



41116NW0025 0018 SCHOLBS

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Report 212NB

GEOLOGY

SHIELDS GROUP, SCHOLBS TOWNSHIP, ONTARIO

GEO-SCIENTIFIC PROSPECTORS LIMITED

GEOPHYSICAL ENGINEERING & SURVEYS LIMITED  
2189 Algonquin Avenue,  
North Bay, Ontario



010C

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- References
- Illustrations:
- Drawing No. 1332      Geology, Shields Group, Scholes Township, Ontario. Scale 1" = 200'
- Drill Hole Records    Holes No. 1, 2, 3 and 4

## SUMMARY

The Shields Group is located in the west part of Scholes Township and comprises eight unpatented mining claims.

A resistivity survey was carried out in the fall of 1957 and selected areas were covered by a self-potential survey. Mineralized zones, indicated by the geophysical surveys, were partially explored by rock trenches and four short diamond drill holes in the spring of 1958. Geological mapping was carried out in the last part of June and the first part of July 1958.

Most of the property is underlain by volcanic rocks of Keewatin age. There are a few small remnants of Cobalt sedimentary rocks. The south part of the property is covered by a remnant of the Nipissing diabase sill. A feldspathized tuffaceous formation underlies the north part of the property.

The volcanic rocks comprise fine grained, andesitic pillow lava and coarser grained dioritic sills or thick flows. They are gently folded in a synclinal structure with the axial plane striking easterly. The tuffaceous horizon, to the north, underlies the volcanic flows.

Four mineralized zones are indicated by geophysical surveys. Three of the occurrences are in fine grained, andesitic volcanics and two of these are near the axis of the synclinal fold. The fourth occurs along the south margin of a carbonate amphibolite band near the south contact of the tuffaceous formation.

The mineralized zones are moderately to sparsely mineralized by pyrite, pyrrhotite and chalcopyrite. The sulphides occur as

tiny veinlets, blebs and disseminations associated with scattered quartz carbonate veinlets.

The host rocks are weakly brecciated and slightly to moderately altered.

All of the mineralized zones are near northwesterly striking faults.

Assays of core samples and chip samples from rock trenches indicate that copper values are low. Nickel was not detected.

Structures controlling the mineralization probably extend to and beyond depths that can be explored by diamond drilling.

Further investigation may indicate a fairly large tonnage of low grade copper ore.

It is recommended that a detailed self-potential survey be carried out over the mineralized zone that occurs on line 9+00W at 7+00N of the base line. If the results are encouraging, it is suggested that exploration of the zone should be continued by diamond drilling.

#### INTRODUCTION

The Shields Group comprises eight unpatented mining claims located in the west part of Scholes Township. It is accessible from Emerald Lake motor road by a trail over a distance of about  $3/4$  miles.

Former owners of the claims carried out a self-potential survey in the northwest part of the group. A northeasterly trending anomaly was explored by rock trenches and three diamond drill holes.

The present owners carried out a resistivity survey in the fall of 1957. Anomalous areas were covered later by a self-potential survey.

Two mineralized zones, indicated by the geophysical surveys, were partly explored by rock trenches and four short Packsack drill holes in the spring of 1958.

A geological survey was carried out in June-July 1958. Control for this survey is provided by measured picket lines, spaced at 300 foot intervals. The base map, with minor alterations, corresponds to the base map used for resistivity and self-potential surveys.

#### TOPOGRAPHY

The terrain over the group is fairly rugged with a maximum difference in elevation of about 250 feet.

A fault, trending northwesterly across the group is marked by a depression that is occupied by three small lakes. Another parallel depression lies about 1200 feet to the southwest.

Although the overburden is not deep, rock exposures are poor except in the area underlain by the Nipissing diabase sill.

The group is covered by a mature growth of mixed forest except in the southwest part where the large pine trees have been cut.

#### GEOLOGY

##### General

Most of the property is underlain by volcanic rocks of Keewatin age. These rocks comprise fine grained pillow lava and coarser grained dioritic sills or thick flows. A fine grained siliceous tuff or sediment underlies the north part of the group. It is

conformable with and underlies the volcanic flows. The tuff and flows are intruded, locally, by irregular, pink felsite veinlets. The tuff appears to be feldspathized in the northeast part of the group, where a large body of feldspar porphyry lies to the north.

Several small remnants of Cobalt sedimentary rocks overlie the volcanic rocks in the central part of the property.

In the south part of the group, the volcanic rocks are overlain by the Nipissing diabase sill.

Several narrow, dark green, medium grained gabbroic dykes intrude the volcanic flows and tuff in the west part of the area.

#### Table of Formations

##### NIPISSING

Diabase (coarse grained sill)

##### COBALT

Greywacke and conglomerate

##### HAILEYBURIAN (?)

Gabbro (medium grained dykes)

##### KEEWATIN

Andesite (pillow lava and volcanic breccia)

Diorite (medium grained sills and/or flows)

Tuff(?) (seliceous, fine grained, banded in part)

#### Description of Formations

1. Diabase - Massive, coarse grained exposures of the Nipissing diabase sill overlie the volcanic rocks in the south and east part of the property. A fine grained phase at the bottom of the sill is exposed on claim T-44288.
2. Cobalt sediments - Four small areas of Cobalt sedimentary rocks are exposed in the central part of the claims. They are adjacent to two northwesterly trending depressions. The sediments comprise pebble conglomerate and greywacke. The conglomerate

consists of pebbles up to 4 inches in diameter, in a fine grained greywacke matrix. The greywacke is fine grained, massive and contains numerous small quartz grains.

3. Gabbro - Several northerly trending gabbro dykes are exposed in the northwest part of the group. Age relationship to the cobalt sediments is unknown. On line 9+00W at 15+00N a gabbro dyke intrudes the carbonate and tuff formation.
4. Andesite - Fine grained volcanic rocks comprise pillow lava, volcanic breccia and some tuffaceous horizons. They are medium green to grey in color. Pillow structures are common but on most exposures it is difficult to determine the attitude. Most of the pillows have a ropy structure. In the vicinity of No. 1, 2 and 4 trenches the andesite is very fine grained and, in part, a flow breccia.
5. Diorite - The fine grained volcanic flows are interbedded with coarser grained, massive dioritic sills or thick flows. The diorite is grey-green in color and is intruded by numerous tiny, irregular pink felsite veinlets in the north and west part of the property.
6. Tuff(?) - A very fine grained, hard, siliceous rock underlies the volcanic flows in the north part of the property. Fresh surfaces are dark grey, weathering to a pale pink color. Scattered, small fragments are apparent on the weathered surfaces of some exposures. On fresh surfaces the fragments appear to have the same composition as the matrix. The south exposure on line 15+00E is finely bedded. The formation is intruded by scattered, irregular felsite veinlets.

### Structures

1. Folding - Observations on pillow structures indicate that the volcanic rocks occur on a synclinal fold with the axial plane striking easterly. The buffaceous formation underlying the volcanic flows strikes from N50°E to E. and dips south at 55° to 65°.
2. Faulting - Three small lakes occupy a depression associated with a northwesterly trending fault on claims No. T-44285, 44286 and 44283. The apparent horizontal displacement on the fault is about 350 feet. Two small remnants of Cobalt sediments occur east of the fault near lines 3+00W and 0+00. The sediments are deposited against a steep face of volcanics indicating that the fault is probably pre-Huronian in age. Other northerly trending topographic depressions, in the west parts of claims No. T44287 and 44282, are probably associated with weaker fault structures.
3. Schistosity, Lination - All of the rock formations in the group are fairly massive. There is no evidence of appreciable schistosity or foliation. Lination is usually apparent on the weathered surfaces of the volcanic rocks. The direction of the lination is parallel to the strike of the flows.

### Alteration

In the mineralized zones the volcanic rocks are slightly to moderately altered. The chief alteration products are silica, chlorite and epidote.

A band of carbonate-amphibolite with associated garnets strikes



parallel to the volcanic formations in the northwest part of the group. The possibility of a sedimentary limestone has been considered, but available evidence indicates that it is probably a replacement deposit. Lamination within the carbonate body is parallel to the south tuff contact. The margins of the deposit where exposed are not clearly defined. The carbonate appears to replace the enclosing rock irregularly. Coarse grained amphibolite occurs along the margins of the deposit.

#### Mineralization

Four mineralized zones are indicated by geophysical surveys. They have been partially explored by rock trenching and diamond drilling.

Sulphide minerals comprise pyrite, pyrrhotite and chalcopyrite in about equal amounts. They occur as veinlets, blebs and disseminations in weakly brecciated host rocks.

Hydrothermal alteration is controlled by the fracturing and extends outward from fracture planes with decreasing intensity.

One mineralized zone extends along the south margin of the carbonate-amphibolite band. It was explored by former owners of the claims. The zone was exposed by trenching, east of 9+00W, over a length of about 100 feet. Pyrite, pyrrhotite and chalcopyrite occur in minor amounts over the length of this exposure. Three holes were drilled to test a self-potential anomaly outlining the zone. The logs of these holes record the occurrence of pyrite, pyrrhotite and chalcopyrite in minor amounts over widths up to 12 feet. No assays are reported.

A second mineralized zone is located on line 9+00W at about 7+00N. Geological mapping shows that it occurs in a fine grained volcanic near the trough of a synclinal fold. The zone is indicated by self-potential and resistivity surveys. It was partially explored, in the spring of 1958 by rock trenches and two short drill holes.

A third mineralized zone is located on line 0+00 at 3+00N. On surface exposures this zone is sparsely mineralized. It was explored by two drill holes to depths of 51 ft. and 30 ft. The core contains minor amounts of pyrrhotite, pyrite and chalcopyrite.

A fourth zone is indicated by geophysical surveys on line 6+00W at 11+00S. A rock outcrop at the center of the anomaly is sparsely mineralized with pyrrhotite, pyrite and chalcopyrite.

All of the mineralized zones are located near northwesterly striking faults.

#### CONCLUSIONS

Four mineralized zones have been outlined by geophysical surveys. The anomalies have been investigated by stripping, trenching, sampling, diamond drilling and geological mapping.

The zones are sparsely mineralized with pyrite, pyrrhotite and chalcopyrite. Hydrothermal alteration has resulted in moderate silicification, chloritization and epidotization. The host rocks are weakly brecciated. The mineralized breccia zones are located near northwesterly trending faults.

It is considered that structural control of the mineralization was provided by breccia zones where they are intersected by later, northwesterly trending faults.

Assays of split core samples and chip samples from rock trenches indicate that copper values are low.

The highest grade copper samples are from No. 1 Trench. Surface exposures show that the mineralization extends over a length of at least 450 feet. It is recommended that this zone be investigated further by a detailed self-potential survey.

Respectfully submitted,

GEOPHYSICAL ENGINEERING & SURVEYS  
LIMITED

*C. G. MacIntosh*

C. G. MacIntosh, Geologist.

North Bay, Ontario  
August 11, 1958

REFERENCES

Mining Geophysics Corporation Limited Drawing

- No. 979 Self-potential survey of part of Rockshield Option and Church-Abex Option, Afton and Scholes Townships, Ontario. Scale 1" = 100'.

Geophysical Engineering & Surveys Limited Drawing

- No. 1175 Resistivity and Self-potential survey, Shields Group, Scholes Township, Ontario for Geo-Scientific Prospectors Limited. Scale 1" = 200'.

Geophysical Engineering & Surveys Limited Reports

- No. 189NB Electrical Resistivity Survey, Shields Property, Scholes Township for Geo-Scientific Prospectors Limited.
- No. 190NB Self-potential Survey and Geological Examination, Shields Property, Scholes Township for Geo-Scientific Prospectors Limited, Scholes Township



Report 190NB

020

REPORT ON  
SELF-POTENTIAL SURVEY AND GEOLOGICAL EXAMINATION  
of the  
SHIELDS PROPERTY, SCHOLES TOWNSHIP, TIMISKAMING MINING DIVISION  
GEO-SCIENTIFIC PROSPECTORS LIMITED  
BY  
GEOPHYSICAL ENGINEERING & SURVEYS LIMITED

ASSESSMENT WORK	
Rec'd from	<i>Resident Geologist</i>
	<i>C. BALT.</i>
Date	<i>Feb 3/59</i>
	<i>1178</i>
	Resident Geologist

REPORT ON  
SELF-POTENTIAL SURVEY AND GEOLOGICAL EXAMINATION  
SHIELDS PROPERTY, SCHOLDS TOWNSHIP, TIMISKAMING MINING DIVISION  
FOR  
GEO-SCIENTIFIC PROSPECTORS LIMITED  
BY  
GOPHYSICAL ENGINEERING & SURVEYS LIMITED

INTRODUCTION

During November of 1957 an electrical self-potential survey accompanied by geological examination of anomalous areas was carried out on the Shields property of Geo-Scientific Prospectors Limited. The purpose of the work was to further investigate four anomalous areas previously outlined by resistivity methods.

The property consists of eight (8) claims numbered T44282 through T44287 and T44445, adjoining the west boundary of Scholes Township, Temagami Area, Timiskaming Mining Division, Province of Ontario.

GENERAL GEOLOGY

The property is underlain largely by steeply dipping Timiskaming-type sediments trending from east-west to slightly north of east. Chloritization is general in all observed outcrop. Locally the sediments are silicified and slightly sericitized.

A complex of altered gabbro and sediments erratically mineralized with chalcopyrite, pyrite and pyrrhotite has been exposed by stripping near the west boundary of claim T44283. Garnetiferous limestone is reported in the north central part of the claims.

Outcrop in the anomaly peak areas on lines 1+50E and 7+50W is characterized by extensive leaching and oxidation.

GEOPHYSICAL SURVEY

Readings of electrical self-potential were taken at 50 foot intervals along north-south picket lines spaced 300 feet apart. Where necessary, intermediate lines were read to detail anomalies. A D.C. potentiometer was used to take readings between non polarizing electrodes.

DISCUSSION OF GEOPHYSICAL RESULTS

Anomalous areas were delineated as follows:

1. Line 1+50E, 3+00N: A self-potential anomaly was delineated confirming the previously obtained resistivity anomaly. A minimum strike length of 300 feet is indicated. Outcrop was located near the anomaly peak consisting of chloritized fractured Timiskaming-type sediments. Disseminated chalcoppyrite, pyrite and pyrrhotite were noted. The fractured condition of observed outcrop has allowed leaching and oxidation of sulfides to progress extensively.

A sharp ridge extends across the anomaly forming a suitable location for an inexpensive program of surface work.

2. Line 7+50W, 6+50N: A self-potential anomaly was delineated slightly offset from the peak of the previously obtained resistivity anomaly. One outcrop was located in the southerly portion of the anomaly consisting of sheared and fractured chloritized and locally silicified Timiskaming-type sediments. Disseminated chalcoppyrite, pyrite and pyrrhotite were noted. Occasional malachite is present as a thin coating on fracture planes. The exposure shows considerable leaching and oxidation.

Soil cover in the area of the anomaly peak appears to be sufficiently thin to permit investigation by test-pitting and Packsack diamond drill.

3. Line 18+00W, 11+50N: Self-potential work indicates an east-west trending area of probable sparsely disseminated sulfides. The zone is on the projected westerly extension of a slight resistivity low obtained on the adjacent and most westerly line of the recent resistivity survey. Outcrop located along this trend consisted of slightly fractured chloritized Timiskaming-type sediments with very sparse disseminated pyrite.

Old diamond drill Hole No. 6 was tied in by compass and chain and was found to have effectively cross-sectioned the zone. Examination of the log of the hole indicated that no mineralization of economic interest was encountered.

4. Line 9+00W, 14+25N: An east-west trending self-potential anomaly was delineated and coincides generally with an area of very slightly lower than average resistivities. Stripping by the previous claim holders falls within the self-potential anomaly peak. This old work has exposed altered gabbro and Timiskaming-type sediments with irregularly disseminated chalcopyrite, pyrite and pyrrhotite mineralization.

Old diamond drill holes Nos. 7 and 8 were tied in by compass and chain and No. 7 was found to have effectively cross-sectioned the anomaly peak. Examination of the log of the hole indicated that no mineralization of interest was encountered.

5. Line 6+00W, 10+50S: Self-potential investigation of a very small resistivity low delineated a small anomaly. Outcrop located at the anomaly peak consisted of slightly chloritic Timiskaming-type sediments. A narrow shear zone with very sparse disseminated pyrite, chalcopyrite and pyrrhotite was revealed by stripping.



CONCLUSIONS AND RECOMMENDATIONS

1. Line 1+50E, 3+00N: Resistivity and self-potential surveys have delineated an anomaly having a minimum strike length of 300 feet. Geological examination of outcrop within the anomaly area has revealed disseminated chalcopyrite, pyrite and pyrrhotite mineralization. Leaching and oxidation of the sulfides has been extensive.

It is recommended that a program of rock trenching and Packsack diamond drilling be undertaken for the purpose of obtaining samples from below the limits of surface oxidation.

2. Line 7+50W, 6+50N: Resistivity and self-potential surveys have delineated an anomalous area. Geological examination has revealed one leached and oxidized outcrop. In the south part of the anomaly, in which disseminated chalcopyrite, pyrite and pyrrhotite mineralization is present together with malachite.

It is recommended that a program of Packsack diamond drilling be undertaken to test the anomaly below the limit of surface oxidation.

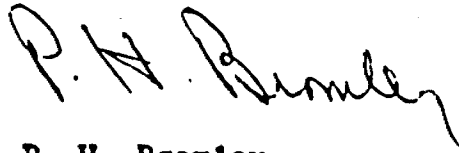
3. Line 18+00W, 11+50N: It is considered that the slight anomaly present in this location is due to very sparsely disseminated sulfides. This has been confirmed by geological examination of outcrop and by diamond drill hole No. 6 which revealed no significant mineralization.

No further work in this area is recommended.

5. Line 6+00W, 10+50S: Stripping and geological examination in the anomaly area has revealed that the amount and extent of mineralization do not justify further work in this area.

The self-potential survey has disclosed two areas which justify investigation by combined surface trenching and Packsack diamond drilling. These locations are: 1. Line 1+50E, 3+00N.  
2. Line 7+50W, 6+50N.

Respectfully submitted,



December 11, 1957  
North Bay, Ontario

P. H. Bromley  
GEOPHYSICAL ENGINEERING & SURVEYS LTD.

Reference:

Drawing 1175



41116NW0025 0018 SCHOLBS

030

REPORT ON  
ELECTRICAL RESISTIVITY SURVEY  
SHIELDS PROPERTY  
SCHOLBS TOWNSHIP, TEMAGAMI AREA, ONTARIO  
FOR  
GEO-SCIENTIFIC PROSPECTORS LIMITED  
BY  
GEOPHYSICAL ENGINEERING & SURVEYS LIMITED

INTRODUCTION

During October and November 1957 an electrical resistivity survey was carried out on the Shields property of Geo-Scientific Prospectors Limited. The group consists of eight (8) claims numbered T-44282 through T-44287 and T-44445 adjoining the west boundary of Scholes Township, Temagami Area, Timiskaming Mining Division, Province of Ontario.

The claims are accessible by trail about one mile east of the Emerald Lake Road.

GENERAL GEOLOGY

The property is underlain largely by Timiskaming-type sediments, chloritized and locally sericitized. Altered gabbro, with disseminated chalcopryite, pyrite and pyrrhotite mineralization has been exposed by stripping near the west boundary of claim T-44283.

Garnetiferous limestone is reported in the north central part of the property.

GEOPHYSICAL SURVEY

Sixty-cycle alternating current was introduced into the ground at electrodes spaced 15,840 feet apart along a line parallel to the traverse lines. Potential differences were measured between probes spaced 100 feet apart along north-south traverse lines using

a geophysical type vacuum-tube voltmeter. Lines were spaced 300 feet apart with intermediate lines reducing the spacing to 150 feet in anomalous areas.

The apparent average earth resistivities were calculated and plotted logarithmically.

#### DISCUSSION OF GEOPHYSICAL RESULTS

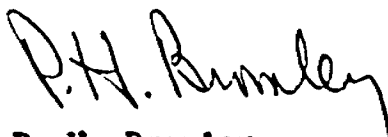
Local areas of lower than average resistivities were indicated as follows:

1. Line 1+50E 3+00N
2. Line 7+50W 6+50N
3. Line 15+00W 11+40N
4. Line 6+00W, 10+50S

#### RECOMMENDATIONS

It is recommended that an electrical self-potential survey of anomalous areas 1,2,3, and 4 be carried out in conjunction with geological examination.

Respectfully submitted,



December 10, 1957  
North Bay, Ontario. P. H. Bromley  
GEOPHYSICAL ENGINEERING & SURVEYS LIMITED

Reference:  
Drawing 1175, November 1957.

## INTRODUCTION

Electrical geophysical surveys, geological mapping, trenching and a limited amount of shallow diamond drilling have been carried out on the property. This report covers a detailed self potential survey carried out to aid in evaluating a mineralized zone located on claims T44282 and T44283. The reader is referred to Geophysical Engineering & Surveys Limited reports 189NB, 190NB, 212NB and Drawings 1175, 1332 which accompany those reports.

## GEOPHYSICAL SURVEY

Readings of electrical self potential were made at 25 foot intervals along north-west picket lines spaced 100 feet apart. Intermediate lines were read where necessary to detail the anomaly. A D.C. potentiometer was used to take the readings between non polarizing electrodes.

The results are plotted as negative self potentials in millivolts referred to an arbitrary base level (see Dwg. 1342 on a scale of 1" = 100' which accompanies this report).

## DISCUSSION OF GEOPHYSICAL RESULTS

The self potential survey suggests medium to heavy sulphide disseminations along a N.E. trending zone for approximately 400 feet. No large body of massive sulphides can be expected near surface.

Trench No. 1 should be considered typical of the heavier sulphide dissemination though somewhat greater widths might be expected about 100 feet to the southwest of trench No. 1.

There is some suggestion that the depth continuity of the mineralization is greater at the southwest end of the zone.

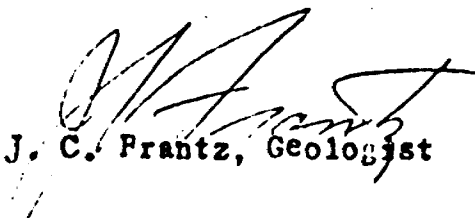
## CONCLUSIONS & RECOMMENDATIONS

A mineralized zone has been traced for a length of over 400 feet. The results suggest that trench No. 1 can be considered a fair sample of the mineralization in the zone.

Any future work should consist of a systematic drilling program. Before a final decision is made on diamond drilling, a limited amount of gravity or magnetic work should be done to aid in estimating the total mass of sulphides present. The gravity survey would be the more diagnostic, of the two methods. The magnetic survey would be more economical, and since pyrrhotite is the most abundant sulphide, some valuable information would be obtained.

Respectfully submitted,

GEOPHYSICAL ENGINEERING & SURVEYS  
LIMITED



J. C. Prantz, Geologist

North Bay, Ontario  
September 29, 1958

PROPERTY - T44282 to T44288 inclusive, Scholes Township  
SURVEY - Resistivity and self potential  
CONTRACTOR - Geophysical Engineering & Surveys Limited  
MILES OF PICKET LINE - 16  
NO. OF STATIONS READ - Resistivity - 476  
Self potential -438

TIME DISTRIBUTION

Geophysical Readings

P. Broughton, North Bay	- Oct. 24/57 to Nov.19/57	
R. Harrington, North Bay	" " " " "	40 days
P. Bromley, North Bay	- Nov. 19/57 to Nov.30/57	
E. O'Donnell, North Bay	" " " " "	14 days
T. G. Robinson, North Bay	August 24/58 to Aug.29/58	
B. O'Donnell, North Bay	August " " " "	12 days

Office

P. Bromley	- Intermittently Nov.6/57 to Dec.10/57	
A. Clark		
T. G. Robinson		28 days
H. Davison	and	
L. Vosu		
Y. Martin	- Intermittently Aug./58 to Sept.20/58	6 days

TOTAL 4 X 100 = 400 days

TO BE APPLIED 40 DAYS TO EACH OF CLAIMS T44282 to T44288 incl.

*10/17/58 J. Jones*

PROPERTY - T44282 to T44288 inclusive, Scholes Township  
SURVEY - geological  
MILBS OF PICKET LINE - 16

TIME DISTRIBUTION

Line cutting, picketing, chaining

T. Montroy, Mattawa; F. Gougeon, J. Stevens,  
B. O'Donnell, North Bay. - Oct. 20 to Nov. 19, 1957 - 36 days

Geological mapping

Field

C. G. MacIntosh - Kirkland Lake, Ontario	18 days
J. C. Prantz - North Bay, Ontario	4 days
June 20 to July 12, 1958	

Office

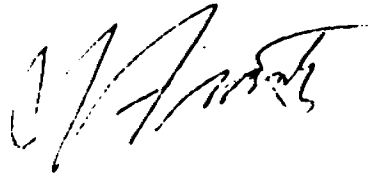
C. G. MacIntosh	7 days
J. C. Prantz	1 day
H. Davison	3 days
L. Vosu	2 "
Y. Martin	1 "

TOTAL

4 X 72 days

= 288

TO BE APPLIED 40 DAYS TO EACH OF CLAIMS T44282 to T44288 inclusive



11/17/58



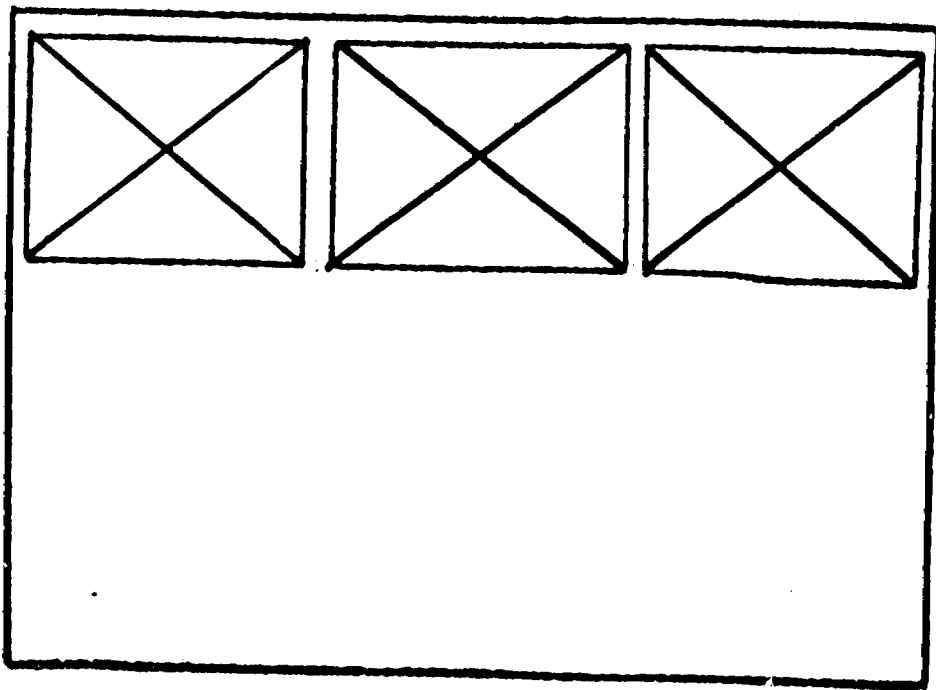
SEE ACCOMPANYING  
MAP(S) IDENTIFIED AS

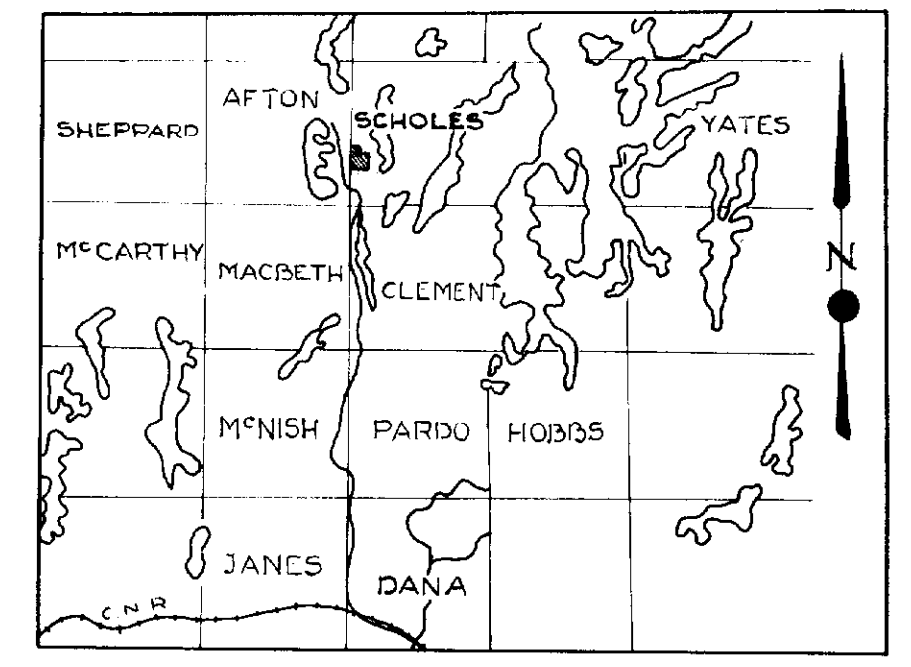
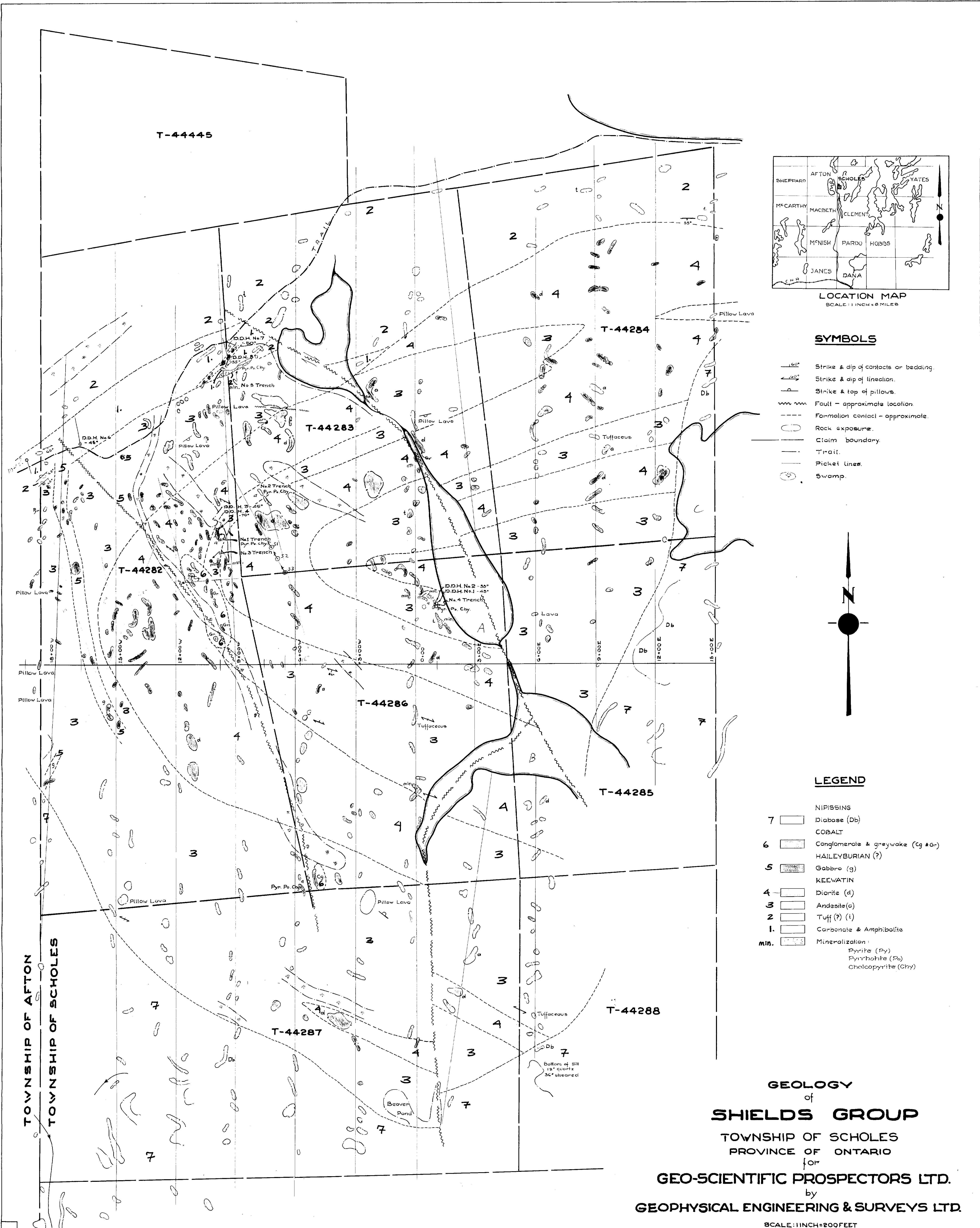
SHOLES-0018-#1

#2

#3

LOCATED IN THE MAP  
CHANNEL IN THE FOLLOWING  
SEQUENCE (X)

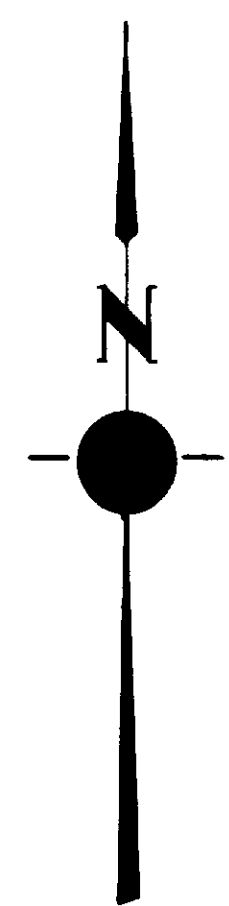




LOCATION MAP  
SCALE: 1 INCH = 6 MILES

**SYMBOLS**

- Strike & dip of contacts or bedding.
- Strike & dip of lineation.
- Strike & top of pillows.
- Fault - approximate location.
- Formation contact - approximate.
- Rock exposure.
- Claim boundary.
- Trail.
- Picket lines.
- Swamp.



**LEGEND**

- 7 NIPISSING Diabase (Db)
- 6 COBALT Conglomerate & greywacke (Cg & Gr)
- 5 HAILEYBURIAN (?) Gabbro (g)
- 4 KEEWATIN Diorite (d)
- 3 Andesite (a)
- 2 Tuff (?) (t)
- 1 Carbonate & Amphibolite
- min. Mineralization:  
Pyrite (Py)  
Pyrrhotite (Pb)  
Chalcopyrite (Chy)

**GEOLOGY**  
of  
**SHIELDS GROUP**

TOWNSHIP OF SCHOLES  
PROVINCE OF ONTARIO

for  
**GEO-SCIENTIFIC PROSPECTORS LTD.**  
by  
**GEOPHYSICAL ENGINEERING & SURVEYS LTD.**

SCALE: 1 INCH = 200 FEET

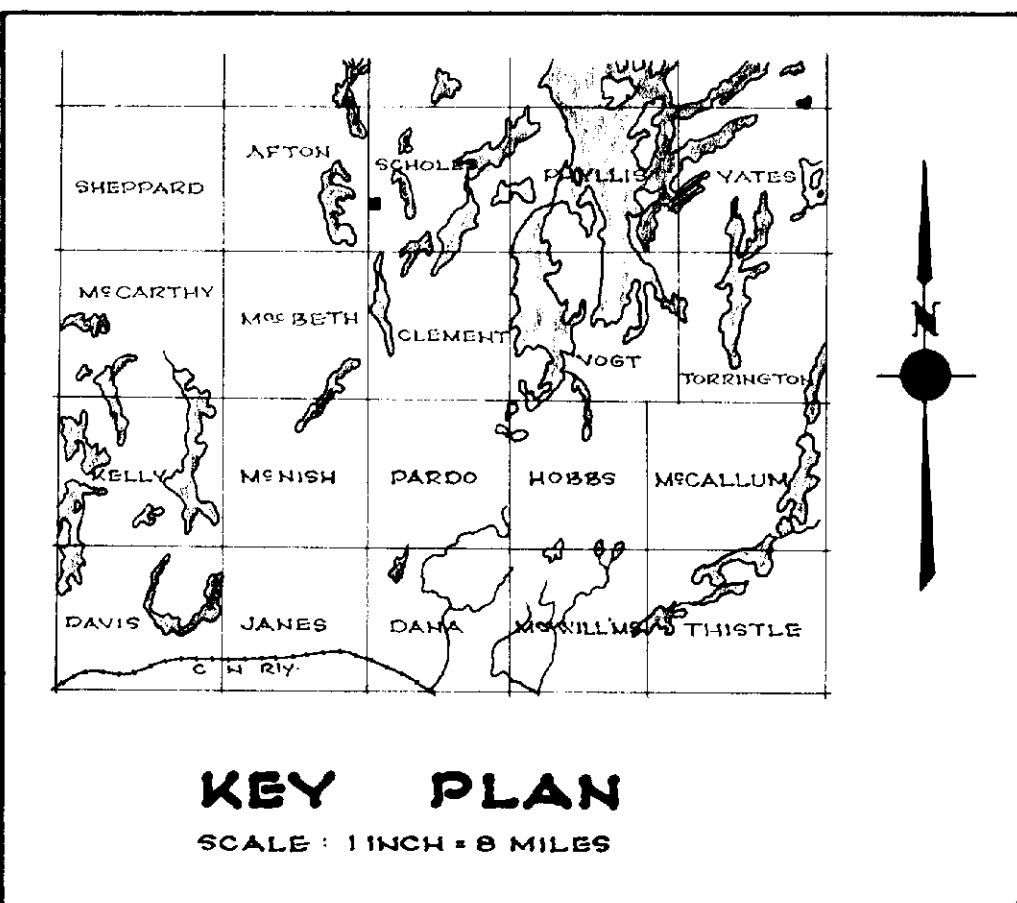
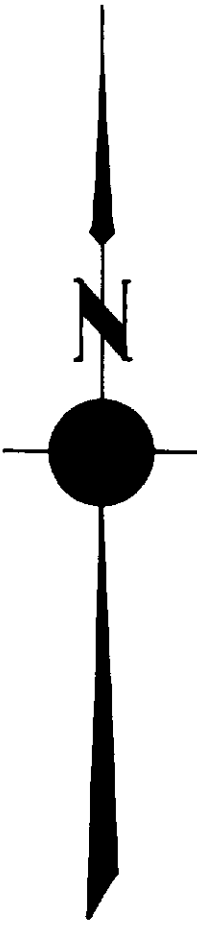
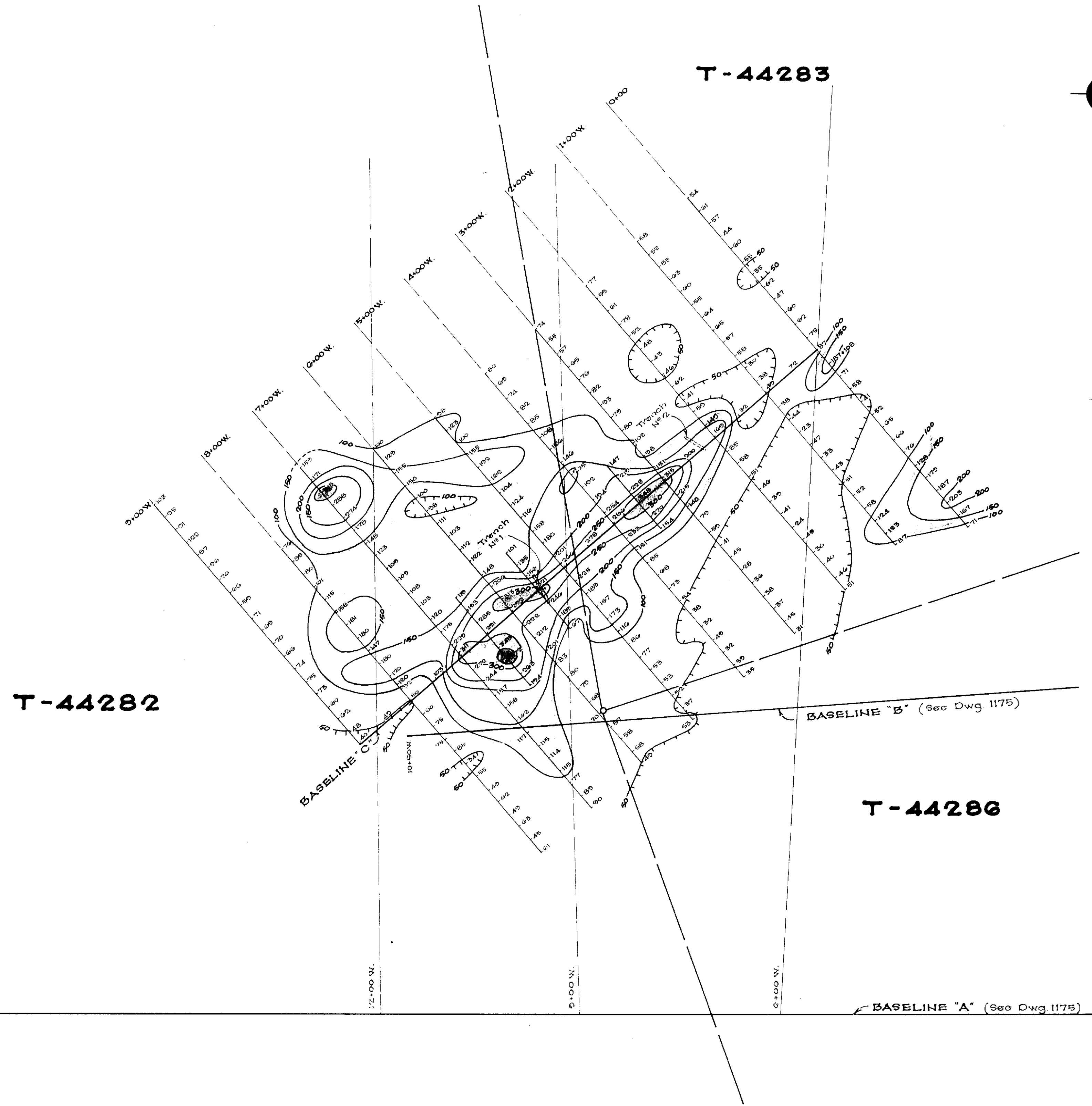
TOWNSHIP OF AFTON  
TOWNSHIP OF SCHOLES

DWG. 1332



TOWNSHIP OF SCHOLES  
DISTRICT OF NIPISSING

TOWNSHIP OF AFTON



NOTE:  
Values are negative self-potentials in millivolts.

SELF-POTENTIAL SURVEY  
OF PART OF  
**SHIELDS GROUP**  
TOWNSHIP OF SCHOLES  
PROVINCE OF ONTARIO

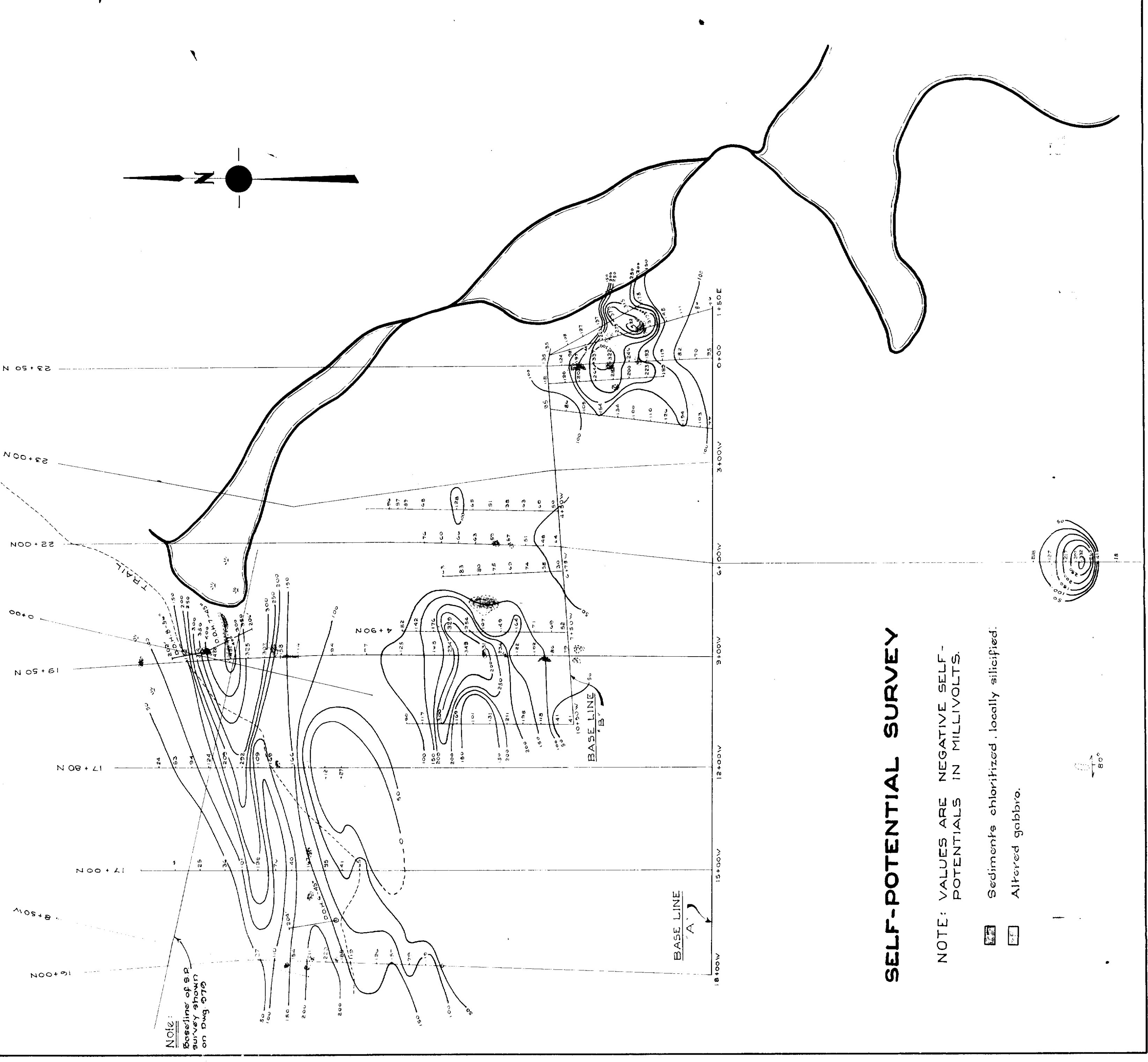
FOR  
**GEO-SCIENTIFIC PROSPECTORS LTD.**

BY  
**GEOPHYSICAL ENGINEERING AND SURVEYS LIMITED**

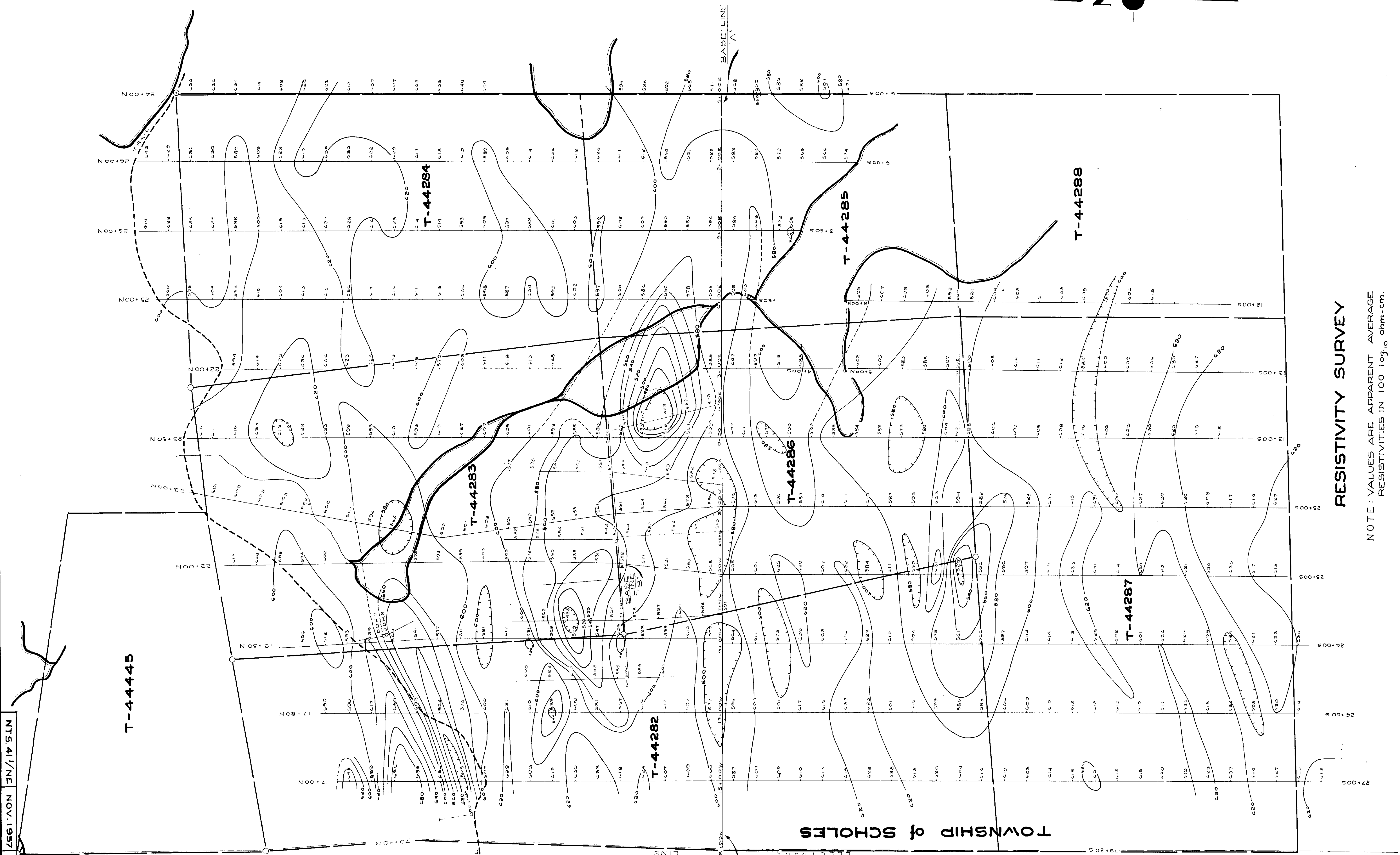
SCALE: 1 INCH = 100 FEET  
0 100 200 300

63-970





TOWNSHIP of AFTON  
TOWNSHIP of SCHOLES



63-970

**RESISTIVITY & SELF-POTENTIAL SURVEY**  
OF  
**SHIELDS GROUP**  
SCHOLES TWP., ONT.  
FOR  
**GEO-SCIENTIFIC PROSPECTORS LTD.**  
BY  
**GEO-PHYSICAL ENGINEERING & SURVEYS LTD.**

RESISTIVITY SURVEY

NOTE: VALUES ARE APPARENT AVERAGE RESISTIVITIES IN 100 105 cm-cm.

