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Assessment Report on

Aerial Survey (LiDAR) conducted by Airborne Imaging Inc.

on the NE Claim Block of the Quartz Lake Properties,

Red Lake Mining Division

For: Huntington Exploration Inc.

Client Number 10004098

Prepared by:

Jamal Amin, M.Sc.

Toronto, ON

April 13, 2022

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List of Illustrations

Summary

This assessment report summarizes the results of a LiDAR (Light Detection and Ranging) remote sensing survey over the north-east block of claims (one of eight blocks of claims owned by Huntington Exploration Inc. in the Birch-Uchi area). The purpose of the work was to obtain high-resolution topography to assist with geological interpretation. The LiDAR survey covered all of the claims owned by Huntington Exploration Inc. and further assessment reports will be filed for this survey. The survey was flown in one day in the field, September 21, 2022 by Airborne Imaging Inc., A Clean Harbors Company. The coordinate system used to locate the area of work is NAD83 UTM Zone 15N and the vertical datum for topographic data is CGVD2013.

The survey yielded very high-resolution topographic data which has been used to confirm the paleo-ice direction which will be used for interpreting till samples collected in the area. The data has also been used to interpret structural features on the property which are prospective for gold mineralization. Further work is recommended on the property, beginning with prospecting and mapping outcrops in areas that have been identified as prospective for gold mineralization.

List of Abbreviations

LiDAR – Light Detection and Ranging

NAD83 – North American Datum, 1983

UTM – Universal Transverse Mercator

N – North

E – East

S – South

W – West

CGVD2013 – Canadian Geodetic Vertical Datum of 2013

DDH – diamond drill hole

m – metre(s)

cm – centimetre(s)

km – kilometre(s)

Ma – Million years ago

Fe – iron

DEM - digital elevation model

DTM – digital terrain model

kHz – kilohertz

RMSE – root mean square error

GPS – global positioning system

Mining Lands

The mining claims are located in the Red Lake Mining District, in an unorganized area (no township). The centre of the block of claims is located at approximately 533740 E, 5684500 N (NAD83 UTM Zone 15N).

Figure 1: Location of the Claim Block
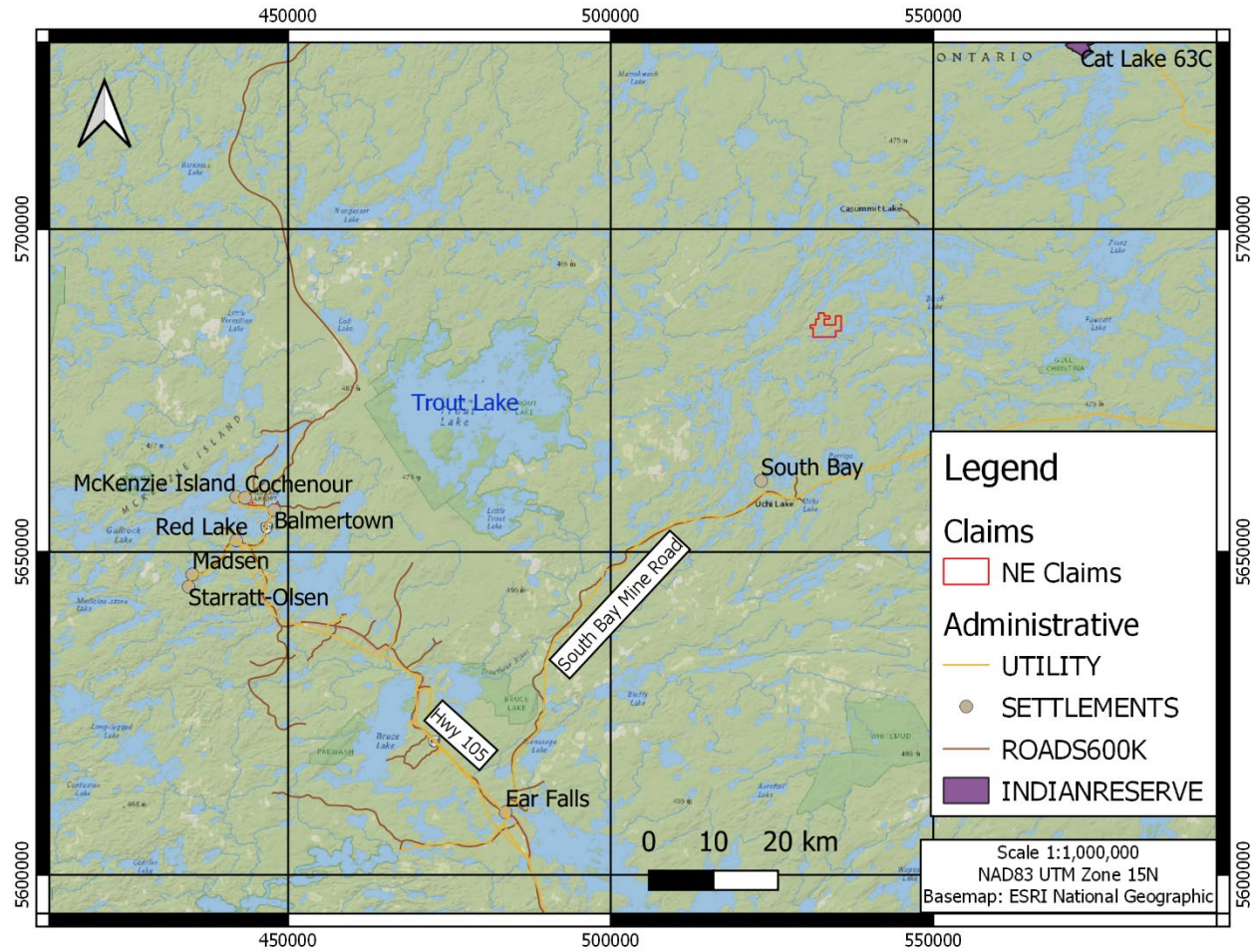
The Claim Block is comprised of three multi-cell claims: 583912, 613791, 613792.

Figure 2: Map of the three multi-cell claims that comprise the Claim Block
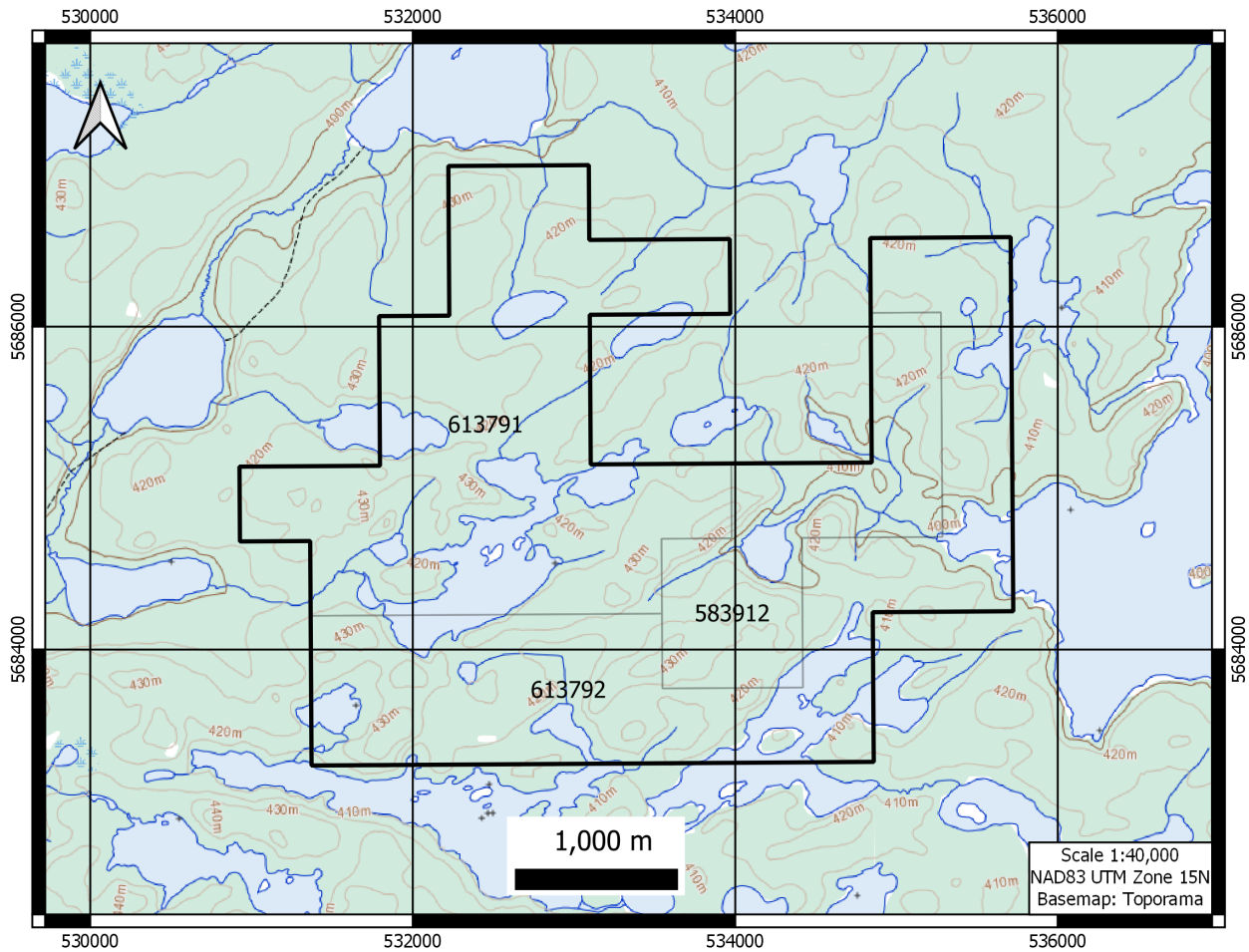
Access

Access to the property is by float plane in the summer and a winter road/snow machine trail in the winter originating from the Ear Falls forestry haulage road at Confederation Lake.

Exploration History

1961: Arjon Mines - prospecting, stripping, sampling.

1974: Ronda Copper Mines - conducted geological mapping.

1986: St. Joe Canada - airborne magnetic and electromagnetic geophysical survey.

1987: St. Joe Canada - 4 DDH totalling 534 m.

1990: Noranda Exploration - lithogeochemical sampling.

Geological Setting

Regional Geology

The Property area lies within the Archean Birch-Uchi Greenstone Belt of the western Uchi Subprovince of northwest Ontario. This belt records a stratigraphic history that spans approximately 290 Ma, involving repeated episodes of rifting, and associated sedimentary and volcanic depositional and magmatic phases. Unconformity-bounded sequences of mafic to felsic volcanic strata and primarily clastic sedimentary strata accumulated between ca. 2992 Ma and 2700 Ma upon a complex extensional architecture, which largely formed the template upon which later compressional structures were superimposed. The regional geology is shown in Figure 3.

Supracrustal strata in the belt have been subdivided into 3 volcano-sedimentary mega-cycles (Stott & Corfu 1992, Thurston 1985) each comprising variably mafic to felsic volcanic strata and subordinate clastic sedimentary strata. From oldest to youngest these mega-cycles are comprised of the following assemblages:

- The Balmer Assemblage (2987 Ma) is primarily an Fe-tholeiitic sequence of mafic volcanic strata, with minor interbeds of banded iron formation. The distribution of this assemblage is restricted to the extreme western edge of the Birch-Uchi Belt immediately adjacent to the Trout Lake Batholith.
- The Woman Assemblage (2858 Ma) is also primarily an Fe-tholeiitic sequence of mafic volcanic strata, with minor interbeds of banded chemical sediments and pyritic siltstones and shales. This assemblage is unconformable or paraconformable on the Balmer assemblage and occurs along the western edge of the Birch-Uchi Belt stratigraphically above the Balmer Assemblage.
- The Confederation Lake Assemblage (2750-2700 Ma) is by far the most aerially extensive assemblage in the belt. It comprises an assemblage of intermediate to felsic flows and pyroclastic strata, which are unconformably overlain by conglomeratic to argillaceous rift-related sediments. The Confederation Lake Assemblage also has minor interbeds or banded iron formation.

At least 3 phases of regional deformation affected the area resulting in the widespread development of folds, axial planar fabrics, and ductile shear zones. D1 deformation involved NW -SE shortening, the development of NE to N striking folds and faults. Evidence for this Dl event is best preserved in the southern part of the belt in the Confederation Lakes area. D2 deformation involved NE-SW to N-S shortening and the development of ~E-W to WNW-ESE striking regional folds, faults and fabrics. This event is manifested to varying degrees throughout the belt from the Casummit Lake area in the north to the Slate Lake area in the south. D3 deformation appears to have involved renewed E-W shortening and is restricted to the northern part of the belt in the Mink Lake/ Casummit Lake area. This shortening event resulted in the buckling of the regional S2 foliation into N-S folds. This event was accompanied by N-S striking S3 crenulation cleavage and ENE plunging F3 fold development.
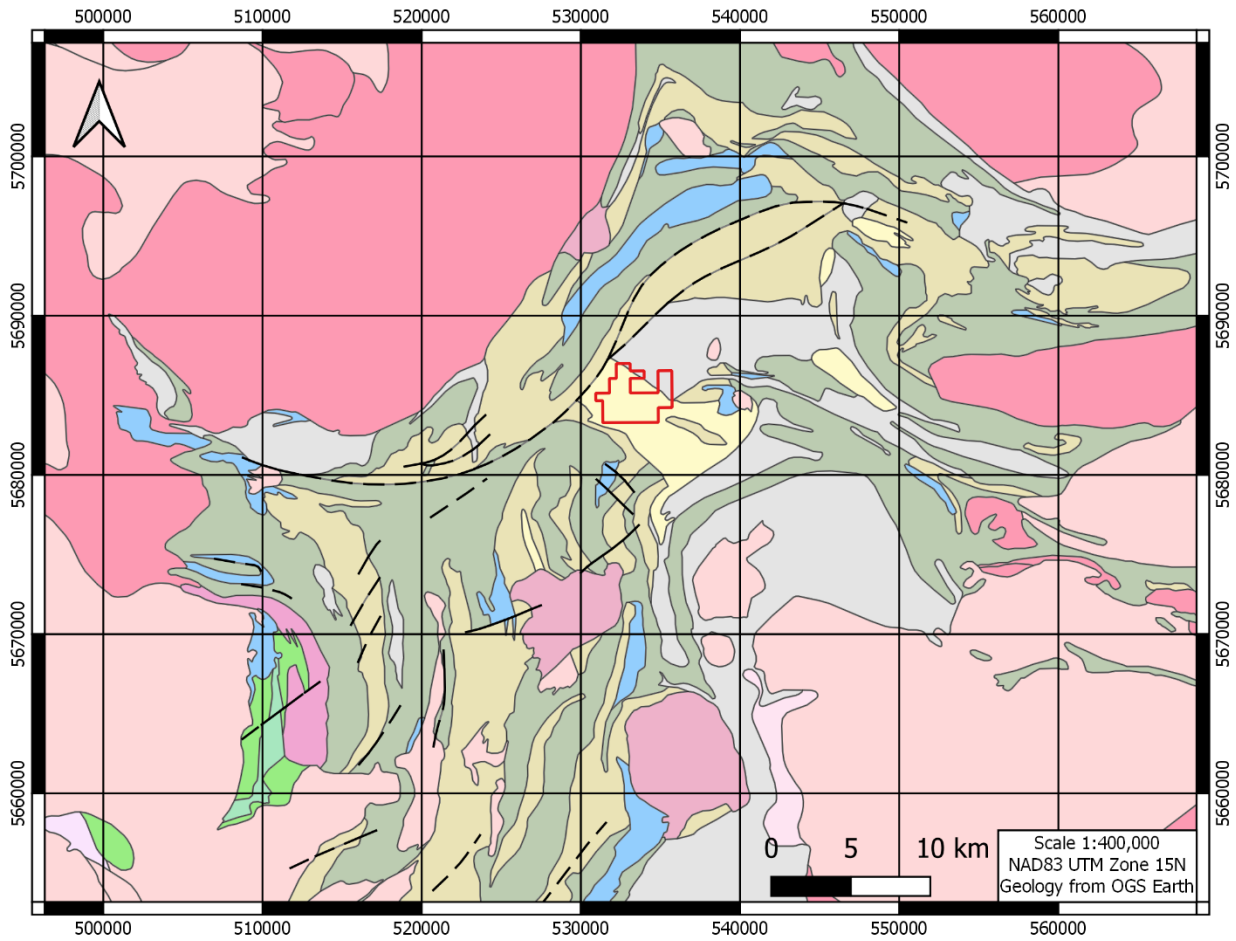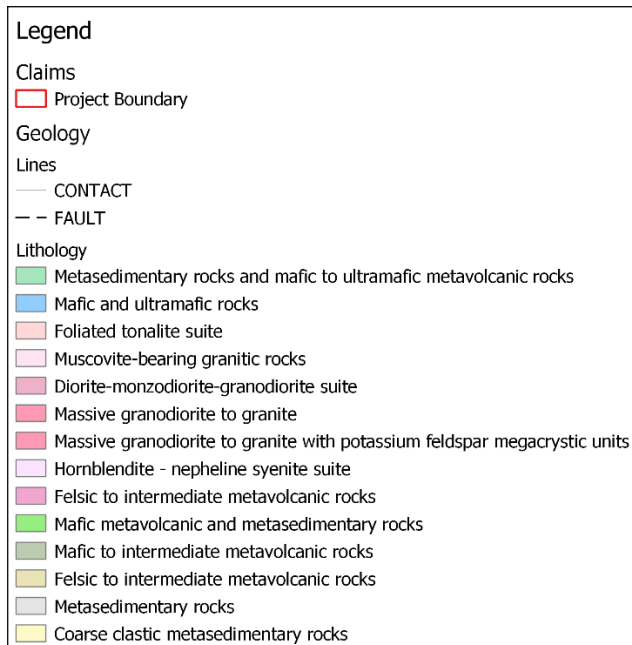
Figure 3: Regional Geology

Figure 4: Legend for Regional Geology map (Figure 3)

Legend

Claims
☐ Project Boundary

Geology

Lines
—— CONTACT
– – FAULT

Lithology
Metasedimentary rocks and mafic to ultramafic metavolcanic rocks
Mafic and ultramafic rocks
Foliated tonalite suite
Muscovite-bearing granitic rocks
Diorite-monzodiorite-granodiorite suite
Massive granodiorite to granite
Massive granodiorite to granite with potassium feldspar megacrystic units
Hornblendite - nepheline syenite suite
Felsic to intermediate metavolcanic rocks
Mafic metavolcanic and metasedimentary rocks
Mafic to intermediate metavolcanic rocks
Felsic to intermediate metavolcanic rocks
Metasedimentary rocks
Coarse clastic metasedimentary rocks

The Property occurs within the sedimentary rocks on the south and southeast margin of the Birch-Confederation Lake. The sediments and subordinate volcanic rocks are interpreted to be part of a discrete terrain distinct from the rest of the belt (Beakhouse, 1989). This distinct sequence of rocks is referred to as the Slate Lake belt and represents a zone of lithological and structural transition between the English River and Uchi subprovinces (Beakhouse, 1989). The Slate Lake belt includes parts of the 3 metavolcanic-sedimentary cycles described in the regional geology section above.

Data Collection

LiDAR is a remote sensing technology that measures distance by illuminating a target with a laser and analyzing the reflected light. LiDAR uses ultraviolet, visible, or near infrared light to image objects. It can target a wide range of materials, including non-metallic objects and rocks. LiDAR is commonly used as a technology to make high-resolution maps and contour mapping. These models can be used to produce detailed topographic maps.

The purpose of the LiDAR survey on the Project was to extract very detailed topographic data, from which a digital elevation model (DEM) and a digital terrain model (DTM) could be constructed. Detailed lineament studies interpreted from the LiDAR data were used to discern geological structures that have the potential to host gold mineralization.

Airborne Imaging Inc. of Calgary, AB collected LiDAR data over the Project area in September 2021. The area of interest covers a total of approximately 117.5 km^2. The project deliverables from Airborne Imaging Inc. included:

- 1m Grids (ARCINFO Binary), Bare Earth and Full Feature
- 1m Intensity Geotiff Images
- 1m Hillshade Geotiff Images, Bare Earth and Full Feature
- Point Cloud (LAS v1.2)
- Metadata (.pdf format LiDAR Summary)

The Metadata LiDAR Summary from the contractor is found in Appendix I.

A Riegl VQ-1560ii LiDAR system was used for acquisition of the LiDAR data. The mission was flown in one day (9/23/2021) at a flying height of 1400 m and flying speed of 160 knots, with a pulse rate rep of 1300 kHz, a scan frequency of 206 Hz, a scan angle of 60 degrees, and a side lap of 20%, to achieve a point density of 12.0 points/m^2.

Airborne Imaging performed a complete calibration on the LiDAR acquisition flight. The data was first produced with its predetermined boresight values and then the calibration was refined by applying corrections to the attitude of the aircraft (roll, pitch and heading) and fluctuations. To statistically quantify the accuracy, the LiDAR elevations were compared with independently surveyed ground points. A GPS mounted truck collects data while driving on an open road. The kinematic positions on the road are post-processed from a nearby base station to provide ground truth points.

The LiDAR data has been assessed to have a horizontal accuracy, RMSE of 25 cm and a fundamental vertical accuracy (relative), RMSE of 10 cm.
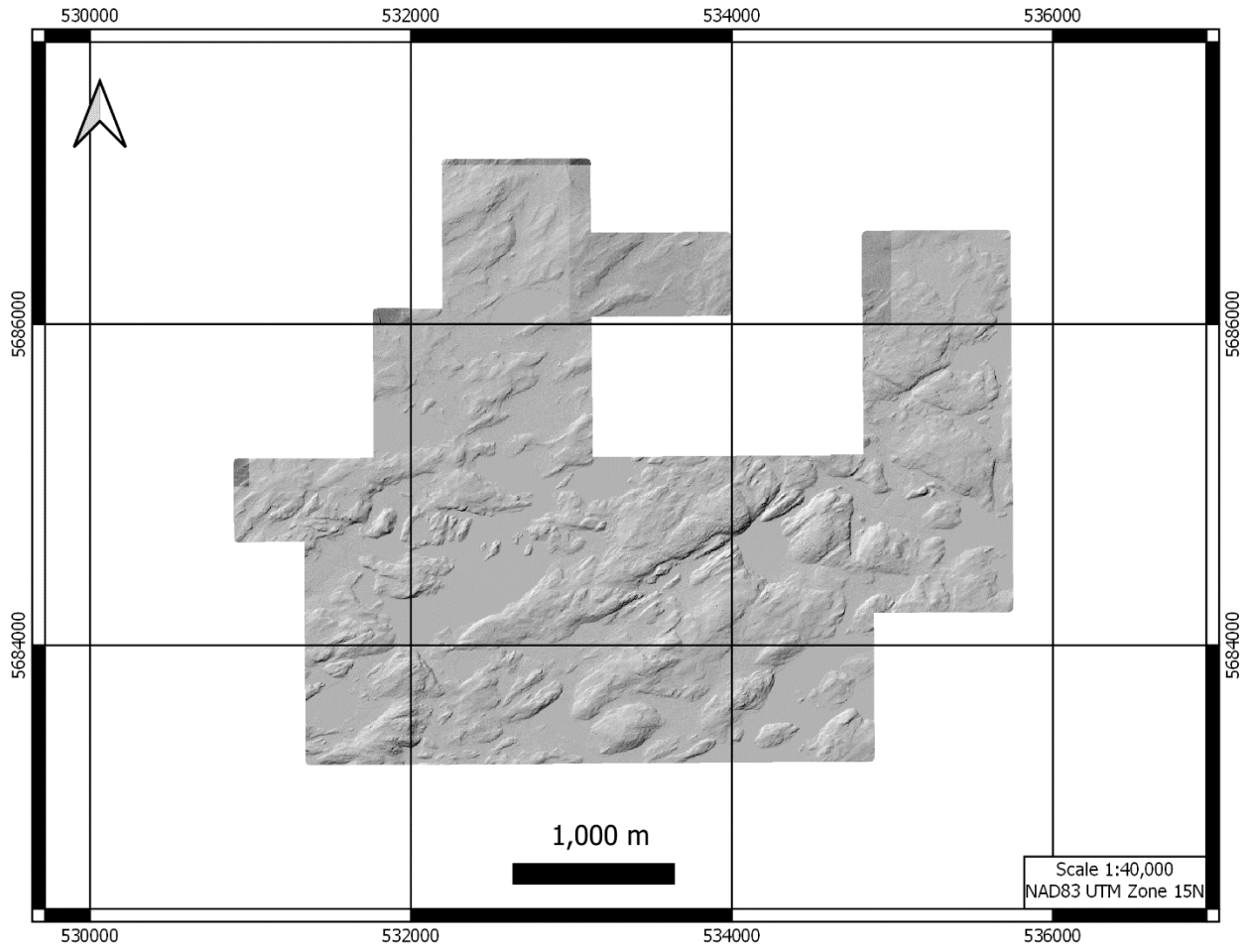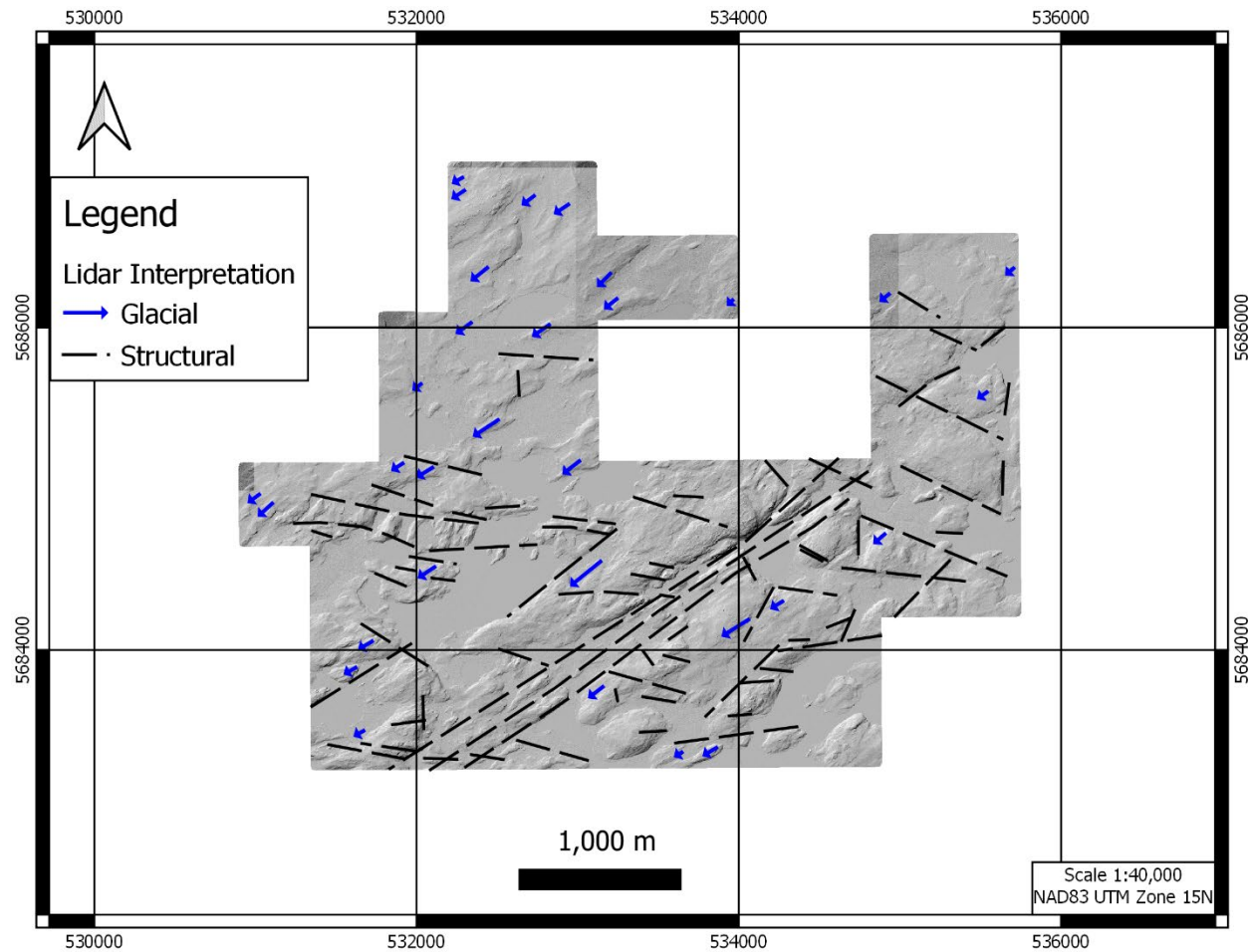
Figure 5: Original LiDAR Imagery

The high-resolution topographic data provided by LiDAR has been used to interpret structural and glacial lineaments across the property. The glacial lineaments provide a paleo- ice flow direction, consistently south-west, which is useful for the interpretation of till sample results.

Based on the results and interpretation of the LiDAR survey of the project area, the region is structurally complex, having undergone both ductile and brittle deformation. The known gold mineralization in the region is shear hosted and the LiDAR survey has provided accurate locations and orientations of numerous prominent structural features that may have potential for hosting gold deposits.

Recommended Work Program

The LiDAR survey has provided a very detailed topographic map which will be useful for finding and mapping outcrops in the field. Upcoming field work should focus on geological mapping and prospecting of outcrops along the shear zones and collecting till samples 'down-ice' from these structures. The anticipated cost of a 2-month field program in this region is approximately $150,000 inclusive of wages, accommodations, transportation, and all other costs.

References

Beakhouse, G.P. 1989. Geology of the western Birch Lake area, Kenora District, Patricia portion; Ontario Geological Survey, Open File Report 5700, 106p;

Stott, G.M. and Corfu, F. 1992: Uchi Subprovince, Chapter 6 in Geology of Ontario, Special Volume 4, Part 1, pp. 145-238; Ontario Ministry of Northern Development and Mines;

Thurston, P.C. 1985: Physical Volcanology and Stratigraphy of the Confederation Lake Area, District of Kenora (Patricia Portion); Ontario Geological Survey, Report 236, 117p, Map 2498;

Certificate of Qualifications

I, Jamal Amin, of the city Toronto, in Ontario, Canada,

Hereby certify that:

1.   I am the author of this report.

2.   I graduated with a Bachelor of Science (Earth Science Specialization) from the University of Waterloo in 2008.

3.   I graduated with a Master of Science (Geosciences) from the State University of New York in 2013.

4.   I possess a valid prospector's license.

4.   I consent to the use of this report by Huntington Exploration Inc.

Dated this 13th day of April, 2022 at Toronto, Ontario, Canada

Jamal Amin
_____

Jamal Amin, M.Sc.

LiDAR Project Summary

Airborne Imaging

produced: November 15, 2021

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Calgary, Alberta, Canada
T2C 4V2

Telephone: (403) 215 2960
Fax: (403) 258 3189
www.airborneimaginginc.com

Project Information

Project Name:	Birch Uchi
Airborne Project Number:	16563
Client:	Huntington Exploration
Project Location:	Red Lake, Ontario, Canada
Project Size:	117.5 km²

Acquisition Projects

Project Number	Project Name	Vintage
1867	Huntington Birch Uchi	Sept 2021

Acquisition Parameters

Date (MM/DD/YY)	Mission	Flying Height (m)	Flying Speed (knots)	Pulse Rate Rep (kHz)	Scan Freq (Hz)	Scan Angle (degree)	Side Lap %	Point Density (pts/m²)	LiDAR System
9/23/21	4321266a	1400	160	1300	206	60	20	12.0	Riegl VQ-1560ii

Geodetic Control

Horizontal Datum:	Nad83 CSRS	Vertical Datum:	CGVD2013
		Undulation model:	CGG2013

Note: We established a local geodetic network fixed to the following control:

Station ID	Lat	Long	Ellp Height (m)
N/A			
N/A			

Calibration Methodology

Airborne Imaging performs a complete calibration on every LiDAR acquisition flight. The data is first produced with its predetermined boresight values and then the calibration refined by applying corrections to the attitude of the aircraft (roll, pitch and heading) and fluctuations if necessary. To statistically quantify the accuracy, we compare the LiDAR elevations with independently surveyed ground points. A GPS mounted truck collects data while driving on an open road. The kinematic positions on the road are post-processed from a nearby base station to provide ground truth points.

Accuracy

Horizontal Accuracy, RMSE:	25 cm
Fundamental Vertical Accuracy (Relative), RMSE:	10 cm

Deliverables

Projection:	UTM Zone 15

Deliverables Formats

1m Grids (ARCINFO Binary), Bare Earth and Full Feature
1m Intensity Geotiff Images
1m Hillshade Geotiff Images, Bare Earth and Full Feature
Point Cloud (LAS v1.2)
Metadata (.pdf format LiDAR Summary)

Claim Credits

doc number	Receipt	Date	Amount	prorated by block	Claim Number	Claim units	%	Credit by claim
1	Clean Harb	February 16 20:	40740	5092.5				
2	Amal Jamir	April 13 3022	2000	250				
3	M Hall - rep	April 13 3022	150	18.75				
				5361.25	583912	9	0.163636364	$ 877.30
					613791	24	0.436363636	$ 2,339.45
					613792	22	0.4	$ 2,144.50
						55		**$ 5,361.25**