OPAP 1992 EXPLORATION PROGRAM
102 GROUP POWELL TWP.
LARDER LAKE MINING DIVISION
NTS41 P/15

OPAP 92 - 325
OPG 92 - 173

FRED KIERNICKI

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INTRODUCTION

In 1987 prospectors Fred Kiernicki and Mike Leahy staked 17 claims in the northwest corner of Powell Twp. after discovering a large carbonate zone. Samples returned assays as high as .6 oz. au. per ton.

Can-Mac Exploration optioned the ground in 1987 and did a stripping and sampling program on the carbonate zone. Can-Mac could not continue exploration for lack of funds and the property was returned to the prospectors.

Newmont Mining of Can. optioned the ground in Aug. of 1988 on the basis of a newly discovered showing with significant gold enrichment. Newmont staked an additional 85 claims surrounding the original 17 claims the prospectors had staked. Between December 1988 and January 1989, ground magnetic and detailed I.P. surveys were performed on the property. Additionally, seven diamond drill holes were completed totalling 1631.6 metres between Jan. and Feb. of 1989. The property of 102 claims was returned to the prospectors as Newmont ceased all exploration in Canada and returned to the United States.

In the fall of 1989 Fred Kiernicki discovered a highly oxidized outcrop in the eastern part of the claim group, on claim L981897. An OPAP grant was applied for in order to trench and sample the new showing. Sampling returned values of up to 700 ppm cu. 400 ppm Zn. and .5% nickle. This new showing is referred to in this report as the sulphide zone.

In 1974 Questor Surveys Limited performed a combined airborne electromagnetic (INPUT) and magnetic survey over the Matachewan area on behalf of the Ontario Division of Mines. Several INPUT conductors occur on the southeastern boundary of the Powell property and appear to be related to the volcanic - sedimentry contact.

The sulphide zone is on strike with these conductors and is about 1,200 feet from the nearest conductor. Regal Goldfields optioned 34 claims in 1990 that covered the sulfide zone and the several input conductors. A program of linecutting, geophysics, and diamond drilling was planned for the claim group. Regal did not follow up with an exploration program and the property was returned to the vendors.

In June of 1992, Fred Kiernicki started an exploration program which consisted of linecutting, geological mapping, prospecting and a horizontal loop E.M. survey. The purpose of this program was to establish the location and identify the airborne conductors on the grid.

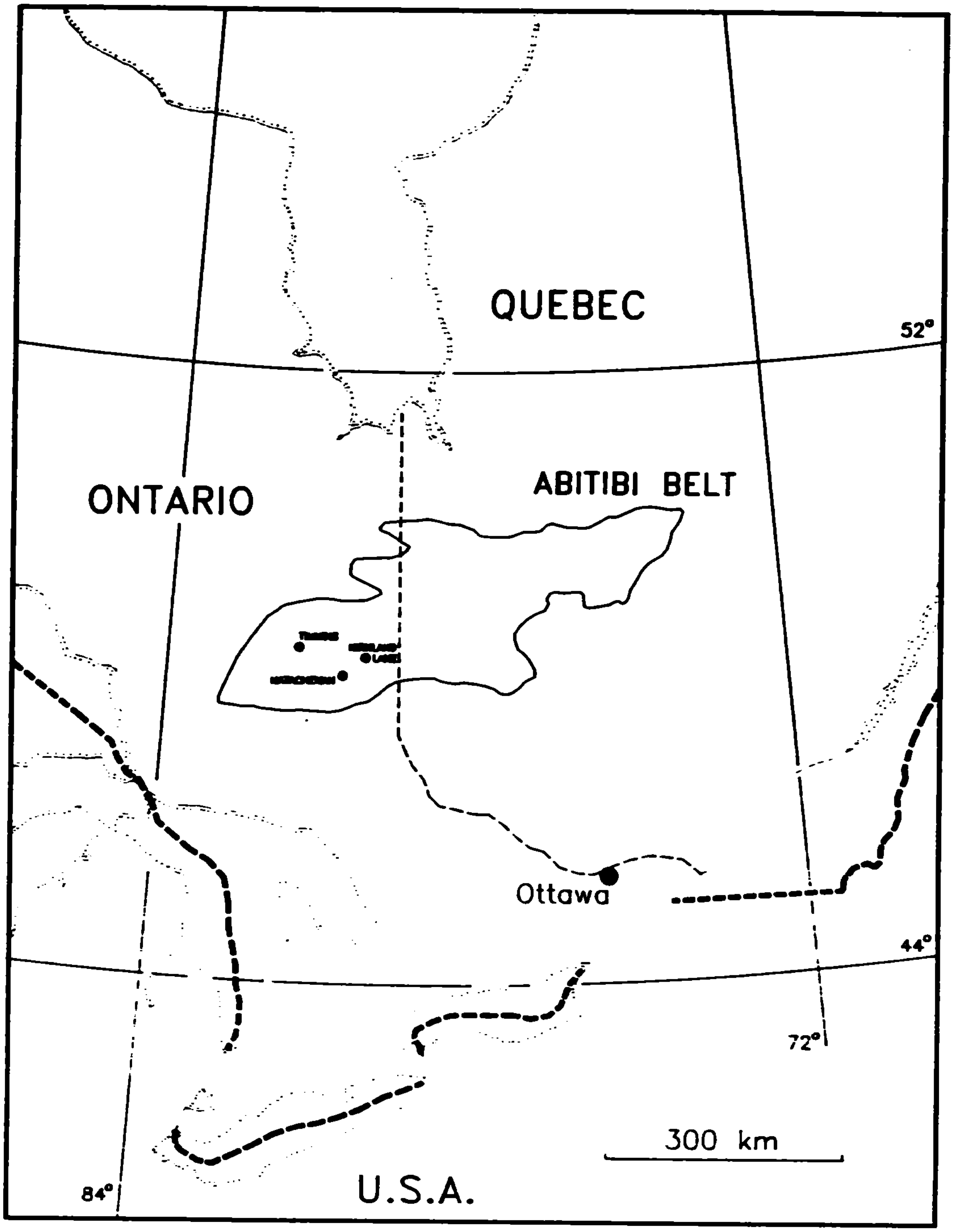
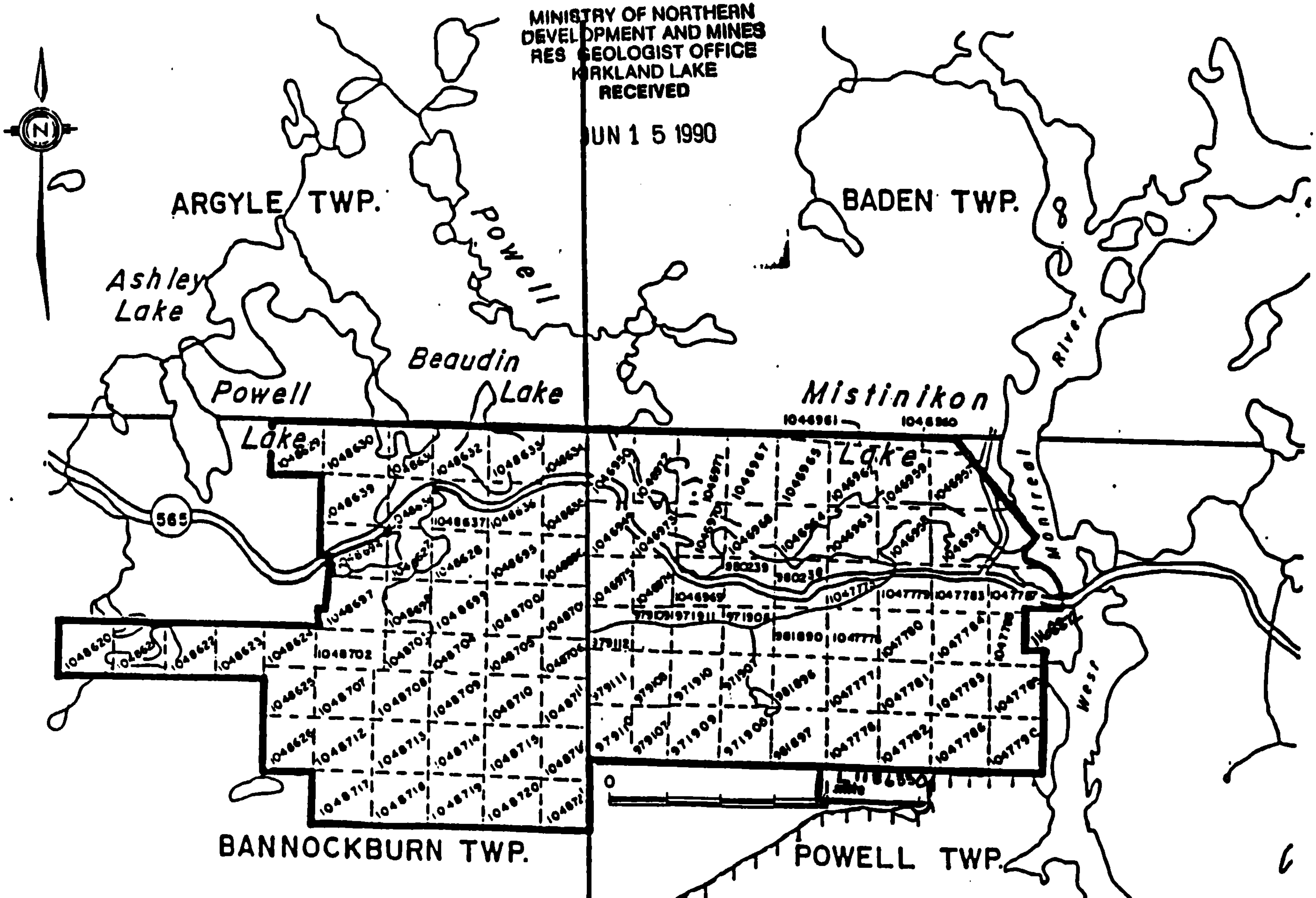


Figure 1: Map showing the location of Matachewan

LOCATION AND ACCESS

The Powell Twp. Input property is situated in the Matachewan area within the southwestern portion of the Abitibi greenstone belt; the property is approximately 70 kilometres to the southeast of Timmins and 55 kilometres to the southwest of Kirkland Lake. The property consists of 102 contiguous, unpatented claims which are located in the northeast and northwest corners of Bannockburn and Powell townships. The exploration program would be carried out on the southeastern part of the claim group, in Powell Twp.

Access to the property from Highway 11 is west via Highway 66 to Matachewan and then Highway 566, 6 miles on a all-weather gravel road which traverses the property. Direct access to the southern portion of the Powell property is via a bush road which ends at the sulfide zone.



POWELL PROPERTY

Figure 2: Claim map

REGIONAL GEOLOGY

Matachewan is located in an area with a complex structural and intrusive history. The gold camp is bounded by the Montreal River-Narrow Lake and Mistinikon Lake faults to the east and west respectively, and it is likely related to the western extension of the Kirkland Lake-Larder Lake break. In Powell township, tight folding appears to have repeated a succession of volcanic and Timiskaming-type sedimentary rocks along an east-west axis. This steeply dipping sequence is intruded by a large number of dikes, sills and stocks of felsic to intermediate composition. A swarm of later 'Matachewan' diabase dikes follow north-trending fracture zones. In the southern portion of Powell township and the majority of Bannockburn township the volcano-sedimentary sequence is unconformably overlain by flat-lying, Cobalt Group (Gowganda Formation), sedimentary rocks. Gold mineralization is related to quartz-carbonate vein systems which crosscut syenite, and carbonatized volcanic and sedimentary rocks (Lovell, 1967).

PREVIOUS WORK

PROPERTY

The Powell Input property has seen relatively minor previous exploration activity. Several unrecorded small trenches and stripped areas on the property also attest to a limited amount of work. Research of assessment files indicate the following exploration work that has been performed on the Powell Input property.

1. Carlton Explorations Ltd. (1973) geological mapping, trenching, minor V.L.F., diamond drilling (5 holes for a total of 349 metres; 108.8 metres maximum hole length). Alteration and shearing were reported in drill logs for several holes.

2. In 1974 Questor Surveys Limited performed a combined airborne electromagnetic (INPUT) and magnetic survey over the Matachewan area, including Powell twp.

3. Leahy - Kiernicki 1990 - stripping, sampling and minor trenching. This work exposed a new zone with disseminated sulphides and anomalous zinc, copper and nickle values.

PROPERTY GEOLOGY

This area consists of the eastern portion of the 102 claim group. The Montreal River is the east boundary and the area known as the sulphide zone would be the west boundary, claim number L981897.

Geological mapping by Carlton Explorations (1973), showed the claim group to be largely underlain by basic volcanic flows with some associated fragmentals. A few scattered areas of rhyolite flows were also observed on the claims group. The extreme south part of the property is underlain by argillaceous sediments but the contact between the volcanic and sedimentry formations is completely obscured by overburden. A few small masses of seyenite were mapped in the extreme east part of the claim group.

A considerable amount of east-west to slightly north of east striking schistosity and shearing was noted throughout the claims group. This shearing and schistosity was often noted to be accompanied by strong carbonate alteration, chloritization, silicification and narrow seams of disseminations of sulphide mineralization consisting largely of pyrite and pyrrhotite with minor amounts of chalcopyrite.

The stripping done by Kiernicki - Leahy on claim L981897 consists of a massive sulphide lens in the basalts that straddle the seyenite intrusive contact. Trenching across the sulphide zone could not reveal a true width as the sulphide zone plunged, the overburden deepened and water filled the trench.

Linecutting

A total of 18.3 km of picket lines were cut and chained over a group of 11 claims that are in the southeast corner of the 102 group in Powell Twp. All grid lines run North to South. Tie-line 10S of Newmont Canada 1988 grid was used as the baseline. Picket lines are 100M apart with 25M. stations.The new grid consists of mining claims L981896, L981897, L104777, L104778, L1047781, L1047782, L1047785, L1047786, L1047783, L1047790 and L1186330.

Geological Mapping

During the summer of 1992, a geological mapping program was conducted over the southeast portion of the 102 group in Powell Twp. by Mike Leahy and Fred Kiernicki. The claims covered included L981896, L981897, L1186330, L1047789, L1047790, L1047786, L1047785, L1047781, L1047782, L1047777 and L1047778. The total area covered was about 320 acres. Four main litholigical units were mapped and are listed by age.

Sedimentary

Package including argillite, a narrow mafic dyke, and grey wacke (skead group equivalents) along the north boundary.

Mafic Ultramafic

Flow package including ultramafic komatrites, tholeitic basalts with minor interflow sediments and a narrow intermediate dike overlying skead group sediments.

Mafic

To intermediate flow package including andesite, dacite, dacitic agglomerate with minor ryholitic and porphyritic units overlying the mafic ultramafic package.

Seyenitic Intrusives

Including part of a large stock in the southwest corner of the map area and a dike n the west shore of Mistinikon Lake which is the east boundary of the claim group.

General

The area mapped covers the south rim of a large synclinal structure which is several miles wide. Most of the rocks strike east-west and dip steeply to the north. Whole rock analysis indicates compositions varying from ultramafic komatrites to tholietic basalts to intermediate calc-alkalic flows. Minor deformation and shearing occur along flow contacts and one major N-S fault is interpreted along L1900 east. The movement along this fault appears to follow the regional pattern of west side south displacement.

Spread Group Sediments

These are the oldest rocks in the map area, and consist of brown to black banded argillite, siltstone and grey wacke. Texture varies from fine to medium grained with weak foliation that is occasionally mineralized with fine pyrite.

Mafic Ultramafic Flows

This package along the south boundary of the map area is about 200 meters wide and runs from Mistinikon Lake, west to the N-S fault on L1900E. It consists of intercalated komatiites and tholeites with many original textures preserved. Polygonal jointing and spinifex textures are common in the ultramafics, while variolitic textures and small pillows are evident in the mafics. Numerous minor shears and faults mostly parallel to stratigraphy, cross the map area. Alteration varies from weak to intense and includes zones of talc-chlorite schist apple green carbonate, and sericite. Fracturing is evident in some areas with fine qtz, qtz carbonate and ankerite stringers filling the fractures. Narrow zones of graphitic argillite, pyrite, and marcasite appear between some flows. Some weak apple green carbonate alteration typical of the Kirkland Lake-Larder Lake Break, occurs in small patches within the ultramafic units which are also contored in places. This package lies completely within Claim L1186330.

Mafic to Intermediate Flows

This package occupies most of the map area lying to the north and west of the mafic to ultramafic package. The composition of this group of rocks varies from tholeitic to calc-alkalic. Rocks are mostly andesite to dacite with some basalt, agglomerate, rhyolite and phorphyritic sections. Strong foliation, deformation and carbonization are prevalent with strong silicification occurring west of the N- fault at L1900E near the contact of the seyenite stock. A strong zone of carbonate and sericite alteration occurs between L2000E and L2200E at about 700 south. Only weak pyrite mineralization was observed as fine disseminations in foliated rocks. The contact between these rocks and the underlying ultramafics follows an area of low wet ground and is assumed to be strongly sheared.

Intrusives

Part of a large seryenite stock intruding the volcanics covers the southwest corner of the map area. The stock is fine to medium grained consisting mostly of dark red feldspar with minor ferromagnesium minerals, magnetite and specularite. The stock appears as a magnetic high on regional geophysical maps. A narrow mafic seyenite dike intrudes the intermediate volcanics near the west shore of Mistinikon Lake. It is composed of dark red fine grained feldspar and minor ferromagnesium minerals including fine biotite. A small narrow diabase or lamprophyre dike intrudes the sediments along the south boundary. It is black, fine grained and contains some fine biotite.

Conclusions

The rock types identified during the mapping program makes this an excellent area to further explore for gold. The ultramafic to mafic contacts have produced many successful gold mines in the Timmins camp, the Noranda-Freewest project in Harker-Holloway camp and the Kerr-Addison Mine in Virginiatown, Ontario. The results of Horizontal Loop EM survey were successful in confirming airborne conductors and locating them on the grid.

Recommendations

All the known EM anomalie should first be prospected. If outcrop is sparse, trenching across the anomalies with a backhoe would be the next phase. If bedrock is exposed washing with a pressure pump, mapping and sampling would follow.

If overburden is too deep, diamond drilling is recommended to identify the cause of these anomalies on the Powell property.

Based on geology and geophysical results, further exploration on the Powell group is recommended.

Fred Kiernicki

Fred Kiernicki

Appendix iv

POWELL TOWNSHIP

SAMPLE DESCRIPTIONS, 1992

MAP NO.	SAMPLE NO.	LOCATION	DESCRIPTION	ASSAY Au PPB or WRA
1	17601	2475E @ TL10S	Basalt, black, fine-grained, 2 - 4% py	33
2	17602	2600E @ TL10S	Argillite, fine-grained, black, graphitic	3
3	17603	2600E + 890S	Ultramafic Komatiite, black, fine-grained, rusty carbonate	3
4	17604	2600E + 895S	Ultramafic Komatiite, black, fine-grained, lacy QV, carbonate, trace pyrite	7
5	17605	2600E + 916S	Basalt, black, f-g, narrow QV, tr py	10
6	17606	2600E + 942S	Cherty, graphitic, black, vf-g flow? tr py	10
7	17607	2600E + 952S	Dike - gray, vf-g, aplite? tr py	3
8	17608	2600E + 968S	Basalt, black, f-g, carbonate, tr py	10
9	17609	2600E + 978S	Ultramafic Komatiite, gray-green, sericite and quartz	7
10	17610	2600E + 990S	Ultramafic Komatiite, 6-8% qtz threads & veins, carbonatized	3
11	17611	2600E + 1004S	Ultramafic, Komatiite, gray-green, QV, py	3
12	17612	2400E + 800S	Dacite, gray, f-g, foliated, carbonate, tr py	NA
13	17613	2400E + 365S	Dike? pink feldspar porphyry - green matrix	NA
14	17614	2200E + 700S	Dacite, gray-green, f-g, foliated, highly carbonatized	7
15	17615	1500E @ TL10S	Basalt, black, vf-g, silicified, sericite	NA
16	17616	2000E + 650S	Dacite, brown-creamy, sericite, highly carbonatized, QV	3
17	17617	2250E @ TL10S	Ankerite float - gray, vf-g, thick rust rind, tr py	3
18	17618	2600E + 1117S	Argillite, gray-brown, vf-g, banded, tr py	NA

POWELL TOWNSHIP
SAMPLE DESCRIPTIONS, 1992

MAP NO.	SAMPLE NO.	LOCATION	DESCRIPTION	ASSAY Au PPB or WRA
19	17619	2600E + 1135S	Dike - black, f-g, mica, carbonatized	NA
20	17620	2700E + 1041S	Basalt - Komatiite, very rusty shear zone, 10% py	NA
21	17621	2700E + 952S	Basalt - Komatiite, very rusty shear zone, 10% py	NA
22	17622	2450E + 1000S	Argillite, black, rusty, graphitic shear zone, py	NA
23	17623	2275E + 1020S	Ankerite float, gray, vf-g, thick rust rind, tr py	NA
24	77241	2800E + 1065S	Basaltic Komatiite, dark green-gray, med. f-g, spinifex texture - (altered - See Jensen plots)	WRA
25	77242	2600E + 1040S	Ultramafic Komatiite, black, f-g, some ankerite seams, calcite, chlorite and talc	WRA
26	77243	3400E + 1150S	Ultramafic Komatiite, black, f-g, polygonal jointing, chlorite and talc	WRA
27	77244	3000E + 425S	Calc-alkalic Dacite, light gray-green, f-g, highly carbonatized, foliated	WRA
28	77245	3100E + 450S	Calc-alkalic Dacite, light gray-green, f-g, carbonatized, foliated	WRA
29	77246	2900E + 1115S	Basalt - iron tholeite, gray-green, f-g, foliated, weak carbonatization	WRA
30	77247	2900E + 375S	Calc-alkalic Rhyolite, light gray-green, f-g, sericitized, fractured, small slightly rusty vugs	WRA
31	77248	3400E + 900S	Basalt - Calc-alkalic, dark gray, f-g	WRA
32	77249	3150E + 1080S	Basaltic Komatiite, black, f-g, chlorite and talc, spinifex texture	WRA
33	77250	2700E + 950S	Ultramafic Komatiite, black, f-g, some ankerite, calcite seams, chlorite and talc - altered.	WRA

POWELL TOWNSHIP
SAMPLE DESCRIPTIONS, 1992

MAP NO.	SAMPLE NO.	LOCATION	DESCRIPTION	ASSAY Au PPB or WRA
34	D-233	1000S + 2600E	Basalt - iron tholeite, dark gray-green, f-g, foliated	NA
35	D-229	1090S + 3100E	Ultramafic Komatiite, dark gray, f-g, ankerite, rust	NA
36		975S + 2900E	Basalt - iron tholeite, black, f-g, foliated, rust, tr py	NA
37	D-218	1050S + 2700E	Basalt, f-g, foliated, carbonate stringers	NA
38	D-219	1000S + 2600E	Basalt - highly altered, green, f-g, ultramafic	17
39	D-220	970S + 2700E	Ultramafic Komatiite, highly altered, gray-green, foliated, carbonatized, talc	NA
40	D-221	975S + 2700E	Basalt, black, f-g, carbonatized, chlorite	NA
41	D-222	955S + 2700E	Basalt, f-g, foliated	NA
42	D-223	500S + 2700E	Basalt, black, f-g, carbonatized, fragmental, 1% py	NA
43	D-224	975S + 2700E	Basalt, black, f-g, carbonatized, chlorite, variolitic	NA
44	D-226	725S + 3400E	Mafic Syenite, dark brick-red, mica, calcite stringers	NA
45	D-230	1000S + 3400E	Ultramafic Komatiite, gray, f-g, ankerite, chlorite	NA
46	D-234	1135S + 2800E	Argillite, gray-brown, banded	NA
47		975S + 2900E	Graphitic schist - highly foliated, black, argillite?	NA
48		522S + 2900E	Dacite, calc-alkalic, light gray-green, f-g, foliated, highly carbonatized	NA
49		1080S + 2900E	Basalt - Komatiite, black, f-g, altered, rust, carbonatized	NA

REPORT ON A
HORIZONTAL LOOP EM SURVEY
PART OF THE 102 PROPERTY
POWELL TOWNSHIP ONTARIO
NTS 41 P/15

J.WHELAN
August 1992

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Introduction:

During August of 1992 a Horizontal Loop Electromagnetic survey was conducted over 10 unpatented mining claims located in the northwest quarter of Powell Township, Larder Lake mining division. Funding for the survey was provided by Mr. Fred Kiernicki's 1992 OPAP grant.

Property, Location and Access.

The 10 claims covered by the survey form part of a block of 102 contiguous unpatented 16 hectare mining claims held by Fred Kiernicki and Michael Leahy of Kirkland Lake Ont.

The claims are located in the northwest quarter of Powell township approximately 15 km northwest of Matachewan, 70 km southeast of Timmins and 55 km southwest of Kirkland Lake.

Access to the property can be gained via highway 566 west from Matachewan. (Figures 1 & 2)

Topography:

Topographic relief on the property is generally gentle to moderate with rolling outcrop and drift covered hills. Areas of steep local relief with slopes in excess of 60% are and elevation changes of 20 - 25 meters are found in the north east and north central portions of the property. The valleys between these east-west trending topographic features are predominantly swampy with spruce or tagalder vegetation. Previous drilling on or near the property and field observations indicate that overburden cover is relatively thin and would probably not exceed 20 meters. Outcrop exposure is in the 10-15% range.

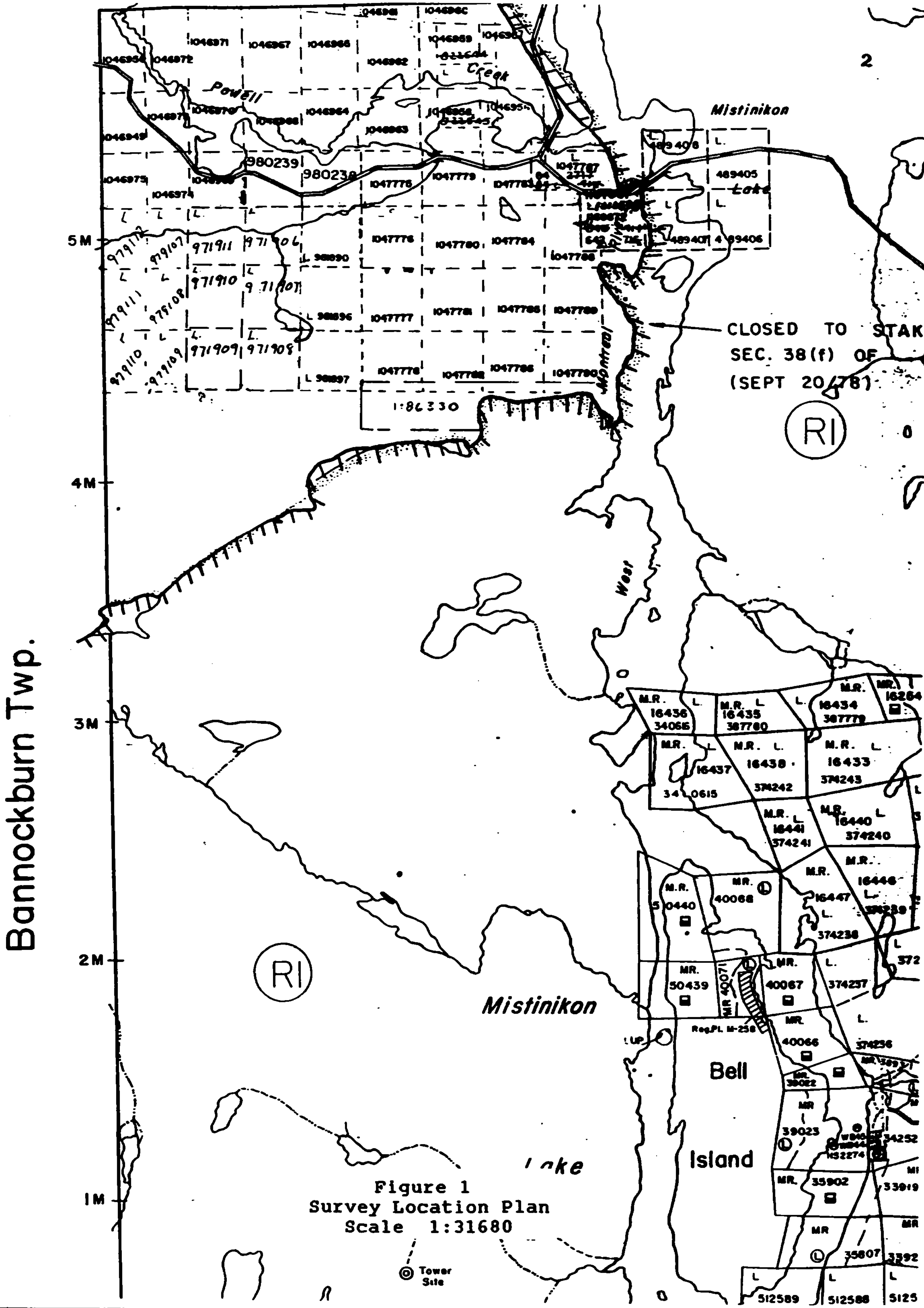


Figure 1
Survey Location Plan
Scale 1:31680

Topography cont.

Water for drilling and outcrop washing is available from Mistinikon Lake (west branch of the Montreal River) near the east boundary,an east flowing small creek which forms the south east boundary,wet swamps in the central portion,and a small lake near the west boundary.

Geology:

Available geologic data indicates the property is primarily underlain by north dipping, east-west trending intermediate to mafic volcanic flows with a narrow wedge of sedimentary rocks (greywacke,argillite) located near the south east corner. In the southwest portion of the property these rocks have been intruded by a magnetic syenite stock.

Previous Work

Regional:

Prospecting has been carried out in the Matachewan area since the discovery of silver near Elk Lake in the 1906. However it was not until 1916 and the gold Discovery of Jake Davidson in Powell township that any real interest was shown in the area. The following is a list of past producers in the Matachewan area.

Young Davidson Mine (past producer)

Located in southeastern Powell township,produced from 1934-57 6,128,272 tons mined from syenite porphyry stock open pit and underground. production: 585,690 ounces Au, 131,939 ounces Ag.

Ryan Lake Mine (past producer)

Located in central Powell twp. in production 1948-57, 1962-64 184,790 tons milled from ore bodies related to shear zones production: 1,352 ounces Au, 36,141 ounces Ag, 4,995,745 pounds Cu, 11,393 pounds Mo

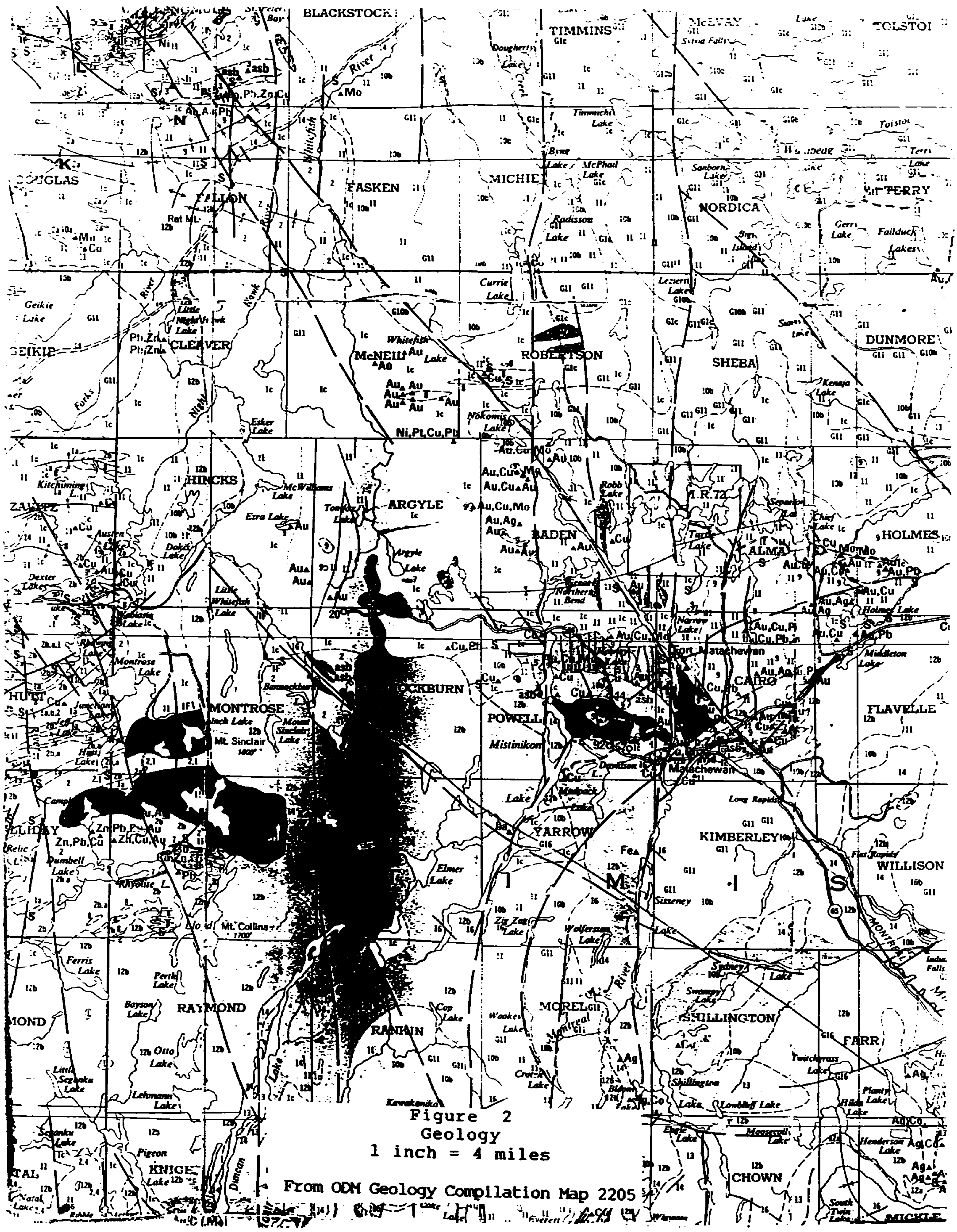


Figure 2
Geology
1 inch = 4 miles

From ODM Geology Compilation Map 2205

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
5175 Timberlea Blvd., Mississauga,
Ontario, Canada L4W 2S3
PHONE: 416-624-2806

To: NORANDA EXPLORATION
P.O. BOX 1205
TIMMINS, ONTARIO
P4N 7J5

Project : 100
Comments: ATTN: JOHN WAKEFORD

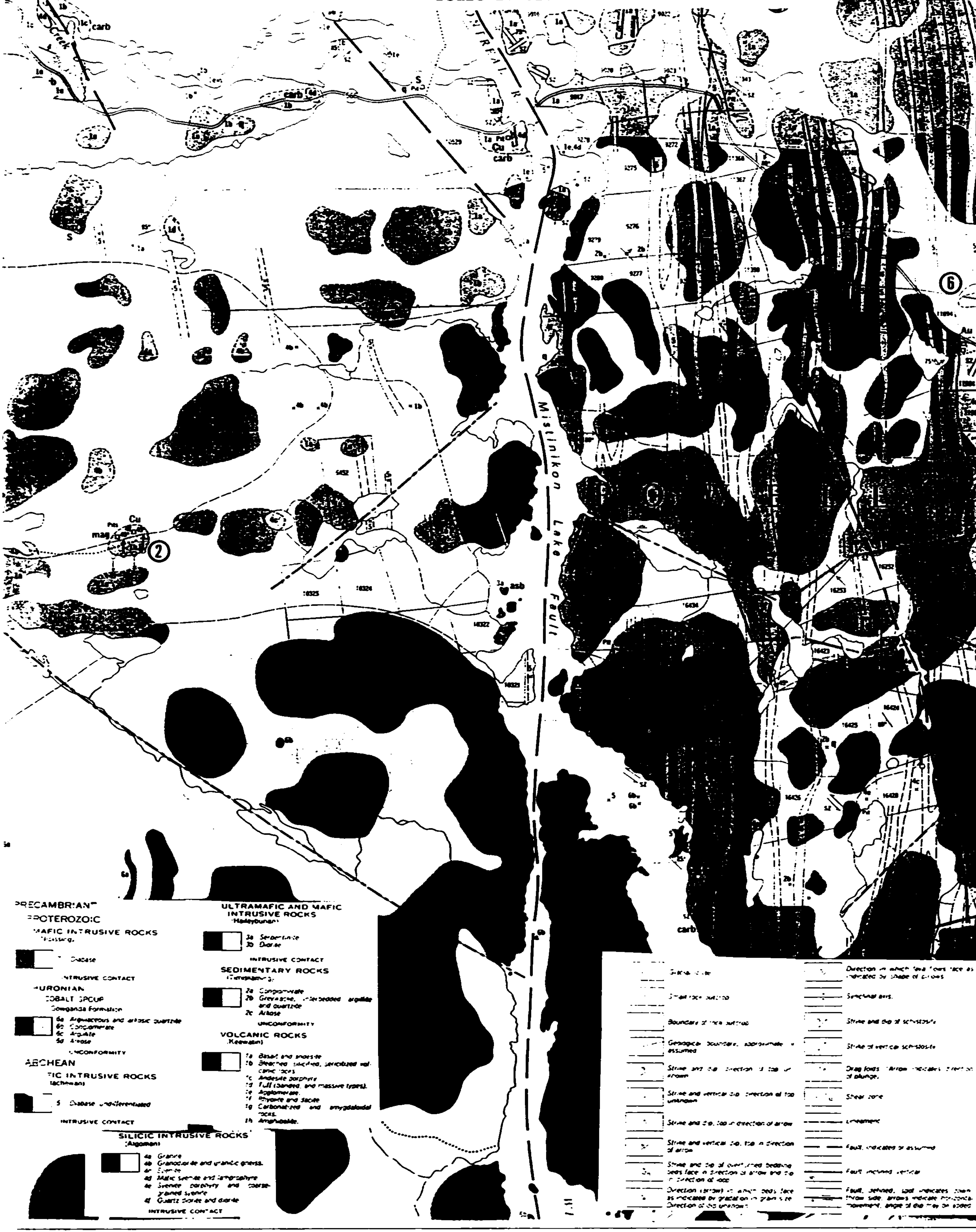
Page Number :1
Total Pages :1
Certificate Date: 20-AUG
Invoice No. :I92192
P.O. Number :
Account :DHG

CERTIFICATE OF ANALYSIS A9219244

SAMPLE	PREP CODE		Al2O3 %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	Ba ppm	Nb ppm	Rb ppm	Sr ppm	Y ppm	Zr ppm
77241	200	274	9.67	4.27	0.44	14.26	0.34	3.55	0.54	1.15	< 0.01	54.37	0.44	8.84	97.57	50	< 10	9	60	< 10	20
77242	200	274	3.09	4.66	0.18	7.35	0.03	28.40	0.10	0.02	< 0.01	35.80	0.17	17.90	97.71	< 10	< 10	< 5	40	< 10	10
77243	200	274	4.07	6.72	0.37	8.40	0.01	27.80	0.10	< 0.01	< 0.01	34.17	0.18	16.53	98.37	< 10	< 10	< 5	40	< 10	10
77244	200	274	13.46	0.11	< 0.01	3.24	2.43	1.92	0.11	3.03	0.03	68.40	0.28	6.66	100.65	370	< 10	59	100	< 10	90
77245	200	274	16.12	3.33	< 0.01	2.83	2.65	2.01	0.05	2.93	0.04	65.57	0.32	4.77	100.65	280	< 10	70	130	< 10	90
77246	200	274	9.75	2.45	0.40	8.12	1.54	3.59	0.20	0.29	< 0.01	66.91	0.47	5.01	98.74	420	< 10	56	20	< 10	20
77247	200	274	15.00	2.74	< 0.01	2.26	3.34	0.70	0.06	3.25	0.08	69.55	0.39	4.05	101.30	520	< 10	81	90	< 10	100
77248	200	274	14.18	5.04	< 0.01	10.35	0.80	4.59	0.15	2.67	0.03	50.57	0.85	8.14	98.17	250	< 10	11	160	20	50
77249	200	274	7.76	14.70	0.28	10.86	0.34	8.10	0.30	0.60	< 0.01	38.70	0.40	15.95	97.78	50	< 10	8	150	10	20
77250	200	274	12.95	1.94	0.62	21.10	0.05	5.52	0.38	1.50	< 0.02	47.94	0.66	6.74	100.40	60	< 10	< 5	60	50	10

CERTIFICATION:________________

Figure 3 (From ODM Geology Map 2110 Powell and Cairo Twp.)
Scale 1: 31680



Previous work cont.

Matachewan Consolidated Mine (past producer)

Located in south eastern Powell twp. 2 types of ore quartz stringers adjacent to fractured lavas and tuffs mineralized with pyrite and gold and fractured mineralized porphyry similar to the Young Davidson. in production from 1934-54 3,525,200 tons milled producing 370,427 ounces Au 133,710 ounces Ag.

Ashley Mine (past producer)

Located in southwestern Argyle and northwestern Bannockburn townships. Gold mineralization occurred in quartz veins In production 1932-36 157,636 tons milled 50,123 ounces Au 7,644 ounces Ag

Mattarow Mine (past producer)

Located in north central Yarrow township near the east shore of Mistinikon Lake. galena and sphalerite occur as stringers and lenses as well as in carbonate veins in Keewatin iron formation 39,804 tons of ore mined 1952-53 ore treated in Young Davidson mill produced 2,460,210 pounds Pb, 916,707 pounds Zn and 4,853 ounces Ag

Extender Minerals (present producer)

Extender Minerals operates a Barite mine in the north west quarter of Yarrow Township on the west shore of Mistinikon Lake.

Property:

Work conducted to date on or near the area covered by the survey includes the following.

Carlton Explorations Ltd. (1973)

Linecutting mapping and VLF-EM surveys over 15 claims including the survey area, 5 diamond drill holes totalling 1147 feet, shearing silicification,quartz veining,carbonate alteration, and narrow sulphide zones reported in drilling but no economic gold or base metal values.

Kiernicki Leahy (1987 to date)

Stripping,trenching and sampling, samples from a trench west of the survey area have returned assays up 22.6 grams per tonne

Newmont Exploration of Canada Ltd .(1989)

Linecutting and magnetic survey over 102 claims including the survey area. Induced polarization survey and diamond drilling (7 holes 1631.6 metres) west of survey area, weakly anomalous to anomalous gold values are reported in several zones encountered in drill holes.

Survey procedure:

Prior to the electromagnetic survey all lines were surveyed with a hand held inclinometer and the mean slopes and chainage corrections between transmitter and receiver stations were calculated to insure proper coil geometry.

The electromagnetic survey was conducted using an Apex MAXMIN II system in the Horizontal Loop mode and at a coil seperation of 100 metres. 2 Frequencies 444 and 1777 kHz were routinely read at 25 metre intervals on lines cut at 100 meter intervals. Line 2500,2600 and 2700 east were also surveyed at a 50 meter coil seperation

The grid used for the survey was originally established by Newmont in 1988 and refurbished this year.

Survey results are presented as profiles of inphase and out of phase data.

Survey results

As indicated on the accompanying maps the most prominent feature defined by the profiled data is a weak to moderate east trending linear zone extending from 2400 to 2800 east. This anomalous zone is strongest on line 2500,2600 and 2700 east.

The profile pattern of lines 2500 and 2600E suggest the presence of two separate anomaly sources roughly 75 - 100 metres apart particulary at the 50 meter coil seperation. The northern anomaly (anomaly B) being in wet terrain at the bottom of a gentle downslope, the southern anomaly (anomaly A) is located on the slope. The drift cover on the slope as revealed by uprooted trees is generally less than 1 meter in depth.

A weak response roughly on the same trend as anomaly "A" is noted

Survey results cont.

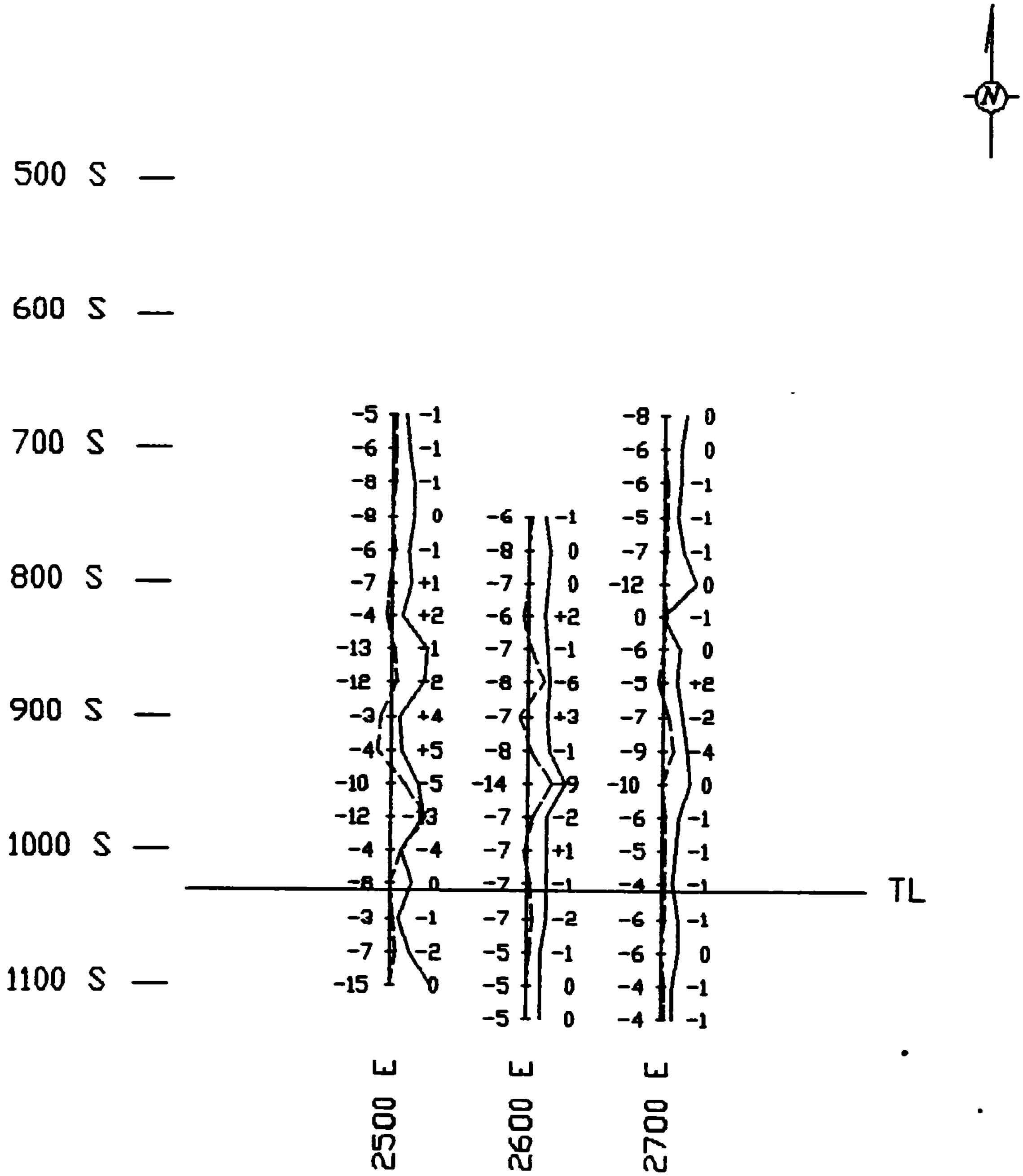
on lines 2100 and 2200 E

Responses at both the 50 and 100 meter coil seperation were stronger at 1777 Khz.

Conclusions and Recommendations

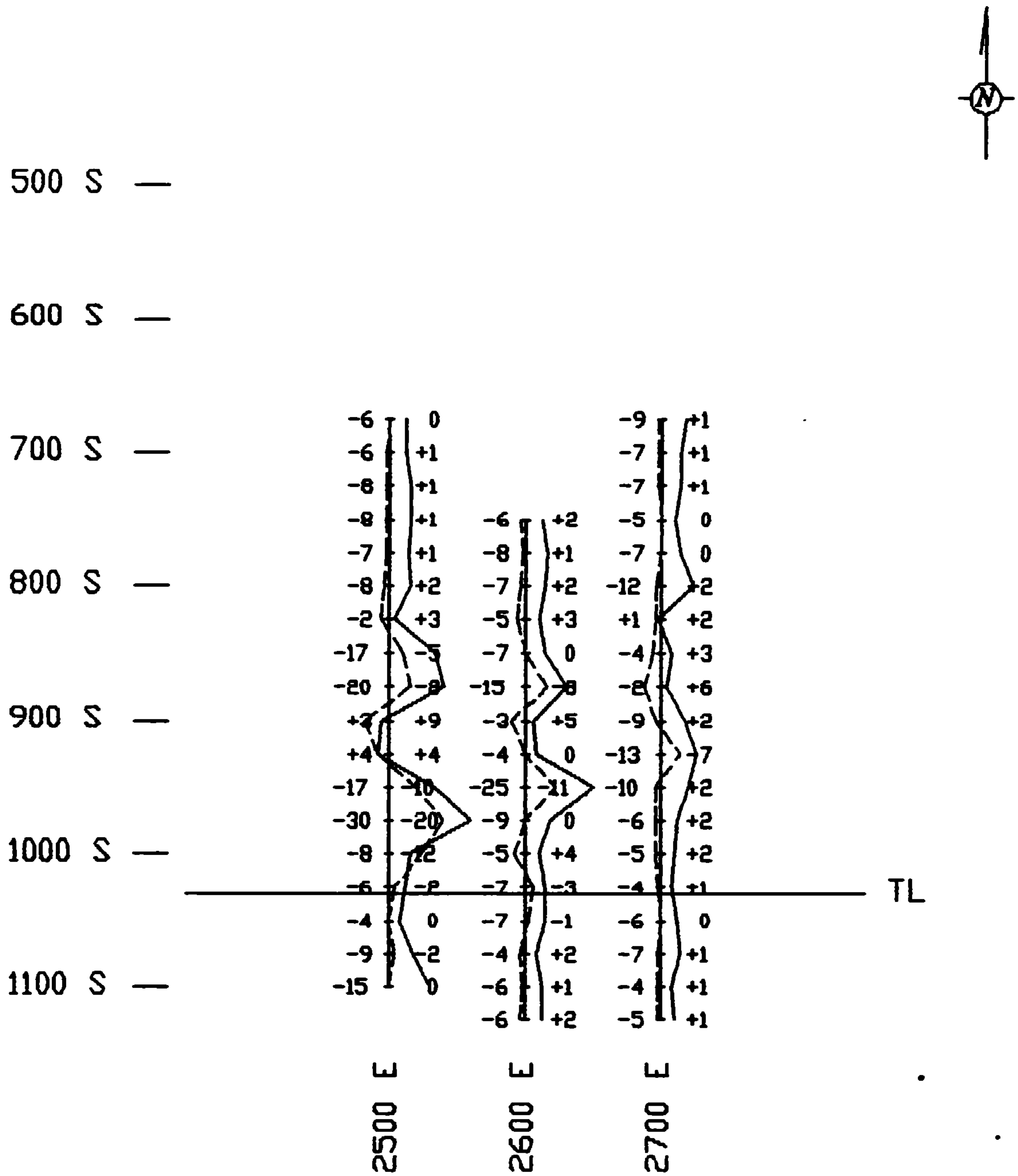
Anomaly "A" is in an area of thin overburden cover and as such is almost certainly a bedrock response. Anomaly "B" is is located in wetter low ground near the edge of a hill and may be caused by shearing along a geologic contact. Although not excessively strong these two anomalies may define shear zones which could contain gold mineralization and should be further investigated.

As the drift cover over anomaly "A" is thin the most cost efective way to determine the source would be power stripping using a back hoe, an attempt should also be made to strip anomaly "B" if the overburden thickness permits. Weaker anomalies indicated on the accompanying maps should be prospected.



HLEM SURVEY 50 m COIL SEPERATION
444 kHz

SCALE 1:5000
VERTICAL SCALE 1 cm = 25 %



HLEM SURVEY 50 m COIL SEPERATION

1777 kHz

SCALE 1:5000

VERTICAL SCALE 1 cm = 25 %

FIGURE 6A

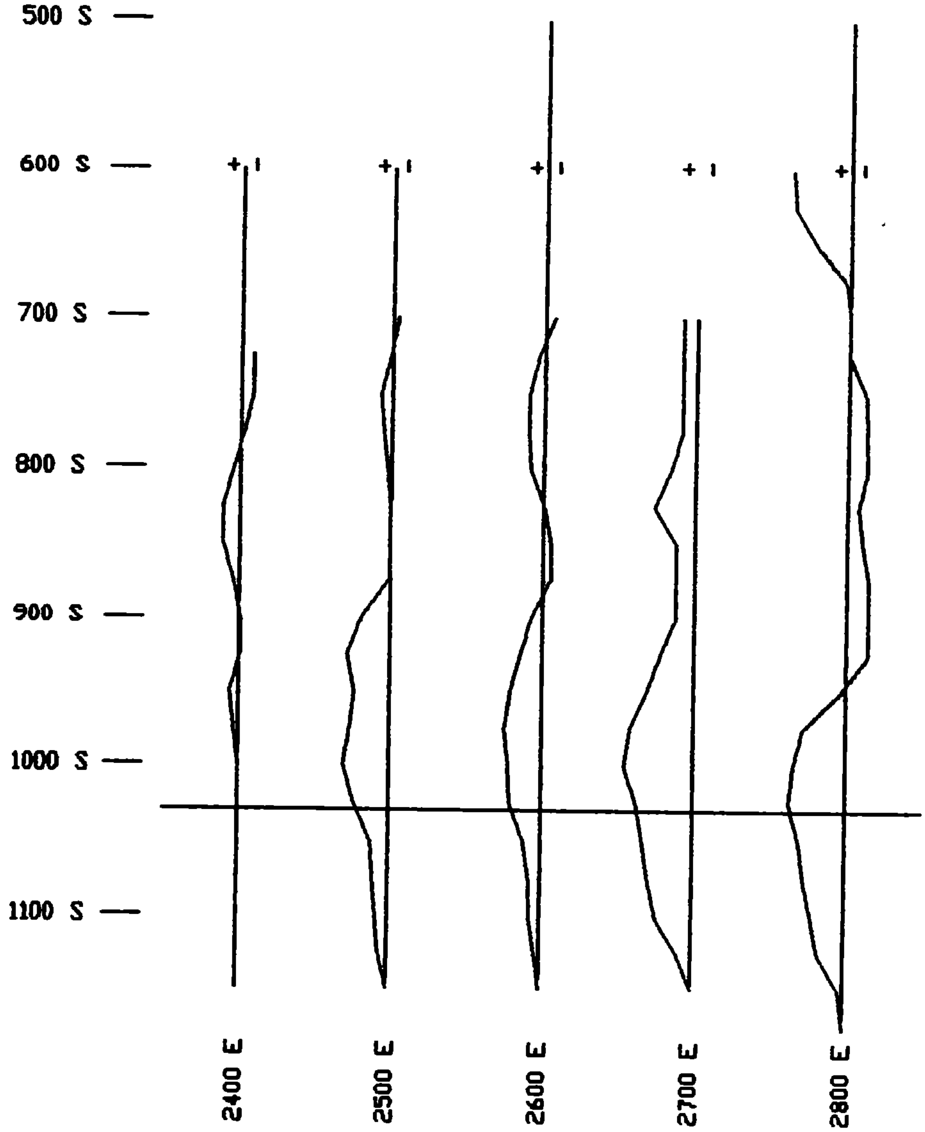


FIGURE 4 TOPOGRAPHIC PROFILES MAIN ANOMALY AREA
VERTICAL SCALE EXAGERRATED 1cm = 25 metres
SCALE: 1:5000

References

Shlanka R. 1969
Copper, Nickel, Lead and Zinc Deposits of Ontario; Ontario Department of Mines Mineral Resources Circular 12 reprint 1989

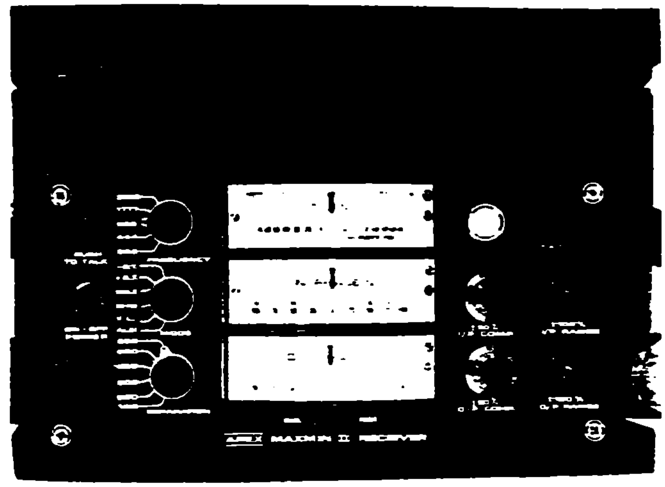
Gordon J.B., Lovell H.L., de Grijs Jan, and Davie R.F. 1979
Gold Deposits of Ontario Part 2 Ontario Geological Survey Mineral Deposits Circular 18

Lovell H.L. 1964
Ontario Department Of Mines Geologic Map 2110 Powell and Cairo Townships scale 1" = 1/2 mile

Dyer W.S 1935
Ontario Department of Mines Annual Report Vol. XLIV part II Geology and Ore Deposits of the Matachewan-Kenogami Area pages 1-55

ODM 1975
Airborne Electromagnetic and Total Intensity Magnetic Survey Powell Township, by Questor Surveys Ltd. Map 1022 scale: 1" = 1/4 mile

Unpublished assessment work reports available in Kirkland Lake resident Geologists Office



SPECIFICATIONS :

Frequencies: 222, 444, 888, 1777 and 3555 Hz.

Modes of Operation:
MAX: Transmitter coil plane and receiver coil plane horizontal (Max-coupled; Horizontal-loop mode). Used with refer. cable.
MIN: Transmitter coil plane horizontal and receiver coil plane vertical (Min-coupled mode). Used with reference cable.
V.L. : Transmitter coil plane vertical and receiver coil plane horizontal (Vertical-loop mode). Used without reference cable, in parallel lines.

Coil Separations: 25, 50, 100, 150, 200 & 250m (MMII) or 100, 200, 300, 400, 600 and 800 ft. (MMIIF).
Coil separations in V.L. mode not restricted to fixed values.

Parameters Read:
- In-Phase and Quadrature components of the secondary field in MAX and MIN modes.
- Tilt-angle of the total field in V.L. mode.

Readouts:
- Automatic, direct readout on 90mm (3.5") edgewise meters in MAX and MIN modes. No nulling or compensation necessary.
- Tilt angle and null in 90mm edgewise meters in V.L. mode.

Scale Ranges:
In-Phase: ±20%, ±100% by push-button switch.
Quadrature: ±20%, ±100% by push-button switch.
Tilt: ±75% slope
Null (V.L.): Sensitivity adjustable by separation switch.

NOW ALSO ±4% QUADRATURE FULL SCALE.

Readability: In-Phase and Quadrature: 0.25 % to 0.5 % ; Tilt: 1 %.

Repeatability: ±0.25 % to ±1 % normally, depending on conditions, frequencies and coil separation used.

Transmitter Output:
- 222 Hz : 220 Atm^2
- 444 Hz : 200 Atm^2
- 888 Hz : 120 Atm^2
- 1777 Hz : 60 Atm^2
- 3555 Hz : 30 Atm^2

Receiver Batteries: 9V trans. radio type batteries (4). Life: approx. 35 hrs. continuous duty (alkaline, 0.5 Ah), less in cold weather.

Transmitter Batteries: 12V 6 Ah Gel-type rechargeable battery. (Charger supplied).

Reference Cable: Light weight 2-conductor teflon cable for minimum friction. Unshielded. All reference cables optional at extra cost. Please specify.

Voice Link: Built-in intercom system for voice communication between receiver and transmitter operators in MAX and MIN modes, via reference cable.

Indicator Lights: Built-in signal and reference warning lights to indicate erroneous readings.

Temperature Range: -40°C to +60°C (-40°F to +140°F).

Receiver Weight: 6kg (13 lbs.)

Transmitter Weight: 13kg (29 lbs.)

Shipping Weight: Typically 60kg (135 lbs.), depending on quantities of reference cable and batteries included. Shipped in two field/shipping cases.

Specifications subject to change without notification

APEX PARAMETRICS LIMITED
BOX 818, R.R. NO. 1, UXBRIDGE, ONTARIO, CANADA L0C 1K0

Phone: (416) 640-6102 / 852-5875 Cables: APEXPARA TORONTO Telex: 06-966625 APEXPARA UXB

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
R.1	NRW 65/83	Nov 18/83	S+M	

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.

SAND and GRAVEL

M T C GRAVEL PIT SF 4 FILE 15565

NOTES

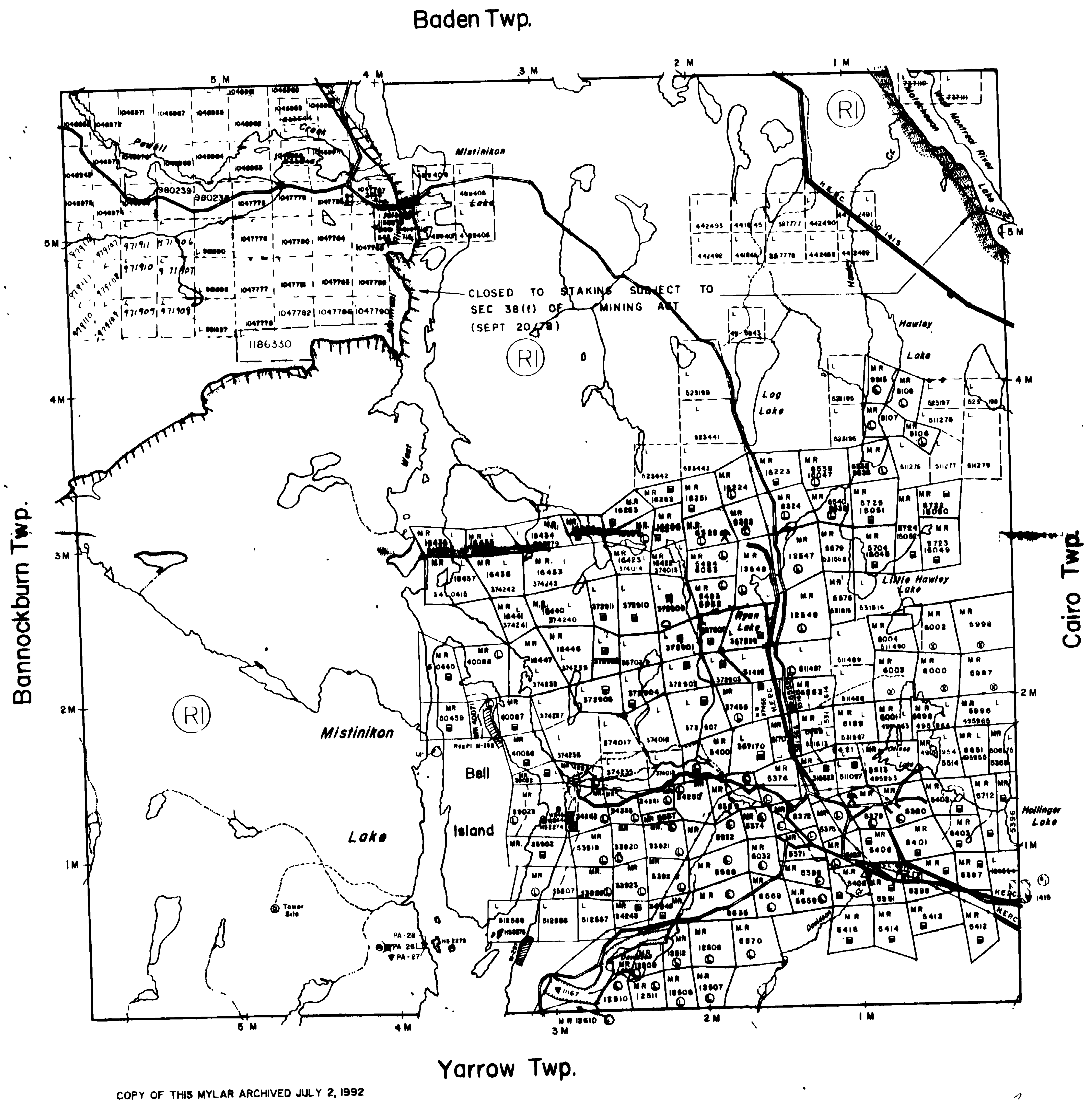
L O 7801 COVERS FLOODING RIGHTS IN THIS TWP TO CONTOUR 870' TO ONT HYDRO FILE 12290 VOL 2

CL 4071 PENDING APPLICATION UNDER PUBLIC LANDS ACT

"THIS MAP SHOWS THE APPROXIMATE LOCATION OF THE BOUNDARIES OF THE AREA WHICH IS THE SUBJECT OF CURRENT

42A02SE0030 OP92-326 POWELL

200



COPY OF THIS MYLAR ARCHIVED JULY 2, 1992

PLAN UPDATED NOV 30\90

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	
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	OC
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

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP

POWELL

M.N.R. ADMINISTRATIVE DISTRICT

KIRKLAND LAKE

MINING DIVISION

LARDER LAKE

LAND TITLES / REGISTRY DIVISION

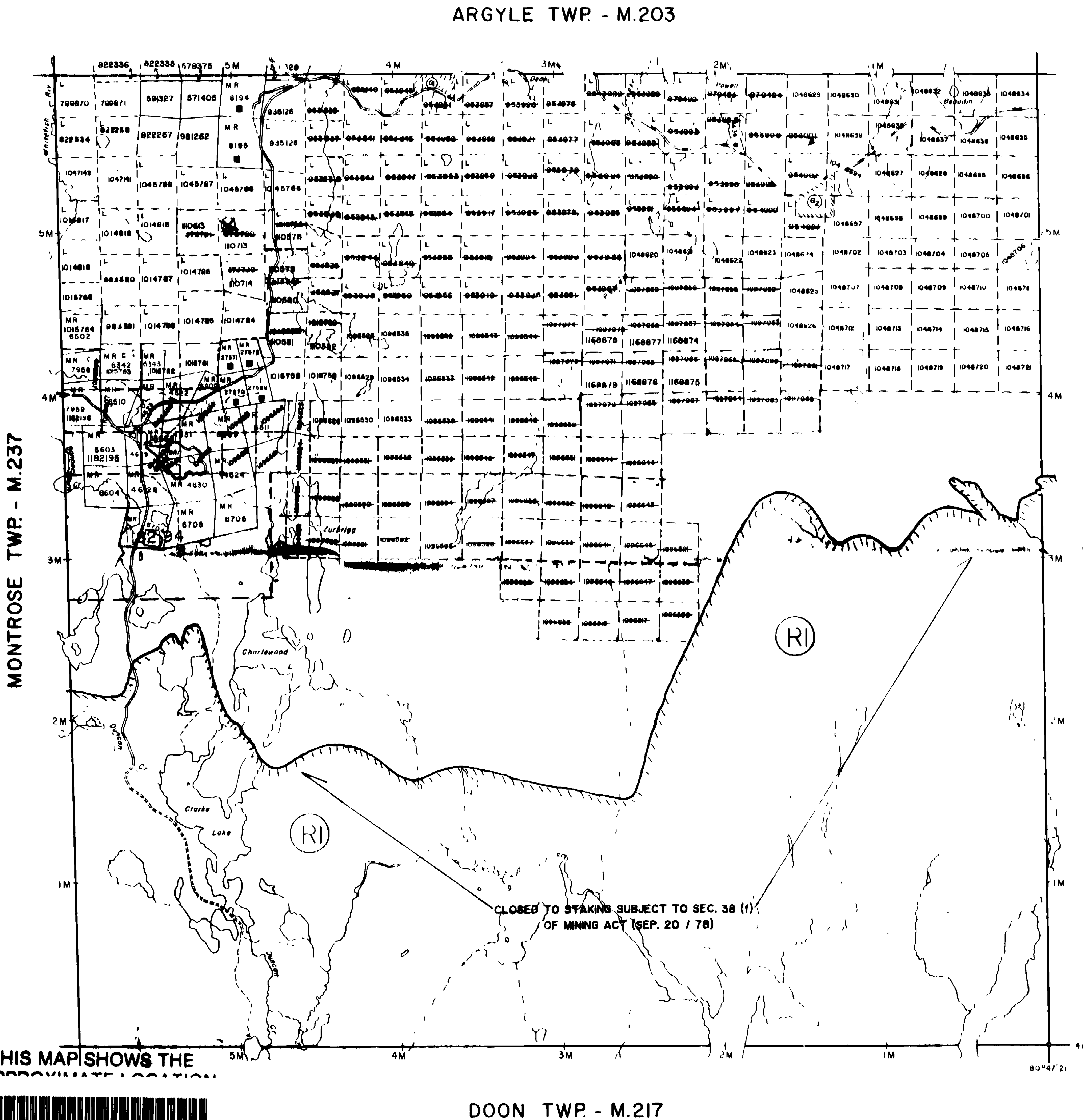
TIMISKAMING

Ministry of Natural Resources — Land Management Branch

Ontario

Date FEBRUARY, 1985

Number G-3218



"THIS MAP SHOWS THE
APPROXIMATE LOCATION
LITIGATION. THE EXACT

42A02SE0030 OP92-326 POWELL

210

DATE RECEIVED FEB 8/89

THE TOWNSHIP
OF

BANNOCKBURN

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH - 40 CHAINS

DISPOSITION OF CROWN LANDS

PATENT, SURFACE AND MINING RIGHTS
" , SURFACE RIGHTS ONLY
" , MINING RIGHTS ONLY
LEASE, SURFACE AND MINING RIGHTS
" , SURFACE RIGHTS ONLY
" , MINING RIGHTS ONLY
LICENCE OF OCCUPATION

ROADS
IMPROVED ROADS
KING'S HIGHWAYS
RAILWAYS
POWER LINES
MARSH OR MUSKEG
MINES
CANCELLED C

NOTES

400' surface rights reservation along the shores of all lakes and rivers

SAND AND GRAVEL

(G1) MTC GRAVEL PIT 3F-25

(G2) MTC GRAVEL PIT 1374

(R1) SURFACE AND MINING RIGHTS WITHDRAWN FROM STAKING, SECTION 36/80 ORDER NO W65/83

(R2) SURFACE AND MINING RIGHTS WITHDRAWN FROM STAKING, ~~SECTION 36/80 ORDER NO~~ W25/85

O L9/89NR OPENS

NOTICE OF FORESTRY ACTIVITY

THIS TOWNSHIP/AREA FALLS WITHIN THE ELK LAKE MANAGEMENT UNIT AND MAY BE SUBJECT TO FORESTRY OPERATIONS. THE MNR UNIT FORESTER FOR THIS AREA CAN BE CONTACTED AT PO BOX 129 SWASTIKA, ONT P0K 1T0 705642-3222

PLAN NO. M.207

MINISTRY OF
NORTHERN DEVELOPMENT
AND MINES

IMATION THAT
ON THIS MAP
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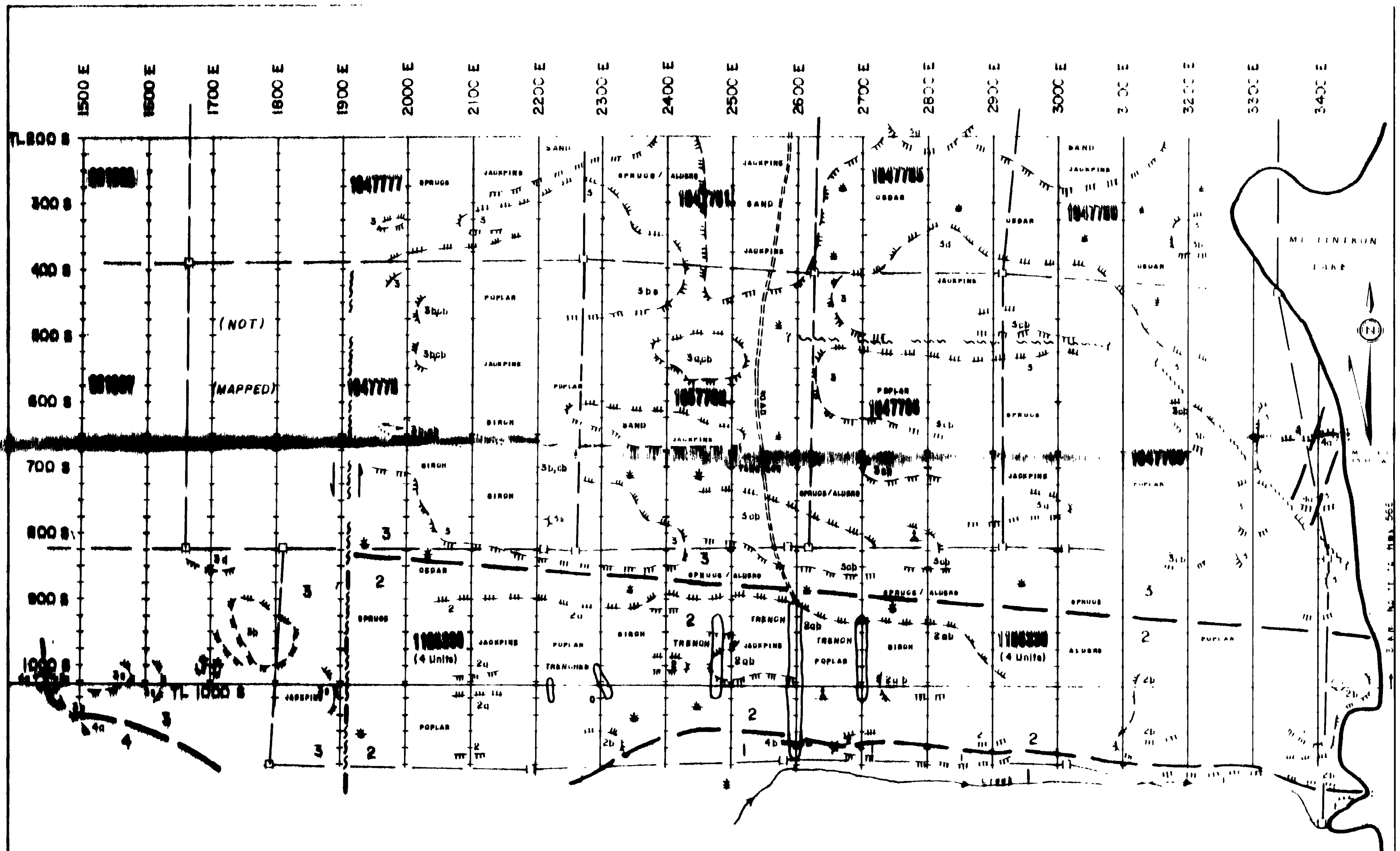
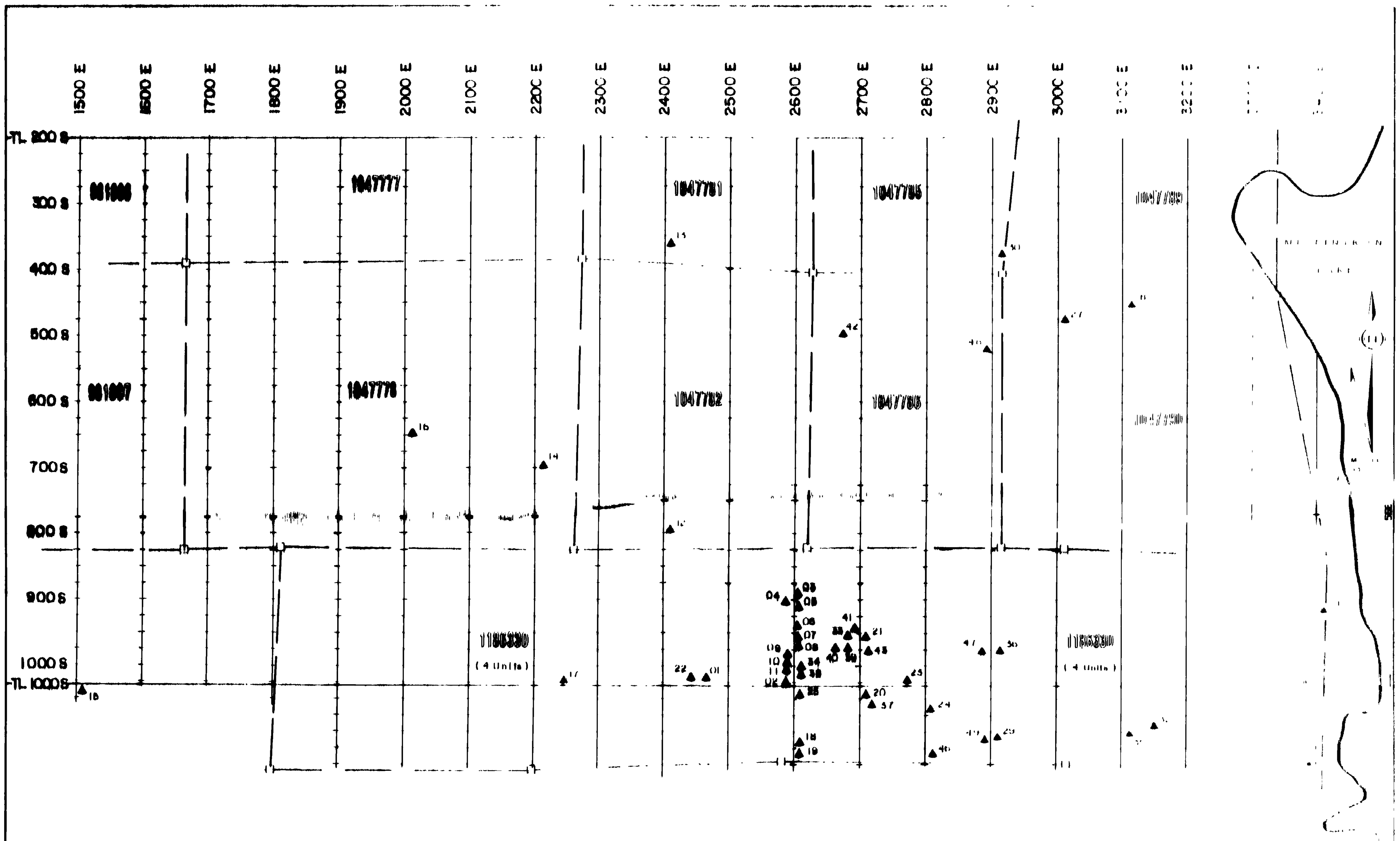
WN HEREON

220

42A02SE0030 OP92-325 POWELL



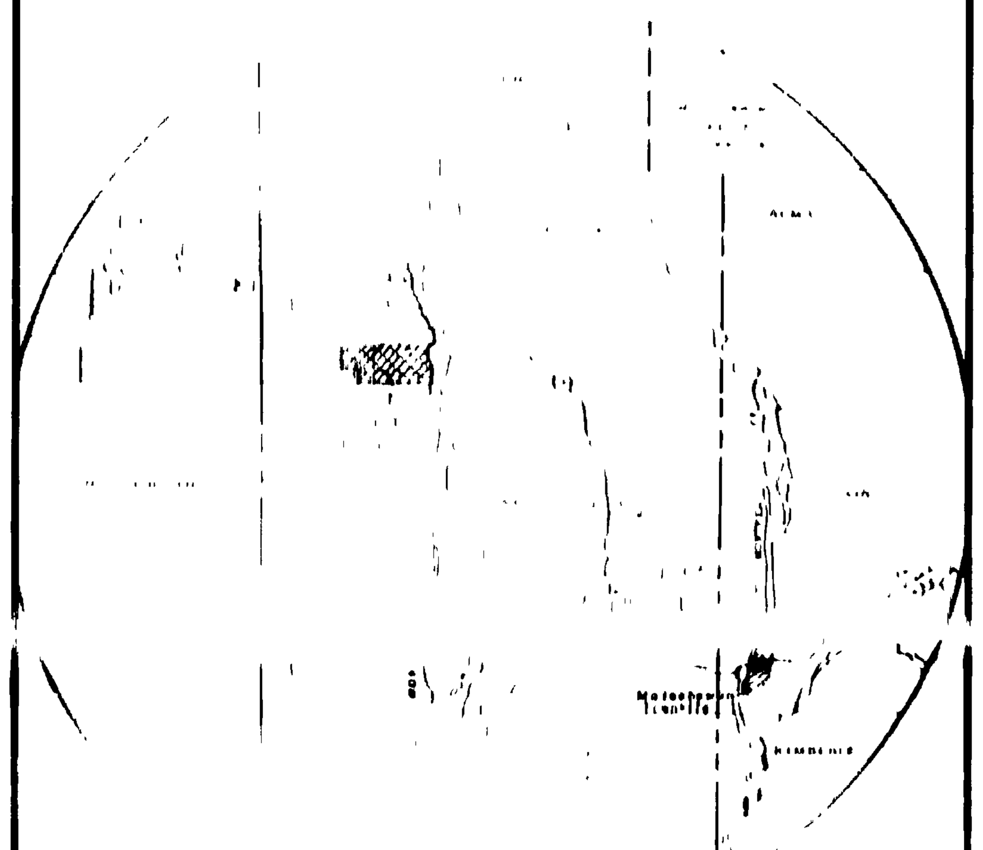
GEOLOGY PLAN



SAMPLE LOCATION PLAN

LEGEND

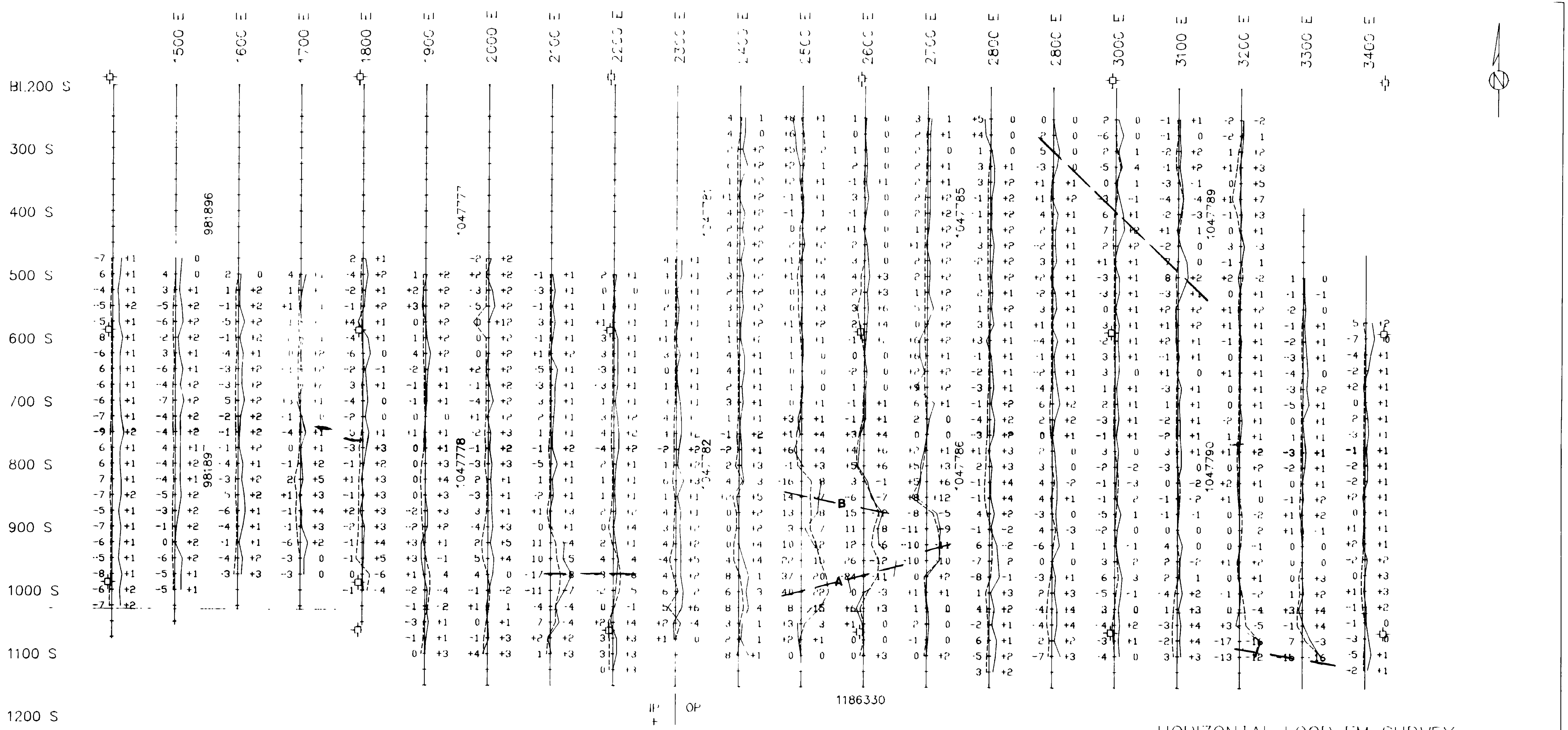
1	ARGILLITE
2	MAFIC FLOWS
2a	Tholeiites
2b	Komatiites
3	MAFIC to INTERMEDIATE FLOWS
3a	Agglomerate
3b	Dacite
3c	Andesite
4	INTRUSIVES
4a	Syenite
4b	Mafic Dikes
— — —	Geological contact
	Fault, shear
	Pillow
	Sample Number and Location



KERNICKEL CLAIMS

GEOLOGY PLAN

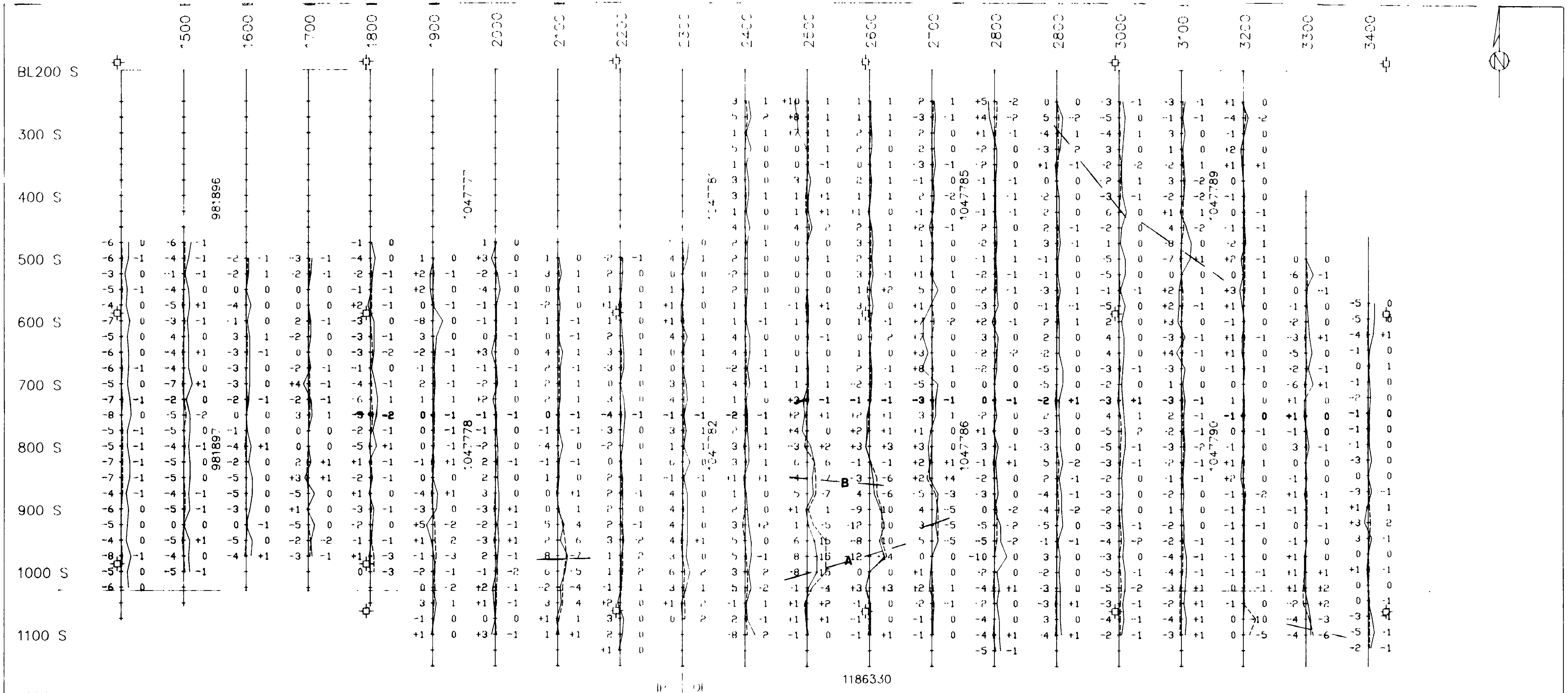
LOCATION PLAN



LEGEND

COIL CONFIGURATION: HORIZONTAL/COPLANAR
INSTRUMENT: APEX MAXMIN II
PROFILE SCALE. 1 cm = 25 %
SOLID LINE: INPHASE
DASHED LINE: OUT OF PHASE

HORIZONTAL LOOP EM SURVEY
OVER PART OF 102 GROUP
POWELL TOWNSHIP LARDER LAKE MINING DIVISION
NTS 42 P/15
1777 kHz
0 100 200
METERS
1 5000



HORIZONTAL LOOP EM SURVEY

OVER PART OF 102 GROUP

POWELL TOWNSHIP LARDER LAKE MINING DIVISION

NTS 42 P/15

444 kHz

0 100 200 METERS

1 5000

LEGEND

COIL CONFIGURATION HORIZONTAL/COPLANAR
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PROFILE SCALE: 1 cm = 25 %
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