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**Geophysical Survey Report for the Reticulate Lake AU/PGM Property**  
*Porter Twp. Sudbury Mining Division, Ontario*

## **Ground Magnetics Geophysical Survey Report**

**Reticulate Lake Gold/PGM Property**

*Porter Twp. Sudbury Mining Division*

March, 2020

**Mining Claim Numbers**

**521059, 521060, 521061**

**Mining Grid Cell Numbers**

**41105F070, 41105F071, 41105F091**

**Prepared by:**

***Mitchell Turcott H.B.Sc.***

## Geophysical Survey Report for the Reticulate Lake AU/PGM Property

Porter Twp. Sudbury Mining Division, Ontario

### SUMMARY:

This report details the ground geophysical survey conducted on the Reticulate Lake Au/PGM Property located in Porter Twp., Sudbury Mining Division in March of 2020. The Reticulate Lake Au/PGM Property is comprised of 3 unpatented mining claims numbered 521059, 521060 & 521061 mining cell numbers 41105F070, 41105F071 & 41105F091 and is 100% owned by Mitchell Turcott.

Two days were spent on the property conducting a ground magnetometer survey on March 21 & 22, 2020 using a Scintrex MF-2 Fluxgate Magnetometer. The magnetics survey was conducted by Mitchell Turcott (instrument operator) and Robert McDonald (GPS/notes).

A total of 3.8 km of GPS grid line was surveyed over 14 lines (L8E @ 438000 m E to L5W @ 437350 m E). The GPS grid was oriented in a North/South direction with 50 metre line spacing's and 10 metre stations starting at 5139000 m N to 5139270 m N. A Garmin 60 CSX GPS utilizing the UTM Grid Reference System (Zone 17) and NAD83 as the Map Datum was used to locate positions for the magnetic readings. No lines were cut during the ground magnetics survey eliminating the need for an exploration permit.

The objective of the ground magnetics survey work during the winter months was to survey a wetlands/marsh area that would not be accessible for ground work during the summer months. Data collected during the magnetics survey will subsequently be used to correlate the magnetic readings with those taken over the rocks hosting a known gold showing located on the property.

The ground magnetics survey identified several anomalies that will require further investigation during the summer months to determine the cause of the magnetic response. Follow-up work is recommended that would require geological mapping, rock/soil sampling and possibly trenching/stripping in the anomalous areas.

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## **Introduction:**

This report details the ground geophysical survey conducted on the Reticulate Lake Au/PGM Property located in Porter Twp., Sudbury Mining Division in March of 2020.

The objective of the ground magnetics work during the winter month of March 2020 was to survey a wetlands/marsh area that would otherwise not be accessible for ground magnetics work during the summer months.

The property is relatively remote and apart from a high tension power line located a few km away there are no significant structures that would adversely affect ground geophysical magnetic surveying on the property.

Data collected during the ground magnetics survey will subsequently be used to correlate the magnetic readings with those taken over the rocks hosting a known quartz vein gold showing located proximal to the marsh/wetlands area on the property.

The Reticulate Lake Au/PGM Property contains anomalous concentrations of Gold (Au) and other Platinum Group Metals (PGM's- platinum, palladium, etc).

The Reticulate Lake AU/PGM Property is prospective for Ni-Cu-PGM sulphides in Nipissing age (approx. 2250 million year old) mafic intrusive rocks within Huronian aged sedimentary rocks. This is a similar geological setting to the Shakespeare Ni-Cu-PGM Mine owned and operated by Ursa Major Minerals and is located a few km to the SW of the Reticulate Lake Au/PGM Property.

The Reticulate Lake Au/PGM Property also hosts mafic intrusive rocks of the Shakespeare Layered Intrusion (approx. 2460 million year old) which are similar to the mafic intrusive rocks that make up the Sudbury Igneous Complex located to the east of the property and has several currently operating and past producing Ni-Cu-PGM mines.

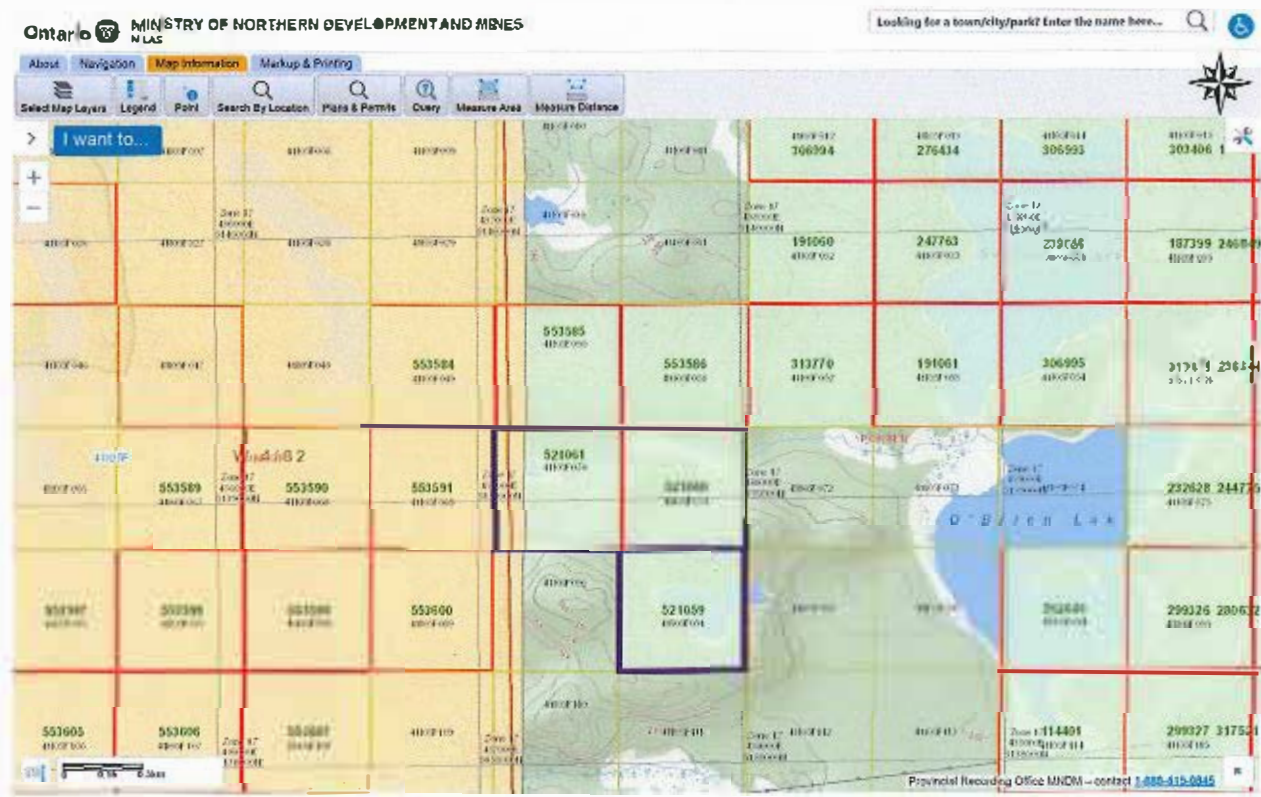
The property has two distinct exploration targets:

- 1) Gold in quartz veins
- 2) Gold/Platinum/Palladium mineralization hosted within a Nipissing age Mafic Intrusion

### Property Description, Location and Access:

The Reticulate Lake Au/PGM Property is comprised of 3 unpatented mining claims numbered 521059, 521060 & 521061 mining cell numbers 41105F070, 41105F071 & 41105F091 located in Porter Township, Sudbury Mining Division and is 100% owned by Mitchell Turcott (Figure 1).

Figure 1: Claim Map of the Reticulate Lake Au/PGM Property



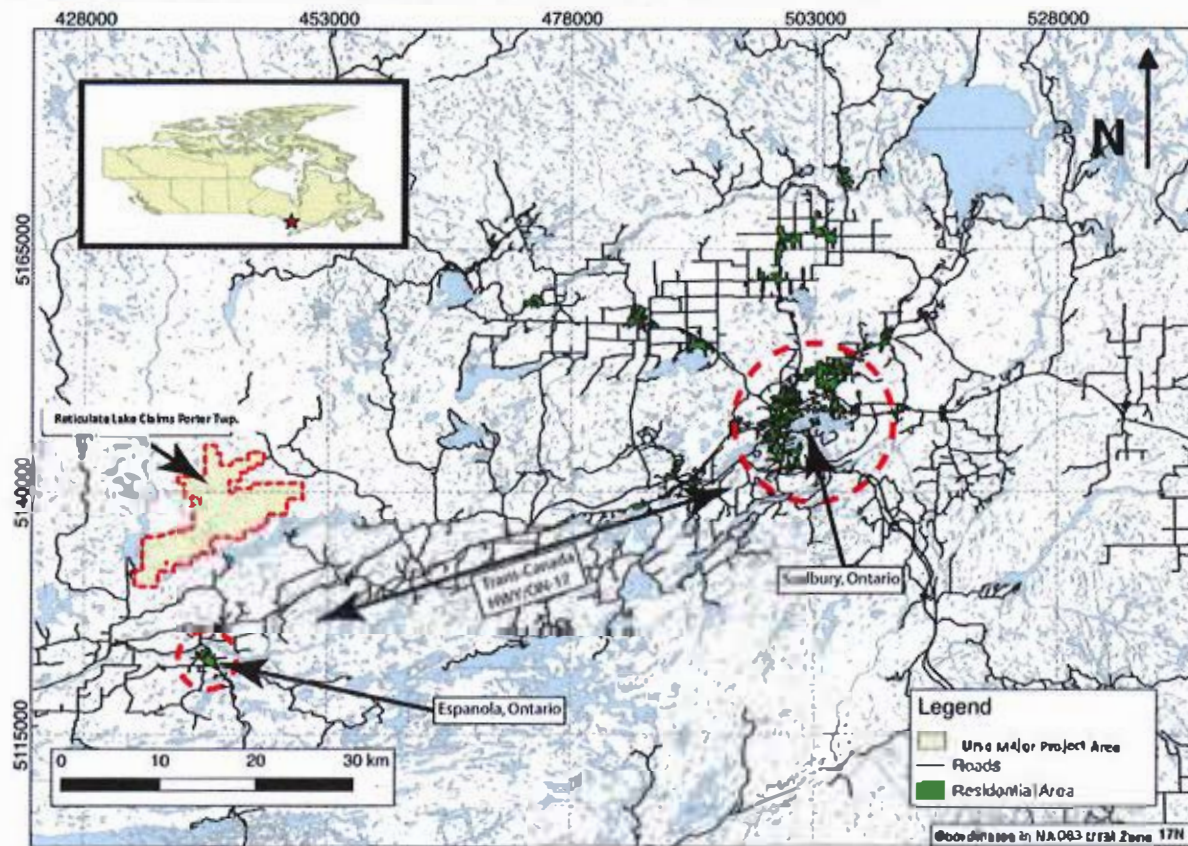
Porter Township, Sudbury Mining District

Claims Map modified from the MNDM MLAS

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The Reticulate Lake Au/PGM Property is located approximately 80 km west of the city of Greater Sudbury along Hwy 17 and about 20 km north of the small town of Espanola. The property can be accessed by vehicle following the Spanish River Road located north of the town of Nairn Centre and then travelling northwest towards the VALE owned High Falls Dam on Agnew Lake and then north on the Shakespeare Mine Road and subsequent logging roads which will take you near O'Brien Lake at which point you can traverse by foot, ATV or snowmobile approximately 2 km to the Reticulate Lake Property mining claims (Figure 2).

**Figure 2: Reticulate Lake AU/PGM Property Location Map:**



*Note: The Reticulate Lake AU/PGM Property claims are adjacent to the Ursa Major Minerals Property which hosts the Shakespeare Ni-Cu-PGM Mine.*

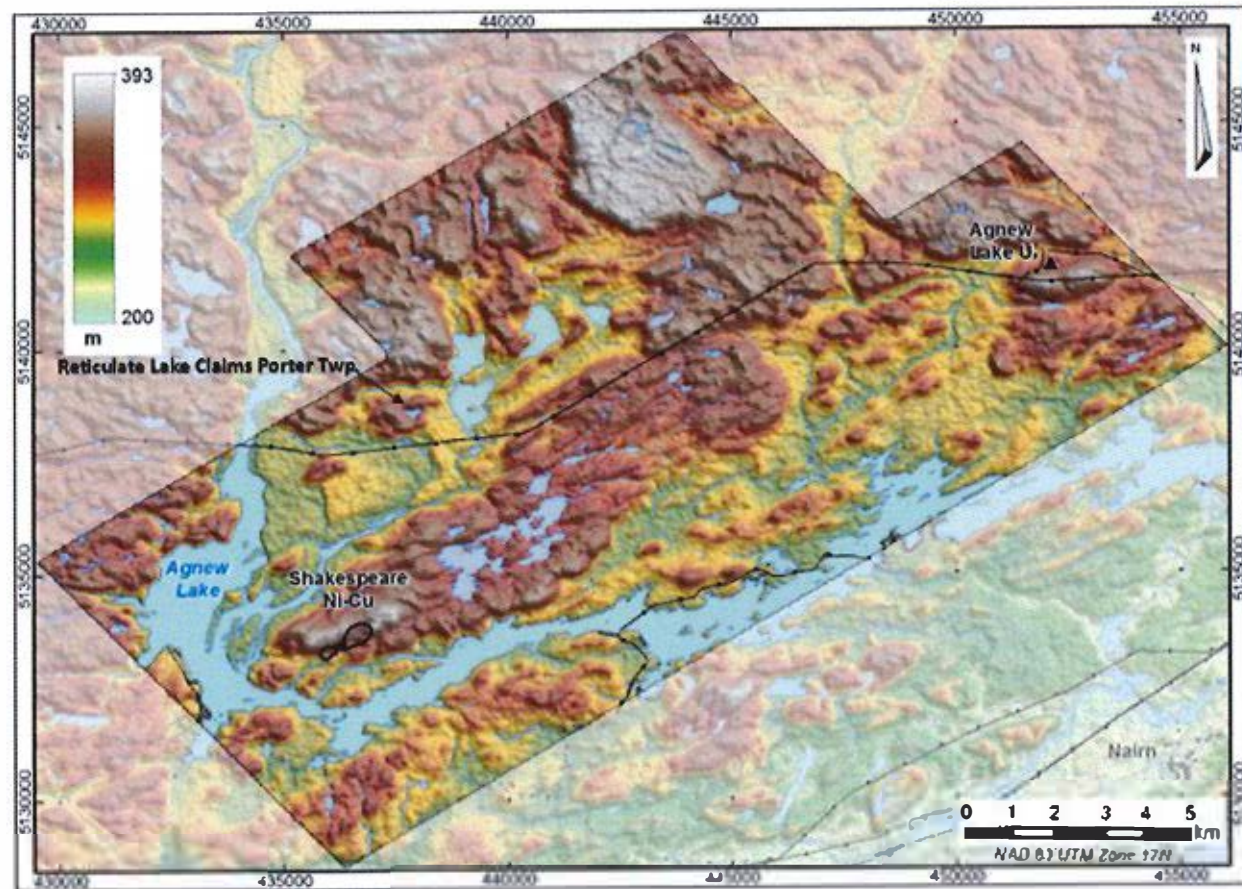
*Location Map modified from Woodhead & Moul 2016*

## Geophysical Survey Report for the Reticulate Lake Au/PGM Property

Porter Twp. Sudbury Mining Division, Ontario

Topographically, the property exhibits moderate relief with elevations ranging from 210 to 300 metres above sea level. There are several vertical rock cliff faces and relatively steep rock ridges within the Reticulate Lake Property claim group making it difficult to conduct geophysical or geological surveys with machinery or on foot (Figure 3). The property lies within the Great Lakes Basin and represents the northern limits of the Great Lakes Forest Region. The property is well vegetated with various types of conifers, hardwoods and softwoods which has attracted commercial logging to the area over the past several decades providing for numerous logging roads and trails that have been constructed for access & timber extraction.

**Figure 3: Digital Terrain Model of the Reticulate Lake Area**



*Note: The Shakespeare Ni-Cu & PGM Deposit is located to the southwest of the Reticulate Lake Au/PGM Property.*

*Digital Terrain Map modified from Woodhead & Moul 2016*



## Property History & Previous Work:

The following is a summary of reported work obtained by my review of the MNDM Assessment File archives:

**1961:** Geological mapping of Porter by R.M Ginn for the OGS was published.

**R005\_Porter Twp Geol Report\_Ginn 1961**

**1967:** Broulan Reef Mines Ltd. completed airborne magnetometer and electromagnetics surveys over the area which identified a number of anomalies. The results of any ground follow-up on the Reticulate Lake Property by Broulan Reef Mines is unknown.

**1983 to 1990:** BP Minerals completed airborne magnetometer and electromagnetics surveys over the area. Ground prospecting, geological mapping and diamond drilling was completed over areas of the Shakespeare Intrusion.

**41J01NE0001 BP Airborne Data 1988**

**1993-94:** Cameco conducted ground geophysics, geological mapping, sampling, trenching and diamond drilling over portions of the Nipissing Intrusion in Porter Twp.

**41I05NE2018\_Cameco 1994\_Geol\_Soil\_DD**

**41I05NW9700\_Cameco 1993\_Mag\_VLF**

**41I05SW0001\_Cameco 1993\_Geol\_Soil**

**1995-2000:** Prospectors Mitch Turcott and Dan Brunne conducted trenching, geologic mapping and rock sampling on portions of the Nipissing aged mafic intrusion in Porter Twp. Several rock grab and channel samples returned anomalous Gold, Platinum and Palladium (Au, Pt, Pd) assay results.

## **Geophysical Survey Report for the Reticulate Lake AU/PGM Property**

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**1998-2007:** Platinum Group Metals/Pacific Northwest Capital/Kaymin Resources conducted geological mapping, trenching, sampling, airborne & ground geophysics (mag & vlf) and diamond drilling over portions of the Shakespeare Intrusion and the Reticulate Lake Property was conducted. Several anomalous gold samples in quartz vein was obtained from the Reticulate Lake Property and 4 diamond drill holes were completed in 2004 after which the property was abandoned.

### **20002294\_2005 Ian Kelso Report**

**2000 to Present:** Ursa Major Minerals conducted geological mapping, rock and soil sampling, airborne geophysics (2004 & 2016), trenching and diamond drilling on portions of the Nipissing aged mafic intrusion in Porter, Shakespeare and Baldwin Townships. Several rock samples from the Ursa Major Property returned anomalous Au, Pt and Pd assay results. Portions of the Reticulate Lake Au/PGM Property were flown by Ursa Major Minerals airborne geophysical surveys in 2004 & 2016 identifying magnetic and electromagnetic anomalies on the property.

### **42C025E1210 2000\_2001 Mike Perkins Report**

### **20001009\_Ursa Major Megatem Airborne Survey 2004**

### **2\_57305\_10\_Airborne Geophysical Surveys\_Shakespeare Property 2016**

**2004-2006:** Geological re-mapping of Porter and Vernon Townships by R. M. Easton for the OGS was conducted. Map and report was published.

### **P2845\_Porter\_Vernon Geology Map EASTON\_2006**

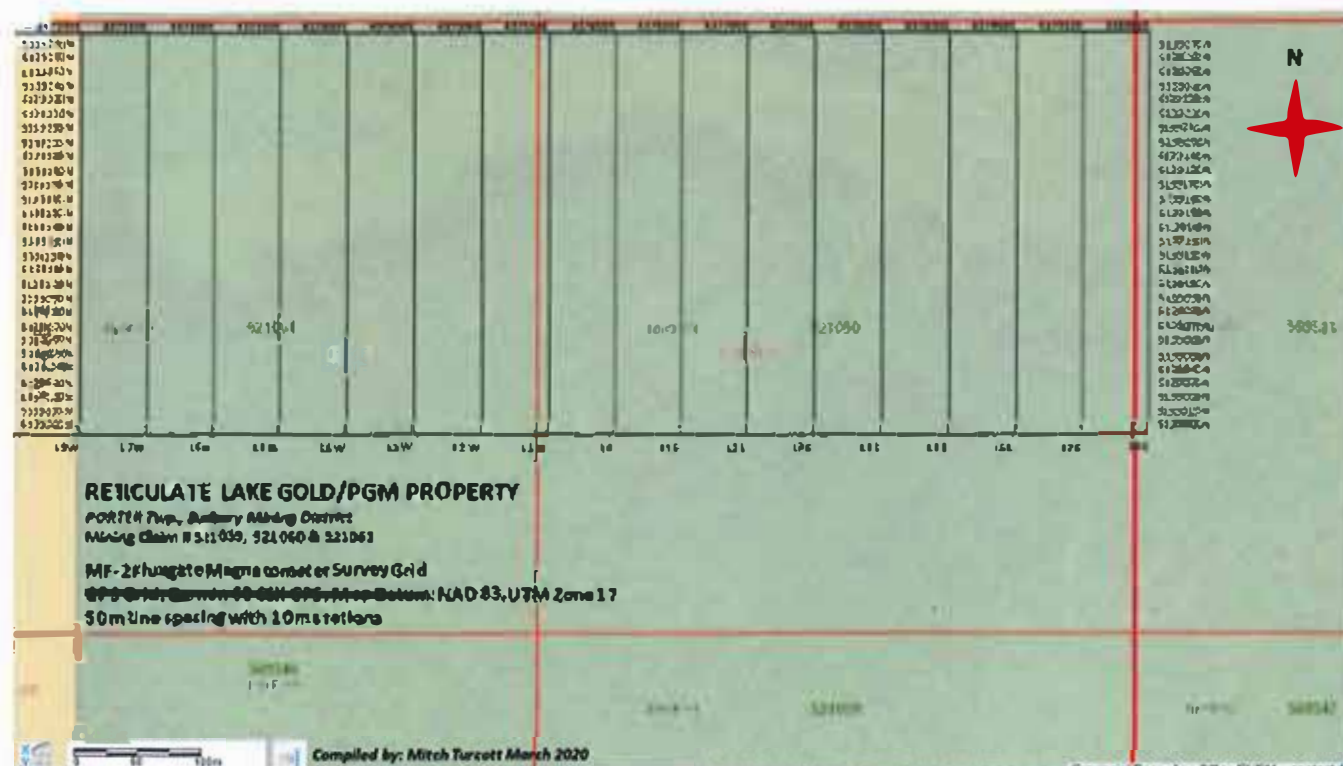
### **SFW20056\_Easton Geology\_Porter Twp**

## Reticulate Lake Ground Magnetics Survey Work Program:

A total of 3.8 km of GPS grid line was surveyed on snowshoe over 14 lines (L8E @ 438000 m E to L5W @ 437350 m E) during two days of field work conducted on March 21 & 22, 2020. The GPS grid was oriented in a North/South direction with 50 metre line spacing's and 10 metre stations starting at 5139000 m N to 5139270 m N (Map 1). The property was accessed using snowmobiles from the West end of Agnew Lake which is easily accessed on Agnew Lake Road from the town of Webbwood located on Hwy 17W.

A Garmin 60 CSX GPS (see Appendix for instrument specifications) utilizing the UTM Grid Reference System (Zone 17) and NAD83 as the Map Datum was used to locate positions for the magnetic readings. No grid lines were cut during the magnetics survey eliminating the need for an exploration permit.

### MAP 1: Reticulate Lake Au/PGM Property GPS Ground Magnetics Survey Grid



Claims Map modified from the MNLM MLAS

Note: Claims 521060 & 521061 Porter Twp. UTM Zone 17, NAD 83

# Geophysical Survey Report for the Reticulate Lake AU/PGM Property

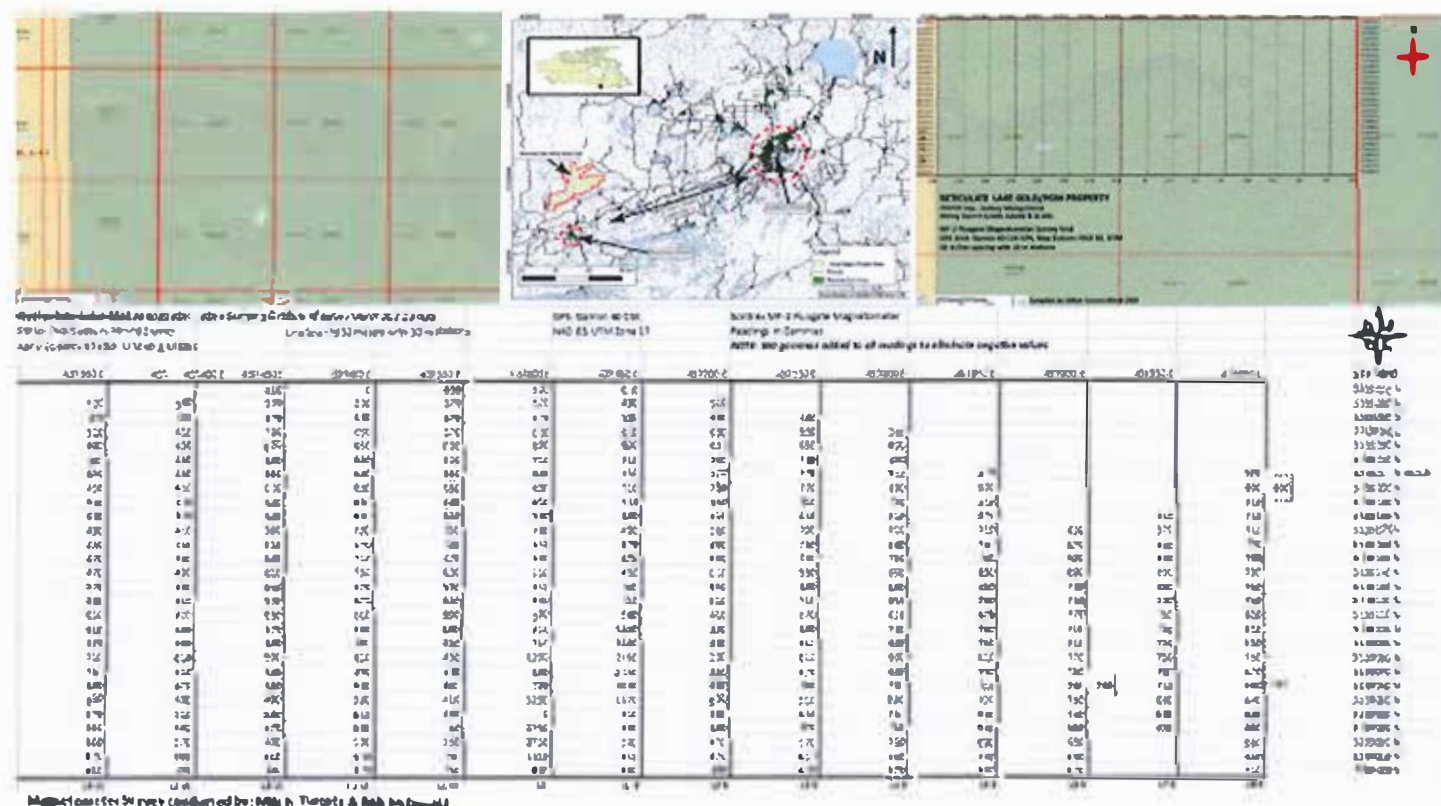
Porter Twp. Sudbury Mining Division, Ontario

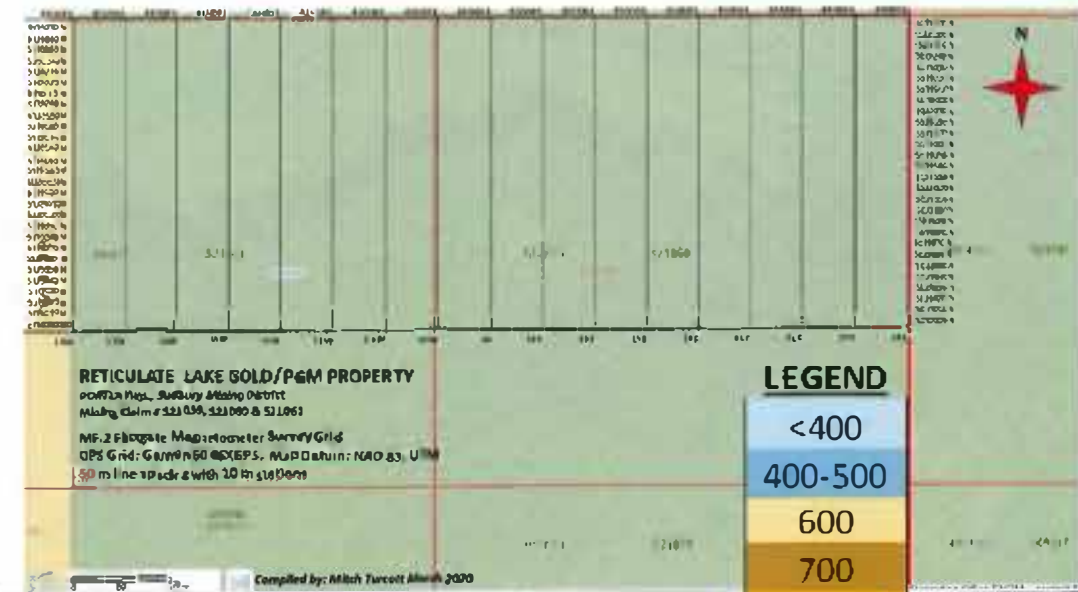
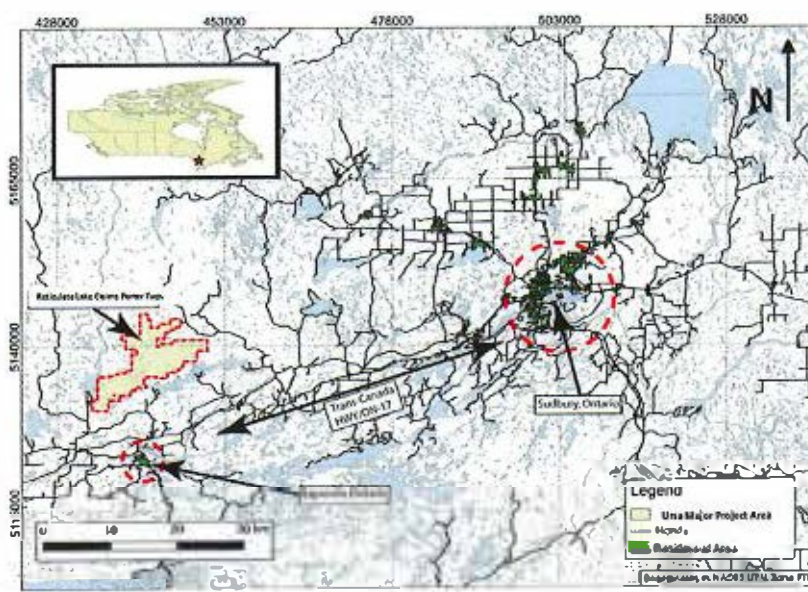
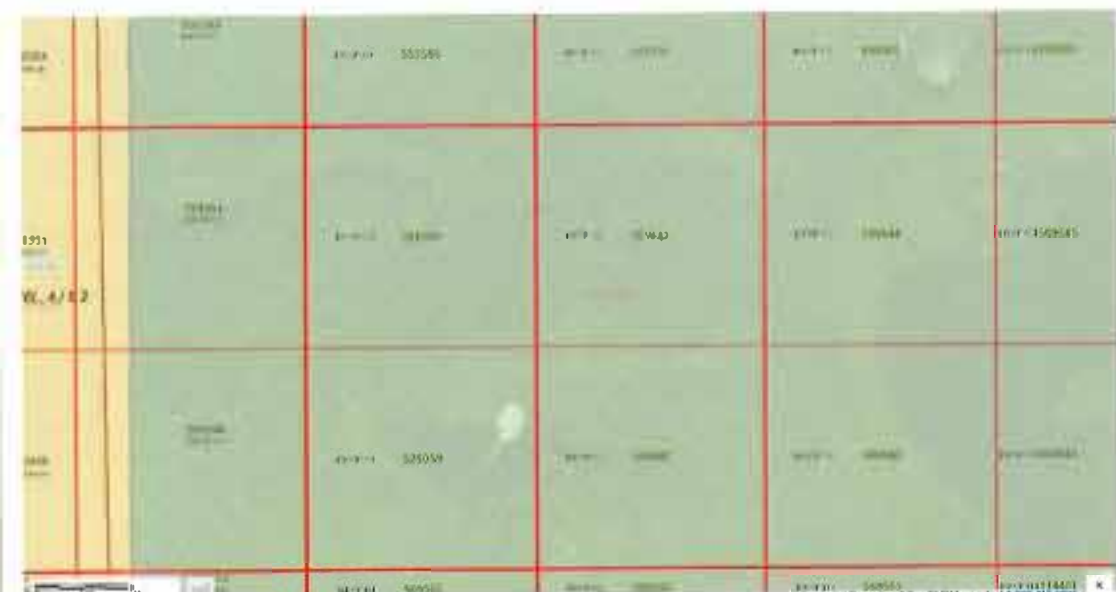
The ground magnetics survey was conducted using a Scintrex Fluxgate Magnetometer (see Appendix 1 for instrument details). The magnetics instrument was zeroed at a neutral location prior to the geophysical survey and readings were taken at a base station location (438000 m E, 5139060 m N) each day to ensure the unit was working properly.

The magnetometer was operated by Mitchell Turcott and readings were recorded by Robert McDonald who was also the GPS navigator. Grid lines were traversed on snowshoe and readings were taken with the magnetometer at 10 metre stations on lines that were spaced 50 metres apart. To ensure magnetometer accuracy readings were tied in at the end of each loop of 2 lines and any magnetic drift (diurnal) was documented and then distributed evenly over the surveyed lines before the data was plotted on the GPS grid.

To eliminate any negative values 550 gammas was added to all of the plotted data for ease of contouring and interpretation (Maps 2 & 3).

## Map 2: Reticulate Lake Au/PGM Property Ground Magnetics Survey Readings





**LEGEND**

<400
400-500
600
700
800
>900

**Gammas**

**Reticulate Lake Magnetometer Survey Grid**

Porter Twp, Sudbury Mining District  
Mining Claims 521059, 521060 & 521061

Date of Survey March 21/22, 2020  
Line Spacing 50 meters with 10 m stations  
GPS: Garmin 60 CSXMap Datum: NAD 83, Grid Reference: UTM Zone 17

Scintrex MF 2 Fluxgate Magnetometer  
Readings in Gammas  
NOTE: 550 gammas added to all readings to eliminate negative values

STATIONS	437350 E	437400 E	437450 E	437500 E	437550 E	437600 E	437650 E	437700 E	437750 E	437800 E	437850 E	437900 E	437950 E	438000 E	STATIONS
5139270 N			410	0	650	590	630								5139270 N
5139260 N	430	390	490	290	570	570	490	510							5139260 N
5139250 N	470	450	670	530	570	570	590	650	490						5139250 N
5139240 N	510	410	750	650	570	650	610	630	530	590					5139240 N
5139230 N	490	430	650	650	630	690	690	650	650	490					5139230 N
5139220 N	490	430	610	650	610	710	710	750	730	490					5139220 N
5139210 N	450	450	650	630	650	690	710	770	770	610	570				5139210 N
5139200 N	450	450	630	650	650	630	710	790	770	690	690				5139200 N
5139190 N	530	430	630	650	630	610	710	650	810	730	610				5139190 N
5139180 N	430	390	630	630	610	590	650	610	810	710	670				5139180 N
5139170 N	490	410	590	630	550	490	490	510	790	810	710	430	570	710	5139170 N
5139160 N	450	450	610	570	530	510	470	490	790	830	730	570	530	770	5139160 N
5139150 N	470	490	650	710	470	530	470	530	750	750	790	630	630	780	5139150 N
5139140 N	470	490	610	750	630	250	450	510	530	890	850	690	690	730	5139140 N
5139130 N	570	590	590	570	590	410	390	550	650	850	850	730	690	750	5139130 N
5139120 N	590	510	570	570	610	350	110	510	710	910	790	750	730	750	5139120 N
5139110 N	610	470	650	610	990	330	530	410	670	810	670	770	750	810	5139110 N
5139100 N	610	530	570	590	490	410	1350	390	650	730	750	710	730	810	5139100 N
5139090 N	570	590	590	530	490	710	3150	350	610	690	750	710	790	810	5139090 N
5139080 N	710	610	590	610	430	1290	2750	290	610	590	810	770	750	750	5139080 N
5139070 N	750	610	530	490	390	690	2150	450	570	590	790	790	750	670	5139070 N
5139060 N	890	470	490	590	350	790	4150	490	490	730	810	790	710	660	5139060 N
5139050 N	810	490	490	590	410	1150	1170	530	510	690	730	780	690	640	5139050 N
5139040 N	770	110	630	510	450	110	810	530	550	730	630	630	630	640	5139040 N
5139030 N	610	850	570	530	10	2750	590	490	570	730	650	690	650	660	5139030 N
5139020 N	650	570	490	530	150	110	590	470	570	750	690	650	650	660	5139020 N
5139010 N	670	390	610	530	750	110	610	470	610	590	730	590	650	650	5139010 N
5139000 N	610	330	430	470	750	830	630	490	630	570	630	570	570	710	5139000 N
	LS W	L4 W	L3 W	L2 W	L1 W	L0	L1 E	L2 E	L3 E	L4 E	L5 E	L6 E	L7 E	L8 E	

**Highlighted and Contoured Magnetic Readings – Reticulate Lake Au/PGM Property**

Magnetometer Survey conducted by: Mitch Turcott & Rob McDonald

## Ground Magnetics Data Results & Interpretation:

Several magnetic highs were located during the magnetic survey some of which are located in the marsh area north of the known gold showing located at line 0 and 5139030 m N.

The known gold mineralization in quartz veins is located on line 0 and line 1 E from 5139000 m N to 5139100 m N and the magnetic response is substantial and in the order of 8750 gammas. More prospecting of this area is recommended to determine the exact orientation of the gold mineralization.

There is a consistent higher than background of magnetic intensity on line 3 E to line 8 E (>700 gammas). The anomaly located at line 4 E @ 5139120 m N at 910 gammas appears to be trending in an east/west direction with much of the anomalous area located in the marsh/wetland area. The broad signature of this anomaly suggests a uniform rock type that may be of interest for gold mineralization.

The single reading of 990 gammas on line 1 W @ 5139110 m N should be followed up with prospecting to determine the source of the magnetic response, outcrop was observed near this station while conducting the survey and it is not far from the known gold showing on line 0.

The magnetic anomaly located on lines 4 W & 5 W @ 5139030 m N to 5139080 m N is of interest and appears to be trending in a northwest direction and may be related to a structural feature like a fault or geological contact between lithologies. This magnetic feature may be of significance if it is structurally related. Further magnetic survey work should be completed west of line 5 W to determine the extent of the magnetic signature.

The magnetic low located on line 2 W @ 5139270 m N is of interest and should be followed up with prospecting to determine the response. This magnetic low may be the result of a dike or geological contact and is located north of the marsh area and rock outcrop should be at or near surface in this location.

## Recommendations:

Further work is recommended for the Reticulate Lake Au/PGM Property based on the magnetic anomalies identified during the ground magnetics survey. Geological mapping on a property scale should be conducted to correlate the ground magnetic data to the property lithologies.

The ground magnetometer survey should be extended to the south of the recently completed survey specifically at line 1 W to line 1 E to determine the extent of the magnetic high outlined in this survey and conditions permitting on the area of the marsh west of line 5 W next winter on the ice.

Areas of magnetic highs should be prospected to determine the presence of sulphides and quartz veins. Rock sampling and assaying should be conducted if the mineralization is deemed of interest.

Areas of poor outcrop exposure may need to be trenched to expose the bedrock which would allow for geological mapping, determination of the orientation of geological structures and any mineralization that may be present. The previously known gold in quartz vein showing located at line 0 should be prospected and stripped of any overburden to try to determine the precise orientation and extent of gold mineralization.

The proposed recommended work program of prospecting, sampling and geological mapping would take approximately 1 week of field work with a two person field crew. The estimated budget for this work program would be approximately \$6,000.00 for labour plus expenses (fuel, meals, sample assay's etc.). Ground magnetic survey work should also be completed south and west of the current magnetics work outlined in this report which would likely take 3 to 4 days of field work with an estimated cost of \$4,000.00 for a two person field crew.

**Reticulate Lake Au/PGM Property Work Report**  
**Daily Log/Expense:**

Reticulate Lake Au/PGM Property Assessment Work Daily Log February,  
2020

<u>Month</u>	<u>Day</u>	<u>Work</u>	<u>Expense</u>
February	17	Research - MNDM Assessment Files	\$400.00
February	23	Research - MNDM Assessment Files	\$400.00
February	24	Trail Brushing & Locating	\$400.00
March	11	Logistics/Equipment Prep/Mag Grid Layout	\$400.00
March	21	Mag Survey - Mitch & Rob	\$800.00
March	22	Mag Survey - Mitch & Rob	\$800.00
March	23	Mag Data Compilation	\$400.00
March	29	Assessment Work Report Compilation	\$400.00
April	9	Assessment Work Report Compilation	\$400.00
<b>Total Expense:</b>			<b>\$4,400.00</b>



## Statement of Qualifications

I, Mitchell Turcott of 662 A Agnew Lake Road, Webbwood, Ontario, do hereby certify that:

I hold a B.Sc. degree in Geology from Laurentian University, awarded in 1998.

I hold a Geological Technician degree from Cambrian College, awarded in 1980.

I have been working as an exploration geologist and prospector since the 1970's for base and precious metals, uranium and dimensional stone in the provinces of Ontario, Quebec, Labrador, Saskatchewan, Yukon and the Northwest Territories.

The information, conclusions and recommendations contained within this report are based on my knowledge, education and experience working in the field and my review of literature, technical reports and other assessment file reports relating to the exploration for Gold, Nickel, Copper and Platinum Group Metals.

I have prepared this report as a requirement for assessment work for mining claims under the Mining Act of Ontario R.S.O. 1990 and is in compliance with Ontario Regulation 65/18 Assessment Work and in the format required as per the Technical Standards for Reporting Assessment Work.



Mitchell Turcott, Honours B.Sc. Geology

April 9, 2020

## **References**

Barry, J.M., Berger, J., Report on Phase 3 Diamond Drilling Agnew Lake Property, 2005; Assessment File Report for Pacific Northwest Capital Corp.

Easton, R. M., Geology and Mineral Potential of Porter and Vernon Townships, Southern Province, 2005; Ontario Geological Survey Open File Report 6172.

Fugro Airborne Systems, Logistics and Processing Report Airborne Magnetics and Megatem Survey Shakespeare and Agnew Lake Property Ontario, Canada, 2004; Assessment File Report for Ursa Major Minerals.

Hale, C. J., JvX Ltd., Agnew Lake Project O'Brien and Bye Grids Report on TDEM, Magnetometer & VLF Surveys, 2004; Assessment File Report for Pacific Northwest Capital Corp.

Kelso, I., Phase 5 Surface Exploration Program Agnew Lake Property, 2005; Assessment File Report for Pacific Northwest Capital Corp.

Woodhead, J., Moul, F., Processing and Assessment of Airgrav Data and VTEM Electromagnetic and Magnetic Data over the Shakespeare Property, 2016; Assessment File Report for Ursa Major Minerals.

## Appendix 1

### How a fluxgate magnetometer works

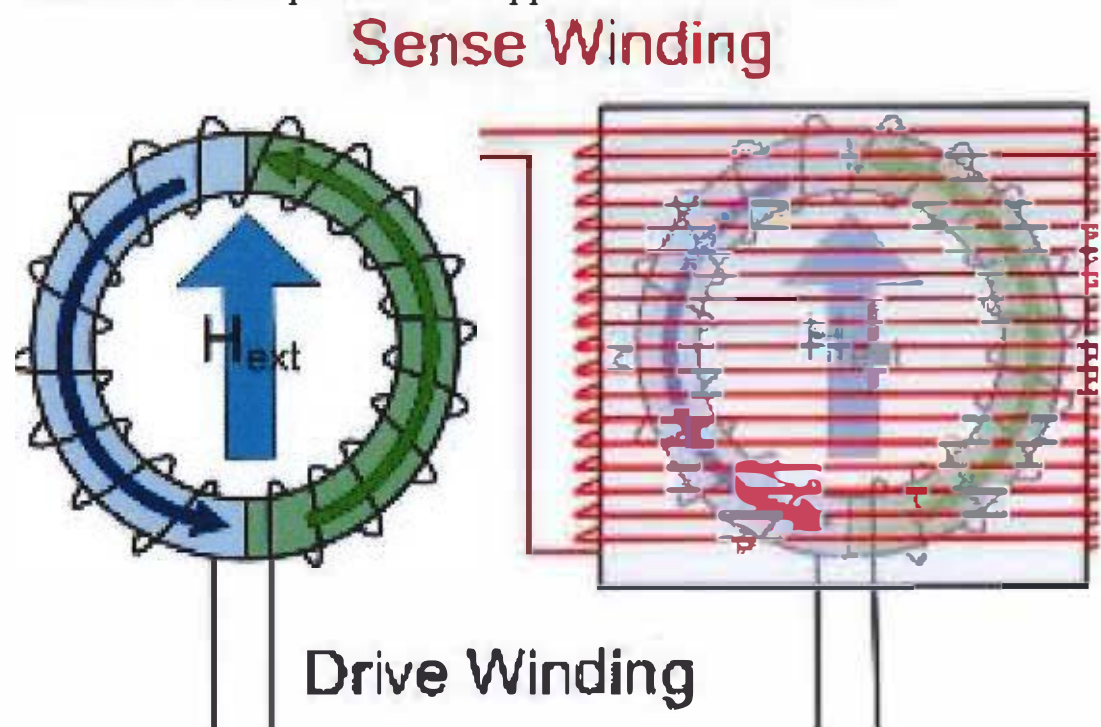
A fluxgate magnetometer is an instrument used to measure magnetic flux density ( $B$ ) or magnetic field intensity ( $H$ ). It consists of a soft-iron core with two coils wrapped around it: a drive coil and a sense coil. An alternating voltage drives the core continuously through a complete hysteresis cycle, from saturation in one direction to saturation in the other. The sense coil measures the flux and the magnetic flux density,  $B$ , integrated over an area. The voltage induced in a coil is proportional to the flux changes in the core.

#### Gating the flux

The magnetic permeability of the core – the slope of the  $B$  vs.  $H$  curve – is modulated as the core goes into and out of saturation: unsaturated, the core has the high permeability of soft iron. Saturated, the core suddenly drops to the low permeability of free space. This means that the flux, the magnetic flux density  $B$  is integrated over an area. The voltage induced in a coil is proportional to the flux density  $B$  in the core due to an external field  $H$ . The voltage induced in a coil is proportional to the flux, due to the external field being switched off as the core saturates and back on as the core desaturates – hence the name “fluxgate”. We may be interested in its individual components or its total magnitude of this gated field to be measured by the sense coil.

Fluxgate sensors are typically ring cores of a highly magnetically permeable alloy around which are wrapped two coil windings: the drive winding and the sense winding (as shown in the figure). Some sensors will also have a third feedback winding, if the sensor is to operate in closed loop.

It is helpful to think of the ring core as two separate half cores shown in blue and green in the figure. This ring core is set up to measure the field in the direction of  $H_{ext}$ . As the current flows through the drive winding, one half core will generate a field with a component in the same direction as  $H_{ext}$  and the other will generate a field with a component in the opposite direction as  $H_{ext}$ .



#### DRIVE WAVEFORM

An example drive waveform is shown in Figure 2a. The transitions are in fact more 'square' than shown in the figure, here they are exaggerated to emphasize what is happening in the 2 half cores.

#### No external field

In the absence of an external field ( $H_{ext} = 0$ ) the two half cores go into and come out of saturation at the same time. The fields generated exactly cancel out as shown in Figure 2b and there is no net change of flux in the sense winding, and hence no voltage induced.

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## With external magnetic field

When there is an external field, the half core generating a field in the opposite direction of the external field (for first transition in Figure 2c, shown in green) comes out of saturation sooner and the half core in same sense as the external field comes out of saturation later. During this time the fields do not cancel out and there is a net change in flux in the sense winding (shown in black). According to Faraday's law, this net change in flux induces a voltage, shown in black in figure 2d. Similarly towards the end of the transition, the half core now generating a field in the same direction as  $H_{ext}$  goes into saturation sooner. Consequently, there are two spikes in voltage for each transition in the drive and the induced voltage is at twice the drive frequency.

## Measuring the field

The size and phase of the induced spikes tells us about the magnitude and direction of the external field. To help amplify this signal to make it easier to detect, the fluxgate magnetometers produced by Imperial College use a capacitor to tune the sense winding. The tuned sensor waveform is shown in red in Figure 2d.

Fig 2a: Drive Waveform

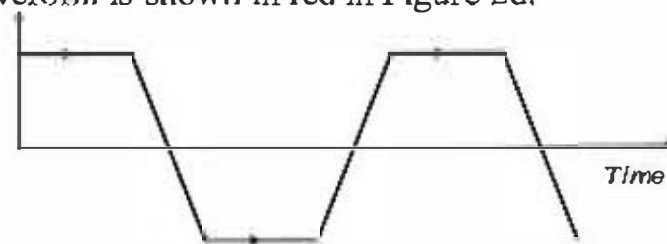


Fig 2b: B generated by each half core with no external field

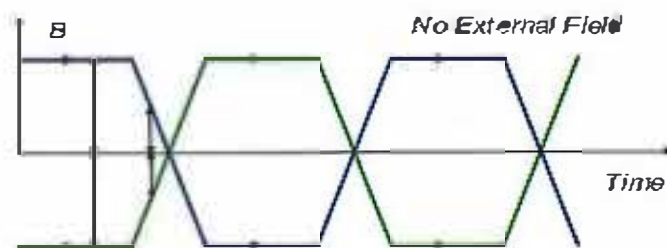


Fig 2c: B generated by each half core in external field

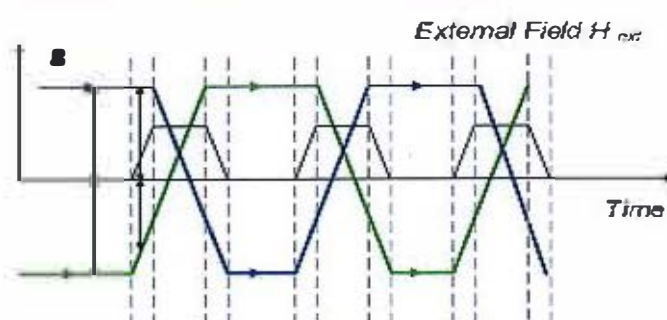
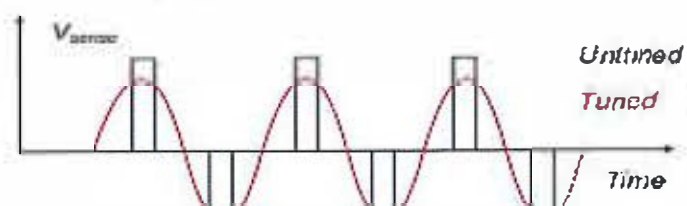


Fig. 2d: Voltage induced in the sense winding (black) Resultant voltage if the sensor is tuned (red)



Geophysical Survey Report for the Reticulate Lake AU/PGM Property

Porter Twp. Sudbury Mining Division, Ontario

OPERATION OF THE INSTRUMENT:

SCINTREX

MF-2 MAGNETOMETER

1. Remove all ferro-magnetic objects from the operator's person, e.g. keys, coins, buttons etc. (zippers should be non-magnetic).
2. Attach carrying strap to the instrument. For light surveying the upper buttons can be used and the strap carried around the neck. In rough terrain, and for long surveys, it is advisable to attach the strap to one upper button around one shoulder to the lower button on the other side of the instrument.
3. If external batteries are to be used, attach battery pack cable to the instrument, and the pack itself to the operator's back.

4. Switch on Main Switch (1) to the first position - BAT.

Meter needle should come to rest within the red arc.

If not, replace or recharge the batteries. **ALWAYS CHECK TERMINALS**

5. Latitude Adjustment (Bucking):

Put Range Switch (3) to 100K position, Main Switch to Positive ("+"), Latitude Switch (2), to 0 gammas and

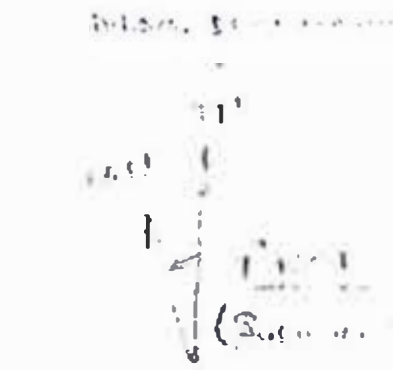
The bucking is then zero, and the magnetometer will read the vertical component of the magnetic field with 1% accuracy. The MF-2, with calibrated latitude control as an option, has Latitude Switch steps of 10,000 gammas  $\pm$  0.5%; thus the reading can be taken on more sensitive ranges and the total value of vertical component calculated by adding the meter reading to the value of the field indicated on the Latitude Switch. In order to obtain readings in more sensitive ranges, it is necessary to adjust the latitude controls to give a zero reading. First, set the Latitude Switch (2) to the position which gives a reading closest to zero on the positive side, and then use the Fine Control to obtain zero. Now set the Range Switch to

the desired range, and readjust the Fine Control, if necessary, to obtain an exact zero reading.

6. The only requirement for taking measurements with the

MF-2 is that the instrument be essentially stationary.

Handwritten notes and scribbles on the left margin, including the word "Magnetic" and some illegible markings.



# Geophysical Survey Report for the Reticulate Lake AU/PGM Property

Porter Twp., Sudbury Mining Division, Ontario

## 7. Calibration

2

This instrument is factory calibrated and field tests have shown that only minor errors (dropping, rough handling, improper shipping) can affect the calibration. Therefore, it is not necessary to re-calibrate in the field. However, should re-calibration become necessary, for any reason, the instrument should be returned to the manufacturer.

8. All parts, except the non-rechargeable batteries and cables, are guaranteed for a period of one year and in the event of a malfunction will be replaced free of charge, providing no obvious misuse has been committed. Should the instrument become inoperative, check the batteries and cables (especially connections). If these prove to be in good order, return the instrument to your supplier, or directly to the manufacturer, for prompt repair.

\*\*\* WARNING: Always remove the external batteries when the unit is being stored or shipped. Those units with internal rechargeable batteries, should be re-charged after each daily use, if possible, and at least once every six months should the unit remain in storage.

9. The charging of rechargeable batteries should be carried out using the accompanying charging unit. The procedure being:

a) Turn the magnetometer main switch to OFF.

\*\*\* N.B.\*\*\* This applies to instruments with external batteries only.

b) Connect the charger cable to the magnetometer plug (E).

c) Plug charger into 120VAC 50 to 60 Hz.

d) The charger Pilot light will indicate that the batteries are being charged and will go off when they are fully charged.

e) If charging is to be done from a 23 to 12V D.C. source, connect the D.C. cable to the charger, and proceed as above.

f) Should the source of charging power be 220 volts A.C., an internal adjustment to the charger is necessary.

If a power source for charging the batteries is not available in the field, the external battery pack (optional) should be used. If external pack is used, the internal batteries have to be re-charged every 6 months.

For convenience the charging plug with chain can be removed and stored in the pocket of the case.

Geophysical Survey Report for the Reticulate Lake AU/PGM Property

Porter Twp. Sudbury Mining Division, Ontario

10. Regional Latitude Settings:

4

Normally, each unit is preset for the Northern Hemisphere.

pre-setting for the Southern Hemisphere will be done

at the factory, as per your instructions and at no

extra cost. However, should the unit be required for

use in both Hemispheres, additional instructions will

be supplied on request.

FIELD PROCEDURES:

GS - 6202  
2880 - 6202

1. Select a base control station, the choice of location being governed by the following considerations:

a) General magnetic background (i.e. not anomalous if possible).

b) Accessibility, in relation to the area being surveyed.

2. Set the magnetometer to read between 0 and 1000 gammas.

150-350  
DEF OF PROS  
FIELD LOG

(For the sake of convenience in contouring and to avoid small negative readings, an arbitrary value of 800 to 1000 gamma may be added to all readings).

3. For effective diurnal control, control stations should be permanently marked, and readings should be taken at the same height and location each time: a simple method is to have the top of the control station picket at about waist height. Rest the probe end of the magnetometer on this picket while taking the reading. In barren country, a mound, large rock or some similar object, can be marked and used as a substitute for pickets.

4. Normal magnetometer survey procedures should be adhered to for the remainder of the survey.

5. Powerful magnets should be kept more than 1 foot away from the MF-2 instrument.

6. During winter operation, external batteries (if used) should be kept in a pocket or under a furka. (Only use batteries with low steel content and Eveready).



# Geophysical Survey Report for the Reticulate Lake AU/PGM Property

Porter Twp. Sudbury Mining Division, Ontario

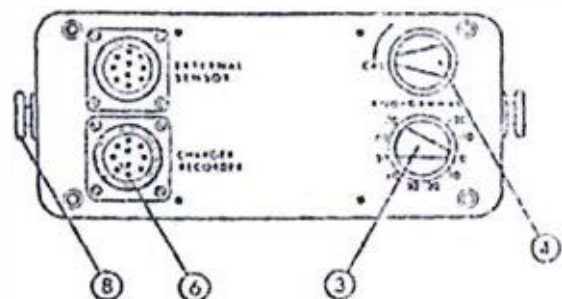
<b>Ranges:</b>	Plus or minus — 1,000 gammas f. sc. 3,000    " 10,000   " 30,000   " 100,000  "
	Sensitivity 20 gammas/div. 50       " 200      " 500      " 2,000    "
<b>Meter:</b>	Tautband suspension 1000 gammas scale 1 7/8" long — 50 div. 3000 gammas scale 1 11/16" long — 60 div.
<b>Accuracy:</b>	1000 to 10,000 gamma ranges $\pm$ 0.5% of full scale 30,000 and 100,000 gamma ranges $\pm$ 1% of full scale
<b>Operating Temperature:</b>	-40°C to +40°C -40°F to +100°F
<b>Temperature Stability:</b>	Less than 2 gammas per °C (1 gamma / °F)
<b>Noise Level:</b>	Total 1 gamma P.P
<b>Long Term Stability:</b>	$\pm$ 1 gamma for 24 hours at constant temperature
<b>Bucking Adjustments:</b> (Latitude)	10,000 to 75,000 gammas by 9 steps of approximately 8,000 gammas and fine control by 10 turn potentiometer. Convertible for southern hemisphere or $\pm$ 30,000 gammas equatorial.
<b>Recording Output:</b>	1.7 ma per oersted for 1000 to 100,000 gamma ranges with maximum termination of 15,000 ohms.
<b>Response:</b>	DC to 5 cps (3db down)
<b>Connector:</b>	Amphenol 91-MC3F1
<b>Batteries:</b>	12 x 1.5V flashlight batteries "C" cell type) (AC Power supply available)
<b>Consumption:</b>	50 milliamperes
<b>Dimensions:</b>	Instrument — 6 1/2" x 3 1/2" x 12 1/2" 165 x 90 x 320 mm Battery pack — 4" x 2" x 7" 100 x 50 x 180 mm Shipping Container — 10" dia x 16" 254 mm dia. x 410 mm
<b>Weights:</b>	Instrument — 5 lbs. 12 oz.     2.6 kg. Battery Pack — 2 lbs. 4 oz.    1.0 kg. Shipping — 13 lbs.            6.0 kg.

Geophysical Survey Report for the Reticulate Lake AU/PGM Property

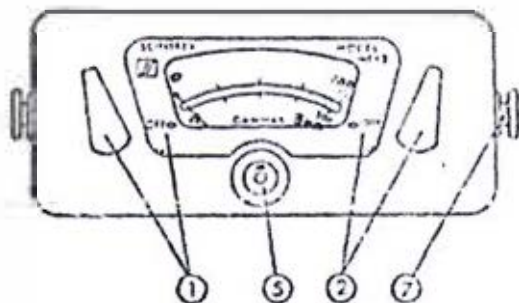
Porter Twp., Sudbury, Mining Division, Ontario

10

3



- 1 RANGE SWITCH
- 2 RANGE SWITCH
- 3 RANGE SWITCH
- 4 BATTERY FUSE CIRCUIT
- 5 LEVER
- 6 CHARGER RECEPTACLE
- 7 UPPER BUTTON
- 8 LOWER BUTTON



## Appendix 2



## GPSMAP® 60Cx and 60CSx



### Navigation features

**Waypoint markers:** 1000 with name and graphic symbol, 10 nearest (automatic), 10 proximity

**Routes:** 50 reversible routes with up to 250 points each, plus MOB and TrackBack® mode

**Tracks:** 100 point automatic track log; 20 saved tracks 500 points each let you retrace your path in both directions

**Trip computer:** Current speed, average speed, resettable max. speed, trip time and trip distance

**Alarms:** Anchor diao, approach and arrival, oil course, proximity waypoint, shallow water and deep water

**Tides:** Built-in celestial tables for best times to fish and hunt, sun and moon rise, set and location

**Map datums:** More than 100 plus user datum

**Position format:** UTM, UTM, Maidenhead, MGRS, Local UTM and other grids, including user UTM grid only

### GPS performance

**Receiver:** 12 channel Sirifast™ high-sensitivity GPS receiver (WAAS-enabled) continuously tracks and uses up to 12 satellites to compute and update your position

**Acquisition times\*:**  
Warm: <1 sec  
Cold: <38 sec  
Autolocate: <15 sec

**Update rate:** 1 Hz, continuous

**GPS accuracy:**  
Position: <10 meters, typical  
Velocity: 0.5 meters/sec steady state

**DGPS (WAAS) accuracy:**  
Position: <5 meters, typical  
Velocity: 0.5 meters/sec steady state

**Protocols and signals:** NMEA 0183 output protocol

**Antenna:** Built-in quad helix receiving antenna with external antenna connection (EMO)

### Moving map features

**Basemap:** Detailed routable basemap with cities, highways, interstates, east, west, rivers, lakes, preloaded with worldwide cities

**Uploadable maps:** Accepts downloaded or plug-in microSD map detail from a variety of optional MapSource media (64 MB microSD card included)

### Electronic compass features (GPSMAP 60CSx only)

**Accuracy:** ±2 degrees with proper calibration; typically ±5 degrees extreme northern and southern latitudes (GPSMAP 60CSx only)

**Altitude feature:** 1 foot

**Resolution:** 1 foot

**Range:** -2,000 to 30,000 feet

**Elevation computes:** Current elevation, resettable minimum and maximum elevation, ascent/descent rate, total ascent/descent, average and maximum ascent/descent rate, Local Pressure (Barometric) (HGT)

**Power Source:** Two "AA" batteries (not included)

**Battery life:** 38 hours typical; up to 30 with battery saving

**Physical Size:** 2.4W x 6.1H x 1.3D inches (61mm x 156mm x 33mm)

**Weight:** 7.5oz. (213 g) est.

**Display:** 1.5 x 2.2 inches (38.1mm x 56mm) 256-color transreflective TFT (160 x 240 pixels) (160 x 240 pixels)

**Case:** Waterproof to IPX 7 standards

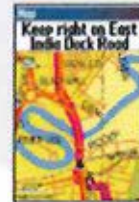
**Temp. range:** 5° to 158°F (-15°C to 70°C)

### Accessories

**Standard:** 64 MB microSD data card  
Belt clip  
USB PC interface cable  
MapSource Trip & Waypoint Manager CD  
User manual  
Quick reference guide  
Wrist strap

### Optional:

Automotive Navigator Kit (includes City Navigator™)  
Automotive mount  
Marine mount  
Suction cup mount  
Carrying case  
12- volt adapter cable  
Powerdata cable  
Remote GPS antenna



With enhanced street map detail from optional MapSource software, you can look up destinations and view accurate point-to-point routes.



The GPSMAP 60 series accepts downloaded map detail, including topo maps with elevation information.



The barometric altimeter feature on the GPSMAP 60CSx provides elevation profiles for climbs and descents.



Garmin's "simple version" GPSMAP 60Cx also features a large easy-to-read electronic compass display.

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Shijie Taipei County, Taiwan  
886-2-2642-9199 Fax 886-2-2642-9099

www.garmin.com

Specifications are preliminary and subject to change without notice.

\* Subject to accuracy degradation to 100m CEP/MS under the U.S. Department of Defense imposed Selective Availability Program.

\*\* These units are also able to transfer waypoints, routes and tracks between the PC and the device using MapSource™.

# Reticulate Lake Magnetometer Survey Grid

Porter Twp, Sudbury Mining District  
 Mining Claim's 521059, 521060 & 521061  
 Mitch Turcott & Rob McDonald

Date of Survey March  
 Line Spacing 50 meters  
 GPS: Garmin 60 CSX

STATIONS	437350 E	437400 E	437450 E	437500 E
5139270 N			410	0
5139260 N	430	390	590	290
5139250 N	470	450	670	530
5139240 N	510	410	750	650
5139230 N	490	430	650	650
5139220 N	490	430	610	650
5139210 N	450	450	650	630
5139200 N	450	450	630	650
5139190 N	530	430	630	650
5139180 N	430	390	630	630
5139170 N	490	410	590	630
5139160 N	450	450	610	570
5139150 N	470	490	630	710
5139140 N	470	490	610	750
5139130 N	570	590	590	570
5139120 N	590	510	570	570
5139110 N	610	470	650	610
5139100 N	610	530	570	590
5139090 N	570	590	590	530
5139080 N	710	610	590	610
5139070 N	750	610	530	490
5139060 N	890	470	490	590
5139050 N	810	490	490	590
5139040 N	770	110	630	510
5139030 N	610	850	570	530
5139020 N	650	570	490	530
5139010 N	670	390	610	530
5139000 N	610	330	430	470
	L5 W	L4 W	L3 W	L2 W

h 21/22, 2020

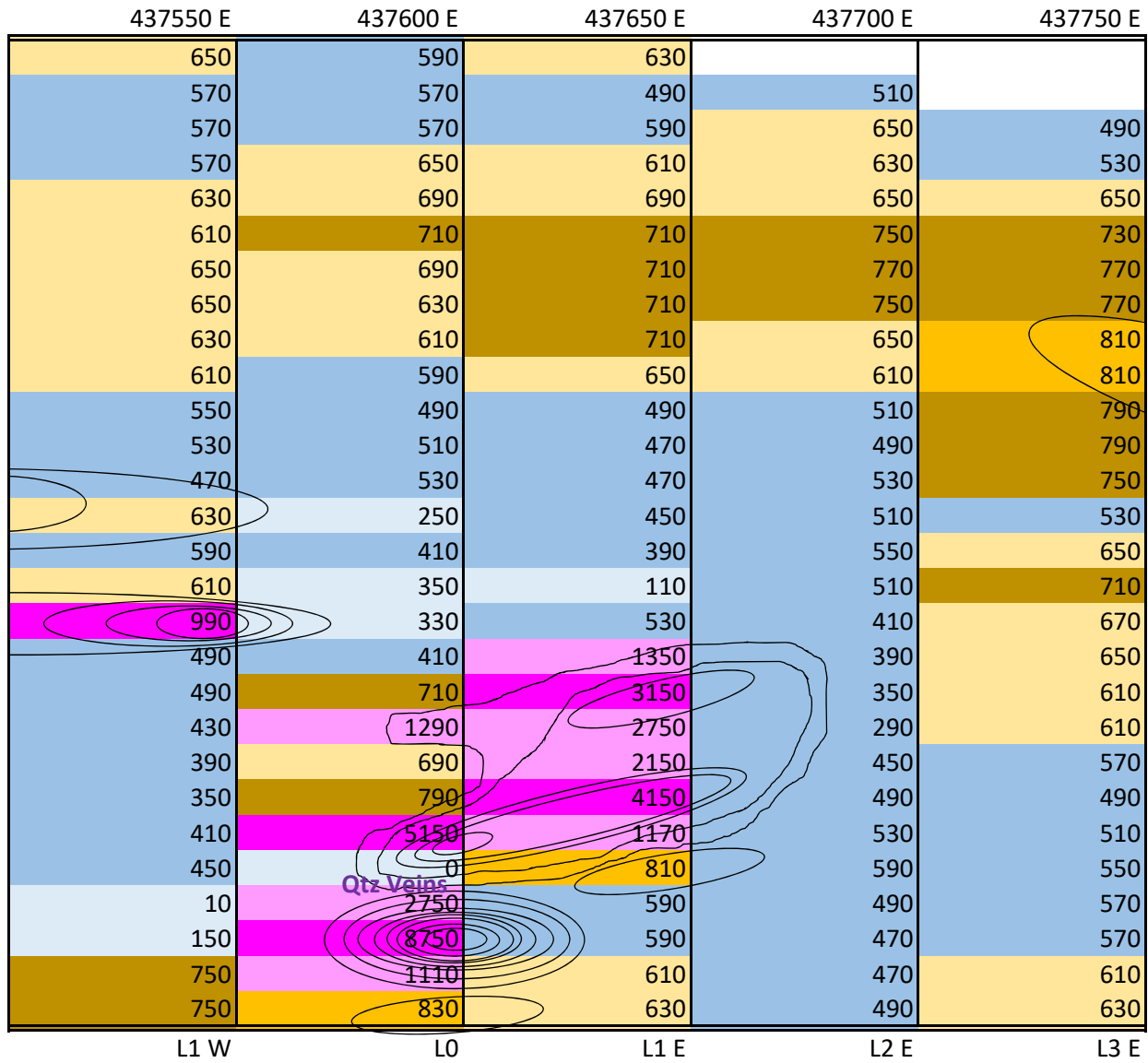
ers with 10 m stations

Map Datum: NAD 83, Grid Reference: UTM Zone 17

Scintrex MF-2 Fluxgate Magnetometer

Readings in Gammas

**NOTE: 550 gammas added to all reading**



s to eliminate negative values

	437800 E	437850 E	437900 E	437950 E	438000 E
	590				
	490				
	490				
	610	570			570
	690	590			630
	730	610			710
	710	670		510	710
	810	710	430	570	710
	830	730	570	530	770
	750	790	630	630	790
	890	850	690	690	730
	850	850	730	690	750
	910	790	750	730	750
	810	670	770	750	810
	730	750	710	730	810
	690	750	710	750	810
	590	810	770	750	750
	590	790	790	750	670
	730	810	790	710	660
	690	730	750	690	640
	730	630	730	630	640
	730	650	690	650	660
	750	690	650		660
	590	730	590		650
	570	630	570		710
L4 E		L5 E	L6 E	L7 E	L8 E

**STATIONS**

5139270 N  
5139260 N  
5139250 N  
5139240 N  
5139230 N  
5139220 N  
5139210 N  
5139200 N  
5139190 N  
5139180 N  
5139170 N  
5139160 N  
5139150 N  
5139140 N  
5139130 N  
5139120 N  
5139110 N  
5139100 N  
5139090 N  
5139080 N  
5139070 N  
5139060 N  
5139050 N  
5139040 N  
5139030 N  
5139020 N  
5139010 N  
5139000 N

**LEGEND**

<400
400-500
600
700
800
>900

***Gammas***

