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WINTER 2020 SOUTH LIMB UAV MAGNETIC SURVEY

**Dona Lake Area
Patricia Mining District
NW Ontario**

NTS: 520/08



ARDIDEN

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Ardiden Limited

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- I. Axiom Logistics Report

1 Introduction

Between 28-31 October 2020, Ardiden Limited engaged Axiom Exploration Group Ltd. (Axiom) to conduct an unmanned aerial vehicle (UAV) magnetic geophysical and photogrammetry survey over the South Limb Project ('Project') near Pickle Lake, Ontario. The magnetic survey consisted of 72.41 line-kms with a traverse line spacing of 25 m and tie line spacing of 250 m. The UAV magnetic survey was part of a due diligence program to evaluate high grade historic gold intercepts and to add further definition to the known iron rich magnetic conductors that form key gold mineralization zones adjacent to the historical Dona Lake Mine, and the South Limb fold nose to the west (South Limb Gold Zone). These historic gold occurrences were previously drilled in 1989 by Placer Dome Inc.

Gold mineralization in the South Limb Gold Zone occurs within a silicified zone containing disseminated sulphides (pyrite, pyrrhotite) alongside magnetite which was historically called 'iron formation'. Conducting a low level, tightly spaced magnetic survey was designed to define the structural complexity over this greenstone belt that has a north-south trend adjacent to the Dona Lake mine before moving to an east-west trend as the sequence drapes around the Hooker Burkowski Stock, which likely represents apophyses of the Ochig Lake Pluton.

The Project consists of a contiguous block of 102 mineral claims totaling 20.21km² situated in the Dona Lake Area (G-2009).

Portions of this report have been copied from the NI 43-101 Technical Report titled "Technical Report on Three Gold Exploration Properties Pickle Lake Area, Ontario, Canada for Manicouagan Minerals Inc." written by G.A. Harron & Associates Inc. and dated August 31st, 2009, and the Technical Report titled "Work Report of the 2010-2012 Exploration Activities, Dona Lake Project Pickle Lake Area, Ontario" written by Bruce Mackie Geological Consulting Services and dated September 2012.

2 Terms of Reference

This Report was prepared in conjunction with and at the request of Ardiden Limited for the purpose of filing assessment work as required under the Ontario Mining Act.

Map projections are in UTM, North American Datum 83, Zone 15 and all referenced UTM coordinates are in meters in this project unless stated otherwise. Contractions are "mm" = millimeter, "cm" = centimeter, "m" = meters, "km" = kilometers, "g" = gram, "kg" = kilogram, "in" = inch, "ft" = foot, "lb" = pound, "oz" = troy ounce, "oz/ton" = troy ounce per short ton, "g/T" is grams per metric tonne, and "ddh" = diamond drill hole.

3 Disclaimer

The writer/s disclaims responsibility for portions of the current report that rely on information from historic assessment files and government maps and reports which may not have been prepared in compliance with modern standards.

4 Property Location and Description

The Project is located in the Patricia Mining District in Northwestern Ontario approximately 10 kilometres southeast of the town of Pickle Lake (Figure 1), and approximately 8 kilometres north of Mishkeegogamang First Nation Community of New Osnaburgh. The geographic centre of the property is located at 699500mE, 5696300mN (UTM, Zone 15, NAD83). The project covers portions of National Topographic Sheet (NTS) 520/08.



Figure 1– Property Location Map (Natural Resources Canada, 2002)

On August 2nd, 2017, Ardiden Limited (ASX: ADV) signed an option agreement with White Metal Resources Corporation (TSX-V: WHM) to acquire 100% of the Pickle Lake Gold Properties in Ontario, Canada. The proposed acquisition includes four separate gold properties the Dorothy-Dobie Lake Property, Kasagiminnis Lake Property, South Limb Property, and the Pickle Lake West Property.

As of the date of this report, the Project consists of a contiguous block of 102 mining claims totaling 220.41Ha (Table 1). The Project is part of a larger land package, the Pickle Lake Properties, held by Ardiden Limited known as the Pickle Lake Gold Project.

Table 1 – South Limb Project Mineral Claims Cell Information

Area	Tenure ID	Tenure Type	Anniversary Date	Holder
Dona Lake	100831	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	101396	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
Dona Lake	101525	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	101526	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	102692	BCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	102906	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	116721	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
Dona Lake	118004	BCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	118221	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	121656	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	121657	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	125050	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	125051	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	125052	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	125053	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	125760	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	125761	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	125762	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	129676	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	160810	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	164956	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	166176	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
Dona Lake	166304	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	166305	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	169680	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	169681	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	173060	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	178291	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	178314	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	178995	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
Dona Lake	178996	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
Dona Lake	178997	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
Dona Lake	179657	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	189146	BCMC	16/03/2021	100% (412507) ARDIDEN LTD

Area	Tenure ID	Tenure Type	Anniversary Date	Holder
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Dona Lake	194187	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
Dona Lake	194210	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	194211	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	194935	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
Dona Lake	194936	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
Dona Lake	194937	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
Dona Lake	195563	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	218371	BCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	219081	BCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	224876	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	225586	SCMC	11/04/2021	100% (412507) ARDIDEN LTD
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Dona Lake	282260	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	282261	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	285637	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	285770	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	289638	SCMC	16/03/2021	100% (412507) ARDIDEN LTD

Area	Tenure ID	Tenure Type	Anniversary Date	Holder
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Dona Lake	293069	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	293146	BCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	293147	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	297669	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	297670	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
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Dona Lake	321677	BCMC	16/03/2021	100% (412507) ARDIDEN LTD
Dona Lake	322315	SCMC	16/03/2021	100% (412507) ARDIDEN LTD
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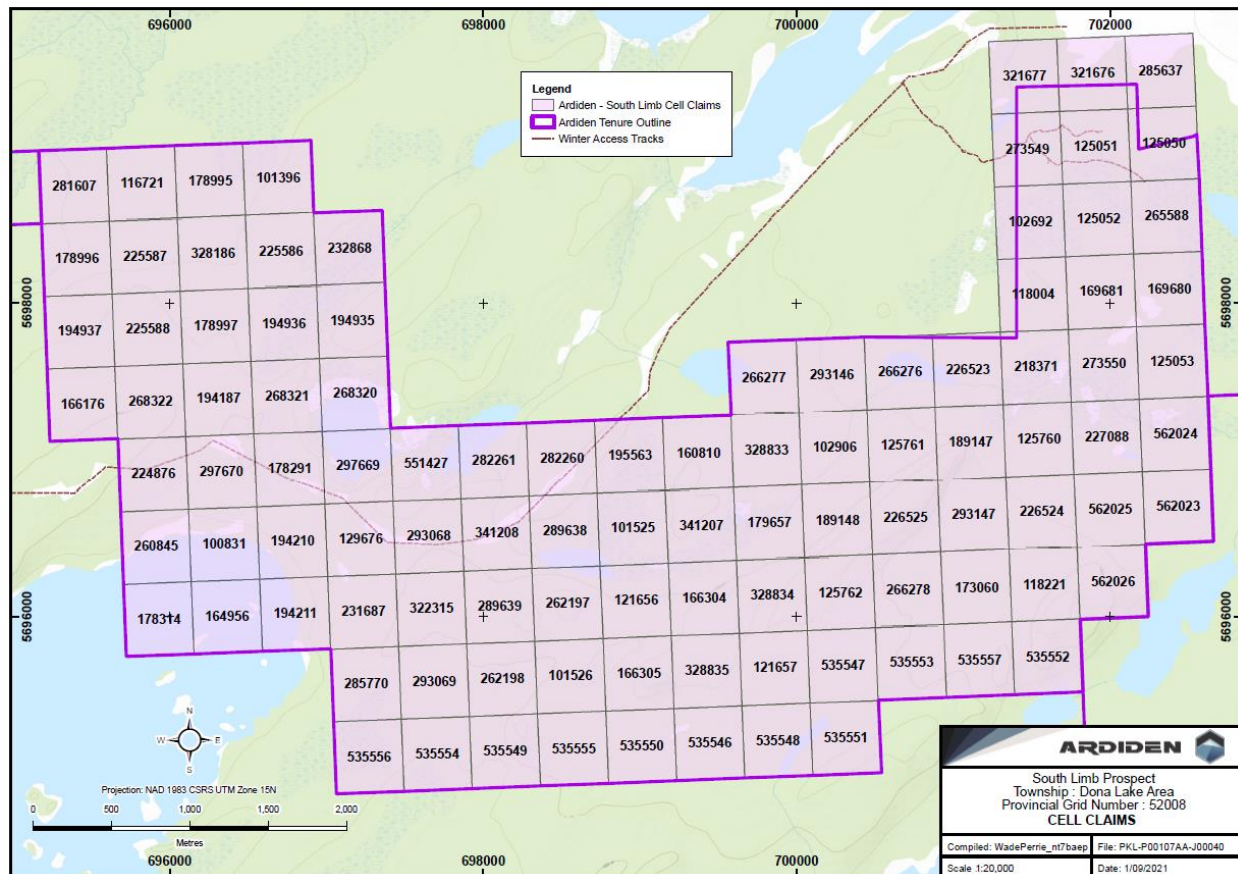


Figure 2 – Regional Location and Access to the South Limb Project

5 Access Infrastructure and Resources

The Project is located within the Mishkeegogamang First Nations traditional lands. The property falls within the taa shi kay win land use planning area.

This property is accessible by year-round access track to the past producing Dona Lake Mine. This access road turns off Provincial Road 599, which runs between Ignace and Pickle Lake, at 694440mE, 5696890mN (UTM, Zone 15, NAD83) (Figure 2). Axiom has utilised this track to complete the UAV survey work as described within the report.

The villages of Pickle Lake and neighbouring Central Patricia are the centre of commercial activity in the area. Amenities available in these villages include groceries, fuel, telecommunications, hotel accommodation, and regular charter aircraft services to Thunder Bay. The major population center in the area is Thunder Bay, 235 km southeast of Ignace. This city provides significant cultural, social, commercial, educational, and medical facilities in northwestern Ontario. Goods and services relevant to minerals exploration and mine production are readily available in Thunder Bay.

6 Climate and Physiography

Elevations on the Project are generally within a 20m range from 390m to 410 m above sea level. The prevailing climatic conditions are typical of the northern Boreal Forest, with cold winter months and warm summer months lasting from June through September. Weather conditions allow exploration activities such as diamond drilling and geophysical surveys to be conducted year-round.

7 Geological Setting

7.1 Regional Geology

The Project is located in the western part of the Pickle Lake Greenstone Belt situated within the Uchi Domain which is located in the southern part of the North Caribou Terrane which in turn lies within the Uchi Subprovince of the Canadian Shield (see Figure 3).

The Uchi Domain represents an area where significant Neoproterozoic volcanism and tectonism resulted in the production of new continental crust both prior and synchronous to collision with the Winnipeg River Terrane to the south. As a result, the Uchi Domain comprises Neoproterozoic volcanic-dominated supracrustal rock sequences, locally significant sedimentary rock accumulations and associated plutons that were built upon, or adjacent to the earlier Mesoproterozoic crust.

The “Pickle Lake Greenstone Belt” has been divided by previous workers in the past into a western portion; the Meen-Dempster Greenstone Belt (“M-DGB”) and an eastern portion; the Pickle Lake (“PLGB”) Greenstone Belt. This two- fold subdivision will be kept for the description below.

The Pickle Crow Assemblage is the oldest (>2860 Ma) lithologic sequence identified in the two greenstone belts. It is composed of mainly massive to pillowed basalt intercalated with thin laterally continuous banded iron formation and small discontinuous lenses of intermediate volcanic rocks. All of these lithologies are intruded by quartz-feldspar porphyry sills, and mafic to ultramafic intrusions. The Pickle Crow Assemblage is interpreted as being deposited in a back-arc to emergent arc setting prior to ~2860 Ma. The isotopically enriched tholeiitic lower sequence may represent deposition on or near a thinned or juvenile continental margin. The compositionally diverse rocks of the upper sequence are interpreted as originating in a transitional arc to back-arc setting.

Rocks of the overlying Kaminiskag Assemblage (2842-2836 Ma) have been identified along the northern margin of the M-DGB and along the southeastern margin of the PLGB. Similar to the Pickle Crow Assemblage massive to pillowed basalt lithologies dominate, and at least two interflow banded iron formations are also present. In the M-DGB the Kaminiskag Assemblage also includes a number of thin discontinuous units of dacite to rhyolitic tuff, whereas in the PLGB the felsic unit is thicker and continuous over 8 km.

The Kaminiskag Assemblage is characterized by LREE depleted tholeiitic basalt and calc-alkaline dacite to rhyolite with radiogenic Nd isotopic compositions. These petrochemical characteristics are typical of immature Archean arc related rocks that occur in younger convergent margin settings.

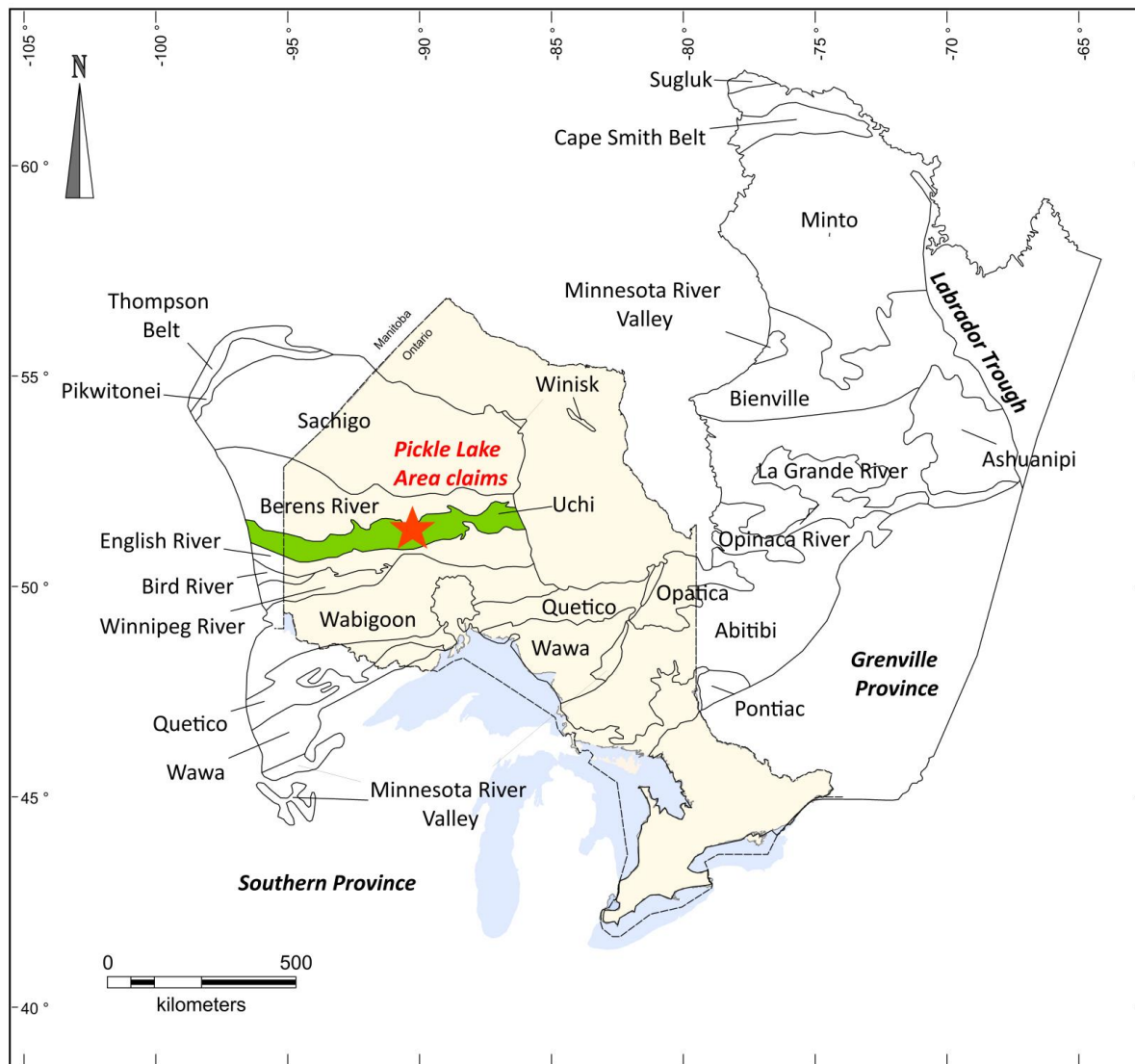


Figure 3 – Geological Subprovinces

The Meen Assemblage (2825 Ma) occurs exclusively in the M-DGB. This assemblage faces southwest, immediately overlying rocks of the Kaminiskag Assemblage and underlying a sequence of Confederation Assemblage rocks that are located to the southwest. The Meen Assemblage occurs as a tabular sheet with a 40 km strike length composed of monolithic pyroclastic rocks that are dominantly dacitic in composition with minor rhyolite. The upper portion of the assemblage locally contains sedimentary rocks (chert, marble, arenite, and pyrite-graphite schist).

Confederation Assemblage rocks (2744-2730 Ma) are found in both the M-DGB and the PLGB. Most of the northeast portion of the Confederation Assemblage is composed of intercalated mafic and intermediate volcanic rocks, which are best exposed in the southeastern part of the PLGB, where the facing direction is to the southeast. In the eastern part of the PLGB the basal contact of the Confederation Assemblage with the underlying Pickle Crow assemblage is marked by abundant fragmental rocks. In the M-DGB the Confederation

Assemblage consists of two bimodal volcanic cycles. Each cycle is composed of pillowed to massive volcanic flows overlain by dacitic pyroclastic rocks. One of these cycles can be correlated between the M-DGB and the PLGB.

7.2 Geology of the Pickle Lake Greenstone Belt

The PLGB is an approximately 70 km long by 25 km wide area of supracrustal rocks and internal granitoid plutons surrounded by large granitoid batholiths (Figures 4). The supracrustal rocks have been deformed and metamorphosed to greenschist facies with amphibolite facies occurring as thermal areoles surrounding younger plutons. A recent revised interpretation of the regional geology forms the basis of the following description of the PLGB.

The PLGB is subdivided into three (tectono-stratigraphic) assemblages (Pickle Crow, > 2860 Ma; Kaminiskag, ~2836 Ma; Confederation ~2744 Ma). The northwest-facing Pickle Crow assemblage dominates the northwestern part of the PLGB. It comprises mainly massive to pillowed basalt flows intercalated with thin laterally continuous banded iron formation and small discontinuous lenses of intermediate volcanic rocks, all of which are intruded by semi-concordant quartz-feldspar porphyry dykes of various ages. On the basis of petrochemical characteristics, the Pickle Crow assemblage can be subdivided into a lower and an upper sequence. The lower sequence consists of tholeiitic basalt and rare calc-alkaline andesite which is spatially associated with iron formation. The upper sequence also consists of tholeiitic basalt intercalated with rare lenses of calc-alkaline andesite to dacite but is distinguished from the lower sequence by a centrally located alkaline basalt unit.

Rocks of the PLGB are affected by three episodes of folding and regional metamorphism.

The McCullah Creek-First Loon Lake area of the PLGB is underlain by supracrustal rocks of three distinct tectonostratigraphic assemblages (Pickle Crow, Confederation and Kaminiskag).

The northern portion of the PLGB is underlain by a northeast-striking sequence of supracrustal rocks defined as the Pickle Crow assemblage (Figure 4). This assemblage is dominated by massive and pillowed mafic volcanic flows with subordinate gabbroic sills. The mafic volcanic rocks are intercalated with thin laterally continuous banded iron formation and small discontinuous lenses of intermediate volcanic rocks. All lithologies are intruded by semi concordant feldspar porphyry dikes. Stratigraphy generally faces toward the northwest, except in areas of asymmetric folding. The minimum age of this assemblage is estimated to be 2860 Ma.

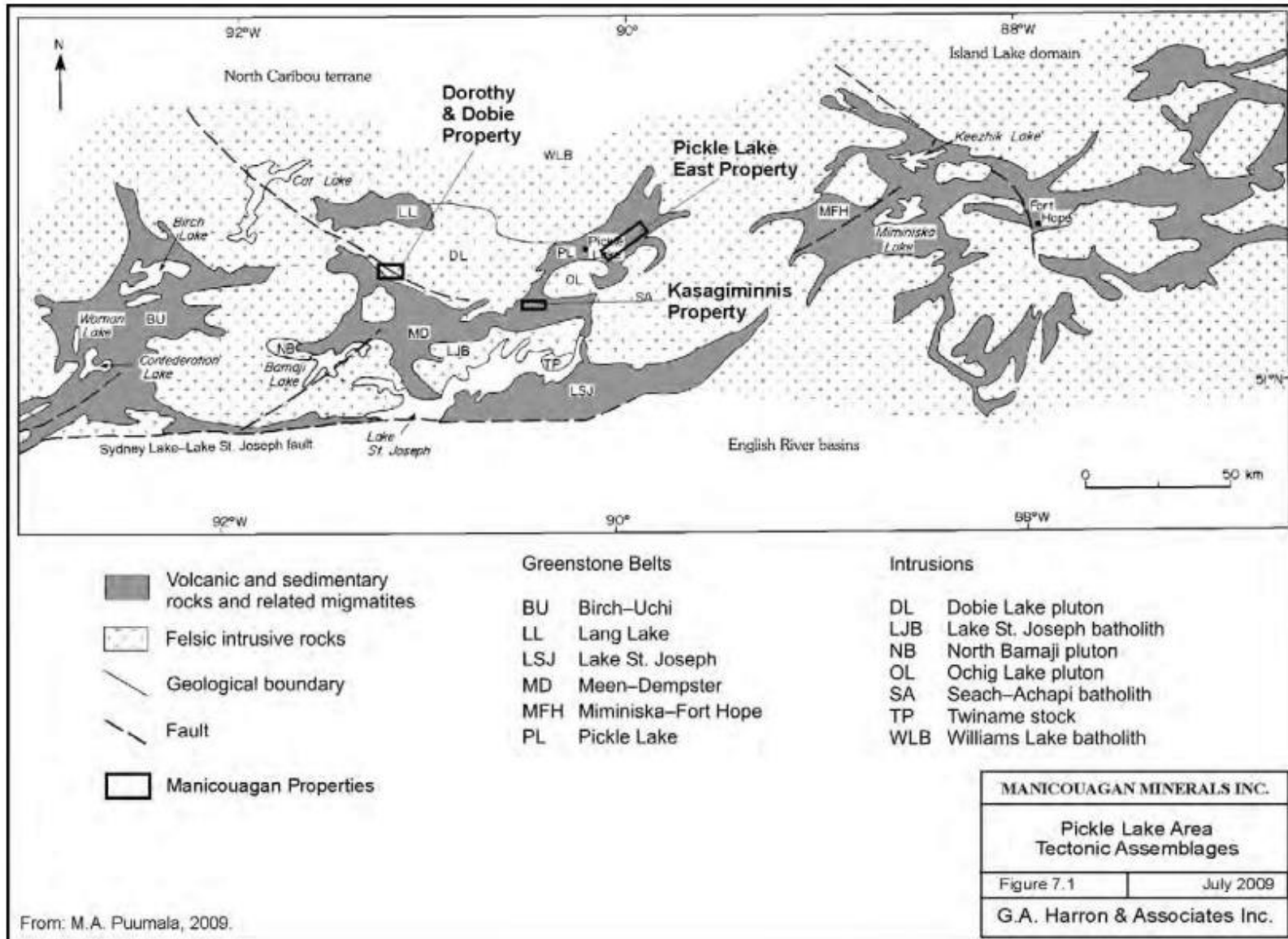


Figure 4 – Pickle Lake Area Tectonic Assemblages (Herron, 2009)

Rocks of the Kaminiskag assemblage (circa 2836 Ma) outcrop to the southeast of the Confederation assemblage. The Kaminiskag assemblage is dominated by mafic volcanic flows, with significant layers of felsic to intermediate volcanic ash flows. The mafic volcanic rocks are generally strongly foliated massive amphibolites, although minor amounts of ultramafic material have been reported. Minor amounts of banded iron formation are interbedded with the mafic volcanic rocks and thin layers of fine-grained clastic sediments are locally interbedded with the felsic to intermediate volcanic rocks. The main felsic to intermediate volcanic unit is a quartz-phyric dacite tuff that can be traced over a strike length of 8 km. This unit locally contains thin pyrrhotite rich massive sulphide lenses in chert.

The Kaminiskag assemblage is bounded to the southeast by granitic rocks of the Second Loon pluton, which imposes a contact strain and metamorphic aureole upon the adjacent supracrustal rocks. Generally, stratigraphy and foliation in the area are sub parallel, strike northeast and dip steeply to the northwest.

Strongly deformed rocks that exhibit extensive silica and carbonate alteration occur in the northwestern portion of the area, near the Kawinogans River. This deformation zone extends toward the southwest into the Pickle Crow Mine area. This deformation event may also be linked to the creation of the anticline-syncline pair in the Central Patricia and Pickle Crow areas. Axial surfaces strike southwest and dip steeply to the northwest, with moderate to steep northeast- plunging hinge lines.

The boundary between the Confederation (2744 Ma) and the Pickle Crow (2860 Ma) assemblages has been interpreted to occur northeast of First Loon Lake. A major structural discontinuity separates an "S" fold from a sequence of less deformed lithologies to the southeast, and south facing directions indicate Confederation assemblage lying unconformably on Pickle Crow assemblage rocks.

7.3 South Limb Project Geology

The general geology of the Pickle Lake area is best documented by Young et al (2006). The Property is underlain by portions of both the Pickle Crow and Confederation assemblages. These groups of rocks have been intruded by diabase, diorite, and lamprophyre dykes. In the Property area, volcanic rocks of the Pickle Crow assemblage have been intruded by three late granitic stocks known as the Ochig Lake, Hooker-Burkowski, Pickle Lake Stocks and Quarrier Tonalite Gneiss Intrusion (Figure 5).

The Ochig Lake Stock (~2741 Ma) is the largest of the three intrusive bodies. It consists of homogenous granodiorite to trondhjemite. This stock primarily exists in the southern portion of the Property. The Hooker-Burkowski Stock (~2716 Ma) is located southeast on the Property and intersects all Pickle Lake greenstone belt assemblages. The southern margin of the stock is well exposed on the property and is composed of quartz phyric trondhjemite.

The Project is located near the contact of the Confederation assemblage and consists of intercalated mafic to intermediate volcanic rocks. The bulk of this assemblage occurs across the property with the assemblage being deposited unconformably on the overturned Pickle Crow assemblage to the north. The Dempster-Pickle Lakes greenstone belt which trends roughly east-west and joins the Pickle Lake belt to the east, and the Meen-Dempster Lakes belt to the west. The Project is underlain by a complex sequence of southward younging mafic-to-intermediate flows, mafic-to-felsic pyroclastics, sediments and iron formation. This sequence has been intruded by numerous small gabbroic bodies, granite pegmatite dykes and minor felsite dykes. The portion of the belt exposed on the property has been compressed between two intrusive bodies, the Ochig Lake Pluton and Quarrier Tonalite Gneiss Intrusion, to the east and west respectively,

trend on the property is described by the nearly circular, 11km long arc of high magnetics which wraps around the tongue of the Ochig Lake Pluton. The high magnetics are caused by a major, semi-continuous unit and numerous minor discontinuous units of oxide iron formation.

The formations occur within a package of tholeiitic, usually pillowed basalt and amphibolite with local tuffs and minor felsic volcanics and clastic sediments. These units dip away from the pluton at a very consistent 60° and also young away from the pluton, suggesting a pre-erosion domal structure over the intrusive. All of the volcanic and sedimentary units have been intruded by sodium-rich felsic dykes and albite porphyry with a composition similar to the Ochig Pluton. The entire assemblage has been metamorphosed to amphibolite grade, as indicated by the presence of garnet porphyroblasts, biotite, local amphibolites with blue-green hornblende, and the relative lack of chlorite.

The Dona Lake deposit is located in iron formation near the west-central portion of the property. The general geology in the immediate vicinity of the deposit, as derived from scattered outcrops, drilling, and ground magnetic surveys, consists of tholeiitic basalt separated by several major units of iron formation, and intruded by felsic dykes and albite porphyry. The volcanics and sediments strike north-south to locally northwest-southeast and dip to the east and northeast at 60°. Tops, as determined from well-preserved pillows, are also to the east.

The basalts, which are normally pillowed and massive, are very schistose and foliated in the vicinity of the iron formations. Some, but not all, of the felsic dykes are also affected by this foliation event. Virtually all of the iron formation has been isoclinally folded. The fold planes are parallel to overall stratigraphy and the fold axes plunge east down the dip of the iron formation. These folds have wavelengths of about 1m and amplitudes of up to 10m. It is within the fold axis of one of these broad-wavelength cross folds, in iron formation, that the Dona Lake gold deposit occurs.

The iron formations are usually classic oxide-facies iron formation, composed of finely bedded magnetite, chert and hornblende, with local grunerite, garnet, calcite and sulphides. A finely bedded chert-sulphide unit in the hanging wall has been genetically grouped with the iron-rich minerals other than sulphides and might be more properly termed a chert, since the sulphides may be secondary. Significantly, no carbonate iron formation, nor iron-rich carbonates, have been located on the property. There is some evidence to suggest that the magnetite content is considerably reduced in mineralized sections, perhaps having been altered to pyrrhotite and/or grunerite. There are virtually no quartz veins and the few which do occur seldom contain gold. There is also no visible or geochemically evident siliceous alteration, at least not within the basalts. Within the iron formation, variable quartz content and the possibility of remobilization of original chert makes identification of siliceous alteration difficult in drill core.”

7.4 Alteration and Mineralization

Gold mineralization at the South Limb property is orogenic in nature and occurs in complexly folded and sheared, mainly tholeiitic, volcanic rocks of the Pickle Crow assemblage near its contact with calc-alkaline volcanic/volcaniclastic rocks of the Confederation assemblage. Host rocks for the mineralization include

tholeiitic lavas, banded iron formation, intermediate volcanic/volcaniclastic rocks and quartz feldspar porphyry. Gold occurrences on the property are associated with iron formation-hosted gold mineralization.

The iron formation-hosted gold mineralization is set adjacent to vein structures and contains stringers, discontinuous lenses of quartz and the iron-bearing minerals have been replaced by sulphides. Both quartz and sulphides are gold mineralized.

“All of the gold occurs in oxide-facies iron formation. Mineralized sections display the following characteristics: between 5% and 15% pyrrhotite virtually always accompanies gold. Notably, this relationship does not apply to pyrite; even when pyrrhotite is abundant, if the pyrite content exceeds 3%-4%, gold values are usually low. The pyrrhotite is fine-grained and wispy, cross cutting bedding and apparently replacing or displacing other minerals. There is no arsenopyrite and no evidence of geochemically anomalous arsenic. This situation should be contrasted with the other gold deposits in the Pickle Lake camp where vein quartz was usually the immediate host and arsenopyrite was often the main sulphide (Cahoon 1986)”

8 History of Exploration on the Property

Mineral exploration in the central part of the Uchi sub-province began in 1928 with the discovery of Pickle Crow and Central Patricia Gold Deposits near Pickle Lake. In 1933 prospecting in the Meen and Kasagiminnis Lake areas discovered minor quantities of visible gold. In the 1940's through the 1960's minimal exploration is recorded in the area, except for the discovery of the Koval-Ohman gold deposit at Bancroft Lake. Hasaga Gold Mines Ltd optioned the property and drill defined a small potentially economic gold deposit. In the late 1960's and early 1970's the area was subject to a period of base metal exploration with the discovery of the Thierry Ni-Cu deposit at Pickle Lake, the Matabi base metal massive sulphide deposit at Sturgeon Lake Union Miniere Explorations (“UMEX”) completed airborne geophysical surveys over a large area, including the current Drum Lake Project with follow-up diamond drilling.

Interest in gold mineralization in the area was in the 1980's and resulted in the discovery of the Golden Patricia and Dona Lake Deposits. Since the early 1990's the level of mineral has diminished and only a few exploration companies. Since 2019 a renewed interest has started in the region with several exploration companies (Ardiden Ltd, AuTeco, Commander Resources Ltd, Metals Creek Resources Corp, New Origin Ltd) active in the area.

Exploration has been documented in the South Limb-Dona Lake area since 1973 as follows:

- 1973 UMEX completed one drill hole on the property C-136, No assay results reported.

- 1985-1989 Placer Dome Canada completed 60 drill holes on the property with limited assays reported. Significant results included 0.5m of 7.8 g/t Au, 1.0m of 4.8 g/t and 1.0m of 2.7 g/t Au.

- 2010 Manicouagan conducted a field mapping program at the western portion of the South Limb property, no significant gold values reported.
- 2011 Furgo Airborne Surveys carried out a helicopter –borne electromagnetic and magnetic GeoTEM survey on behalf of Manicouagan.

9 2020 UAV Survey Program

9.1 Airborne Unmanned Aerial Vehicle Magnetometer Survey (UAV-MAG™)

Axiom UAV and Geomatics, a wholly owned subsidiary of Axiom Exploration Group Ltd., was commissioned to conduct the airborne magnetometer survey using a DJI M600 Pro Unmanned Aerial Vehicle (“UAV”) and a Gem Systems GSMP-35UA high precision potassium magnetometer. The magnetometer specifications are listed as base station locations, setup, and specification in Table 3/Figure 7/Table 4 and UAV specifications in Table 5.

A total of 72.41-line kilometers with a 25m line spacing was collected including 6.47-line kilometers of tie lines oriented 90 degrees to the flight lines (Figure 6/ Table 2). The flight line orientation was designed to display the maximum magnetic geometries to the iron rich structures and potential gold hosting structural features at the Project.

A total of 72.41-line km’s of continuous profiling at 35m AGL (above ground level) was conducted between Originally the project consisted of two separate areas, south Limb-West and South Dona Lake. Upon the competition of the South Limb-West block, the crew set up the base station closer to the second block and prepared for the first flights.

After the UAV had completed its own internal calibration and safety checks, the UAV navigation system immediately failed and switched into a full manual control mode and was nearly uncontrollable. The flight was immediately aborted, and no injuries or incidents took place.

After further investigation, which included several other test flights with a new UAV, it was determined the iron formation and associated 140,000nT anomaly was the cause of the malfunction.

The Pilot in command (Chase Wood) made the decision to cease all flights and de-mobilize from the survey area once it was determined that this was the cause based on his prior experience surveying iron deposits in Canada.

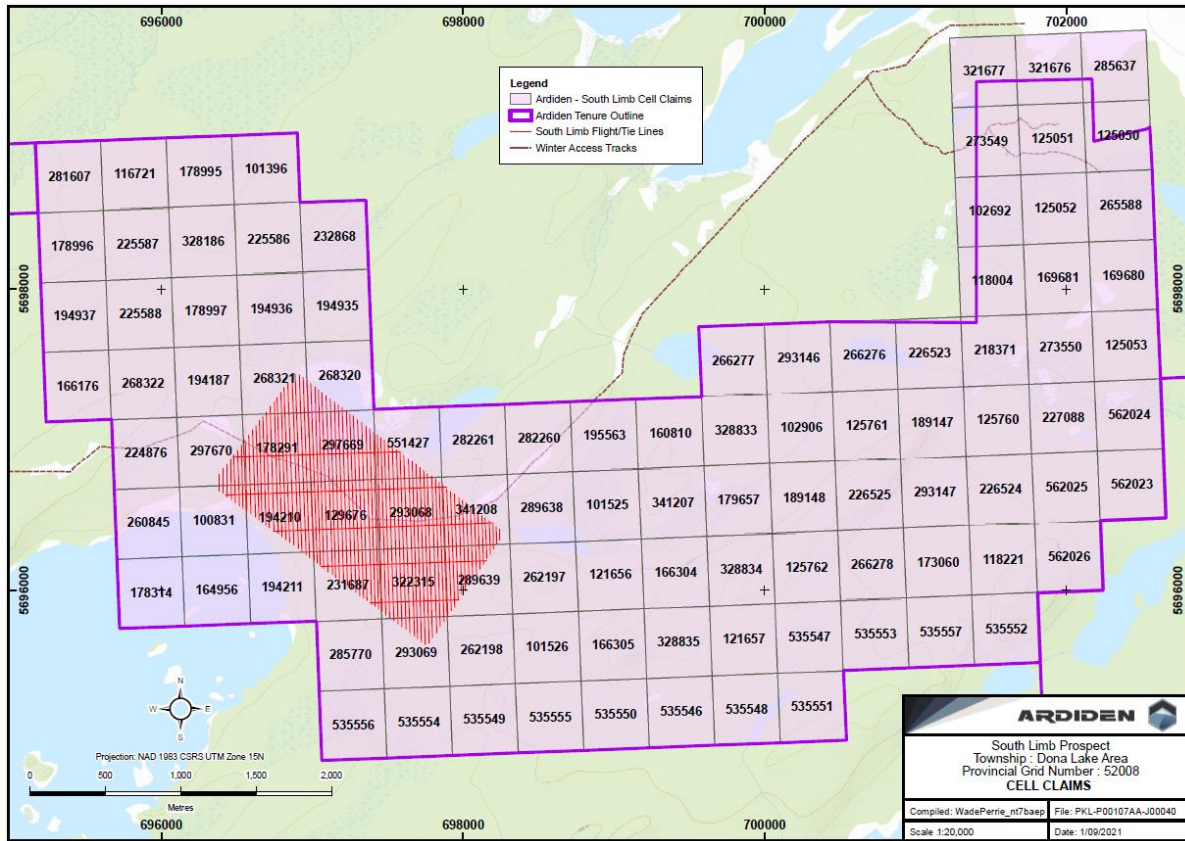


Figure 6 – Map of UAV Airborne survey area, black flight lines are completed lines from this survey

Table 2 – Summary of Total Flight Lines per Cell Claim

Project	Cell Type	Claim Numbers	Flight Lines Metres
South Limb	Flight Line Cells	100831	867.08
South Limb	Flight Line Cells	129676	9384.58
South Limb	Flight Line Cells	178291	7951.47
South Limb	Flight Line Cells	194210	6860.82
South Limb	Flight Line Cells	194211	75.81
South Limb	Flight Line Cells	231687	4786.98
South Limb	Flight Line Cells	268320	999.91
South Limb	Flight Line Cells	268321	1949.01
South Limb	Flight Line Cells	289639	3895.43
South Limb	Flight Line Cells	293068	8695.76
South Limb	Flight Line Cells	293069	1594.36
South Limb	Flight Line Cells	297669	7994.37
South Limb	Flight Line Cells	297670	1381.16
South Limb	Flight Line Cells	322315	8993.29
South Limb	Flight Line Cells	341208	4397.22
South Limb	Flight Line Cells	551427	2586.91
Total Metres			72414.16

Table 3 – Potassium Magnetometer Specification

Sensitivity	0.0002 nT @ 1 Hz	Gradient Tolerance	Over 50,000 nT/m
Heading Error	± 0.05 nT	Dynamic Range	15,000 to 120,000 nT
Resolution	0.001 nT	Absolute Accuracy	± 0.1 nT @ 1 Hz

Table 4 – Magnetometer Base station locations for Airborne Survey

Base Station	Easting (m)	Northing (m)	Coordinate System
#1 - 8062827	691671	5689393	WGS84 UTM Zone 15N



Figure 7 – Base Station Setup

Table 5 –UAV Specifications for Airborne Survey

Sensitivity	0.022 nT @ 1 reading per sec.	Gradient Tolerance	Over 10,000 nT/m
	0.05 nT @ 1 reading every 4 sec.	Dynamic Range	20,000 to 120,000 nT
Resolution	0.01 nT	Absolute Accuracy	± 0.1 nT @ 1 Hz

9.2 Operational Logistics and Personnel

Field operations were supervised by Ardiden Limited with Daniel Grabiec (Exploration Manager) P.Geomobilising from Thunder Bay, Ontario, Canada. Axiom provided three field staff in Chase Wood as pilot in command (PIC) and one visual observer (VO) in Mark Weir. Axiom Exploration Group is based out of Saskatoon, Saskatchewan, Canada, along with the support staff and geophysicist. All these individuals and contractors satisfactorily carried out their respective duties. The program was based out of Pickle Lake, located approximately 15 kilometers northwest of the project area.

10 Results

Total Magnetic Field and First Vertical Derivative results are respectively presented in the Axiom Logistics report in Appendix II. The magnetic data dynamic range for the surveyed area is approximately 3000 nT. The magnetic highs are generally oriented in a E-W direction to the west and moving to N-S direction to the east that are likely reflecting the regional metavolcanic-metasedimentary stratigraphy. The magnetic data dynamic range appears greatest throughout the region of the completed survey where magnetic units are clearly discernible.

The metavolcanic host rocks within the surveyed area correspond to the known highly prospective and mineralised structure running through the Project. Notwithstanding the surveys elevated component along with any potential cultural or environmental interference, the UAV’s elevation of approximately 35 metres above ground level and survey speed has produced a significant level of detail to discriminate shear zones and faulting within the gridded data that should be associated to gold bearing mineralisation.

The postulated lithological boundaries may be difficult to define given the limited flight area, however, significant breaks, offsets and demagnetised zones can be interpreted from the data and likely to correspond to the significant mineralised structure of interest. The main structural controls appear in an E-W to N-S sense as this wraps around the controlling compression of the Ochig Lake Pluton, Hooker-Burkowski and Pickle Lake Stocks to the east and north-east of the belt played an important role in the creation of a secondary fault system, trending NE and NW, densely cross cutting the greenstone belt.

There is a distinct continuation of the magnetic body within the survey data that correlates to previous geophysical data sets and historical drilling highlighting part of the interpreted gold bearing iron formation. The extent of the limited data flown does however highlight approximately 2000m long and 100m wide of an E-W trending magnetic structure which to date has had very limited drilling and would be an important follow-up target for drilling.

11 Interpretations and Conclusions

The winter 2020 UAV magnetic geophysical survey on the Project successfully highlighted the complex structural nature and highly magnetic domain of the east-west trending greenstone belt in the western region of the property. Whilst disappointing the highly magnetic zone located to the south of the Dona Lake mine grounded the UAV from operating and conducting the planned survey it demonstrated this highly magnetic anomaly that lies within the property.

Additional work is warranted along the southern extension of the Dona Lake mine to determine the contributing factors to the anomalous magnetic response. In addition, a further UAV magnetic geophysical and photogrammetry survey is recommended across the magnetic iron formation across the Project.

Ongoing analysis and review on the structural controls of the Project has merit given mineralisation appears to be consistent with a structurally controlled component and associated with iron rich rocks within the greenstone belt.

12 Recommendations

Based on the results of the UAV magnetic geophysical survey, a further two-phase exploration program is warranted on the Project.

12.1 Exploration Phase I

Further exploration on the Project should include a 2000-3000 metre program of 20-30 drill holes recommended to effectively drill test the anomalous mineralisation of the Project.

In addition, a ground magnetic survey (GMAG) should be planned to cover the region to the south of the Dona Lake mine on the property. Whilst historical drilling on the property has highlighted anomalous gold results, further drill holes should test depth extents of the known mineralization along with the targeting along strike to develop a larger, potentially economic, deposit size. Elsewhere in the Pickle Lake Greenstone belt, iron formation related gold has been mined successfully to depths of down to ~1,200 metres at the Central Pickle mine.

12.2 Exploration Phase II

In conjunction to the results of Phase I, further UAV-MAG survey is recommended across the iron formation across the Project.

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14 Statement of Qualifications

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Certificate of Author

I, Haydn Daxter, do hereby certify that:

1. I am a direct employee of Ardiden Limited and Exploration Manager (Australia) in charge of producing this report.
2. I am a graduate of the University of New England, NSW, Australia B.Sc., Mineral Deposits (2019).
3. I am a member of the Australian Institute of Geoscientists (MAIG No. 7595).
4. I have worked as a geologist for a total of 2 years since obtaining my B.Sc. degree and had an exposure to Archean gold systems in Australia and Canada.
5. I am responsible for the preparation of this report titled "Winter 2020 South Limb UAV Magnetic Survey, South Limb Project, Pickle Lake Area, Ontario"
6. I have previously visited the Property and planned the UAV survey program.
7. I have had an involvement with the property that forms the subject of this report since the survey commenced in October 2020.

Dated the 31st August, 2021

"Haydn Daxter"

Haydn Daxter BSc MAIG

Exploration Manager

Ardiden Limited

Appendix I Work Report

UAV MAGNETIC SURVEY

SOUTH LIMB WEST PICKLE LAKE, ONTARIO



ARDIDEN

PREPARED FOR:
ARDIDEN LIMITED
ATTENTION TO: HAYDN DAXTER

PREPARED BY:
AXIOM EXPLORATION GROUP LTD.

SUITE 101 - 3239 FAITHFULL AVENUE
SASKATOON, SK, CANADA



Project #20.5051.ADV

NOVEMBER 12, 2020

PETER DUECK, MBA., P.GEO.
CHASE WOOD, M.Sc., G.I.T.
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1. INTRODUCTION

From October 28th to October 31th, 2020 Axiom Exploration Group Ltd. ('Axiom') carried out an unmanned aerial vehicle (UAV) magnetic geophysical survey over the South Limb - West Project near Pickle Lake, Ontario. The magnetic survey consisted of 72.41 line-kms with a traverse line spacing of 25 m and tie line spacing of 250 m.

The magnetometer UAV system consists of a single GSMP-35UC high precision potassium vapor magnetometer slung from a DJI M600 Pro UAV platform. The magnetometer was towed with a 16.4' cable to ensure adequate separation between the UAV and the magnetometer.

Quality control and quality assurance were completed daily during the acquisition phase to ensure all field data collected was at a high standard. Final processing and leveling were completed post acquisition

Final magnetic deliverables from the survey include:

- All raw UAV magnetic data including base station data
- 3D TMI Inversion
- A final leveled dataset
- Map products including:
 - Total Magnetic Intensity (TMI) Map
 - Residual Magnetic Intensity (RMI) Map
 - Analytic Signal (AS) Map
 - First Vertical Derivative (VD1) Map
 - Line Path Map with Base Stations Locations

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

1.1. LOCATION & ACCESS

The general location area is in the western region of the province of Ontario, Canada (Figure 1). The immediate project area is centered approximately 8km south of Pickle Lake, Ontario. The property was accessed by truck along Highway 599 then along an unnamed road for final grid access (Figure 2).

- NTS Sheet(s): 052O/08



Figure 1: General Location Area¹

¹ © 2000-2009 Her Majesty the Queen in Right of Canada, Natural Resources Canada

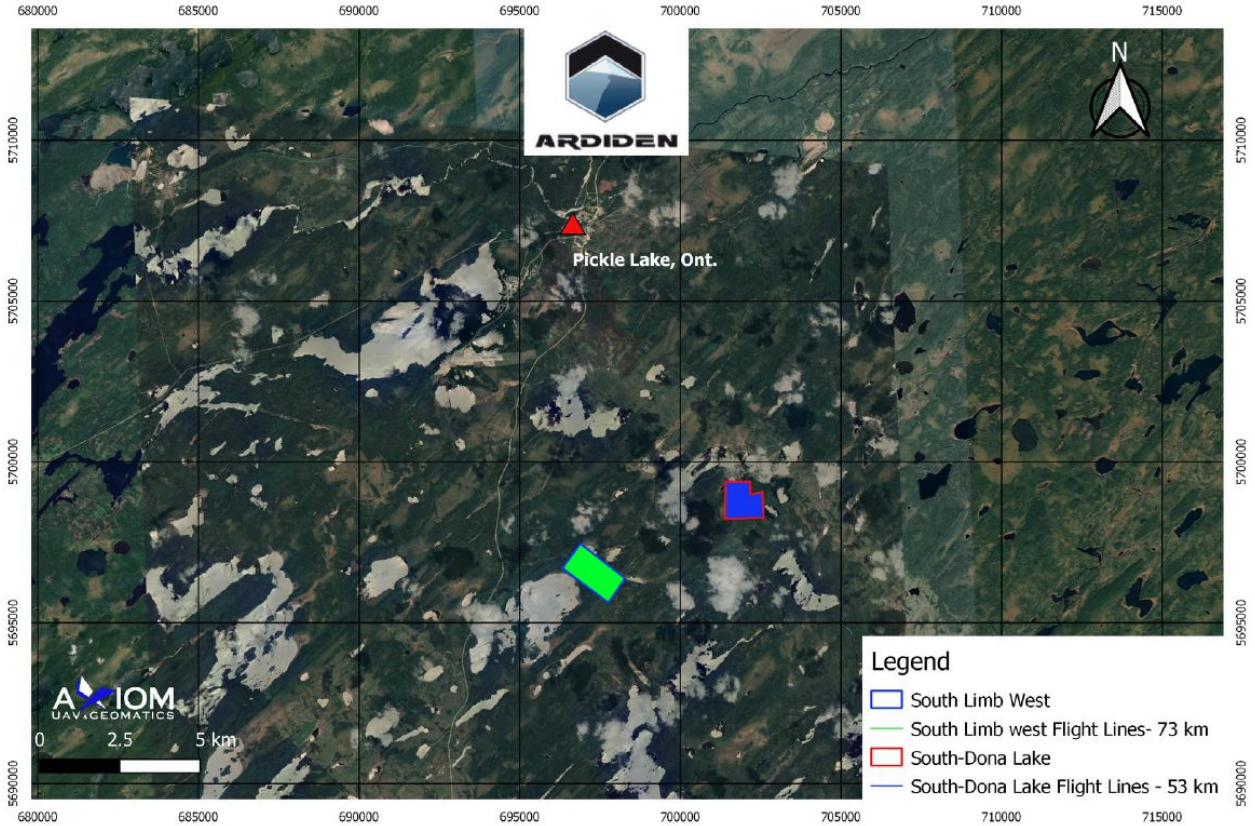


Figure 2: Project Location as shown on Google Earth

Originally the project consisted of two separate areas, south Limb-West and South Dona Lake. Upon the completion of the South Limb-West block, the crew set up the base station closer to the second block and prepared for the first flights.

After the UAV had completed its own internal calibration and safety checks, the UAV navigation system immediately failed and switched into a full manual control mode and was nearly uncontrollable. The flight was immediately aborted, and no injuries or incidents took place.

After further investigation, which included several other test flights with a new UAV, it was determined the iron formation and associated 140,000nT anomaly was the cause of the malfunction.

The Pilot in command (Chase Wood) made the decision to cease all flights and de-mobilize from the survey area once it was determined that this was the cause based on his prior experience surveying iron deposits in Canada.

2. PROJECT SPECIFICS

Personnel and support staff that were directly involved in this project including the data processing and QA/QC are listed in Table 1.

Table 1: Project Personnel & Support Staff

Pilot In Command (PIC)	Chase Wood
Visual Observer (VO)	Mark Weir
Geophysicist	Peter Dueck
Supporting Staff	Tanya Coetzee

The field crew was stationed in Pickle Lake and commuted each day to the survey block from the Pickle Lake Hotel. October 18 was a weather day due to limited visibility as well as intermittent sleet and snow as well as high winds.

2.1. TOPOGRAPHICAL RELIEF & CULTURAL FEATURES

The main portion of the survey area covered by land has minimal topographical relief as shown in Figure 3. The transition from lakes to vegetation was the biggest concern for this survey due to topographic changes and tree height. For this survey, the Above Ground Level (AGL) mean magnetometer height is 34.11m.

Due to the location and relative isolation of the survey area, no significant cultural noise was seen in the data as there was no powerline across the unnamed road that crosscut the grid.

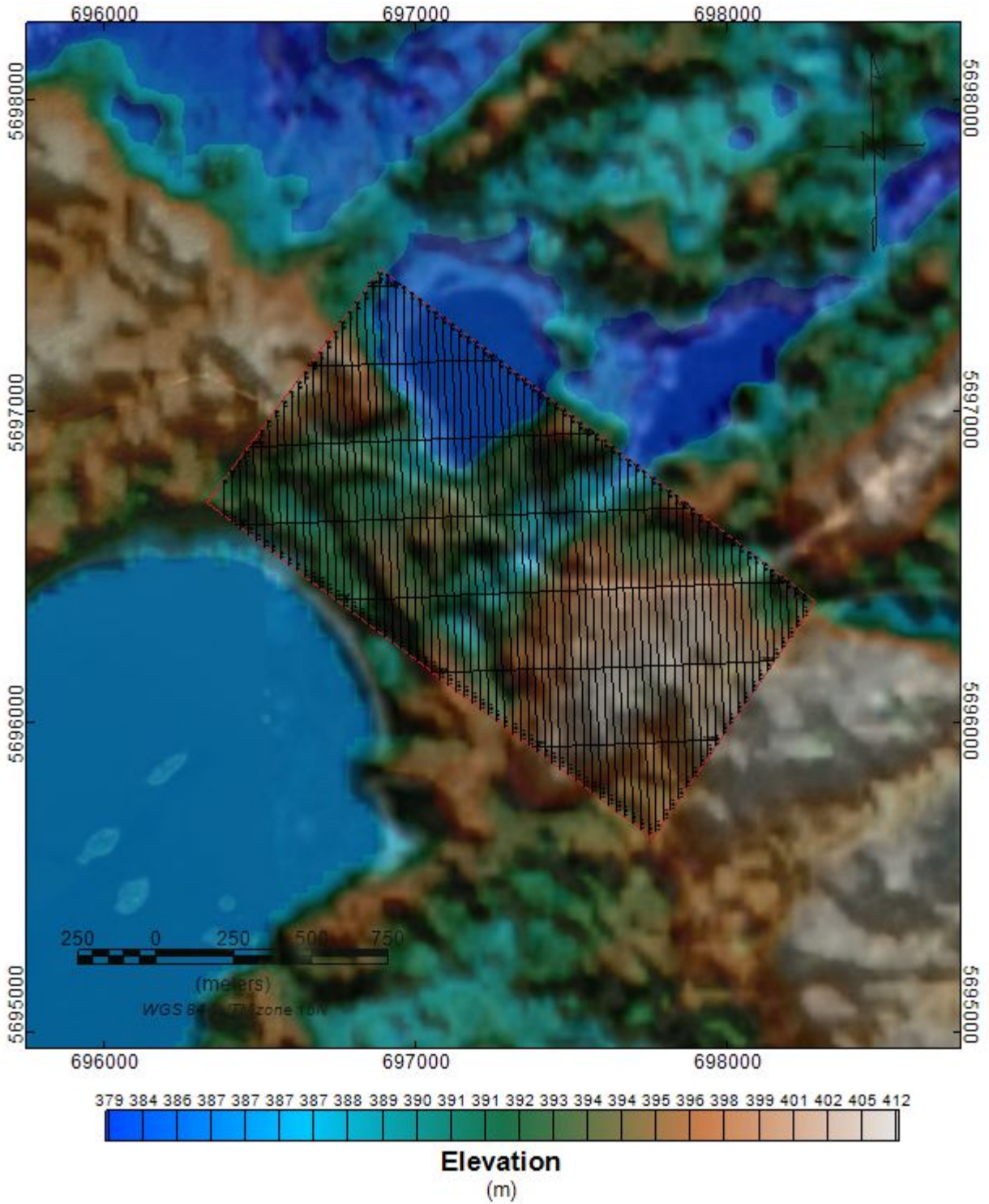


Figure 3: SRTM Topography (1 Arc-Second) over Survey Area

2.2. MAGNETIC SURVEY PARAMETERS

From October 28th to October 31th, 2020 Axiom Exploration Group Ltd. ('Axiom') carried out an unmanned aerial vehicle (UAV) magnetic geophysical survey over the South Limb - West Project near Pickle Lake, Ontario. The magnetic survey consisted of 72.41 line-kms with a traverse line spacing of 25 m and tie line spacing of 250 m.

The UAV system consists of a single GSMP-35UC high precision potassium vapor magnetometer slung from a DJI M600 Pro UAV platform. The magnetometer was towed with a 16.4' cable to ensure adequate separation between the UAV and the magnetometer.

Further survey parameters can be found in Table 2.

Table 2: Survey Parameters

Survey Block	Line Type	Line Spacing (m)	Flight Direction (Degrees)	Actual Line-kms Flown
South Limb - West	Traverse	25	178° - 358°	65.94
	Tie	250	088° - 268°	6.47
			Total:	72.41

The final survey was defined by the boundary coordinates shown in Table 3.

Table 3: Survey Area Coordinates

WGS84 UTM Zone 15N	
<i>Easting</i>	<i>Northing</i>
696886	5697457
698280	5696386
697758	5695627
696325	5696704

BASE STATION

A single GEM's GSM-19 (Overhauser) magnetometers was used for this survey in their "Base" mode of operations. The magnetometer is equipped with a high-resolution (.07m) integrated GPS. The base station was recording at 3 second intervals and was used to do the final diurnal corrections.

Location information for the base station is included in Table 4, instrument specifications are included in Table 5 and a picture of the final setup is included in Figure 4.

Table 4: Base Station Information

Base Station	Easting (m)	Northing (m)	Coordinate System
#1 - 8062827	697407	5696475	WGS84 UTM Zone 15N

Table 5: Base Station Specifications

Sensitivity	0.022 nT @ 1 reading per sec.	Gradient Tolerance	Over 10,000 nT/m
	0.05 nT @ 1 reading every 4 sec.	Dynamic Range	20,000 to 120,000 nT
Resolution	0.01 nT	Absolute Accuracy	± 0.1 nT @ 1 Hz



Figure 4: Base station setup

2.3. UAV MAGNETOMETER SYSTEM

The UAV system consists of a single GSMP-35UC high precision potassium vapor magnetometer slung from a DJI M600 Pro UAV platform. The magnetometer was towed with a 16.4' cable to ensure adequate separation between the UAV and the magnetometer. Technical specifications of the GSMP-35U are included in Table 6.

Table 6: GSMP-35U Specifications

Sensitivity	0.0002 nT @ 1 Hz	Gradient Tolerance	Over 50,000 nT/m
Heading Error	± 0.05 nT	Dynamic Range	15,000 to 120,000 nT
Resolution	0.001 nT	Absolute Accuracy	± 0.1 nT @ 1 Hz

The UAV magnetometer configuration includes a GPS for recording measurement location, laser altimeter for recording measurement height and an Inertial Measurement Unit (IMU) for recording the roll, pitch and yaw of the unit in flight. The sensor was set to record at a rate of 10 Hz.



Figure 5: UAV Magnetometer System Configuration

2.4. MAGNETIC SURVEY AIRCRAFT

The M600 is a fully integrated aerial platform designed for professional film making and industrial application. The on-board A3 flight controller ensures reliable flight performance while the E2000 Pro propulsion system effectively increases payload. Multiple expansion ports guarantee maximized compatibility with add-on devices. The M600 also integrates the Lightbridge 2 transmission system, bringing live HD view and the ability to communicate directly gimbals such as the Ronin-MX.

The M600 Pro has an extended flight time and a 5km long-range transmission. A comprehensive battery management system means that if any of its six Intelligent Batteries are turned on or off, the rest will follow suit. The battery management system monitors every battery during flight, ensuring safe landing in the event of single battery failure. Compared to traditional non-intelligent batteries, the M600 Pro's battery management system simplifies maintenance while enhancing security.

Additional specifications for the M600 Pro are shown below in Table 7.

Table 7: UAV Specifications

Aircraft Type	Hexacopter
Dimensions	1668 mm × 1518 mm × 727 mm with propellers, frame arms and GPS mount unfolded (including landing gear)
Hovering Accuracy	Vertical: ±0.5 m, Horizontal: ±1.5 m
Survey Speed	8 m/s (Terrain Dependent)
Flight Control System	A3 Pro
Propulsion System	Motor Model: DJI 6010; Propeller Model: DJI 2170R

3. MAGNETIC DATA PROCESSING

In general, all typical magnetic QA/QC and data processing techniques have been applied to the data. All post-field data processing was carried out using Geosoft Oasis Montaj and Microsoft Excel software/ programming languages. Presentation of final maps used QGIS and/or Geosoft's Oasis Montaj. Results were gridded using minimum curvature method and a grid cell size of approximately 1/3 of flight line spacing.

The geophysical images accompanying this report are positioned using the WGS 1984 Datum. The survey geodetic GPS positions have been projected to map using the Universal Transverse Mercator (UTM) projection.

The magnetic data was first quality checked in the field and any points lacking sufficient georeferenced data or which were excessively noisy were removed. The resulting data was processed as mosaics throughout the survey area as data was collected daily. A combination of all data formed the finalized results including lines that were re-flown due to weak, noisy, or insufficient magnetic signal. The corrected profile data were interpolated into a grid using the minimum curvature technique with a grid size of approximately 1/3 of flight line spacing. All final maps have a normalized color interval.

The base station readings were initially processed and filtered to remove sudden spikes. The filtered data were then used for diurnal correction. This correction removes all time-varying magnetic errors related to the diurnal variation of the earth's magnetic field.

Lag error results when the survey positioning system location is significantly different from the physical sensor location. A lag correction simply adjusts the time base of the physical readings to match the positioning data. Because the GPS is located directly on the UAV, only a minor lag correction needs to be applied (typically 1-2 fiducials).

Heading errors are related to the magnetic field of the survey platform, which varies as a function of survey direction. A heading correction corrects data for systematic shifts in the data that change with the survey direction. Due to the low heading error of the GSMP-35U magnetometers, heading biases were negligible. For this reason, no heading correction needed to be applied

After finishing interpolation, initial processing may subject the data to a non-linear filter with a wavelength limit of 3-4 fiducials and tolerance of 0.001. This filter removes extra high frequency features which mostly occur because the sensor is in the dead zone. This usually occurs due to sudden changes in sensor orientation, effect of ferro-metallic objects, or the influence of weather conditions on the sensor. This filter smooths out noise and high frequency features. This filtering is only applied if required.

After leveling the data using the tie lines, to mitigate the corrugation effect associated with gaps between the data lines, the data was micro-leveled. This task was done by applying a high pass butterworth filter with the threshold of four times the line spacing followed by a directional cosine filter perpendicular to the line direction. The resulted noise channel was then subtracted from the leveled values to microlevel the data. All levelling was undertaken using Geosoft's Oasis Montaj software. The finalized result of the leveling and micro-leveling processes is the final deliverable that should be used for any interpretation or integration techniques moving forward.

4. 3D INVERSION MODELLING

The 3D magnetic inversions were created using Geosoft's VOXI inversion modelling program. The process of 3D inversion seeks to produce the most likely distribution of physical rock parameters that explain what we have observed. As the process is non-unique, the ability of the inversion process to produce reasonable results, combined with reasonable constraints and the experience of the interpreter is important.

The process of 3D inversion describes the earth as a collection of small rectangular cells (typically 5 to 50 metres in size), each with a different physical parameter (density, susceptibility, magnetic vector, etc.). This is called a voxel model of the earth. This is becoming a common model that can be used in a variety of visualization systems and combined with other geological information and interpretive processes.

Once an exploration team has a good idea of the type of target they seek, what we call "forward modelling" of the target is an important step to determine the value of conducting various geophysical surveys. As for exploration programs already underway, geophysical surveys - particularly magnetic and gravity surveys - are standard methods that provide both direct targeting information and are useful as an aid to general geologic interpretation. Because this data already exists, it is often useful to use 3D inversion of select parts of existing prospects to add to the existing knowledge.

4.1. SOFTWARE

Geosoft VOXI Earth Modelling is geophysical inversion software that allows the user to create 3D voxel models from airborne or ground gravity and magnetic data. VOXI Earth Modelling is powered by Microsoft Windows Azure. The 3D voxel models from airborne or ground gravity and magnetic data allow the interpreter to see and understand the subsurface by producing a model of rock properties.

VOXI reduces the time and effort required to generate 3D models using geophysical inversion techniques. Fully integrated with Geosoft Oasis Montaj, VOXI enables the interpreter to efficiently update and integrate models with your geology and other datasets in your Geosoft 3D environment.

The Model Builder can incorporate supplementary geological, geophysical and geochemical information. The interpreter can apply these models as constraints to the inversion using Parameter and Gradient reference models; Upper and Lower bounds; Parameter and Gradient weightings; Active Model; and Reweighting Model.

5. MAGNETIC MAPS & DERIVED DATA PRODUCTS

5.1. TOTAL MAGNETIC FIELD

Based on the flight lines of the drone, the total magnetic field map grid was created by interpolating the filtered magnetic data. The Total Magnetic Field (TMF) data collected in flight was profiled on screen along with a fourth difference channel calculated from the TMF. Spikes were removed manually where indicated by the fourth difference. The purpose of this map is to highlight geological structures by their magnetic signature or their magnetic contrast with their surroundings.

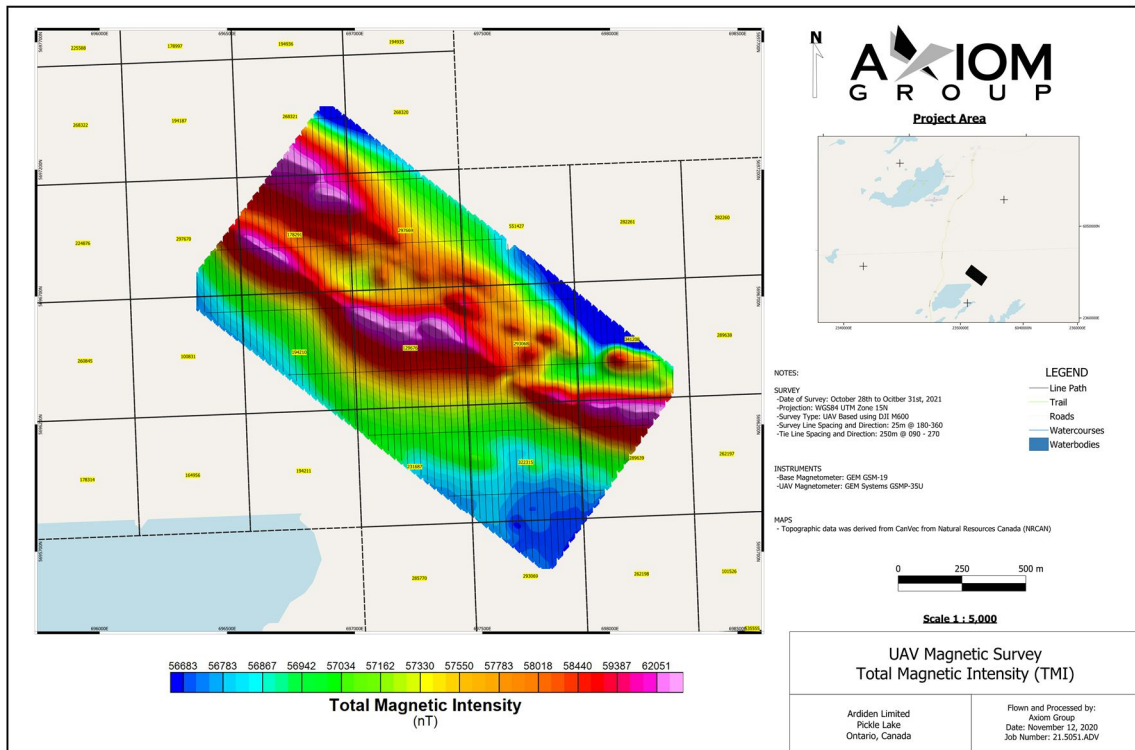


Figure 6: Total Magnetic Intensity (TMI)

5.2. RESIDUAL MAGNETIC INTENSITY

The residual magnetic intensity (RMI) was calculated from the total magnetic field, the diurnal, and the regional magnetic field. The total magnetic field was measured, the diurnal was measured from the ground station and the regional magnetic field was calculated from the International Geomagnetic Reference Field (IGRF 2015). The IGRF is the empirical representation of Earth's magnetic field as a function of time, and in the absence of any crustal or external sources. The model employs the spherical harmonics expansion of the scalar potential in geocentric coordinates. The IGRF model coefficients are based on all available data sources including geomagnetic measurements from observatories, ships, aircrafts and satellites.

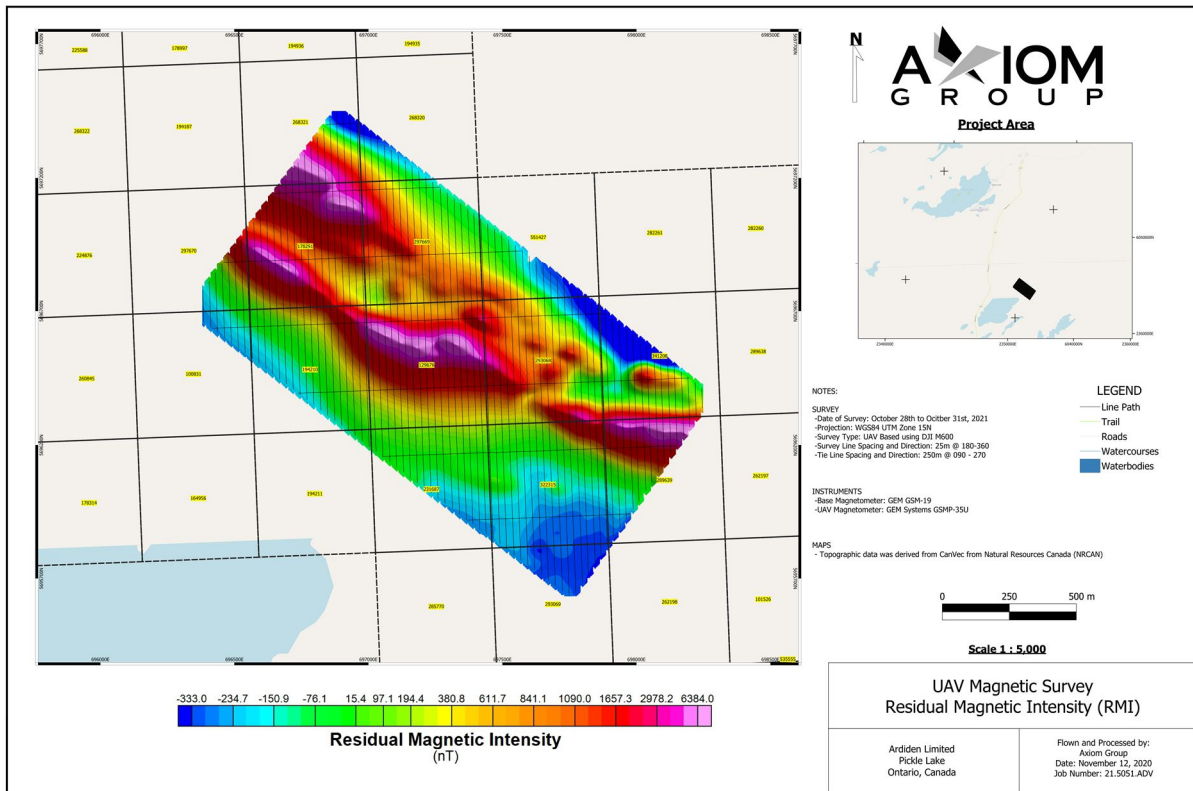


Figure 7: Residual Magnetic Intensity (RMI)

5.3. ANALYTIC SIGNAL

The analytic signal is the square root of the sum of the squares of the derivatives in the x, y, and z directions:

$$\text{Analytical Signal} = \sqrt{dx * dx + dy * dy + dz * dz}$$

Mapped highs in the calculated analytic signal of the magnetic parameter locate the anomalous source body edges and corners (e.g. contacts, fault/shear zones, etc.). Analytic signal maxima are located directly over faults and contacts, regardless of structural dip, and independently of the direction of the induced and/or remnant magnetizations. The analytic signal is also useful in locating the edges of magnetic source bodies, particularly where remnant magnetic signals and/or low magnetic latitude complicates interpretation.

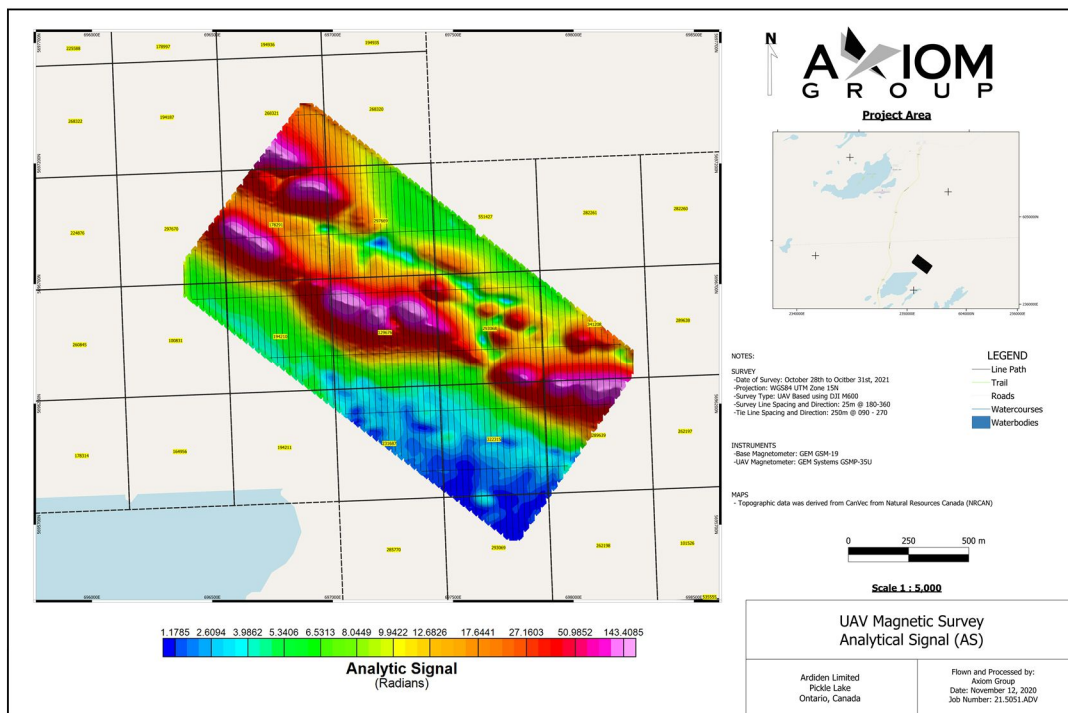


Figure 8: Analytic Signal (AS)

5.4. FIRST VERTICAL DERIVATIVE

The first order vertical derivative quantifies the rate of change of the magnetic field as a function of elevation. It is an approximation of the vertical magnetic gradient, which could be directly measured with separate magnetometers vertically spaced apart. The purpose of this type of filter is to eliminate the long wavelength signatures and make sharp features more detectable, such as the edges of magnetic bodies. This filter also increases the noise level, which limits the use of higher order derivatives ($n=2$ for example). The vertical derivative is used to delineate the contacts between large-scale magnetic domains because its value is zero over vertical contacts.

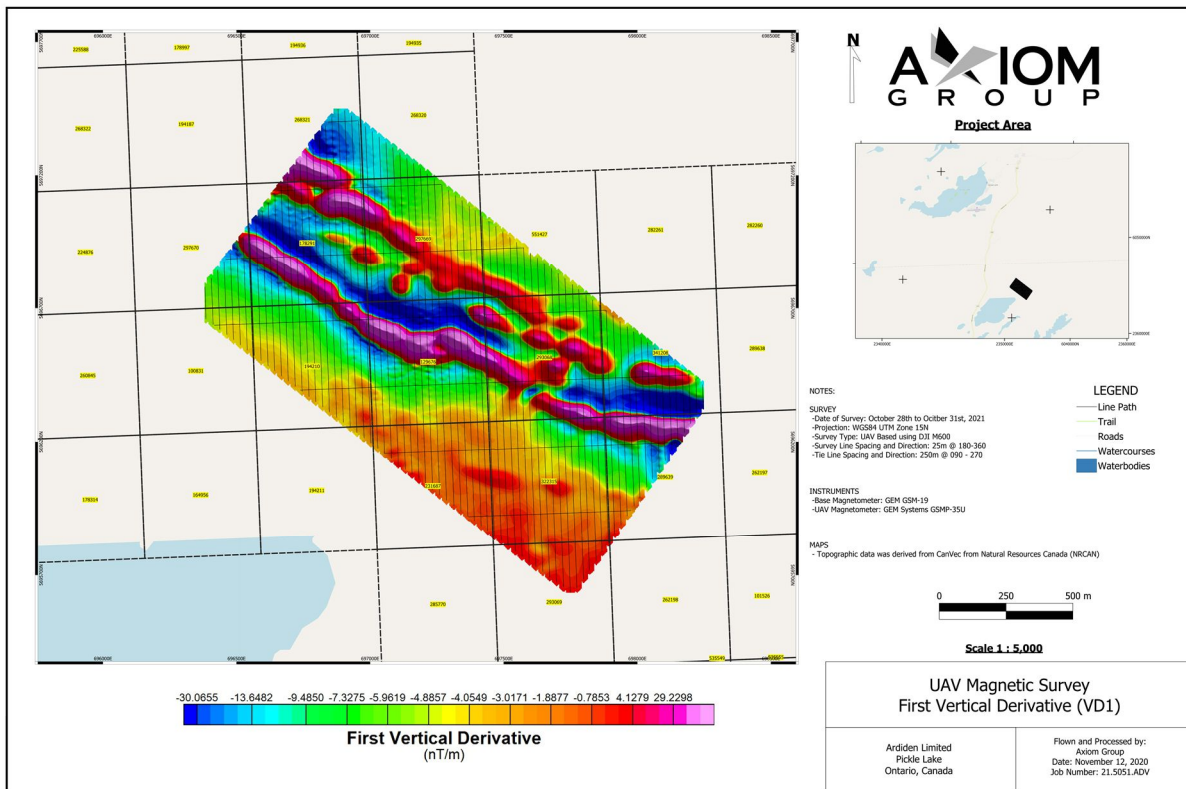


Figure 9: First Vertical Derivative (VD1)

5.5. 3D INVERSION

Geosoft VOXI Earth Modelling is geophysical inversion software that allows the user to create 3D voxel models. A 3D inversion was undertaken using Geosoft VOXI Earth Modelling platform. Multiple, unconstrained inversions were run on the dataset using a relatively coarse cell size. When a plausible magnetic inversion was achieved, a final inversion was run using a much smaller cell size with the preliminary inversion used as an initial constraint. In addition, the Iterative Reweighting Inversion Focusing (IRIF) was run four times for the final inversion product. The IRIF takes a smooth earth model and uses it as a reweighting constraint when running a new inversion of the same data. It is used to model sharper contacts in the inversion result, providing more refined targets.

An example of the parameters used was with the inversion on the larger area surveyed. The final area used 256 cells in the X direction, 240 cells in the Y directions and 47 cells in the Z directions, giving a total of 2,887,680 total cells in the inversion. The final inversion data fit was 0.9789 where an optimal fit is a value of 1. The inversion mesh is shown in Figure 10.

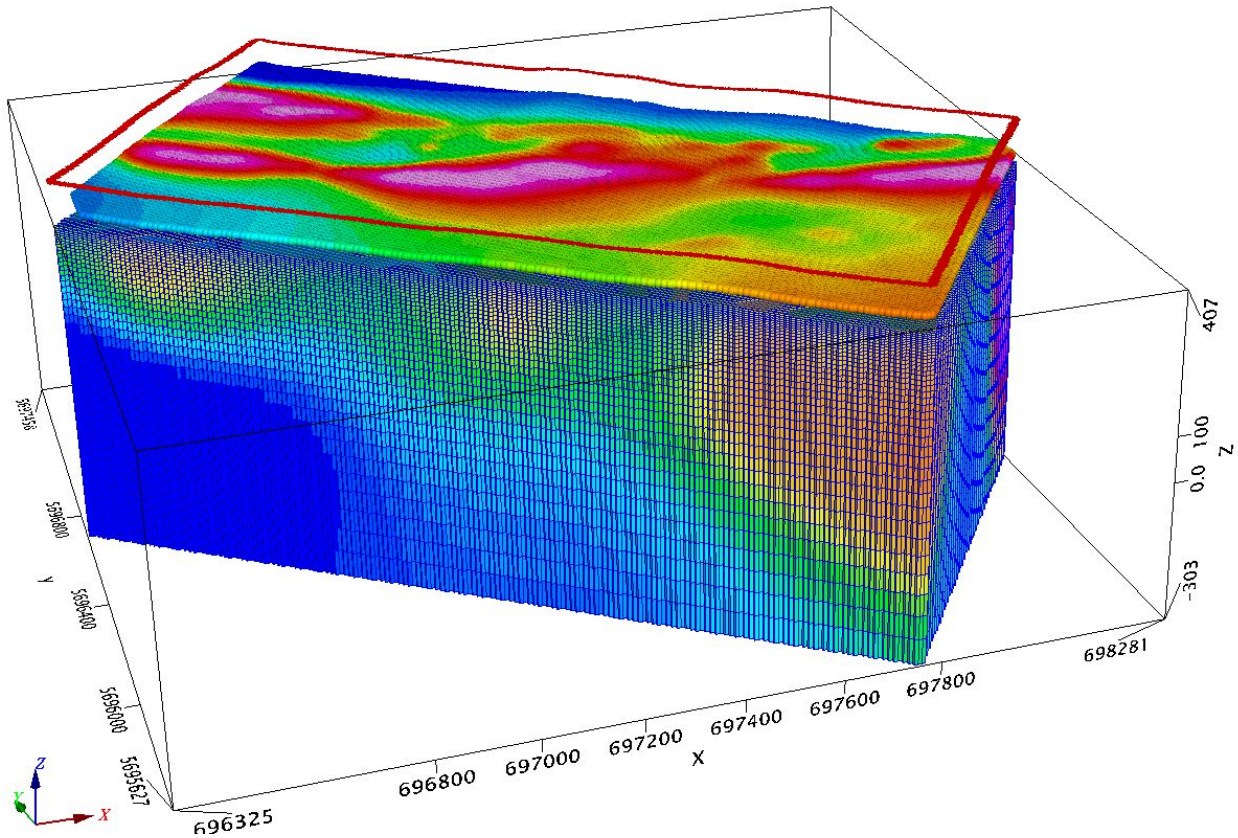


Figure 10: Inversion mesh used for final 3D Inversions

From the voxel model block, one can directly extract horizontal sections of susceptibility or also vertical slices at different elevations (Figure 11). These 2D sections, either vertical or inclined, can be chosen in any direction. The goal is to exploit some of this information to clarify the potential of magnetic bodies.

Some important considerations include:

- Depth of source and attitude;
- Spatial location, geometry and dimensions;
- Magnetic susceptibility

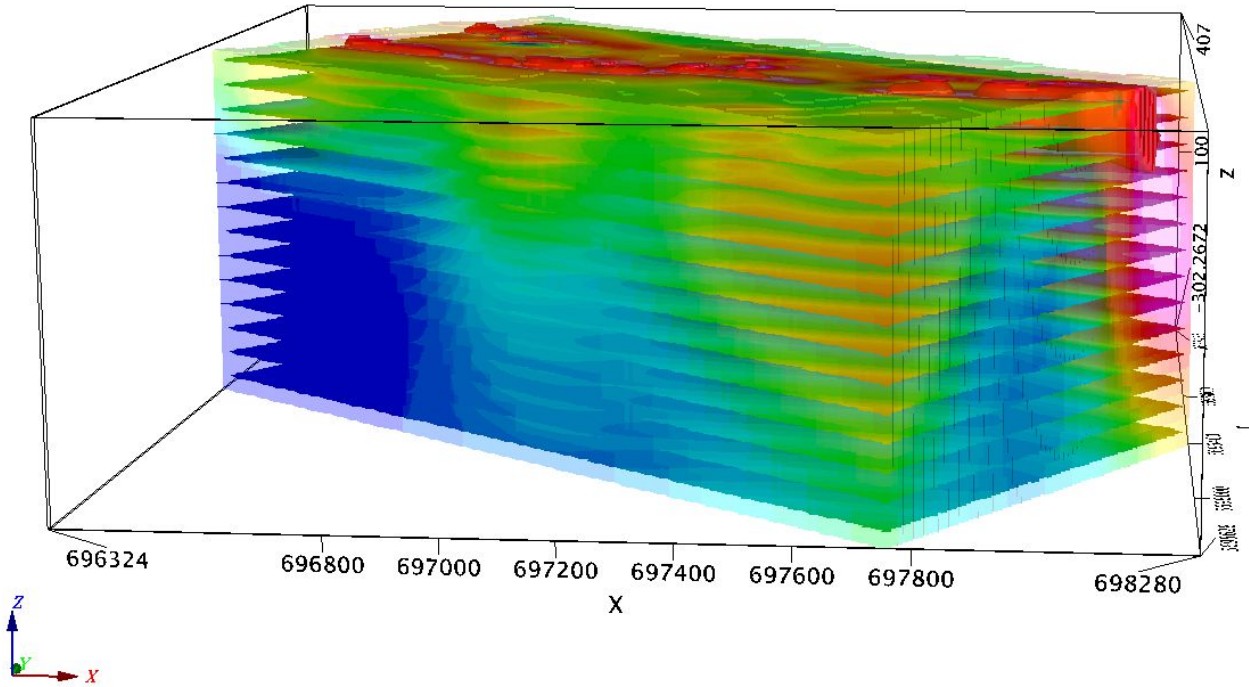


Figure 11: Example of horizontal slices extracted from the 3D magnetic inversion

6. MAGNETIC DELIVERABLES

6.1. DATABASE

All data is typically delivered in either Geosoft Database ('GDB') or simple formats such as .txt or csv. The data deliverables are client specific to best suit their needs and software requirements. Regardless of software, a database is supplied to the client with the following channel descriptions:

Table 8: Database Channel Descriptions

Parameter	Description	Unit
utmE	UTM easting (WGS84)	meters
utmN	UTM northing (WGS84)	meters
time	Gnss time stamp	hhmmss.ss
latitude	Latitude (WGS84)	decimal degrees
longitude	Longitude (WGS84)	decimal degrees
sat	Number of locked satellites	Integer
zone	UTM Zone	-
Yaw	IMU yaw reading	Degrees
Pitch	IMU pitch reading	Degrees
Roll	IMU roll reading	Degrees
Base	Raw Base Station Readings	nT
Base_Filt	Low Pass Filtered Base Station	nT
Dist	Distance Between Subsequent Readings	m
IGRF	The total magnetic field corrected by International Geomagnetic Reference Field at GPS altitude	nT
Inc	Inclination of the total field based on International Geomagnetic Reference Field at GPS altitude	Deg
Dec	Declination of the total field based on International Geomagnetic Reference Field at GPS altitude	Deg
nT_Raw	Magnetic field readings (Raw)	nT
nT_Corr	Magnetic field readings (Diurnally Corrected)	nT
nT_Final	Final leveled and micro-leveled data	nT
RMI	Residual Magnetic Intensity Values	nT
AS	Analytic Signal	Radians/m
VD1	1st Vertical derivative	nT/m

6.2. MAGNETIC MAPS (APPENDIX A)

All maps are presented in the coordinate / projection system WGS84 Datum, UTM Zone 15U. A list of maps provided are as follows:

- Total Magnetic Intensity (TMI) Map
- Residual Magnetic Intensity (RMI) Map
- Analytic Signal (AS) Map
- First Vertical Derivative (VD1) Map
- Line Path Map with Base Stations Locations

7. CONCLUSIONS

Axiom Exploration successfully completed an unmanned aerial vehicle magnetic survey in the South Limb - West project area for Ardiden Limited. The survey consisted of a total of 72.41 line-kms flown.

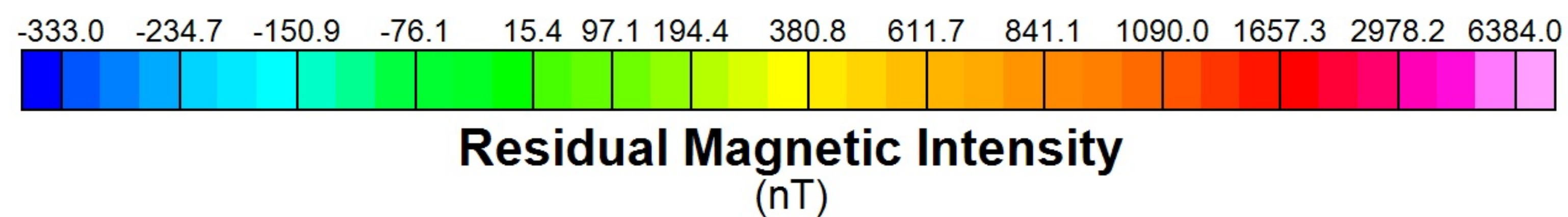
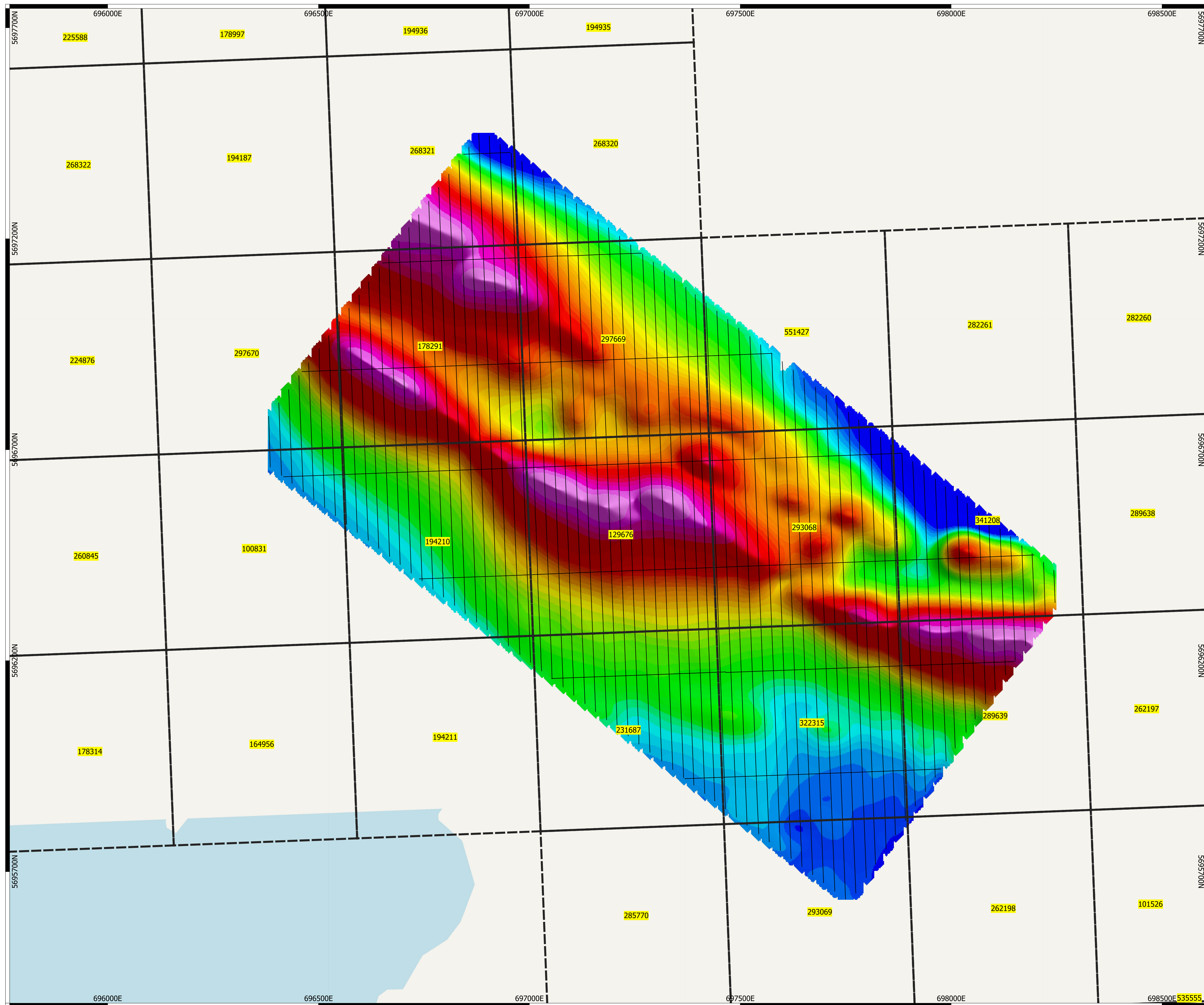
Ultimately, the magnetic data collected was very successful in delineating and defining targets for further investigations. It should be noted that all geophysical interpretations need to be vetted with geology and other relevant information for optimal results.

Respectfully submitted,

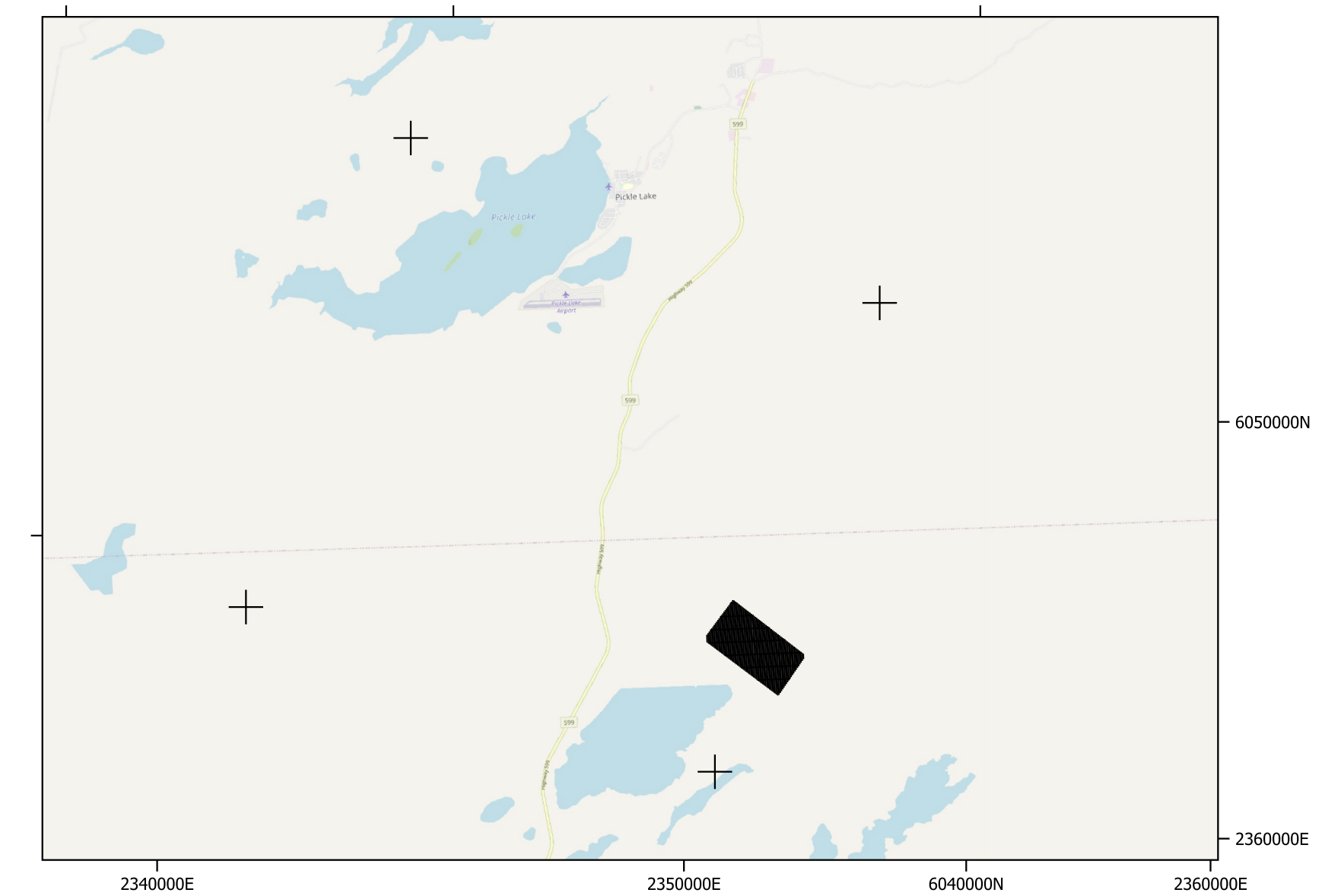
A handwritten signature in black ink, appearing to read "P. Dueck". The signature is written in a cursive, flowing style.

Peter Dueck, P.Geo.

CBO and Principal Geophysicist
Axiom Exploration



Project Area



NOTES:

SURVEY

- Date of Survey: October 28th to October 31st, 2021
- Projection: WGS84 UTM Zone 15N
- Survey Type: UAV Based using DJI M600
- Survey Line Spacing and Direction: 25m @ 180-360
- Tie Line Spacing and Direction: 250m @ 090 - 270

INSTRUMENTS

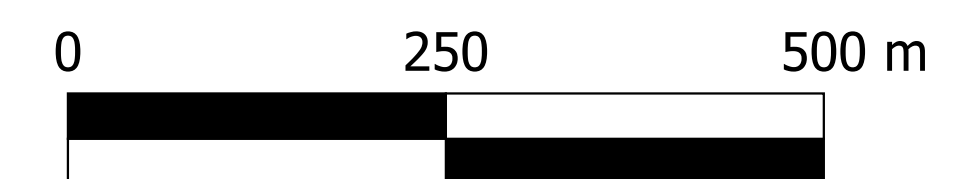
- Base Magnetometer: GEM GSM-19
- UAV Magnetometer: GEM Systems GSMP-35U

MAPS

- Topographic data was derived from CanVec from Natural Resources Canada (NRCAN)

LEGEND

- Line Path
- Trail
- Roads
- Watercourses
- Waterbodies

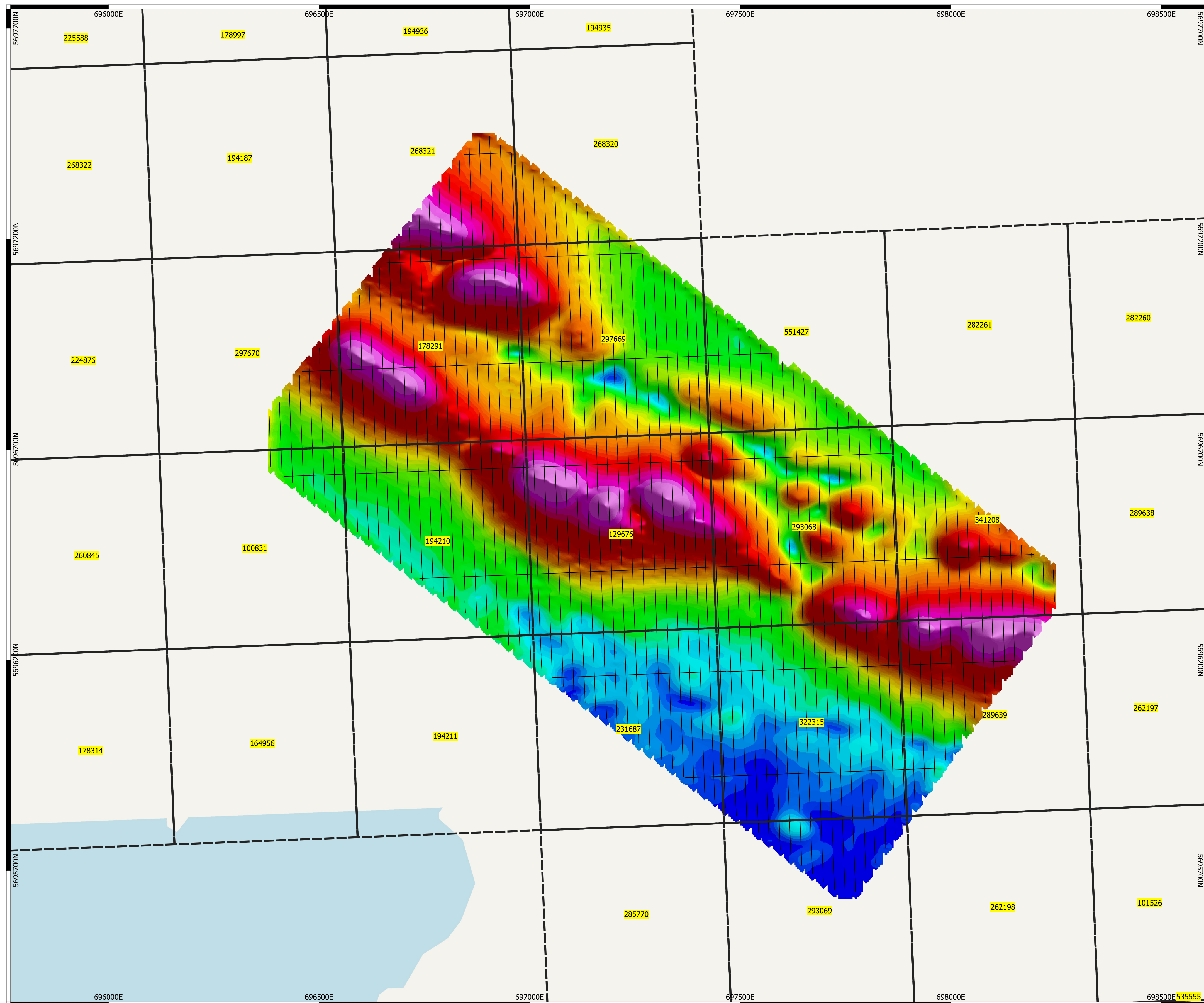


Scale 1 : 5,000

**UAV Magnetic Survey
Residual Magnetic Intensity (RMI)**

Ardiden Limited
Pickle Lake
Ontario, Canada

Flown and Processed by:
Axiom Group
Date: November 12, 2020
Job Number: 21.5051.ADV



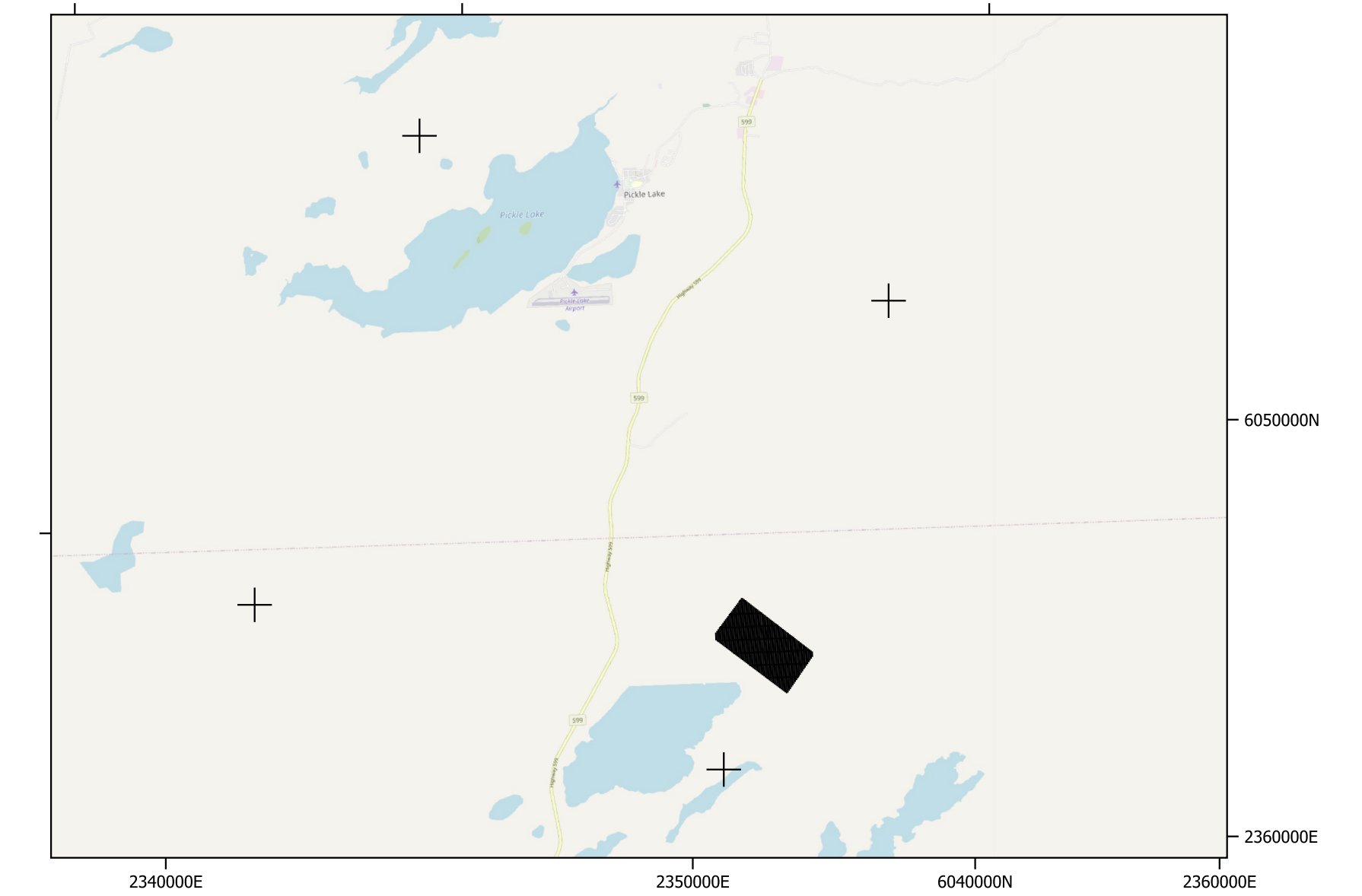
1.1785 2.6094 3.9862 5.3406 6.5313 8.0449 9.9422 12.6826 17.6441 27.1603 50.9852 143.4085



Analytic Signal
(Radians)



Project Area



NOTES:

SURVEY

- Date of Survey: October 28th to October 31st, 2021
- Projection: WGS84 UTM Zone 15N
- Survey Type: UAV Based using DJI M600
- Survey Line Spacing and Direction: 25m @ 180-360
- Tie Line Spacing and Direction: 250m @ 090 - 270

INSTRUMENTS

- Base Magnetometer: GEM GSM-19
- UAV Magnetometer: GEM Systems GSMP-35U

MAPS

- Topographic data was derived from CanVec from Natural Resources Canada (NRCAN)

LEGEND

- Line Path
- Trail
- Roads
- Watercourses
- Waterbodies

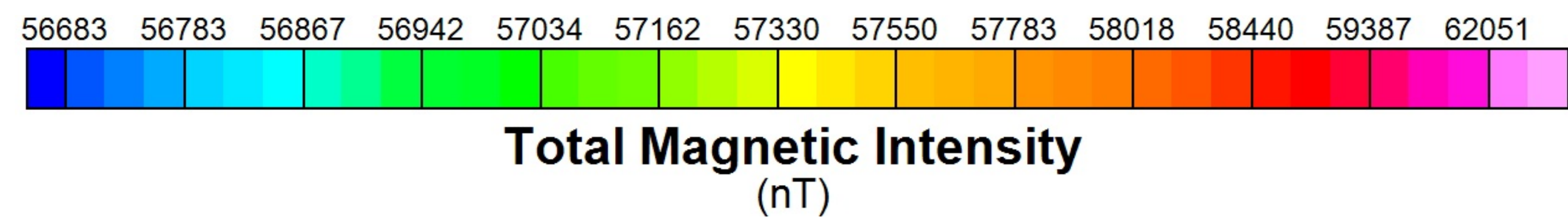
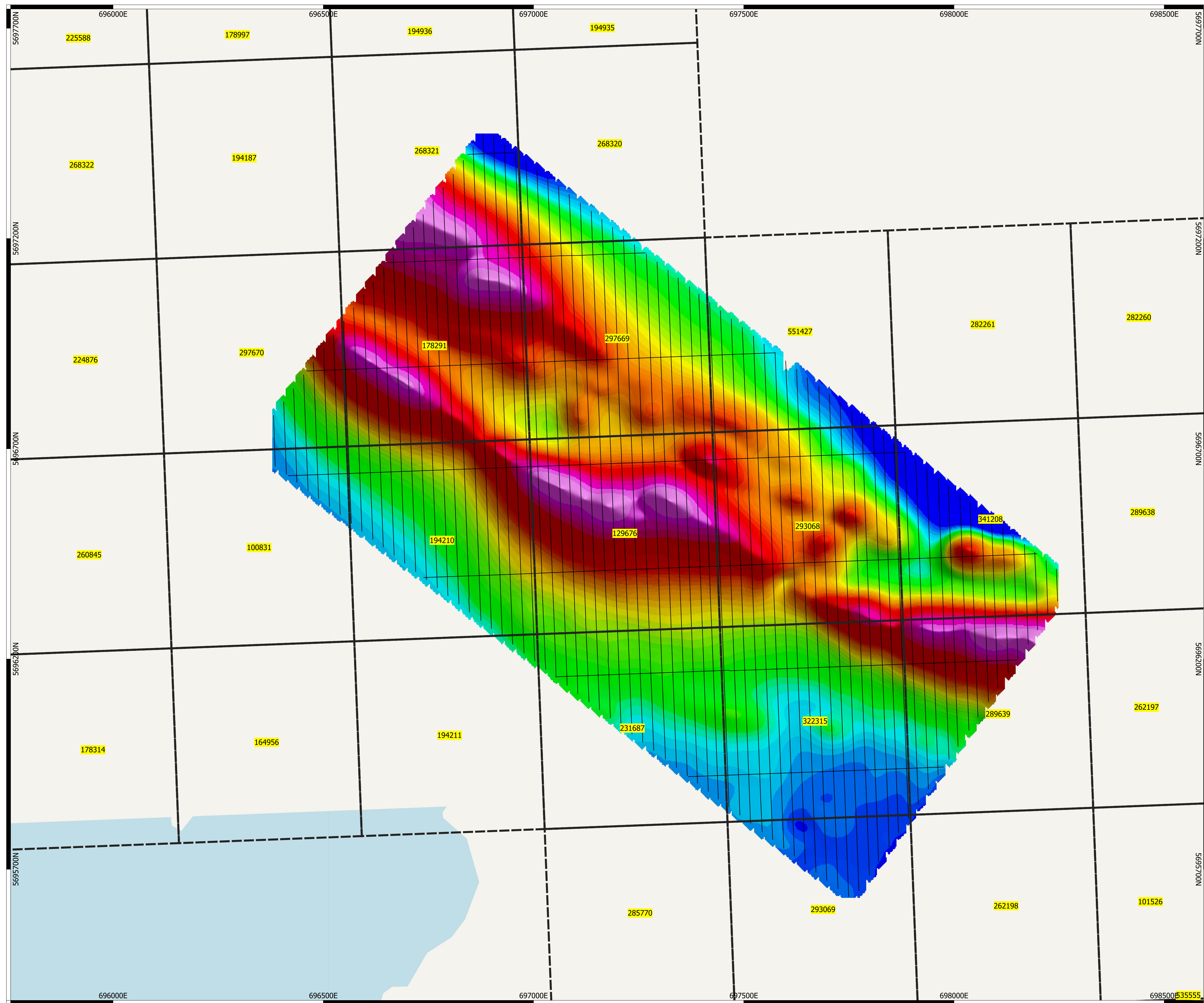


Scale 1 : 5,000

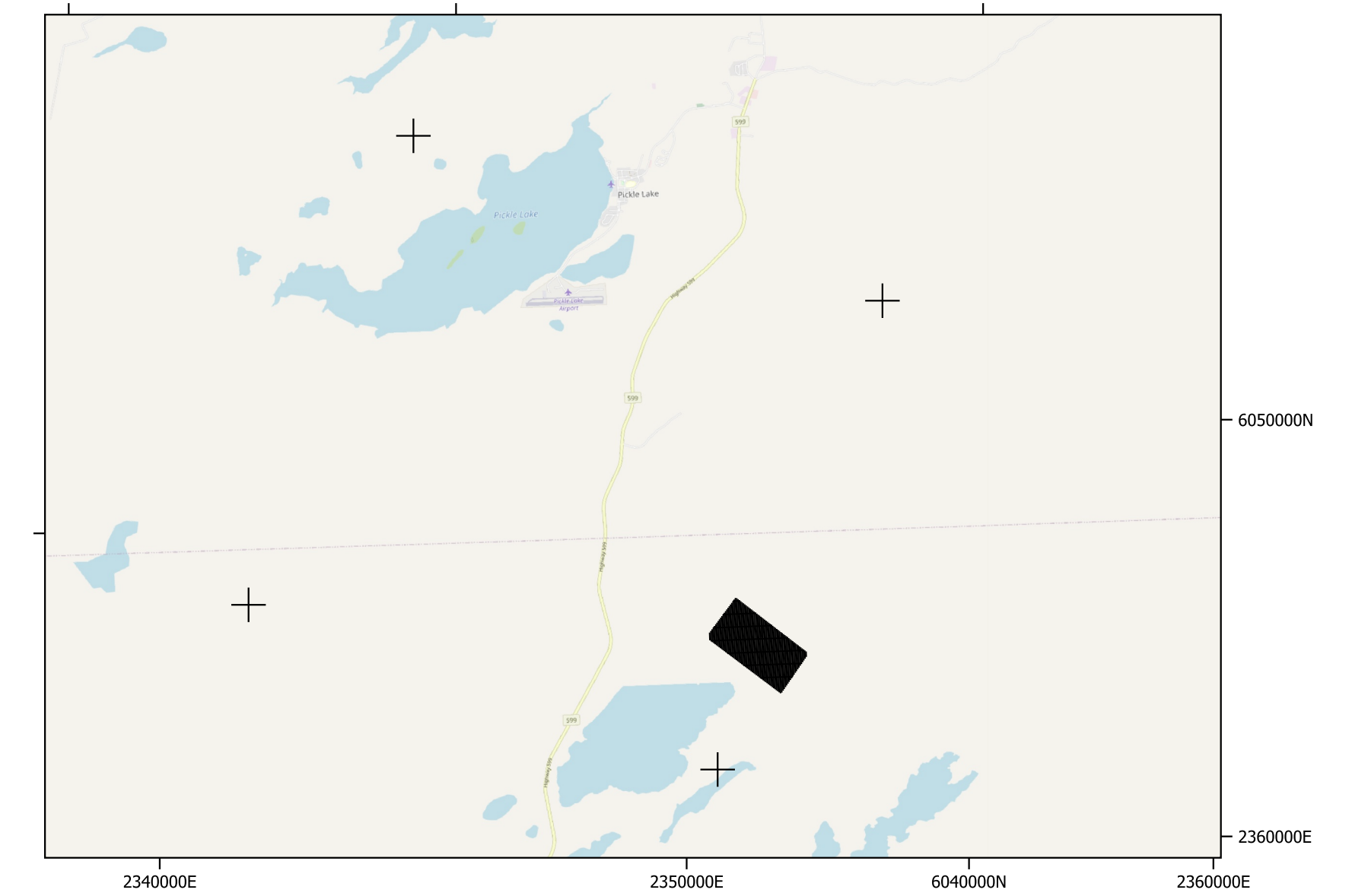
**UAV Magnetic Survey
Analytical Signal (AS)**

Ardiden Limited
Pickle Lake
Ontario, Canada

Flown and Processed by:
Axiom Group
Date: November 12, 2020
Job Number: 21.5051.ADV



Project Area



NOTES:

SURVEY

- Date of Survey: October 28th to October 31st, 2021
- Projection: WGS84 UTM Zone 15N
- Survey Type: UAV Based using DJI M600
- Survey Line Spacing and Direction: 25m @ 180-360
- Tie Line Spacing and Direction: 250m @ 090 - 270

INSTRUMENTS

- Base Magnetometer: GEM GSM-19
- UAV Magnetometer: GEM Systems GSMP-35U

MAPS

- Topographic data was derived from CanVec from Natural Resources Canada (NRCAN)

LEGEND

- Line Path
- Trail
- Roads
- Watercourses
- Waterbodies

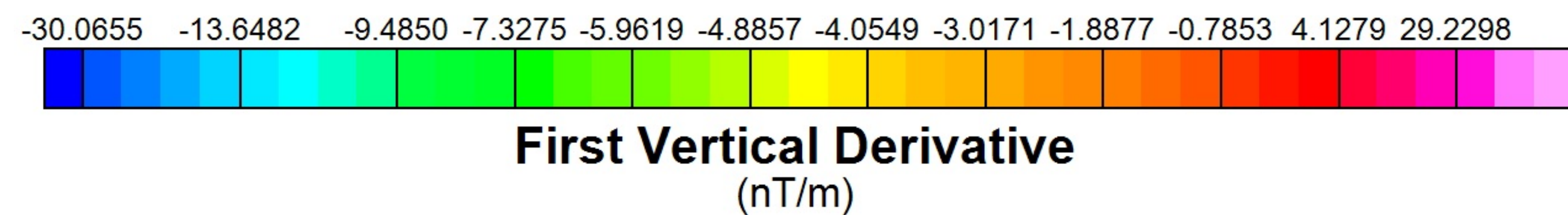
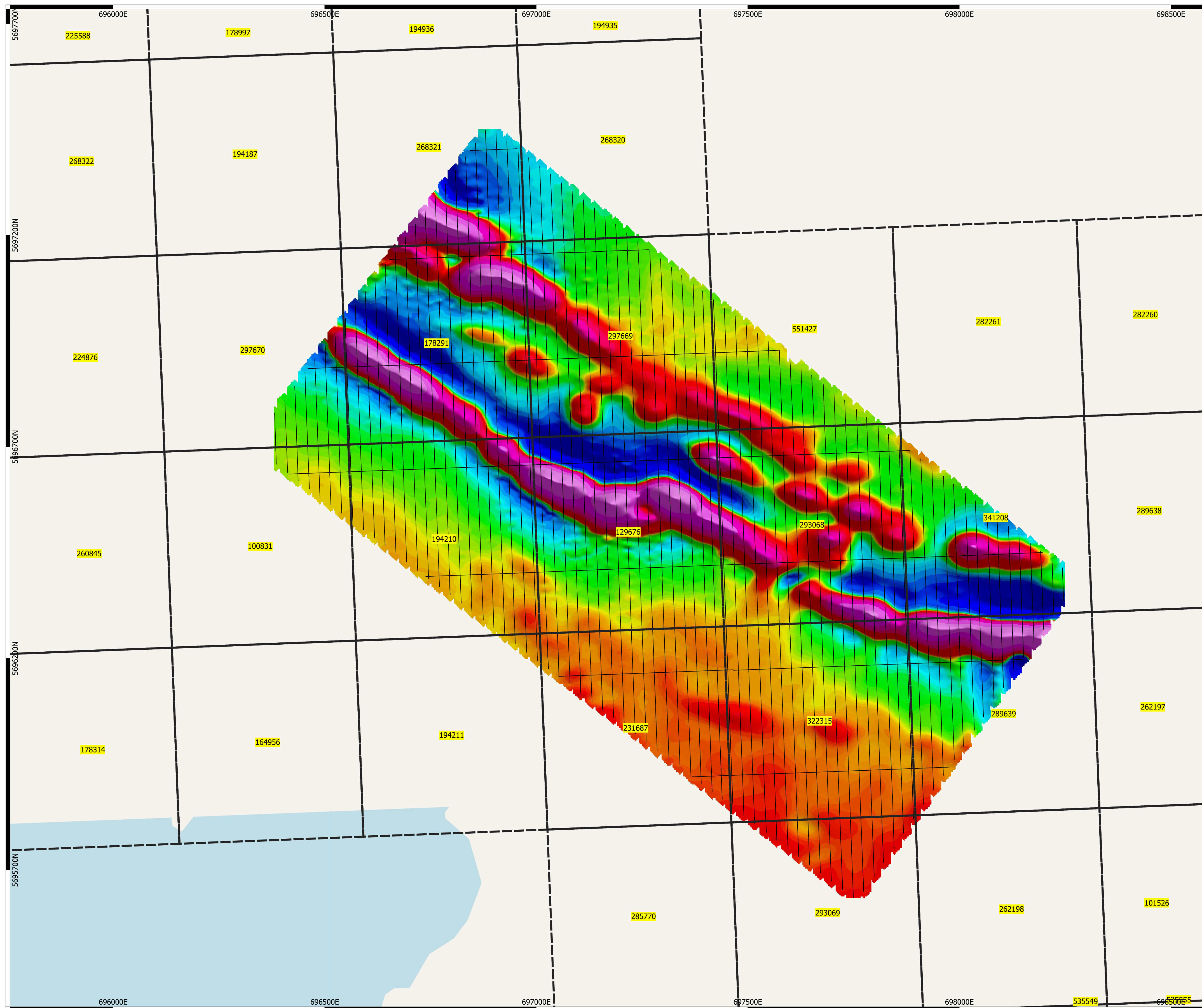


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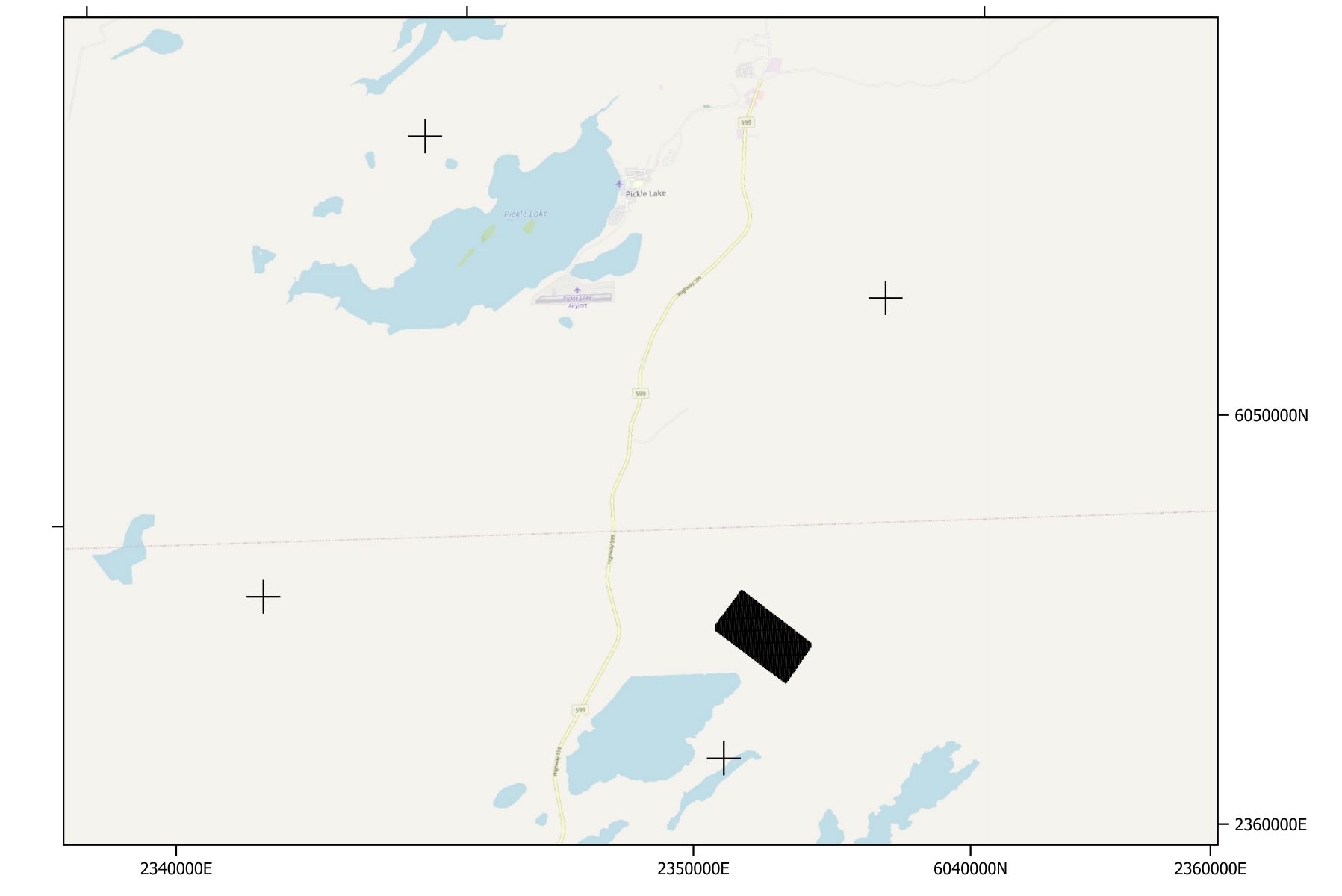
**UAV Magnetic Survey
Total Magnetic Intensity (TMI)**

Ardiden Limited
Pickle Lake
Ontario, Canada

Flown and Processed by:
Axiom Group
Date: November 12, 2020
Job Number: 21.5051.ADV



Project Area



NOTES:

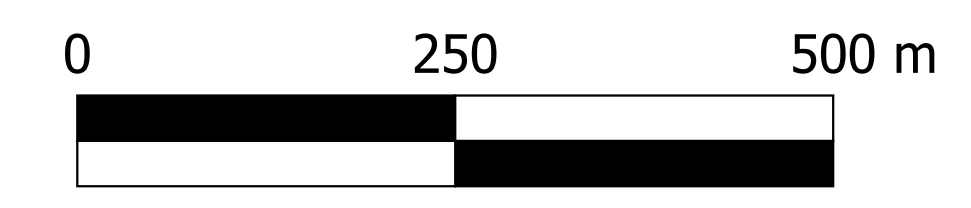
SURVEY
 -Date of Survey: October 28th to October 31st, 2021
 -Projection: WGS84 UTM Zone 15N
 -Survey Type: UAV Based using DJI M600
 -Survey Line Spacing and Direction: 25m @ 180-360
 -Tie Line Spacing and Direction: 250m @ 090 - 270

INSTRUMENTS
 -Base Magnetometer: GEM GSM-19
 -UAV Magnetometer: GEM Systems GSMP-35U

MAPS
 - Topographic data was derived from CanVec from Natural Resources Canada (NRCAN)

LEGEND

- Line Path
- Trail
- Roads
- Watercourses
- Waterbodies

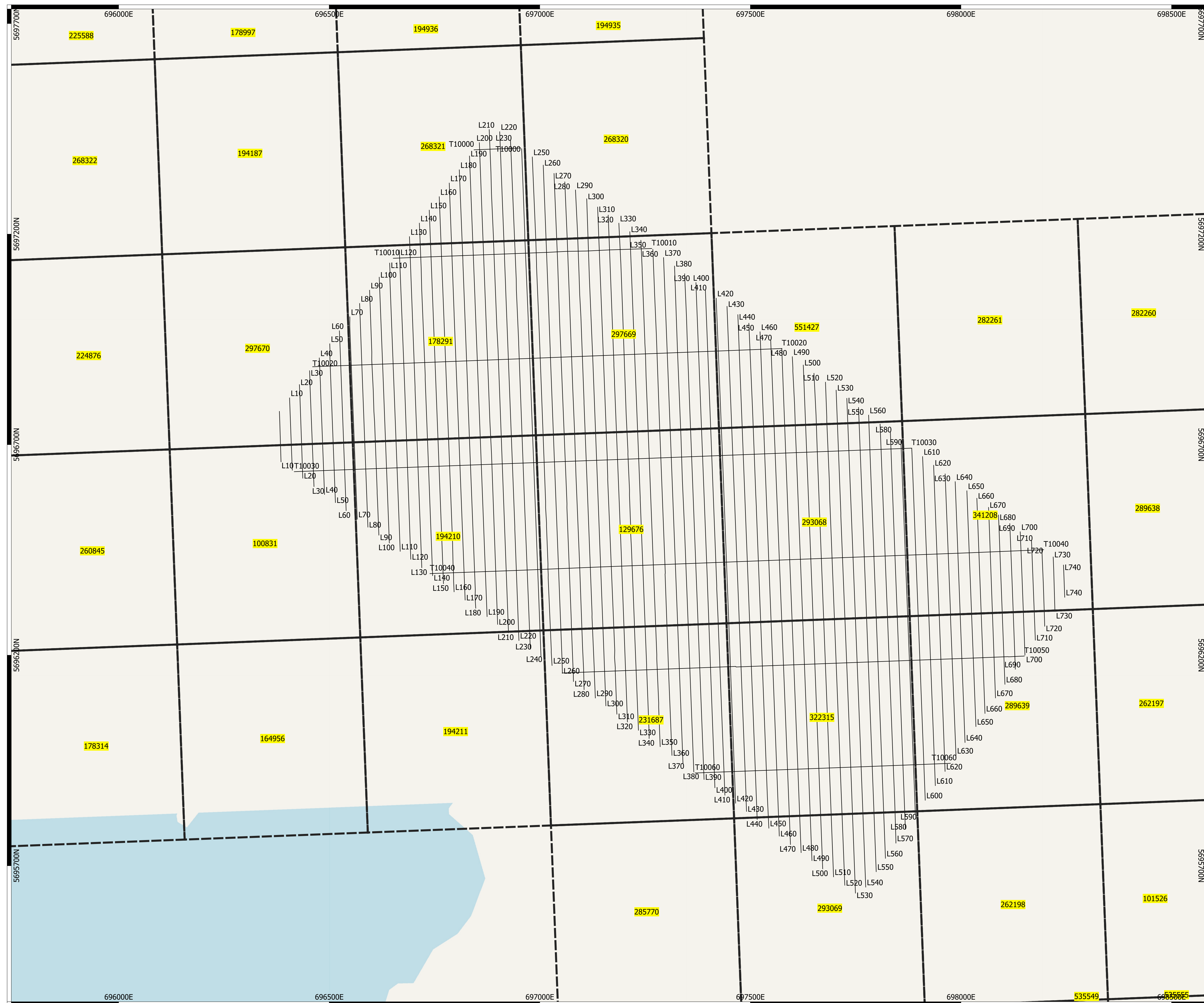


Scale 1 : 5,000

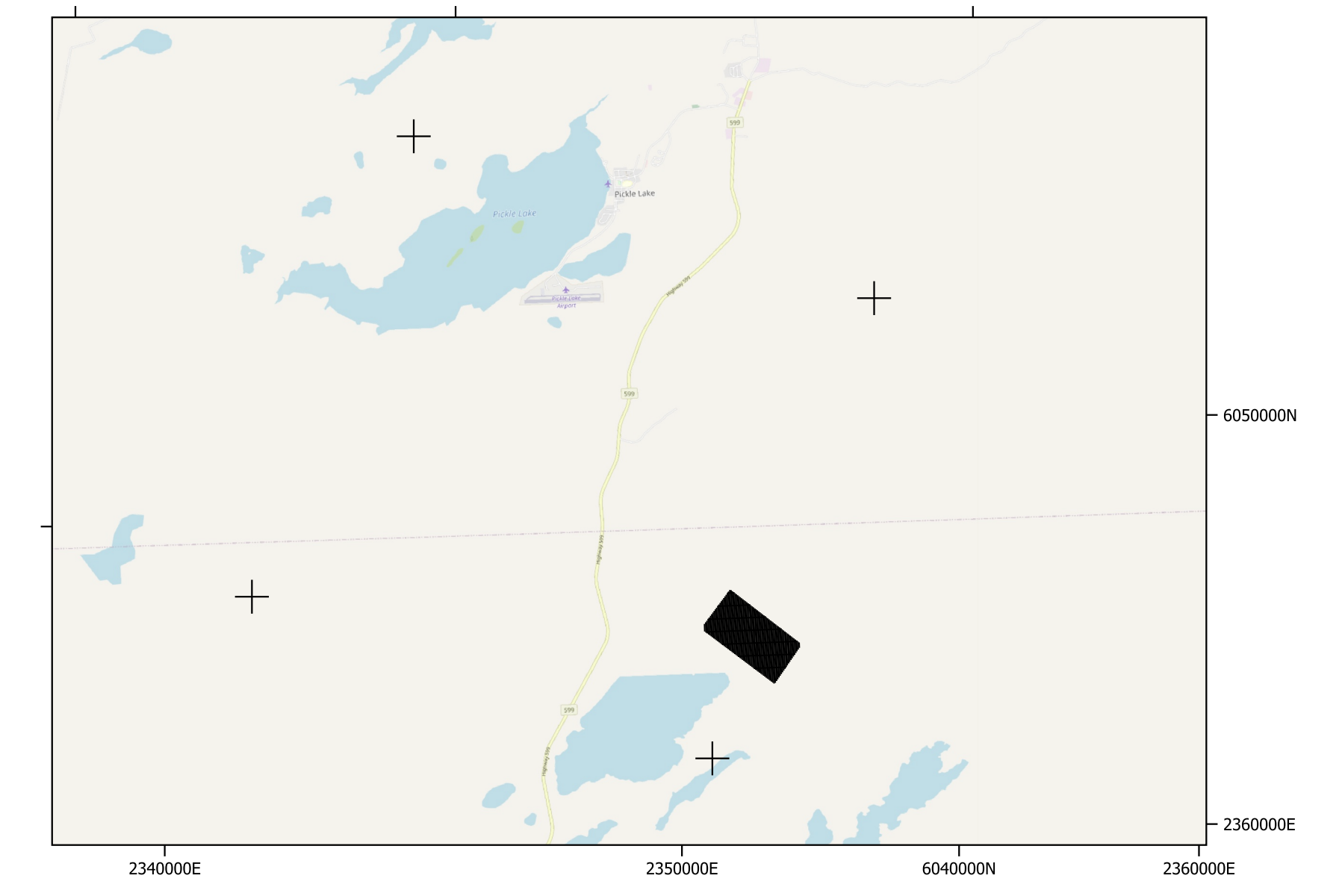
**UAV Magnetic Survey
First Vertical Derivative (VD1)**

Ardiden Limited
Pickle Lake
Ontario, Canada

Flown and Processed by:
Axiom Group
Date: November 12, 2020
Job Number: 21.5051.ADV



Project Area



NOTES:

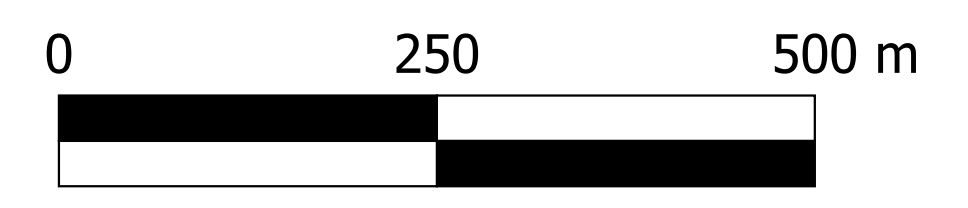
- SURVEY**
- Date of Survey: October 28th to October 31st, 2021
 - Projection: WGS84 UTM Zone 15N
 - Survey Type: UAV Based using DJI M600
 - Survey Line Spacing and Direction: 25m @ 180-360
 - Tie Line Spacing and Direction: 250m @ 090 - 270

- INSTRUMENTS**
- Base Magnetometer: GEM GSM-19
 - UAV Magnetometer: GEM Systems GSMP-35U

- MAPS**
- Topographic data was derived from CanVec from Natural Resources Canada (NRCAN)

LEGEND

- Line Path
- Trail
- Roads
- Watercourses
- Waterbodies



Scale 1 : 5,000

**UAV Magnetic Survey
Line Path**

Ardiden Limited
Pickle Lake
Ontario, Canada

Flown and Processed by:
Axiom Group
Date: November 12, 2020
Job Number: 21.5051.ADV