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AIRBORNE GEOPHYSICAL REPORT

Report by: Timothy Lavoie
Wawa Property Claim 4267582 Riggs Township.

Converted to boundary claim(s) 114394, 299939,330061, 332555
NTS 42 C 8; Lochalsh, Ontario
Northern Ontario

February 9, 2020

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Summary

Timothy Lavoie has prepared this report for assessment purposes.

The property is comprised of one contiguous claim block (two units) totaling some 32 hectare area, located in Riggs Township in the District of Algoma, Northern Ontario. The claims lie some forty-eight kilometers northeast of Wawa and within the eastern section of the Wawa-Michipicoten Greenstone Belt. The property lies within a deformation belt, the Goudreau Lochalsh Deformation Zone (GLDZ), in which some of the largest producing gold mines in the Wawa area are situated (including the last four of five producing gold mines in the Wawa area). The GLDZ is known to pass through the southern section of the Lavoie claim.

Historically, the area produced some 1,400,000 ounces of gold at an average grade of 7.15 grams Au per tonne (Magino, Kremzar , Edwards, Cline, Renabie). Within this deformation belt mining values west of the property average 6.03 grams Au per tonne, in the area of the property

7.90 to 27.0 grams Au per tonne, and east of the property 7.89 grams Au per tonne. Since 1988, some 4,000,000 tonnes averaging 8.2 grams of gold per tonne have been outlined on the neighbouring properties. Some of these gold bearing veins have exceptional widths, such as the Richmont C-Vein at 4.5 meters width, and the Edwards vein at 4.1O meters width. Generally, all of the gold veins in the area widen at depth and increase in value with depth on average. All of the significant gold occurrences and gold producers in the area are associated with the Goudreau-Lochalsh Deformation Zone (GLDZ), which also passes through the southern portion of the Lavoie claim.

Some twelve years past, Monopros performed a thorough study of the Manitou Mountain intrusive complex and found the rim to be diamondiferous. Goodwin in the early 1930's was also reported to have found two diamonds in - situ within this complex. The Manitou Mountain stock has been mapped as a vertical cylinder of olivine gabbro which is some 1500 meters in diameter.

Noranda Exploration Ltd. and Quote Resources Inc. found a gabbro complex over the northwest section of the property, which contains between 22.2 and 31.9 percent magnesium oxide resources, and has found the complex to be high in platinoids, nickel, chromium, silica, and iron elements. Recent assays have confirmed that the rim of this

structure averages 28 to 30% magnesium oxide. Other elements of significance within this structure are zinc, vanadium, cobalt, lithium, and gold.

Introduction

The area surrounding the Lavoie claim is known for gold and silver occurrences. Historically, there were four trenches sunk on the Lavoie claim but this data is not available. There was also a small stamp mill / refinery mill set up on the Lavoie claim and no data is available from this project, which includes where the material refined came from.

Structural controls and geological units where gold-bearing zones are located in the area are well understood. Generally, the significant gold- bearing zones are located within shear-spalys coming off the GLDZ shear, and the 110 degree direction is the preferred axis of the most significant gold-bearing systems associated with the GLDZ and other deformation zones throughout Wawa. F.T. Archibald was involved as inspector with the Abandoned Mines Program (AMIS) for MNDM in the early 1990's, and a study of information as well as site visit to various properties indicated this.

Reliance on Other experts

This report contains extracts from a Report on a Helicopter-borne Versatile Time Domain Electromagnetic and Horizontal Magnetic Gradiometer Geophysical Survey, prepared for Trillium Mining by Geotech Airborne Geophysical Surveys, dated August 2019.

Property Description & Location

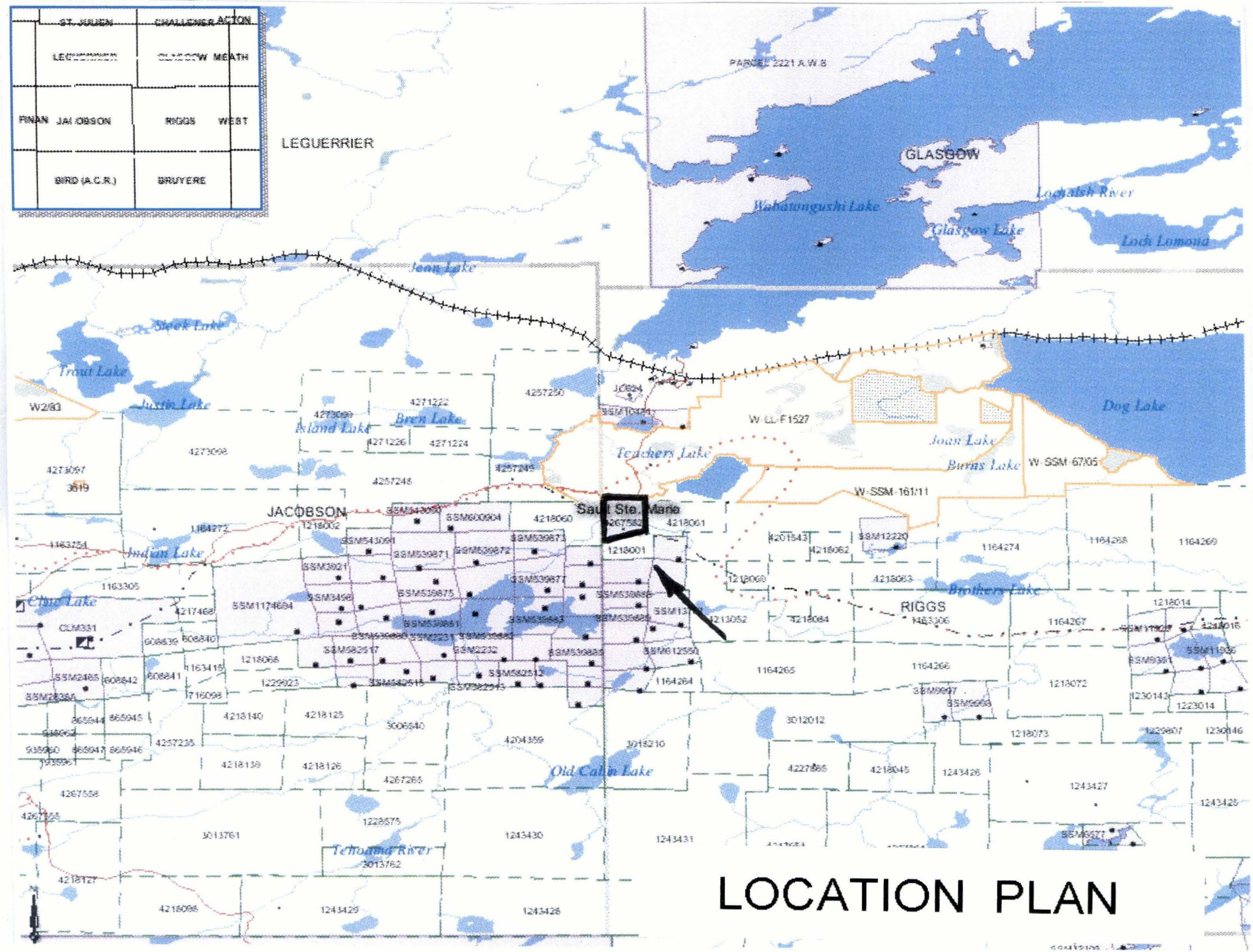
The claim group consists of one claim block within Riggs Township and is made up of six units, and is situated in Riggs Townships in the District of Algoma of Northern Ontario.

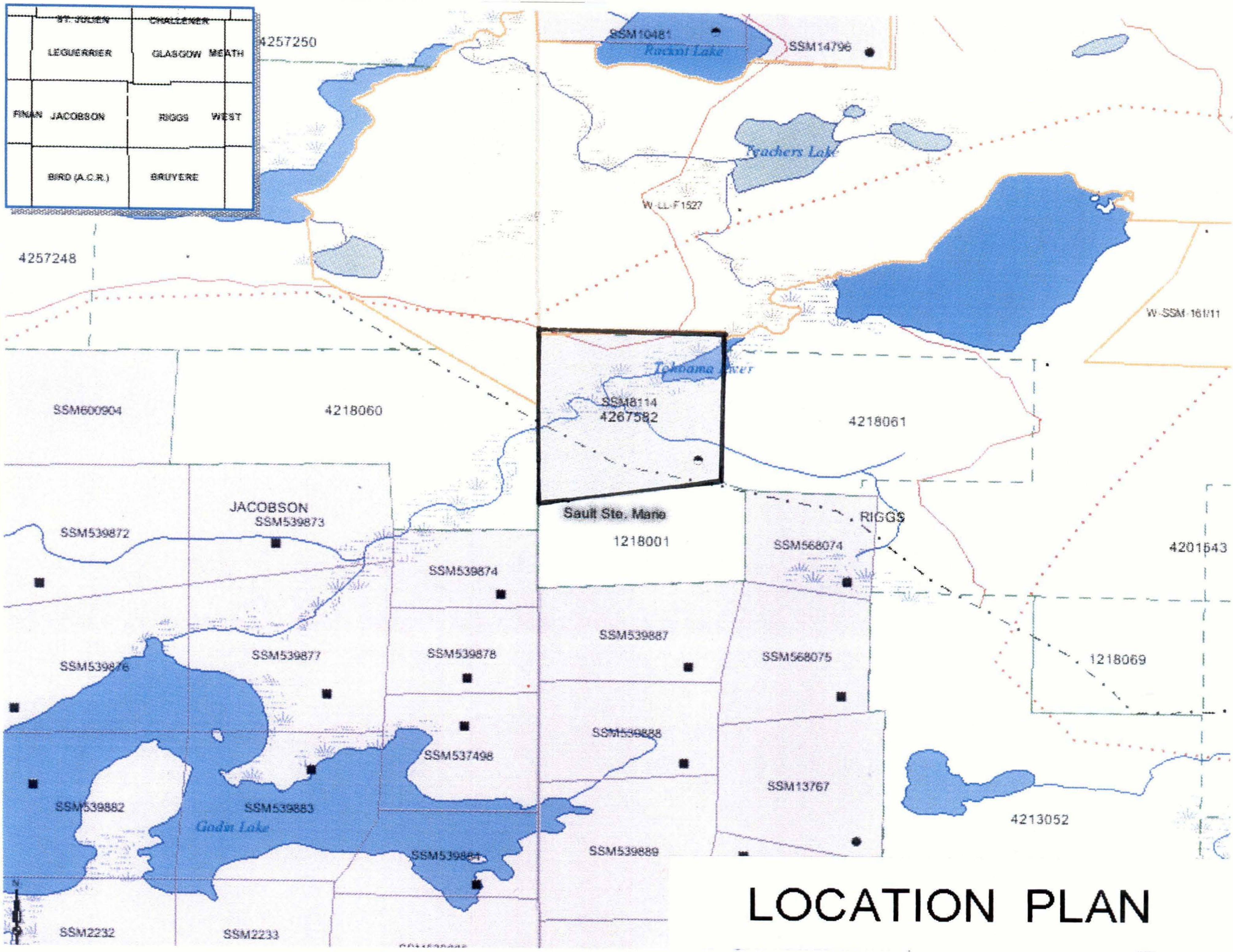
The property is situated some 60 kilometers due north of Wawa, and can be accessed from Wawa by road for some 11O kilometers. Trans-Canada Highway is taken for some 40 kilometers north of Wawa to the Highway 519 which is taken for another 32 kilometers to the Goudreau Road, then toward the “48” Road. The road to Dubreuilville is open year-round, and the road to approximately 10km west of the property is open year-round by Richmont Mines and Argonaut Exploration.

By air, float plane can be taken to Godin Lake or to Dog Lake in the southwest and northeast respectively.

By rail, train can be taken to Lochalsh using the CPR (Canadian Pacific) or to Goudreau using the ACR (Algoma Central). A gravel road joins Lochalsh to Goudreau.

Figure Location Map


ST. JULIEN
CHALLENER
ACTON
GLASGOW
MEATH
FINAN
JACOBSON
RIGGS
WEST
BIRD (A.C.R.)
BRUYERE
LEGUERRIER
PARCEL 2221 A.W.S
GLASGOW
Wabatongushi Lake
Glasgow Lake
Lochalsh River
Loch Lomond
Jean Lake
Sleek Lake
Trout Lake
Justin Lake
Island Lake
Bren Lake
Teachers Lake
Joan Lake
Burns Lake
Dog Lake
W-LL-F1527
W-SSM-67/05
W-SSM-161/11
W2/83
JACOBSON
Sault Ste. Marie
Indian Lake
Cline Lake
Brothers Lake
RIGGS
Old Cabin Lake
Tellooma River
LOCATION PLAN

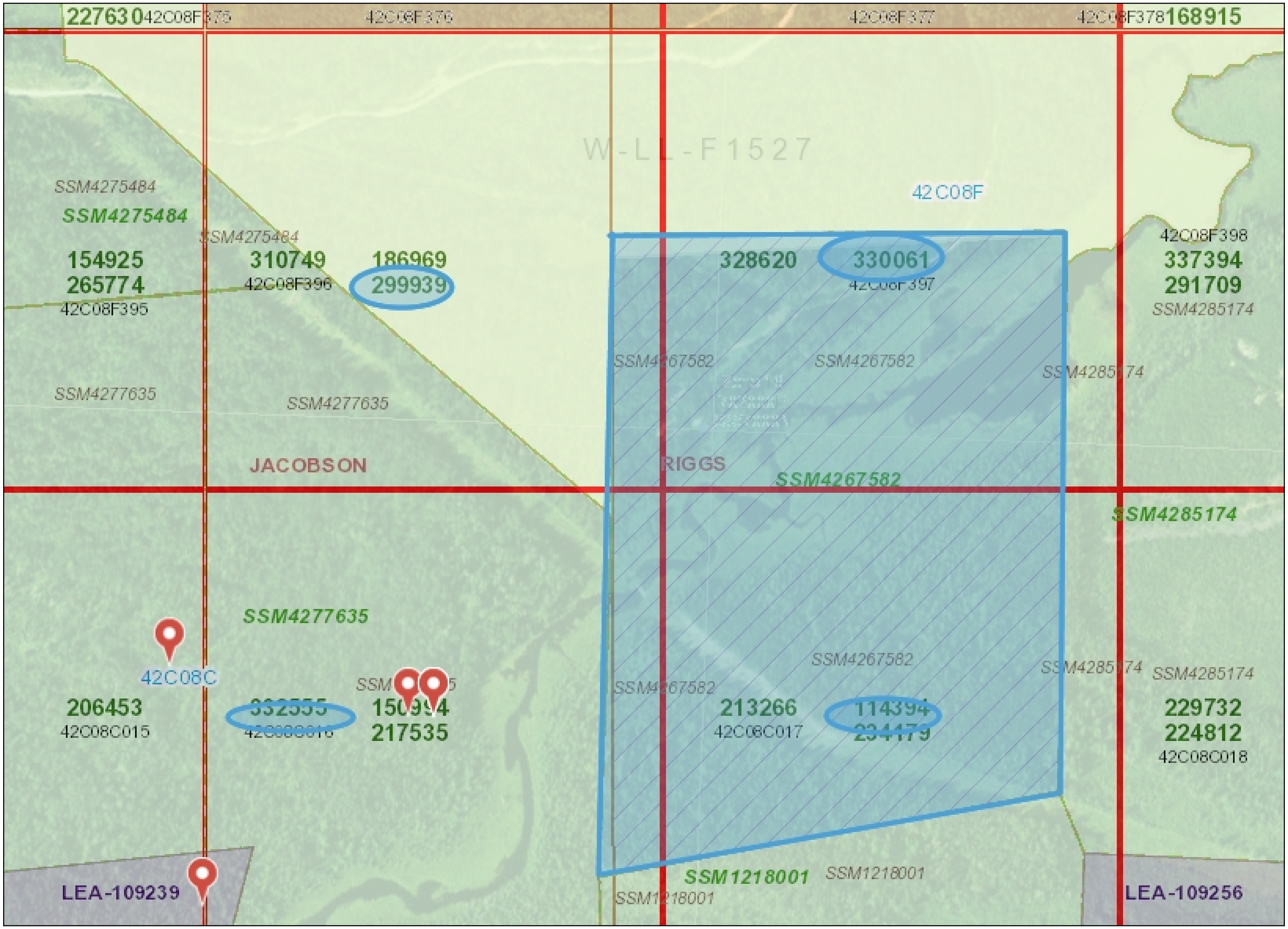


LOCATION PLAN

Ontario MINISTRY OF NORTHERN DEVELOPMENT AND MINES
MLAS Map Viewer

MLAS Map

Notes:



Legend

Provincial Grid Cell
- Available
- Pending
- Unavailable

Mining Claim

Mining Lease
- Surface Rights Only
- Mining Rights Only
- Surface and Mining Rights

Mining Licence of Occupation
- Surface Rights Only
- Mining Rights Only
- Surface and Mining Rights

Mining Patent
- Surface Rights Only
- Mining Rights Only
- Surface and Mining Rights

Boundary Claim

Legacy Claim

Mining Claim - History

Mining Land Tenure - History

Mining Division

MNDM Townships and Areas

Provincial Grid Group

Non-Mining Land Tenure
- Patent, Surface Rights Only
- Patent, Mining Rights Only
- Patent, Surface and Mining Rights
- Lease, Surface Rights Only

0 0.30 km

Projection: Web Mercator

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Accessibility & Climate

The property, consisting of one claim block, is situated in Riggs Township in the District of Algoma of Northern Ontario, and can be accessed from the Lochalsh-Goudreau Road along a driveable logging road which bypasses property to the north. The property is accessed can on the north-west through the use of a historical access road which connects to the Lochalsh-Goudreau Road.

The property is situated some 60 kilometers due north of Wawa, and can be accessed from Wawa by road for some 11O kilometers. Trans-Canada Highway is taken for some 40 kilometers north of Wawa to the Highway 519 which is taken for another 32 kilometers to the Goudreau Road, then toward the “48” Road. The road to Dubreuilville is open year-round, and the road to immediately west of the property is open year-round by Richmont Mines and Argonaut Exploration.

By air, float plane can be taken to Godin Lake in the central portion or to Dog Lake in the eastern portion.

By rail, train can be taken to Lochalsh using the CPR (Canadian Pacific) or to Goudreau using the ACR (Algoma Central).

Road access for seven months of the year and five months of the year the road between Lochalsh and Goudreau is snow covered.

Snowmobilers use the road between Lochalsh and Goudreau in the wintertime. Up to two meters of snow is expected in the wintertime and snowshoes are recommended for traversing. In the coldest part of the winter, temperatures of -40 C are encountered.

Lodging is available in Dubreuilville, Lochalsh, and Goudreau throughout the year.

The Town of Wawa and town of Dubreuilville are full-service communities with housing and manpower with a history of mining expertise.

Topography & Resources

The property is generally gently undulating. Although there is approximately five percent surface outcrop, most of the area is covered by shallow overburden of less than a few meters. There are some areas in the swamps and north sections of the property, which are covered by up to five to eight meters of glacial till overburden.

An Algoma Power distribution line crosses the north and east section of the property. There are several sub-stations along this line and can be accessed within the property boundaries.

Recent timbering of approximately one-half of the property has opened the area with good road access.

The opening of three mines in the area keeps the roads open year- round. There is a good work force in the area due to the recent closing of four gold mines in the area.

Recent timbering within the last five years has occurred to the east and south of the property.

History

In 1920, the area was staked by Michael and Webb, and a zone some 30.5 meters in length and 2.1 meters in width averaging 13.7 grams Au per ton was outlined by trenching and channel sampling.

From 1921 to 1927, three shafts were sunk on the Cline-Pick property adjoining to the west. By 1936, another shaft (#4) was sunk to 366 meters with eight development levels. Some 331,842 tons was extracted above the 152 meter level. In 1959, some 20,000 tonnes averaging 19.5 grams Au per tonne was proven in the #3 Shaft area.

During the same period the Edwards Mine inclined shaft was sunk on the Carbonate Zone, a 0.60 meter wide vein on surface.

In the early 1930's, the McCall and Laughlin showing were discovered on the northwest side of Godin Lake.

From 1934 to 1938, a program of trenching, channel sampling and diamond drilling over the Markes Zone confirmed a tonnage estimate of 150,000 tons averaging. Some thirteen drill holes, drilled by Erie Canadian Mines, were used to define this tonnage.

In 1937, a 1,431 tonne sample averaging 9.64 g/t Au was recovered from the Edwards Mine.

From 1938 to 1946, the Cline Lake Mine, adjoining to the west side of the property, went into production and produced some 231,842 tons averaging 9.26 grams Au per tonne.

In 1940, E. Bruce mapped the area for the Ontario Department of Mines.

From 1946 through 1980, the area had very little exploration mainly due to access, and it was not until timbering occured that tr.e area opened up again.

In 1948, some 302,730 tnne @ 6.0 g/t Au (58,427 oz.Au) was produced by Pick Mines Ltd. at the Cline Mine from an eight level underground development and above 190 meter depth.

In 1953 and 1954, Algoma Steel located gold associated with the Goudreau Iron Range with grades exceeding 3.0 g/t Au.

In 1974, Amax Minerals Exploration did surveys, sampling and diamond drilling. In 1976, Hughes -Lang of Gulf Minerals completed airborne geophysics over the area in search of base metals.

From 1975 to 1977, Fl. Campbell and D. Burt drilled seventeen holes with 1372 meters of diamond drilling on the "A" Zone. One hole, 75-3, averaged 8.23 grams Au per tonne over 4.70 meters width.

In the late 1980's, Monopros spent two years in evaluating the olivine gabbro complex. In the early 1990's, Noranda Exploration looked at the base metal and magnesium potential of the Manitou Mountain Complex.

From 1980 to 1982, Vega Gold Explorations Ltd. picked up the three patented Algoma Steel claims and staked 42 claims around this showing. They ran 24 km. of magnetics and VLF electromagnetics, 19 kilometers of induced polarizations survey, and some 50 kilometers of geological survey. Some 39 drillholes totalling some 1750 meters was drilled over four zones. Till sampling was performed over the Godin Lake area. The "A Zone, occuring within the hangwall part of a 30.5 meter wide shear, was traced for a length of 460 meters. The deepest hole in this zone (46 meter depth) intersected 7.20 grams Au over 3.23 meters. The "B" and "E" zones located gold-bearing values stratabound with pyritic iron formation (chemical Metasediments).

In 1982, ROK Engineering Construction was awarded the lease for the Cline Minewhich was bought out by Cline Development Corporation in 1983.

In 1983, Canamax and Algoma Steel explored for gold in several areas paralleling the GLDZ in Finan and Jacobson Townships.

In 1983, Anaconda Canada Exploration Ltd. drilled seven holes totaling 617.5 meters. Anaconda were particularly interested in potential primary volcanic exhalative gold enrichment around Godin Lake. They also mapped the property and performed magnetics and induced polarization surveys.

From 1983 to 1985, Fl. Sage of the Ontario Geological Survey mapped the area covering Jacobson and Riggs Townships.

In the late 1980's, Monopros spent two years in evaluating the olivine gabbro complex. In the early 1990's, Noranda Exploration looked at the base metal and magnesium potential of the Manitou Mountain Complex.

In 1983, Canamax Resources Inc. and Algoma Steel Inc. formed a joint venture over the Goudreau iron range whic encompasses the Canamax-Kremzar property. In 1990 a ramp was put under Goudreau Lake and a 4,167 tonne bulk sample processed in the Kremzar Mill.

In 1983, Anaconda Canada Exploration Ltd. drilled seven holes totalling 617.5 meters. Anaconda were particularly interested in potential primary volcanic exhalative gold enrichment around Godin Lake. They also mapped the property and performed magnetics and induced polarization surveys.

From 1983 to 1985, A. Sage of the Ontario Geological Survey mapped the area covering Jacobson and Riggs Townships.

From 1984 to 1985, Noranda Mines optioned the Cline Mine and performed drilling of 4,679.8 meters in sixty holes.

In 1986, Vencan Gold (formerly Spirit Lake Explorations Ltd.) acquired the Edwards Mine. This property reverted back to F.T. Archibald for a short period afterwards and reverted back to Vencan after certain shareholder requests were made.

From 1986 to 1987, Esso Minerals drilled the Markes showing with 2316 meters in 27 drill holes, and outlined some 75,000 tons averaging

5.75 grams Au per tonne. The program also consisted of backhoe trenching, channel sampling, VLF electromagnetics, and magnetics. This was done at a cost of $325,000 and it was decided to drop the option due to a commitment of spending another $425,000.

In 1986 and 1987, Magino Mine which is to the west and along the southern deformation zone, 8,000,000 tons averaging 8.57 grams Au per ton was outlined. F.T. Archibald Consulting Ltd., under a management contract, discovered the new zone which averaged 1.5 to 1.7 meters in width. Thirteen of the first sixteen holes intersected visible gold and the property was sold to Muscocho after twenty-three holes were drilled.

In 1988, Canamax drill indicated 2,240,042 tons averaging 7.71 grams Au per tonne in three zones, two in the south deformation zone and one along the northern deformation zone. These zones are located west of the property and along the same deformation which crosses the property.

In 1988, some 644,514 tons have been delineated in seven zones at the Edwards Mine property which adjoins to the western end of the Pele property. Although two of these zones, the Porphyry and Carbonate Zones, were drill indicated at 15.5 grams Au per tonne they are presently being mined at an average grade of 34.3 grams Au per tonne.

FT.Archibald Consulting Ltd. headed the management team which put in the discovery hole (88-24).

In 1988 and 1989, K.Heather and Z.Arias of the Ontario Geological Survey mapped several of the surface-stripped gold-bearing zones in the area, including the Markes Occurrence.

In 1988, ROK Engineering upgraded indicated resources at the Cline Mine to 203,840 tnne @ 8.80 git Au (57,687 oz.Au). Noranda Exploration drilled ten holes totalling 1997 meters the same year, and another eight holes totalling 2261 meters in 1989.

In 1990, Win-Eldrich drilled some 1O holes totalling 1931 meters was drilled on the Cline Mine property. A total of four gold-bearing zones were delineated.

In 1991, the Renabie Mine, operated by Barrick, mined 294,800 tonnes averaging 6.22 git Au (averaging 58,952 oz.Au per year). The mine operated from 1947 to 1991 when ventilation and cave-problems forced the mine to close. Values averaged between 6.0 git to 6.3 git Au and the mine produced over 1,000,000 oz. Au during its lifetime.

From 1986 to 1992, the Magino Mine produced some 105,543 oz. Au from 699,497 tonnes averaging 4.26 *git* Au.

In 1993, Hemlo (Noranda Exploration) Gold Mines drilled 2097 meters in 13 holes (two phases) to test the economic mineralization at depth in the "A" Zone and "E" Zone. Although 93-1 hit widths of 3.5 grams Au over 8.2 meters, consequent holes were found to be spotted in the wrong positions to hit the downward plunge. Values as high as 5.1 grams Au over 1.0 meter intersected the "E" Zone. The program also consisted of induced polarization surveys, geological mapping and prospecting, and soil geochemical surveys. Some 32.3 km of linecutting and 16.8 km. of induced polarization was run over the "A" Zone and "E" Zone areas during this program.

In 1996, Patricia Mining acqired the Kremzar property and did 16,862 meters of drilling in 49 holes. In 2004, an underground mining program on the Island and Lochalsh Zones commenced and a total of 8,137 meters in 53 holes drilled.

In 1996, Vencan Gold drilled 3,081 metres on the Plowman (Cline Mine) claim immediately east of the Edwards Shaft.

In 1998, J.C. Archibald and F.T. Archibald drilled separate areas of and sampled the Manitou Mountain Gabbro Complex. This confirmed the existance of magnesiumk oxide within a gabbro sill structure. Initial prospecting did not uncover the diamondiferous heterolithic brecciazones around the gabbro complex.

In 2002, Strike Minerals acquired the Edwards property from Vencan. A total of 10,596 meters in 41 holes was drilled the same year., delineating seven parallel gold-bearing zones. The Carbonate Zone and Porphyry Zones are the main zones that were mined by River Gold Mines.

In 2004, RPA estimated an inferred resource of 275,000 tonnes averaging 13.1 g/t (116 ,000 oz. Au at the Kremzar and Richmont spent

$12,622,482 by 2005 on this project.

In 2006 and 2007, Cline Mining Corp. drilled 29 hole totalling 13,803 meters. In 2008, some thirty-one holes totalling 5,576 meters was drilled on the Cline Mine property. From 1987 to 2008, some

$4,512,729.00 has been spend on exploration of the Cline Mine property.

In 2012, some 219,739 meters of drilling in 1,21O surface and underground drill holes were drilled on the Magino property to date; whereby narrow high-grade gold-bearing veins were observed in the mafic volcanics and wide sections of low-grade gold within the altered (quartz-carbonate granodiorite intrusives). A total resource of 6,606,180 oz. Au averaging 0.87 g/t Au has been calculated to date.

In 2013, Cline Mining Corp. acquired 12.5% of the Edwards Mine interest which is now being contested by Strike Minerals. In 2013, Strike Minerals was seved with a Construction Lien for $1,451,834.00 Strike have a working deficit of $6,048,962.00

Regional Geology

All of the gold-bearing deformation zones lie on the north limb of the Michipicoten (Wawa) Greenstone Belt which lies within the Superior Province of the Canadian Shield. This belt is 140 kilometers in length and 45 kilometers in width.

The Supracrustal sequence contains at least three cycles of volcanic rocks (Sage ,1991), and is characterized by metamorphosed intermediate to mafic metavolcanics (andesites, basalts, coarse grained flows) and felsic to intermediate tuffs and metasediments (greywacke, siltstone, and argillite). Algoma type iron formation consisting of chert-siliceous bands and pyrite phases followed by carbonate phases are located along the felsic and mafic interfaces.

The volcanic rocks have been intruded by granitic - granodioritic rocks, gabbro dykes and sills, quartz-feldspar porphyry, and diabase dykes. The granitic rocks range from tonalites to trondjhemite.

All of the rock units, with the oldest and bottom of the pile being the felsic metavolcanics overlain by mafic metavolcanics, have been folded in a weak foliation and a lower (greenschist facies) of metamorphism.

The belt is comprised of three volcanic cycles. Cycle 1 of the *Hawk Assemblage* is 2889 Ma, Cycle 2 of the *Wawa Assemblage* is 2750 Ma, and Cycle 3 of the *Catfish Assemblage* is 2700 Ma. The GLDZ is a synclinal structure with strike-slip faulting with sinistral movement whereby gold-bearing vein occur withinsubsiduary splays (ie- Beattie Mine along Porcupine-Destor Fault, Osisko Malartic along Cadillac Break of which author has been involved with both occurrences).

Geological Setting

The property is located within the Michipicoten Greenstone Belt and specifically within the northern splay of the Goudreau-Lochalsh Deformation Zone (GLDZ) which crosses through the southern half of the Lavoie property. The property is underlain by mafic metavolcanics (pillowed basalt) which has been metamorphosed to a greenschist and amphibolite facies. The rocks include Cycle 2 felsic to intermediate metavolcanics (southern part of the claim) to Cycle 3 mafic volcanic rocks

(central and northern part of the claim). The Magino Mine, Richmont Mine, Edwards Mine, and Cline Mine are hosted within Cycle 3 mafic volcanic rocks which lie along the contacts with granodiorite (trondhiemite) intrusives such as Magino Mine and Godin Lake.

Structural Geology

There are two directions of brittle-ductile high-strain zones in the host rocks which include: mafic metavolcanic basalt flows, quartz-feldspar porphyry intrusives, and carse grained flows (altered gabbro). The strains are: 80 to 90 dextral (oblique slip) and 110 to 115 dextral (oblique slip). Two other minor strains are 45 to 55 degrees and 140 to 150 degrees. The most important for gold mineralization throughout the Wawa

Greenstone Belt is the 110 degree direction. Four periods of deformation are prevalent; the main two along a 80 to 90 degree axis and along a 110 to 115 degree axis.The supercrustals have been cut in a northwesterly direction by late, sinistral faults which are for the most part intruded by diabase (olivene or pyroxene bearing) dykes.

Alteration within the gold-bearing zones consists of chlorite, biotite, potassic-rich, serecite, carbonate(ankerite), and ironcarbonatization.

Mineralization associated with the gold-bearing systems is primarily pyrite with minor amounts of pyrrhotite, chalcopyrite, sphalerite, and angle (+- 70 degrees).

The olivine gabbro complex is high in magnesium which increases towards the rim. In this area the rim is micro-brecciated and has potential for diamonds due to the fact it is a deep-seated complex with high olivine- chromite content. This olivine diabase complex is a deep-seated unit which has potential for diamondiferous material along the contact edges.

There are two structural controls in which gold-bearing vein systems splay off the east-west trendin Goudreau-Lochalsh Deformation Zone (GLDZ); which are 070 to 075 degrees (ductile) and 110 degrees (ductile- brittledextral slip). In the Wawa area the 110-degree axis is the most important for gold-bearing vein systems. The 070 to 075 is within post- mineralized faults (T.Deevy, Magino Mine). The gold-bearing veins are within five stages of alteration associated with: seriticization, slicification, pyritization, cabonatization, ankeritization, chloritization, and dolomitization. At the Edwards Mine there are two sets of perpendicular faults in which vertical uplift block faults control the hydrothermal-gold mineralization within pinches and swells within stacked strain fractures (C.Kuryliw , 2003).

Quartz-carbonate veins with banded silica-pyrite exhibit extensional strain and boudinage with higher gold values associated with grey-blue translucent seams.

Visible gold is often seen within the sections of sugary- blue/grey silicification. Gold values and widening of the gold-bearing vein systems increase with depth which is indicative from Goudrea across to Missanabie (Renabie Mine) within the GLDZ system.

Property Geology

The property is mainly underlain by mafic and felsic metavolcanic flows (pillowed basalts and tufts) which dip 70 to 90 degrees to the north. These flows are intercalated by coarse grained flows of possible gabbro intrusive origin. The northwestern edge property has been intruded by an olivine gabbro complex some 1500 meters in diameter.

The mafic Volcanic flows are tine grained to coarser grianed phases and are generally foliated at 070 degrees. The coarser grained units are medium grained and gabbroic textured with 10% bluish quartz eye phenocrysts. Historically, the gold-bearing zones favor the contacts between fine and coarse grained units.

The felsic volcanic flows are medium grey with increa3ed pyrite and silica and 10% blue quartz eye phenocrysts. Historically, the gold-bearing zones favour the contacts between the mafic and felsi volcanic units.

Most of the gold-bearing zones on the property are associated with a series of east-west trending shear zones (each up to 10 to 15 meters in width) which are associated with the mafic metavolcanic units. Within the shear zones, higher gold concentrations are associated with cross-cutting fault structures which splay off the shears on both sides at a 20 to 30 degree angle. The shears are also stratigraphically controlled by the coarse and fine grained phases as well as by felsic and mafic volcanic contacts. Intrusion of these zones by quartz-feldspar porphyry which have re-concentrated gold mineralization and are also hosts for gold mineralization.

Most gold-bearing zones in the surrounding area plunge 70 degrees to the east with a northeasterly or southeasterly rake. In areas cross-cutting faults in the steeply north-dipping zones can fold and flatten to 45 to 55 degrees.

Gold-bearing zones are primarily found within mafic metavolcanics (carbonate-chlorite-potassic altered basalts), coarse grained flows (epidote-altered gabbro), quartz-feldspar porphyry (with serecite- carbonate alteration), granodiorite intrusives, and altered felsic metavolcanis (rhyolite). They are associated with siliceous-brecciated shearing related with east-west shear structures or northwest trending fault structures. Gold mineralization is associated with grey-white "sugary" textured quartz and is dependent upon the finer disseminations and amounts of sulphide mineralization.

Optimum sulphide amounts for gold mineralization are from 2 to 5% pyrite mineralization.

Base metal occurrences are associated with the olivine-gabbro intrusive complex which covers the northwest portion of the claim group. This complex measure approximately 1500 meters in diameter.

The area surrounding the gabbro complex has potential for gold and silver.

Mineralization and Alteration

The GLDZ hosts most of the significant gold-bearing occurrences in the area. The GLDZ is separated into the North Band (Magino , Kremzar , Edwards, Cline, A-Zone , B-Zone and Lavoie), and the South Band (Island , Lochalsh ,Goudreau, Markes, Vega "E" Zone).

The North Zone is mainly within Mafic Volcanic Basalts, and the South Zone mainly within, felsic volcanic tufts. Quartz-feldspar porphyry, granodiorite intrusives, and diabase contacts are also associated with gold-bearing systems in the GLDZ.

The GLDZ has approximately thirteen parallel gold-bearing veins in the north Zone and some five gold-bearing zones in the South Zone. Some of these could be extensions of the same zone.

When gold mineralization is associated with granodirite intrusives and quartz-feldspar intrusives it is usually of finer and lower grade. When gold mineralization is associated with quartz-carbonate veins within mafic volcanics and felsic volcanics it is usually with coarser visible gold (speck to cloud gold) and higher values.

Alteration within the gold-bearing zones consists of silicu-carbonate, ankerite, albite, biotie, chlorite, and tourmaline. Crenulated and folded pyrite-silica bands (and grey-sugary textured quartz and sulphide content 2% to 3%) usually indicate higher grades of gold. There are flat-lying zones as well as steeply dipping zones, which the gold systems are associated.

Mineral Deposit Types & Other Gold Zones

The **Murphy Lake Mine** is within mineralized quartz veins associated with GLDZ trending 110 degrees.

The **Magino Mine Deposit** is an orogenic gold occurrence related to greenstone hosted quartz-carbonate quartz veining which are structurally controlled within metamorphosed terranes which can co-exist with iron formation and turbidite hosted vein systems. (Dube & Gosselin 2007).

From 1933 to 1939 some 105,792 tonnes was mined at an average grade of 2.57 git Au. Low values shut the mine down.

The **Kremzar Mine** has thirteen original gold-bearing veins, which occur as quartz veins within shears, and some associated with diabase dyke contacts. From 1988 to 1992, some 306,603 tonnes averaging 4.77 git Au (46,798 oz. Au) was produced by Muscocho. Low head grades and dilution problems shut the mine down.

The **Edwards Mine** occurs within quartz veins and quartz feldspar porphyry within offset shears from the main GLDZ shear. F.·om 1996 to 2001, River Gold Mines ramped to 270 meters depth and mined 160,000 oz. Au. Although the head grade at the mill was 13.2 git Au, the actual grade on site was 31.1 git Au; loss is due to the fact that free visible gold never made it to the mill. The vein at surface is 0.60m width and widens to 7.1 meters width at the bottom of the ramp. Values are consistent and do continue past the bottom of the ramp (J.Pleicash personal communications 2001).

Generally, gold-bearing systems within the GLDZ system are associated with brittle-ductile splays and brittle fault-hosted breccia style mineralization (Heather and Arias, 1992).

Exploration Program 2019

The 2019 exploration program consisted of working with Trillium Mining to establish an Airborne Geophysical Survey program. I became aware that Trillium Mining was working on its property and was undertaking an Airborne Geophysical Survey program. In reviewing a number of options with Trillium, it became evident that Trillium would be willing to work together and share the cost and results of the program.

Attachment A is the report provided by Geotech Ltd. “Report on a Helicopter-borne Versatile Time Domain Electromagnetic and Horizontal Magnetic Gradiometer Geophysical Survey”. Summary maps for the area flown over the Lavoie claim is included in Attachment B.

In future work, this report will guide my annual work efforts, and to continue to gain better information in respect of the claim property and areas with greatest promise.

Attachment A

Report on a Helicopter-borne Versatile Time Domain Electromagnetic and Horizontal Magnetic Gradiometer Geophysical Survey

February 9, 2020

VTEM™ Plus

REPORT ON A HELICOPTER-BORNE VERSATILE TIME DOMAIN ELECTROMAGNETIC (VTEM™ plus) AND HORIZONTAL MAGNETIC GRADIOMETER GEOPHYSICAL SURVEY

PROJECT: TRILLIUM GOLD PROJECT
LOCATION: WAWA, ONTARIO
FOR: TRILLIUM MINING CORP.
SURVEY FLOWN: MAY – JUNE, 2019
PROJECT: GL190070

Geotech Ltd.
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GEOTECH
AIRBORNE GEOPHYSICAL SURVEYS

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EXECUTIVE SUMMARY

TRILLIUM GOLD PROJECT
WAWA, ONTARIO

During May 28th to June 20th, 2019 Geotech Ltd. carried out a helicopter-borne geophysical survey over the Trillium Gold Project situated near Wawa, Ontario.

Principal geophysical sensors included a versatile time domain electromagnetic (VTEM™plus) system and a horizontal magnetic gradiometer with two caesium sensors. Ancillary equipment included a GPS navigation system and a radar altimeter. A total of 965 line-kilometres of geophysical data were acquired during the survey.

In-field data quality assurance and preliminary processing were carried out on a daily basis during the acquisition phase. Preliminary and final data processing, including generation of final digital data and map products were undertaken from the office of Geotech Ltd. in Aurora, Ontario.

The processed survey results are presented as the following maps:

- Electromagnetic stacked profiles of the B-field Z Component
- Electromagnetic stacked profiles of dB/dt Z Components
- B-Field Z Component Channel grid
- Total Magnetic Intensity (TMI)
- Magnetic Total Horizontal Gradient
- Magnetic Tilt-Angle Derivative
- Calculated Time Constant (Tau) with Calculated Vertical Derivative contours
- Resistivity Depth Images (RDI) sections are presented

Digital data includes all electromagnetic and magnetic products, plus ancillary data including the waveform.

The survey report describes the procedures for data acquisition, processing, description of equipment, final image presentation and the specifications for the digital data set.

1. INTRODUCTION

1.1 GENERAL CONSIDERATIONS

Geotech Ltd. performed a helicopter-borne geophysical survey over the Trillium Gold Project situated near Wawa, Ontario (Figure 1 & Figure 2).

Joe Currie represented Trillium Mining Corp. during the data acquisition and data processing phases of this project.

The geophysical surveys consisted of helicopter borne EM using the versatile time-domain electromagnetic (VTEM™) plus system with Full-Waveform processing. Measurements consisted of Vertical (Z) and In-line Horizontal (X) and cross-line Horizontal (Y) components of the EM fields using an induction coil and a horizontal magnetic gradiometer using two caesium magnetometers. A total of 965 line-km of geophysical data were acquired during the survey.

The crew was based out of Wawa, ON for the acquisition phase of the survey. Survey flying started on May 28th and was completed on June 20th, 2019.

Data quality control and quality assurance, and preliminary data processing were carried out on a daily basis during the acquisition phase of the project. Final data processing followed immediately after the end of the survey. Final reporting, data presentation and archiving were completed from the Aurora office of Geotech Ltd. in August 2019.

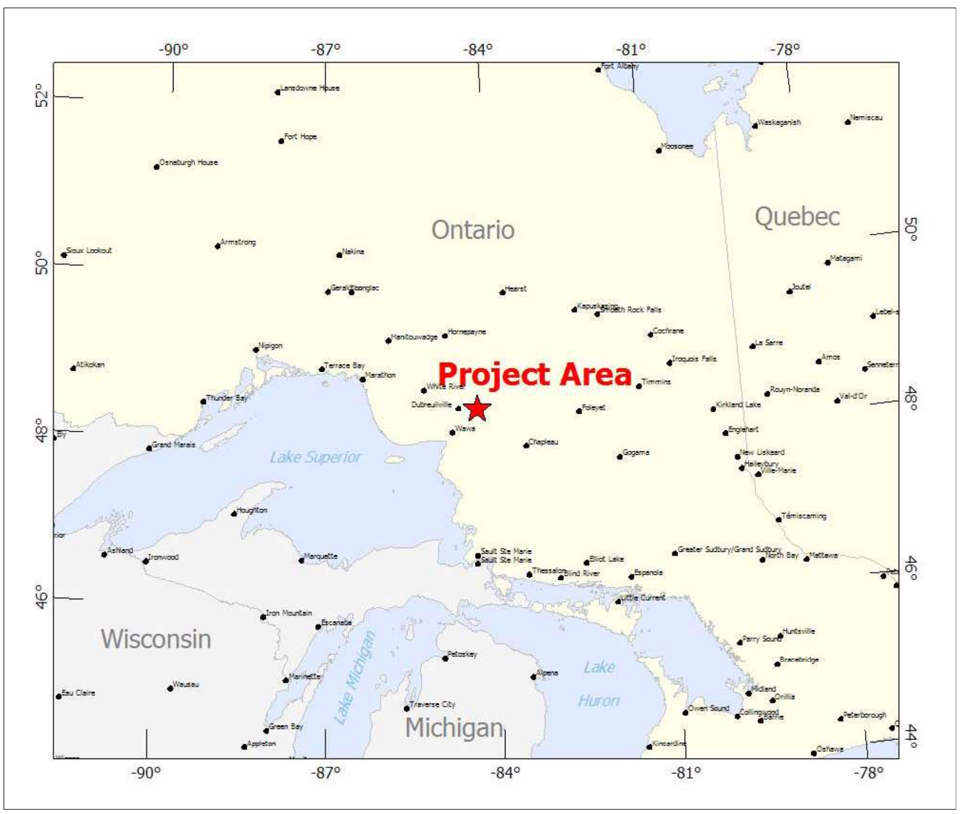

Figure 1: Survey location

1.2 SURVEY AND SYSTEM SPECIFICATIONS

The survey area is located near Wawa, Ontario (Figure 2).

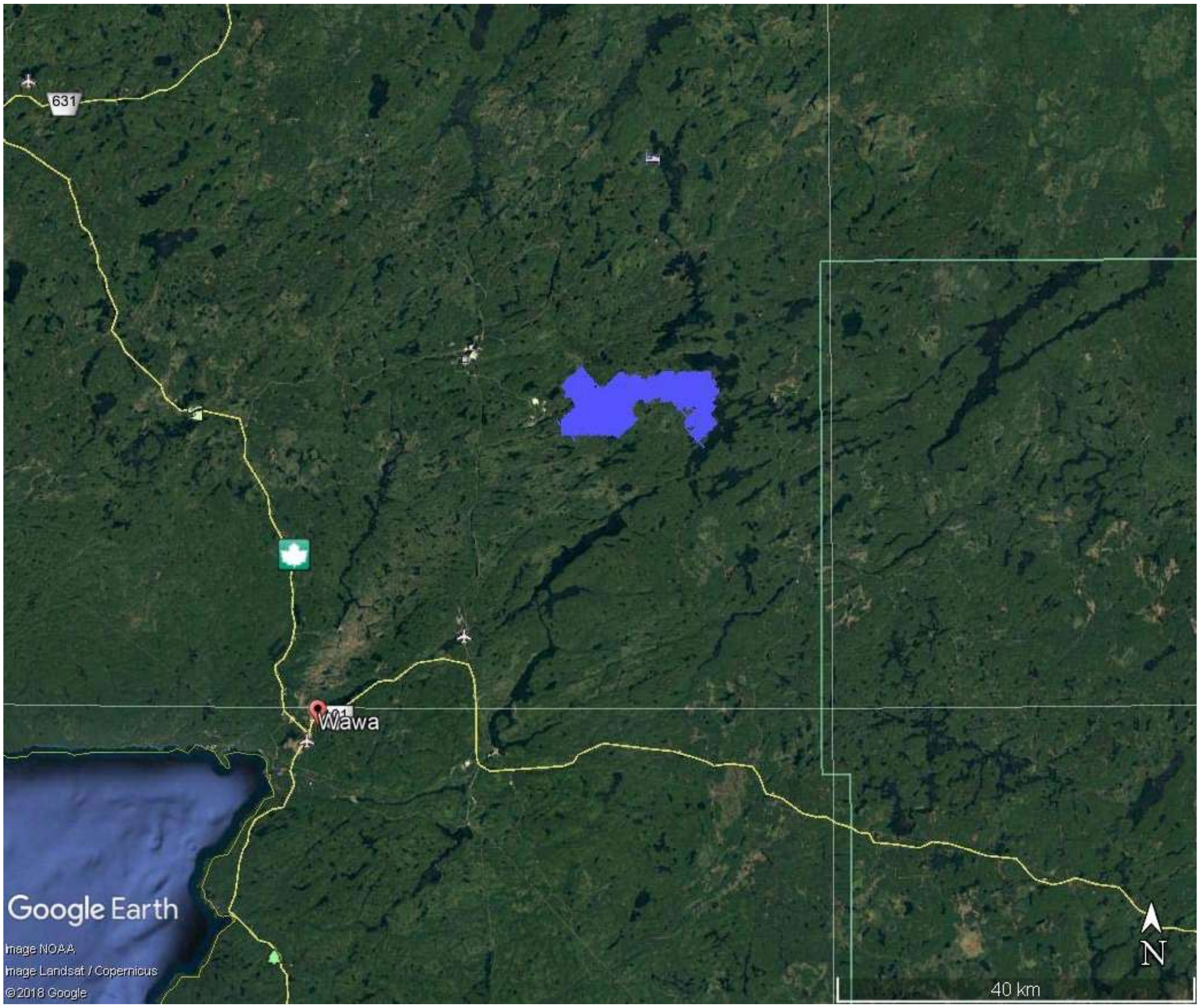

Figure 2: Survey area location on Google Earth.

The survey areas were flown in southwest to northeast (N 45° E azimuth) directions with traverse line spacings of 100 metres as depicted in Figure 3. Tie lines were flown perpendicular to the traverse lines. For more detailed information on the flight spacing and direction see Table 1.

1.3 TOPOGRAPHIC RELIEF AND CULTURAL FEATURES

Topographically, the survey area exhibits elevations ranging from 330 to 461 metres above mean sea level over a combined area of 87 square kilometres (Figure 3).

There are various rivers and streams running through the survey areas which connect various lakes and wetlands. There are visible signs of culture such as roads and powerlines.

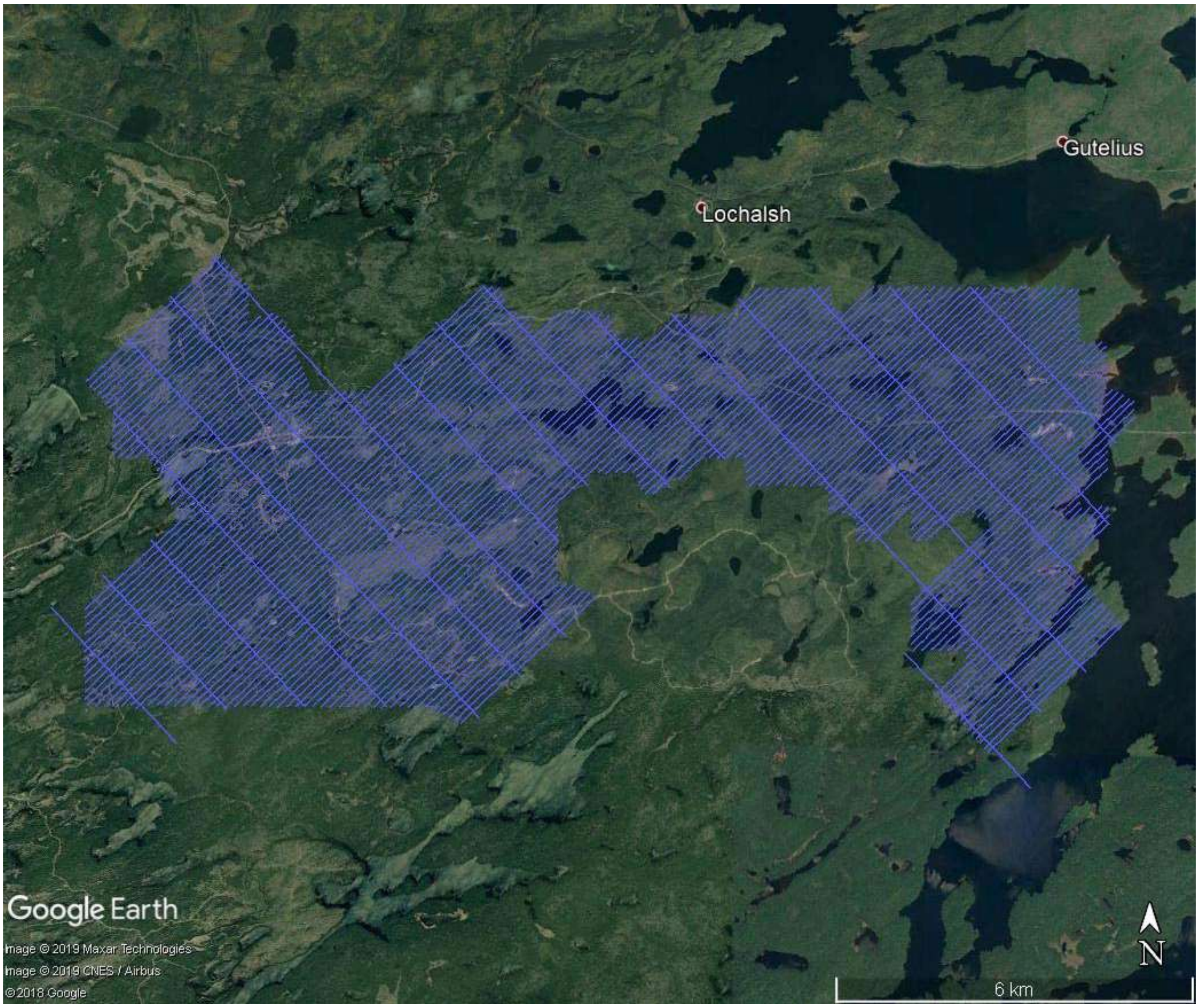

Figure 3: Flight paths over a Google Earth Image.

2. DATA ACQUISITION

2.1 SURVEY AREA

The survey area (see Figure 3 and Appendix A) and general flight specifications are as follows:

Table 1: Survey Specifications

Survey block	Line spacing (m)	Area (Km^2)	Planned[1] Line-km	Actual Line-km	Flight direction	Line numbers
Trillium Gold	Traverse: 100	87	943	965	N 45° E / N 225° E	L1000 – L2490
	Tie: 1000				N 135° E / N 315° E	T3000 – T3150

Survey area boundaries co-ordinates are provided in Appendix B.

2.2 SURVEY OPERATIONS

Survey operations were based out of Wawa, ON from May 28th to June 20th, 2019. The following table shows the timing of the flying.

Table 2: Survey schedule

Date	Comments
28-May-19	crew arrived on site
29-May-19	system assemby
30-May-19	system assemby
31-May-19	system assemby
1-Jun-19	system testing
2-Jun-19	system testing
3-Jun-19	system testing
4-Jun-19	system testing
5-Jun-19	system testing
6-Jun-19	system testing
7-Jun-19	system testing
8-Jun-19	system testing
9-Jun-19	system testing
10-Jun-19	system testing
11-Jun-19	system testing
12-Jun-19	no production due to weather
13-Jun-19	no production due to weather
14-Jun-19	production
15-Jun-19	no production due to weather
16-Jun-19	production
17-Jun-19	production
18-Jun-19	no production due to weather
19-Jun-19	production
20-Jun-19	production - flight plan completed

[1] Note: Actual Line kilometres represent the total line kilometres in the final database. These line-km normally exceed the Planned Line-km, as indicated in the survey navigation files.

2.3 FLIGHT SPECIFICATIONS

During the survey the helicopter was maintained at a mean altitude of 98 metres above the ground with an average survey speed of 80 km/hour. This allowed for an actual average Transmitter-receiver loop terrain clearance of 62 metres and a magnetic sensor clearance of 72 metres.

The on board operator was responsible for monitoring the system integrity. He also maintained a detailed flight log during the survey, tracking the times of the flight as well as any unusual geophysical or topographic features.

On return of the aircrew to the base camp the survey data was transferred from a compact flash card (PCMCIA) to the data processing computer. The data were then uploaded via ftp to the Geotech office in Aurora for daily quality assurance and quality control by qualified personnel.

2.4 AIRCRAFT AND EQUIPMENT

2.4.1 SURVEY AIRCRAFT

The survey was flown using an AS350 B3 helicopter. The helicopter is owned and operated by Geotech Aviation. Installation of the geophysical and ancillary equipment was carried out by a Geotech Ltd crew.

2.4.2 ELECTROMAGNETIC SYSTEM

The electromagnetic system was a Geotech Time Domain EM (VTEM™plus) full receiver-waveform streamed data recorded system. The "full waveform VTEM system" uses the streamed half-cycle recording of transmitter and receiver waveforms to obtain a complete system response calibration throughout the entire survey flight. The VTEM™ transmitter current waveform is shown diagrammatically in Figure 4.

The VTEM™ Receiver and transmitter coils were in concentric-coplanar and Z-direction oriented configuration. The receiver system for the project also included a coincident-coaxial X-direction coil and coincident cross line Y- direction coil to measure the in-line and cross-line dB/dt and calculated B-Field responses. The Transmitter-receiver loop was towed at a mean distance of 34 metres below the aircraft as shown in Figure 5.

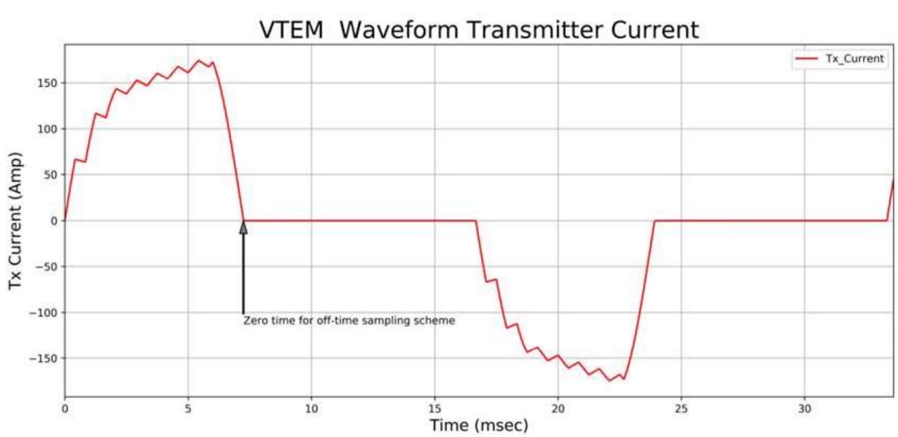

Figure 4: VTEM™ Transmitter Current Waveform

The VTEM™ decay sampling scheme is shown in Table 3 below. Forty-three time measurement gates were used for the final data processing in the range from 0.021 to 8.083 msec. Zero time for the off-time sampling scheme is equal to the current pulse width and is defined as the time near the end of the turn-off ramp where the dI/dt waveform falls to 1/2 of its peak value.

Table 3: Off-Time Decay Sampling Scheme

VTEM™ Decay Sampling Scheme				
Index	Start	End	Middle	Width
Milliseconds				
4	0.018	0.023	0.021	0.005
5	0.023	0.029	0.026	0.005
6	0.029	0.034	0.031	0.005
7	0.034	0.039	0.036	0.005
8	0.039	0.045	0.042	0.006
9	0.045	0.051	0.048	0.007
10	0.051	0.059	0.055	0.008
11	0.059	0.068	0.063	0.009
12	0.068	0.078	0.073	0.010
13	0.078	0.090	0.083	0.012
14	0.090	0.103	0.096	0.013
15	0.103	0.118	0.110	0.015
16	0.118	0.136	0.126	0.018
17	0.136	0.156	0.145	0.020
18	0.156	0.179	0.167	0.023
19	0.179	0.206	0.192	0.027
20	0.206	0.236	0.220	0.030
21	0.236	0.271	0.253	0.035
22	0.271	0.312	0.290	0.040
23	0.312	0.358	0.333	0.046
24	0.358	0.411	0.383	0.053
25	0.411	0.472	0.440	0.061
26	0.472	0.543	0.505	0.070
27	0.543	0.623	0.580	0.081
28	0.623	0.716	0.667	0.093
29	0.716	0.823	0.766	0.107
30	0.823	0.945	0.880	0.122
31	0.945	1.086	1.010	0.141
32	1.086	1.247	1.161	0.161
33	1.247	1.432	1.333	0.185
34	1.432	1.646	1.531	0.214
35	1.646	1.891	1.760	0.245
36	1.891	2.172	2.021	0.281
37	2.172	2.495	2.323	0.323
38	2.495	2.865	2.667	0.370

VTEM™ Decay Sampling Scheme				
Index	Start	End	Middle	Width
Milliseconds				
39	2.865	3.292	3.063	0.427
40	3.292	3.781	3.521	0.490
41	3.781	4.341	4.042	0.560
42	4.341	4.987	4.641	0.646
43	4.987	5.729	5.333	0.742
44	5.729	6.581	6.125	0.852
45	6.581	7.560	7.036	0.979
46	7.560	8.685	8.083	1.125

Z Component: 4 - 46 time gates
X Component: 20 - 46 time gates
Y Component: 20 - 46 time gates

VTEM™ system specifications:

Transmitter	Receiver
• Transmitter loop diameter: 26 m • Number of turns: 4 • Effective Transmitter loop area: 2123.7 m^2 • Transmitter base frequency: 30 Hz • Peak current: 175 A • Pulse width: 7.24 ms • Waveform shape: Bi-polar trapezoid • Peak dipole moment: 370,741 nIA • Average transmitter-receiver loop terrain clearance: 64 metres above the ground	• X & Y Coil diameter: 0.32 m • Number of turns: 245 • Effective coil area: 19.69 m^2 • Z-Coil diameter: 1.2 m • Number of turns: 100 • Effective coil area: 113.04 m^2

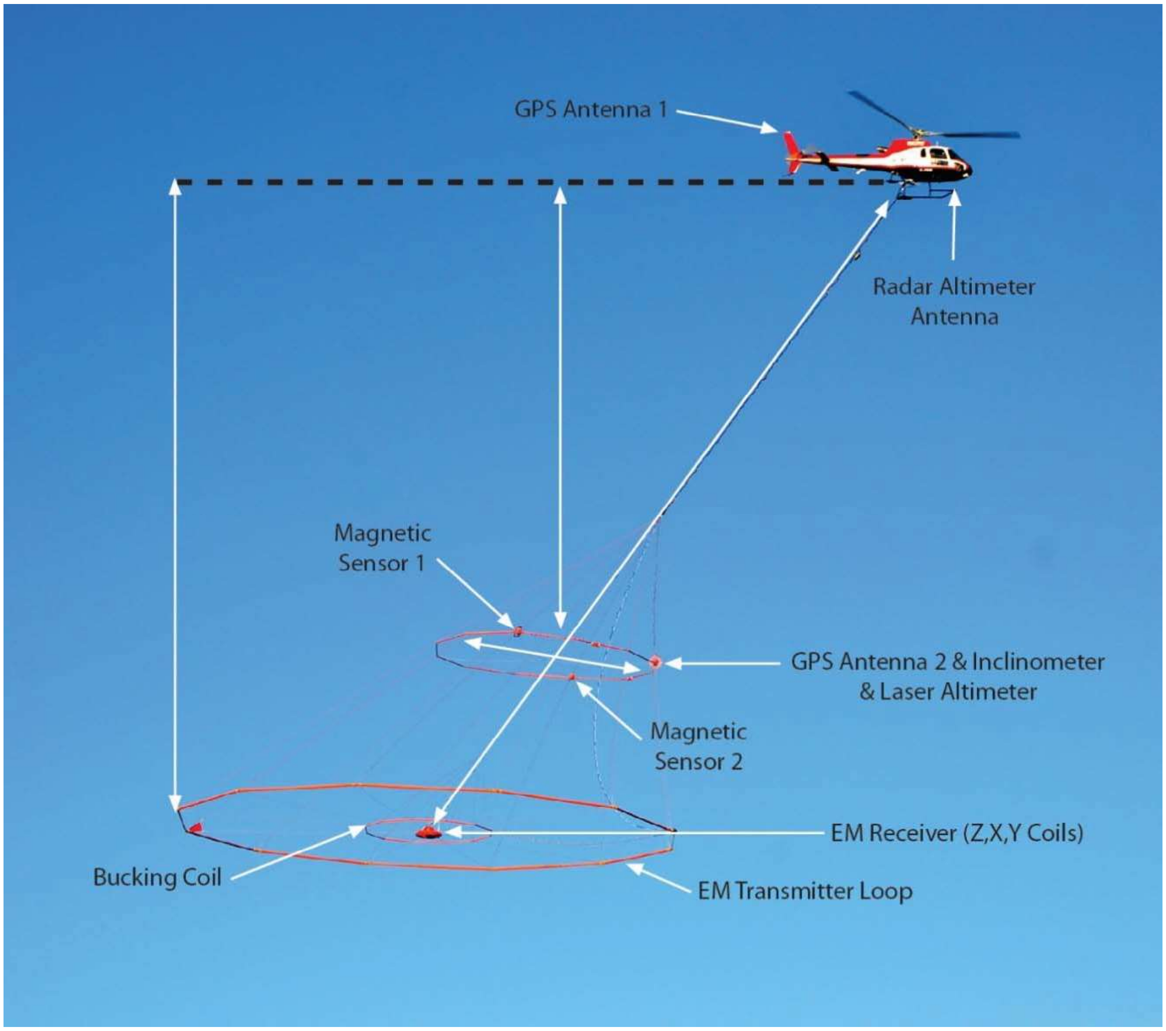

Figure 5: VTEM™plus System Configuration.

2.4.3 FULL WAVEFORM VTEM™ SENSOR CALIBRATION

The calibration is performed on the complete VTEM™ system installed in and connected to the helicopter, using special calibration equipment. This calibration takes place on the ground at the start of the project prior to surveying.

The procedure takes half-cycle files acquired and calculates a calibration file consisting of a single stacked half-cycle waveform. The purpose of the stacking is to attenuate natural and man-made magnetic signals, leaving only the response to the calibration signal.

This calibration allows the transfer function between the EM receiver and data acquisition system and also the transfer function of the current monitor and data acquisition system to be determined. These calibration results are then used in VTEM full waveform processing.

2.4.4 HORIZONTAL MAGNETIC GRADIOMETER

The horizontal magnetic gradiometer consists of two Geometrics split-beam field magnetic sensors with a sampling interval of 0.1 seconds. These sensors are mounted 12.5 metres apart on a separate loop, 10 metres above the Transmitter-receiver loop. A GPS antenna and Gyro Inclinometer is installed on the separate loop to accurately record the tilt and position of the magnetic gradiomag bird.

2.4.5 RADAR ALTIMETER

A Terra TRA 3000/TRI 40 radar altimeter was used to record terrain clearance. The antenna was mounted beneath the bubble of the helicopter cockpit (Figure 5).

2.4.6 GPS NAVIGATION SYSTEM

The navigation system used was a Geotech PC104 based navigation system utilizing a NovAtel's WAAS (Wide Area Augmentation System) enabled GPS receiver, Geotech navigate software, a full screen display with controls in front of the pilot to direct the flight and a NovAtel GPS antenna mounted on the helicopter tail (Figure 5). As many as 11 GPS and two WAAS satellites may be monitored at any one time. The positional accuracy or circular error probability (CEP) is 1.8 m, with WAAS active, it is 1.0 m. The co-ordinates of the survey area were set-up prior to the survey and the information was fed into the airborne navigation system. The second GPS antenna is installed on the additional magnetic loop together with Gyro Inclinometer.

2.4.7 DIGITAL ACQUISITION SYSTEM

A Geotech data acquisition system recorded the digital survey data on an internal compact flash card. Data is displayed on an LCD screen as traces to allow the operator to monitor the integrity of the system. The data type and sampling interval as provided in Table 4

Table 4: Acquisition Sampling Rates

Data Type	Sampling
TDEM	0.1 sec
Magnetometer	0.1 sec
GPS Position	0.2 sec
Radar Altimeter	0.2 sec
Inclinometer	0.1 sec

2.5 BASE STATION

A combined magnetometer/GPS base station was utilized on this project. A Geometrics Caesium vapour magnetometer was used as a magnetic sensor with a sensitivity of 0.001 nT. The base station was recording the magnetic field together with the GPS time at 1 Hz on a base station computer.

The base station magnetometer sensor was installed in a secure area away from electric transmission lines and moving ferrous objects such as motor vehicles. The base station data were backed-up to the data processing computer at the end of each survey day.

3. PERSONNEL

The following Geotech Ltd. personnel were involved in the project.

FIELD:

Project Manager:	Adrian Sarmasag (Office)
Data QC:	Dmitriy Danchenko (Office)
Crew chief:	Colin Lennox
Operator:	Stefan Dreyer

The survey pilot and the mechanical engineer were employed directly by the helicopter operator – Geotech Aviation.

Pilot:	Jocelyn Vallieres
Mechanical Engineer:	Dylan Pike

OFFICE:

Preliminary Data Processing:	Dmitriy Danchenko
Final Data Processing:	Julian Boada
Data QA/QC:	Kanita Khaled
Reporting/Mapping:	Kyle Orlowski

Processing and reporting were carried out under the supervision of Kanita Khaled, P.Geo. The customer relations were looked after by David Hitz.

4. DATA PROCESSING AND PRESENTATION

Data compilation and processing were carried out by the application of Geosoft OASIS Montaj and programs proprietary to Geotech Ltd.

4.1 FLIGHT PATH

The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was converted into the NAD83 Datum, UTM Zone 16 North coordinate system in Oasis Montaj.

The flight path was drawn using linear interpolation between x, y positions from the navigation system. Positions are updated every second and expressed as UTM easting's (x) and UTM northing's (y).

4.2 ELECTROMAGNETIC DATA

The Full Waveform EM specific data processing operations included:

- Half cycle stacking (performed at time of acquisition);
- System response correction;
- Parasitic and drift removal.

A three stage digital filtering process was used to reject major sferic events and to reduce noise levels. Local sferic activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major sferic events.

The signal to noise ratio was further improved by the application of a low pass linear digital filter. This filter has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 1 second or 15 metres. This filter is a symmetrical 1 sec linear filter.

The results are presented as stacked profiles of EM voltages for the time gates, in linear - logarithmic scale for the B-field Z component and dB/dt responses in the Z and X components. B-field Z component time channel recorded at 0.880 milliseconds after the termination of the impulse is also presented as a colour image. Calculated Time Constant (TAU) with Calculated Vertical Derivative contours is presented in Appendix C and E. Resistivity Depth Image (RDI) is also presented in Appendix F and G.

VTEM™ has three receiver coil orientations. Z-axis coil is oriented parallel to the transmitter coil axis and both are horizontal to the ground. The X-axis coil is oriented parallel to the ground and along the line-of-flight. The Y-axis coil is oriented parallel to the ground and perpendicular to the line-of-flight. The combination of the X and Z coils configuration provides information on the position, depth, dip and thickness of a conductor. This combined three coil configuration provides information on the position, depth, dip and thickness of a conductor. Generalized modeling results of VTEM data, are shown in Appendix D.

In general X-component data produce cross-over type anomalies: from "+ to – "in flight direction of flight for "thin" sub vertical targets and from "- to +" in direction of flight for "thick" targets. Z component data produce double peak type anomalies for "thin" sub vertical targets and single peak for "thick" targets.

The limits and change-over of "thin-thick" depends on the dimensions of the TEM system (Appendix D, Figure D-16).

Due to the fact that the X component polarity is depends on the flight line direction, a convolution Fraser Filter (Figure 6) is applied to X component data to assist in defining the axes of conductors on a gridded contour map form. In this case positive FF anomalies always correspond to "plus-to-minus" X data crossovers, for thin-type conductors, which are independent of the flight line direction. Conversely, thick-type conductors that correspond to "minus-to-plus" X data crossovers are identified with negative FF anomalies.

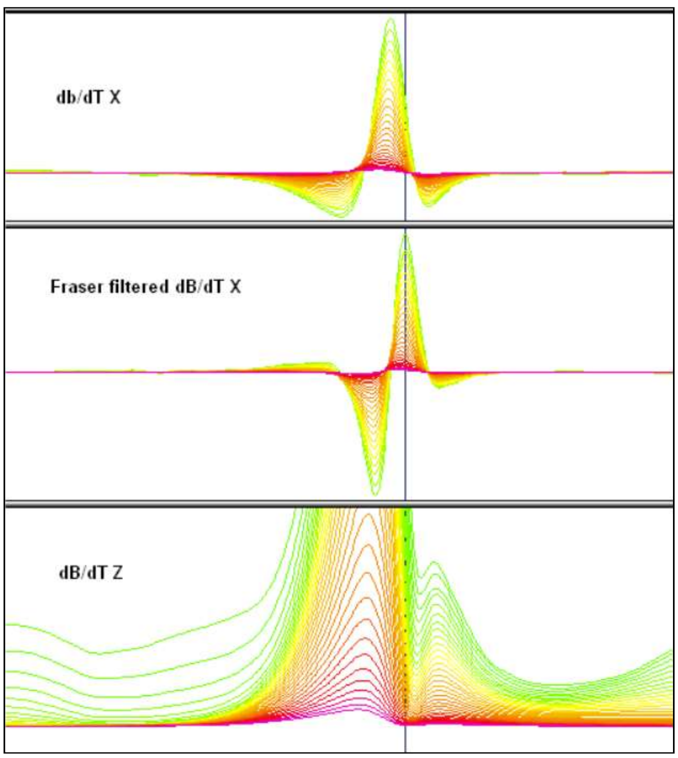

Figure 6: Z, X and Fraser filtered X (FFx) components for "thin" target.

4.3 HORIZONTAL MAGNETIC GRADIOMETER DATA

The horizontal gradient data from the VTEM™Plus are measured by two magnetometers 12.5 m apart on an independent auxiliary loop mounted 10m above the VTEM™ loop. A GPS and a Gyro Inclinometer help to determine the positions and orientations of the magnetometers. The data from the two magnetometers are corrected for position and orientation variations, as well as for the diurnal variations using the base station data.

The position of the centre of the horizontal magnetic gradiometer bird is calculated from the GPS utilizing in-house processing tool in Geosoft. Following that total magnetic intensity is calculated at the center of the bird by calculating the mean value from both sensors. In addition to the total intensity advanced processing is performed to calculate the in-line and cross-line (or lateral) horizontal gradients which enhance the understanding of magnetic targets. The in-line (longitudinal) horizontal gradient is calculated from the difference of two consecutive total magnetic field readings divided by the distance along the flight line direction; while the cross-line (lateral) horizontal magnetic gradient is calculated from the difference in the magnetic readings from both magnetic sensors divided by their horizontal separation.

Two advanced magnetic derivative products, the total horizontal derivative (THDR), and tilt angle derivative and are also created. The total horizontal derivative or gradient is defined as:

THDR = sqrt(Hx*Hx+Hy*Hy), where Hx and Hy are cross-line and in-line horizontal gradients.

The tilt angle derivative (TDR) is defined as:

TDR = arctan(Vz/THDR), where THDR is the total horizontal derivative, and Vz is the vertical derivative.

Measured cross-line gradients can help to enhance cross-line linear features during gridding.

5. DELIVERABLES

5.1 SURVEY REPORT

The survey report describes the data acquisition, processing, and final presentation of the survey results. The survey report is provided in two paper copies and digitally in PDF format.

5.2 MAPS

Final maps were produced at scale of 1:20,000 for best representation of the survey size and line spacing. The coordinate/projection system used was NAD83 Datum, UTM Zone 16 North. All maps show the flight path trace and topographic data; latitude and longitude are also noted on maps.

The preliminary and final results of the survey are presented as EM profiles, a late-time gate gridded EM channel, and a colour magnetic TMI contour map.

- Maps at 1:20,000 in Geosoft MAP format, as follows:

GL190070_20k_dBdt:	dB/dt profiles Z Component, Time Gates 0.220 – 7.036 ms in linear – logarithmic scale.
GL190070_20k_Bfield:	B-field profiles Z Component, Time Gates 0.220 – 7.036 ms in linear – logarithmic scale.
GL190070_20k_BFz30:	B-field Z Component Channel 30, Time Gate 0.880 ms colour image.
GL190070_20k_TMI:	Total magnetic intensity (TMI) colour image and contours.
GL190070_20k_TauSF:	dB/dt Calculated Time Constant (Tau) with Calculated Vertical Derivative contours
GL190070_20k_TotHG:	Magnetic Total Horizontal Gradient colour image.
GL190070_20k_TiltDrv:	Magnetic Tilt-Angle Derivative colour image.

- Maps are also presented in PDF format.
- The topographic data base was derived from 1:50,000 CANVEC data (http://maps.canada.ca)
- Inset data derived from Geocommunities (www.geocomm.com)
- A Google Earth file *GL190070_Trillium.kmz* showing the flight path of the block is included. Free versions of Google Earth software from: http://earth.google.com/download-earth.html

5.3 DIGITAL DATA

Two copies of the data and maps on DVD were prepared to accompany the report. Each DVD contains a digital file of the line data in GDB Geosoft Montaj format as well as the maps in Geosoft Montaj Map and PDF format.

- DVD structure.

Data contains databases, grids and maps, as described below.
Report contains a copy of the report and appendices in PDF format.

Databases in Geosoft GDB format, containing the channels listed in Table 5.

Table 5: Geosoft GDB Data Format

Channel name	Units	Description
X:	metres	UTM Easting NAD83 Zone 16N
Y:	metres	UTM Northing NAD83 Zone 16N
Longitude:	Decimal Degrees	WGS84 Longitude data
Latitude:	Decimal Degrees	WGS84 Latitude data
Z:	metres	GPS antenna elevation (above Geoid)
Zb:	metres	EM bird elevation (above Geoid)
Radar:	metres	Helicopter terrain clearance from radar altimeter
Radarb:	metres	Calculated EM transmitter-receiver loop terrain clearance from radar altimeter
DEM:	metres	Digital Elevation Model
Gtime:	Seconds of the day	GPS time
Mag1L:	nT	Measured Total Magnetic field data (left sensor)
Mag1R:	nT	Measured Total Magnetic field data (right sensor)
Basemag:	nT	Magnetic diurnal variation data
Mag2LZ	nT	Z corrected (w.r.t. loop center) and diurnal corrected magnetic field left mag
Mag2RZ	nT	Z corrected (w.r.t. loop center) and diurnal corrected magnetic field right mag
TMI2	nT	Calculated from diurnal corrected total magnetic field intensity of the centre of the loop
TMI3	nT	Microleveled total magnetic field intensity of the centre of the loop
Hginline		Calculated in-line gradient
Hgcxline		Measured cross-line gradient
CVG	nT/m	Calculated Magnetic Vertical Gradient
SFz[4]:	pV/(A*m4)	Z dB/dt 0.021 millisecond time channel
SFz[5]:	pV/(A*m4)	Z dB/dt 0.026 millisecond time channel
SFz[6]:	pV/(A*m^4)	Z dB/dt 0.031 millisecond time channel
SFz[7]:	pV/(A*m^4)	Z dB/dt 0.036 millisecond time channel
SFz[8]:	pV/(A*m^4)	Z dB/dt 0.042 millisecond time channel
SFz[9]:	pV/(A*m^4)	Z dB/dt 0.048 millisecond time channel
SFz[10]:	pV/(A*m^4)	Z dB/dt 0.055 millisecond time channel
SFz[11]:	pV/(A*m^4)	Z dB/dt 0.063 millisecond time channel
SFz[12]:	pV/(A*m^4)	Z dB/dt 0.073 millisecond time channel
SFz[13]:	pV/(A*m^4)	Z dB/dt 0.083 millisecond time channel
SFz[14]:	pV/(A*m^4)	Z dB/dt 0.096 millisecond time channel

Channel name	Units	Description
SFz[15]:	pV/(A*m^4)	Z dB/dt 0.110 millisecond time channel
SFz[16]:	pV/(A*m^4)	Z dB/dt 0.126 millisecond time channel
SFz[17]:	pV/(A*m^4)	Z dB/dt 0.145 millisecond time channel
SFz[18]:	pV/(A*m^4)	Z dB/dt 0.167 millisecond time channel
SFz[19]:	pV/(A*m^4)	Z dB/dt 0.192 millisecond time channel
SFz[20]:	pV/(A*m^4)	Z dB/dt 0.220 millisecond time channel
SFz[21]:	pV/(A*m^4)	Z dB/dt 0.253 millisecond time channel
SFz[22]:	pV/(A*m^4)	Z dB/dt 0.290 millisecond time channel
SFz[23]:	pV/(A*m^4)	Z dB/dt 0.333 millisecond time channel
SFz[24]:	pV/(A*m^4)	Z dB/dt 0.383 millisecond time channel
SFz[25]:	pV/(A*m^4)	Z dB/dt 0.440 millisecond time channel
SFz[26]:	pV/(A*m^4)	Z dB/dt 0.505 millisecond time channel
SFz[27]:	pV/(A*m^4)	Z dB/dt 0.580 millisecond time channel
SFz[28]:	pV/(A*m^4)	Z dB/dt 0.667 millisecond time channel
SFz[29]:	pV/(A*m^4)	Z dB/dt 0.766 millisecond time channel
SFz[30]:	pV/(A*m^4)	Z dB/dt 0.880 millisecond time channel
SFz[31]:	pV/(A*m^4)	Z dB/dt 1.010 millisecond time channel
SFz[32]:	pV/(A*m^4)	Z dB/dt 1.161 millisecond time channel
SFz[33]:	pV/(A*m^4)	Z dB/dt 1.333 millisecond time channel
SFz[34]:	pV/(A*m^4)	Z dB/dt 1.531 millisecond time channel
SFz[35]:	pV/(A*m^4)	Z dB/dt 1.760 millisecond time channel
SFz[36]:	pV/(A*m^4)	Z dB/dt 2.021 millisecond time channel
SFz[37]:	pV/(A*m^4)	Z dB/dt 2.323 millisecond time channel
SFz[38]:	pV/(A*m^4)	Z dB/dt 2.667 millisecond time channel
SFz[39]:	pV/(A*m^4)	Z dB/dt 3.063 millisecond time channel
SFz[40]:	pV/(A*m^4)	Z dB/dt 3.521 millisecond time channel
SFz[41]:	pV/(A*m^4)	Z dB/dt 4.042 millisecond time channel
SFz[42]:	pV/(A*m^4)	Z dB/dt 4.641 millisecond time channel
SFz[43]:	pV/(A*m^4)	Z dB/dt 5.333 millisecond time channel
SFz[44]:	pV/(A*m^4)	Z dB/dt 6.125 millisecond time channel
SFz[45]:	pV/(A*m^4)	Z dB/dt 7.036 millisecond time channel
SFz[46]:	pV/(A*m^4)	Z dB/dt 8.083 millisecond time channel
SFx[20]:	pV/(A*m^4)	X dB/dt 0.220 millisecond time channel
SFx[21]:	pV/(A*m^4)	X dB/dt 0.253 millisecond time channel
SFx[22]:	pV/(A*m^4)	X dB/dt 0.290 millisecond time channel
SFx[23]:	pV/(A*m^4)	X dB/dt 0.333 millisecond time channel
SFx[24]:	pV/(A*m^4)	X dB/dt 0.383 millisecond time channel
SFx[25]:	pV/(A*m^4)	X dB/dt 0.440 millisecond time channel
SFx[26]:	pV/(A*m^4)	X dB/dt 0.505 millisecond time channel
SFx[27]:	pV/(A*m^4)	X dB/dt 0.580 millisecond time channel
SFx[28]:	pV/(A*m^4)	X dB/dt 0.667 millisecond time channel
SFx[29]:	pV/(A*m^4)	X dB/dt 0.766 millisecond time channel
SFx[30]:	pV/(A*m^4)	X dB/dt 0.880 millisecond time channel
SFx[31]:	pV/(A*m^4)	X dB/dt 1.010 millisecond time channel
SFx[32]:	pV/(A*m^4)	X dB/dt 1.161 millisecond time channel
SFx[33]:	pV/(A*m^4)	X dB/dt 1.333 millisecond time channel
SFx[34]:	pV/(A*m^4)	X dB/dt 1.531 millisecond time channel
SFx[35]:	pV/(A*m^4)	X dB/dt 1.760 millisecond time channel
SFx[36]:	pV/(A*m^4)	X dB/dt 2.021 millisecond time channel
SFx[37]:	pV/(A*m^4)	X dB/dt 2.323 millisecond time channel

Channel name	Units	Description
SFx[38]:	pV/(A*m^4)	X dB/dt 2.667 millisecond time channel
SFx[39]:	pV/(A*m^4)	X dB/dt 3.063 millisecond time channel
SFx[40]:	pV/(A*m^4)	X dB/dt 3.521 millisecond time channel
SFx[41]:	pV/(A*m^4)	X dB/dt 4.042 millisecond time channel
SFx[42]:	pV/(A*m^4)	X dB/dt 4.641 millisecond time channel
SFx[43]:	pV/(A*m^4)	X dB/dt 5.333 millisecond time channel
SFx[44]:	pV/(A*m^4)	X dB/dt 6.125 millisecond time channel
SFx[45]:	pV/(A*m^4)	X dB/dt 7.036 millisecond time channel
SFx[46]:	pV/(A*m^4)	X dB/dt 8.083 millisecond time channel
SFy[20]:	pV/(A*m^4)	Y dB/dt 0.220 millisecond time channel
SFy[21]:	pV/(A*m^4)	Y dB/dt 0.253 millisecond time channel
SFy[22]:	pV/(A*m^4)	Y dB/dt 0.290 millisecond time channel
SFy[23]:	pV/(A*m^4)	Y dB/dt 0.333 millisecond time channel
SFy[24]:	pV/(A*m^4)	Y dB/dt 0.383 millisecond time channel
SFy[25]:	pV/(A*m^4)	Y dB/dt 0.440 millisecond time channel
SFy[26]:	pV/(A*m^4)	Y dB/dt 0.505 millisecond time channel
SFy[27]:	pV/(A*m^4)	Y dB/dt 0.580 millisecond time channel
SFy[28]:	pV/(A*m^4)	Y dB/dt 0.667 millisecond time channel
SFy[29]:	pV/(A*m^4)	Y dB/dt 0.766 millisecond time channel
SFy[30]:	pV/(A*m^4)	Y dB/dt 0.880 millisecond time channel
SFy[31]:	pV/(A*m^4)	Y dB/dt 1.010 millisecond time channel
SFy[32]:	pV/(A*m^4)	Y dB/dt 1.161 millisecond time channel
SFy[33]:	pV/(A*m^4)	Y dB/dt 1.333 millisecond time channel
SFy[34]:	pV/(A*m^4)	Y dB/dt 1.531 millisecond time channel
SFy[35]:	pV/(A*m^4)	Y dB/dt 1.760 millisecond time channel
SFy[36]:	pV/(A*m^4)	Y dB/dt 2.021 millisecond time channel
SFy[37]:	pV/(A*m^4)	Y dB/dt 2.323 millisecond time channel
SFy[38]:	pV/(A*m^4)	Y dB/dt 2.667 millisecond time channel
SFy[39]:	pV/(A*m^4)	Y dB/dt 3.063 millisecond time channel
SFy[40]:	pV/(A*m^4)	Y dB/dt 3.521 millisecond time channel
SFy[41]:	pV/(A*m^4)	Y dB/dt 4.042 millisecond time channel
SFy[42]:	pV/(A*m^4)	Y dB/dt 4.641 millisecond time channel
SFy[43]:	pV/(A*m^4)	Y dB/dt 5.333 millisecond time channel
SFy[44]:	pV/(A*m^4)	Y dB/dt 6.125 millisecond time channel
SFy[45]:	pV/(A*m^4)	Y dB/dt 7.036 millisecond time channel
SFy[46]:	pV/(A*m^4)	Y dB/dt 8.083 millisecond time channel
BFz	(pV*ms)/(A*m^4)	Z B-Field data for time channels 4 to 46
BFx	(pV*ms)/(A*m^4)	X B-Field data for time channels 20 to 46
BFy	(pV*ms)/(A*m^4)	Y B-Field data for time channels 20 to 46
SFxFF	pV/(A*m^4)	Fraser Filtered X dB/dt
NchanBF		Latest time channels of TAU calculation
TauBF	ms	Time constant B-Field
NchanSF		Latest time channels of TAU calculation
TauSF	ms	Time constant dB/dt
PLM:		60 Hz power line monitor

Electromagnetic B-field and dB/dt Z component data is found in array channel format between indexes 4 – 46 and X & Y component data from 20 – 46, as described above.

- Database of the Resistivity Depth Images in Geosoft GDB format, containing the following channels:

Table 6: Geosoft Resistivity Depth Image GDB Data Format

Channel name	Units	Description
Xg	metres	UTM Easting NAD83 Zone 16N
Yg	metres	UTM Northing NAD83 Zone 16N
Dist:	metres	Distance from the beginning of the line
Depth:	metres	Array channel, depth from the surface
Z:	metres	Array channel, depth from sea level
AppRes:	Ohm-m	Array channel, Apparent Resistivity
TR:	metres	EM system height from sea level
Topo:	metres	Digital Elevation Model
Radarb:	metres	Calculated EM transmitter-receiver loop terrain clearance from radar altimeter
SF:	pV/(A*m^4)	Array channel, dB/dT
TMI3:	nT	TMI data
CVG:	nT/m	CVG data
DOI:	metres	Depth of Investigation: a measure of VTEM depth effectiveness
PLM:		60Hz Power Line Monitor

- Database of the VTEM Waveform "GL190070_waveform.gdb" in Geosoft GDB format, containing the following channels:

Table 7: Geosoft database for the VTEM waveform

Channel name	Units	Description
Time:	milliseconds	Sampling rate interval, 5.2083 microseconds
Tx_Current:	amps	Output current of the transmitter

- Geosoft Resistivity Depth Image Products:

Sections:	Apparent resistivity sections along each line in .GRD and .PDF format
Slices:	Apparent resistivity slices at selected depths from 25m to depth of investigation, at an increment of 25m in .GRD and .PDF format
Voxel:	3D Voxel imaging of apparent resistivity data clipped by digital elevation and depth of investigation

- Grids in Geosoft GRD and GeoTIFF format, as follows:

BFz30:	B-Field Z Component Channel 30 (Time Gate 0.880 ms)
CVG:	Calculated Vertical Derivative (nT/m)
DEM:	Digital Elevation Model
Hgcxline:	Measured Cross-Line Gradient (nT/m)
Hginline:	Measured In-Line Gradient (nT/m)
TauBF:	B-Field Z Component, Calculated Time Constant (ms)
TauSF:	dB/dt Z Component, Calculated Time Constant (ms)
TMI3:	Total Magnetic Intensity (nT)
TotHGrad:	Magnetic Total Horizontal Gradient (nT/m)
TiltDrv:	Magnetic Tilt derivative (radians)

SFz15:	dB/dt Z Component Channel 15 (Time Gate 0.110 ms)
SFz25:	dB/dt Z Component Channel 25 (Time Gate 0.440 ms)
SFz38:	dB/dt Z Component Channel 38 (Time Gate 2.667 ms)

A Geosoft .GRD file has a .GI metadata file associated with it, containing grid projection information. A grid cell size of 25 metres was used.

6. CONCLUSIONS AND RECOMMENDATIONS

A helicopter-borne versatile time domain electromagnetic (VTEM™plus), horizontal magnetic gradiometer geophysical survey has been completed over the Trillium Gold Project situated near Wawa, Ontario.

The total area coverage is 87 km^2. Total survey line coverage 965 line kilometres. The principal sensors included a Time Domain EM system, horizontal magnetic gradiometer using two caesium magnetometers system. Results have been presented as stacked profiles, and contour colour images at a scale of 1:20,000. A formal Interpretation has not been included or requested.

Based on geophysical observation, the dB/dt time constant and most dB/dt time channels define anomalous conductivity in the western area of the block with apparent resistivity values of less than 10 Ohm-m. Due to the powerline running throughout the block, some EM anomalies near the powerline can be contaminated and may not be reliable. Large magnetic intensity values span the central area of the block, and decreases when moving to the North. Total magnetic intensity data show structural anomalies in the southern region of the block.

If the conductors correspond to an exploration model on the area it is recommended performing EM anomaly picks and EM Maxwell plate modeling with test drill hole parameters planning prior to ground follow up and drill testing. A structural analysis of the magnetic data is also warranted given the lode-gold exploration model.

Respectfully submitted[2],

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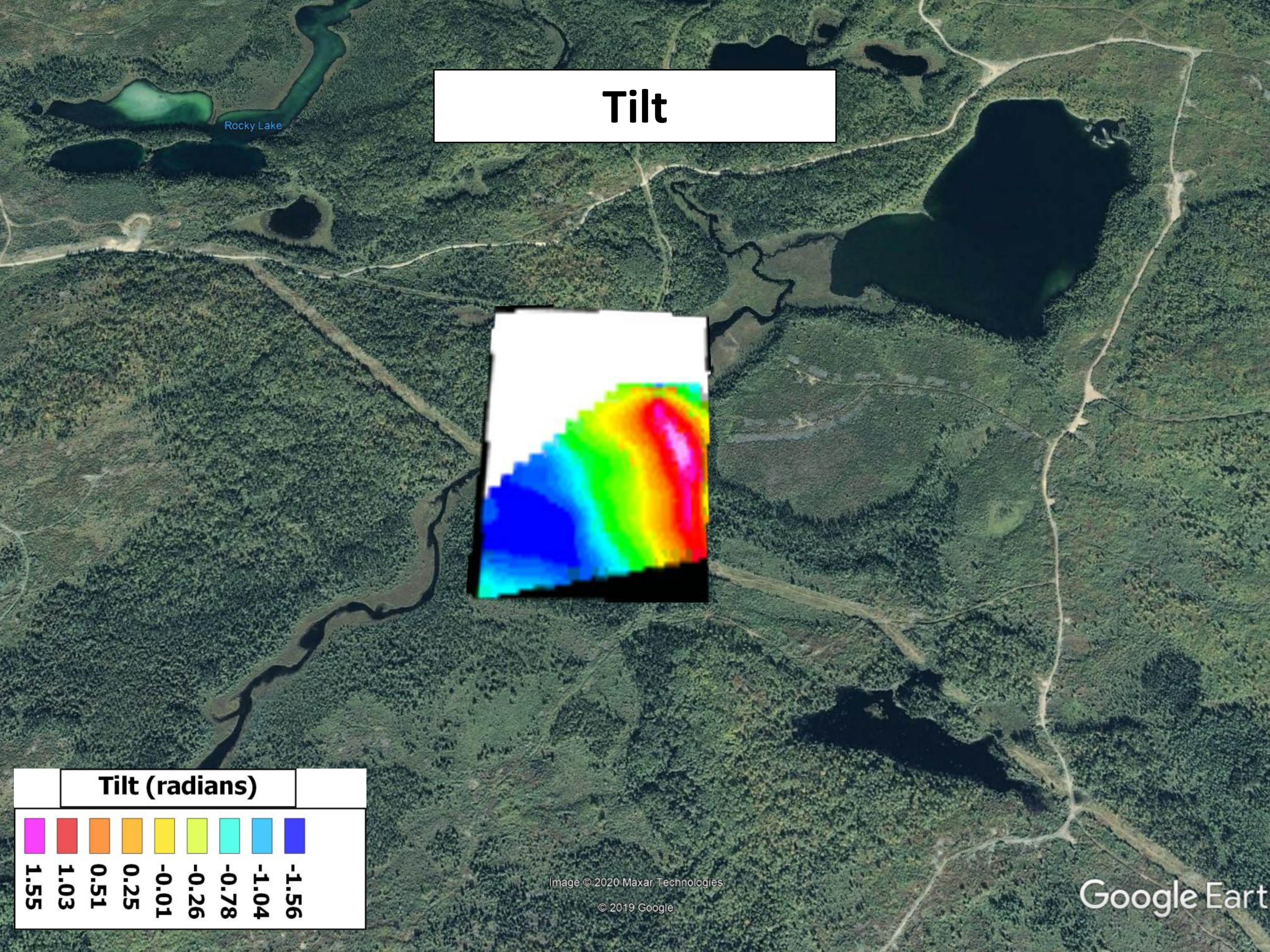
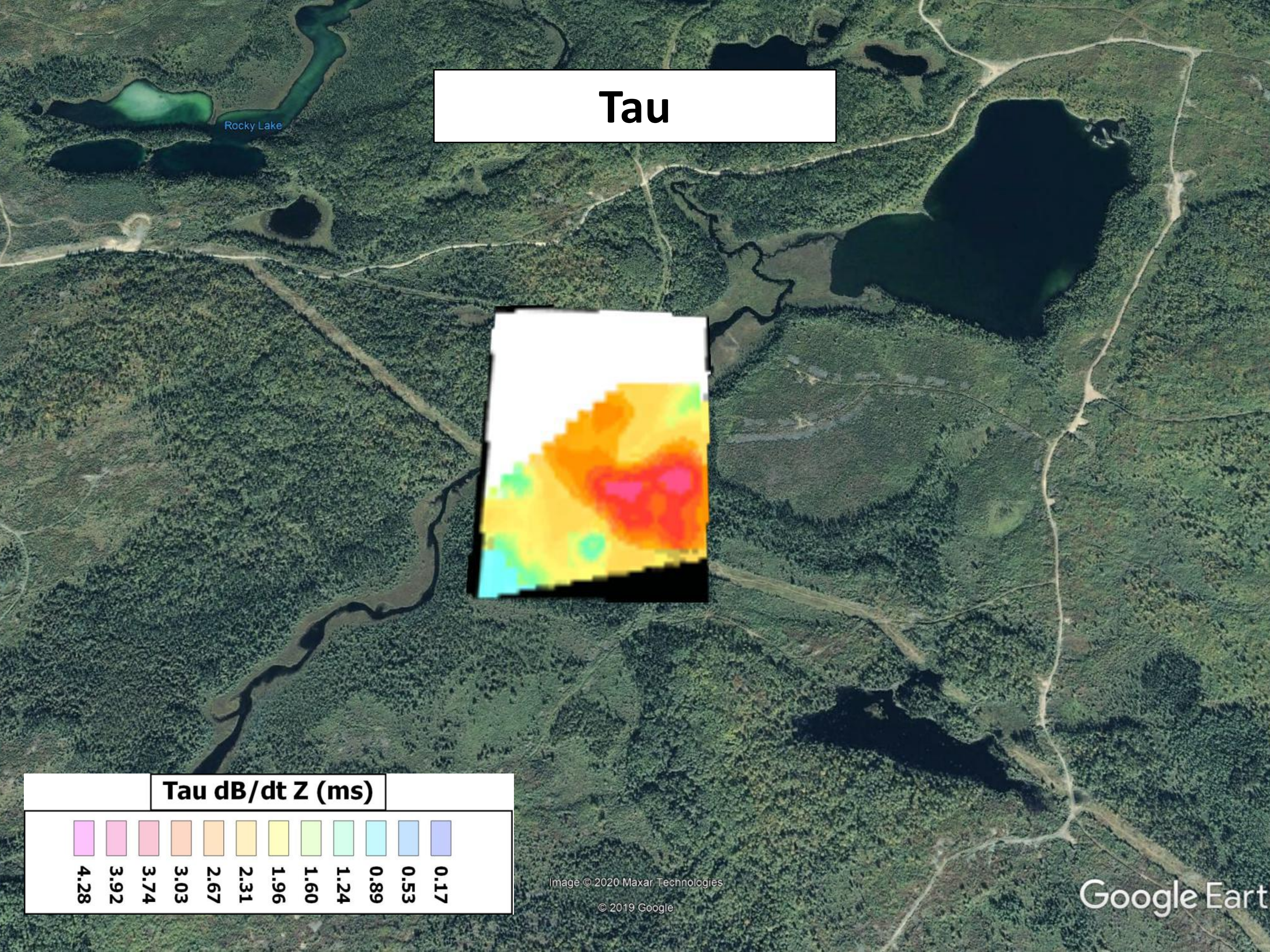
August, 2019

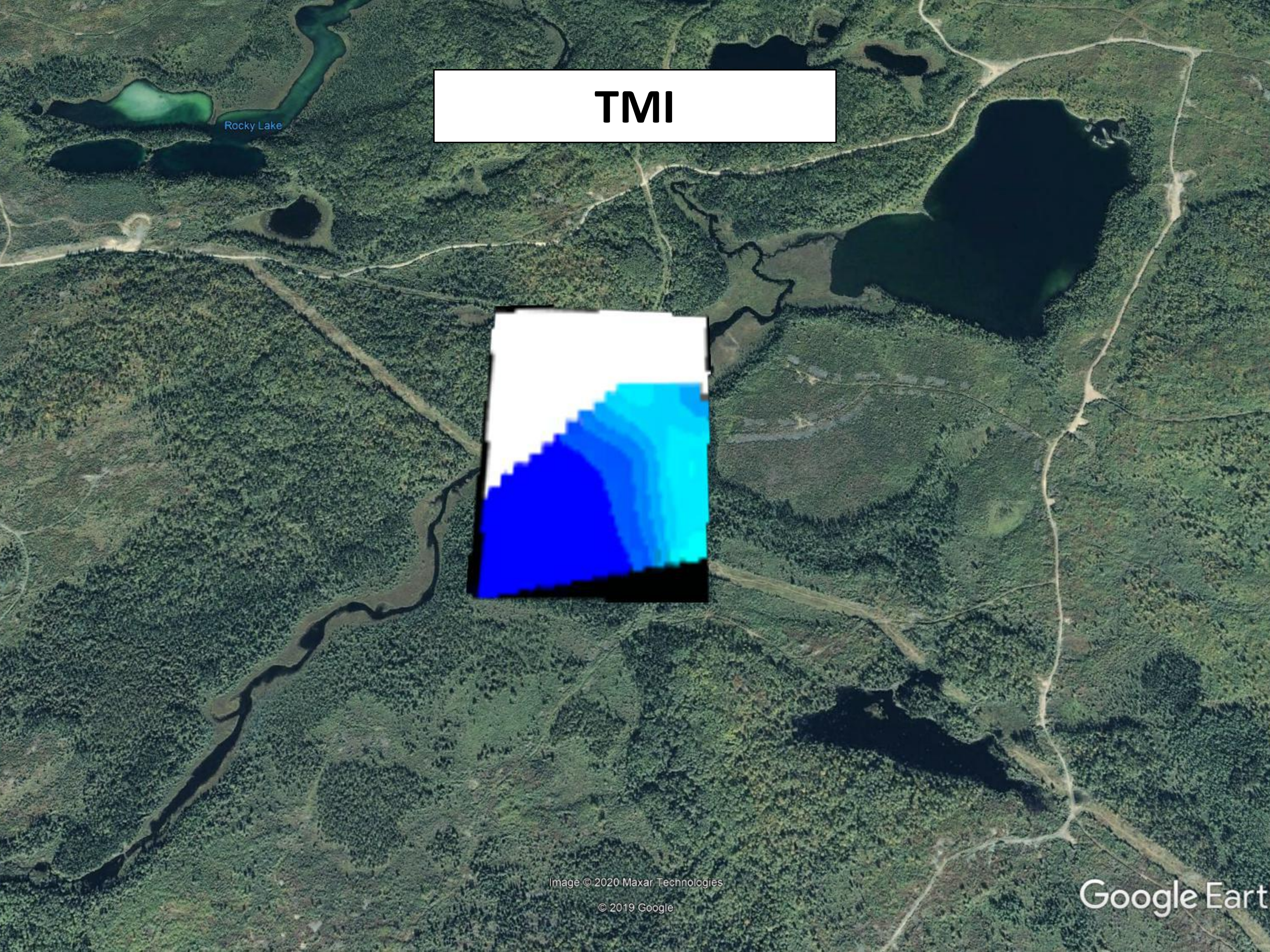
[2] Final data processing of the EM and magnetic data were carried out by Julian Boada, from the office of Geotech Ltd. in Aurora, Ontario, under the supervision of Kanita Khaled, P.Geo, and Jean Legault, P.Geo.

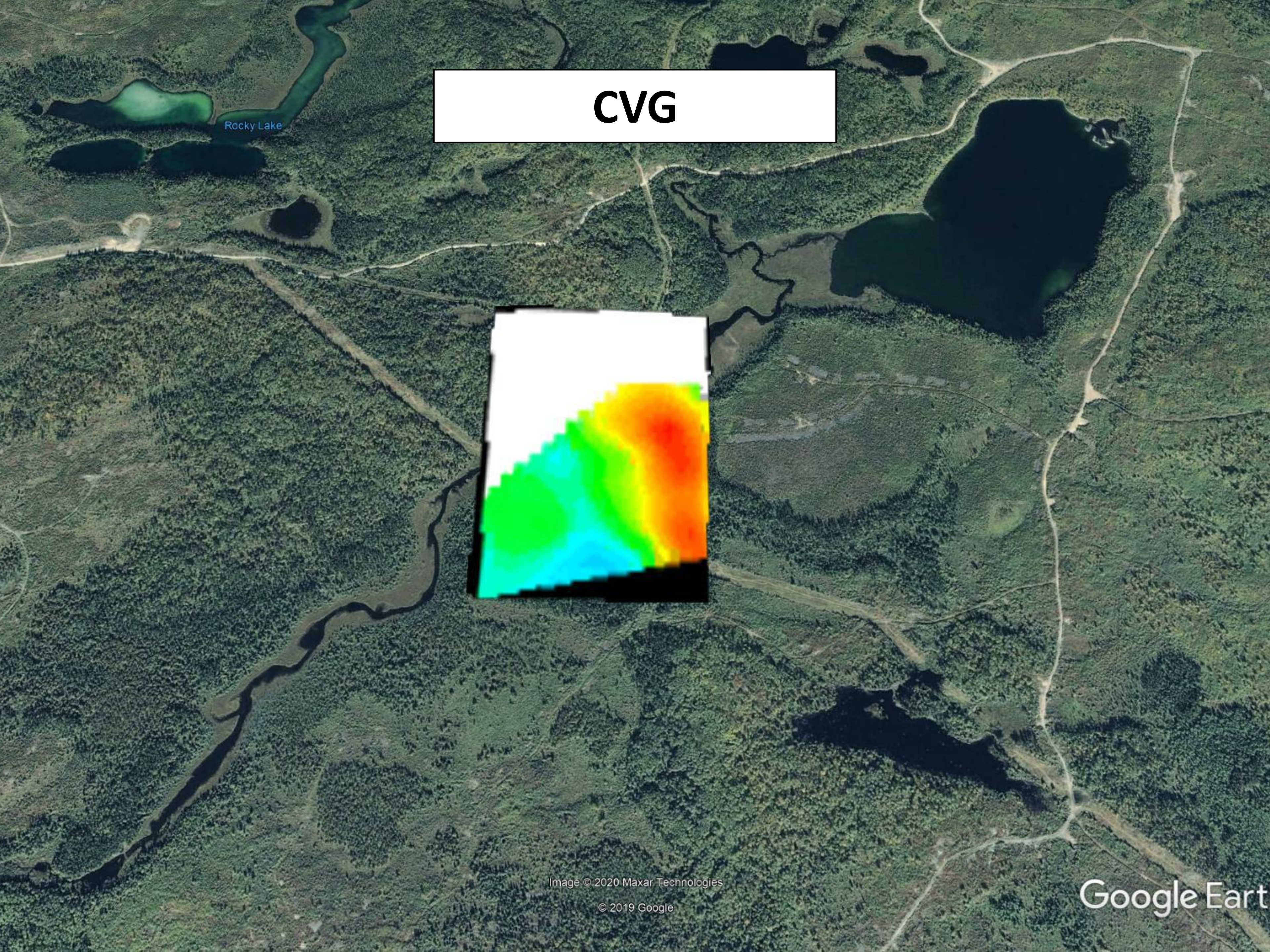
Attachment B

Summary maps for the area flown over the Lavoie claim

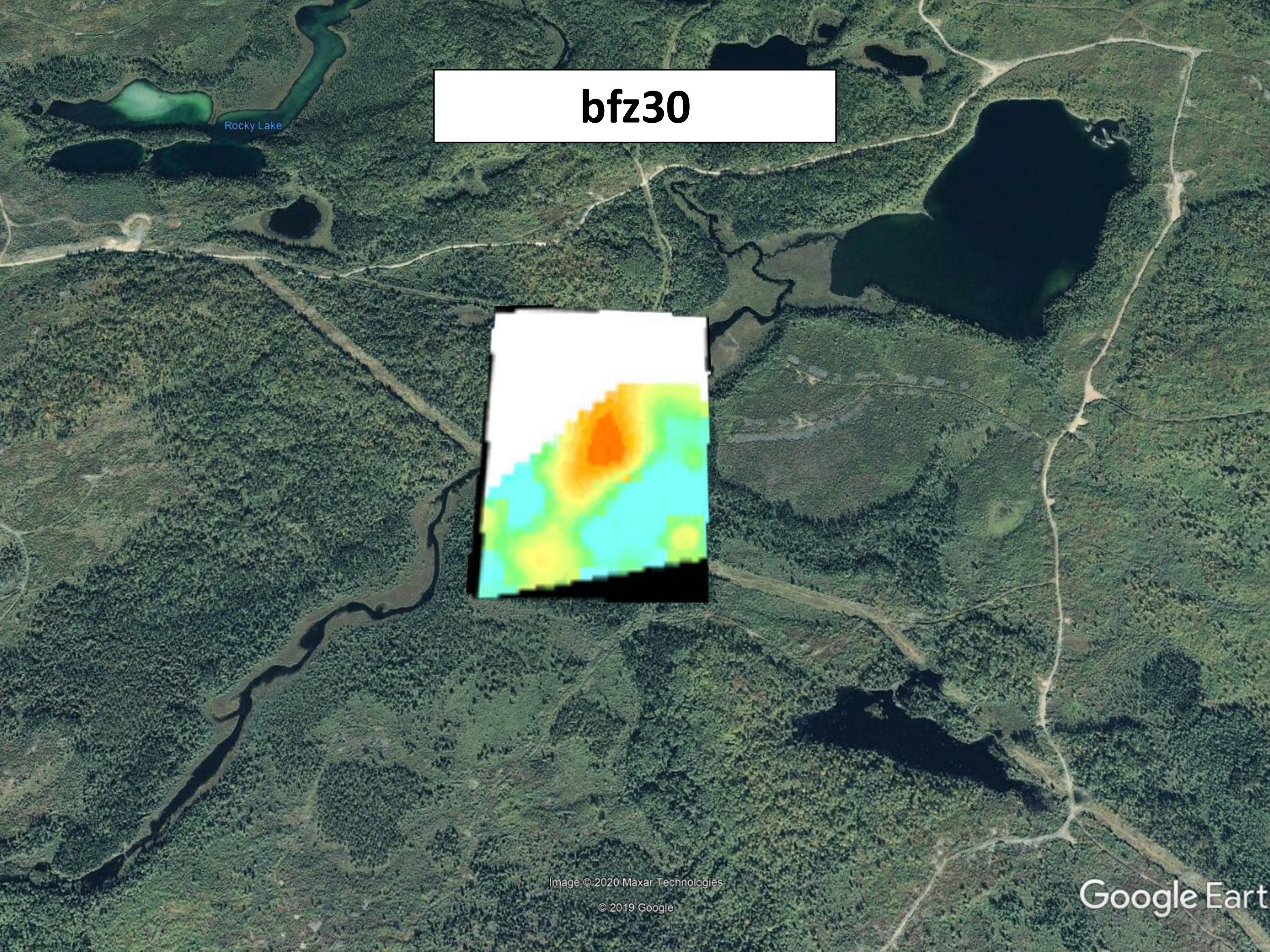

Tilt
Rocky Lake
Tilt (radians)
1.55
1.03
0.51
0.25
-0.01
-0.26
-0.78
-1.04
-1.56
Image © 2020 Maxar Technologies
© 2019 Google
Google Earth


Tau
Rocky Lake
Tau dB/dt Z (ms)
4.28
3.92
3.74
3.03
2.67
2.31
1.96
1.60
1.24
0.89
0.53
0.17
Image © 2020 Maxar Technologies
© 2019 Google
Google Earth


TMI
Rocky Lake
Image © 2020 Maxar Technologies
© 2019 Google
Google Eart


CVG
Rocky Lake
Image © 2020 Maxar Technologies
© 2019 Google
Google Earth

bfz30


Rocky Lake
Image © 2020 Maxar Technologies
© 2019 Google
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