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VLF EM-16 Survey / Interpretation Report

Waters Twp

UTM Zone 17T- NAD 83

Prepared For

Marietta Kosovsky

April 13, 2020

Frank C. Racicot P. Geo

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1.0 Introduction

Frank Racicot, P. Geo, conducted a VLF-EM16 survey over claims held by Marietta Kosokosky in Waters Township, Sudbury Mining District. The property is about 15 km west of Sudbury.

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.

The survey was carried out between Feb 29 and March 3, 2020. A total of 1.1 km. of VLF was carried out over one North-south reconnaissance grid line. A VLF EM-16 unit was used in conjunction with a handheld Garmin GPS-60CSX unit. The VLF line was north south and was situated so that it ran directly over the pit and showing of QD (Quartz Diorite) near the boundary of claim 124082 and 236209.

QD dikes are specific to the Sudbury Basin and are often the focus of Cu-Ni sulphide mineralization which in turn can be a potential source of PGEs as well.

The main objective was to determine if there was any response over the dike- or elsewhere on the property. It was assumed that any dike or associated mineralization had a general east west strike.

Only one TX transmitter was read at each station. Stations were 25 m apart.

- TX NAA 24.0 KHz – Cutler, Maine

The survey was over Makada Lake from 6+00S to the shoreline at about 0+50N. From the shore line to about 0+50N there was a high voltage cable and a small cabin. A gravel road was between 0+50N and 1+00N. Then most of the rest of the survey from 1+00N to 5+00N was done over a thin layer of soil on outcrop. The high voltage, underground cable near the shoreline (close to 0+25N), produced an anomalous reading with the VLF results.

2.0 Location and Access

The claims and traverse area are located in Waters Township in the Sudbury Mining Division, west of Sudbury Ontario. The claims can be reached by travelling about 5-10 minutes west from Sudbury on old Highway 17 (now Regional road 55) to the town of Lively. One then turns left on Black Lake Road, proceeding south for about 3.8 km and then turning west onto the North Shore Black Lake Road. The main traverse initiated from the intersection of North Shore black Lake Toad and Clark Road.

Figure 1 shows the location of Waters Township in relation to other townships, main highways and railways and Sudbury. Figure 2 shows the location of the claim group in Waters Township.

3.0 Claim Ownership

The claims are currently held by Marietta Kosovsky:

510 Gay St, Apt 200

Nashville, Tennessee, USA

372219

Client No. 392366

Since 2018, the claim units and numbering system has changed because map staking is now in effect in Ontario. Currently 13 claims cover the property, four of which are boundary claims.

The following table printed from the MNDM's MLAS site lists and summarizes the old legacy claim numbers, the new numbering system and all relevant data. There are multiple listing of the same claim number due to the fact that the original legacy claims were bigger and/or did not exactly overlap the new claim numbers.

The following table shows the clients' current claim status.

Legacy Claim ID	Township	Tenure ID	Tenure Type	Anniversary Date	Work Required	Tenure Status
1043223	WATERS	218011	Boundary Cell Mining Claim	2020-04-28	200	Active
1043223	WATERS	200266	Single Cell Mining Claim	2021-04-28	200	Active
1043223	WATERS	181451	Single Cell Mining Claim	2021-04-28	200	Active
1043225	WATERS	236209	Single Cell Mining Claim	2021-04-28	200	Active
			Boundary Cell Mining Claim			
1043225	WATERS	218011	Claim	2020-04-28	200	Active
1043225	WATERS	200266	Single Cell Mining Claim	2021-04-28	200	Active
1043226	WATERS	236209	Single Cell Mining Claim	2021-04-28	200	Active
1043226	WATERS	235354	Single Cell Mining Claim	2021-04-28	200	Active
1043226	WATERS	200266	Single Cell Mining Claim	2021-04-28	200	Active
1043226	WATERS	124082	Single Cell Mining Claim	2021-04-28	200	Active
1223074	WATERS	235354	Single Cell Mining Claim	2021-04-28	200	Active
1223074	WATERS	217443	Single Cell Mining Claim	2021-04-15	200	Active
1223074	WATERS	200266	Single Cell Mining Claim	2021-04-28	200	Active
1223074	WATERS	181451	Single Cell Mining Claim	2021-04-28	200	Active
1223188	WATERS	320795	Single Cell Mining Claim	2020-04-15	200	Active
1223188	WATERS	236209	Single Cell Mining Claim	2021-04-28	200	Active

1223188	WATERS	218180	Boundary Cell Mining Claim	2020-04-15	200	Active
1223188	WATERS	198065	Single Cell Mining Claim	2020-04-15	200	Active
1223188	WATERS	198064	Single Cell Mining Claim	2021-04-15	200	Active
1223188	WATERS	124082	Single Cell Mining Claim	2021-04-28	200	Active

Figure 1

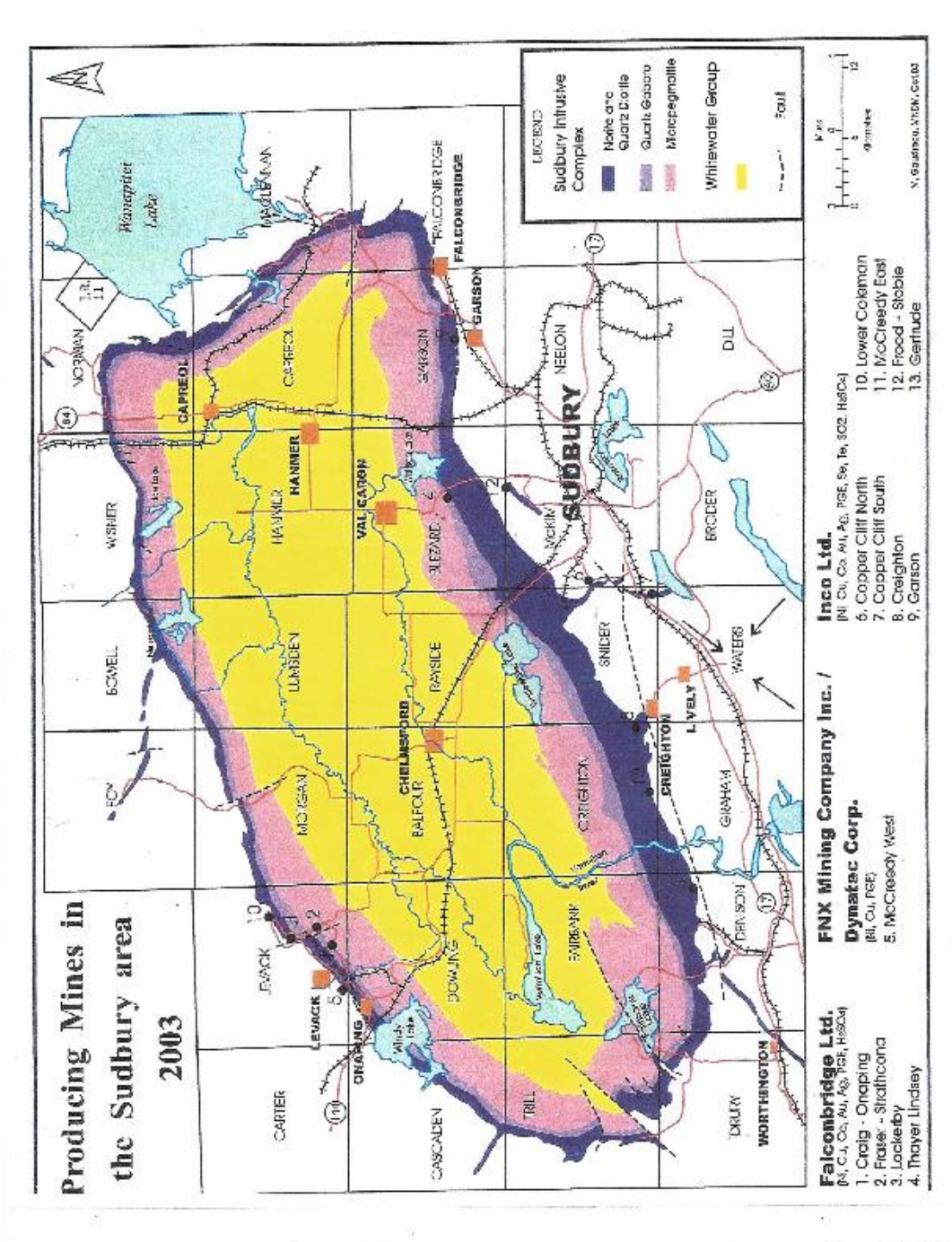


Figure 2

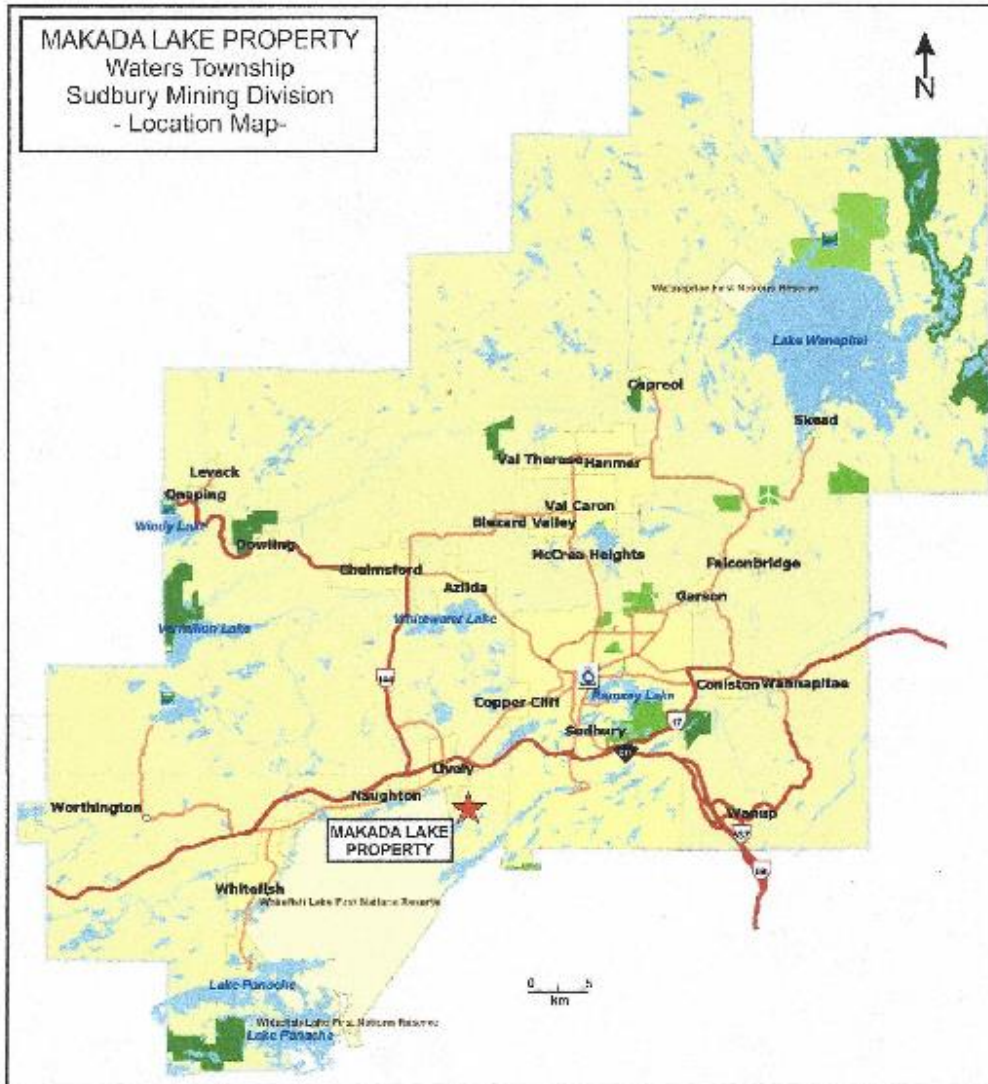
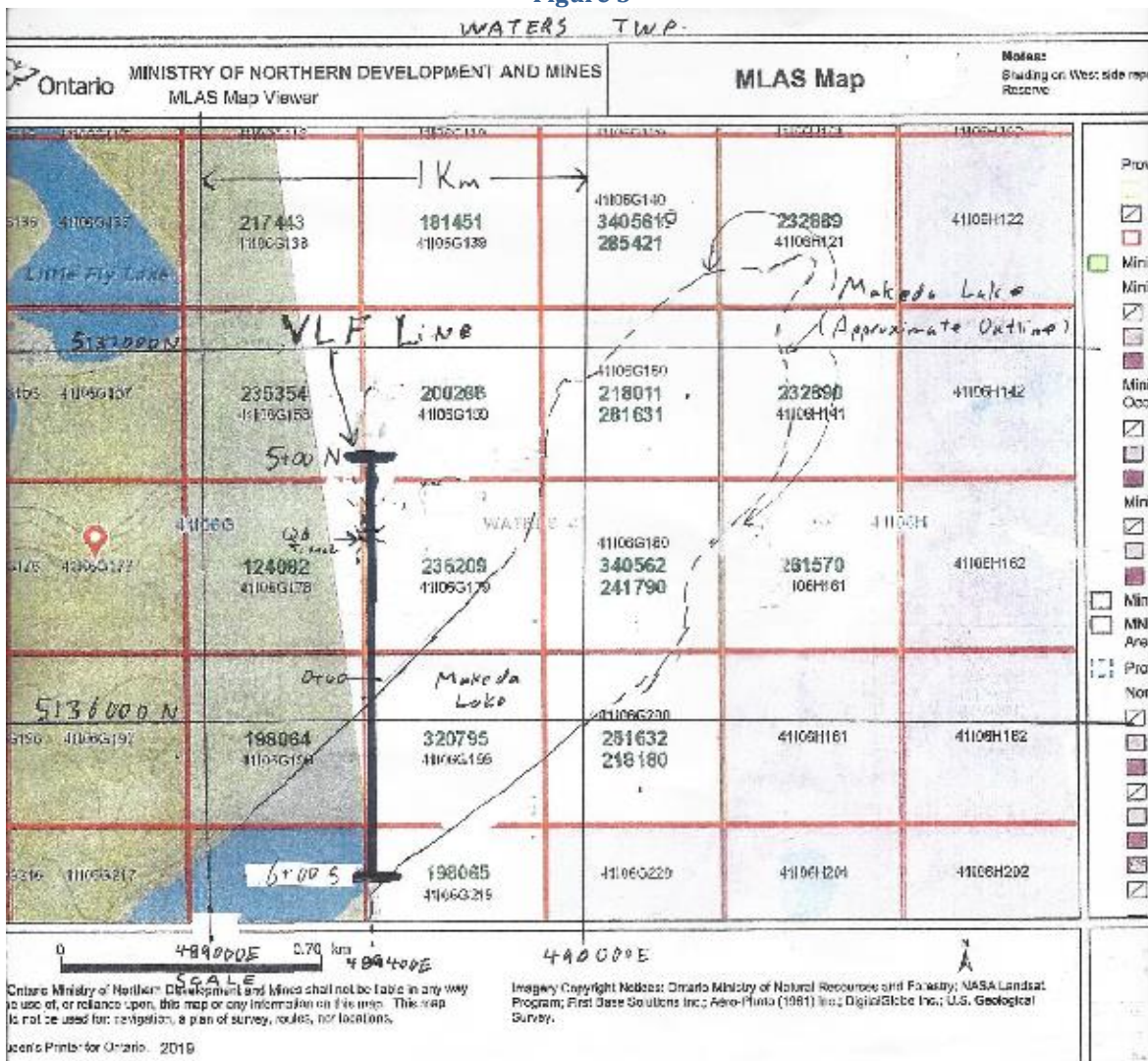


Figure 3



4.0 Topography and Vegetation

The topography on the east side of the northern Makeda claims that were investigated consists mainly of northeast trending ridges of gabbroic rocks. Exposure is generally very good with at least 40-50% exposed rock or obvious outcrop with very little overburden cover that consists of humus, poorly developed soils and sandy clay. There are several northeast trending lineaments within the gabbro as seen on Google Earth, as well as some smaller lineaments. The vegetation on the gabbro is mainly red pine, birch, maple, some oak and some white pine with a few spruce trees.

The topography and vegetation on the west side of the northern claims that were visited is substantially different from that to the east. According to Ken Cards geology map 2119, the west side is mainly quartzite. There were a few quartzite outcrops close to the west edge of the gabbro, but most of the area to the west is flat and void of outcrops. The vegetation on the west side consists mainly of cedar, black spruce, balsam, poplar and a few rare birch trees.

5.0 Previous Work

The area was staked in 1988 and the following is a chronological list of work done since then.

1988 BP resources Canada Ltd., Kirkland Lake: Airborne EM-VLF-MAG survey- part of Waters Twp.

1988 BP resources Canada Ltd., Kirkland Lake: Airborne EM-VLF-MAG survey- part of Waters Twp.

1989 Rauhala, Lively: assays and geochemical analysis: overburden stripping.

1990 Rauhala, Lively: mechanical overburden stripping, sampling and power washing.

BP Resources Canada Ltd., Kirkland Lake: grab samples and assays; best results 1.27% Ni, 0.89% Cu, 216 ppb Au, 31 ppb Pd and 15 ppb Pt (Dave Gamble)

INCO, Copper Cliff: grab samples and assays; best results 0.62% Ni, 0.29% Cu, 309 ppb Au and 103 ppb Pt (Andy Bite).

Falconbridge, Sudbury: grab samples and assays; best results 0.45% Ni, 0.14% Cu, 10 ppb Au, 10 ppb Pd, 30 ppb Pt, 200 ppm Ag and 400 ppm Co (Ted Barnett).

Giroux, Mackenzie, Cronkwright, Sudbury: geophysical survey on claim S-1043223 using Mag-VLF and Crone CEM system; several anomalies were outlined.

1991 Trivett and Rauhala, Sudbury: trenching (S-1043223) to determine source of geophysical anomalies; revealed thick gossan and bedrock mineralization.

- Rauhala, Lively: prospecting, sampling and blasting; best assays 1.59% Cu, 3738 ppb Au and 35 ppb Pd (claims S-1043223 and S-1043225).
- MNDM, Sudbury: grab samples and assays; best results 1.43% Ni, 0.40% Cu, 686 ppb Au and 1308 ppb Pd (Mike Cosec).
- Trivett and Junnila, Sudbury: geological mapping and report.
- Niemi and Trivett, Sudbury: geophysical survey (mag-VLF) on claims S-1043223, 1043225, &1043226 using EDA Omni Plus system; several anomalies were outlined.
- Niemi and Trivett, Sudbury: geophysical survey (Mag-VLF) on claims S-1043223 and 1043225 Using EDA Omni Plus system; several anomalies were outlined.
- 1993** Trivett, Sudbury: completed geophysical survey (Mag-VLF) on part of claim S-1223074; several anomalies were outlined.
- 1996** Rauhala, Lively: manual bedrock trenching and assays.
- 1997** Hopcroft and Berry, Oakville: Mechanical overburden stripping; no assays. Berry, Oakville: diamond drill hole (A1-97; 56.4 m length) completed in area south of and under Pit #2; no assays and only rudimentary logging completed.
- Jobin-Bevans, London: sampling, thin sections, assays and lithogeochemistry as part of Ph. D. thesis work.
- 1998** Jobin-Bevans, Sudbury: sampling, thin sections, assays, lithogeochemistry and detailed geological mapping as part of Ph. D. thesis work.
- 1999** Jobin-Bevans, Sudbury: re-logging of selected parts of drill hole A1-97; drill core sampling (23 core assays, sulphur and selenium); best results 0.11% Ni, 0.11 % Cu and 1.4 g/t Pt+Pd+Au (1033 ppb Pd, 217 ppb Pt).
- 2002** Jobin-Bevans, Sudbury: Investigated the geochemistry of the gabbroic rocks on the west side of the property and various dykes. Best PGE assay was 31 ppb (Pt, Pd, Au). Compared chondrite normalized PGE-Au-Cu-Ni-Co plots with rocks from property and various other areas.
- 2003** Jobin-Bevans and Cecil Johnson, Sudbury: Prospecting program, including a “Beep Mat” survey that identifies 11 new areas with sulphide mineralization with a northeast trending, dyke, including the “CJ Showing”.
- 2004** Jobin-Bevans and Cecil Johnson, Sudbury: Follow up of the “CJ Showing” - that included mechanical stripping and mapping.
- 2005** JVX completes 3.2 km of ground mag and VLF surveys on N-S lines west of road.
- 2007** Johnson Cecil, Sudbury: Channel Sampling Report. Best results 59 ppb Pt, 131 ppb Pd, 32 ppb Au, 1146 ppm Ni, 302 ppm Cu. Walter Peredery Ph.D. identifies the nearby dyke as a possible Quartz Diorite dyke incorporation field observations and thin section analysis.

- 2008** Racicot Frank, Sudbury: 19 samples from a soil sampling line in a selected area and sent in two rock samples for whole rock analyses. High Zn and Mo anomaly Sudbury. Pegasus Metals collected 15 samples- 2 samples from the JR showing assay 0.42 g/t Au, 0.53% Ni, 0.12% Cu.
- 2011** Foy Robert and Johnson Cecil: Surface sampling and Beep Mat survey.
- 2013** Racicot Frank, Sudbury: ICP analysis on four samples and whole rock analysis on 7 samples, one of which is sent in for gold assay. Low results; some thin section work.
- 2017** Johnson Cecil, Sudbury: Prospecting and sampling of xenolith bearing dyke
- 2019** Frank Racicot did a grass roots prospecting report in May, mainly on claim 181451. (Possibly rejected by MNDM).
- 2019** Frank Racicot submitted a shore line mapping report in August, mainly on claim 241790, with a later supplemental thin section and XRF report.
- 2019** Dr Gordon Osinski of the UWO wrote a report with various whole rock analyses and some thin section work from a pit believed to contain a QD (Quart Diorite) dike. Racicot help submit the report and addressed minor deficiencies in the report.

6.0 Generalized Regional Geology

The region around the Makada Lake property in Waters Township consists of Early Proterozoic sedimentary rocks such as Mississagi Quartzites, Nipissing Gabbro intrusions, Middle Proterozoic Sudbury Dykes, the Creighton Pluton and several Grenville age related plutons. The property is about 10 km southwest of the southern edge of the Sudbury Igneous Complex (see Figure 2). An Offset (QD) dyke has been located and explored near Page Lake, about 2.5 km to the southeast.

7.0 Generalized Property Geology

The Makada Lake property is mainly underlain by a Nipissing Gabbro intrusion and Huronian Supergroup sedimentary rocks that include Mississagi Formation feldspathic quartzites, arenite and arkose. There is a magnetic Olivine Diabase dyke on the property. A QD dyke and/or a 'xenolith bearing dyke' has been located on the property, south of the main northern traverse outlined in this report as well as a mafic trap rock dyke.

8.0 Work Performed

On Feb. 29, 2020 Racicot visited the property to locate and orient the north south VLF line that would go over top of the trench where there was previous work done on a possible QD (Quartz Diorite) dike. Permission was granted by the owner, Dan Roy, to cross his property to gain access to the lake. Mr. Roy also had two large German Shepard dogs guarding the property and Racicot was 'properly introduced' to both dogs- as they were left outside when Racicot had to return to finish the VLF survey on March 3rd.

The line was oriented with a compass and readings were taken every 25 meters. A flagged station was put up every 50-100 meters on north of the lake.

Figure 4

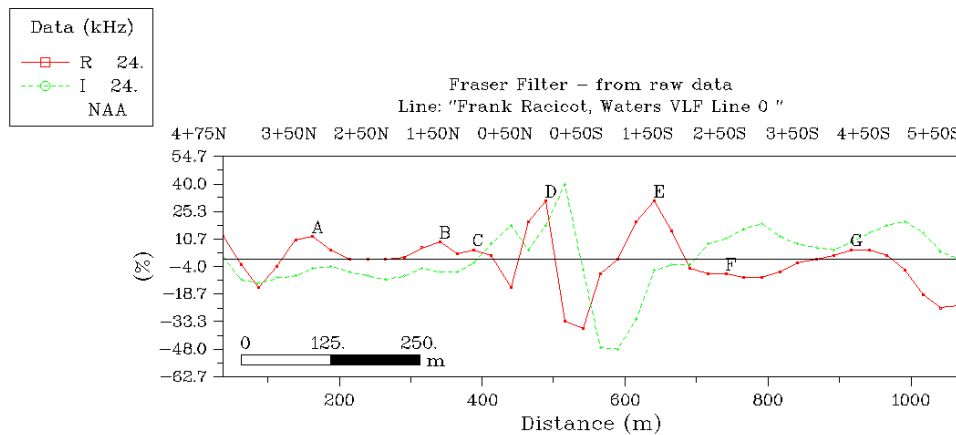
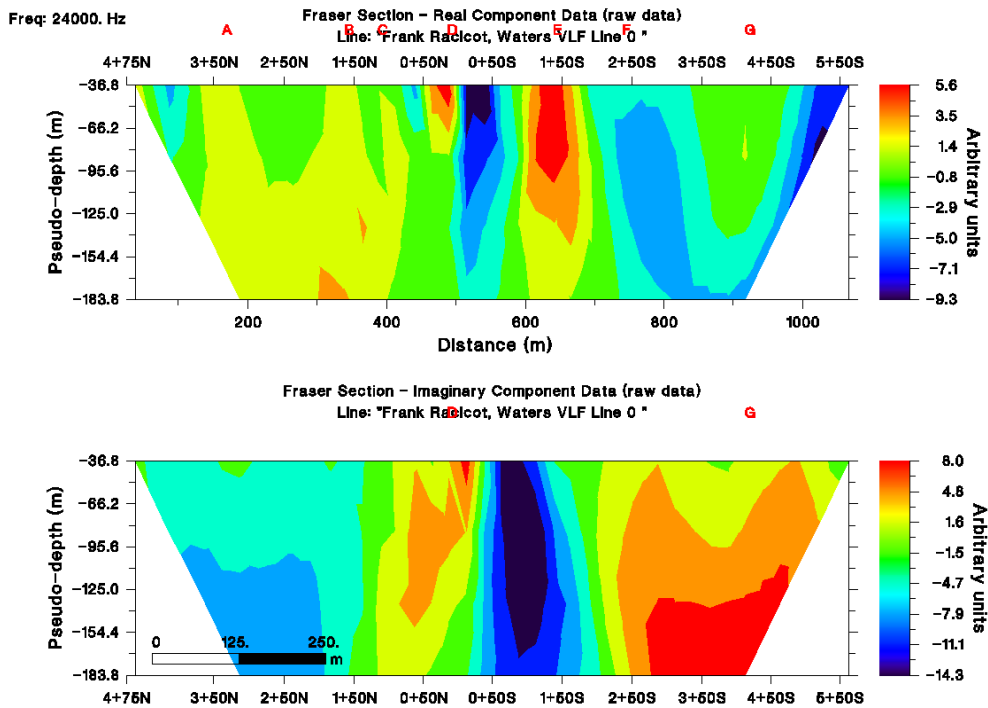


Figure 5



9.0 Personnel

The VLF EM-16 operator and GPS field navigator responsible for the collection of all raw data was Frank Racicot. The raw VLF data was processed by Sandra Slater and the interpretation was done by Shaun Parent- both of Superior Exploration.

10.0 Discussion of Results

Once the raw data was processed, the computer generated 7 'pic points', numbered A to G inclusive. These 'pic points' are best considered as "points of interest" and were not necessarily legitimate geophysical responses. The following interpretation is based on Shaun Parent's extensive experience in doing VLF interpretations.

Point Pic 'A', which was close to, if not exactly over the QD trench, is a possible contact. The VLF survey profile only went about 200 meters north of point pic 'A' and while it might have helped to extend the VLF profile an additional 200 meters, it is speculated the result would have been the same. What is certain, is that there does not appear to be any sulphides or conductor associated with the QD 'zone'.

Point Pics 'B' and 'C' might according to the 4000 Ohm model might be a contact.

Point Pic 'D' based on the Fraser Filter and Raw Data profiles is a surface conductor. This was verified by the fact that a HIGH VOLTAGE notice and electrical box was viewed on the shoreline at about 0+25N.

Point Pic 'E' on the various profiles was the only and best VLF conductor. The fact that it is in the lake is problematic, in that it could only be tested by drilling.

The various plots of the data referred to above, as well as the initial raw VLF field data are in appendix 1

11.0 Recommendations

It is recommended that the possible contacts for point pics 'A', 'B' and 'C' be examined to determine if there is some sort of contact- or some sort of change in rock type in the vicinity of the 'contact areas'.

Since the legitimate conductor at point pic 'E' is in the lake, one possibility would be to project where this conductor hit on either shore and request permission with the owners of the land and/or mineral rights, to examine the area where pic point was projected to hit the shoreline.

In the case of the conductor projected to the west, it would come out somewhere on the reserve. Perhaps a soil survey- or even additional VLF work could be arranged on land, to the west and/or east of conductor/ pic point 'E'.


Alternatively, although Racicot has never heard of a 'Lake Sediment Profile Line' being run, it might be an interesting 'experiment' to determine if there is any metal anomaly associated with the conductor at point pic 'E'. This could be attempted by doing some tightly spaced lake sediment samples with a lake bottom sampling probe- launched from a boat or canoe.

12.0 Certificate of Qualifications

STATEMENT OF QUALIFICATIONS for: FRANK RACICOT

This is to certify that I, Frank Racicot:

- reside in 734 Whittaker St., Sudbury, Ontario, P3E 4B2
- I am an independent geological consultant with over 35 years varied experience in mineral exploration in Canada.
- I graduated in 1974 from Laurentian University, in Sudbury Ontario with a BSc in geology.
- I am a member in good standing of the Association of Professional Geologists of Ontario (APGO)
- Dated this 13th day of March, 2020 Frank C. Racicot (0958)

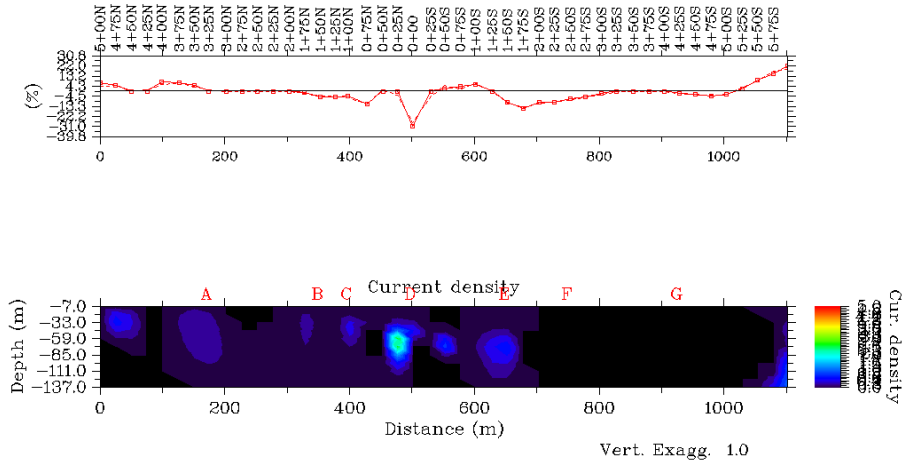


Frank Racicot

APPENDIX 1

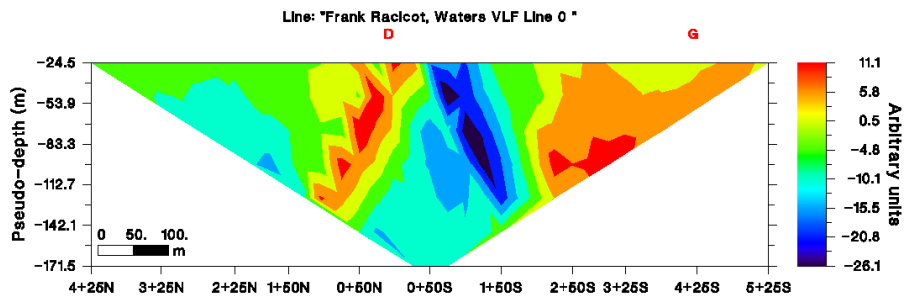
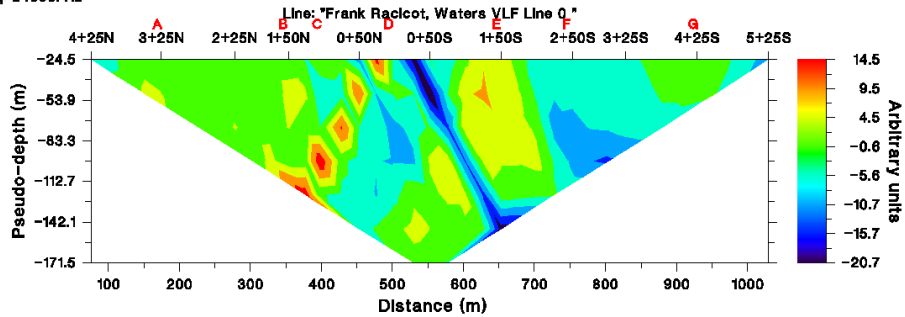
NAA JY Model 2

VLF-EM - Current Density
Line: "Frank Racicot, Waters VLF Line 0 "



NAA KY Profile

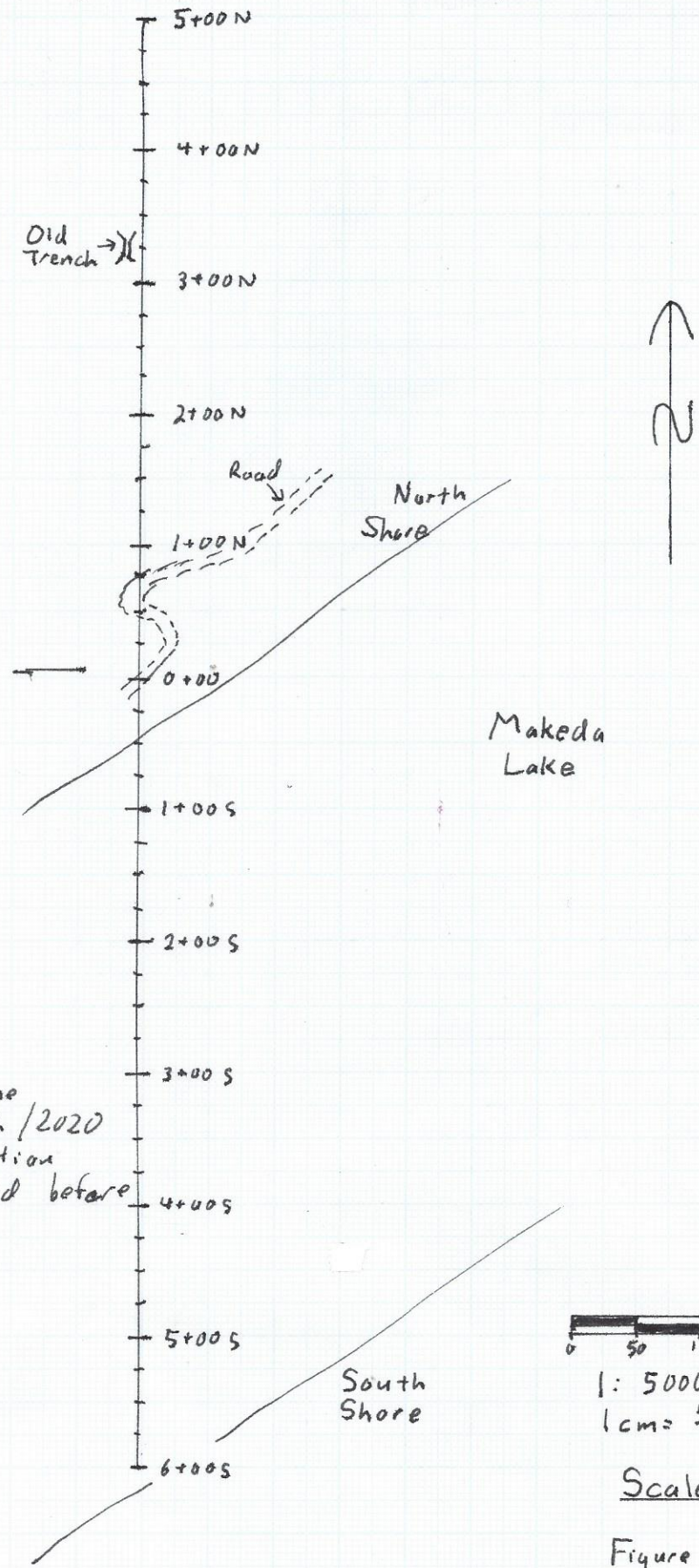
Freq: 24000. Hz



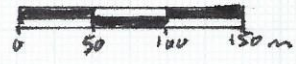
UTM Co-ordinates, VLF Values and Misc Notes Station NAA

Line No.	Grid Stn	Easting	Northing	Elev	In Phase	Out Phase	Comment
0	5+00N	489436	5136700	267	7	-16	
0	4+75N	489434	5136675	267	5	-18	
0	4+50N	489434	5136650	272	0	-20	
0	4+25N	489439	5136625	274	0	-15	
0	4+00N	489436	5136602	277	8	-7	
0	3+75N	489437	5136574	276	7	-10	
0	3+50N	489435	5136550	278	5	-7	
0	3+25N	489430	5136527	289	0	-6	Beside QD trench
0	3+00N	489438	5136500	283	0	-6	
0	2+75N	489438	5136475	287	0	-3	
0	2+50N	489436	5136450	293	0	-2	
0	2+25N	489437	5136425	289	0	2	
0	2+00N	489436	5136399	290	0	4	
0	1+75N	489436	5136375	289	-1	5	
0	1+50N	489435	5136349	284	-5	6	
0	1+25N	489434	5136325	284	-5	10	
0	1+00N	489435	5136305	276	-4	8	
0	0+75N	489438	5136275	268	-11	10	5 m N of Rd
0	0+50N	489435	5136250	256	0	0	
0	0+25N	489437	5136226	246	0	0	
0	0+00	489437	5136202	241	-31	5	Beside House
0	0+25S	489440	5136173	230	0	-23	20 m north of High Voltage cable
0	0+50S	489437	5136151	222			5 m S of Shore & HIGH voltage cable; on lake
0	0+75S	489433	5136126	222			Within 35 m S of high voltage cable; on lake
0	1+00S	489434	5136102	222	6	12	on lake
0	1+25S	489434	5136075	222	0	24	on lake
0	1+50S	489434	5136051	222	-10	20	on lake
0	1+75S	489433	5136026	222	-15	22	on lake
0	2+00S	489434	5136000	222	-10	25	on lake
0	2+25S	489436	5135976	222	-10	20	on lake
0	2+50S	489437	5135950	222	-7	19	on lake
0	2+75S	489434	5135926	222	-5	15	on lake
0	3+00S	489434	5135900	222	-2	8	on lake
0	3+25S	489434	5135876	222	0	7	on lake
0	3+50S	489434	5135849	222	0	4	on lake
0	3+75S	489435	5135824	222	0	3	on lake
0	4+00S	489434	5135800	222	0	2	on lake
0	4+25S	489433	5135775	222	-2	0	on lake
0	4+50S	489434	5135750	222	-3	-4	on lake
0	4+75S	489435	5135725	222	-4	-8	on lake
0	5+00S	489437	5135700	222	-3	-14	on lake
0	5+25S	489434	5135675	222	2	-18	on lake
0	5+50S	489434	5135651	222	10	-18	on lake
0	5+75S	489435	5135625	222	15	-18	on lake
0	6+00S	489434	5135602	222	22	-18	18m N of shore

Sketch Showing North-South VLF Line Co-ordinates



Note: Survey done in early March / 2020
- All picket station markers removed before ice melted.



1: 5000
1cm = 50m

Scale

Figure 3

RACICOT GEOLOGICAL CONSULTING LTD

734 Whittaker St., Sudbury, Ontario P3E 4B2

Telephone # (705) 691-5920

INVOICE #

108N

Date: 14-Apr-20
Submitted To: Marietta Kosovosky

Submitted By: Frank Racicot (Senior Geological Consultant)
Project: Agnew Lake Project
Work Period: Feb 29, 2020 to April 14, 2020

VLF Survey Costs

1) Feb 28: Recon trip to locate access and obtain permission (no charge)	
2) Feb 29 and March 3, 2020: Do 1.1 km of VLF survey in Field (1 day total)	\$450
3) Feb 29 and March 3: Truck rental- 2 days @ \$75 per day (includes gas)	\$150
4) Send data for processing and interpretation and write report between March 10th and April 14th: 2 days @\$500 per day	<u>\$1,000.00</u>
	Sub Total \$1,600
	HST (Not Claimed for credits) <u>\$208</u>
	TOTAL \$1,808

Thanks for the Work HST # 93106 335 RT 0001 Frank C. Racicot P. Geol

EM16 SPECIFICATIONS

MEASURED QUANTITY	Inphase and quad-phase components of vertical magnetic field as a percentage of horizontal primary field. (i.e. tangent of the tilt angle and ellipticity).
SENSITIVITY	Inphase: $\pm 150\%$ Quad-phase: $\pm 40\%$
RESOLUTION	$\pm 1\%$
OUTPUT	Nulling by audio tone. Inphase indication from mechanical inclinometer and quadphase from a graduated dial.
OPERATING FREQUENCY	15-25 kHz (15-30 kHz optional) VLF Radio Band. Station selection done by means of plug-in units.
OPERATOR CONTROLS	ON/OFF switch, battery test push button, station selector switch, audio volume control, quadrature dial, inclinometer.
POWER SUPPLY	6 disposable 'AA' cells.
DIMENSIONS	53 x 21.5 x 28 cm.
WEIGHT	Instrument: 1.8 kg Shipping: 8.35 kg

CAUTION:

EM16 inclinometer may be damaged by exposure to temperatures below -30°C . Warranty does not cover inclinometers damaged by such exposure.