

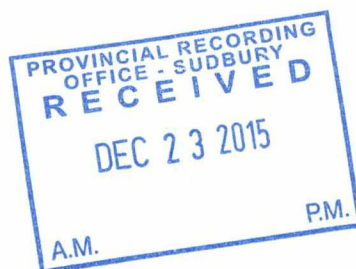
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2-56513

VLF Reconnaissance Profile Line:  
A  
Geophysical Report in  
Finan Township  
Sault Ste Marie Mining Division  
N.T.S. 42 C/SE  
for  
Claim 4276266

Prepared for: Prodigy Gold Inc



Frank C. Racicot  
Sudbury, Ontario

P. Geo  
Dec. 22, 2015

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## 1.0 Introduction

In early October, 2015 Frank Racicot did some reconnaissance and detailed mapping on claim 4276266 for Prodigy Gold Inc. That report was previously submitted to MNDM.

In addition, Racicot also conducted a single VLF profile line across strike of a known, mineralized shear on Oct 10, 2015 with a Geonics VLF EM-16 unit and a hand held Garmin GPS. The purpose of this single VLF profile line was to determine if an expanded VLF survey might be warranted in the future.

NAA 24.0 KHz – Cutler, Maine and NML 25.2KHz- La Moure, North Dakota.

A VLF-EM16 survey is a relatively simple and economic geophysical survey that is used to better understand shallow, vertical and sub vertical bedrock conductors.

This report describes the findings and results of the VLF EM-16 survey on Line 7W utilizing the new VLF 2DMF processing software of which the author of this report has assisted in developing with Dr. Fernando Santos of Lisbon, Portugal.

VLF2DMF is a software package that has been developed in order to enable the processing and inversion of electromagnetic (EM) induction data acquired at a Very Low Frequency (VLF).

VLF2DMF is capable of inverting VLF-EM data acquired along a surveyed line at different frequencies. Data collected in a survey area can also be processed. The software produces profiles of the Raw Data, Fraser Filtered Data, KH, Resistivity and a (2-D) Modelled Inversion. The software also allows for plan maps and slices of Fraser, KH and Inversion models of separate VLF survey lines.

The claim is located north of Wawa and about 9 km southeast of the town of Dubreuilville Ontario. See Figure 1

Racicot is the temporary agent for this claim only, in order to write and submit this assessment report. The official agent for all of the Prodigy claims is Randy Sedor.

## 2.0 Property Ownership

The claims are listed in the MNDM data base as being held by Prodigy Gold Inc. Prodigy Gold Inc is owned by Argonaut Gold. Their address is:

Argonaut Gold  
9600 Prototype Court.  
Reno Nevada  
USA  
89521

Area Location Map

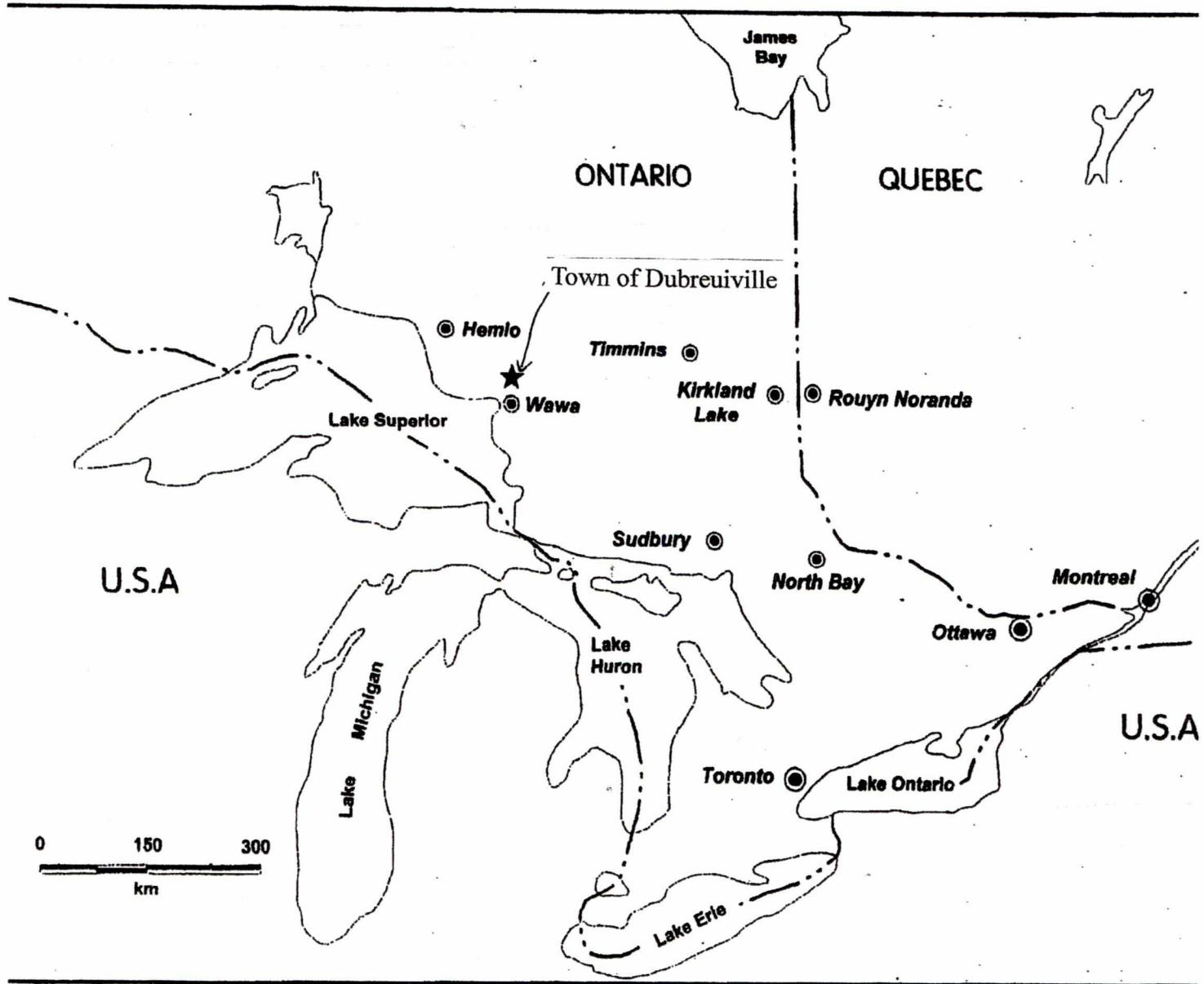


Figure 1







### 3.0 Location and Access

This claim is in Finan Township in the Sault Ste Marie Mining District. To get to the claims, one drives about 30 km north from Wawa on highway 17 and then turns east on highway 579, just before Desolation Lake. After proceeding east on 579 for about 30 km this will bring you to the small town of Dubreuilville.

About several hundred meters before the town of Dubreuilville- one turns east on the Goudreau Road and travels for about 13-14 km and then turns north at approximately 690600 E. One has to pass through the mine site held by Richmond Mines. The mine site is gated and access was generously given to Frank Racicot (P. Geol) and his assistants by the Richmond geological staff.

Once permission was received to access the mine site, one parked at the Richmond geology and engineering parking lot and then walked down the pump house road towards Maskinonge Lake. The south boundary of claim 4276266 is about 100 m north of the pump house road. Figure 1 shows the location of Wawa and Dubreuilville. Figure 2 shows the location of claim 4276266 in Finan Township.

### 4.0 Previous Exploration Work

There does not appear to be much specific work recorded in the assessment files for this claim. According to the Geological Data Inventory File 139 (GDIF 139) published in 1984 there was no work done in this area.

There was a substantial amount of work done immediately to the south of claim 4276266- which eventually lead to become Richmond's Kremzar Mine. (See Figure 3). The area is reported to have possible reserves of 85,952 tonnes at a grade of 8.67 g/t Au (Independent Consultant, December 1990).

A search on the Geology Ontario website indicated there was some work done this claim after 1983.

In 1985 Ferderber Geophysics conducted an airborne VLF-EM and an aeromagnetic survey over 268 claims in Finan Township and neighboring townships (AFRI 42C08NE0044 0036). A total of 1123 line miles (entire survey) were flown at a spacing of 440 feet (1/12th mile) and an elevation of 250 feet above the landscape. The southern part of the survey in area A (Finan and Jacobson Townships) managed to barely just cover claim 4276266.

The VLF-EM survey located 26 structures that were considered 'bedrock structures'- ie structures related to zones of weakness and/or potential gold structures, sulphides associated with iron formation or geological contacts. Conductor axis 25 which appears to be located at the south edge of the claim was considered a bedrock structure- but not a potential gold structure. See Figure 4.

Source: M.J. Perkins Sept. 2000

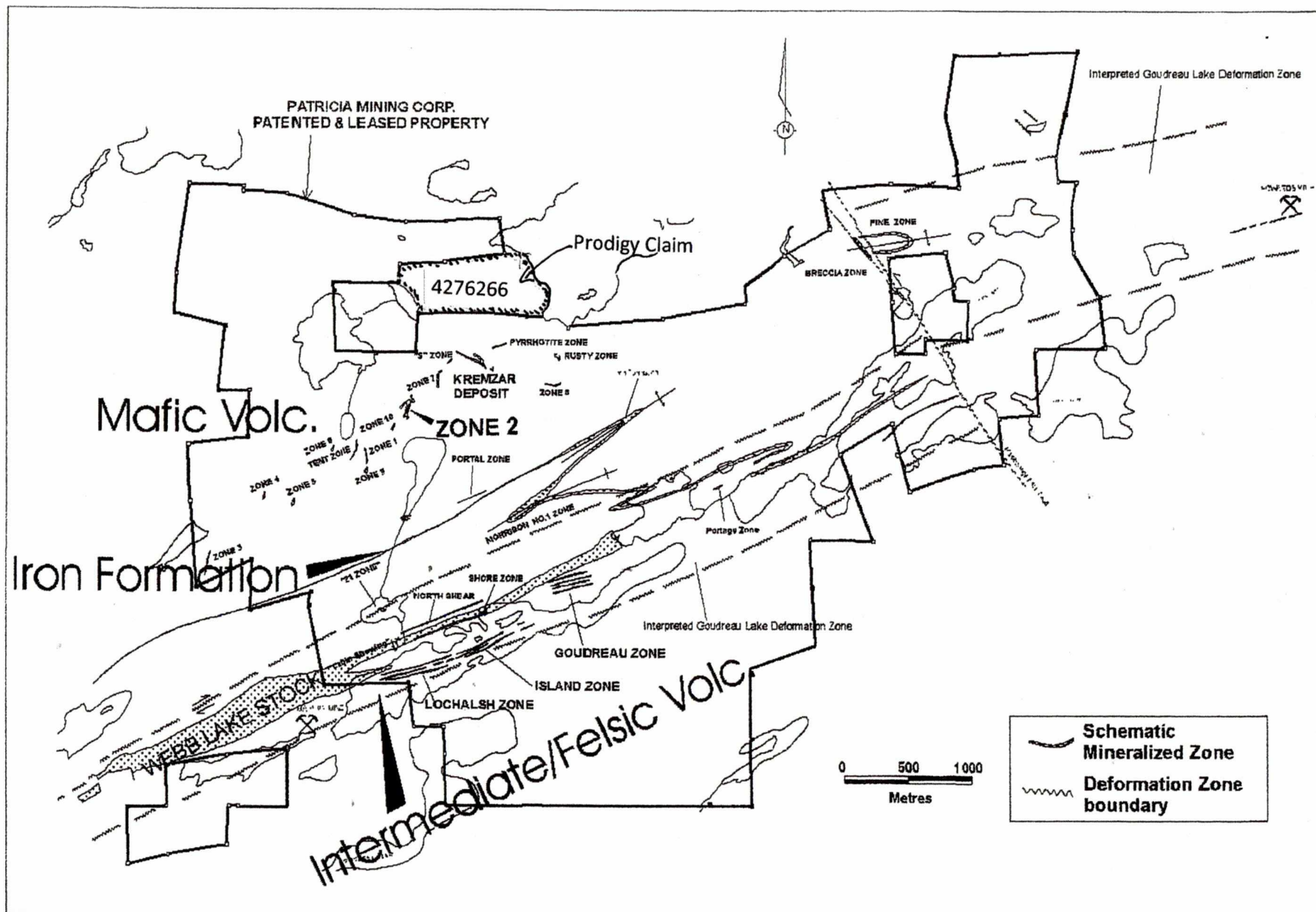


Figure 3



1985 Airborne VLF-EM Survey and  
Location of Claim 4276266

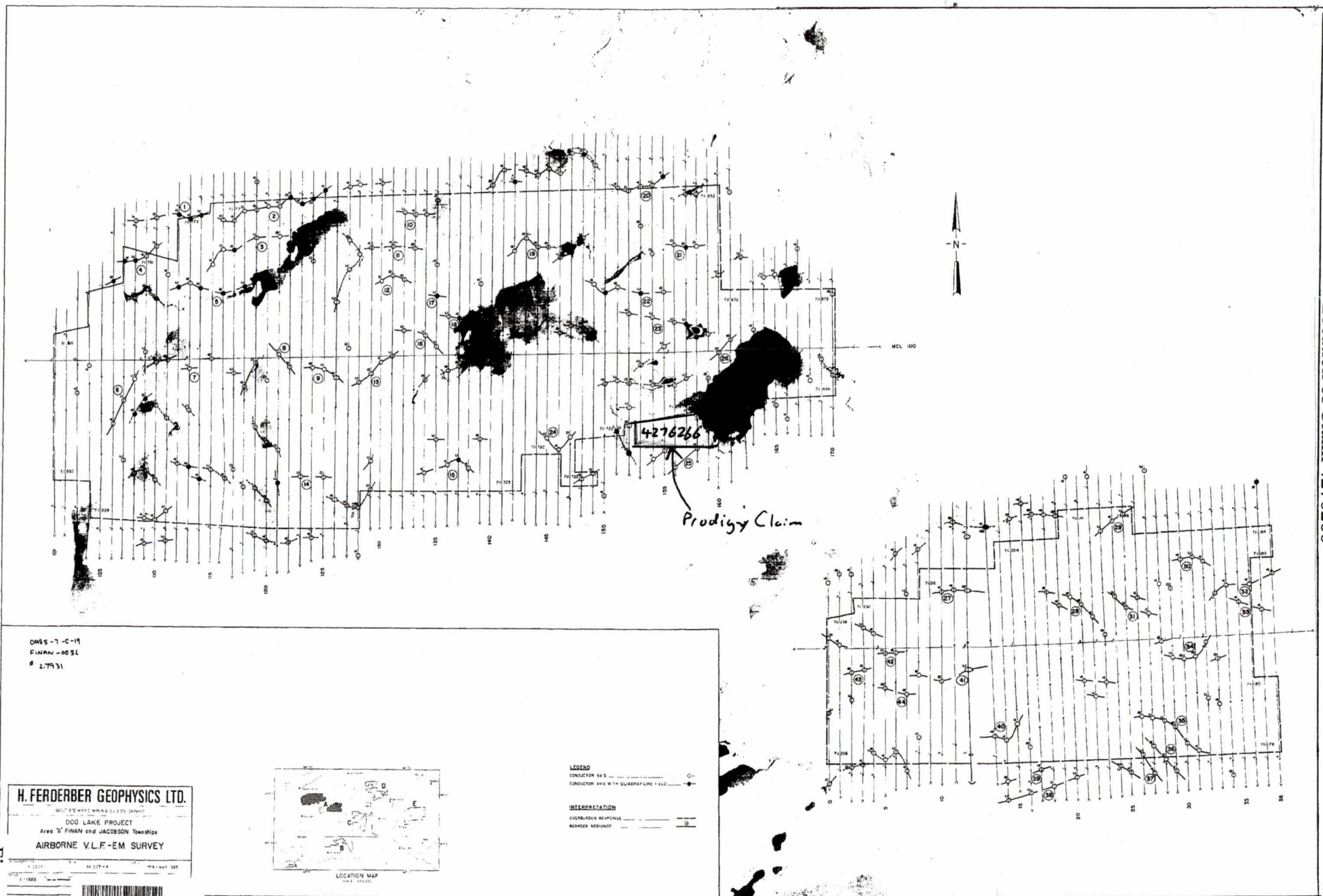
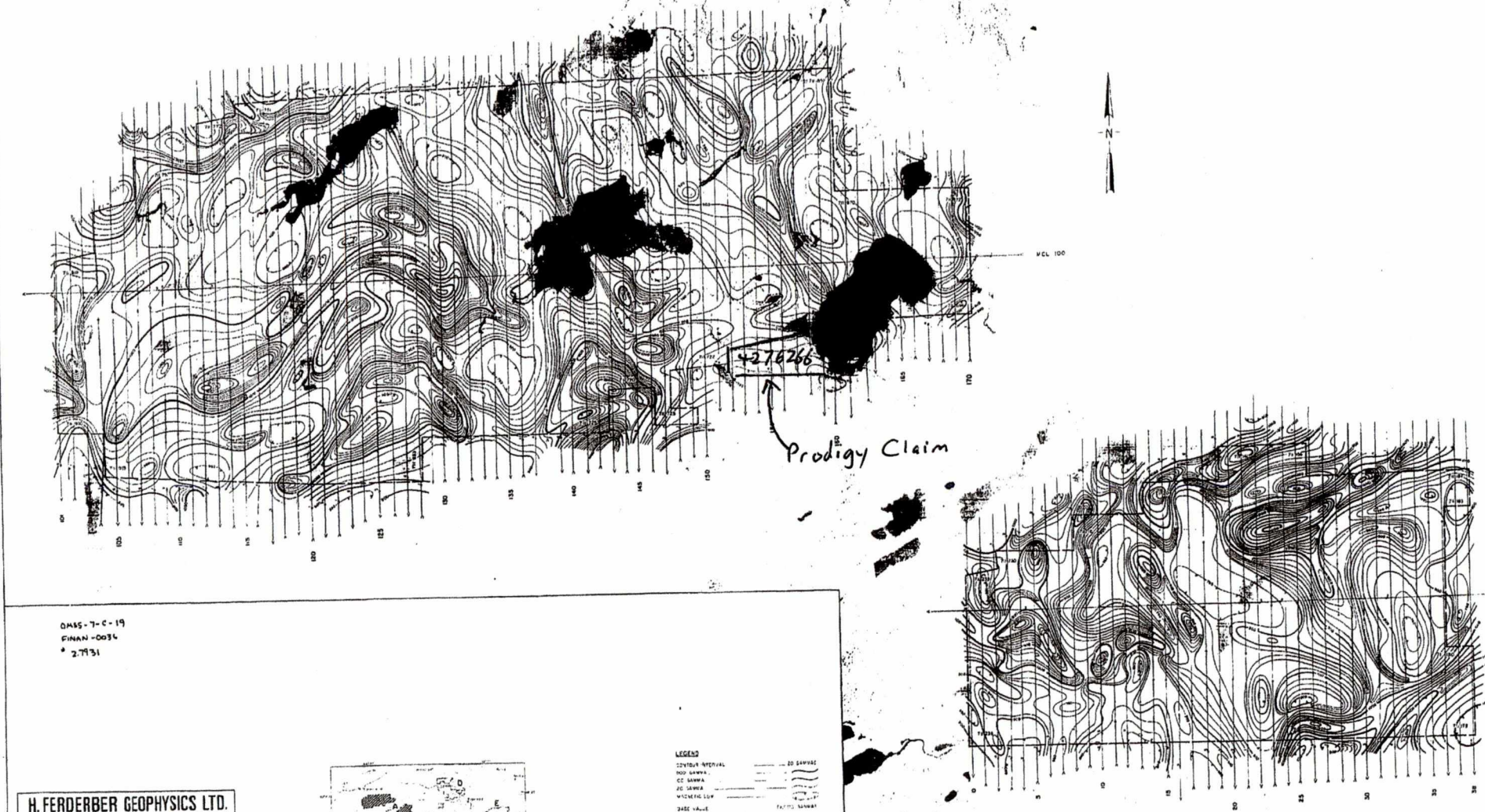


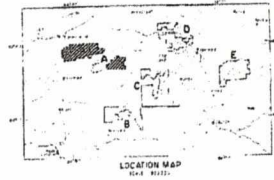
Figure 4

1985 Airborne Magnetic Survey and  
Location of Claim 4276266



0455-7-C-19  
FINAN-0036  
• 2.7131

**H. FERDERBER GEOPHYSICS LTD.**  
SOUTH BRITISH COLUMBIA  
DOG LAKE PROJECT  
Area 1a FINAN and JACOBSON Townships  
AIRBORNE MAGNETIC SURVEY



**LEGEND**  
CONTOUR INTERVAL 20 GAMMA  
GRID SPACING 100 METERS  
CC SPACING 100 METERS  
20 GAMMA  
WIDE SPACING 100 METERS  
BASE VALUE 40000  
TYPICAL MAGNETIC

Figure 5



The Ferderber survey also located a northwest trending conductor axis with quadrature at- or just near the north-west corner of the claim. This conductor corresponds quite closely with a small, northwest trending lake; it is unsure if this conductor is actually on land- or in the lake.

The southern edge of the aeromagnetic survey just barely covered the claim where it located a partial magnetic low on or around the claim.. It also located a narrow, northwest trending magnetic high that extended northwest from Maskinonge Lake, several hundred meters east of claim 4276266. This mag high corresponds with a magnetic diabase dike located in 1990 on P map 3168 by Ron Sage. Figure 5 shows the 1985 aeromagnetic survey.

In 2010, MPH Ventures conducted a radiometric survey over the area (former claim number 4218052), as a means of exploring for gold. Their premise was that since gold is associated with tellurides and that tellurides are slightly radioactive- there might be a possible correlation.

Their survey consisted of 3.609 km of line readings and claimed to pick up the northwest trending conductor axis near the northwest corner of the lake. The author of the report made the comment that it was more logical to contour their scintillometer readings from the south-west to the north-east. It is the authors opinion that the results of this survey while possibly some what dubious, were a creative exploration attempt.

While conducting the scintillometer survey, the field crew located several old trenches over 80 m long- which had signs of channel sampling. They took several samples from these old trenches and had them assayed for gold. The samples returned values ranging from <2 ppb and up to 827 ppb.

## 5.0 Regional Geology

Claim 4276266 is located along the northern flank of the Wawa Greenstone Belt of the Archean Superior Province (also referred to as the Michipicoten Greenstone Belt). Figure 6 shows the claim in proximity to the regional geology and the gold bearing zones located just to the south. The oldest supracrustal rocks in Finan Township, which are exposed mainly in the southern part of the township, are intermediate to felsic metavolcanics consisting largely of tuff, lapilli tuff, coarse breccia, feldspar crystal tuff, quartz-feldspar tuff. These rocks are succeeded by massive and pillowed mafic and intermediate metavolcanics.

The intermediate to felsic metavolcanics are separated from the intermediate to mafic metavolcanic by a stratigraphically continuous horizon of tightly folded, Michipicoten iron formation.

The youngest supracrustal rocks in Finan Township are metasediments, consisting of wacke, siltstone and local lenses of Dore-type conglomerate.



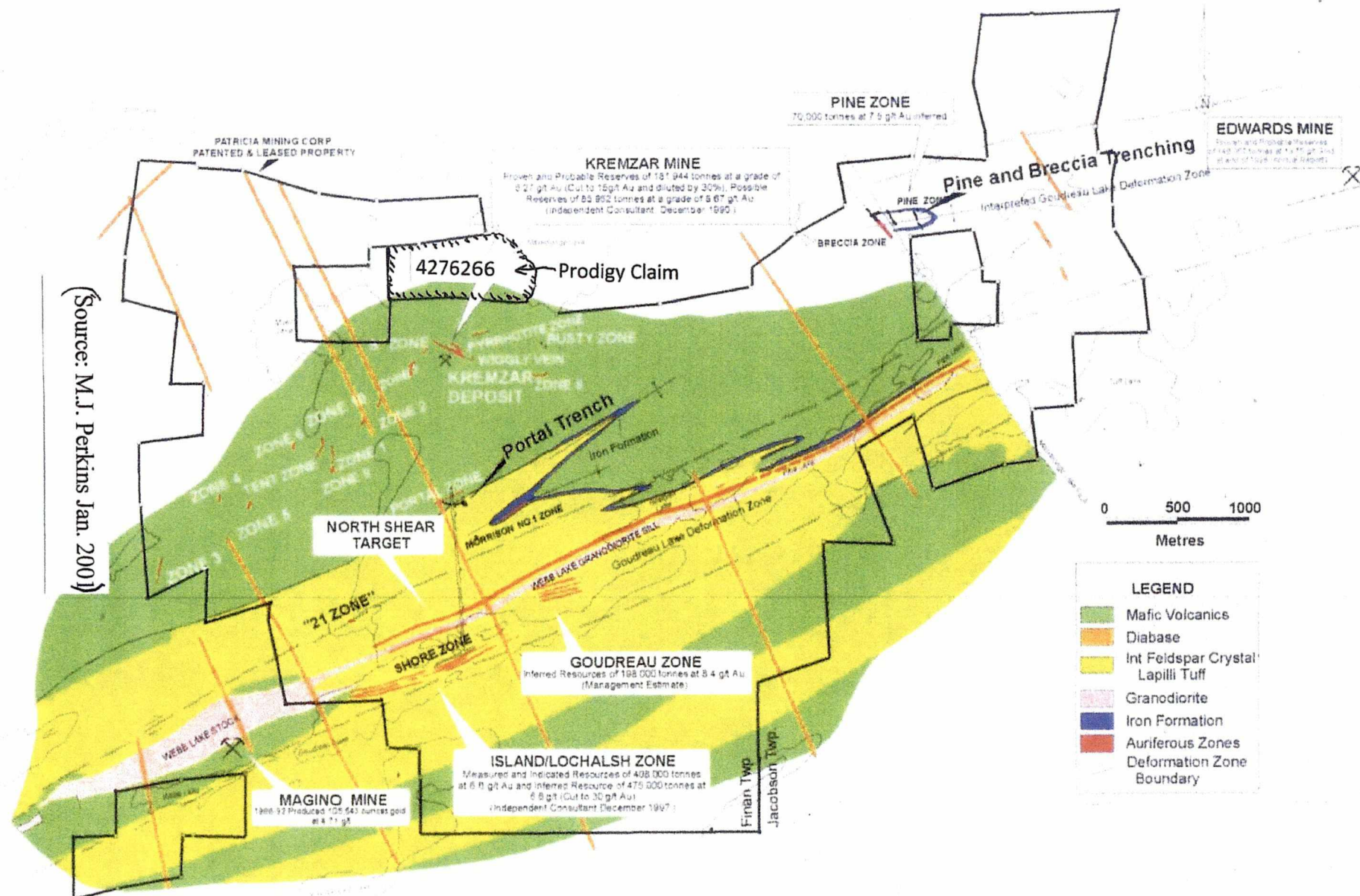


Figure 6

Within Finan Township there are many intermediate to mafic intrusions, ranging from quartz diorite to gabbro. These two types of intrusions are generally concordant or sill-like and according to Sage (1990) "host or occur near, a large number of the gold showings."

A large, homogeneous granodiorite stock known as the Muskinoge Lake stock underlies a large area of the east central part of Finan township. This medium grained, equigranular stock is elliptical, has a northeast trending axis and is about 4000 meters long. The south contact of this stock occurs just north of claim 4276266.

A large body of generally coarse grained nepheline syenite occurs in the west-central part of Finan Township including all of claim 4276266. This syenite is known as the Herman Lake alkalic rock complex and is interpreted to be intruded by the Maskinoge Lake stock. The Herman stock is elongated with a northeast orientation and is about 6500m long. The outer portion of the complex is nepheline-bearing and the central portion is cancrinite-bearing.

All of the above rocks are cut by later, northwest trending diabase dikes that occupy faults or shear zones-including two of which straddle this claim to the east and west.

According to the preliminary map, P3168, no obvious major faults or lineaments appear to cut the property.

#### 6.0 Property Geology (Based on OGS mapping)

According to map P3168, there are a few outcrops of massive, pillowed or medium-grained flows near the north contact of the claim.

When the geology from preliminary map P3168 was plotted on the 1:20,000 MNDM claim map, a small outcrop of 'autoclastic, monolithic breccia' was located within the claim boundary. However once in the field the north claim boundary was further south than was indicated on the claim map. As a result- the breccia was never seen. According to map P3168 there was virtually no outcrop in the central or southern portion of the claim.

A copy of the claim and the geology from OGS map P3168 on and around the claim is shown on Figure 7. A Table of Formations follows Figure 7

#### 7.0 Geophysical Work Performed

A 600m north-south VLF profile line was done to the west of the mineralized shear zone and some old trenches. See Figure 8. (Map 1). This map shows the area that was mapped at a scale of 1:5000 and the location of the VLF profile line. Readings were taken every 25m from two different transmitting stations to eliminate the uncertainty of spurious readings.



[illegible]

1" = 1/2 mile

Figure 7



## TABLE OF FORMATIONS

(Abbreviated and Taken From OGS Map P3168)

### **PROTEROZOIC**

#### **Diabase Dikes**

- 12a Diabase
- 12b Porphyritic (feldspar) diabase
- 12c Glomerophyritic (feldspar) diabase

### **ARCHEAN**

#### **Metamorphosed Alkalic and Felsic Intrusive Rocks**

- 8a Medium grained syenite
- 8b Coarse grained nepheline syenite
- 8c Nepheline syenite pegmatite

#### **Felsic Intrusive Rocks**

- 7a Quartz Feldspar Porphyry
- 7b Feldspar Porphyry
- 7c Quartz Porphyry
- 7e Granodiorite, granite
- 7f Aplite
- 7s Porphyritic quartz monzonite
- 7t Syenite to quartz syenite

#### **Metamorphosed Mafic to Ultramafic Intrusive Rocks**

- 6a Gabbro / diorite
- 6b Anorthositic gabbro
- 6m Quartz gabbro

#### **Metasedimentary Rocks**

- 5a Magnetite / hematite-chert iron formation
- 5b Carbonate, commonly with minor chert, pyrite and rarely with arsenopyrite.
- 5c Sulphide, commonly with subordinate siderite and chert

## Intermediate to Felsic Metavolcanic Rocks

- 3a Sericite schist
- 3b Heterolithic breccia
- 3c Monolithic lapilli tuff
- 3n Autoclastic monolithic breccia
- 3q Quartz eye crystal tuff
- 3u Laminated tuff

## Mafic to intermediate Metavolcanic Rocks

- 2a Massive flows
- 2b Pillowed flows
- 2c Chlorite schist
- 2g Massive medium grained flows
- 2h Magnetite bearing flows
- 2l Amygdaloidal flows
- 2v Laminated tuff

### QUARTZ VEINS

qv	quartz vein
qcv	quartz carbonate vein
qtv	quartz tourmaline vein
qvst	quartz vein stockwork
qvsh	quartz vein sheeted
qvb	quartz vein bull white
qvs	quartz vein smoky
qvg	quartz vein granular texture

### ALTERATION

Bio	Biotite
Ser	Sericite
Mu	Muscovite
Kf	Potassium feldspar
Ab	Albite (Na feldspar)
Sil	Silicified

### STRAIN INTENSITY

U	Faint/undeformed
W	Weak
M	Moderate
S	Strong
I	Intense
Fol	foliation

### OTHER CODES

Bx	Breccia
F	Fault
G	Ground Core
L	Core Lost
O/B	Overburden
R	Rubble or Blocky

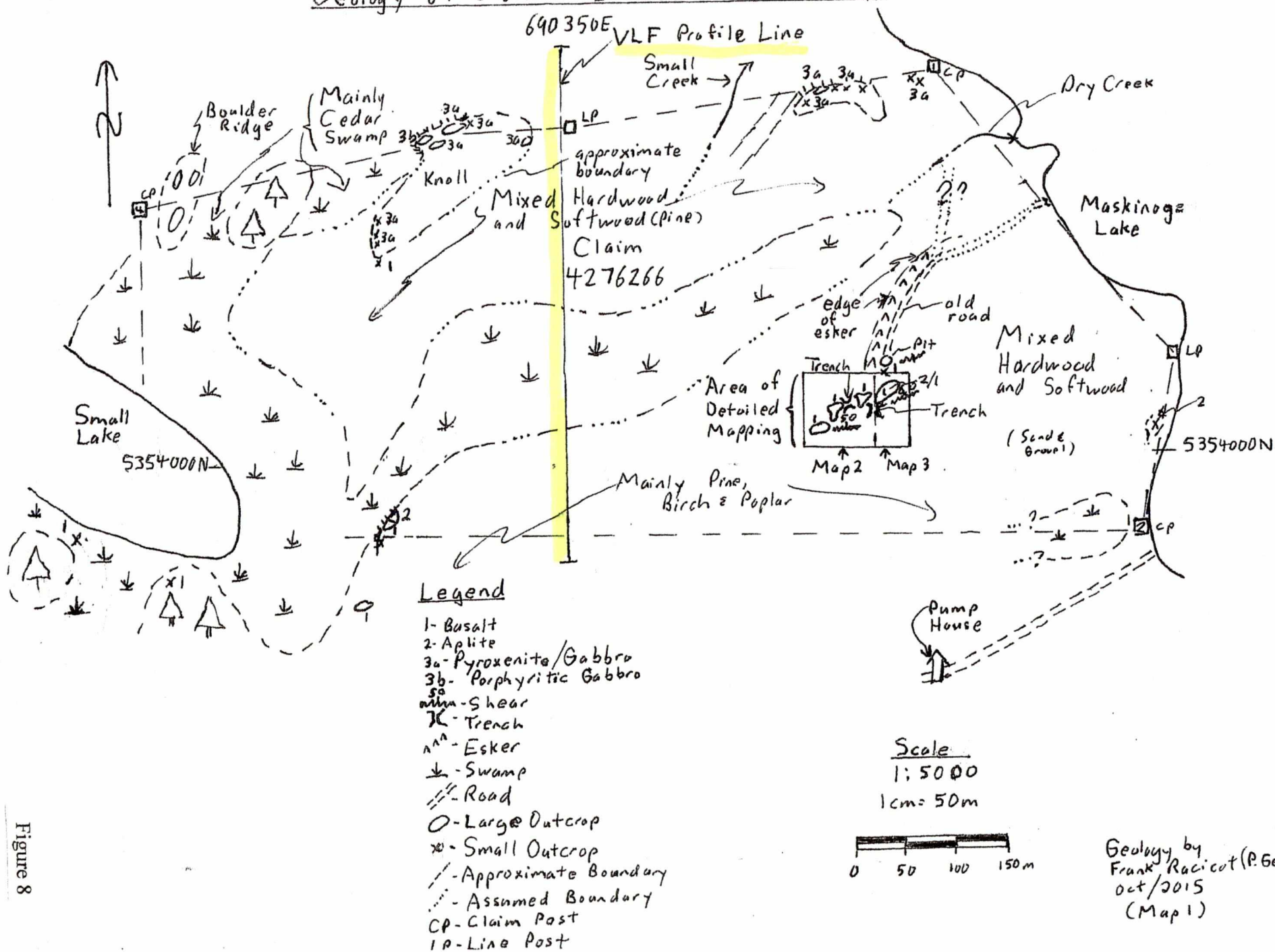
### MINERALIZATION

VG	Visible gold
Py	Pyrite
Cpy	Chalcopyrite
Po	Pyrrhotite
As	Arsenopyrite
Mo	Molybdenite
Sp	Sphalerite
Ga	Galena
Mg	Magnetite

### GRAIN SIZE

vfgr	very fine grained
fgr	fine grained
mgr	medium grained
cgr	coarse grained

# Geology of Claim 4276266 - Finan Township



1:5000 Geology (Map 1)

Figure 8



## VLF Data Profile

VLF data collected on single line 0 was processed using the VLF2DMF software. Profiles for each frequency: NAA-24.0 KHz.-Cutler, Maine and NML-25.2 KHz.- La Moure, North Dakota.

## 8.0 Geophysical Results

The raw data was given to Shaun Parent of "Superior Exploration" to do modeling and interpretation with his "YVLF Program" and new computer program and algorithm. The raw data readings for both stations are shown in Table 2.

### **1: VLF Raw and Filtered Data Profiles**

Raw data for each frequency was plotted for each line surveyed. A running average filter of the raw data is run to smooth the survey profile.

### **2: Fraser Filter Profiles**

Raw data for frequency NAA and NML was run through the Fraser Filter. This filter transforms In-Phase cross overs and inflections into positive peak anomalies. In-Phase inflections and cross overs are usually plus to minus, while Quadrature responses are negative to positive giving a negative peak anomaly when the Fraser Filter is applied. VLF anomalies were chosen based on the location of the peaks on the Fraser Filter profile.

### **3: VLF K-H Profiles**

Filtered data for frequency NAA and NML was run through the Karous-Hjelt (K-H) filter. The filter is applied to obtain a section of current density. The higher values are, in general, associated with conductive structures (not shown in Figures)

### **4/5: VLF Resistivity Profiles - 2000 Ohm**

The Apparent Resistivity for frequency NAA and NML was calculated and plotted. The resistivity can be calculated if the mean environmental resistivity is known at the beginning of the VLF profile.

### **6/7: VLF Models -2000 Ohm**

A Resistivity 2000 Ohm's was used to build an initial model used in the inversion to obtain a realistic cross section of the line surveyed. An elevation scale is found on the left side of model profiles. A VLF conductor is marked on the model profile, as well as a probable lithological contact and a probable fault.

Finan Township Field VLF Readings; Oct 2015, F. Racicot

1< VLF STATION

NAA

24.0< VLF STATION FREQUENCY

2< VLF STATION

NML

25.2< VLF STATION FREQUENCY

LineNu	StationID	X	Y	elevat Z	NAA		NML			
					InPhase	OutPh	InPhase	OutPhase		
L 0	0+00	690352	5354400	401	19	2	19	0	swamp edge	457
L 0	0+25S	690351	5354372	403	15	8	15	7	swamp edge	458
L 0	0+50S	690350	5354350	405	27	13	30	12	flat	NA
L 0	0+75S	690350	5354325	408	20	14	5	13	bottom of hill	459
L 0	1+00S	690352	5354298	408	9	10	8	8		460
L 0	1+25S	690351	5354274	413	3	6	2	6		462
L 0	1+50S	690354	5354250	417	-3	5	-3	5		463
L 0	1+75S	690358	5354220	418	0	13	0	12		464
L 0	2+00S	690355	5354199	418	-3	13	-4	13		465
L 0	2+25S	690353	5354172	430	-8	13	-10	12		466
L 0	2+50S	690349	5354148	424	-15	12	-15	11		467
L 0	2+75S	690351	5354127	423	-21	8	-23	6		468
L 0	3+00S	690354	5354099	419	-25	9	-27	6	swamp 25m to east	469
L 0	3+25S	690348	5354075	407	-33	7	-34	7	swamp 25m to east	470
L 0	3+50S	690355	5354052	393	-20	10	-23	10	edge of swamp	471
L 0	3+75S	690351	5354025	400	-8	15	-8	13	edge of swamp	472
L 0	4+00S	690348	5354001	403	-7	14	-7	17	close to on strike with trenches 175m to east	473
L 0	4+25S	690350	5353970	424	-5	20	-5	20	on strike with trenches 175 east	474
L 0	4+50S	690351	5353950	409	-11	18	-12	20	close to on strike with trenches 175m to east	475
L 0	4+75S	690346	5353922	417	-15	15	-18	20		476
L 0	5+00S	690359	5353901	419	-20	14	-24	16		477
L 0	5+25S	690350	5353872	420	-23	18	-23	16		478
L 0	5+50S	690353	5353851	420	-25	17	-28	17		479
L 0	5+75S	690363	5353827	425	-37	15	-37	15		480
L 0	6+00S	690356	5353800	419	-45	14	-45	16		481

Table 2

The graphic representation of the NAA raw data is shown in Figure 9. The Fraser Filter data for Line '0', NAA station is shown in Figure 10. The apparent resistivity for NAA is shown in Figure 11.

The model for the NAA data is shown in Figure 12 and for NML data in Figure 13.

There appears to be a weak conductor the north part of the property.; there is a definite contact in the center of the claim and a probable fault in the south part of the claim. Figures x4 and x5 show these interpretations.

## 9.0 Conclusions and Recommendations

It is the author's conclusion that the single VLF line, L'0' served the purpose as a cost effective preliminary look at sub surface geology that was covered by overburden and the swamp on claim 4276266.

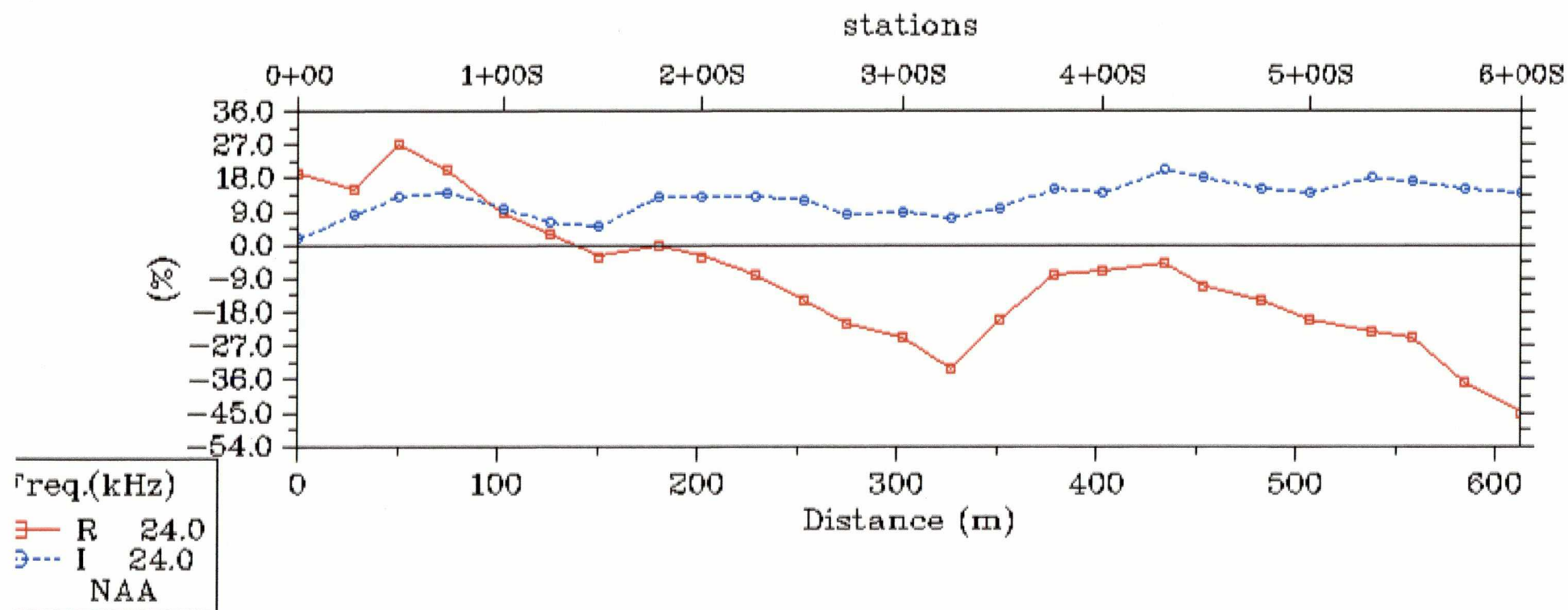
It is recommended that additional VLF lines be done to determine the strength, extent and validity of the above noted features.

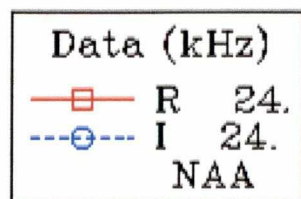
## 10.0 References

- 1) Campbell Robert A. 1989. Report On The Combined Airborne Magnetic and VLF-Electromagnetic Survey on the Property of Robele Resource Developers Inc by H. Ferderber Geophysics Ltd. 42C08SW0183
- 2) Fenton Scott. 1985. Report On Airborne Geophysical Surveys, Dog Lake Area by Ferderber Geophysics Ltd. 42C08NE0044
- 3) Perkins J. Mike. 2001. Trenching, Geological Mapping and Sampling Program. Portal, Pine and Breccia Zones....Island Gold Project, for Patricia Mining Corp. November 2001
- 4) Perkins J. Mike. 2001. Trenching, Geological Mapping and Sampling Program # 2 Zone, Kremzar Mine Property, for Patricia Mining Corp. September 2000.
- 5) Sage, R.P. 1990. Precambrian geology, Finan Township, Ontario Geological Survey, Preliminary Map P3168. Scale 1:15840
- 6) Salo, G.J. Report on Finan Township Radiometric Survey for MPH Ventures Corp, October 2010

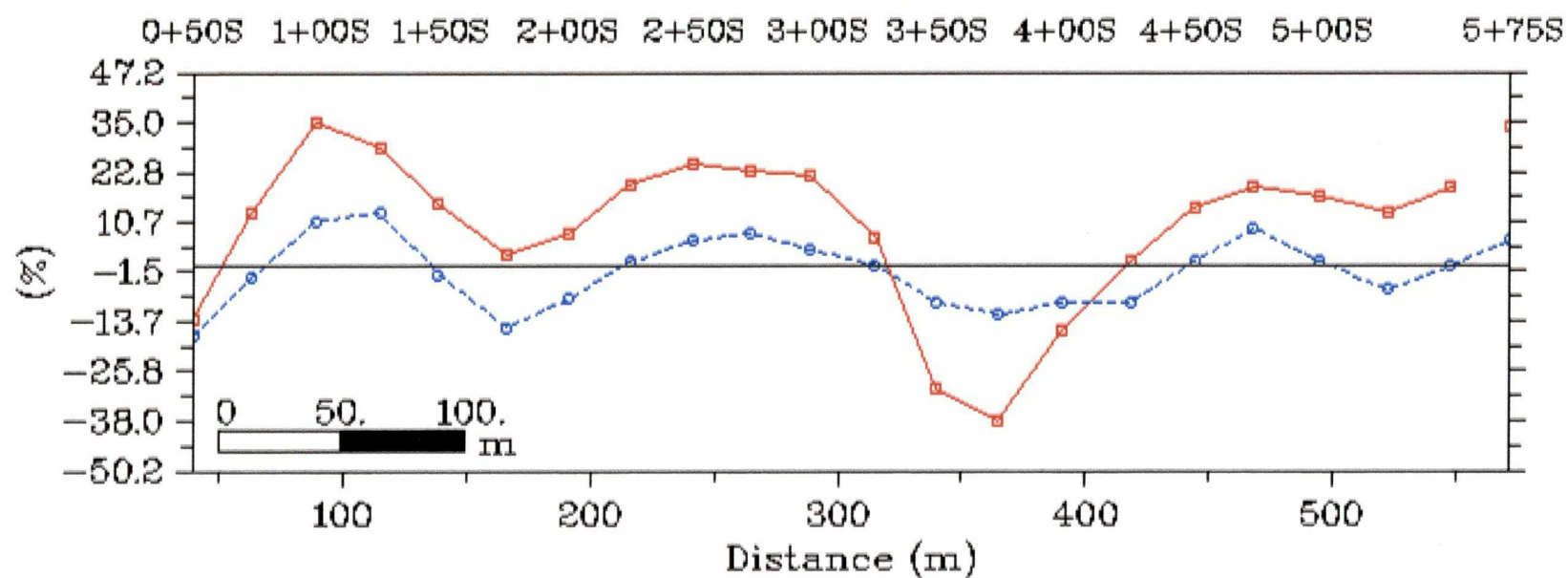


VLF-EM raw data  
Line: Dubreuville Line 0





Fraser Filter - from raw data  
Line: Dubreuville Line 0



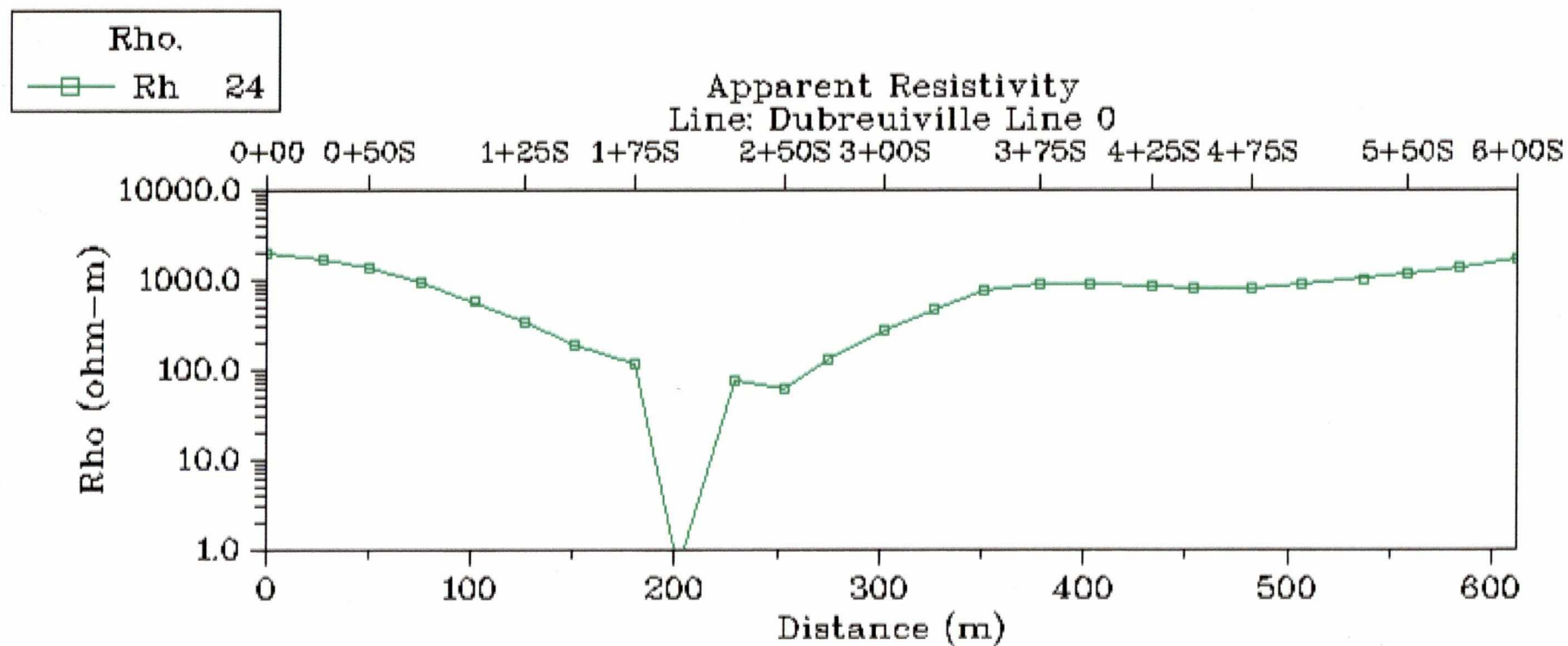
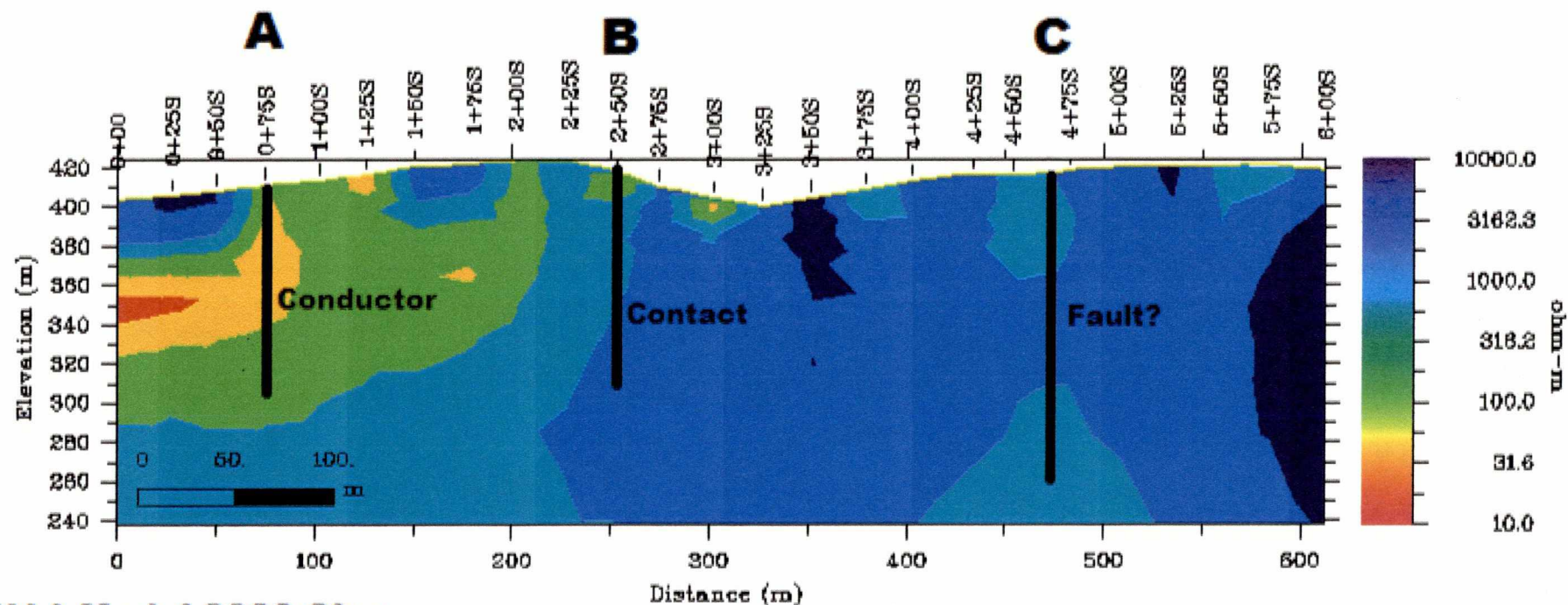


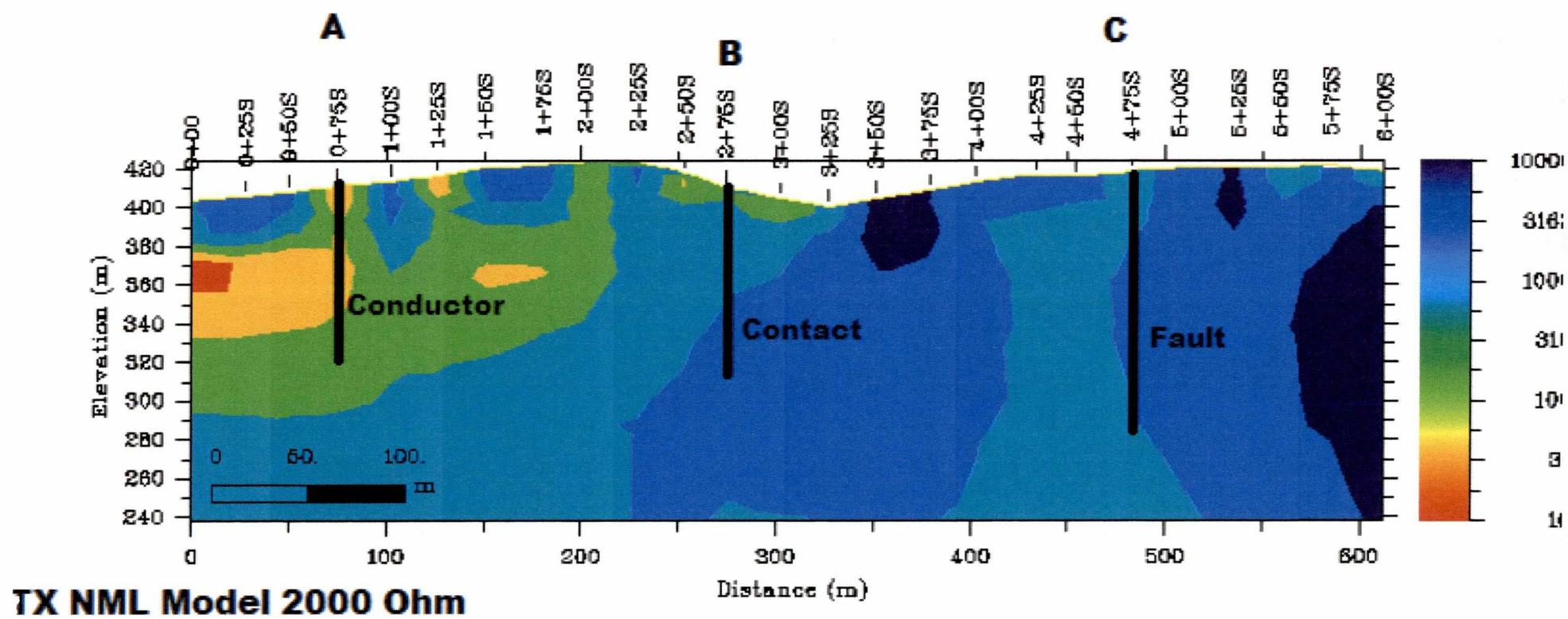
Figure 11





Line 00 TX NAA Model 2000 Ohm  
 A- 690351/5354311  
 B- 690351/5354160  
 C- 69048/5353936

Figure 12



#### 11.0 Statement of Qualifications

I, Frank Racicot graduated from Laurentian University in 1974 with BSc in geology. He has over 30 years of varied experience in mineral exploration working for a variety of junior and larger exploration companies.

I am also a member in good standing with the Association of Professional Geoscientists of Ontario (APGO), the Ontario Prospectors Association (OPA) and the Sudbury Regional Discussion Group (SGDG).

Racicot's address is: 734 Whittaker St.  
Sudbury, Ontario  
P3E 4B2

A handwritten signature in black ink that reads "Frank Racicot". The signature is written in a cursive style with a large, stylized 'F' and a trailing flourish at the end.