



42A04NW0068 OP93-734 KENOGAMING

010

**SUMMARY OF INDUCED POLARIZATION SURVEY
COMPLETED ON AKWESKWA LAKE PROPERTY
KENOGAMING TOWNSHIP, ONTARIO**

OPAP Grant Number - OPGW 93 - 231

OPAP File Number - OP 93-734

C. J. Bradbrook, M.Sc.

March 21, 1994.

EXECUTIVE SUMMARY

Line cutting totalling 6.8 kilometres, and an induced polarization survey totalling 5.5 kilometres were completed on the Akweskwa Lake Property, Kenogaming Township, Ontario. The work was completed in the NW and SE part of the property where waterbodies and swampy ground dictated the work could only be done in the winter. The line spacing, and survey parameters were chosen to maximize coverage of these areas in the most cost effective manner.

Au mineralization has been identified on, and adjacent to, the Akweskwa Lake Property, within zones of schistose sericitic felsic volcanic rocks with disseminated pyrite: these zones can reach in excess of 200 ft in thickness. Examples of previous sampling include 0.504 oz Au/t over 10 ft from diamond drilling, and 0.24 oz Au/t; and 0.24 % Zn over 4 ft.

Induced polarization surveys represent perhaps the most effective method of delineating buried zones of disseminated pyrite. It was therefore the intent of this survey to locate such zones in the water covered and swampy areas of the Akweskwa Lake Property.

The survey was successful in identifying a number of well developed induced polarization anomalies with elevated phase readings, and low resistivity readings. Two of these appear to represent NW and SE extensions of known Au mineralization whilst others represent excellent additional targets.

Further work is warranted on the basis of the encouraging results from this survey and appropriate recommendations are therefore made for future work to be completed on the Akweskwa Lake Property.



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TABLE OF CONTENTS

Section	Page
Executive Summary	i
Table of Contents	ii
1.0 LOCATION AND ACCESS	1
2.0 GEOLOGY	4
2.1 Regional Geology	4
2.2 Local Geology	4
2.3 Mineralization	7
2.3.1 Gold	7
<i>Dunvegan Zone</i>	7
<i>Jonsmith Zone</i>	7
<i>Other Au Mineralization</i>	8
2.3.2 Nickel	8
3.0 WORK DONE	9
3.1 General Statement	9
3.2 Description of Work	9
3.2.1 Line Cutting	9
3.2.2 Induced Polarization Survey	9
4.0 RESULTS AND RECOMMENDATIONS	12
4.1 Results	12
4.1.1 Grid A	12
<i>Anomaly E</i>	12
<i>Anomaly E'</i>	12
<i>Anomaly F</i>	12
<i>Anomaly G</i>	18
4.1.2 Grid B	18
<i>Anomaly A</i>	18
<i>Anomaly B</i>	18
<i>Anomaly C</i>	22
<i>Anomaly D</i>	22
4.2 Recommendations	22
REFERENCES	24

LIST OF FIGURES

Figure	Page
1. Akweskwa Lake Property - Location	2
2. Location of Akweskwa Lake Property Within Kenogaming Township	3
3. Location of Akweskwa Lake Property in Swayze Greenstone Belt	5
4. Geology of Akweskwa Lake Property and Surrounding Area	6
5. Location of Cut Grids with respect to claim boundary of Akweskwa Lake Property	10
6. IP Pseudosection Line 2+00 W Grid A	13
7. IP Pseudosection Line 0+00 W Grid A	14
8. IP Pseudosection Line 2+00 E Grid A	15
9. IP Pseudosection Line 4+00 E Grid A	16
10. IP Pseudosection Line 6+00 E Grid A	17
11. IP Pseudosection Line 0+00 Grid B	19
12. IP Pseudosection Line 2+00 W Grid B	20
13. IP Pseudosection Line 4+00 W Grid B	21

LIST OF MAPS (Back Pocket)

1.	Resitivity Contoured - Grid A (1:2000)
2.	IP Anomalies - Grid A (1:2000)
3.	Resistivity Contoured - Grid B (1:2000)
4.	IP Anomalies - Grid B (1:2000)
5.	Compilation Map (1:5000)

1.0 LOCATION AND ACCESS

The Akweskwa Lake property is located approximately 60 km southwest (in a straight line) of Timmins, Ontario in Kenogaming Township, Porcupine Mining Division (Figure 1). The property is located entirely on claim map sheet G-3239, in NTS area 42/A5, at latitude 48°09' N, and longitude 81°56' W.

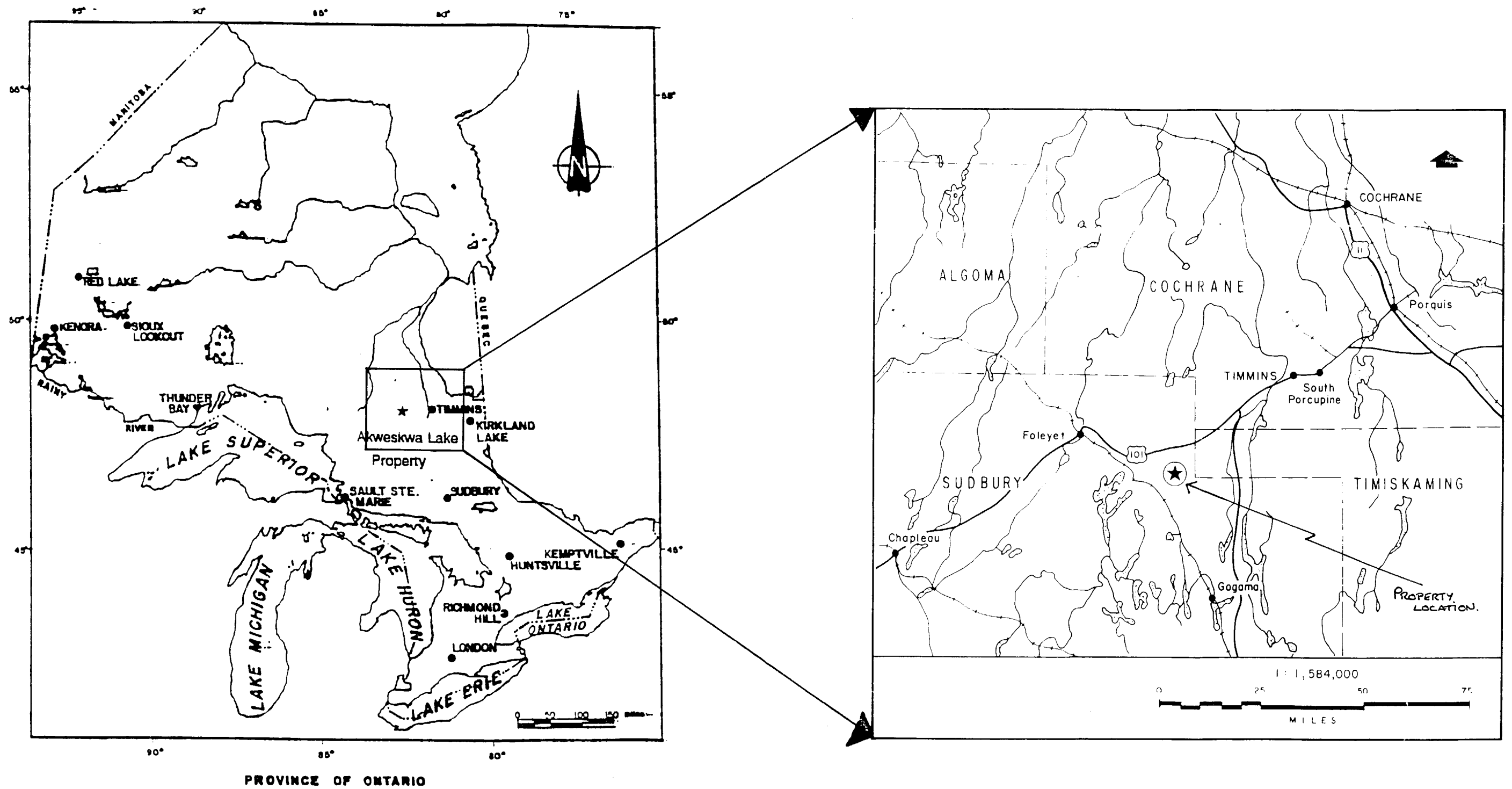
Access is excellent by road, traveling via Highway 101 west for approximately 60 km, then an additional 11 km south on a network of logging roads maintained by Malette Inc. of Timmins.

The property comprises 11 claims (totaling 23 claim units) in the Northern half of Kenogaming Township (Figure 2). The claim numbers are:

<u>Claim No.</u>	<u>No. of Claim Units</u>
1177255	1
1177257	3
1177258	1
1177259	1
1177269	4
1177270	1
1177271	1
1177272	4
1177273	1
1177282	2
1177283	4

To the north of the Akweskwa Lake Property are a group of 9 patented claims (Figure 2).

FIGURE 1



AKWESKWA LAKE PROPERTY

PROPERTY LOCATION

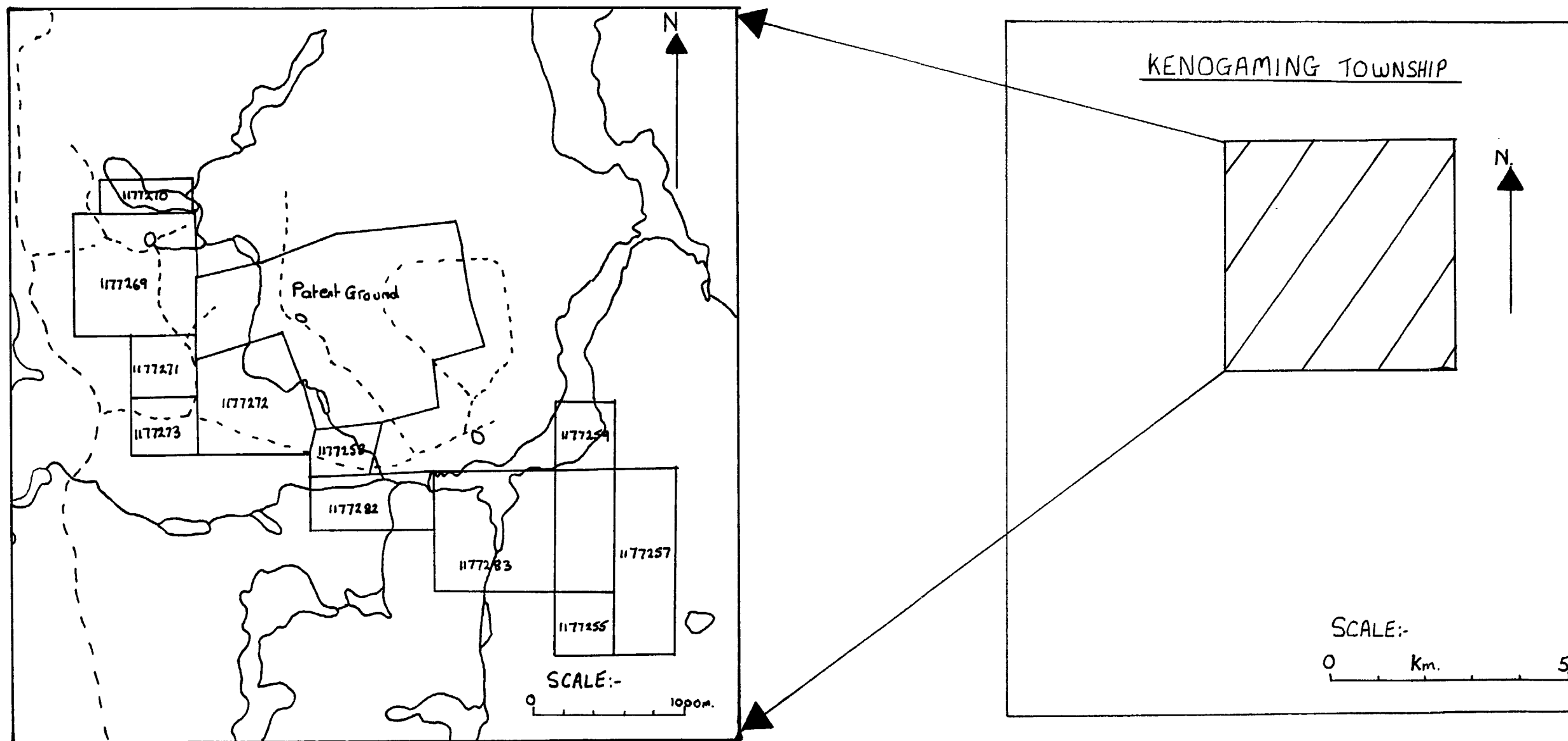


FIGURE 2. LOCATION OF AKWESKWA LAKE PROPERTY CLAIMS WITHIN KENOGAMING TOWNSHIP

2.0 GEOLOGY

2.1 REGIONAL GEOLOGY

The Akweskwa Lake Property is underlain by Archean Rocks of the NE part of the Swayze Greenstone Belt, which is adjacent to (the west of) the Abitibi Greenstone Belt (Figure 3).

2.2 LOCAL GEOLOGY

On a local scale, the property is underlain predominantly by intercalated felsic to intermediate volcanic rocks (Figure 4) and lesser mafic tuffs. These rocks are part of the Hanrahan Lake Complex (Milne 1972), which is a wedged shaped area with a 7 km wide north-south base at Akweskwa Lake and extending west southwest 13 km to its apex about 1.6 km west of the Nat River in Penhorwood Township. This complex forms the core of a northwest-plunging antiform fold, and is enclosed by mafic volcanic rocks to the north south and west, and is in fault contact (Tanton Lake Fault) with felsic intrusive rocks, and lesser mafic, intermediate, and felsic volcanic rocks to the east.

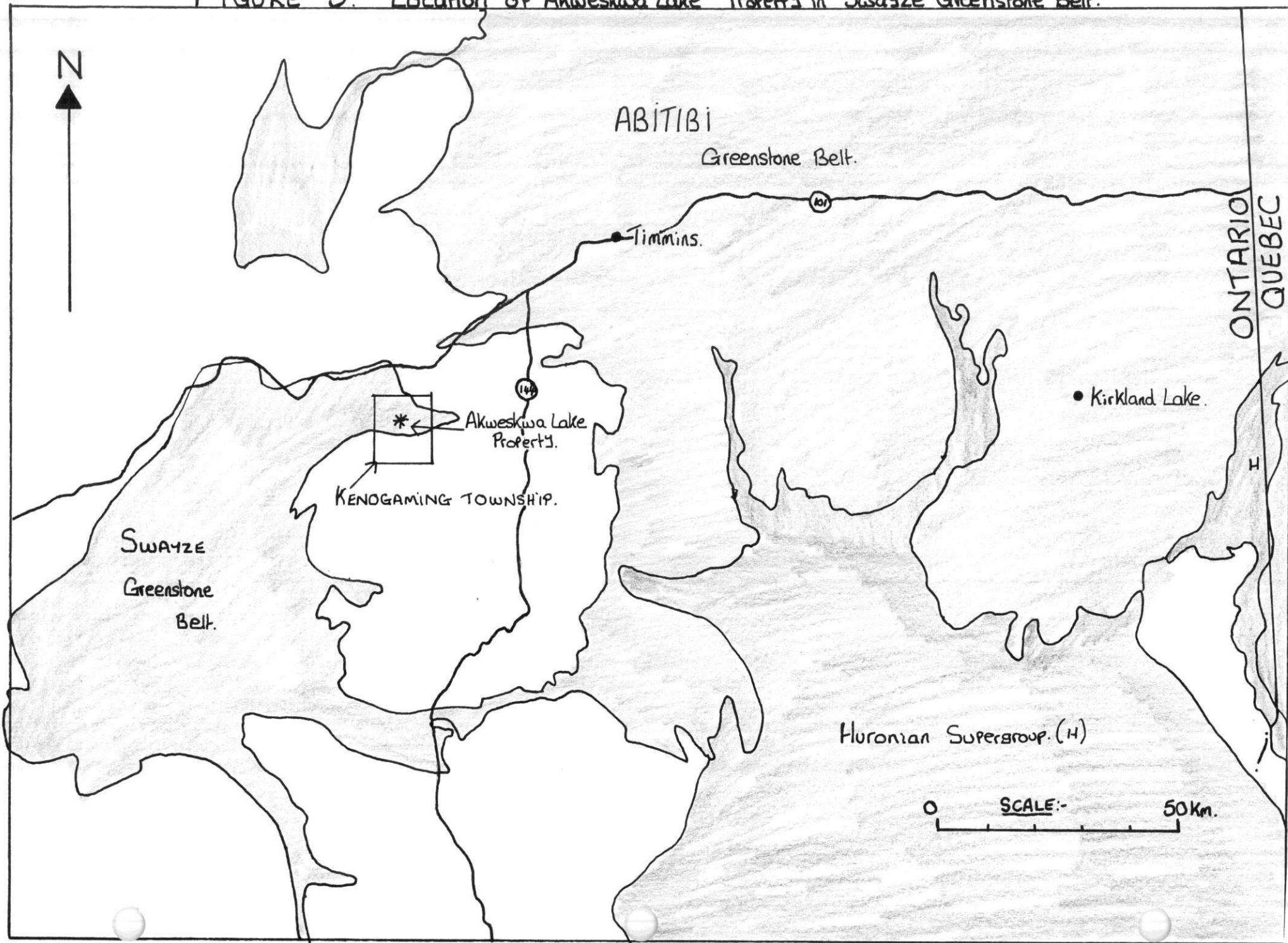
The volcanic rocks in the Hanrahan Lake Complex are felsic and mafic tuffs, lapilli tuffs, and agglomerates; intermediate to felsic flows; and locally some tuffaceous greywacke. Felsic flows appear similar in composition to the pyroclastic rocks and may grade laterally into these rock types. On the Akweskwa Lake Property the volcanic rocks strike East to Southeast and dip steeply to the North or North East. A schistosity parallels bedding and fragments have been elongated parallel to it.

The volcanic rocks underlying Akweskwa Lake property have been intruded by a number of Southeast trending serpentized ultramafic rocks. Contacts with the country rock appear to be sheared, and at these contacts the ultramafic intrusive rocks are talc-carbonate schist. In general this contact shearing is parallel with country rock foliation. Folding of these intrusive rocks appears to parallel that of the country rocks.

Narrow feldspar porphyry sills intrude both volcanic and ultramafic rocks. These are generally less than 3m thick. Elsewhere in the Hanrahan Lake complex larger feldspar porphyry masses are present.

All rocks are intruded locally by a number of north to northwest trending diabase dikes.

FIGURE 3. Location of Akweskwa Lake Property in Swayze Greenstone Belt.



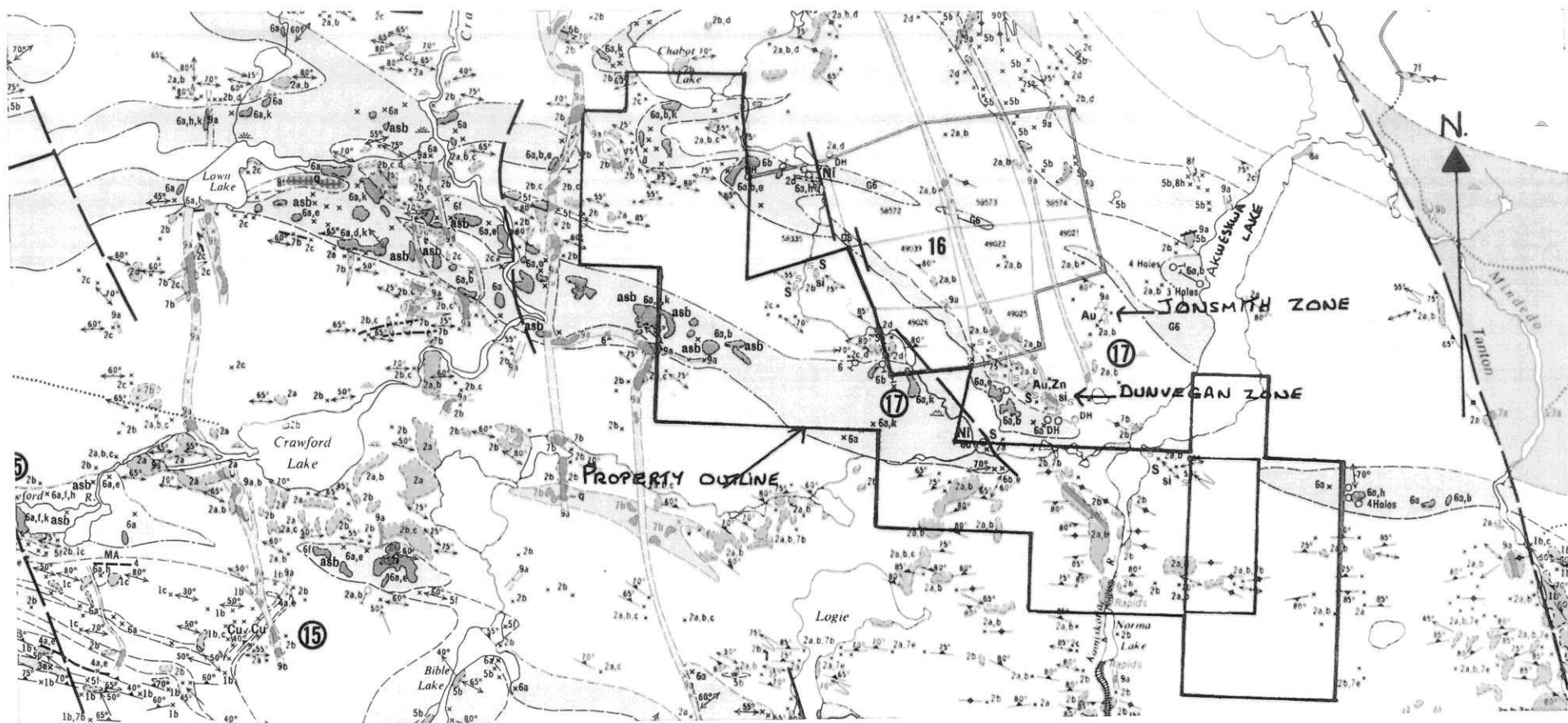


FIGURE 4.

Geology of Akweskwa Lake Property and Surrounding Area. (From MNDM Map 2231).

Scale 1 inch to 1/2 mile.

Rock types:- (2) Int. to Felsic volcanic rocks; (3) Sedimentary rocks; (5) Mafic Intrusive rocks; (6) Ultramafic Intrusive rocks; (7) Feldspar Porphyry; (8) Felsic Intrusive rocks; (9) Diabase Dikes

2.3 MINERALIZATION

2.3.1 Gold

Dunvegan Zone

Au mineralization of the Dunvegan Zone is located approximately 200m north of the property boundary approximately 600m west of Akweskwa Lake (Figure 4).

Au is associated with disseminated pyrite, in schistose sericitic felsic tuffs and agglomerates intruded by feldspar porphyry sills. The pyrite is locally associated with pods and veinlets of sphalerite. Gold was first discovered in the area of the Akweskwa Lake property in 1947 by N. Elieff who panned gold from pyritic shear zones. Trenching and sampling by Dunvegan Mines in 1951 obtained anomalous results including:

- 0.01 oz Au/t across 12 ft
- 0.20 oz Ag/t; 0.19% Zn across 20 ft
- 0.40 oz Ag/t; 0.39% Zn across 20 ft
- 0.24 oz Au/t; 0.20 oz Ag/t; 0.24% Zn across 4 ft
- 0.02 oz Au/t; 1.04% Zn across 6 ft

In 1952, Norduna Mines completed one diamond drill hole (271 ft) into the zone, and between 65.6 ft and 157 ft intersected a sheared tuffaceous rhyolite with disseminated pyrite throughout, and disseminated sphalerite between 65.6 ft and 75.0 ft.

In 1966, Falconbridge Nickel Mines Limited completed 8 holes into the zone and obtained a number of anomalous results, including 0.01 oz Au/t; 0.55 oz Ag/t; and 1.03% Zn over 14.2 ft in hole Number 7.

In 1988 and 1989 Halley Resources Ltd. completed 18 holes into the Dunvegan Zone and surrounding area, and verified the results of previous workers.

Jonsmith Zone

Au mineralization of the Jonsmith Zone was identified in 3 diamond drill holes totaling 306 ft, completed by packsack drill, approximately 300 metres northeast of the Dunvegan Zone (Figure 4). The predominant rock type intersected was sericitic tuff with variable pyrite content. In hole No. 1 the interval between 65-75 ft averaged 0.504 oz Au/t in a section with more abundant pyrite associated with chalcopyrite and galena. However, where sampled, the pyritic, sericitic tuff contained 0.01 to 0.07 oz Au/t. The tuff was in excess of 100 ft thick.

Other Au Mineralization

Work by Ingamar Exploration in 1983/85 obtained 0.157 Au/t from a grab sample of a 5cm wide seam of semi-massive pyrite within sheared felsic tuffs. This sample was taken from Claim 1177283 on the east side of Akweskwa Lake (Map No. 5).

In 1986 Glen Auden Resources Ltd. and Golden Range Resources Ltd. completed 4 holes totaling 2,032 ft on current claims 1177269 and 1177272 in an attempt to locate the Northwest extension of the Dunvegan Zone (Map No. 5). All holes intersected pyritic, sericitic schistose felsic volcanic rocks. These rocks were intersected over widths of up to 210 ft, and contained up to 8% fine grained disseminated pyrite. All holes provided samples with geochemically anomalous quantities of Au (>100 ppb Au), and the most Northwesterly hole (GAK-4) contained a 132 ft interval with ≤ 600 ppb Au.

2.3.2 Nickel

Nickel mineralization occurs in a serpentine in the NE corner of patent claim 58335 adjacent to the NW part of the Akweskwa Lake property (Figure 4). Drilling by Norduna Mines in 1953 obtained a number of anomalous intersections, with the most anomalous being 0.88% Ni and 0.156% Cu over 25 ft (Milne 1972).

A second nickel showing occurs 400m south of the No. 3 post of patent claim 49025 adjacent to the central part of the Akweskwa Lake property (Figure 4). Grab samples of up to 1% Cu, and 0.9% Ni have been reported (Milne: 1972).

3.0 WORK DONE

3.1 GENERAL STATEMENT

Previous work has indicated that anomalous Au occurs over significant widths within sericitic, pyritic felsic volcanic rocks. Previous work has largely focused on the known Au occurrences. However the Akweskwa Lake property was staked to enable exploration of the entire stratigraphic sequence enclosing this known mineralization to the NW and SE, to explore for both strike extensions of this known mineralization, as well as for other parallel zones. However tracing the strike extensions of known anomalous zones or identifying new zones to the NW, and SE is hindered by waterbodies, swampy ground and overburden up to 20m of overburden in the NW and SE parts of the property (Figure 2).

Induced polarization is perhaps the most effective method for locating hidden zones of disseminated pyrite. The work completed with the funds authorized by the OPAP grant was therefore aimed at identifying potential zones of gold-bearing disseminated pyrite in the NW and SE areas of the property where induced polarization surveys could only be completed in the winter when swamp and waterbodies are frozen.

3.2 DESCRIPTION OF WORK

3.2.1 Line Cutting

2 grids were cut. Lines were oriented north-south and spaced at 200 metre intervals to maximize coverage in the most cost effective way. All lines were chained and picketed at 25 metre intervals.

Grid A was cut in the SE part of the property on claims 117282, and 1177283 over an arm of the southwest part of Akweskwa Lake and surrounding swampy land (Figure 5). Lines cut consisted of a baseline of 800m and cross lines totaling 2600m.

Grid B was cut in the NW part of the property on claims 1177269, 117270 and 1177271 over 2 lakes and swampy ground (Figure 5). Lines cut consisted of a baseline of 500m, and cross lines totaling 2900m. Line 0+00 was extended far enough south to permit completion of the induced polarization survey over the interpreted NW extension of the Dunvegan Zone, and to correlate any anomalies generated by this zone with any other anomalies identified in the remainder of the grid covered by this survey.

3.2.2 Induced Polarization Survey

An induced polarization (IP) survey was completed between February 13 and February 19, 1994 over the entire length of all North-South lines on both grids A and B. 2.6 km of induced polarization was completed over Grid A, and 2.9 km over Grid B. The survey

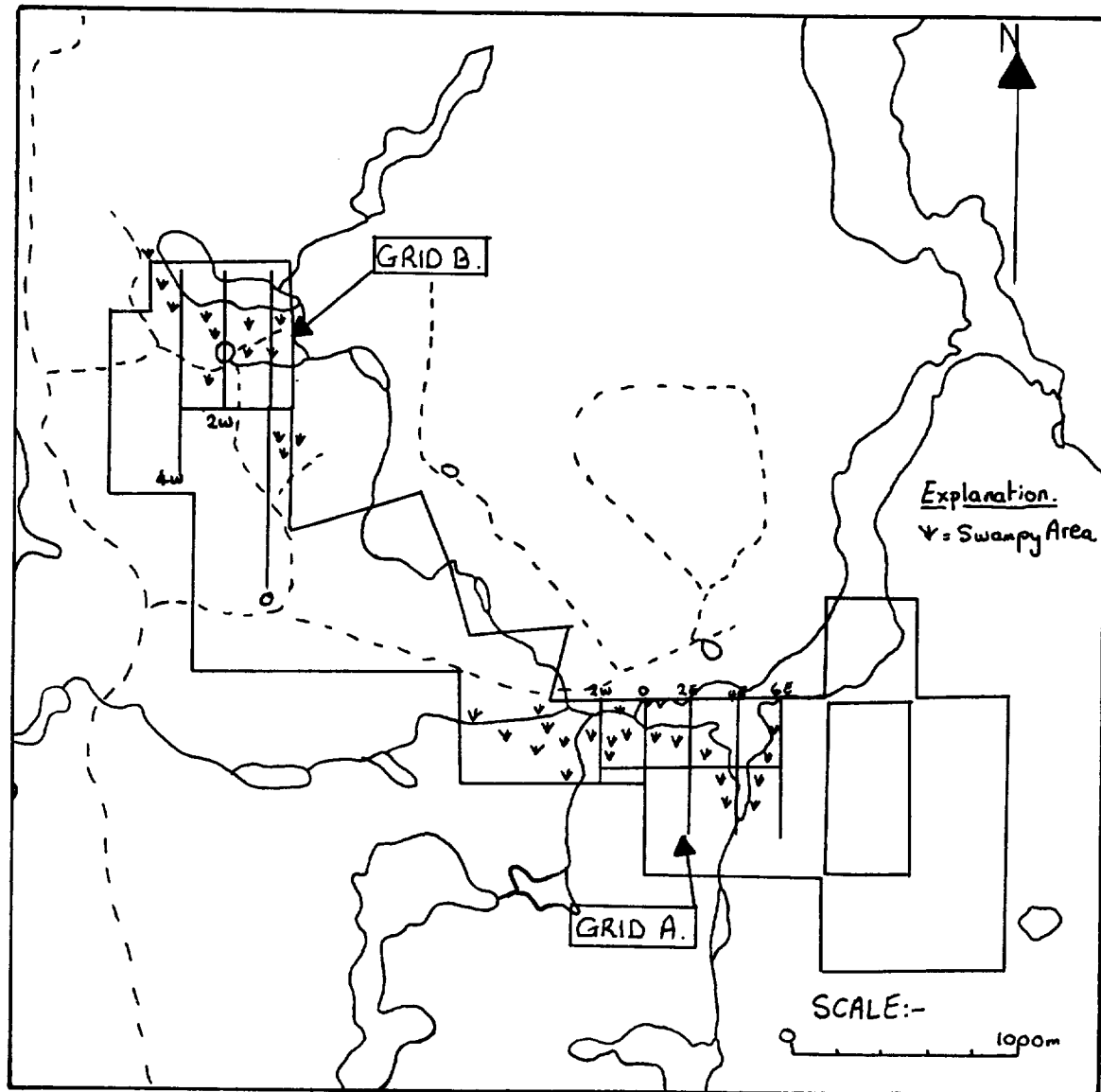


FIGURE 5. LOCATION OF CUT GRIDS WITH RESPECT TO CLAIM BOUNDARY.

AKWESKWA LAKE PROPERTY.

utilized the Phase I.P. method with a dipole-dipole array. Dipole spacing ("spread") was 50 metres with readings taken for dipole separations of "n" = 1 to 6, with a frequency of 1.0 hz, and phase measured in milli-radians. Readings were also taken of resistivity and recorded in ohm_m. These survey parameters were utilized to ensure maximum coverage was obtained cost effectively and to ensure penetration to bedrock beneath swampy areas.

The receiver used in this survey was a Phoenix IPV-1, with a Phoenix IPT-1 transmitter; power was provided by a 3.0 kw motor generator, and electrodes were stainless steel rods or aluminum foil. The survey was completed by a crew comprised of 1 operator and 4 assistants.

4.0 RESULTS AND RECOMMENDATIONS

4.1 RESULTS

4.1.1 Grid A

Results of the Induced Polarization Survey over Grid A are presented in Pseudo Sections in Figures 6-10 (inclusive). Filtered resistivity results have been plotted and contoured in plan view (Map 1 Back Pocket). Resistivity can be an excellent tool for identifying lithological changes. On Grid A there appears to be a lithological contact trending ESE from approximately 1+00N on Line 2+00W to approximately 00+50S on Line 6+00E. This contact is marked by a change from lower resistivity results (<2500 ohm_m) in the north part of the Grid to considerably higher resistivity results (mostly >10,000 ohm-m) in the south part of the grid. The resistivity change caused by this interpreted contact is somewhat obscured by the effects of the lower resistivity of the swampy ground around Akweskwa Lake. The lower resistivity results may reflect schistose, sericitic, pyritic felsic volcanic rocks, whereas the higher resistivity readings may reflect more massive volcanic rocks. 3 phase anomalies have been identified on Grid A; 2 associated with the zone of lower resistivity, and 1 associated with the zone of higher resistivity immediately adjacent to the lower resistivity zone (Map 2). These anomalies are described below.

Anomaly E

Identified in the northern part of Lines 4+00E and 6+00E, and may extend north of the property boundary. It is most clearly identified on Line 6+00E where it produced phase readings of ≤ 28 milli-radians associated with low resistivity readings to 461 ohm_m. It appears the anomaly trends Northwest and may correlate with the Dunvegan Zone (Map 5).

Anomaly E'

Identified in the Northern part of Lines 2+00E and 4+00E. It is characterized by low resistivity readings to 243 ohm_m, with no associated phase response. This anomaly may represent an envelope to anomaly E, perhaps comprising schistose rocks with little or no associated sulphide minerals.

Anomaly F

This anomaly is best developed on Line 2+00W, extending north from 1+00N to the limit of readings which could be taken on the property. It is a very well developed "n-shaped" anomaly with phase readings up to 27 milli-radians associated with low resistivity readings to 707 ohm-m. The anomaly appears to fade to the east, and its presence on Line 0+00 is questionable.

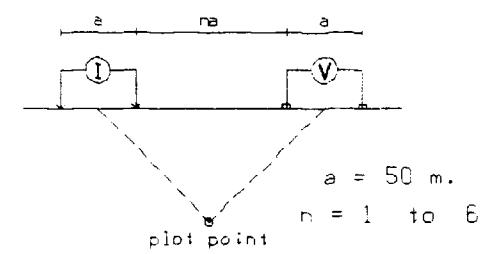
FIGURE 6.



FILTERED PROFILES

Line 200 W

Dipole-Dipole Array

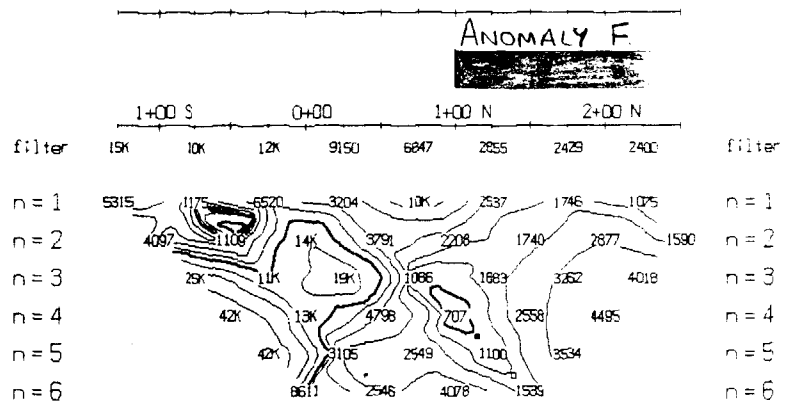


Filtered Profiles

Resistivity	-----	filter
Polarization	=====	*
Metal Factor	-----	**

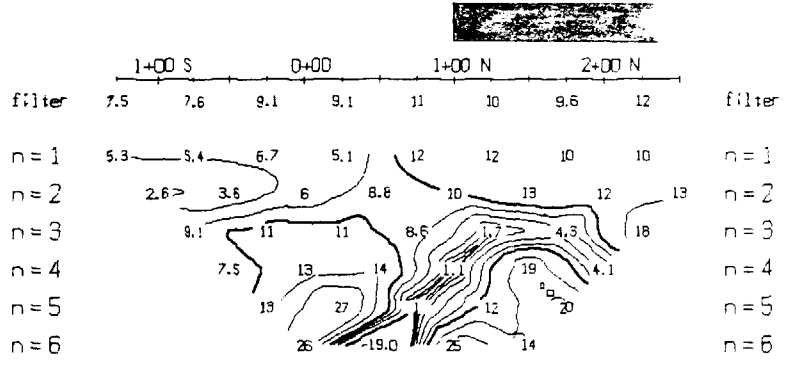
Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments: IPT1, TURBO IPV-4
 Frequency: 1.0 Hz.
 Operator: J.M.N.

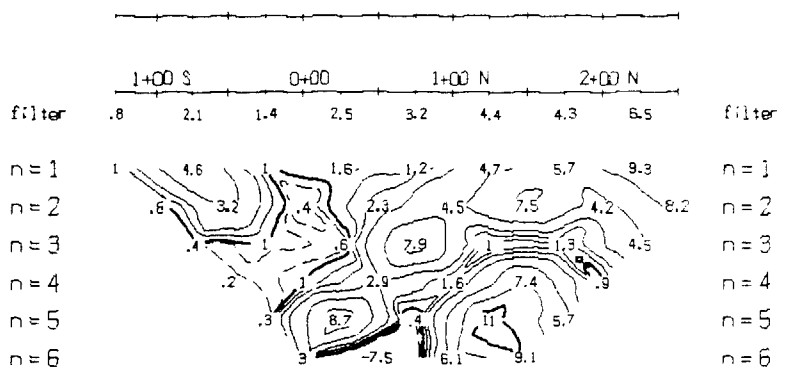


TOPOGRAPHY

RESISTIVITY
(ohm_m)



PHASE
(milliradians)



INTERPRETATION

METAL FACTOR
(ip/res * 1000)

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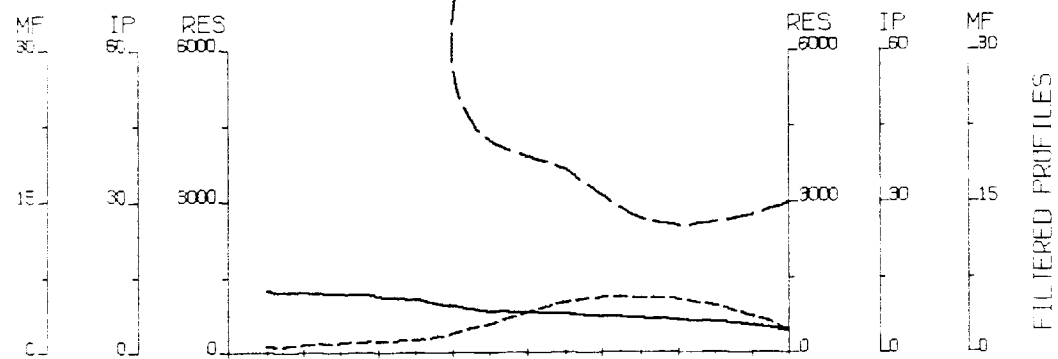
INDUCED POLARIZATION SURVEY
 Kenogaming Twp. Grid A,
 Timmins, Ontario

Date: Feb \ 1994 N.T.S.

Scale: 1 : 5000

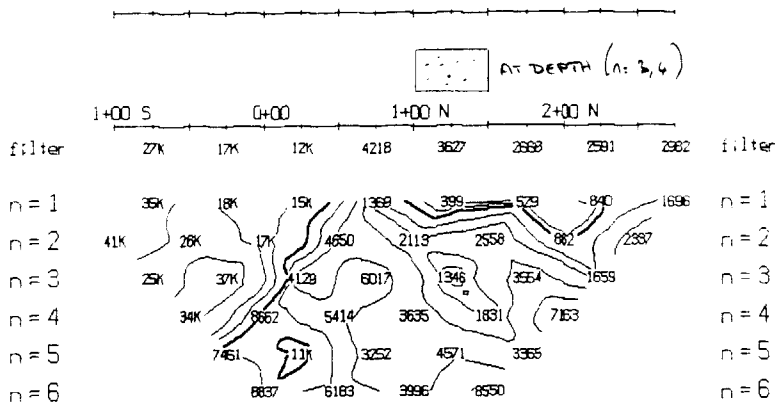
MERTENS & MacNEIL LTD.

FIGURE 7.

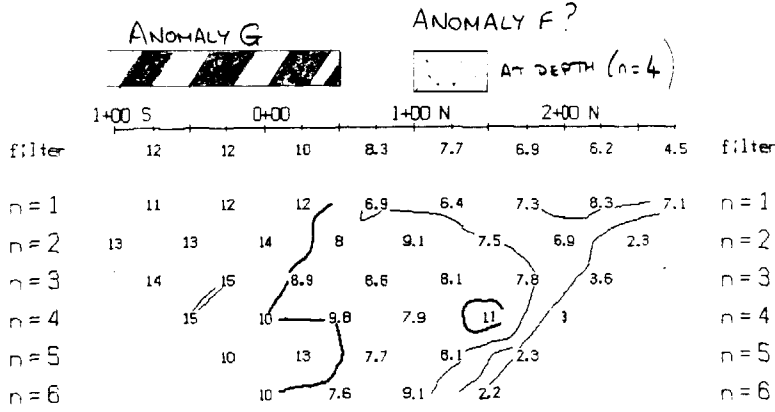


FILTERED PROFILES

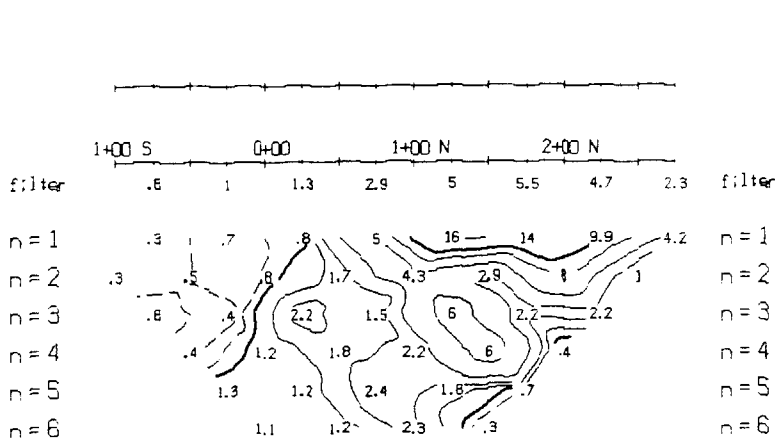
TOPOGRAPHY



RESISTIVITY
(ohm_m)



PHASE
(milli-radians)

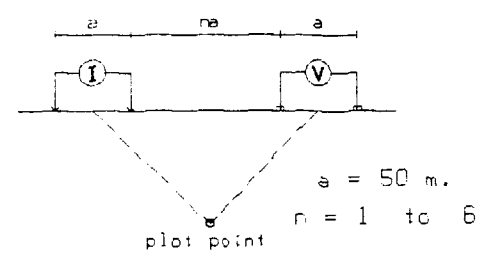


INTERPRETATION

METAL FACTOR
(ip/res * 1000)

Line 000 E

Dipole-Dipole Array



Filtered Profiles

Resistivity	-----	filter
Polarization	=====	*
Metal Factor	-----	**

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments: IPT1, TURBO IPV-4
Frequency: 1.0 Hz.
Operator: J.M.N.

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INDUCED POLARIZATION SURVEY

Kenogaming Twp. Grid A,
Timmins, Ontario

Date: Feb \ 1994 N.T.S.

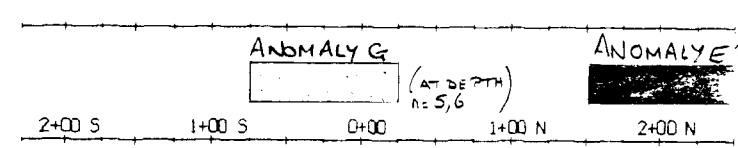
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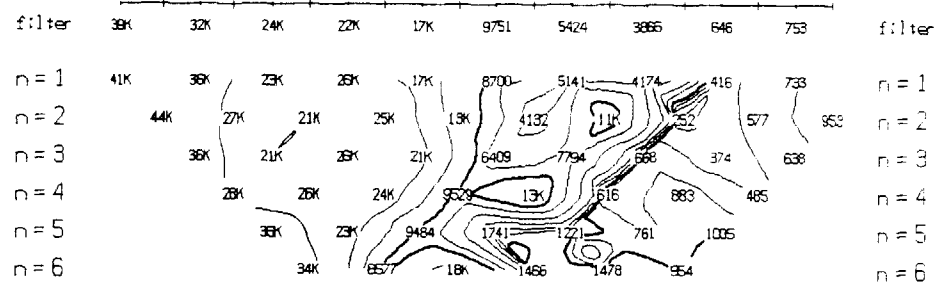
FIGURE 8.



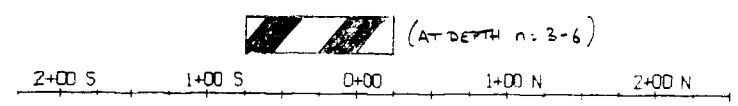
FILTERED PROFILES



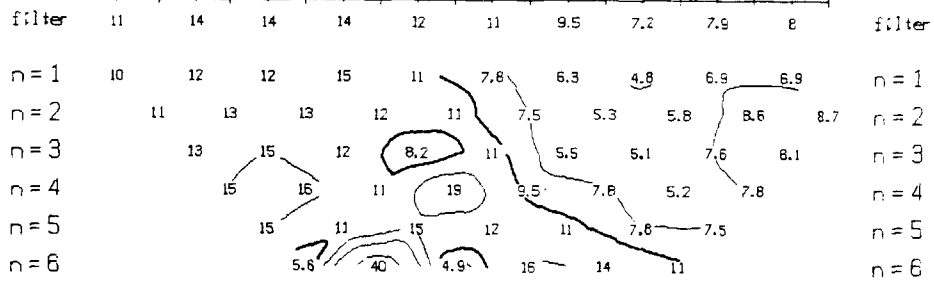
TOPOGRAPHY



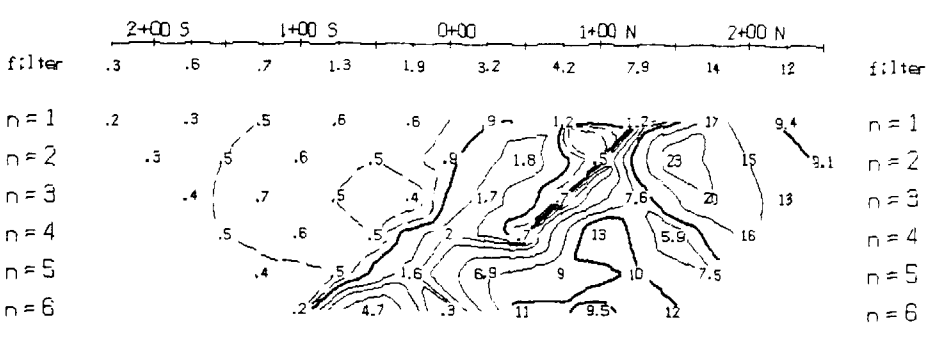
RESISTIVITY
(ohm_m)



PHASE
(milli-radians)



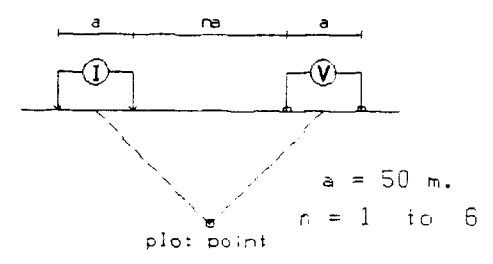
INTERPRETATION



METAL FACTOR
(ip/res * 1000)

Line 200 E

Dipole-Dipole Array



Filtered Profiles

Resistivity	-----	filter	*
Polarization	=====		**
Metal Factor	- - - - -		***

Logarithmic			
Contours	1, 1.5, 2, 3, 5, 7.5, 10, ...		

Instruments: IPT1, TURBO IPV-4
 Frequency: 1.0 Hz.
 Operator: J.M.N.

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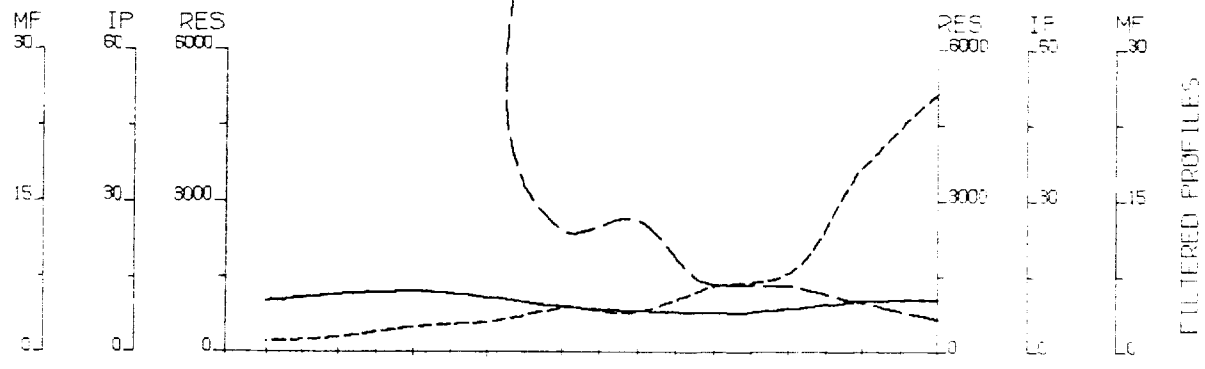
INDUCED POLARIZATION SURVEY
 Kenogaming Twp. Grid A,
 Timmins, Ontario

Date: Feb \ 1994 N.T.S.

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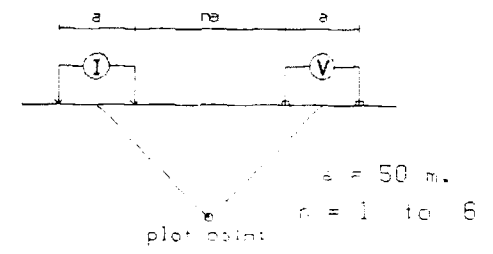
MERTENS & MacNEIL LTD.

FIGURE 9.



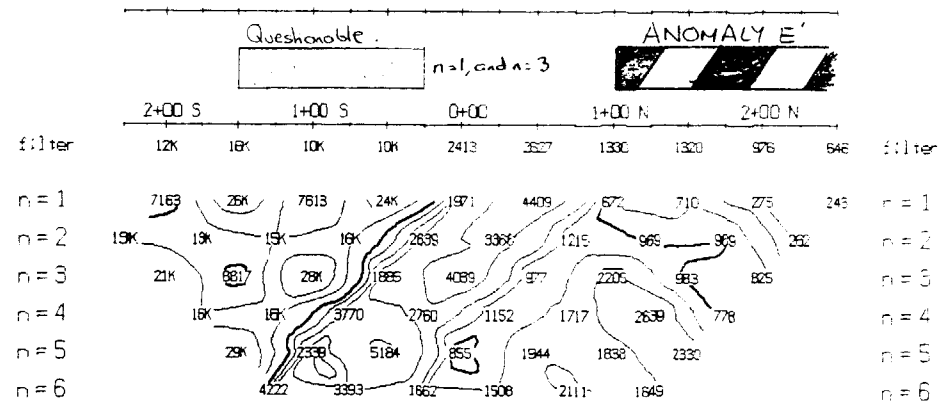
Line 400 E

Dipole-Dipole Array



TOPOGRAPHY

Filtered Profiles

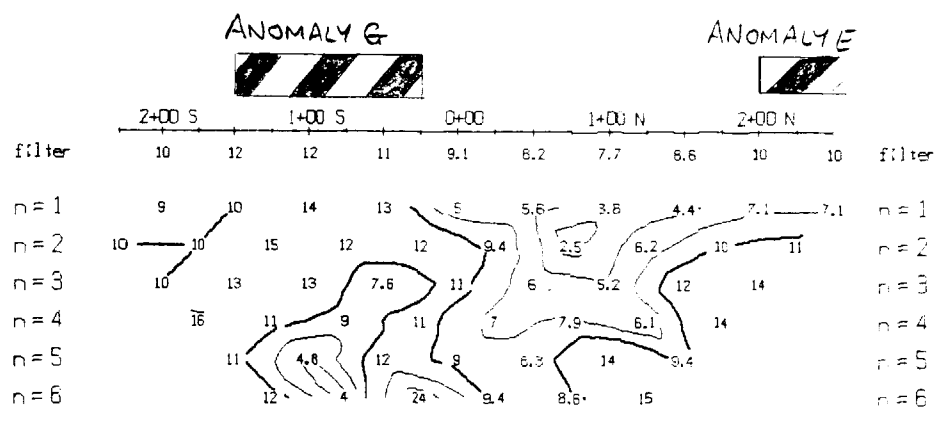


RESISTIVITY

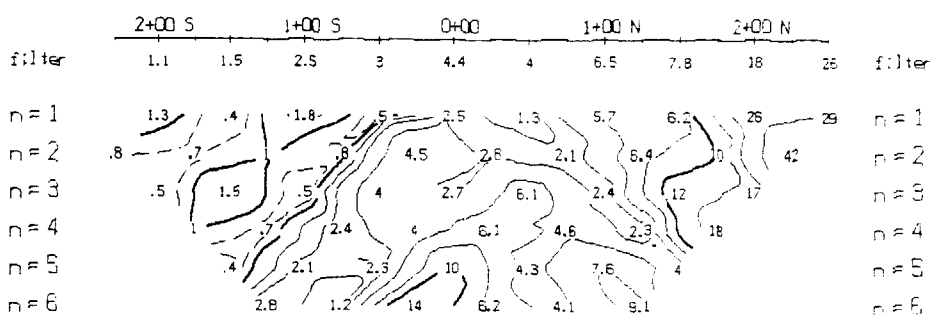
Resistivity	-----	filter	*
Polarization	=====		**
Metal Factor	-----		***

Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments: IPT1, TURBO IPV-4
 Frequency: 1.0 Hz.
 Operator: J.M.N.



PHASE
(milliradians)



INTERPRETATION

METAL FACTOR
($\mu\text{p/res} \times 1000$)

CHRIS BRADBROOK

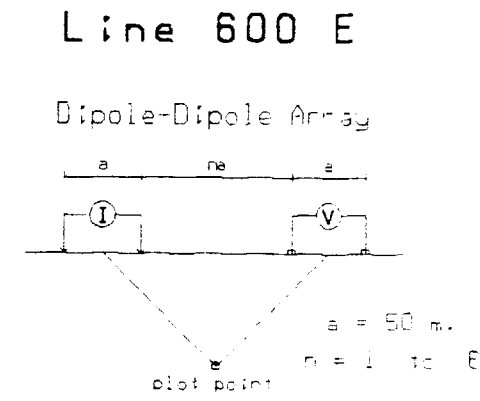
INDUCED POLARIZATION SURVEY
 Kenogaming Twp. Grid A,
 Timmins, Ontario

Date: Feb \ 1994 N.T.S.

Scale: 1 : 5000

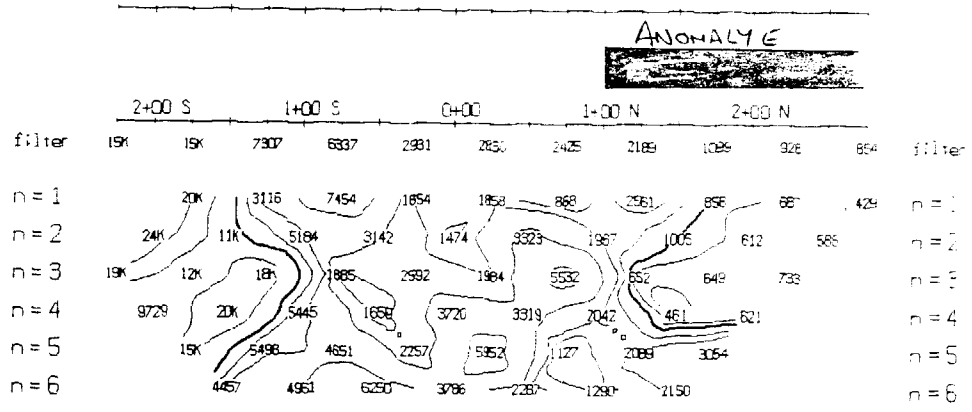
MERTENS & MacNEIL LTD.

FIGURE 10.



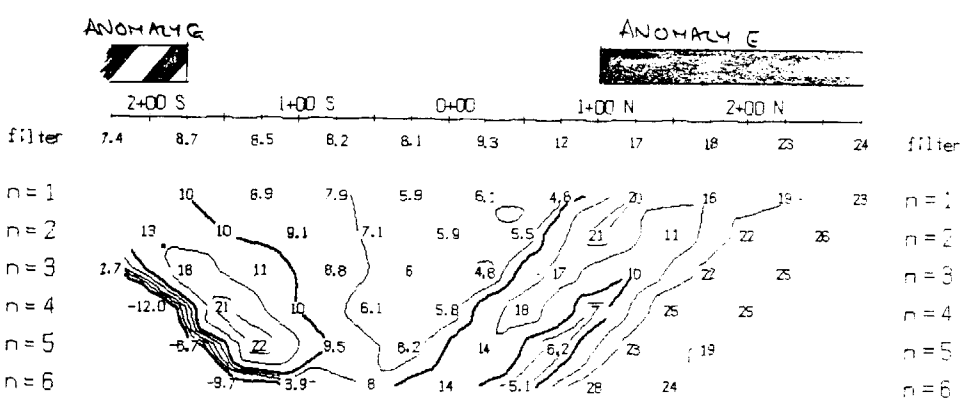
TOPOGRAPHY

Filtered Profiles



RESISTIVITY

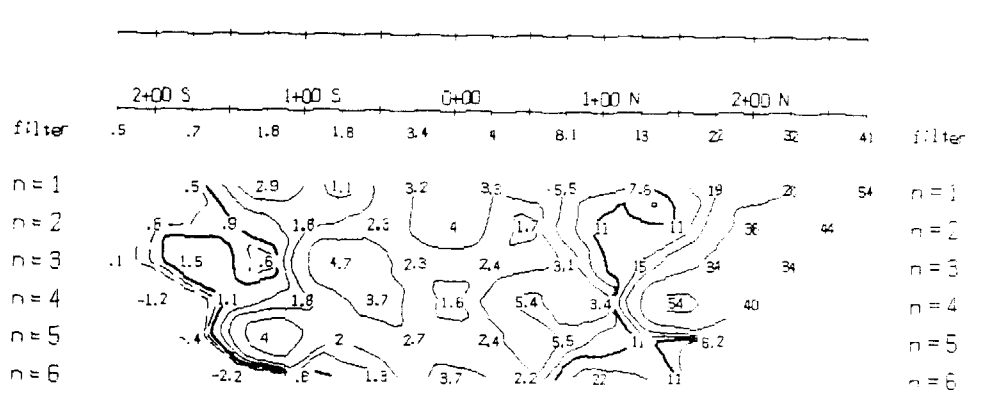
Resistivity ——— filter *
Polarization ——— **
Metal Factor - - - - - ***



PHASE
(mili-radians)

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10, ..

Instruments: IPT1, TURBO IPV-4
Frequency: 1.0 Hz.
Operator: J.M.N.



INTERPRETATION

METAL FACTOR
($\mu\text{p/res} \times 1000$)

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INDUCED POLARIZATION SURVEY
Kenogaming Twp. Grid A,
Timmins, Ontario

Date: Feb \ 1994 N.T.S.

Scale: 1 : 5000

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Anomaly G

This anomaly extends east-west across the South and central parts of Grid A. It produces a phase response of mostly 10-15 milli-radians, although on Line 2+00E at n=6, a response of 40 milli-radius was obtained. The phase response is associated with high resistivity values (>10,000 ohm_m), although may occur at a lithological contact with low resistivity rocks to the north.

4.1.2 Grid B

Results of the Induced Polarization Survey over Grid B are presented in Pseudo Sections in Figures 11-13 (inclusive). Filtered resistivity results have been plotted and contoured in plan view (map 3, back pocket).

An area of high resistivity (≤ 7246 ohm_m) is present in the northern half of lines 2+00W and 4+00W, and may be caused by an area of ultramafic intrusive rocks.

An area of low resistivity (< 2000 ohm_m) trends southeast in the southern half of Grid B, and may represent schistose rocks, which correlate with those hosting the Dunvegan zone to the southeast.

A second zone of low resistivity (< 2000 ohm-m) is present along the southern margin of the lake in the north of the grid, and appears to occur close to the contact between ultramafic intrusive rocks, and felsic volcanic rocks (Map 5).

Anomaly A

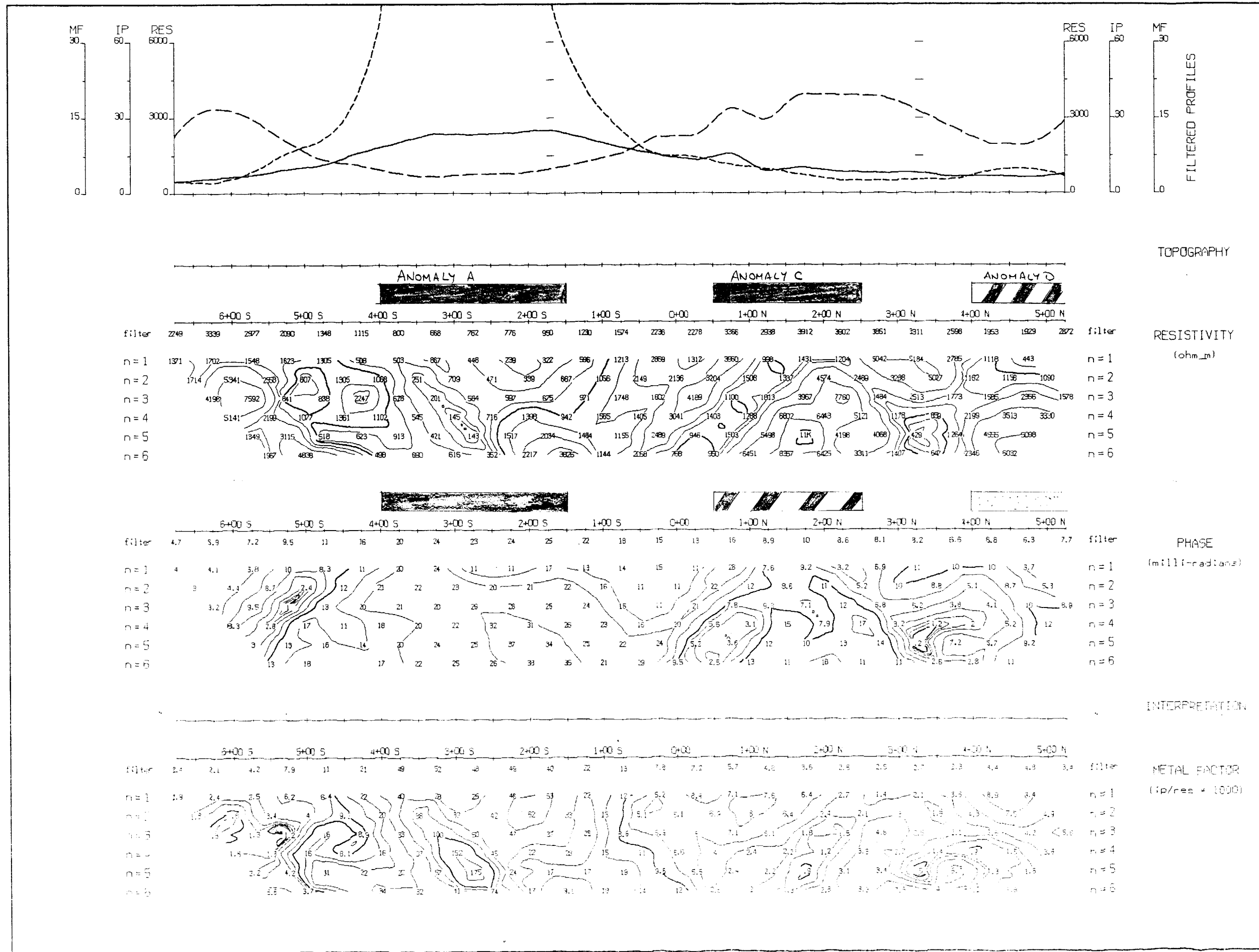
On Line 0+00 this a wide strong phase anomaly between 1+50S and 4+00S with readings of ≤ 38 milli-radians, associated with low resistivity readings to 143 ohm_m. It appears to be strongest at depth (n = 3-6). The anomaly is interpreted to continue northwest to Line 4+00W where it is strongest between 0+75 N and 0+25 S with phase readings to 67 milli-radians, and associated low resistivity readings to 633 ohm_m.

This anomaly is interpreted to be caused by pyritic sericitic rocks which correlate with those rocks hosting the Dunvegan Zone to the Southeast (Map 5).

Anomaly B

This anomaly was detected at the southern end of Line 2+00W, at the base line with phase readings to 26-milli-radians and lower resistivity values to 1358 ohm_m. This particular anomaly may represent the northern edge of anomaly A or may be a distinct anomaly which correlates with pyritic sericitic rocks containing ≤ 600 ppb Au over 132 ft intersected in a drill hole at the east property boundary (Map 5).

FIGURE 11.



Line 000 W

Dipole-Dipole Array

$a = 50 \text{ m.}$
 $n = 1 \text{ to } 6$

Filtered Profiles

Resistivity	---	filter	*
Polarization	---		**
Metal Factor	---		***

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments: IPT1, TURBO IPV-4
Frequency: 1.0 Hz.
Operator: J.M.N.

CHRIS BRADBROOK

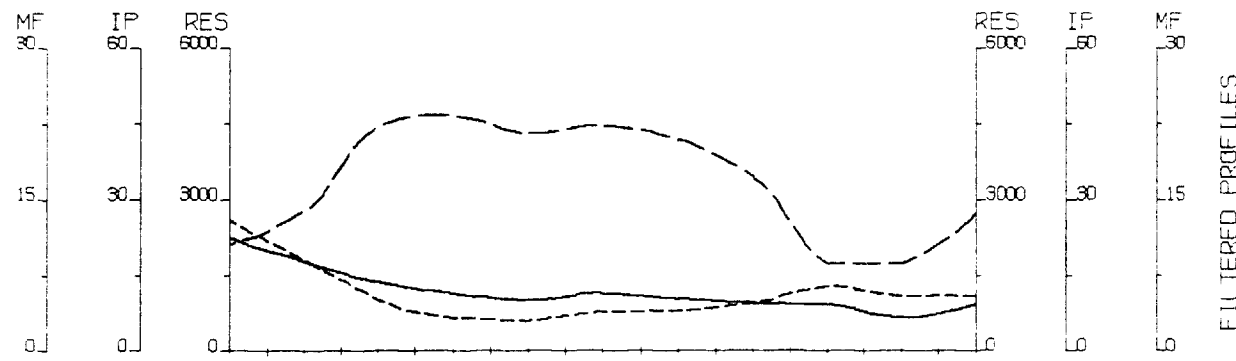
INDUCED POLARIZATION SURVEY
Kenogaming Twp. Grid B,
Timmins, Ontario

Date: Feb \ 1994 N.T.S.
Scale: 1 : 5000

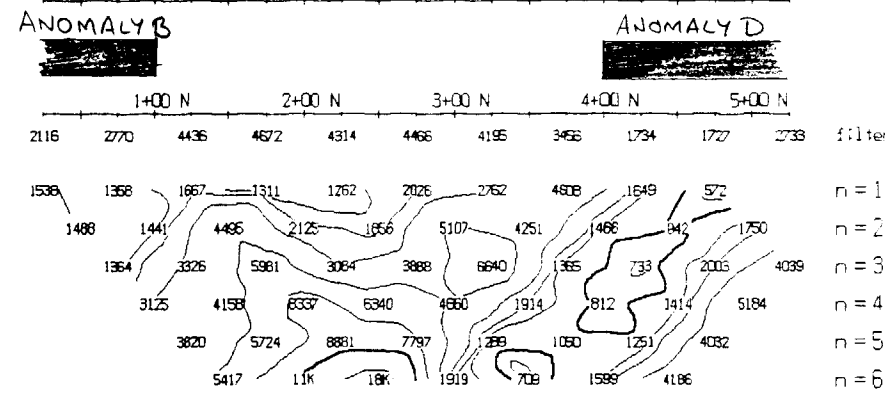
MERTENS & MacNEIL LTD.

MERTENS & MacNEIL LTD., 1000 Sheppard Ave. E., Toronto, Canada

FIGURE 12.

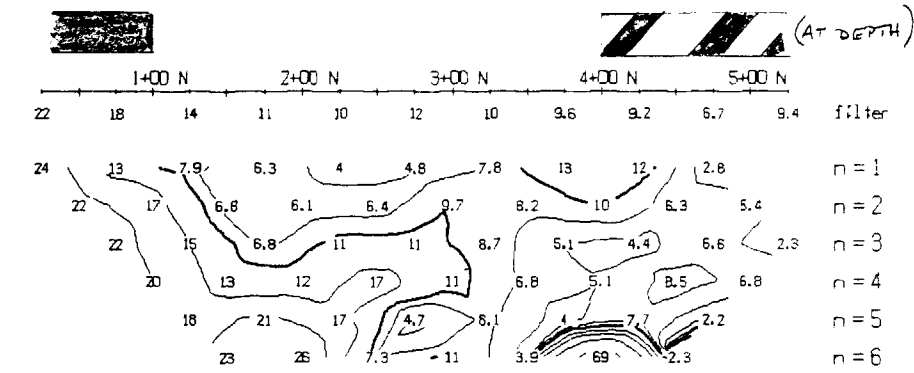


FILTERED PROFILES

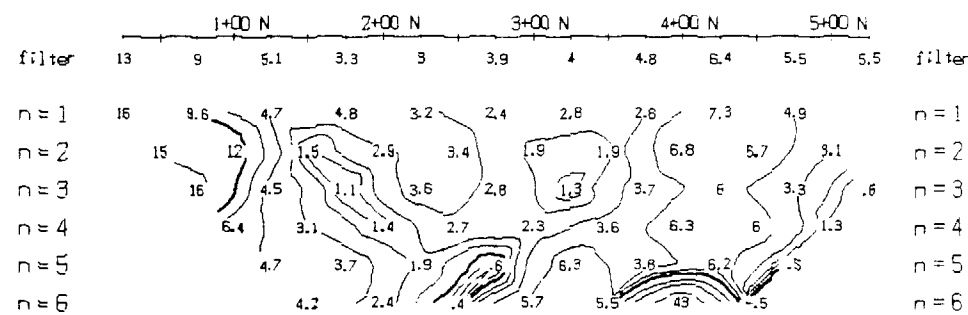


TOPOGRAPHY

RESISTIVITY
(ohm_m)



PHASE
(milli-radians)

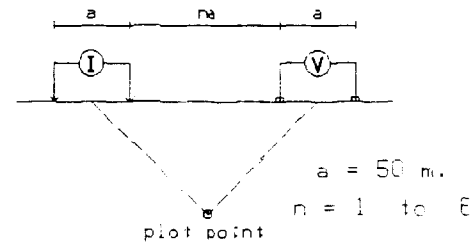


INTERPRETATION

METAL FACTOR
(ip/res * 1000)

Line 200 W

Dipole-Dipole Array



Filtered Profiles

Resistivity	-----	filter	*
Polarization	=====		**
Metal Factor	-----		***

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10....

Instruments: IPT1, TURBO IPV-4
Frequency: 1.0 Hz.
Operator: J.M.N.

CHRIS BRADBROOK

INDUCED POLARIZATION SURVEY

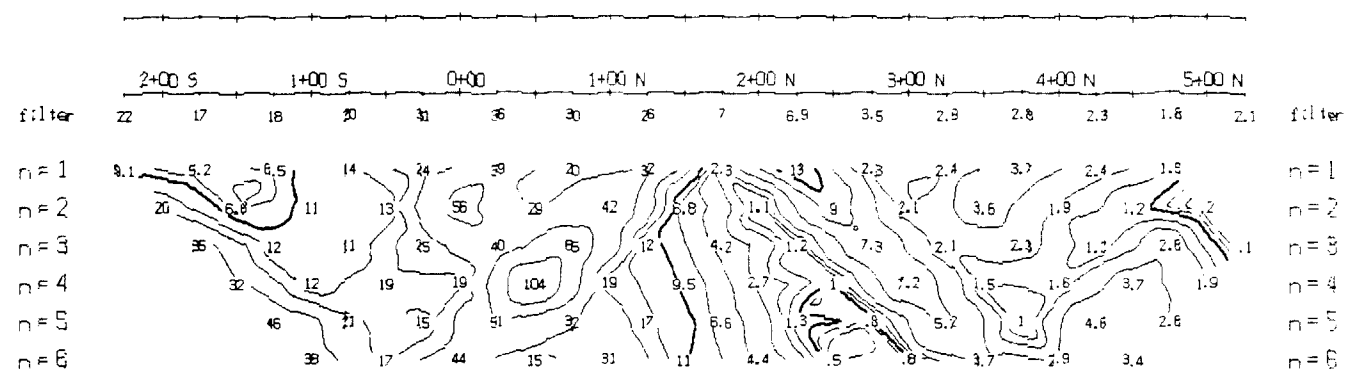
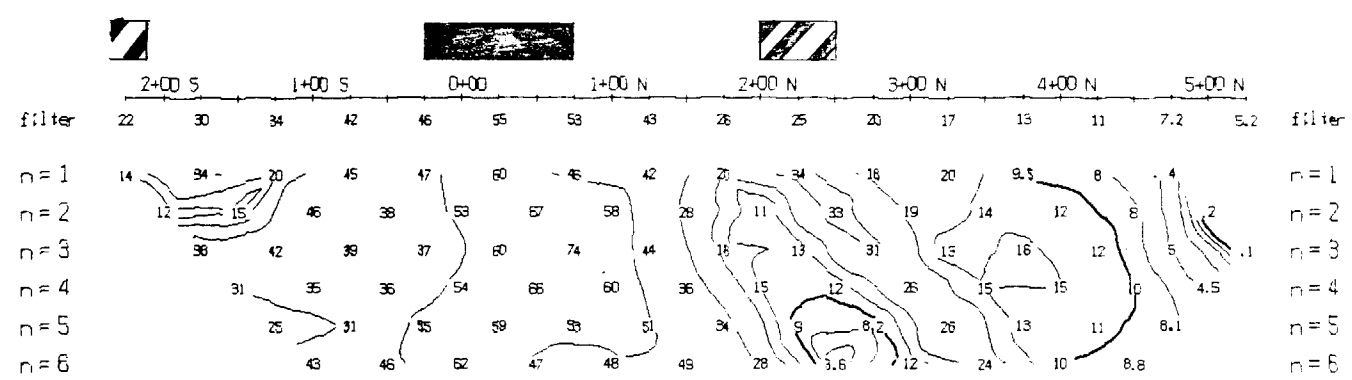
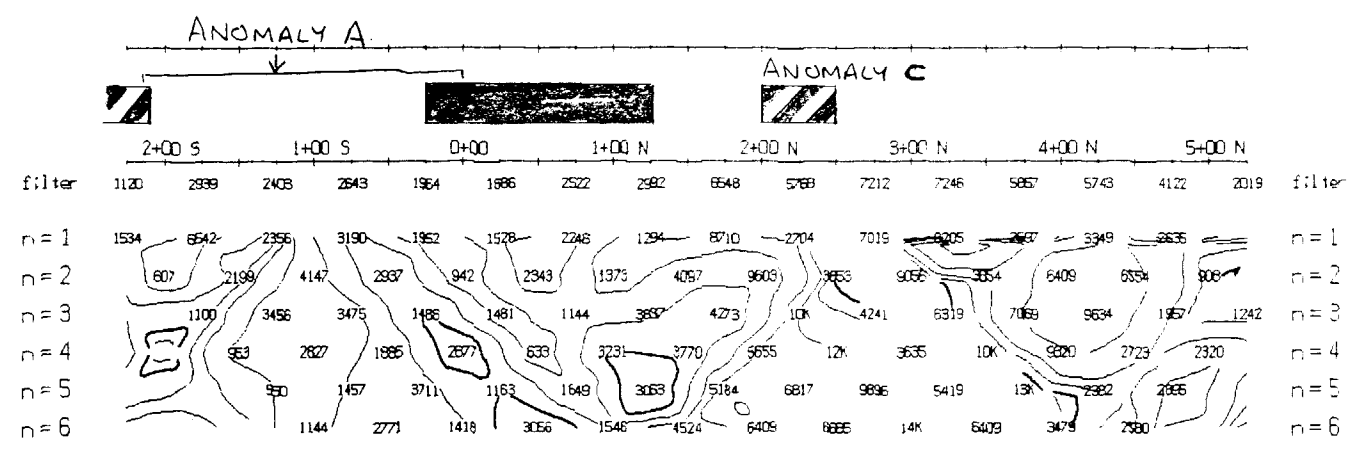
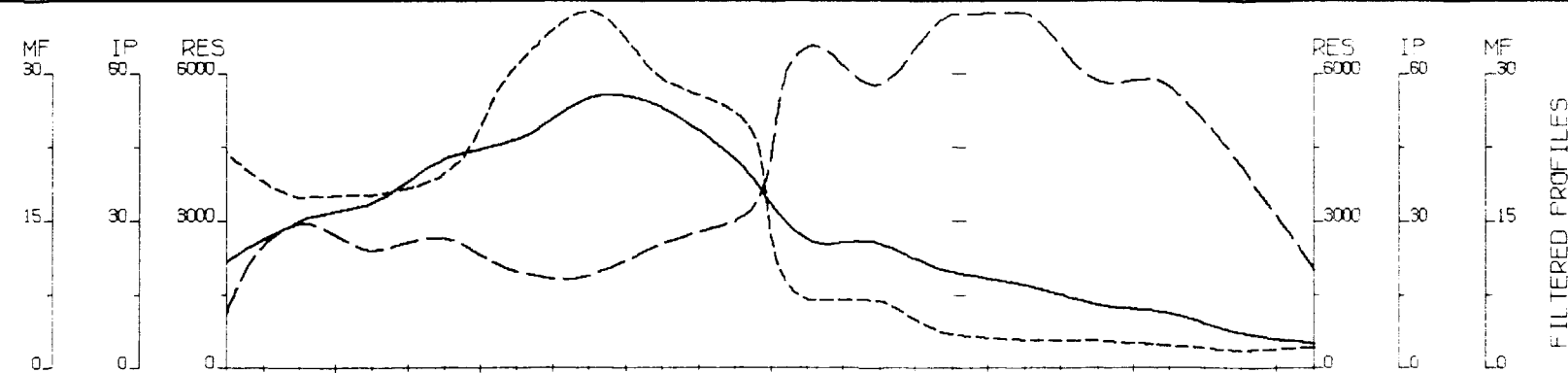
Kenogaming Twp. Grid B,
Timmins, Ontario

Date: Feb \ 1994 N.T.S.

Scale: 1 : 5000

MERTENS & MacNEIL LTD.

FIGURE 13.



TOPOGRAPHY

RESISTIVITY
(ohm_m)

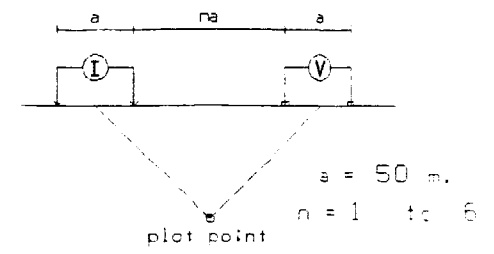
PHASE
(milli-radians)

INTERPRETATION

METAL FACTOR
(ip/res * 1000)

Line 400 W

Dipole-Dipole Array



Filtered Profiles

Resistivity ----- filter *

Polarization ===== **

Metal Factor - - - - - ***

Logarithmic
Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

Instruments: IPT1, TURBO IPV-4
Frequency: 1.0 Hz.
Operator: J.M.N.

CHRIS BRADBROOK

INDUCED POLARIZATION SURVEY
Kenogaming Twp. Grid B,
Timmins, Ontario

Date: Feb 1994 N.T.S.

Scale: 1 : 5000

MERTENS & MacNEIL LTD.

Anomaly C

This is a rather less distinct anomaly located on lines 0+00 and 4+00W. Phase readings of up to 34 milli-radians associated with low resistivity values to 429 ohm_m in an area of generally high resistivity (> 5000 ohm_m). It is not clear what the cause of this anomaly may be.

Anomaly D

The anomaly occurs at the southern margin of the lake on the north part of the grid, on lines 0+00, and 2+00W. Phase response was strongest at n=6 on line 2+00 W, 4+00 N where the reading was 69 milli-radians. Low resistivity values are more clearly defined with readings down to 572 ohm_m. This anomaly may represent sulphide mineralization at or near the contact between volcanic rocks and ultramafic intrusive rocks.

4.2 Recommendations

The work completed was successful in identifying a number of induced polarization anomalies beneath waterbodies and swampy areas, and which exhibit elevated phase readings, and commonly lower resistivity readings. These anomalies represent exploration targets which may reflect pyritic zones which could be associated with either anomalous Au mineralization where hosted by felsic volcanic rocks; or with Ni mineralization where hosted by ultramafic rocks.

Two of these anomalies; E on Grid A, and A on Grid B (Map 5), are interpreted, respectively to represent the SE, and NW extensions of the Dunvegan Zone, and therefore represent excellent exploration targets. Anomaly A is stronger than Anomaly E, and itself is strongest on Line 4+00 W of Grid B, suggesting the anomaly is getting stronger to the NW, and indicating an excellent untested exploration target exists in that direction.

In addition, the fact that the significant Au mineralization identified in the Jonsmith Zone is parallel to, and 300m from, the Dunvegan Zone suggests the other parallel induced polarization anomalies identified in this survey also represent additional excellent exploration targets for pyritic Au deposits.

The following recommendations are therefore made:-

- 1) Complete a grid (summer cut) across the remainder of the Akweskwa Lake Property. A line spacing of no less than 200m should be used, and Grids A and B should be "tied in" to each other.
- 2) Conduct an induced polarization survey on the newly cut grid using the same survey parameters as those outlined in this report.

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- 2) Conduct an induced polarization survey on the newly cut grid using the same survey parameters as those outlined in this report.

- 3) Conduct a basal till sampling program across all induced polarization anomalies identified by the completed survey, using a portable percussion pionjar drill set up. Samples should be analyzed for Au, Cu, Pb, Zn, and Ni.
- 4) Complete diamond drill holes into those induced polarization anomalies associated with anomalous results from the basal till survey.
- 5) Anomalies A and E, and their continuations identified by the new recommended induced polarization survey, will warrant testing by diamond drilling regardless of the basal till sampling results, since they represent the strike extensions of the Dunvegan Zone.

REFERENCES

Assessment files for Kenogaming Township in Timmins and Toronto.

Milne, V. G. 1972. Geology of the Kukatush - Sewell Lake area, District of Sudbury; Ontario Division of Mines, GR 97, 116p. Accompanied by Maps 2230, 2231, scale 1 inch to 1/2 mile.

REFERENCE

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	Description	File

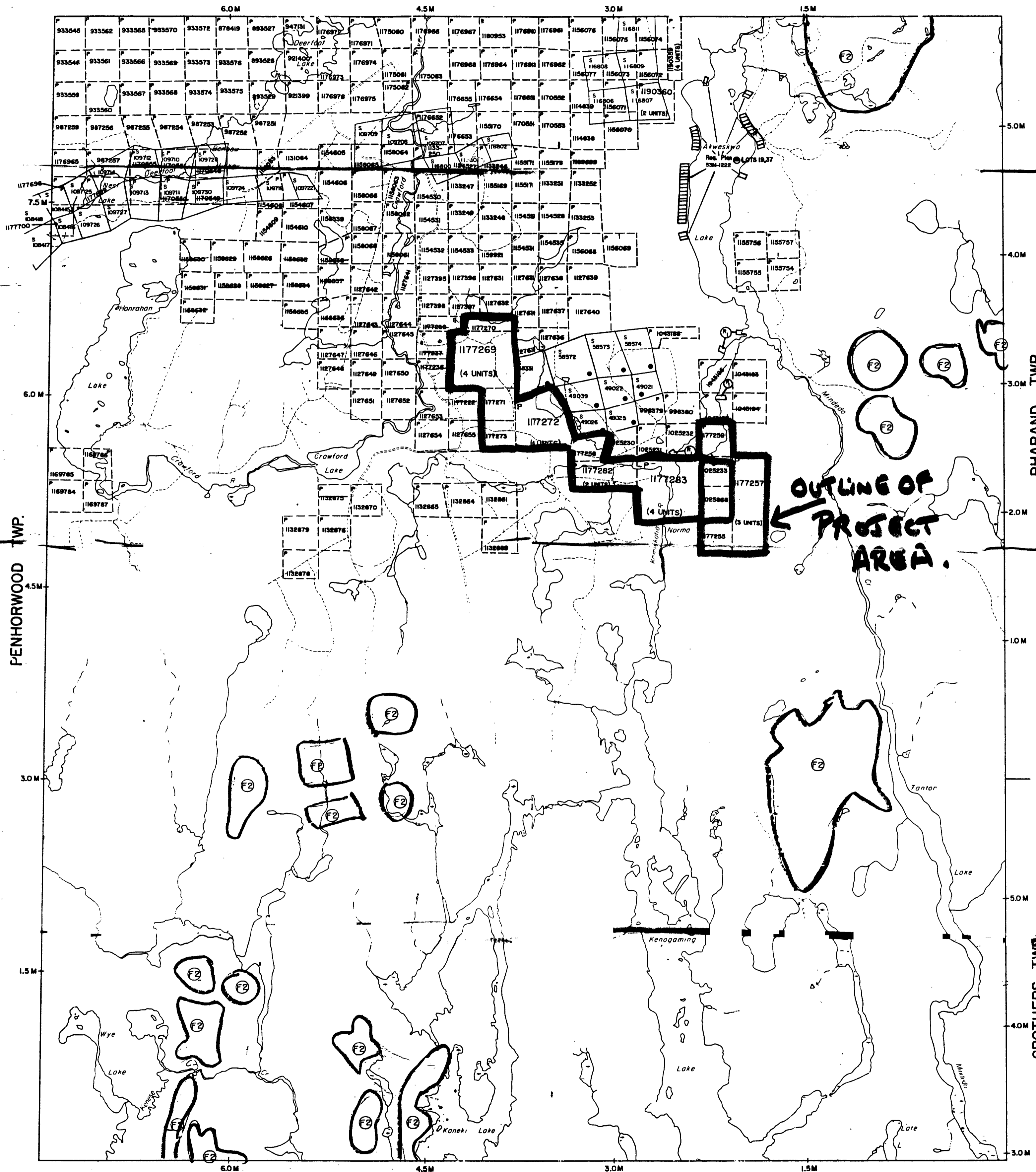
PROPOSED COTTAGING AREAS NOTICE RECEIVED DECEMBER 22, 1988

THIS TWP. IS SUBJECT TO FOREST ACTIVITY IN 1992/93. FURTHER INFORMATION AVAILABLE ON FILE.

THIS TWP. SUBJECT TO FOREST ACTIVITY IN 1993/94. FURTHER INFORMATION AVAILABLE ON FILE.

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

SEWELL TWP.



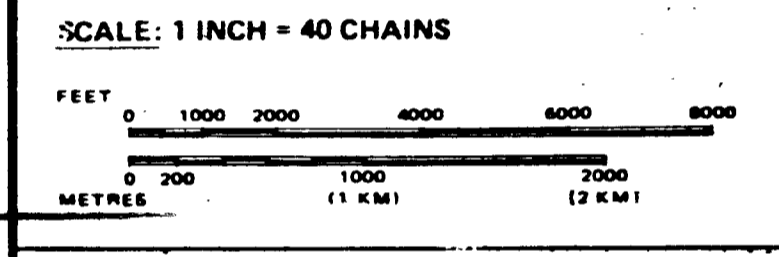
LEGEND

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 MUSKEG	
MINES	
TRANSVERSE 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	

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. 306, SEC. 63, SUBSEC. 1.



ISSUED
SEP 2 1985
PORCUPINE MINING DIVISION

TOWNSHIP
KENO GAMING
M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
SUDBURY

Ministry of Natural Resources
Land Management Branch
Ontario

Date: APRIL 1985
Number: **G-3239**

ACTIVATED JULY 29, 1992 BY D.C.
CHECKED BY S.W.

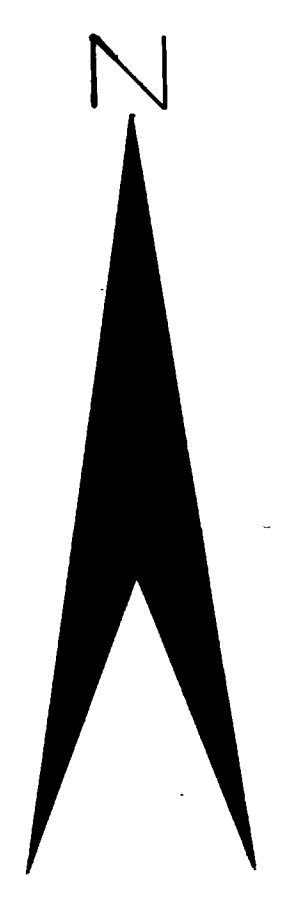
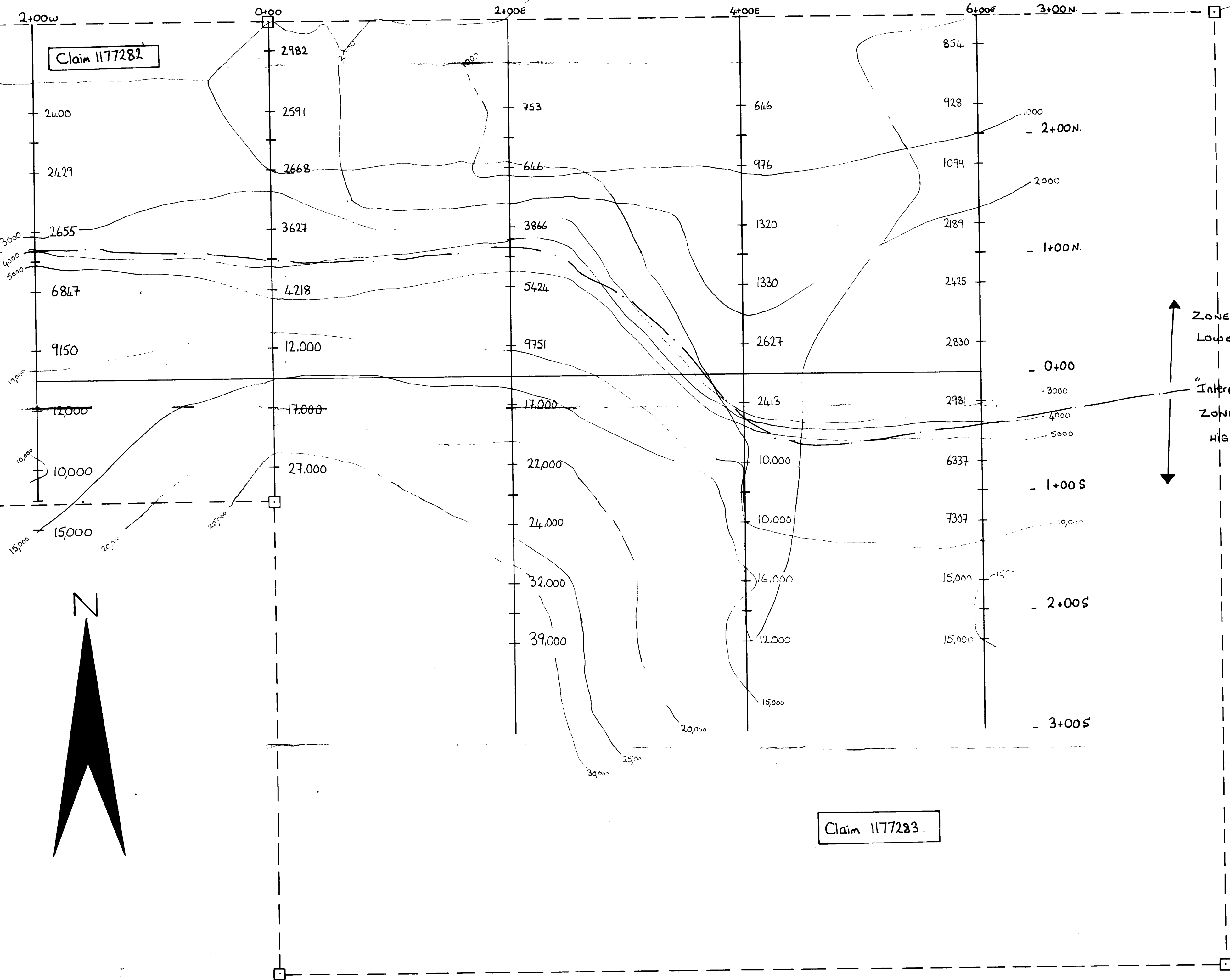
4244NW0068 OP93-734 KENO GAMING
 125888
 3533



AKWESKWA LAKE.

Claim 1177282

Claim 1177283



LEGEND.

Phase
Grid-radial → P R

Resistivity
(ohm.m)

Possible
Probable
Deviate

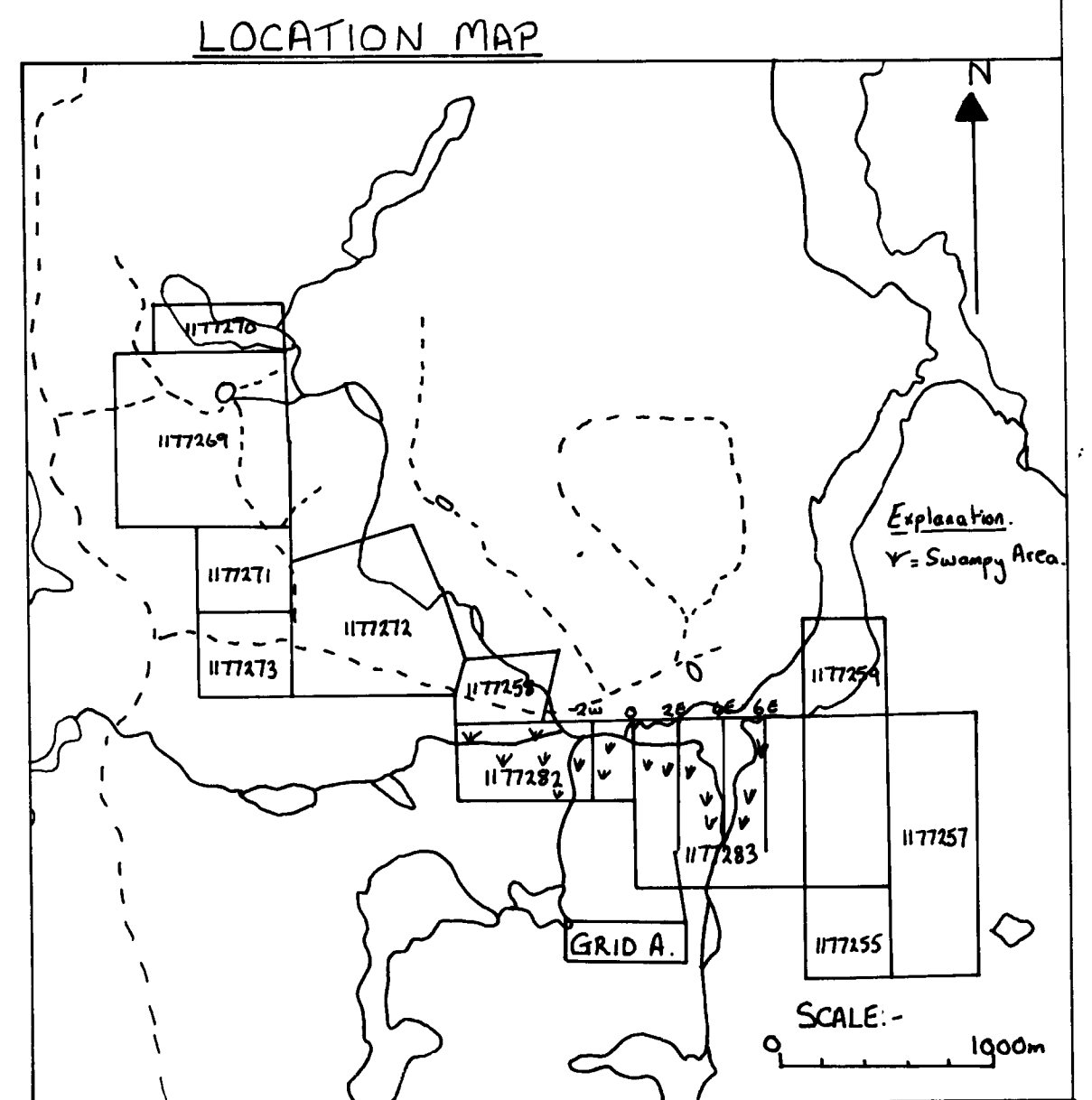
Classification
of
Anomals.

Interbedded Location of Strata

Polarization Anomals.

E

Identification and Interpreted
Trend of Induced Polarization
Anomals.



GRID A.
AKWESKWA LAKE PROPERTY
 INDUCED POLARIZATION SURVEY
 CONTOURED RESISTIVITY - FILTERED (ohm.m)

DRAWN BY:- C.J. Bradbrook M.Sc.
 DATE:- March 16, 1994.

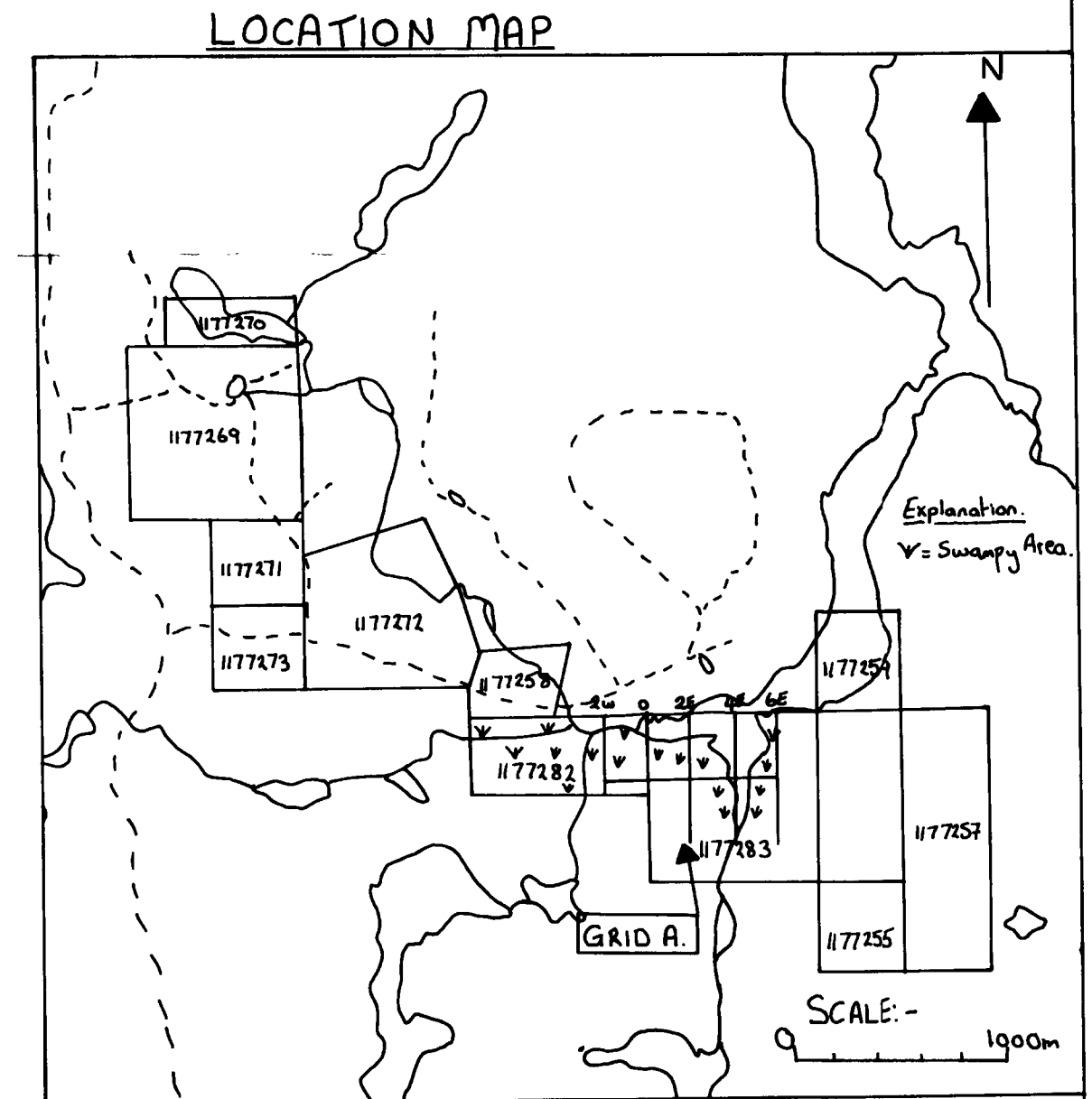
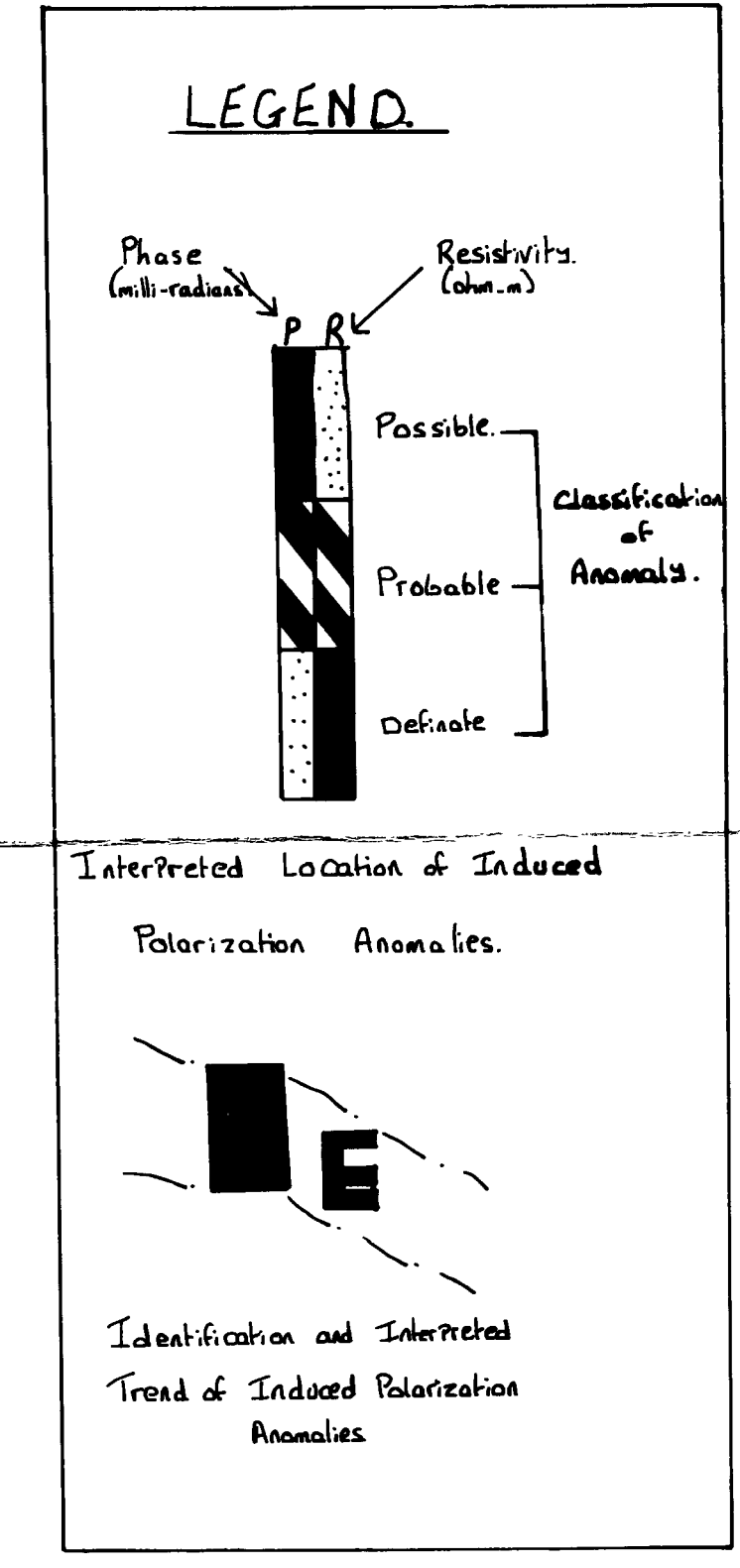
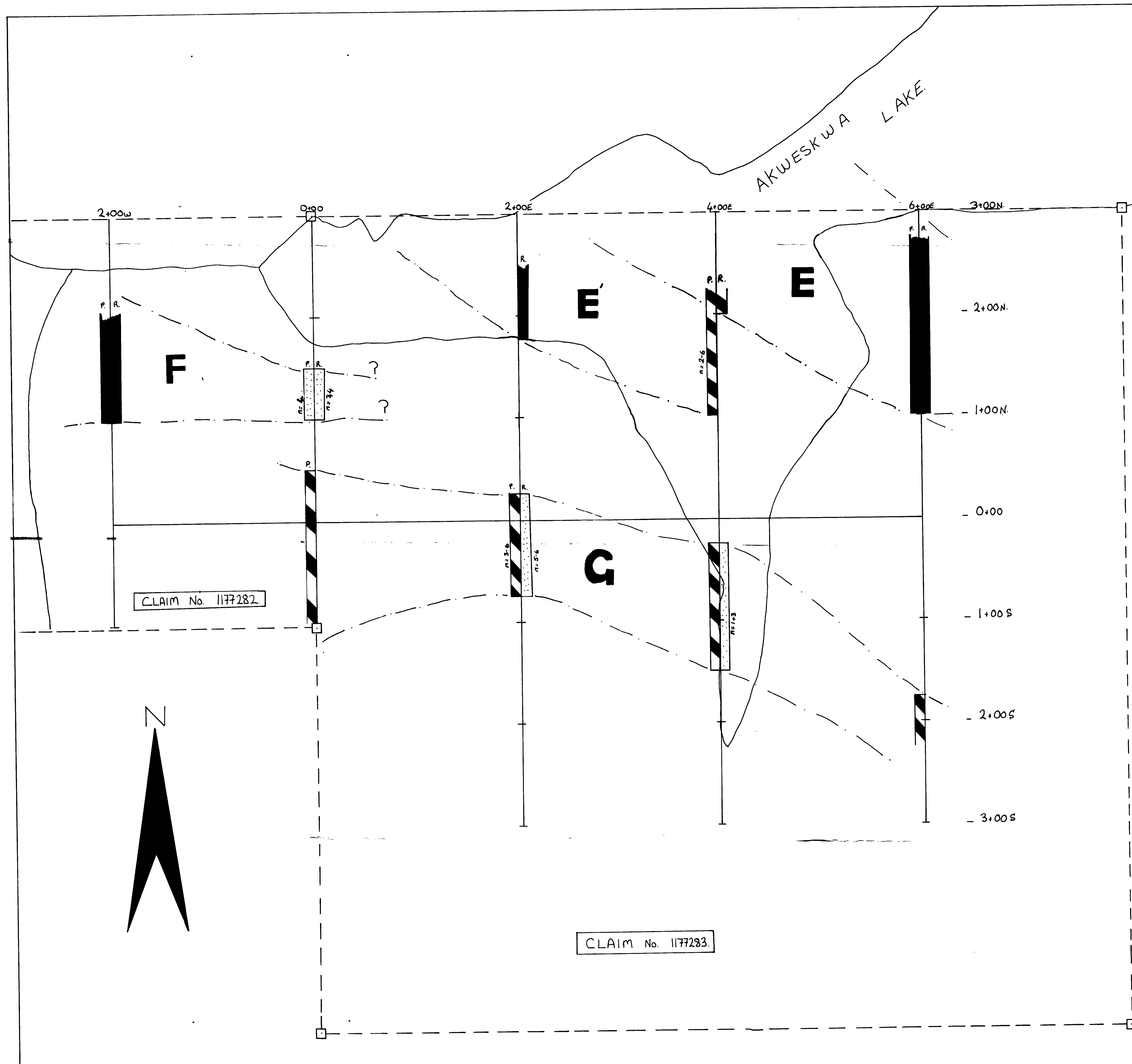
KENO GAMING TOWNSHIP

SCALE:-
 0 100 200 metres
 1:2000

MAP 1.

MAP 1





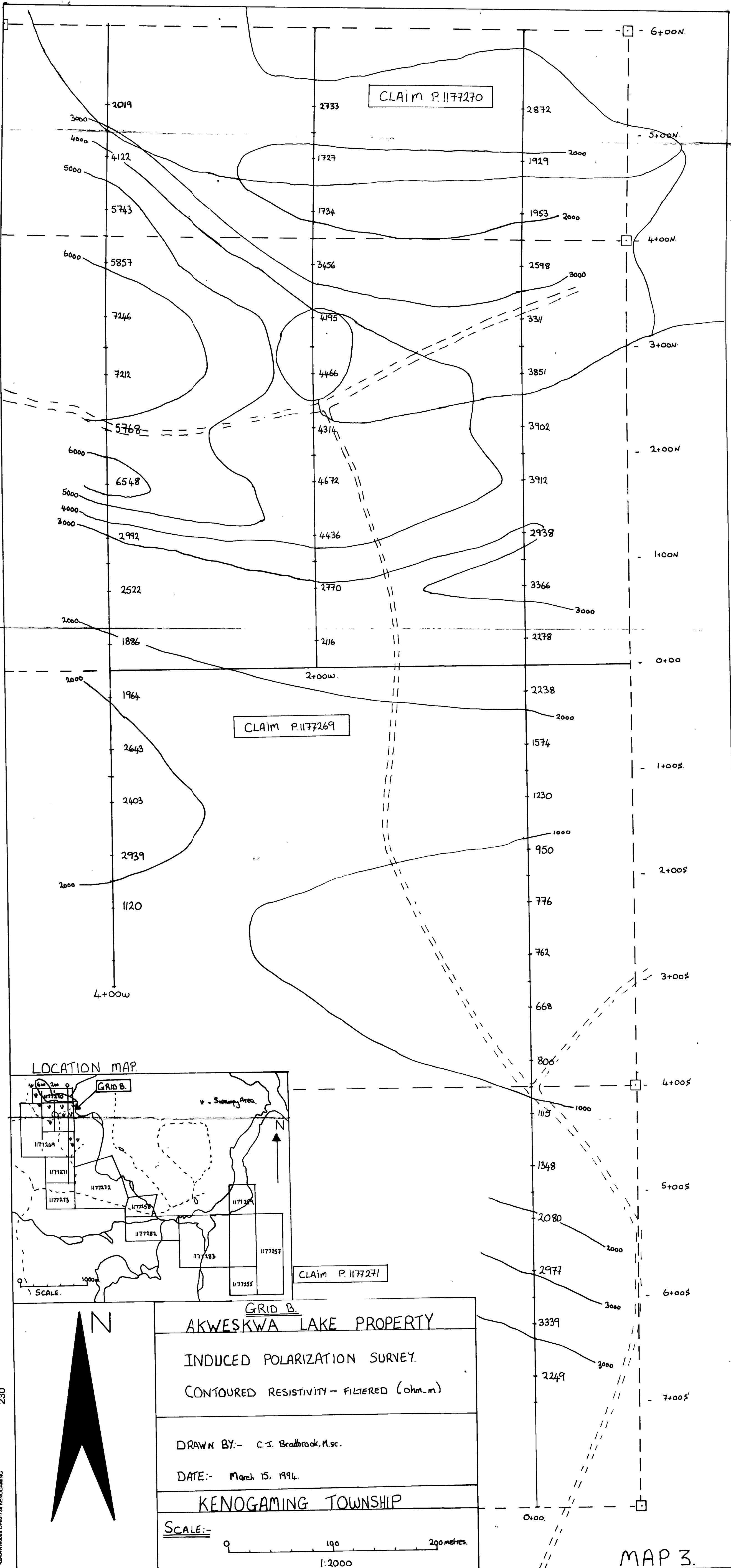
GRID A.
AKWESKWA LAKE PROPERTY
INDUCED POLARIZATION SURVEY
PLAN SHOWING ANOMALS

DRAWN BY:- C.S. Bradbrook M.Sc.
 DATE:- March 16, 1994
KENO GAMING TOWNSHIP

SCALE:-
 0 100 200 metres
 1:2000

MAP 2.

MAP 2.



CLAIM P. 1177270

CLAIM P. 1177269

CLAIM P. 1177271

LOCATION MAP

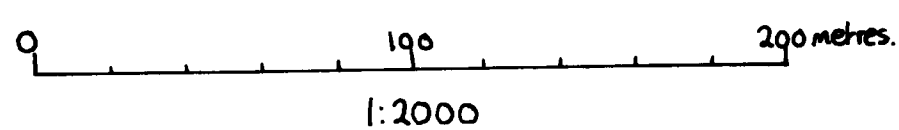
GRID B
 AKWESKWA LAKE PROPERTY
 INDUCED POLARIZATION SURVEY.
 CONTOURED RESISTIVITY - FILTERED (ohm.m)

DRAWN BY:- C.S. Bradbrook, M.Sc.

DATE:- March 15, 1994.

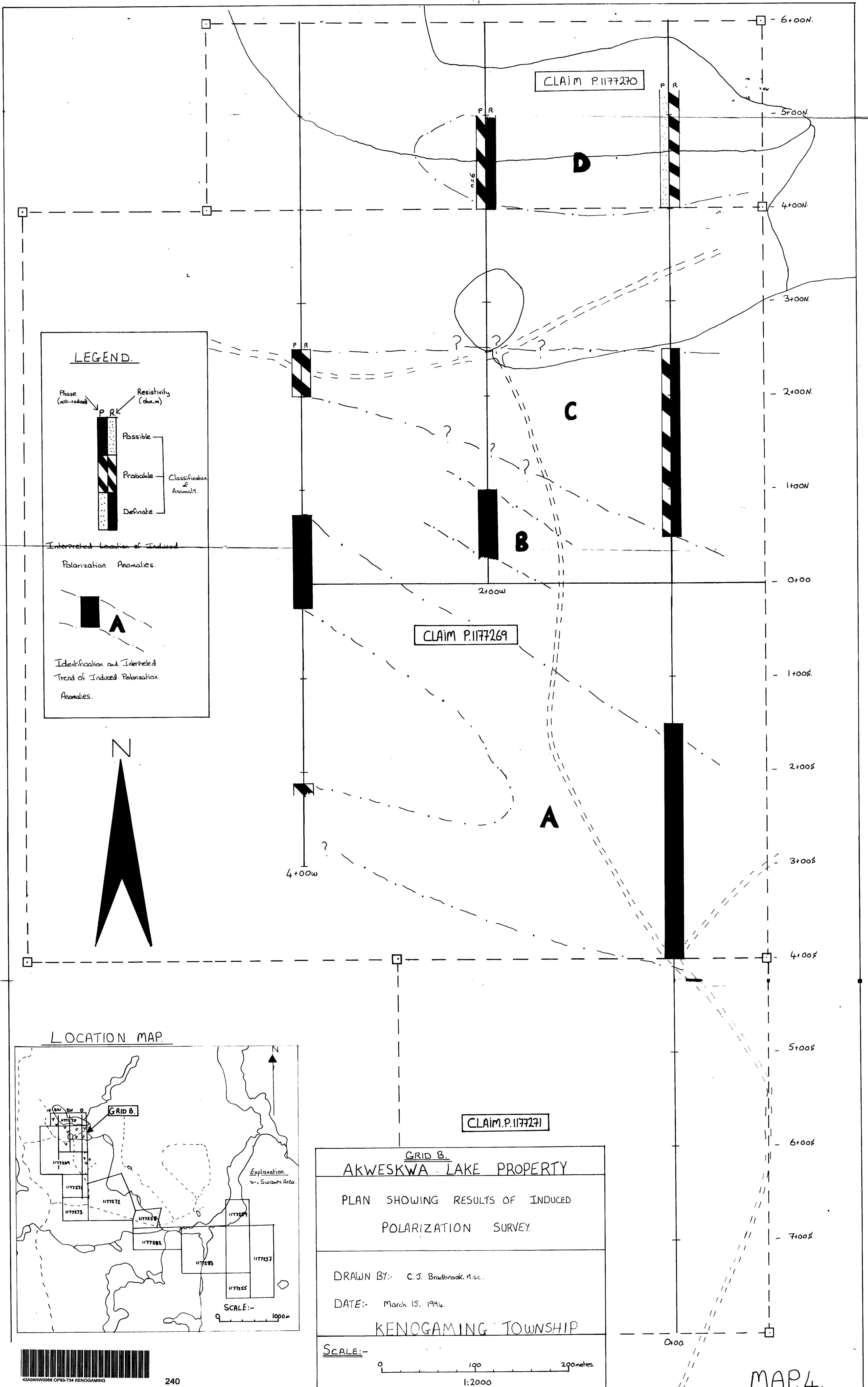
KENOGAMING TOWNSHIP

SCALE:-



MAP 3.





LEGEND.

Phase (milli-radians) Resistivity (ohm.m)

P R

Possible

Probable

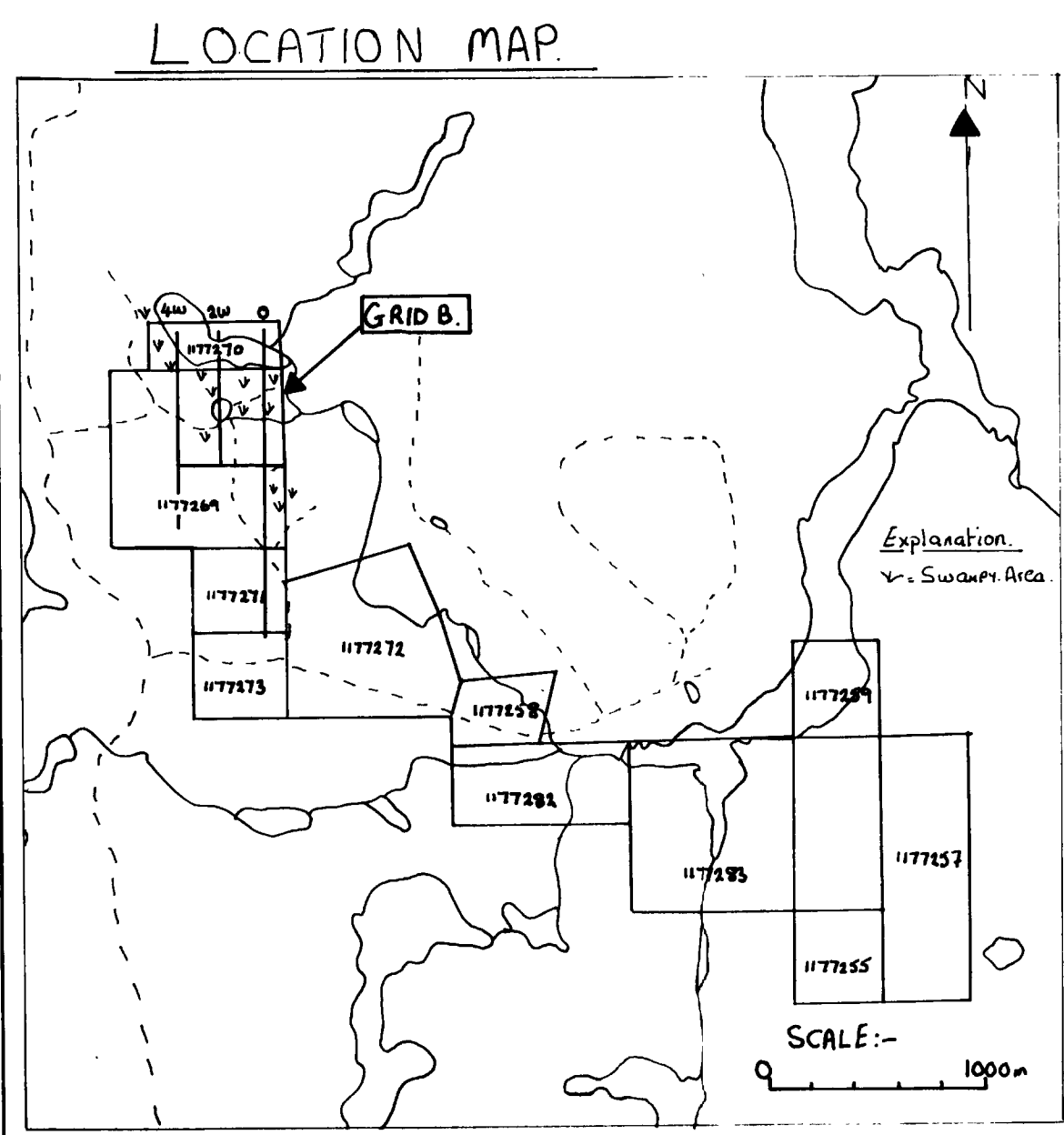
Definite

Classification of Anomaly

Interpreted Location of Induced Polarization Anomalies.

A

Identification and Interpreted Trend of Induced Polarization Anomalies.



CLAIM P.1177271

GRID B.

AKWESKWA LAKE PROPERTY

PLAN SHOWING RESULTS OF INDUCED POLARIZATION SURVEY.

DRAWN BY:- C.J. Bradbrook, n.s.c.

DATE:- March 15, 1994.

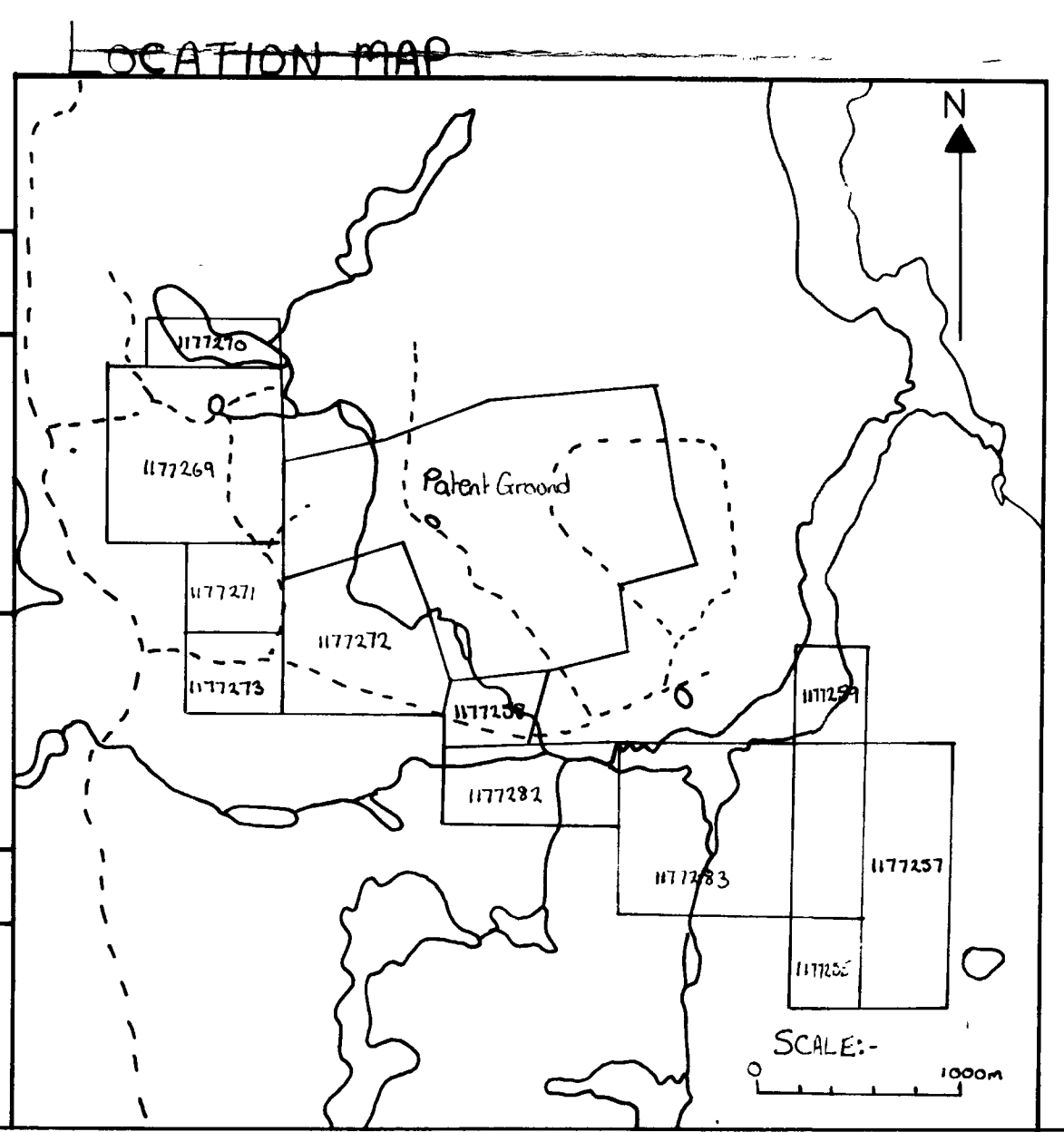
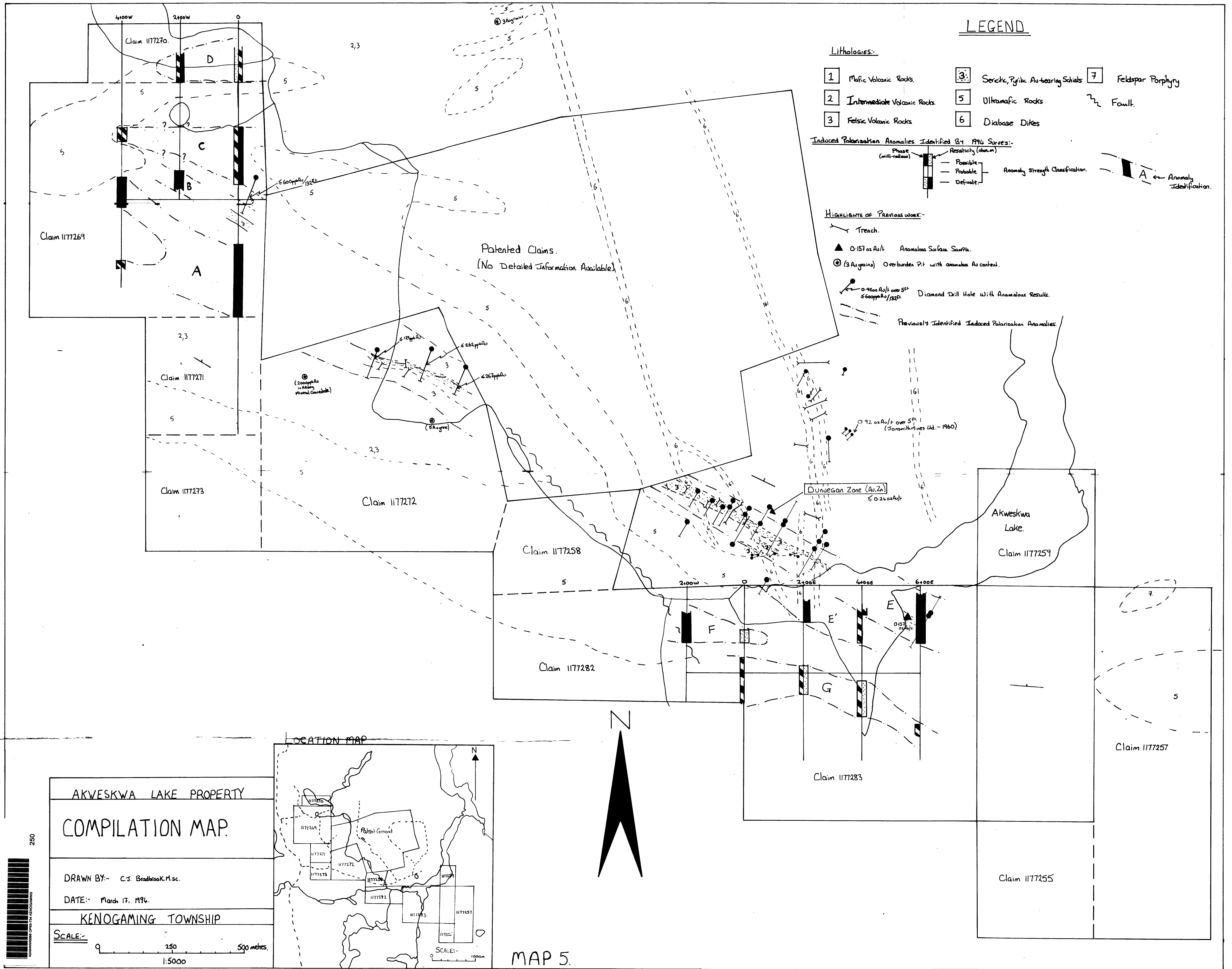
KENO GAMING TOWNSHIP

SCALE:-

0 100 200 metres.

1:2000





AKWESKWA LAKE PROPERTY

COMPILATION MAP.

DRAWN BY:- C.J. Bradbrook, M.Sc.

DATE:- March 17, 1974.

KENOGAMING TOWNSHIP

SCALE:- 1:5000