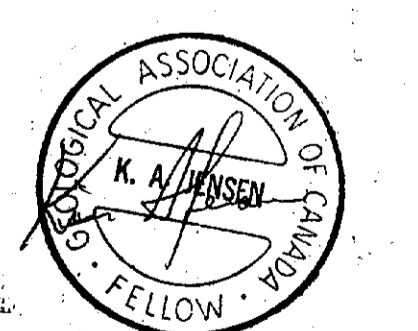
Add 58,000 gammas to all readings for total field values

- Contours
- Depression Contours

▲ Base Station Location: TL-4+00 L-0 59,105

Contour Intervals 100 gammas

2.13179



WILLIAM SIMS PROPERTY

KEEFER TWP

Survey by: Trans-Cambrian Exploration Ltd

Instrument: Geometrics Proton G-816

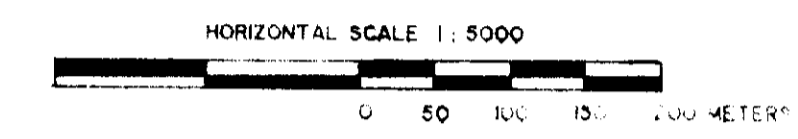
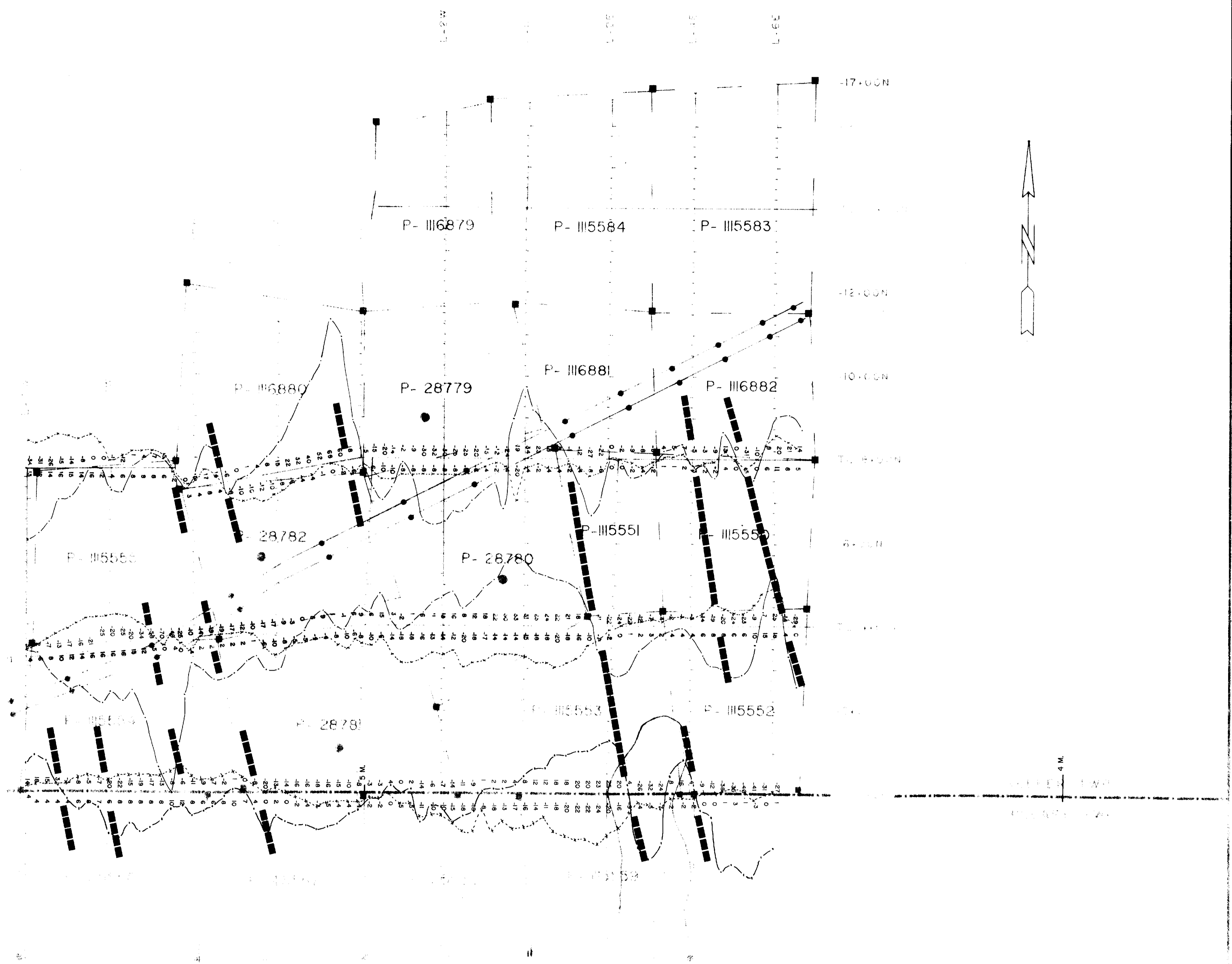
Date of Survey: Jan. 1990

Drawn by: Shirley Groulx

Grant #

OP-89-239

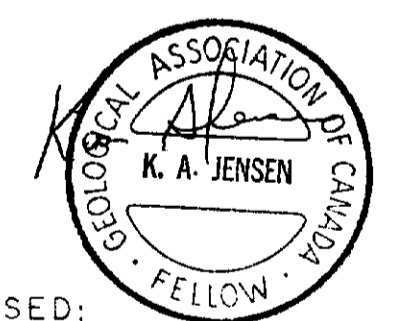




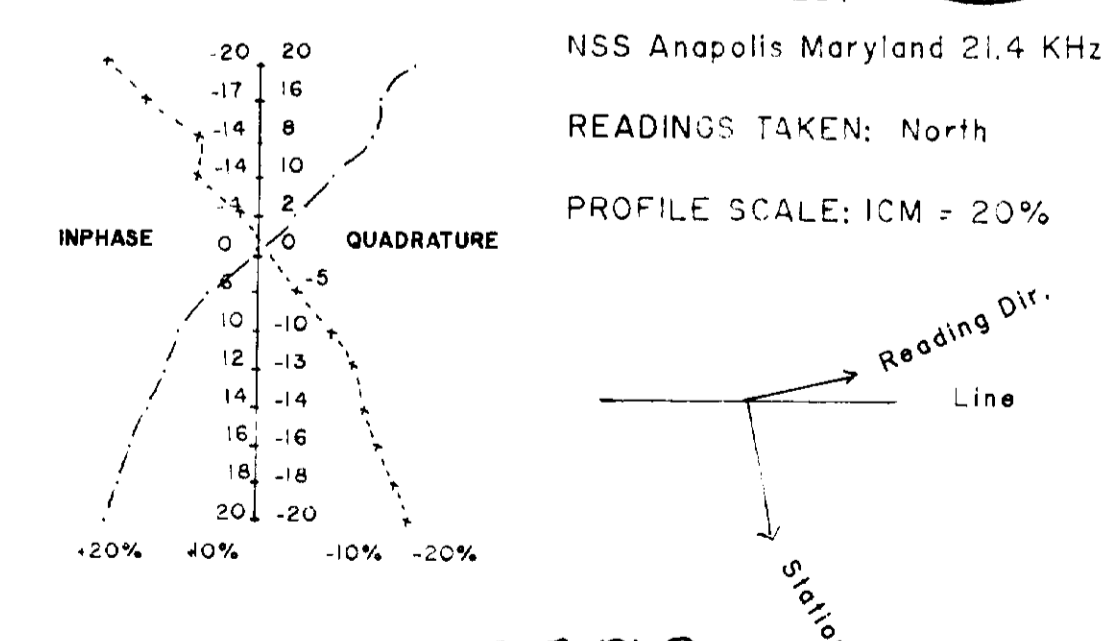
TOPOGRAPHIC

- Trail portage
- Bush road
- Good driving road, Highway
- Railroad
- Claim post located
- Claim post assumed location
- Witness post
- Creek, River
- Lakeshore
- Swamp, Bog
- Property boundary line
- Power line

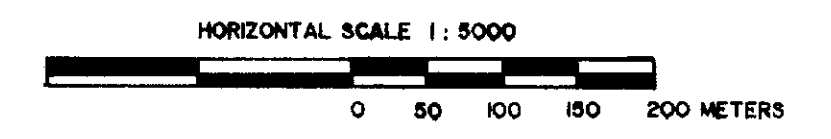
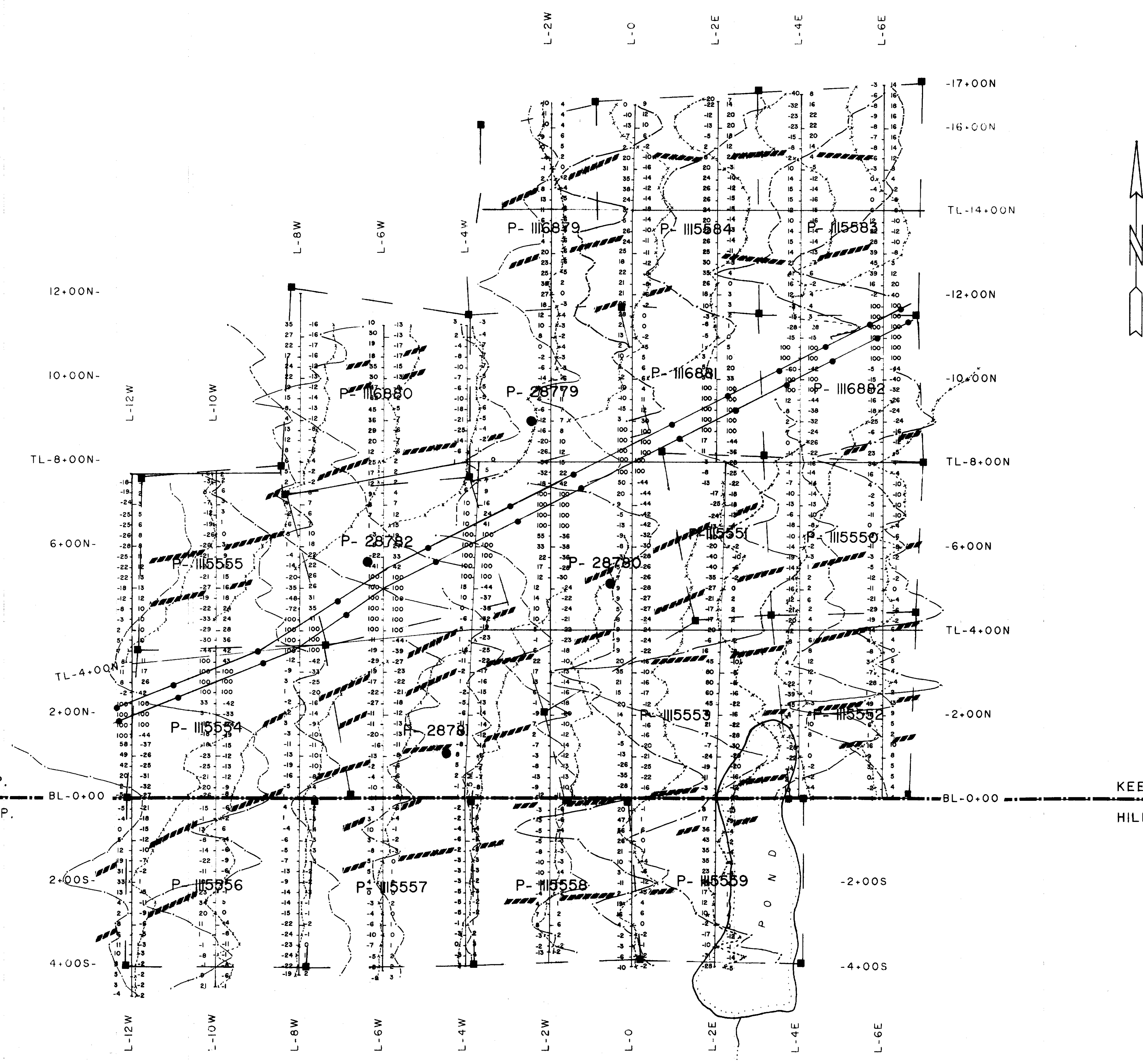
VLF EM SURVEY
ANOMALY AMPLITUDE



STATION USED:
NSS Anapolis Maryland 21.4 KHz
READINGS TAKEN: North
PROFILE SCALE: 1CM = 20%



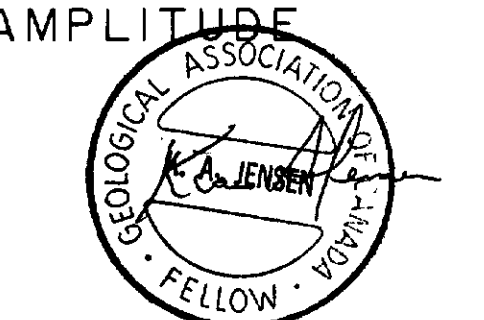
2.13179
WILLIAM SIMS PROPERTY
KEEPER TWP



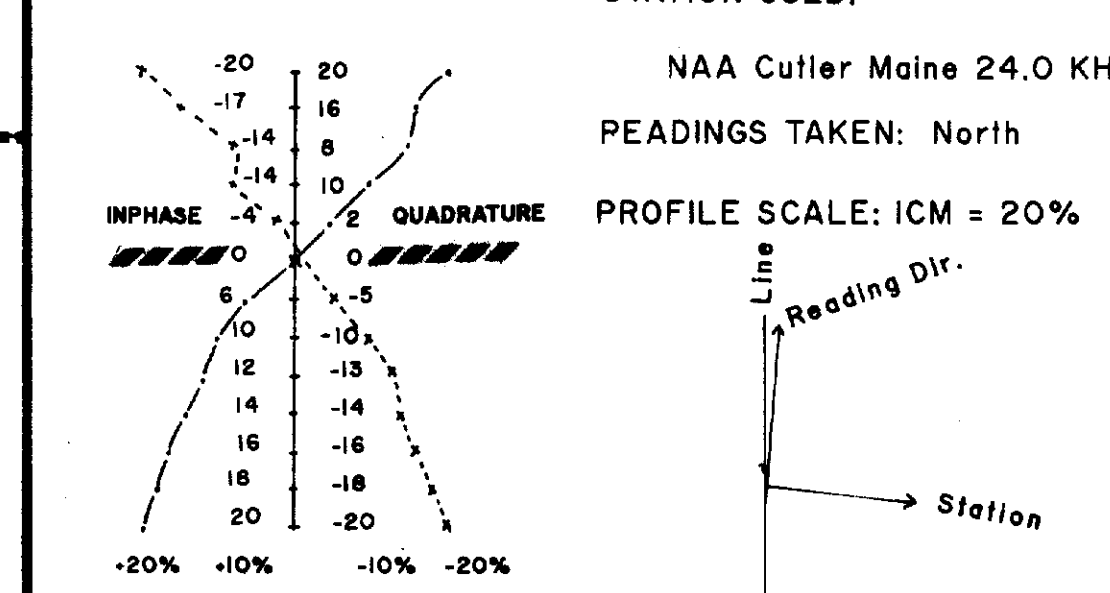
TOPOGRAPHIC

- Trail portage
- === Bush road
- ==== Good driving road, Highway
- ++++ Railroad
- Claim post located
- Claim post assumed location
- wp Witness post
- ~ Creek, River
- ~ Lakeshore
- Swamp, Bog
- Property boundary Line
- Power line

**VLF EM SURVEY
ANOMALY AMPLITUDE**



STATION USED:
NAA Cutler Maine 24.0 KHz
PEADINGS TAKEN: North
PROFILE SCALE: 1CM = 20%



2.13179

**WILLIAM SIMS PROPERTY
KEEFER TWP**

Survey by: Trans-Cambrian Exploration Ltd

Instrument: Geonix Em 16	Date of Survey: Jan. 1990
Drawn by: Shirley Groulx	Grant # OP-89-239

