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Assessment Report  
on the

**Upper Red Lake Project**

Northwestern Ontario  
Red Lake Mining Division  
Skinner, Shabu Lake, and East of Trout Lake Townships  
NTS Sheet 052N02, 052N03, 052N07

**Prepared for**

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## 1.0 SUMMARY

Xplore Resource Corp.'s Upper Red Lake Project ('The Property') is located in the Red Lake Mining Division of northwestern Ontario. The Property is approximately 280 km northeast of Winnipeg, Manitoba, and 430 km northwest of Thunder Bay, Ontario. The Property is situated along highway 105 just north of Ear Falls south of Red Lake. The Property is 60 km east-northeast of the town of Red Lake. The Property is accessible by forestry roads and smaller forest service roads. The Property consists of 12 single cell and multi-cell mining claims for a total area of ~ 1780 hectares. The claims are listed in Table 1 and are shown in Figure 2. The claims are held 100% by Abitibi Gold Royalties. The total work requirement for the property annually amounts to \$35,200.

The Municipality of Red Lake was founded on gold discoveries made in 1925 by Ray and Lorne Howey and George McNeely. The discoveries led to a gold rush peaking in 1926 with a subsequent mining boom in the 1930s and 1940s that resulted in 12 producing gold mines. The Property spans a large block of ground south and east of the South Bay Mine (Cu, Zn) (past producer 1971 to 1981) of 1.45 million tons of ore grading 2.3% copper, 14.7% zinc and 120 g/t silver.

The property is located within the western portion of the Archean Birch-Uchi Greenstone Belt of the East Uchi Subprovince as illustrated in Figure 1. The property is underlain by assemblages of Orogenic Sediments, Neoproterozoic Continental Margin Arc, Mesoproterozoic Continental Margins, and Neoproterozoic Plutonic Rocks as shown in Figure 2.

The Birch-Uchi greenstone belt is geologically comparable to the Red Lake greenstone belt but has a higher proportion of Neoproterozoic Confederation assemblage (which date from 2.75 Ga - 2.735 Ga.) with only a small proportion of Mesoproterozoic rocks (Sanborn-Barrie et al. 2004). The dominant Confederation Assemblage units are a mix of calc-alkaline sediments and volcanic rocks that frequently overlie Balmer Assemblage.

Gold and base metals have been historically produced within the Birch-Uchi greenstone belt but currently there are no producing mines. Historically, only about 5 million ounces of gold have been discovered in Confederation volcanic rocks but there has been a substantial increase in exploration activity in the Birch-Uchi greenstone belt as the result of the success of Kinross at their Dixie project.

The topography of the property is generally gentle with elevations ranging on average from 380 to 460 meters above sea level. Saturated soil/ground covers 10-30% of the properties while lakes cover approximately 10-20% of the properties. The forest contains a multitude of old cut blocks, while the properties are actively being logged in areas of mature timber. The forests are typical of northern Ontario containing dominantly spruce, balsam, poplar, and birch, with low bushes, grasses and mosses covering the lowlands and swamps.

The best exploration time fall mid summer when the areas of saturated soil can dry out and allow field traverses although geophysical surveys and diamond drilling can be implemented after winter freeze up and before spring thaw.

Prospectair Geosurveys conducted a heliborne high-resolution magnetic (MAG) survey on the Upper Red Lake Property from August 22<sup>nd</sup> to 24<sup>th</sup> 2021. One survey block was flown for a total of 393 l-km.

Waldo Sciences Inc of Vernon, BC was contracted to carry out a preliminary field examination of the geophysical anomalies identified on the Property. Additionally, the program consisted of prospecting and mapping, and a till sampling program. The focus of the 2021 exploration program was a reconnaissance level program designed to evaluate the mineral perspective of the property and to establish field techniques for future exploration programs.

## 2.0 INTRODUCTION

The Upper Red Lake Project ('The Property') lies in the Red Lake Mining Division of Northwestern Ontario (Figure 1). The Report is based on published literature, Ministry of Energy Northern Development and Mines (MENDM) assessment files and work carried out by Xplore Resources Corp. An exploration program consisting of a high resolution airborne magnetic survey, rock sampling, and till sampling was carried out over the property.

Figure 1: Property Location Map



### 3.0 PROPERTY DESCRIPTION AND LOCATION

The Upper Red Lake Project is located in the Skinner, Shabu Lake Are, and East of Trout Lake Area Townships of the Red Lake Mining Division in northwestern Ontario, approximately 60 km east-northeast of the community of Red Lake, ON. The UTM coordinates for the approximate centre of the claim block are 504000 m E, 5676000 m N (NAD 83, Zone 15).

The Property consists of 12 multi-cell mining claims for a total area of ~ 1780 hectares. The claims are listed in Table 1 and are shown in Figure 2. The claims are held 100% by Abitibi Gold Royalties. The total work requirement for the property annually amounts to \$35,200.

Exploration program are subject to the guidelines, policies and legislation of the Ontario Ministry of Energy, Northern Development and Mines (“MENDM”), Ontario Ministry of Natural Resources and Federal Department of Fisheries and Oceans regarding surface exploration, stream crossings, and work being carried out near rivers and bodies of water, drilling and sludge disposal, drill casings, capping of holes, storage of core, trenching, road construction, waste and garbage disposal.

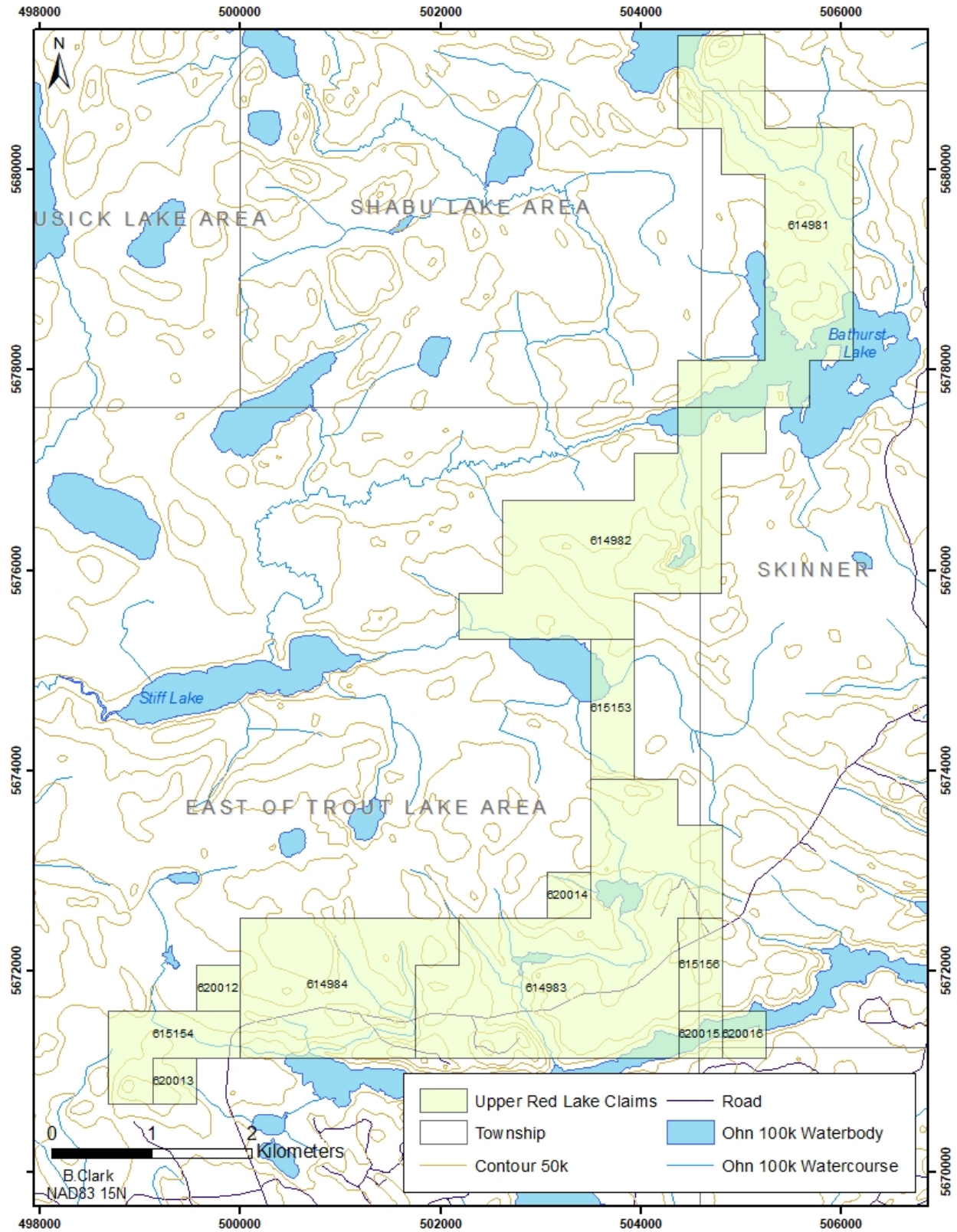
The *Mining Act* (Ontario) requires Exploration Permits or Plans for exploration on Crown Land, which in turn are obtained from the MENDM. The processing periods are 50 days for a permit and 30 days for a plan while the documents are reviewed by MENDM and presented to the Aboriginal communities whose traditional lands may be impacted by the work. The Author recommends the company discuss the recommended exploration with the MENDM to determine the plan and/or permit required as well as the Aboriginal communities to consult.

The Government of Ontario requires expenditures of \$400 per year per cell for staked claims, prior to expiry, to keep the claims in good standing for the following year. The Assessment report describing the work done by the company must be submitted by the expiry date of the claims to which the work is to be applied. There are no boundary claims related to the Property.

**Table 1: Upper Red Lake Property Claims**

Claim Number	Holder	Anniversary Date	Tenure Status	Mining Claim Type	Area (ha)	Cost
						(per/yr)
614981	Abitibi Gold Royalties	2022-10-07	Active	Multi cell mining claim	362.7	\$7,200.00
614982	Abitibi Gold Royalties	2022-10-07	Active	Multi cell mining claim	364.1	\$7,200.00
614983	Abitibi Gold Royalties	2022-10-07	Active	Multi cell mining claim	506.6	\$10,000.00
614984	Abitibi Gold Royalties	2022-10-07	Active	Multi cell mining claim	263.3	\$5,200.00
615153	Abitibi Gold Royalties	2022-10-10	Active	Multi cell mining claim	60.7	\$1,200.00
615154	Abitibi Gold Royalties	2022-10-10	Active	Multi cell mining claim	81.0	\$1,600.00
615156	Abitibi Gold Royalties	2022-10-10	Active	Multi cell mining claim	40.4	\$800.00
620012	Abitibi Gold Royalties	2022-11-23	Active	Single cell mining claim	20.2	\$400.00
620013	Abitibi Gold Royalties	2022-11-23	Active	Single cell mining claim	20.2	\$400.00
620014	Abitibi Gold Royalties	2022-11-23	Active	Single cell mining claim	20.2	\$400.00
620015	Abitibi Gold Royalties	2022-11-23	Active	Single cell mining claim	20.2	\$400.00
620016	Abitibi Gold Royalties	2022-11-23	Active	Single cell mining claim	20.2	\$400.00

Figure 2: Property Claim Map





#### **4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

The Property is in the northwestern region of Ontario and is best accessed from the major cities of Winnipeg (Manitoba) or Thunder Bay (Ontario), both of which have international airports. The Property is approximately 280 km northeast of Winnipeg, Manitoba, and 430 km northwest of Thunder Bay, Ontario. From these centers, the property can be accessed using Trans-Canada Highway 17 to the town of Vermillion Bay where Ontario Highway 105, the 'Red Lake highway' begins. The property is 60 km east-northeast of the Town of Red Lake and is accessible by a network of forest service roads..

The Red Lake Municipality, with a population of approximately 5,000, is comprised of six communities: Red Lake, Balmertown, Cochenour, Madsen, McKenzie Island, and Starratt-Olsen. Mining and mineral exploration is the primary industry in the area, with production mainly from Evolution Mining's 3100 tonne/day Red Lake Gold Mine. Since production commenced in 1949, the combined Red Lake Operation has produced more than 25 M oz of gold at an average grade in excess of 20g/t gold (<https://evolutionmining.com.au/red-lake/> accessed Sept 23, 2021). Other industries include logging and tourism. The Red Lake airport is serviced by several regional commercial airlines that offer regularly scheduled flights. The Municipality of Red Lake offers a full range of services and supplies for mineral exploration and mining, including both skilled and unskilled labour, bulk fuels, freight, heavy equipment, groceries, hardware and mining supplies.

Power is available from Red Lake, and there is also a generating station at Ear Falls, approximately 70km south of Red Lake, with the power line running along Highway 105. The current land holdings are sufficient to allow for exploration and there are currently no encumbrances related to surface rights impacting the Property.

The climate in the Red Lake area is described as warm-summer humid continental (climate type Dfb according to the Köppen climate classification system). Mean daily temperatures range from -18°C in January to +18°C in July. Annual precipitation averages 70 cm, mainly occurring as summer rain showers, and total annual precipitation includes approximately two metres of snow. Snow usually starts falling during late October and starts melting during March but is not normally fully melted until late April. Fieldwork and drilling are possible year-round on the property some swampy areas are more easily accessible in the winter when frozen.

The topography of the properties is generally gentle with elevations ranging on average from 380 to 460 meters above sea level. Saturated soil/ground covers 10-30% of the properties while lakes cover approximately 10-20% of the properties. The forest contains a multitude of old cut blocks, while the properties are actively being logged in areas of mature timber. The forests are typical of northern Ontario containing dominantly spruce, balsam, poplar, and birch, with low bushes, grasses and mosses covering the lowlands and swamps.

The best exploration time fall mid summer when the areas of saturated soil can dry out and allow field traverses although geophysical surveys and diamond drilling can be implemented after winter freeze up and before spring thaw.

## **5.0 PROPERTY HISTORY**

An examination of the Ministry of Northern Development and Mines assessment files has indicated that there has been an extensive amount of assessment work performed on and adjacent to the Properties. The area has been subject to a variety of studies on various project areas since the first recorded work that was performed in 1969.

Table 2 below provides a summary of assessment work listed by Assessment File ID, year, type of work that was performed, link to the report. This is by no means an exhaustive search of the records available at the Red Lake recording office.

**Table 2: Summary of Exploration History**

AFRI_FID	YEAR	PERFORM FOR	TOWNSHIP	WORK TYPES	LINK	Percentage on Property
20000005550	1969	C C Hudson And Associates	Corless	AEM, AMAG, ARAD	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000005550.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000005550.html</a>	100.00%
52N03NE0001	1992	G Strilchuk	Skinner	ASSAY, PROSP, PSTRIIP	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N03NE0001.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N03NE0001.html</a>	11.35%
52N07SW9913	1993	Asarco Exploration Co Of Canada Ltd	Shabu Lake Area	EM, GEOL, MAG	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N07SW9913.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N07SW9913.html</a>	75.34%
52N07SW0021	1993	Asarco Exploration Co Of Canada Ltd	Shabu Lake Area	PDRILL	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N07SW0021.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N07SW0021.html</a>	92.86%
52N07SW0026	1993	G Strilchuk	Skinner	GCHEM, PROSP, PSTRIIP	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N07SW0026.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N07SW0026.html</a>	23.68%
52N07SW0025	1993 - 1994	G Strilchuk	Shabu Lake Area	ASSAY, EM, PROSP, PSTRIIP, PTRNCH	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N07SW0025.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N07SW0025.html</a>	12.78%
52N02NW0003	1994	D R Hawke, G Campbell	East Of Trout Lake Area	ASSAY, GEOL, PROSP	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N02NW0003.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N02NW0003.html</a>	100.00%
52N07SW2001	2002	Fronteer Dev Group Inc	Shabu Lake Area	AEM, AMAG, ASSAY, GCHEM, GEOL	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N07SW2001.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N07SW2001.html</a>	81.65%

AFRI_FID	YEAR	PERFORM FOR	TOWNSHIP	WORK TYPES	LINK	Percentage on Property
52N08NE2003	2003	Jilbey Gold Exploration Ltd	Keigat Lake Area	ASSAY, GCHEM, MAG	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N08NE2003.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/52N08NE2003.html</a>	28.03%
20000002414	2005 - 2007	Sabina Silver Corp	Skinner	ASSAY, PDRILL	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000002414.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000002414.html</a>	47.04%
20000000984	2005	High River Acquisition Corp	Shabumeni Lake Area	AMAG	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000000984.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000000984.html</a>	31.15%
20000003546	2008	Merrex Gold Inc	Shabu Lake Area	ASSAY, GCHEM, PROSP	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000003546.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000003546.html</a>	36.63%
20000006012	2010	Frontline Gold Corp	Shabumeni Lake Area	ASSAY, PROSP	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000006012.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000006012.html</a>	19.22%
20000007338	2011 - 2012	Clark Exploration Consulting	Little Shabumeni Lake Area	ASSAY, GEOL, PMAN, PROSP, PTRNCH	<a href="http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000007338.html">http://www.geologyontario.mndm.gov.on.ca/mndmfiles/afri/data/records/20000007338.html</a>	36.69%

### 6.0 GEOLOGICAL SETTING AND MINERALIZATION

The properties are located within the western portion of the Archean Birch-Uchi Greenstone Belt of the East Uchi Subprovince as illustrated in Figure 3. The properties are underlain by assemblages of Orogenic Sediments, Neoproterozoic Continental Margin Arc, Mesoproterozoic Continental Margins, and Neoproterozoic Plutonic Rocks as shown in Figure 4.

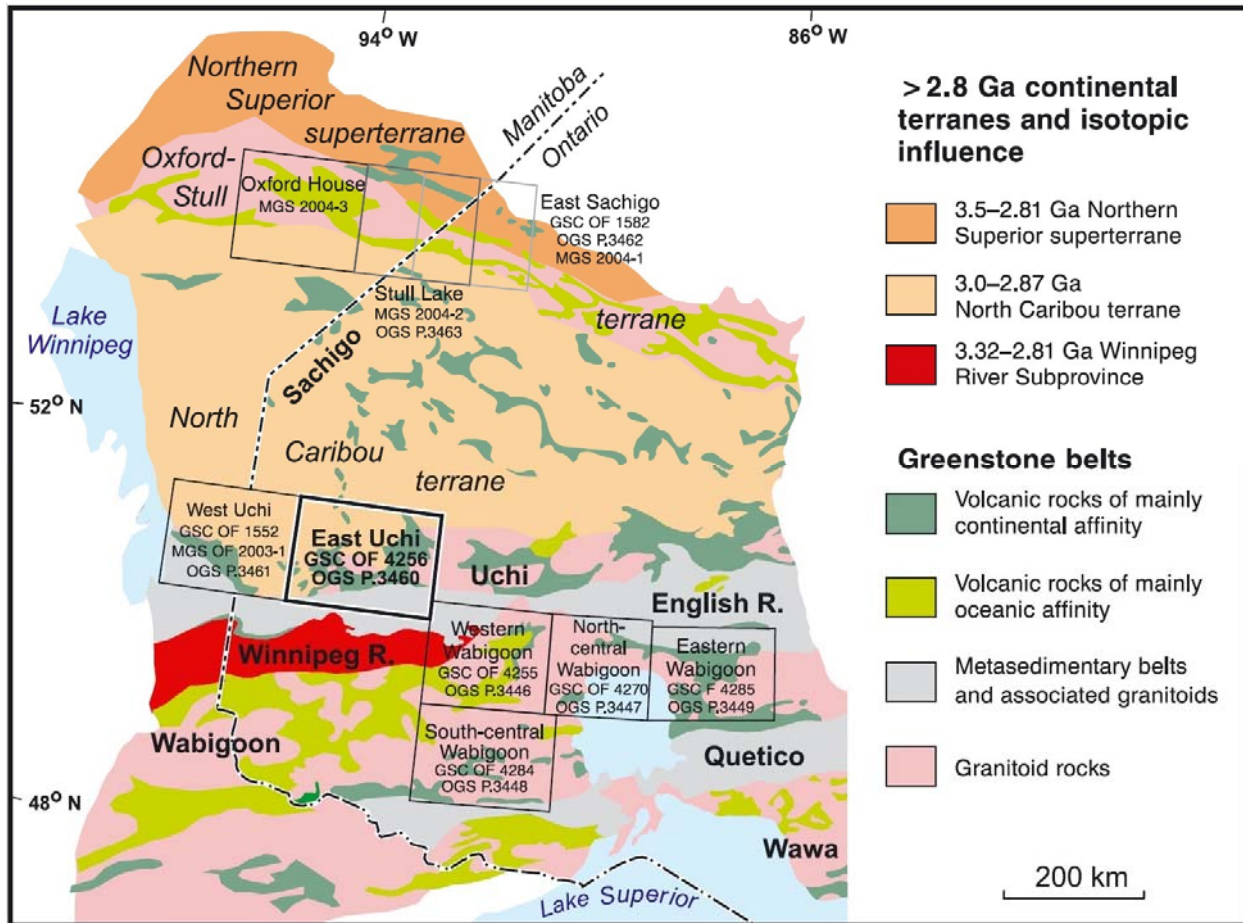
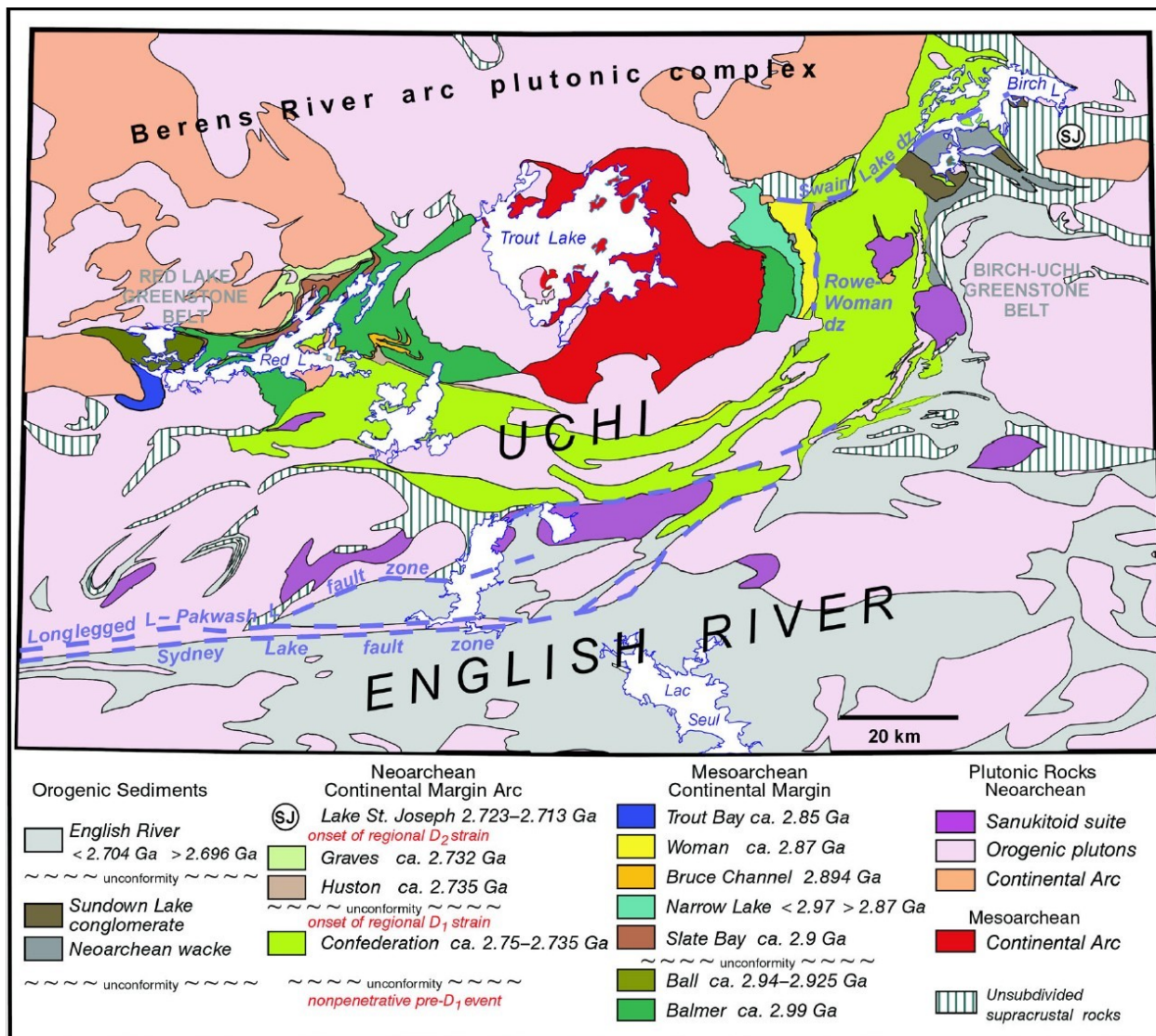


Figure 3: Tectonic map of the western Superior Province showing locations of 1 :250 000 scale NATMAP compilation maps. (Sanborn-Barrie et al, 2004)

**Figure 4: Major tectonostratigraphic assemblages and tectonic affinities assigned to volcanic, sedimentary and plutonic rocks of the eastern Uchi Subprovince and adjacent English River Subprovince. (Sanborn-Barrie et al, 2004)**



The Birch-Uchi greenstone belt is geologically comparable to the Red Lake greenstone belt but has a higher proportion of Neoarchean Confederation assemblage (which date from 2.75 Ga - 2.735 Ga.) with only a small proportion of Mesoarchean rocks (Sanborn-Barrie et al. 2004). The dominant Confederation Assemblage units are a mix of calc-alkaline sediments and volcanic rocks that frequently overlie Balmer Assemblage.

Gold and base metals have been historically produced within the Birch-Uchi greenstone belt but currently there are no producing mines. Historically, only about 5 million ounces of gold have been discovered in Confederation volcanic rocks but there has been a substantial increase in exploration activity in the Birch-Uchi greenstone belt as the result of the success of Great Bear Resources at their Dixie project.

The regional structural geology of the was summarized by Robert Falls in the Geological, Geochemical and Geophysical Report PORTAGE PROPERTY, BIRCH-UCHI GREENSTONE BELT in 2002 (52N07SW2001).

*At least 3 phases of regional deformation affected the area resulting in the widespread development of folds, axial planar fabrics, and ductile shear zones.*

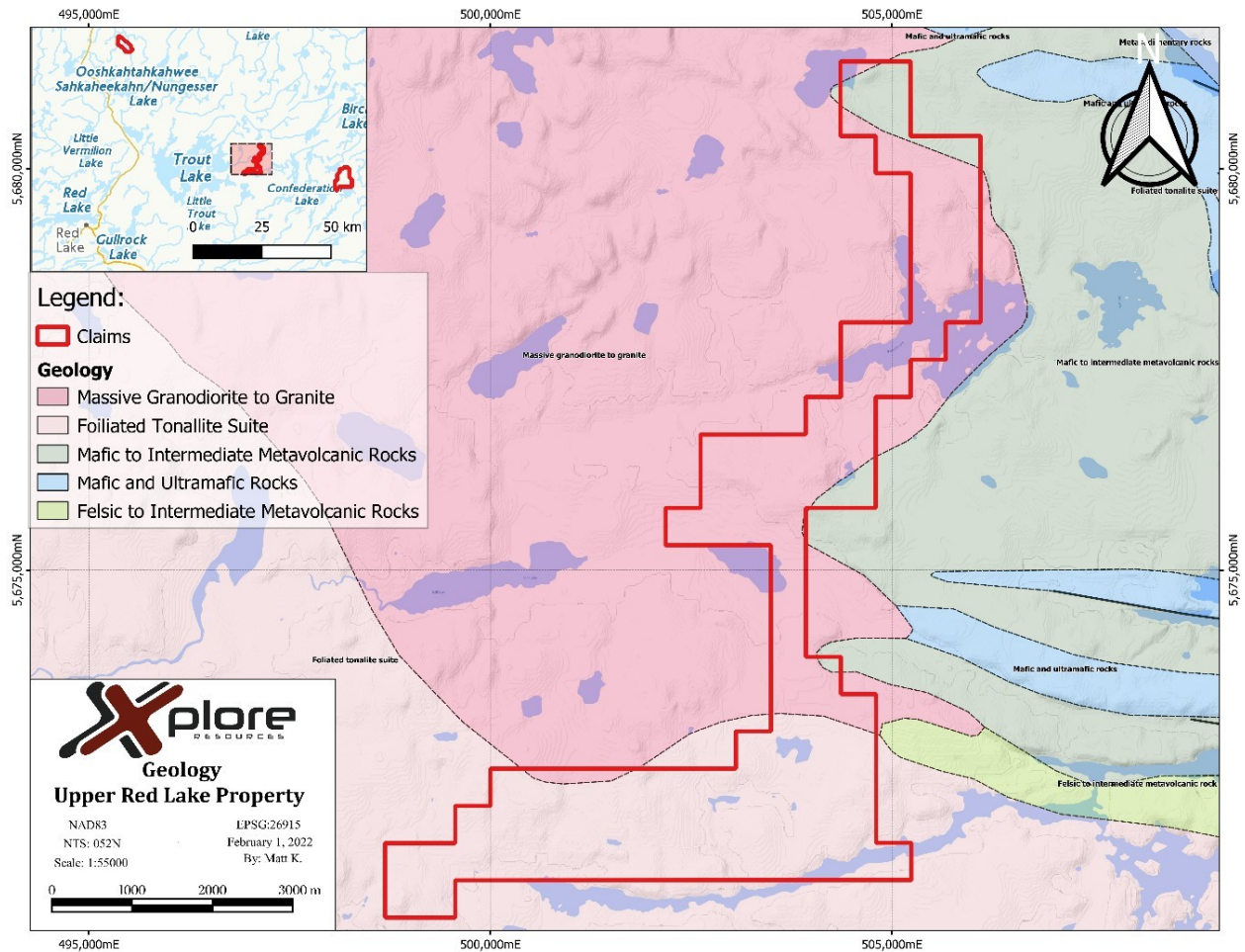
- *D1 deformation involved NW-SE shortening, the development of NE to N-striking folds and faults. Evidence for this D1 event is best preserved in the southern part of the belt in the Confederation Lakes area.*
- *D2 deformation involved NE-SW to N-S shortening and the development of ~E-W to WNW- ESE 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.*

The structural history is further interpreted by the Ontario Geological Survey Open File Report 6030 with:

*The distribution of faults and directly related late orogenic strike-slip basins in the Birch-Uchi greenstone belt may be related to the influence of a block of presumably older crust located southeast of the greenstone belt. Northwest-southeast compression of this block against the adjacent Birch-Uchi greenstone belt could have produced a symmetric pattern of dextral faults and pull-apart basins in the northern (northeast) part of the greenstone belt, versus the sinistral faults common in the southern (southwest) part of the greenstone belt.*

The tectonically complexity of the Birch-Uchi Greenstone Belt hosting pull apart basins and associated strike slip faulting places the prospective and known gold mineralization in a tectonic context, as part of a complex late orogenic wrenching stage. This is a known widespread scenario for Late Archean gold deposits world-wide and validates the prospectively of the belt.

Figure 5: Property Geology



The Upper Red Lake Property is underlain by volcanic sequences of the Balmer (ca 2.99 Ga) and the Narrow Lake (ca <2.97>2.87 Ga) assemblages with intrusive rocks from the Trout Lake Batholith exposed on the south of the property.

The Upper Red Lake Gold Project largely lies along the NW boundary of Prosper Gold Corporation, Golden Sidewalk Project. Prosper Gold Corporation have identified several W to WNW trending anomalous gold trends dubbed the “Golden Corridor” and are believed to continue to trend onto the Upper Red Lake Property. This “Golden Corridor” extension is the target for further exploration on the Upper Red Lake Property.



## 6.1 MINERALIZATION

Within the Birch-Uchi greenstone belt multiple forms of mineralization is observed with the three most notable types being (J.R. Devaney, 2001):

1. *Copper-zinc volcanogenic massive sulphide mineralization is present in the southern part of the greenstone belt (the former South Bay mine), significant sulphide mineralization is not known from the presumably broadly correlative Confederation assemblage units near Birch Lake, and stratigraphic and structural complexity limit both volcanological- sedimentological basin analysis and attempts to use predictive ore deposit models;*
2. *the local gold-bearing quartz veins have the structural characteristics and mineral compositions typical of mesothermal lode gold deposits;*
3. *significant values of platinum and palladium have been previously documented from the gabbroic part of a composite stock in the Birch Lake area.*

From work done on the Golden Sidewalk project adjacent to the Upper Red Lake Property gold mineralization is observed in white to smoky quartz veins that are irregularly distributed, nuggety and appears to have been remobilized (David S. Hunt, 2007). David S. Hunt further describes the veins as:

*Auriferous veins appear to occupy east-northeast to east-southeast fracture zones in basaltic flows and gabbroic sills, and are often intimately associated with parallel quartz-feldspar (felsite) dykes or lenses. Gold is occasionally hosted by biotite-altered, quartz flooded portions of felsite dykes. Boudinaging veins consist of quartz, quartz-chlorite, quartz-calcite or quartz-carbonate, with occasional biotitic wallrock alteration. Associated sulphide mineralization includes trace to 10% pyrite, trace to 15% pyrrhotite, trace to 10% arsenopyrite and trace to 2% chalcopyrite.*

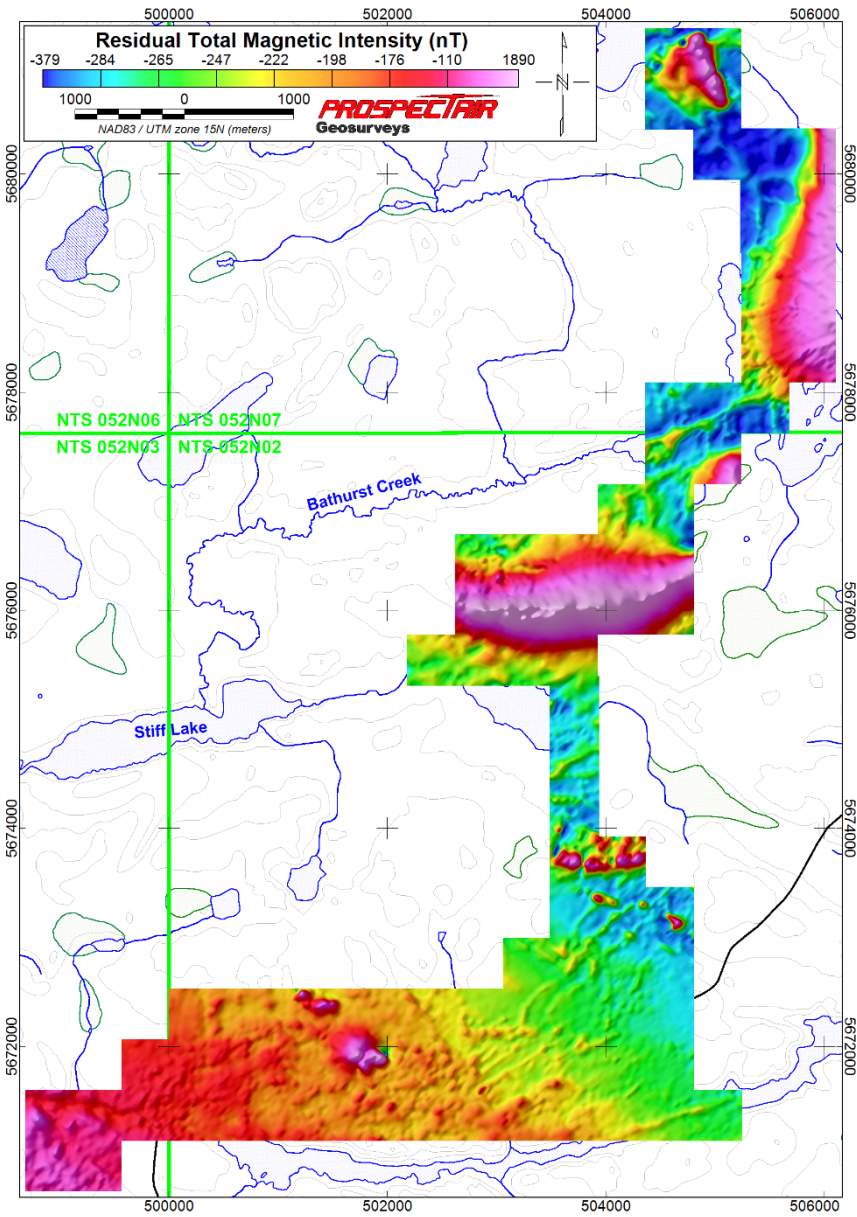
## **7.0 EXPLORATION**

### **7.1 Airborne Geophysics**

Prospectair Geosurveys conducted a heliborne high-resolution magnetic (MAG) survey on the Upper Red Lake Property from August 22<sup>nd</sup> to 24<sup>th</sup> 2021. One survey block was flown for a total of 393 l-km. A total of four production flights were performed using Prospectair's Robinson R-44, registration C-GBOU. The helicopter and survey crew operated out of the Red Lake Airport located about 60km to the west of the block.

The Upper Red Lake block was flown with traverse lines at 50m spacing and control lines spaced every 500m. The survey lines were oriented N126 and control lines were flown at an azimuth of N036.

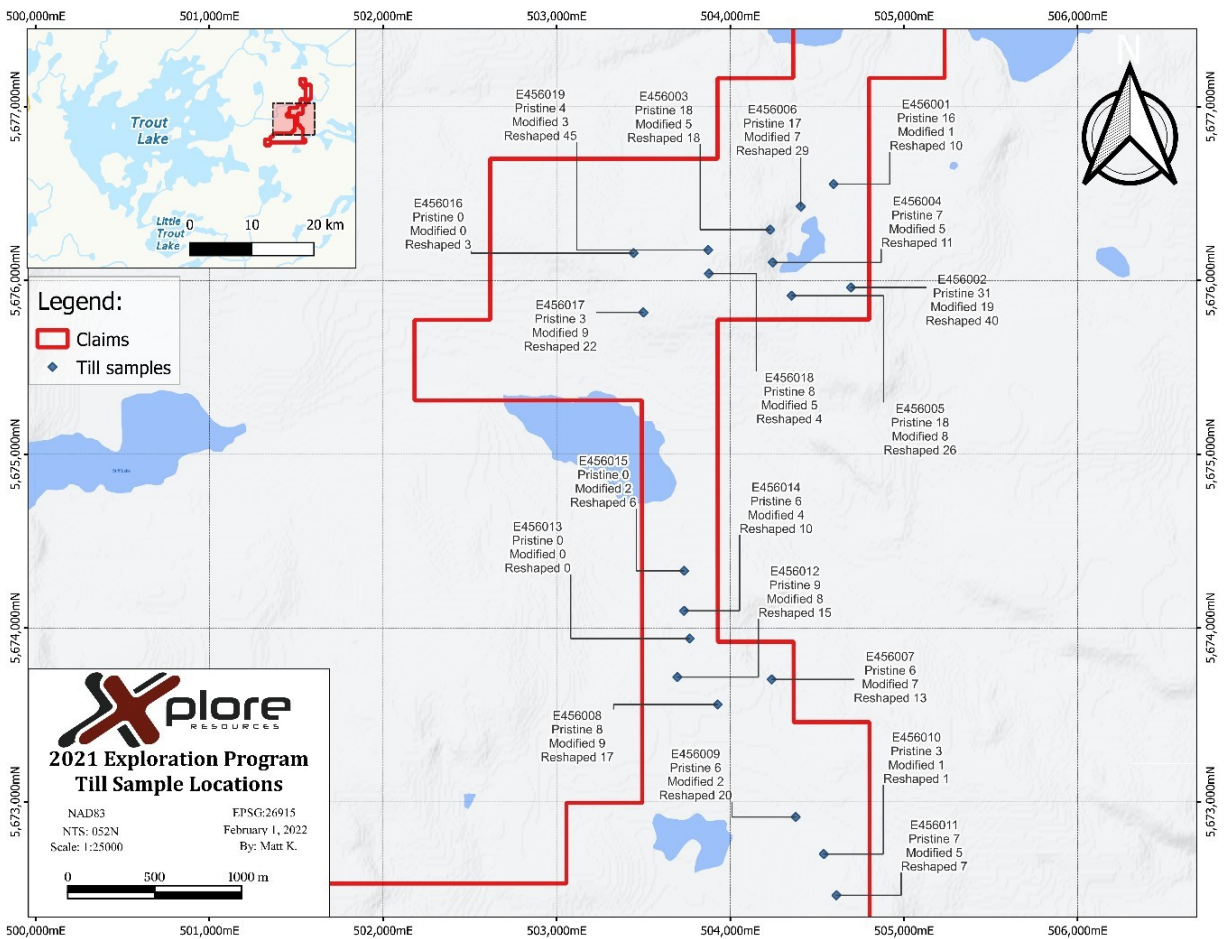
Figure 6: Total Magnetic Intensity (TMI)



Waldo Sciences Inc. carried out a reconnaissance-level geological mapping, prospecting, and geochemical sampling program on the Upper Red Lake Projects between October 25th and November 6th, 2021. The 13-day program was conducted by Raymond Wladichuk, P.Geo., B.Sc., GDBA Principal and Matt Krukowski, P.Geo., B.Sc. who mobilized to and from the properties from Winnipeg. While on site they stayed at the Woman River Camp & Outposts which is located off Highway 657 and Wenasaga South Lake Road along the main forest service road allowing access the area.

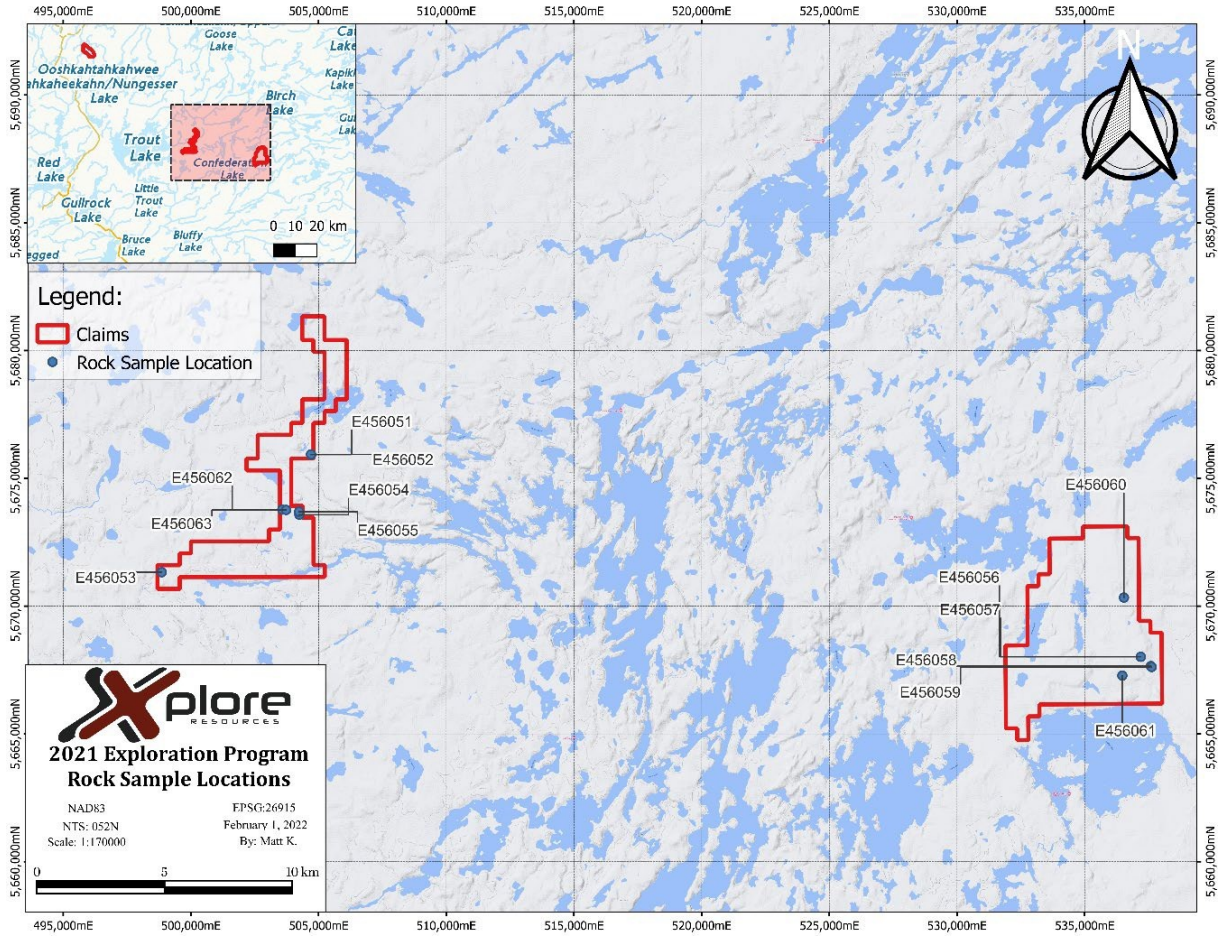
During the program a total of 19 till and 7 rock samples were collected with details summarized in Appendix IV. Samples were secured in a manor where sample integrity and provenance were maintained for future analytical procedures.

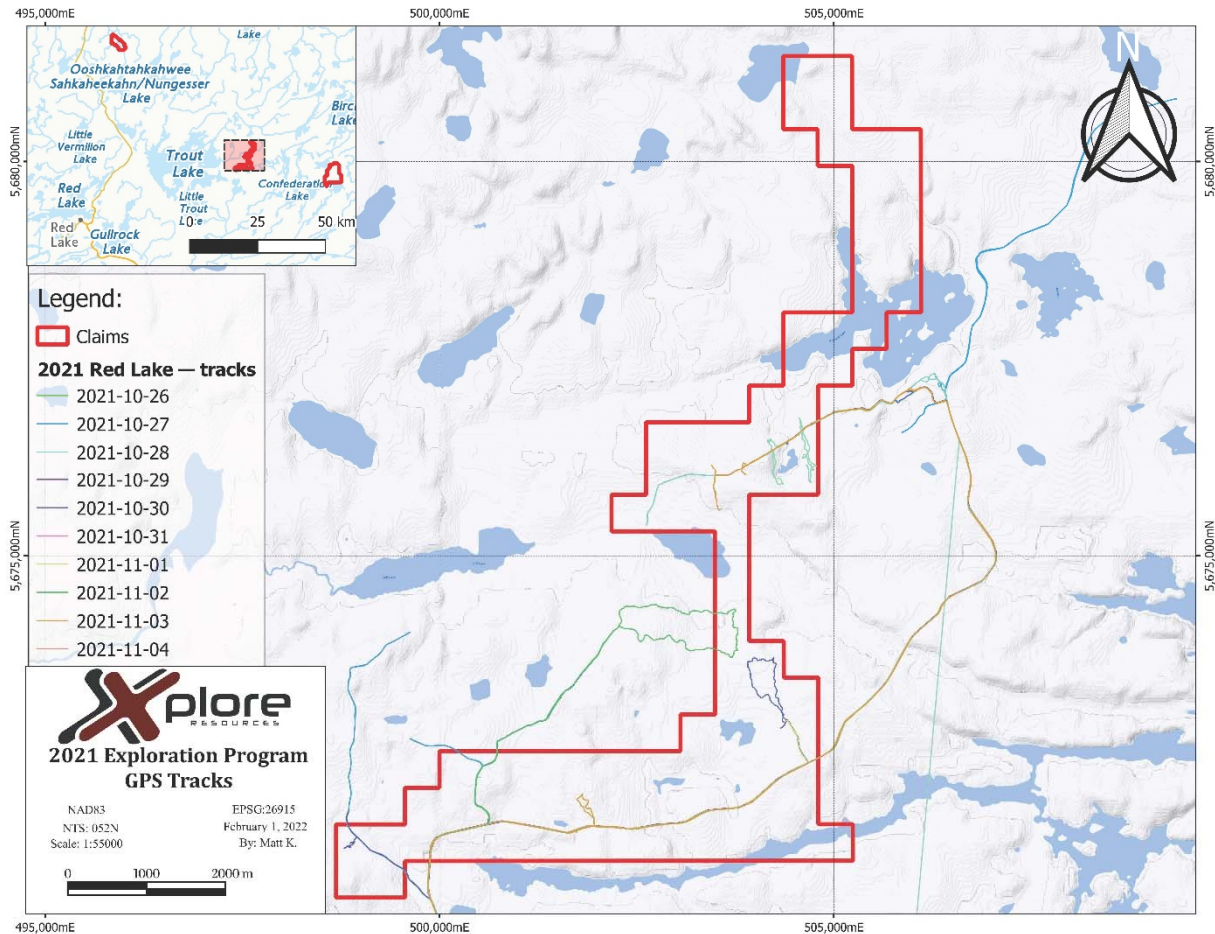
**Figure 7: Till sampling locations**



**Table 3: Till sample results**

Sample Number	Number of Visible Gold Grains				Nonmag HMC Weight (g)*	Calculated PPB Visible Gold in HMC			
	Total	Reshaped	Modified	Pristine		Total	Reshaped	Modified	Pristine
E456001	27	10	1	16	51.6	7834	7787	<1	47
E456002	90	40	19	31	60.0	358	323	18	17
E456003	41	18	5	18	57.6	835	790	27	18
E456004	23	11	5	7	44.8	415	402	9	4
E456005	52	26	8	18	52.4	118	81	29	8
E456006	53	29	7	17	62.8	1010	968	12	29
E456007	26	13	7	6	40.0	73	62	9	2
E456008	34	17	9	8	42.0	121	96	12	13
E456009	28	20	2	6	52.8	179	172	3	4
E456010	5	1	1	3	51.6	7	4	<1	3
E456011	19	7	5	7	37.2	215	159	31	25
E456012	32	15	8	9	47.2	228	190	24	13
E456013	0	0	0	0	43.6	0	0	0	0
E456014	20	10	4	6	38.8	52	24	26	2
E456015	8	6	2	0	51.6	17	13	4	0
E456016	3	3	0	0	56.8	13	13	0	0
E456017	34	22	9	3	50.8	155	121	33	2
E456018	17	4	5	8	48.0	36	7	21	9
E456019	52	45	3	4	44.4	1076	1043	31	3





## 8.0 SAMPLE PREPARATION, ANALYSIS, AND SECURITY

### 8.1 Sampling Procedure

Till sample locations were marked by GPS in NAD83 UTM Zone 15N, the sample locations were recorded in field notebooks, and as a waypoint on a Garmin 66i GPS unit. Each sample was collected into its own 18" x 12" poly bag labeled with a unique 7-character sample ID (ie. E456063) assigned from a barcoded ALS sample book. A tear-out tag with the barcode and unique sample ID was inserted in the bag with the sample and the bag sealed with a cable tie in the field. The sample locations were marked in the field with orange flagging tape and the unique sample ID number was written on the flagging tape.

The till samples were collected following strict guidelines and protocols as follows:

1. Sediment taken must be of glacial origins
2. Organic and heavily oxidized surface material must not be sampled
3. Sample must be sieved in the field (5mm mesh) to remove excess weight
4. Sample weight must be over 12 kg to ensure large enough sample for lab processing

5. Sample depth, colour, sorting, particle size and weight were recorded at sample site
6. Each till sample hole must be filled-in and the vegetation replaced once the sample is collected

Rock samples collected were located by GPS in NAD83 UTM Zone 15N, the sample location was recorded in field notebooks, an assay sample tag book and as a waypoint on a Garmin 66i GPS unit. Each sample was collected into its own 18" x 12" poly bag labeled with the locale (i.e. "Upper Red Lake") and a unique 7-character sample ID (i.e. E456063) assigned from a barcoded ALS sample book. A tear-out tag with the barcode and unique sample ID was inserted in the bag with the sample and the bag was sealed with a cable tie in the field. The sample locations are marked in the field with orange flagging tape and the unique sample ID number was written on the flagging tape.



*Figure 10 Example of Till Sample Collection from the 2021 Exploration Program*

## 8.2 Sampling Preparation and Analysis

Till samples were submitted for analysis at Overburden Drilling Management Limited, Unit 107, 15 Capella Court, Ottawa, Ontario, Canada, K2E 7X1.

Overburden Drilling Management Limited uses the following quality control procedures:

- Incoming samples are immediately catalogued and organized. A character subsample is archived from every sample.
- In every circuit, the sample processing sequence and operator is recorded.



- The quality of the mineral separation is visible at every concentration stage (shaking table, heavy liquid, magnetic, electromagnetic) as well as during final indicator mineral logging; no blind (enclosed) concentrators are used.
- All shaking tables are customized to eliminate indicator mineral carryover.
- Blank samples are inserted and processed between projects.
- Gold grains are observed immediately in the initial tabling circuit and extra blank samples are inserted after anomalous samples.
- Sieves are meticulously cleaned after each concentrate.
- All sample fractions and subfractions obtained during processing are weighed and tallied to identify potential sample mix-ups. Any unreconcilable weight imbalances are assessed and immediately reported to the client in writing.
- Regular heavy mineral recovery tests are conducted on all shaking tables.
- Kimberlite indicator mineral results are controlled by random blind tests on spiked samples with full disclosure of test procedures and results.
- Unusual mineral grains or other suspect particles observed during gold micropanning or indicator mineral logging are immediately resolved by SEM analysis.
- Indicator minerals are meticulously organized by species and grain size in separate vials.

Rock sample analysis was carried out by ALS Canada Ltd., 2103 Dollarton Hwy, North Vancouver, BC, V7H 0A7, which is ISO/IEC 17025:2005 and ISO 9001:2015 certified and independent of the issuer.

The analysis methods requested from the ALS lab for the rock samples collected in the 2021 field exploration program are listed below:

SAMPLE PREPARATION		
ALS CODE	DESCRIPTION	
WEI-21	Received Sample Weight	
DISP-01	Disposal of all sample fractions	
CRU-QC	Crushing QC Test	
PUL-QC	Pulverizing QC Test	
LOG-21	Sample logging – ClientBarCode	
DRY-22	Drying – Maximum Temp 60C	
CRU-32	Fine Crushing 90% <2mm	
SPL-21	Split sample – riffle splitter	
PUL-32	Pulverize 1000g to 85% < 75 um	
BAG-01	Bulk Master for Storage	

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
ME-MS61	48 element four acid ICP-MS	

## Gold by Fire Assay

An optimal fire assay flux recipe and rigorous quality control program easily handle problem materials including chromite, base metal sulphides and oxides, selenides, and tellurides.

Choice of crushing fineness, splitting technique and pulp size can all affect the analytical outcome of fire assay gold methods. Discuss with your local ALS laboratory for more information.

CODE	ANALYTE	RANGE (ppm)	DESCRIPTION
<b>Trace Level</b>			
Au-ICP21	Au	0.001-10	Au by fire assay and ICP-AES.
Au-ICP22			<b>30g sample</b>
Au-AA23		0.005-10	Au by fire assay and AAS.
Au-AA24			<b>30g sample</b>
		<b>50g sample</b>	
<b>Ore Grade</b>			
Au-AA25	Au	0.01-100	Au by fire assay and AAS.
Au-AA26			<b>30g sample</b>
Au-GRA21		0.05-10,000	Au by fire assay and gravimetric finish.
Au-GRA22			<b>30g sample</b>
		<b>50g sample</b>	

## Four Acid Digestion With ICP-MS Finish

Four acid digestion quantitatively dissolves nearly all minerals in the majority of geological materials. However, barite, rare earth oxides, columbite-tantalite, and titanium, tin and tungsten minerals may not be fully digested.

Despite the potentially incomplete digestion of REEs, the leachable portion of these elements may hold important exploration vectoring information and can be chosen as an add-on.

CODE	ANALYTES & RANGES (ppm)							
ME-MS61™ 0.25g sample	Ag	0.01-100	Cu	0.2-10,000	Na	0.01%-10%	Sr	0.2-10,000
	Al	0.01%-50%	Fe	0.01%-50%	Nb	0.1-500	Ta	0.05-500
	As	0.2-10,000	Ga	0.05-10,000	Ni	0.2-10,000	Te	0.05-500
	Ba	10-10,000	Ge	0.05-500	P	10-10,000	Th	0.01-10,000
	Be	0.05-1,000	Hf	0.1-500	Pb	0.5-10,000	Ti	0.005%-10%
	Bi	0.01-10,000	In	0.005-500	Rb	0.1-10,000	Tl	0.02-10,000
	Ca	0.01%-50%	K	0.01%-10%	Re	0.002-50	U	0.1-10,000
	Cd	0.02-1,000	La	0.5-10,000	S	0.01%-10%	V	1-10,000
	Ce	0.01-500	Li	0.2-10,000	Sb	0.05-10,000	W	0.1-10,000
	Co	0.1-10,000	Mg	0.01%-50%	Sc	0.1-10,000	Y	0.1-500
*ME-MS61™ 0.75g sample	Cr	1-10,000	Mn	5-100,000	Se	1-1,000	Zn	2-10,000
	Cs	0.05-500	Mo	0.05-10,000	Sn	0.2-500	Zr	0.5-500
	Dy	0.05-1,000	Gd	0.05-1,000	Nd	0.1-1,000	Tb	0.01-1,000
	Er	0.03-1,000	Ho	0.01-1,000	Pr	0.03-1,000	Tm	0.01-1,000
	Eu	0.03-1,000	Lu	0.01-1,000	Sm	0.03-1,000	Yb	0.03-1,000

## 9.0 INTERPRETATION AND CONCLUSIONS

Visible sulphide mineralization was discovered within the meta-volcanics of the Upper Red Lake and Perrigo Properties, illustrating the potential of gold mineralization typical of archean-aged orogenic greenstone-hosted gold deposits known to the area. The 'Golden Corridor' mineralized trend of the adjacent Golden Sidewalk Project owned by Prosper Gold Corp. (containing the historic Bathurst Mine) was found to extend onto the Upper Red Lake Project through field traverses. Rock and till samples were collected along strike of the 'Golden Corridor' feature, and along the identified geophysical anomalies from the 2021 heliborne high-resolution magnetic survey.

The 2021 till sampling on the Upper Red Lake Property was successful in finding gold grains in eighteen of the nineteen till samples taken, with pristine gold grains found in sixteen samples. The amounts of gold grain encountered is summarized in Table 2 and Figure 7. Gold grains found in till becomes reshaped quickly as they are transported from their provenance so having widespread pristine gold grains indicates a proximal source and highlights the potential for significant gold mineralisation on the property.

The 2021 rock sampling encountered minor to trace polymetallic sulphide mineralization, but no significant gold mineralization was encountered. This result although unfortunate was expected because like the Golden Sidewalk Project the gold mineralization is found to be nuggety and irregularly distributed within white to smoky quartz-chlorite-carbonate veins similar to what was sampled on the Upper Red Lake Property.

## 10.0 RECOMMENDATIONS

A multi-phase exploration program is recommended for the Upper Red Lake Property.

Further geophysics is recommended at Upper Red Lake to help understand the geology and the mineralization. An IP survey over the extension of Prosper Gold Corp "Golden Corridor" could help detect mineralization, define structures and lithologic units which are proving to be important control of mineralization on the property. Additionally, the geophysical information gathered will be critical to developing higher resolution field work programs and to aid in drill targeting.

Further mapping and sampling are recommended to follow up on prospective areas defined in the 2021 Fall program. This work is recommended to include:

- A till sediment sampling should be undertaken property wide. In zones of high pristine grains from the 2021 Fall program infill till samples should be collected.
- Detailed lithological and structural geological mapping. Structural and lithological controls have a significant role on mineralization.
- Detailed channel/chip/trench sampling across prospective areas where mineralized and quartz veined surface outcrops are exposed. Equal emphasis should be placed on understanding the mineralization as well as it's interaction with the surrounding volcanic/plutonic host rock, and the associated alteration.

Based on the current results more field work is required before diamond drilling is implemented. The broader mapping/trenching/till sampling phase 1 should aim to delineate drill targets and plan for their implementation. Newly established logging tracks, and forestry service roads may allow for easy drill access and further prospecting.

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## 12.0 CERTIFICATE OF QUALIFICATIONS

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### CERTIFICATE OF QUALIFIED PERSON

I, Brent Clark, P. Geo. (#3188), do hereby certify that:

1. I am a consulting geologist with an office at 941 Cobalt Crescent, Thunder Bay, Ontario.
2. I graduated with the degree of Honours Bachelor of Earth Science (Geology) from Carleton University, Ottawa, Ontario in 2014. I have worked on gold projects in Northwestern Ontario, and Australia.
3. "Assessment Report" refers to the report titled "Assessment Report on the Upper Red Lake Project, Northwestern Ontario, Red Lake Mining Division" dated July 13, 2022.
4. I am a registered Professional Geoscientist with the Association of Professional Geoscientists of Ontario (#3188).
5. I have worked as a Geologist since my graduation from university.
6. I am the author of this report and responsible for all sections and editing of the Assessment Report.
7. As of the date of this certificate, and to the best of my knowledge, information and belief, the Assessment Report contains all scientific and technical information that is required to be disclosed to make the Assessment Report not misleading.

Dated this 13<sup>th</sup> day of July 2022.

"Brent Clark"

---

## **APPENDICES**

- Appendix I – Prospectair Geosurveys Report and Maps
- Appendix II – Assay Certificates
- Appendix III – ODM Analytical Results
- Appendix IV – Grab Sample and Till Sample Descriptions

# ***Technical Report***

## ***High-Resolution Heliborne Magnetic Survey***

***Upper Red Lake Property, Birch-Uchi-West Greenstone Belt  
area, Red Lake Mining Division, Ontario, 2021***

***Xplore Resources Corp.  
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***Prospectair Geosurveys***

***Dynamic Discovery Geoscience***



Prepared by:  
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## I. INTRODUCTION

Prospectair Geosurveys conducted a heliborne high-resolution magnetic (MAG) survey for the mineral exploration company Xplore Resources Corp. on its Upper Red Lake Property located in the western extension of the Birch-Uchi Greenstone Belt area, Red Lake Mining Division, Province of Ontario (Figure 1). The survey was flown from August 22<sup>nd</sup> to 24<sup>th</sup> 2021.

Figure 1: General Survey Location

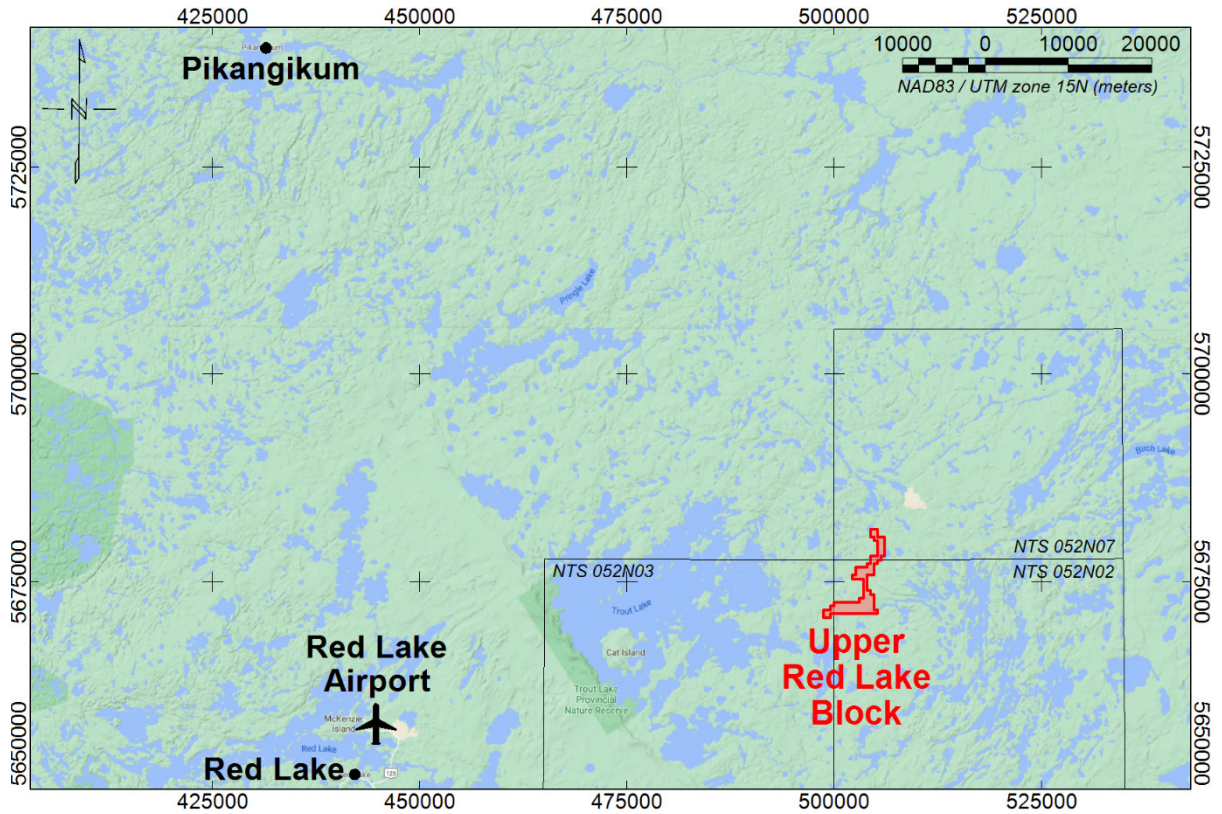


One survey block was flown for a total of 393 l-km. A total of 4 production flights were performed using Prospectair’s Robinson R-44, registration C-GBOU. The helicopter and survey crew operated out of the Red Lake Airport located about 60 km to the west of the block (Figure 2).

Table 1: Survey block particulars

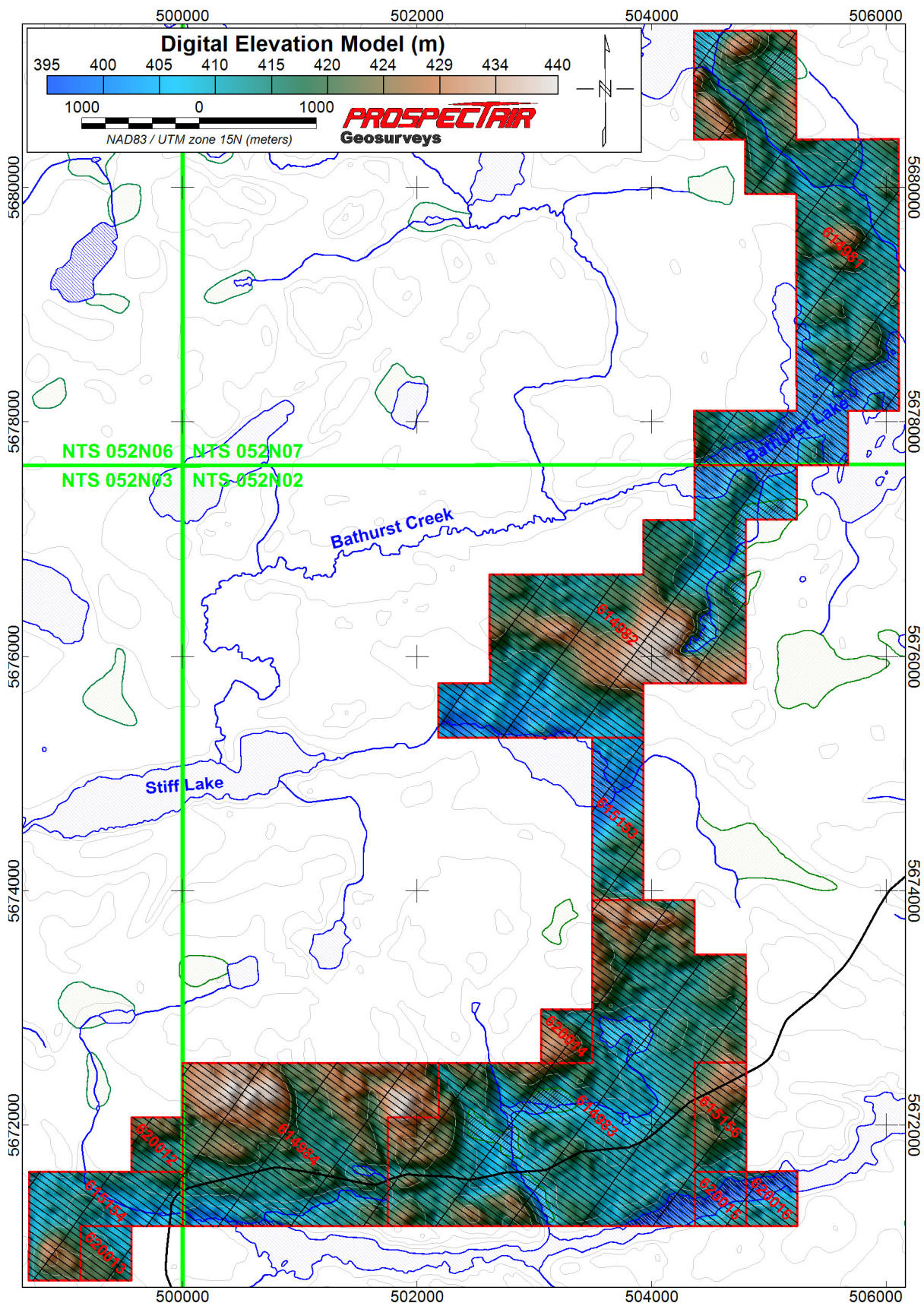
Block	NTS Mapsheet	Line-km flown	Flight numbers	Dates Flown
Upper Red Lake	052N02, 052N03, 052N07	393 l-km	Flt 1 to 4	Aug. 22 <sup>nd</sup> to 24 <sup>th</sup>

Figure 2: Survey Location and base of operation



The Upper Red Lake block was flown with traverse lines at 50 m spacing and control lines spaced every 500 m. The survey lines were oriented N126 and control lines were flown at an azimuth of N036. The average height above ground of the helicopter was 42 m and the magnetic sensor was at 23 m. The average survey flying speed was 32.6 m/s. The survey area is covered by forest, wetlands and lakes. The topography is mostly gently undulating, with a few low-level hills, which are fairly typical characteristics of the area near Red Lake. The elevation is ranging from 395 to 440 m above mean sea level (MSL). The town of Red Lake is found about 65 km to the west of the block, while the Slate Falls village is located approximately 95 km to the east of it. From the ground, the block can be easily accessed via secondary forestry roads connecting to highway 105, which links Red Lake to southern communities. The main lake covered by the block is Bathurst Lake, found in its northeastern part. Coordinates outlining the survey block are given in Appendix A, with respect to NAD-83 datum, UTM projection zone 15N. The location of the Upper Red Lake Property claims (in red) and of the survey lines is shown on Figure 3. The Property claims numbers are also listed in Appendix B.

Figure 3: Survey lines and Upper Red Lake Property claims



## II. SURVEY EQUIPMENT

Prospectair provided the following instrumentation for this survey:

### **Airborne Magnetometer**

*Geometrics G-822A*

The heliborne system used a non-oriented (strap-down) optically-pumped Cesium split-beam sensor. These magnetometers have a sensitivity of 0.005 nT and a range of 15,000 to 100,000 nT with a sensor noise of less than 0.02 nT. The heliborne sensor was mounted in a bird made of non-magnetic material located 19 m below the helicopter when flying. Total magnetic field measurements were recorded at 10 Hz in the aircraft.

### **Real-Time Differential GPS**

*Omnistar DGPS*

Prospectair uses an OmniStar differential GPS navigation system to provide real-time guidance for the pilot and to position data to an absolute accuracy of better than 5 m. The *Omnistar* receiver provides real-time differential GPS for the Agis on-board navigation system. The differential data set was relayed to the helicopter via the Omnistar network appropriate geosynchronous satellite for the survey location. The receiver optimizes the corrections for the current location.

### **Airborne Navigation and Data Acquisition System**

*Pico-Envirotec AGIS-XP system*

The Airborne Geophysical Information System (AGIS-XP) is advanced, software driven instrument specifically designed for mobile aerial or ground geophysical survey work. The AGIS instrumentation package includes an advanced navigation system, real-time flight path information that is displayed over a map image of the area, and reliable data acquisition software. Thanks to simple interfacing, the radar and barometric altimeters and the Geometrics magnetometer are easily integrated into the system and digitally recorded. Automatic synchronization to the GPS position and time provides very close correlation between data and geographical position. The AGIS is equipped with a software suite allowing easy maintenance, upgrades, data QC, and project and survey area layout planning.

### **Magnetic Base Station**

*GEM GSM-19*

A GEM GSM-19 Overhauser magnetometer, a computer workstation and a complement of spare parts and equipment serve as the base station. Prospectair establish the base station in a secure location with low magnetic noise. The GSM-19 magnetometer has resolution of 0.01 nT, and 0.2 nT accuracy over its operating range of 20,000- to 100,000 nT. The ground system was recording magnetic data at 1 Hz.

## Altimeters

### *Free Flight Radar Altimeter*

The Free Flight radar altimeter measures height above ground to a resolution of 0.5 m and an accuracy of 5% over a range up to 2,500 ft. The radar altimeter data is recorded and sampled at 10 Hz.

### *Digital Barometric Pressure Sensor*

The barometric pressure sensor measures static pressure to an accuracy of  $\pm 4$  m and resolution of 2 m over a range up to 30,000 ft above sea level. The barometric altimeter data are sampled at 10 Hz.

## Survey helicopter

### *Robinson R-44 (registration C-GBOU)*

The survey was flown using Prospectair's Robinson R-44 helicopter that handles efficiently the light equipment load and the survey range for magnetic surveys. Table 2 presents the helicopter technical specifications and capacity, and the aircraft is shown in Figure 4.

Table 2: **Technical specifications of the R-44 Robinson helicopter**

Item	Specification
Powerplant	One 195kW (260hp) Textron Lycoming O-540
Rate of climb	1,000 ft/min
Cruise speed	223 km/h – 120 kts
Service ceiling	14,000 ft
Range with no reserve	645 km
Empty weight	635 kg
Maximum takeoff weight	1,090 kg

Figure 4: **C-GBOU Robinson R-44**





### III. SURVEY SPECIFICATIONS

#### Data Recording

The following parameters were recorded during the course of the survey:

In the helicopter:

- GPS positional data: time, latitude, longitude, altitude, heading and accuracy (PDOP) recorded at intervals of 0.1 s;
- Total magnetic field: recorded at intervals of 0.1 s;
- Pressure as measured by the barometric altimeter at intervals of 0.1 s;
- Terrain clearance as measured by the radar altimeter at intervals of 0.1 s;

At the base and remote magnetic ground stations:

- Total magnetic field: recorded at intervals of 1 s;
- GPS time recorded every 1 s to synchronize with airborne data.

#### Technical Specifications

The data quality control was performed on a daily basis. The following technical specifications were adhered to:

- *Height* – 50m mean terrain clearance for the helicopter except in areas where Transport Canada regulations prevent flying at this height, or as deemed by the pilot to ensure safety. Traverse lines and control lines must be flown at the same altitude at points of intersection; the altitude tolerances are limited to no more than 30 m difference between traverse lines and control lines.
- *Airborne Magnetometer Data* – A 0.5 nT noise envelope not to be exceeded for more than 500 m line-length without a reflight.
- *Diurnal Specifications* – A maximum tolerance of 5.0 nT (peak to peak) deviation from a long chord of one minute at the base station.
- *Flying Speed* – The average ground speed for the survey aircraft should be 120 kph. The acceptable high limit is 180 kph over flat topography.
- *Radar Altimeter* – minimal accuracy of 5%, minimum range of 0-2500 m.
- *Barometer* – Absolute air pressure to 0.1 kPa.
- *Flight Path Following* – The line spacing not to vary by more than 30% from the ideal spacing over a distance of more than 300 m, except as required for aviation safety.

For Upper Red Lake Block:

Traverse lines: Azimuth N126, 50 m spacing.

Control Lines: Azimuth N036, 500 m spacing.

## IV. SYSTEM TESTS

### **Magnetometer System Calibration**

The survey configuration using a bird towed 19 m below any magnetic piece of the helicopter allows the simplification of the magnetic calibration requirement. Consequently, heading error and aircraft movement noise was considered negligible and no correction was applied to the data.

### **Instrumentation Lag**

The magnetometer lag is a combination of two factors: 1) the time difference between when a reading is sensed, and when that value is recorded by the acquisition system, and 2) the time taken for the sensor to arrive at the location of the GPS antenna. The second factor is defined by the physical distance between the GPS antenna and any given sensor, and the speed of the aircraft. The average total magnetic lag value for the AGIS acquisition system has been calculated to 0.96 s for this survey.

## V. FIELD OPERATIONS

The survey operations were conducted out of the Red Lake Airport from August 22<sup>nd</sup> to 24<sup>th</sup>, 2021. The data acquisition required 4 flights. At the end of each production day, the data were sent to the Dynamic Discovery Geoscience office via internet. The data were then checked for Quality Control to ensure they fulfilled contractual specifications. The full dataset was inspected prior to provide authorization for the field crew to demobilize. The GSM-19 magnetic base station was set up in a magnetically quiet area close to the crew accommodations in Red Lake, at latitude 51.030732°N, longitude 93.757661°W. The survey pilot was Dominic Latour and the survey system technician was Jonathan Drolet.

Figure 5: **Example of a magnetic base station setup**



## VI. DIGITAL DATA COMPILATION

Data compilation including editing and filtering, quality control, and final data processing was performed by Joël Dubé, P.Eng. Processing was performed on high performance computers optimized for quick daily QC and processing tasks. Geosoft software Oasis Montaj version 9.10 was used.

### **Magnetometer Data**

#### *General*

The airborne magnetometer data, recorded at 10 Hz, were plotted and checked for spikes and noise on a flight basis. An average of 0.96 second lag correction was applied to the data to correct for the time delay between detection and recording of the airborne data.

Ground magnetometer data were recorded at 1 sample per second and interpolated by a spline function to 10 Hz to match airborne data. Data were inspected for cultural interference and edited where necessary. Low-pass filtering was deemed necessary on the ground station magnetometer data to remove minor high frequency noise. The diurnal variations were removed by subtracting the ground magnetometer data to the airborne data and by adding back the average of the ground magnetometer value.

The levelling corrections were applied in several steps. First of all, a correction for altitude was applied by multiplying the First Vertical Derivative (FVD) of the Total Magnetic Intensity (TMI) by the difference between the actual survey altitude and the average survey altitude. Standard levelling corrections were then performed using intersection statistics from traverse and tie lines. After statistical levelling was considered satisfactory, decorrugation was applied on the data to remove any remaining subtle non-geological features oriented in the direction of the traverse lines.

Once the Total Magnetic Intensity (TMI) was gridded, its First Vertical Derivative (FVD) and Second Vertical Derivative (SVD) were calculated to enhance narrow and shallow geological features. Finally, the component of the normal Earth's magnetic field, described by the International Geomagnetic Reference Field (IGRF), has been removed from the TMI to yield the residual TMI.

#### *Tilt Angle Derivative*

In order to enhance the subtle magnetic features some more, the Tilt Angle Derivative (TILT) was also computed for this project.

It has been shown that it is possible to use the Tilt Angle Derivative to estimate both the location and depth of magnetic sources (Salem et al., 2007).

When two body of different magnetic susceptibility are in contact, the vertical and horizontal gradients along a horizontal line perpendicular to the vertical contact are governed by the following equations:

$$\delta M/\delta h = 2KFc(z_c/(h^2+z_c^2))$$

$$\delta M/\delta z = 2KFc(h/(h^2+z_c^2))$$

where

K = susceptibility contrast

F = magnetic field's strength

c =  $1 - \cos^2(\text{field Inclination})\sin^2(\text{field Declination})$

h = location along an horizontal axis perpendicular to the contact

$z_c$  = contact depth

$$\delta M/\delta h = \text{sqrt}((\delta M/\delta x)^2 + (\delta M/\delta y)^2)$$

The Tilt Angle ( $\theta$ ) is defined as

$$\theta = \tan^{-1}[(\delta M/\delta z)/(\delta M/\delta h)]$$

By substitution of the gradients we get

$$\theta = \tan^{-1}[h/z_c]$$

This has two main implications for any given anomaly:

- 1- The  $0^\circ$  angle line is located directly above the contact between a magnetic source and the surrounding rock. This allow for accurate estimation of source location.
- 2- The distance between the  $0^\circ$  and the  $+45^\circ$  contour lines as well as the distance between the  $-45^\circ$  and the  $0^\circ$  contour lines are equal to the depth of the source at the contact. This allow for a direct estimation of the depth of the source of the anomaly. The depth estimated with this method is actually the distance between the magnetic sensor and the top of the source. Knowing that the sensor was 23 m above the ground in average enables direct depth estimates.

In practice, the signal originating from multiple sources at different depth within a same area will cause juxtaposition of the Tilt Angle values, and complicate location and depth estimation. Nevertheless, the method remains an excellent tool for rapid assessment of sources characteristics, without the need for complex assumptions to be made or heavy computer requirements, as is the case with 3D Euler deconvolution or 3D data inversions.

### *Gridding*

The magnetic data were interpolated onto a regular grid using a bi-directional gridding algorithm to create a two-dimensional grid equally incremented in x and y directions. The final grids of the magnetic data are supplied with a 10 m grid cell size. Traverse lines were used in the gridding process.

### **Radar Altimeter Data**

The terrain clearance measured by the radar altimeter in metres was recorded at 10 Hz. The data were filtered to remove high frequency noise using a 1 sec low pass filter. The final data were plotted and inspected for quality.

### **Positional Data**

Real time DGPS correction provided by Omnistar was applied to the recorded GPS positional data.

Positional data were originally recorded at 10 Hz sampling rate in geographic longitude and latitude with respect to the WGS-84 datum. The delivered data locations are provided in X and Y using the UTM projection zone 15 North, with respect to the NAD-83 datum. Altitude data were initially recorded relative to the GRS-80 ellipsoid, but are delivered as orthometric heights (MSL elevation).

### **Terrain Data**

Terrain elevation data (also referred to as digital elevation model, or DEM) are computed from the altitude of the helicopter, given by DGPS recordings, and the radar altimeter data.

## VII. RESULTS AND DISCUSSION

The residual Total Magnetic Intensity (TMI) of the Upper Red Lake block, presented in Figure 6, varies over a range of 2,269 nT, with an average of -173 nT and a standard deviation of 206 nT.

The majority of the surveyed area, in the background, is magnetically settled, which is typical of areas dominated by sedimentary or felsic intrusive rocks, but some magnetically active areas are also occurring locally. Several linear low amplitude magnetic anomalies are found throughout the block. These weaker anomalies could relate to horizons slightly enriched in magnetic minerals, to local volcanic units of intermediate composition or to weakly magnetic intrusive sills or dyke. The southern part of the block depicts a regional gradient increasing towards the southwest and is possibly caused by an intermediate to mafic intrusion at depth towards the southwest. Stronger magnetic anomalies are also seen in a few areas, some with longer wavelengths, like in the central part of the block and along its northeastern edge, indicating sources with continuity at depth, and some more discrete and of smaller size, indicating shallow sources of limited extents. These stronger anomalies could relate to iron formations, or to mafic/ultra-mafic volcanic or intrusive rocks. Stronger magnetic anomalies are best seen on Figure 7 which shows the residual TMI data with a linear color distribution.

Magnetic lineaments are very variable in strike in the area. Most are generally trending N-S in the northern part of the bloc, generally E-W to ENE-WSW in its central part, and are highly variable in orientation in the southern part, depicting a complex fabric. Many lineaments appear curved, and some are even possibly folded locally, attesting that the area underwent some deformation events in the past. In general terms, magnetic lineaments are related to rock formations that are enriched in magnetic minerals (magnetite and/or pyrrhotite).

Throughout the block, it is possible to detect structural features offsetting observed magnetic lineaments and causing abrupt interruption or changes of the magnetic response. These features are typically caused by faults, fractures and shear zones. If they are thought to be favorable structures in the exploration context of the Upper Red Lake project, they should be paid particular attention and should be the object of a comprehensive structural interpretation, which is beyond the scope of this report.

Shorter wavelength anomalies are greatly enhanced on the FVD (Figure 8) and on the TILT (Figure 9) products. Since the FVD attenuates longer wavelength anomalies, and the TILT enhances very weak amplitude anomalies, they are the preferred products for structural interpretation.

Figure 6: Residual Total Magnetic Intensity with equal area color distribution

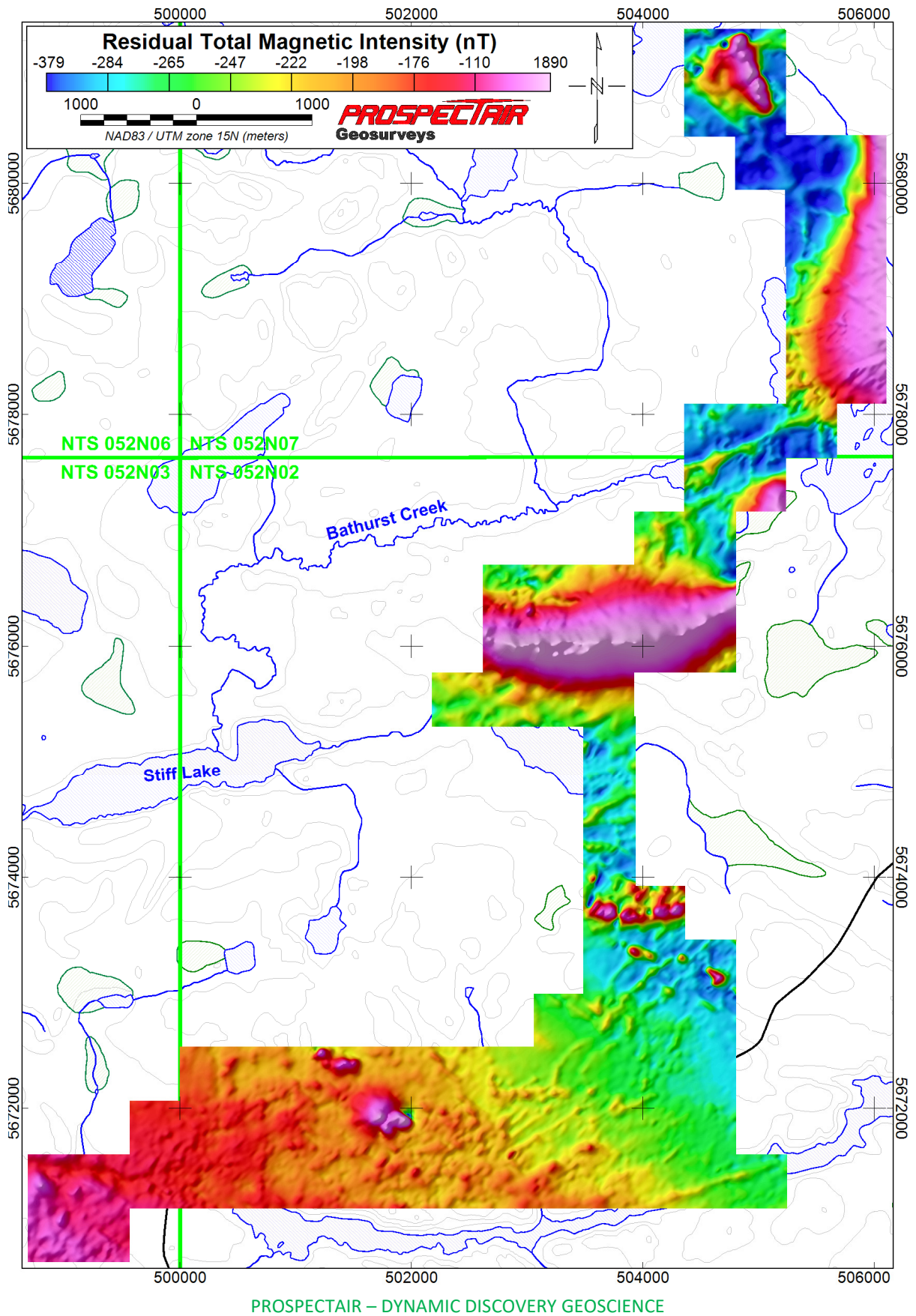




Figure 7: Residual Total Magnetic Intensity with linear color distribution

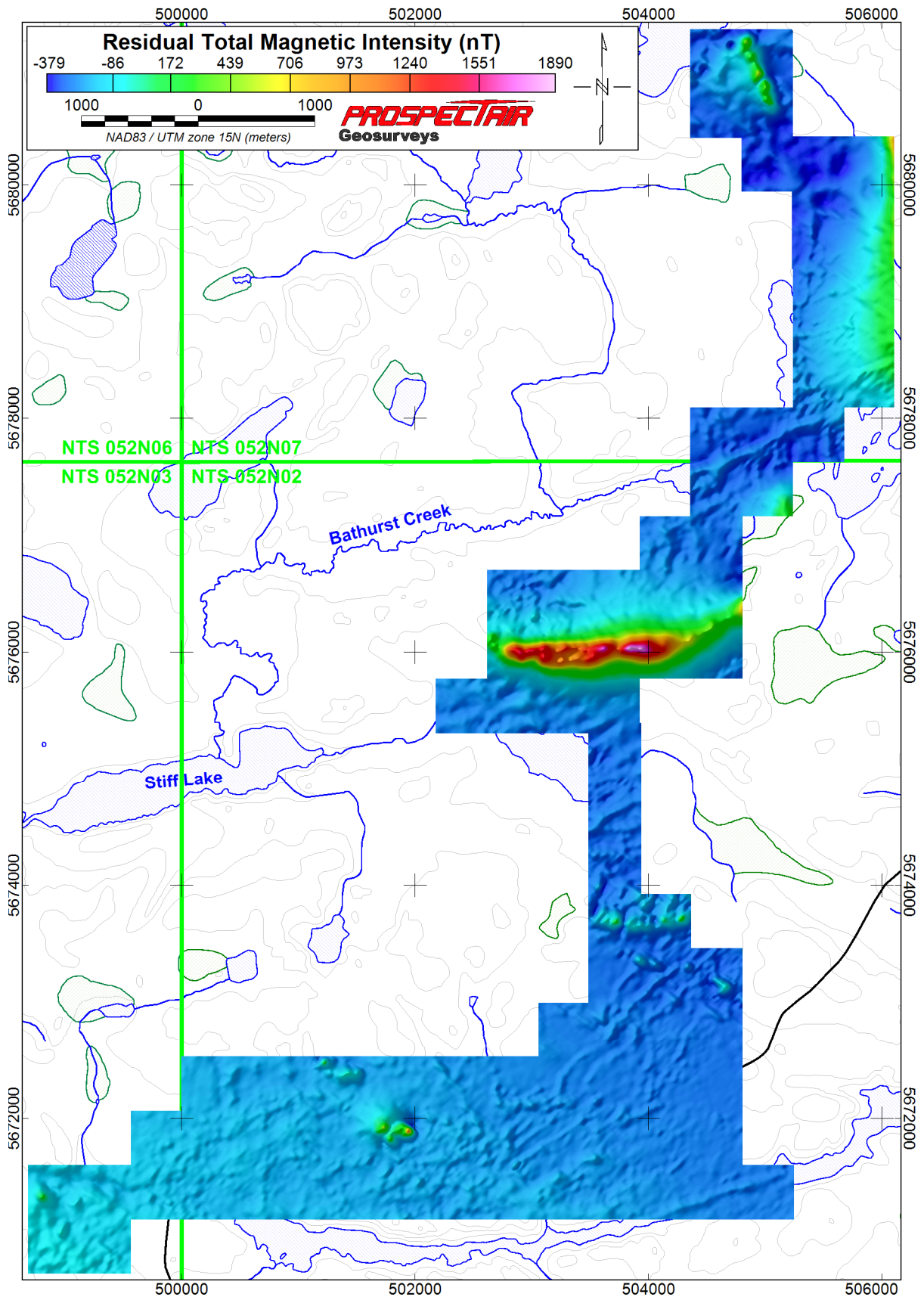


Figure 8: First Vertical Derivative of TMI

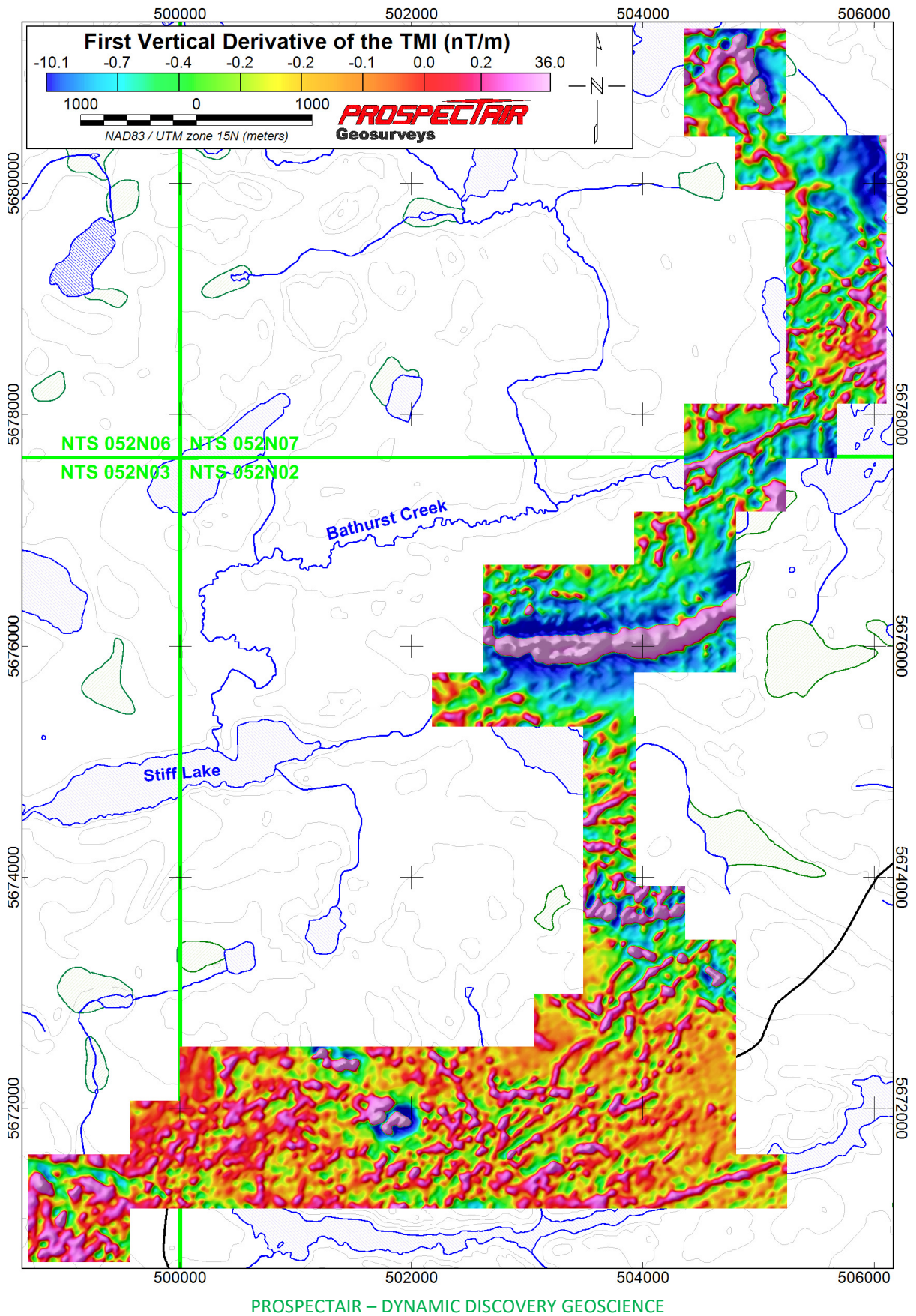
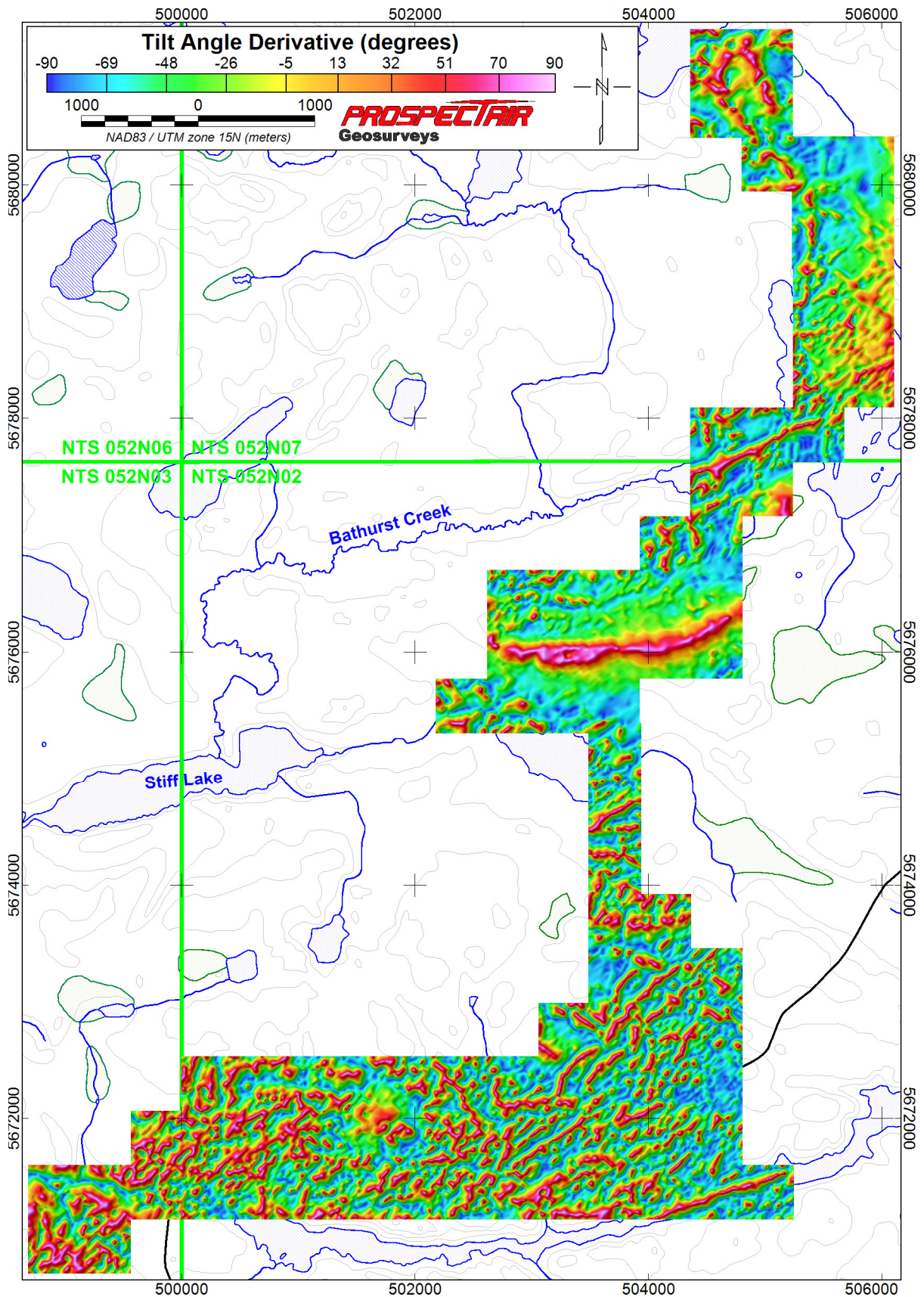


Figure 9: Tilt Angle Derivative



## VIII. FINAL PRODUCTS

### Digital Line Data

The Geosoft database is provided with the channels detailed in Table 3.

Table 3: **MAG line data channels**

No.	Name	Description	Units
1	UTM_X	UTM Easting, NAD-83, Zone 15N	m
2	UTM_Y	UTM Northing, NAD-83, Zone 15N	m
3	Lat_deg	Latitude in decimal degrees	Deg
4	Long_deg	Longitude in decimal degrees	Deg
5	Gtm_sec	Second since midnight GMT	Sec
6	Radar	Ground clearance given by the radar altimeter	m
7	Terrain	Calculated Digital Elevation Model (w.r.t. MSL)	m
8	GPS_Z	Helicopter altitude (w.r.t. MSL)	m
9	Mag_Raw	Raw magnetic data	nT
10	Mag_Lag	Lagged magnetic data	nT
11	Gnd_mag	Base station magnetic data	nT
12	Mag_Cor	Magnetic data corrected for diurnal variation	nT
13	TMI	Fully levelled Total Magnetic Intensity	nT
14	TMIres	Residual TMI (IGRF removed)	nT

### Maps

All maps are referred to NAD-83 datum in the UTM projection Zone 15 North, with coordinates in metres. Maps are at a 1:15,000 scale and are provided in PDF, PNG and Geosoft MAP formats for the products detailed in Table 4.

Table 4: **Maps delivered**

No.	Name	Description
1	DEM+FlightPath+Claims	Digital Elevation Model with flight path and property claims
2	TMI	Residual Total Magnetic Intensity
3	FVD	First Vertical Derivative of the TMI
4	TILT	Tilt Angle Derivative

## Grids

All grids are referred to NAD-83 in the UTM projection Zone 15 North, with coordinates in metres. Grids are provided in Geosoft GRD format, with a 10 m grid cell size, as well as in the Geotiff format for the products listed in Table 5.

Table 5: **Grids delivered**

No.	Name	Description	Units
1	DEM	CDED Digital Elevation Model	m
2	Terrain	Calculated Digital Elevation Model	m
3	TMI	Total Magnetic Intensity	nT
4	FVD	First Vertical Derivative of TMI	nT/m
5	SVD	Second Vertical Derivative of TMI	nT/m <sup>2</sup>
6	TMIres	Residual TMI (IGRF removed)	nT
7	TILT	Tilt Angle Derivative	Degree

## Project Report

The report is submitted in PDF format.

Respectfully submitted,




Joël Dubé, P.Eng.  
September 9<sup>th</sup> 2021

## IX. STATEMENT OF QUALIFICATIONS

Joël Dubé  
7977 Décarie Drive  
Ottawa, ON, Canada, K1C 3K3

Telephone: 819.598.8486  
E-mail: jdube@ddgeoscience.ca

I, Joël Dubé, P.Eng., do hereby certify that:

1. I am a Professional Engineer specialized in geophysics, President of Dynamic Discovery Geoscience Ltd., registered in Canada.
2. I earned a Bachelor of Engineering in Geological Engineering in 1999 from the École Polytechnique de Montréal.
3. I am an Engineer registered with the Ordre des Ingénieurs du Québec, No. 122937, and a Professional Engineer with Professional Engineers Ontario, No. 100194954 (CofA No. 100219617), with the Association of Professional Engineers and Geoscientists of New Brunswick, No. L5202 (CofA No. F1853), with the Association of Professional Engineers of Nova Scotia, No. 11915 (CofC No. 51099), with Engineers Geoscientists Manitoba, No. 43414. (CofA No. 6897), with Professional Engineers & Geoscientists Newfoundland & Labrador, No. 10012 (PtoP No. N1134) and with the Northwest Territories Association of Professional Engineers & Geoscientists, No. L4447 (PtoP No. P1414).
4. I have practised my profession for 22 years in exploration geophysics.
5. I have not received and do not expect to receive a direct or indirect interest in the properties covered by this report.

Dated this 9<sup>th</sup> day of September, 2021

Joël Dubé, P.Eng. #100194954

## X. Appendix A – Survey block outline

### Upper Red Lake Block

Easting	Northing
499566	5670673
498688	5670675
498687	5671605
499561	5671605
499561	5672068
499997	5672069
499998	5672532
503054	5672533
503054	5672996
503490	5672997
503488	5675308
502179	5675308
502179	5675776
502615	5675776
502615	5676703
503924	5676704
503924	5677167
504360	5677168
504359	5678094
505231	5678095
505229	5679943
504793	5679943
504793	5680406
504357	5680406
504356	5681338
505233	5681339
505234	5680412
506106	5680413
506109	5678091
505673	5678090
505673	5677627
505237	5677627
505237	5677164
504801	5677163
504803	5675773
503930	5675772
503931	5673924
504367	5673924
504368	5673461
504804	5673461
504806	5671608
505243	5671608
505244	5671139
499566	5671137

**XI. Appendix B – Property claims numbers covered by the survey**

Tenure number	Holder
614981	(100) ABITIBI ROYALTIES INC.
614982	(100) ABITIBI ROYALTIES INC.
614983	(100) ABITIBI ROYALTIES INC.
614984	(100) ABITIBI ROYALTIES INC.
615153	(100) ABITIBI ROYALTIES INC.
615154	(100) ABITIBI ROYALTIES INC.
615156	(100) ABITIBI ROYALTIES INC.
620012	(100) ABITIBI ROYALTIES INC.
620013	(100) ABITIBI ROYALTIES INC.
620014	(100) ABITIBI ROYALTIES INC.
620015	(100) ABITIBI ROYALTIES INC.
620016	(100) ABITIBI ROYALTIES INC.





Overburden Drilling Management Limited  
Unit 107, 15 Capella Court  
Nepean, Ontario, Canada, K2E 7X1  
Tel: (613) 226-1771 Fax: (613) 226-8753  
odm@storm.ca www.odm.ca

## Laboratory Data Report

### Client Information

Waldo Science Inc.  
7587 L & A Road  
Vernon, BC  
V1B 3S5

[ray@waldosciences.com](mailto:ray@waldosciences.com)

Attention: Raymond Wladichuk

### Data-File Information

Date: January 25, 2022  
Project name:  
  
ODM batch number: 2478  
Sample numbers: E456001 to E456019  
Data file: 20222478 - Waldo Science - Wladichuk - (Gold Only) January 2022

Number of samples in this report: 19  
Number of samples processed to date: 19  
Total number of samples in project: 19

Preliminary data:   
Final data:   
Revised data:

**Samples Processed For:** Gold Only

### Processing Specifications:

1. Submitted by client: Till and sand + gravel samples prescreened in the field to -10 mm.
2. One  $\pm 300$  g archival split taken from each sample.
3. All samples panned for gold, PGMs and fine-grained metallic indicator minerals.

### Notes

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Mike Crawford  
Laboratory Manager

**Primary Sample Processing Weights and Descriptions**

Client: Waldo Science Inc.

File Name: 20222478 - Waldo Science - Wladichuk - (Gold Only) January 2022

Total Number of Samples in this Report: 19

ODM Batch Number(s): 2478

Sample Number	Weight (kg wet)					Screening and Shaking Table Sample Descriptions													Class
						Clasts (+2.0 mm)					Matrix (-2.0 mm)								
	Bulk Rec'd	Archived Split	Table Split	+2.0 mm Clasts	Table Feed	Size	Percentage				Distribution				Colour				
							V/S	GR	LS	OT*	S/U	SD	ST	CY	ORG	SD	CY		
E456001	15.4	0.3	15.1	2.2	12.9	G	100	TR	0	0	S	MC	-	N	N	OC	NA	SAND + GRAVEL	
E456002	17.5	0.3	17.2	2.2	15.0	P	100	TR	0	TR	U	+	Y	-	N	OC	OC	TILL	
E456003	16.1	0.3	15.8	1.4	14.4	G	100	0	0	TR	S	MC	-	N	N	OC	NA	SAND + GRAVEL	
E456004	16.5	0.3	16.2	5.0	11.2	G	100	0	0	TR	S	MC	-	N	N	OC	NA	SAND + GRAVEL	
E456005	13.7	0.3	13.4	0.3	13.1	G	100	TR	0	0	S	FM	-	N	N	OC	NA	SAND	
E456006	16.5	0.3	16.2	0.5	15.7	G	100	0	0	0	S	FM	-	N	N	OC	NA	SAND	
E456007	11.8	0.3	11.5	1.5	10.0	G	100	TR	0	TR	U	+	Y	-	N	OC	OC	TILL	
E456008	12.5	0.3	12.2	1.7	10.5	G	100	TR	0	TR	U	+	Y	-	N	OC	OC	TILL	
E456009	15.4	0.3	15.1	1.9	13.2	P	100	TR	0	TR	U	+	Y	-	N	DOC	DOC	TILL	
E456010	13.4	0.3	13.1	0.2	12.9	G	100	TR	0	TR	S	F	+	+	N	BE	BE	SILT + CLAY	
E456011	11.6	0.3	11.3	2.0	9.3	G	100	0	0	TR	U	+	Y	-	N	DOC	DOC	TILL	
E456012	12.5	0.3	12.2	0.4	11.8	G	90	10	0	TR	S	FM	Y	N	N	DOC	NA	SAND	
E456013	11.6	0.3	11.3	0.4	10.9	P	80	20	0	TR	S	F	+	-	N	DOC	DOC	SAND + SILT	
E456014	11.0	0.3	10.7	1.0	9.7	G	90	10	0	0	U	+	Y	-	N	OC	OC	TILL	
E456015	14.9	0.3	14.6	1.7	12.9	C	80	20	0	TR	U	Y	Y	Y	N	GG	GG	TILL	
E456016	14.5	0.3	14.2	0.0	14.2		No Clasts				S	F	-	N	N	GB	NA	SAND	
E456017	13.7	0.3	13.4	0.7	12.7	G	70	30	0	TR	S	FM	-	N	N	OC	NA	SAND	
E456018	13.9	0.3	13.6	1.6	12.0	G	90	10	0	0	S	MC	-	N	N	OC	NA	SAND + GRAVEL	
E456019	13.0	0.3	12.7	1.6	11.1	G	80	20	0	TR	U	+	Y	-	N	OC	OC	TILL	

\*Clasts listed as OT are Quartz.

### Gold Grain Summary

Client: Waldo Science Inc.

File Name: 20222478 - Waldo Science - Wladichuk - (Gold Only) January 2022

Total Number of Samples in this Report: 19

ODM Batch Number(s): 2478

Sample Number	Number of Visible Gold Grains				Nonmag HMC Weight (g)*	Calculated PPB Visible Gold in HMC			
	Total	Reshaped	Modified	Pristine		Total	Reshaped	Modified	Pristine
E456001	27	10	1	16	51.6	7834	7787	<1	47
E456002	90	40	19	31	60.0	358	323	18	17
E456003	41	18	5	18	57.6	835	790	27	18
E456004	23	11	5	7	44.8	415	402	9	4
E456005	52	26	8	18	52.4	118	81	29	8
E456006	53	29	7	17	62.8	1010	968	12	29
E456007	26	13	7	6	40.0	73	62	9	2
E456008	34	17	9	8	42.0	121	96	12	13
E456009	28	20	2	6	52.8	179	172	3	4
E456010	5	1	1	3	51.6	7	4	<1	3
E456011	19	7	5	7	37.2	215	159	31	25
E456012	32	15	8	9	47.2	228	190	24	13
E456013	0	0	0	0	43.6	0	0	0	0
E456014	20	10	4	6	38.8	52	24	26	2
E456015	8	6	2	0	51.6	17	13	4	0
E456016	3	3	0	0	56.8	13	13	0	0
E456017	34	22	9	3	50.8	155	121	33	2
E456018	17	4	5	8	48.0	36	7	21	9
E456019	52	45	3	4	44.4	1076	1043	31	3

\* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 0.4% of the table feed.

## Detailed Gold Grain Data

Client: Waldo Science Inc.

File Name: 20222478 - Waldo Science - Wladichuk - (Gold Only) January 2022

Total Number of Samples in this Report: 19

ODM Batch Number(s): 2478

Sample Number	Dimensions (µm)			Number of Visible Gold Grains				Nonmag HMC Weight* (g)	Calculated V.G. Assay in HMC (ppb)	Metallic Minerals in Pan Concentrate
	Thickness	Width	Length	Reshaped	Modified	Pristine	Total			
E456001	3	C	15	15			4	4	<1	Tr (~10 grains) pyrite(25-50 µm).
	5	C	25	25	2	1	4	7	3	
	8	C	25	50	1		3	4	6	
	10	C	25	75			1	1	3	
	13	C	25	100			1	1	5	
	13	C	50	75			2	2	14	
	18	C	50	125	1			1	16	
	15	C	75	75	1			1	12	
	18	C	75	100			1	1	19	
	27	C	125	150	1			1	74	
	48	C	225	300	1			1	473	
	56	C	225	400	1			1	731	
	56	C	275	350	1			1	781	
	98	C	400	1000	1			1	5698	
							27	51.6	7835	
E456002	3	C	15	15	11		16	27	2	No sulphides.
	5	C	25	25	6	10	11	27	11	
	8	C	25	50	10	7	2	19	23	
	10	C	25	75		1	1	2	5	
	10	C	50	50	3	1		4	13	
	13	C	50	75	5		1	6	36	
	18	C	75	100	1			1	17	
	25	C	75	175	1			1	41	
	20	C	100	100	1			1	25	
	25	C	100	150	1			1	46	
	36	C	125	250	1			1	140	
								90	60.0	
E456003	3	C	15	15	2		5	7	1	No sulphides.
	5	C	25	25	4	3	7	14	6	
	8	C	25	50			3	3	4	
	10	C	25	75			2	2	5	
	10	C	50	50	3			3	10	
	13	C	50	75	1	1	1	3	19	
	18	C	50	125	1			1	14	
	20	C	50	150		1		1	20	
	20	C	100	100	1			1	26	
	27	C	125	150	2			2	132	
	29	C	125	175	1			1	83	
	31	C	125	200	1			1	102	
	38	C	150	250	1			1	186	
40	C	175	250	1			1	228		
							41	57.6	835	
E456004	3	C	15	15			2	2	<1	No sulphides.
	5	C	25	25	3	2	4	9	5	
	8	C	25	50	2	2	1	5	8	
	10	C	25	75	1			1	3	
	10	C	50	50		1		1	4	
	13	C	50	75	1			1	8	
	20	C	75	125	2			2	63	
	25	C	100	150	1			1	62	
50	M	125	250	1			1	262		
							23	44.8	415	

\* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 0.4% of the table feed.

## Detailed Gold Grain Data

Client: Waldo Science Inc.

File Name: 20222478 - Waldo Science - Wladichuk - (Gold Only) January 2022

Total Number of Samples in this Report: 19

ODM Batch Number(s): 2478

Sample Number	Dimensions (µm)			Number of Visible Gold Grains				Nonmag HMC Weight* (g)	Calculated V.G. Assay in HMC (ppb)	Metallic Minerals in Pan Concentrate
	Thickness	Width	Length	Reshaped	Modified	Pristine	Total			
E456005	3	C	15	15	3	1	7	11	1	No sulphides.
	5	C	25	25	9	2	9	20	9	
	8	C	25	50	2	2	2	6	8	
	10	C	25	75	1	1		2	6	
	10	C	50	50	5	1		6	22	
	13	C	50	75	5			5	34	
	18	C	75	100	1	1		2	38	
							52	52.4	118	
E456006	3	C	15	15	2		6	8	1	No sulphides.
	5	C	25	25	9	2	5	16	6	
	8	C	25	50	4	3	2	9	10	
	10	C	25	75		1	1	2	5	
	10	C	50	50	1		1	2	6	
	13	C	50	75	8	1		9	51	
	15	C	50	100			1	1	9	
	15	C	75	75	1		1	2	20	
	18	C	75	100	2			2	32	
	22	C	75	150	1			1	30	
	75	M	250	375	1			1	840	
							53	62.8	1010	
E456007	3	C	15	15	1	1	3	5	1	No sulphides.
	5	C	25	25	5	4	3	12	7	
	8	C	25	50	3	1		4	7	
	10	C	25	75	1			1	4	
	10	C	50	50		1		1	5	
	13	C	50	75	1			1	9	
	15	C	75	75	1			1	16	
	18	C	75	100	1			1	25	
							26	40.0	73	
E456008	3	C	15	15	2	2	3	7	1	No sulphides.
	5	C	25	25	7	4	2	13	8	
	8	C	25	50	2	1		3	5	
	10	C	25	75	1	1	2	4	14	
	10	C	50	50		1	1	2	9	
	13	C	50	75	3			3	26	
	18	C	75	100	1			1	24	
20	C	100	100	1			1	36		
							34	42.0	121	
E456009	3	C	15	15	5		4	9	1	No sulphides.
	5	C	25	25	6	1	1	8	4	
	8	C	25	50	3			3	4	
	10	C	25	75		1	1	2	5	
	10	C	50	50	5			5	18	
	34	C	175	175	1			1	147	
							28	52.8	179	
E456010	3	C	15	15			1	1	<1	No sulphides.
	5	C	25	25		1		1	<1	
	8	C	25	50			2	2	3	
	10	C	50	50	1			1	4	
							5	51.6	7	

\* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 0.4% of the table feed.

## Detailed Gold Grain Data

Client: Waldo Science Inc.

File Name: 20222478 - Waldo Science - Wladichuk - (Gold Only) January 2022

Total Number of Samples in this Report: 19

ODM Batch Number(s): 2478

Sample Number	Dimensions (µm)			Number of Visible Gold Grains				Nonmag HMC Weight* (g)	Calculated V.G. Assay in HMC (ppb)	Metallic Minerals in Pan Concentrate
	Thickness	Width	Length	Reshaped	Modified	Pristine	Total			
E456011	3	C	15	15	1		2	3	<1	No sulphides.
	5	C	25	25	1	1	3	5	3	
	8	C	25	50	2	1		3	6	
	10	C	50	50			1	1	5	
	13	C	50	75	1	3		4	39	
	15	C	75	75			1	1	17	
	18	C	75	100	1			1	27	
	29	C	100	200	1			1	118	
							19	37.2	215	
E456012	3	C	15	15	3		5	8	1	Tr (~50 grains) pyrite (25-50 µm).
	5	C	25	25	2	3	2	7	4	
	8	C	25	50	1	2		3	5	
	10	C	50	50	2	1	1	4	16	
	13	C	50	75	6	2	1	9	68	
	34	C	100	250	1			1	134	
							32	47.2	228	
E456013	No Visible Gold									No sulphides.
E456014	3	C	15	15	2		3	5	1	No sulphides.
	5	C	25	25	5	1	3	9	6	
	8	C	25	50	2	1		3	6	
	13	C	50	75		1		1	9	
	15	C	50	100		1		1	15	
	15	C	75	75	1			1	17	
							20	38.8	52	
E456015	5	C	25	25	4	1		5	2	No sulphides.
	10	C	50	50	1	1		2	7	
	13	C	50	75	1			1	7	
							8	51.6	17	
E456016	5	C	25	25	1			1	<1	No sulphides.
	10	C	25	75	1			1	3	
	15	C	50	100	1			1	10	
							3	56.8	13	
E456017	3	C	15	15	2		1	3	<1	No sulphides.
	5	C	25	25	6	4	1	11	5	
	8	C	25	50	2	3	1	6	9	
	10	C	50	50	7			7	26	
	13	C	50	75	1	1		2	14	
	15	C	50	100	1			1	11	
	15	C	75	75	1			1	13	
	18	C	75	100		1		1	19	
	20	C	75	125	1			1	28	
	20	C	100	100	1			1	30	
							34	50.8	155	
E456018	3	C	15	15			2	2	<1	No sulphides.
	5	C	25	25	2	1	2	5	3	
	8	C	25	50	1	2	3	6	9	
	10	C	25	75			1	1	3	
	10	C	50	50	1	1		2	8	
	15	C	75	75		1		1	13	
							17	48.0	36	

\* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 0.4% of the table feed.

**Detailed Gold Grain Data**

Client: Waldo Science Inc.

File Name: 20222478 - Waldo Science - Wladichuk - (Gold Only) January 2022

Total Number of Samples in this Report: 19

ODM Batch Number(s): 2478

Sample Number	Dimensions (µm)			Number of Visible Gold Grains				Nonmag HMC Weight* (g)	Calculated V.G. Assay in HMC (ppb)	Metallic Minerals in Pan Concentrate
	Thickness	Width	Length	Reshaped	Modified	Pristine	Total			
E456019	3	C	15	15	1		1	2	<1	No sulphides.
	5	C	25	25	4	1	2	7	4	
	8	C	25	50			1	1	2	
	10	C	50	50	3			3	13	
	13	C	50	75	7	1		8	65	
	15	C	50	100	1			1	13	
	18	C	50	125	3			3	56	
	15	C	75	75	10			10	144	
	18	C	75	100	2	1		3	67	
	20	C	75	125	6			6	190	
	22	C	75	150	2			2	85	
	27	C	75	200	1			1	68	
	22	C	100	125	1			1	47	
	25	C	100	150	2			2	125	
	29	C	100	200	2			2	198	
								52	44.4	

\* Calculated PPB Au based on assumed nonmagnetic HMC weight equivalent to 0.4% of the table feed.

Sample Number	Easting UTM	Northing UTM	Elevation	Depth	Colour	Sorting	Particle Size	Weight (kg)	Notes
E456001	504595.286	5676555.22	410.644531	0.65-0.85m	Medium brown	rounded to angular poorly sorted	medium to coarse sand with cobbles and pebbles	15.4	
E456002	504695.031	5675960.01	423.652344	0.4-0.6m	Light-medium brown	rounded poorly sorted	Silty till with cobbles	17.5	Directly on bedrock
E456003	504230.206	5676292.565	429.070312	0.75-1.0m	Medium brown	rounded to angular poorly sorted	Silty till with pebbles	16.1	
E456004	504244.604	5676104.183	404.224243	0.8-0.9m	Medium brown	medium to well sorted	Silty till with cobbles and pebbles	16.5	
E456005	504353.185	5675912.887	407.816559	0.95-1.1m	Light-medium brown	medium to well sorted	Silty sand, some angular to rounded gravel, trace cobbles	13.7	Next to granitic Boulder >1m diam.
E456006	504405.944	5676425.934	419.675842	0.75-1.0m	light brown to grey	medium to well sorted	Silty sand, some angular to rounded gravel, trace cobbles	16.5	
E456007	504238.838	5673704.422	404.149597	0.5-0.6m	Dark brown	rounded to angular poorly sorted	Silty sand, angular-subrounded gravel, cobbles, boulders around.	11.8	
E456008	503927.017	5673560.047	422.480469	0.75-1.0m	Medium brown	medium to well sorted	Silty till with cobbles and pebbles	12.5	
E456009	504376.617	5672912.177	419.097351	0.50-0.55m	Dark brown	rounded to angular poorly sorted	Silt till, some sand, contains pebbles and cobbles.	15.4	Directly on bedrock
E456010	504538.452	5672698.691	419.909119	0.3-0.45m	Medium brown	rounded to angular poorly sorted	Silt-clay till. Cobbles in matrix.	13.4	
E456011	504611.46	5672462.33	430.92868	0.65-0.75m	Brown	rounded to angular poorly sorted	Silty sand, some gravel	11.6	
E456012	503695.433	5673717.35	419.591888	0.6-0.75m	Red-brown	rounded poorly sorted	Sand till, some silt, some gravel, trace pebbles.	12.5	Potentially directly on top of bedrock.
E456013	503766.09	5673939.594	407.517975	0.3-0.55m	Grey-black	rounded to angular poorly sorted	Sandy, grey-black. Abundant large angular cobbles.	11.6	Side of slope, directly on bedrock.
E456014	503733.776	5674099.488	406.248993	0.3-0.45m	Light brown-red	rounded to angular poorly sorted	Sand some silt, some cobbles.	11	Directly on bedrock.
E456015	503733.89	5674329.352	407.751221	0.45-0.8m	Grey	medium to well sorted	Clay till, abundant boulders.	14.9	Not sieved due to clayeyness and saturation
E456016	503442.421	5676157.851	423.863281	0.45-0.8m	Light brown	angular poorly sorted	Fine sand some silt, contains angular cobbles of various lithologies, trace angular gravel.	14.5	
E456017	503499.76	5675816.261	428.008148	0.45-0.6m	Light brown	angular poorly sorted	Sand till, some silt, a couple angular cobbles, trace-some angular gravel.	13.7	Adjacent to multiple erratics.
E456018	503877.159	5676039.724	437.562805	0.45-0.8m	Brown	rounded to angular poorly sorted	Sand some silt, some angular-subrounded gravel, a couple cobbles	13.9	
E456019	503872.867	5676175.514	438.019989	0.45-0.65m	Brown	rounded to angular poorly sorted	Gravelly sand, trace to some silt, abundant cobbles, various lithologies	13	



Sample_Num	Easting_UTM	Northing_UTM	Elevation	Description	Ag_ppm	As_ppm	Au_ppm
E456051	504709	5675927	399	Moss covered outcrop >50m in size of dark grey to black weakly foliated mafic metavolcanics with discordant 2-5cm milky white to clear quartz veins hosting 2-5mm pods of chlorite, epidote, and mafics with minor sulphides including 1% pyrite and trace ars	0.12	8.9	<0.005
E456052	504701	5675939	399	Moss covered outcrop >50m in size of dark grey to black weakly foliated mafic metavolcanics. The outcrop illustrates multiple ~1-2m zones of quartz carbonate stringers following the weak foliation with a second set of chaotic quartz carbonate veinlets cr	0.1	0.9	<0.005
E456053	498857	5671325	411	~100m wide and ~5m high hill covered in till and disturbed soil with zones of whale-backed megacrystic to very coarse tonalite to granodiorite with late pegmatite dikes that are often bordered by alteration zones consisting of quartz, alkali feldspar and	0.03	0.5	<0.005
E456054	504247	5673577	408	20m long bench of moss-covered outcrop that is dark grey to black, mafic metavolcanics with moderate gneissic banding. The outcrop contains minor quartz carbonate stringers and sparce 2-5cm quartz veins.	0.03	2	<0.005
E456055	504237	5673692	403	~30m bench of dark grey to black, mafic metavolcanics massive to pillowed, variably altered, and foliated mafic flows with zones of intense shearing, and local boudinaging.	0.02	3.4	<0.005
E456062	503577	5673774	423	Elongate moss covered bench ~20m of dark grey to black moderate to strongly foliated mafic metavolcanics. Minor quartz carbonate stringers following the foliation with a second set of chaotic quartz carbonate veinlets crosscutting and offsetting the stri	0.02	5.2	<0.005
E456063	503730	5673763	425	Elongate moss covered bench ~15m of dark grey to black moderatley foliated mafic metavolcanics with discordant 2-5cm milky white to clear quartz veins hosting 2-5mm pods of chlorite, epidote, and mafics with minor sulphides including 1% pyrite and trace	0.05	3	<0.005

Oct 25th, 2021: Mobilized to Winnipeg.

Oct 26th, 2021: Bought supplies and drove to the Woman River Camp and Outposts.

Oct 27th, 2021: Drove all available logging roads to establish assess to both Perrigo and Upper Red Lake. Became familiar with the area and unpacked exploration gear.

Oct 28th, 2021: Hiked the decommissioned forest service road into the priority 1 mag anomaly and prospected for available outcrop. Light rain on and off all day.

Oct 29th, 2021: Started till grid over the priority 1 mag anomaly. 5 till samples taken and 2 rocks. Heavy rain.

Oct 30th, 2021: Hiked into priority 1 mag anomaly to retrieve samples and take 1 infill till sample. Checked out mag anomaly at the south of the property. Hiked into priority 2 mag anomaly and took 2 till and two rock samples. Light rain all day.

Oct 31st, 2021: Went to the Perrigo property and prospected the contact between the metavolcanics and metasediments. Took 5 rock grab samples from outcrop of observed mineralization. Light rain and snow.

Nov 1st, 2021: Went to Ear Falls for supplies in the Morning. Went to Upper Red Lake and took three till samples in the afternoon. Snow has been on and off all day 1 cm on ground.

Nov 2nd, 2021: Hiked in from the west logging road to hit the extension of the golden sidewalk greenstone belt, took 4 till and two rock samples.

Nov 3rd, 2021: Hiked to the North Priority 1 target and took 4 till samples. Hiked the priority 3 mag highs that were interpreted as potential kimberlites.

Nov 4th, 2021: Headed to the Perrigo property and prospected the contact between the metavolcanics and metasediments. Received a flat tire which ended the day short.

Nov 5th, 2021: Demobilized from property.

Nov 6th, 2021: Flew out of Winnipeg.



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**CERTIFICATE VA21306129**

Project: Red Lake

This report is for 13 samples of Rock submitted to our lab in Vancouver, BC, Canada on 9-NOV-2021.

The following have access to data associated with this certificate:

MATT KRUKOWSKI	RAYMOND WLADICHUK	
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SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
DISP-01	Disposal of all sample fractions
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-21	Sample logging - ClientBarCode
DRY-22	Drying - Maximum Temp 60C
CRU-32	Fine Crushing 90% <2mm
SPL-21	Split sample - riffle splitter
PUL-32	Pulverize 1000g to 85% < 75 um
BAG-01	Bulk Master for Storage

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
ME-MS61	48 element four acid ICP-MS	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

**Signature:**   
 Saa Traxler, General Manager, North Vancouver



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Project: Red Lake

**CERTIFICATE OF ANALYSIS VA21306129**

Sample Description	Method Analyte Units LOD	WEI-21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
		Recvd Wt. kg	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cs ppm	Cu ppm	Fe %
		0.02	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
E456051		2.18	0.12	5.56	8.9	30	0.13	0.18	3.98	0.10	7.99	40.8	146	0.31	142.5	6.97
E456052		2.52	0.10	7.30	0.9	30	0.20	0.04	6.14	0.13	6.79	49.1	143	0.26	174.5	9.42
E456053		3.54	0.03	5.95	0.5	370	1.07	0.02	1.31	0.02	17.80	2.5	21	0.80	13.7	1.49
E456054		3.36	0.03	7.93	2.0	190	1.75	0.20	5.06	0.11	47.8	13.2	75	3.87	22.6	4.45
E456055		3.04	0.02	5.87	3.4	30	0.90	1.19	12.85	0.11	1.82	12.4	653	0.12	4.8	9.04
E456056		2.98	0.42	7.28	0.9	110	1.80	1.32	7.91	0.26	30.0	54.4	11	28.7	226	12.55
E456057		1.62	0.07	5.06	0.6	20	1.66	1.34	8.90	0.22	14.00	17.0	11	1.56	52.9	6.44
E456058		2.58	1.28	7.59	1.3	530	1.60	1.44	5.05	0.09	16.80	0.8	30	1.07	66.6	8.60
E456059		2.60	0.63	6.74	0.6	150	1.03	0.74	5.10	0.17	23.4	9.0	35	5.82	51.7	7.90
E456060		2.52	0.29	6.73	0.6	210	0.83	0.51	6.98	0.23	26.6	33.5	6	1.70	252	18.20
E456061		1.62	0.02	0.67	0.6	20	0.73	0.53	0.24	<0.02	0.69	0.4	20	0.61	4.6	0.65
E456062		1.78	0.02	6.85	5.2	100	0.27	0.09	9.67	0.16	8.59	49.4	341	0.35	36.2	8.52
E456063		2.96	0.05	8.36	3.0	100	0.30	0.05	8.20	0.18	9.03	49.7	164	0.53	82.1	8.79

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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Project: Red Lake

**CERTIFICATE OF ANALYSIS VA21306129**

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb
		ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
		0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10	0.5
E456051		13.25	0.13	0.4	0.072	0.10	2.7	29.1	2.55	1125	0.37	0.49	2.1	85.5	260	3.2
E456052		15.20	0.11	0.4	0.064	0.14	2.3	39.9	4.27	1540	0.17	1.35	2.3	97.5	320	1.5
E456053		14.65	0.10	3.0	0.012	2.13	8.3	21.0	0.33	376	0.11	2.61	6.9	5.0	230	7.7
E456054		19.75	0.17	3.4	0.059	1.16	17.2	16.0	1.11	1355	0.81	2.99	18.9	20.1	1790	5.8
E456055		12.55	0.11	0.2	0.056	0.03	1.0	5.3	4.19	2480	1.52	0.07	0.8	101.5	90	2.2
E456056		24.8	0.14	2.8	0.125	0.54	14.0	59.3	2.98	1740	5.84	1.32	6.0	22.0	610	8.1
E456057		17.50	0.07	1.3	0.059	0.05	6.0	8.6	1.35	1055	0.46	0.33	2.9	7.5	290	7.7
E456058		18.40	0.08	2.8	0.108	0.51	9.0	3.1	0.73	1915	1.63	2.48	6.7	0.8	430	18.5
E456059		20.9	0.11	2.2	0.098	0.60	10.8	17.0	1.95	2070	1.17	2.06	5.0	12.9	560	10.2
E456060		24.5	0.13	2.2	0.103	0.79	14.1	10.8	1.57	3470	0.39	0.98	5.2	14.9	620	12.5
E456061		1.42	0.05	<0.1	<0.005	0.10	<0.5	1.3	0.03	75	2.50	0.19	0.2	1.0	190	1.3
E456062		14.30	0.10	0.6	0.058	0.34	3.9	11.6	4.93	2240	0.60	0.79	2.1	156.0	260	3.0
E456063		16.35	0.08	0.7	0.078	0.51	3.5	23.2	3.03	2020	0.22	1.86	2.4	116.5	350	1.4



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**CERTIFICATE OF ANALYSIS VA21306129**

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	
		Rb ppm	Re ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm
		0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02	0.1	1
E456051		4.5	<0.002	0.02	0.36	36.9	<1	0.6	110.0	0.13	<0.05	0.22	0.509	0.02	0.1	249
E456052		3.9	<0.002	0.04	0.23	39.8	<1	0.5	109.5	0.14	<0.05	0.20	0.570	0.02	0.1	307
E456053		68.8	<0.002	0.12	0.06	3.6	<1	1.0	125.0	0.88	<0.05	5.83	0.101	0.33	1.9	19
E456054		42.2	<0.002	0.01	0.20	14.2	<1	2.7	148.5	2.02	<0.05	3.05	0.553	0.31	1.5	103
E456055		1.2	<0.002	0.62	0.19	35.2	1	6.1	54.4	<0.05	<0.05	0.08	0.103	<0.02	0.1	194
E456056		30.1	0.008	1.75	0.36	41.5	2	3.1	302	0.37	0.21	2.72	0.835	0.32	0.7	335
E456057		1.7	<0.002	0.17	1.10	19.1	<1	7.8	346	0.18	<0.05	1.38	0.400	0.02	0.4	184
E456058		14.8	<0.002	0.48	1.92	22.4	3	2.0	316	0.43	0.82	3.37	0.627	0.18	1.0	180
E456059		19.9	<0.002	0.28	0.24	29.8	1	1.8	428	0.33	0.45	3.01	0.640	0.18	0.8	246
E456060		16.2	0.002	1.43	0.60	33.4	2	1.8	131.0	0.34	0.19	2.85	0.745	0.27	0.8	310
E456061		3.0	<0.002	0.01	0.09	0.2	<1	0.5	51.2	<0.05	0.13	0.06	0.007	<0.02	<0.1	3
E456062		11.8	<0.002	<0.01	0.28	43.9	<1	0.6	118.0	0.13	<0.05	0.26	0.462	0.07	0.1	274
E456063		27.5	<0.002	0.02	0.36	47.8	<1	0.6	112.5	0.15	<0.05	0.33	0.572	0.15	0.1	334



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 Plus Appendix Pages  
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 Account: WALSCI

Project: Red Lake

**CERTIFICATE OF ANALYSIS VA21306129**

Sample Description	Method Analyte Units LOD	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Au-AA23
		W ppm 0.1	Y ppm 0.1	Zn ppm 2	Zr ppm 0.5	Au ppm 0.005
E456051		0.7	19.5	88	9.0	<0.005
E456052		1.0	21.3	106	8.6	<0.005
E456053		0.1	14.9	30	95.0	<0.005
E456054		0.6	33.3	97	133.5	<0.005
E456055		0.3	11.5	61	8.2	<0.005
E456056		1.4	29.5	123	104.0	<0.005
E456057		22.4	12.8	58	46.6	<0.005
E456058		0.7	10.1	65	107.5	<0.005
E456059		0.7	15.2	87	81.2	<0.005
E456060		1.6	25.3	244	71.9	<0.005
E456061		1.6	0.9	3	1.4	<0.005
E456062		0.6	18.5	86	11.7	<0.005
E456063		0.4	24.1	121	14.9	<0.005



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**CERTIFICATE OF ANALYSIS VA21306129**

CERTIFICATE COMMENTS													
	<p style="text-align: center;"><b>ANALYTICAL COMMENTS</b></p> <p>Applies to Method: REEs may not be totally soluble in this method. ME-MS61</p>												
	<p style="text-align: center;"><b>LABORATORY ADDRESSES</b></p> <p>Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.</p> <table><tbody><tr><td>Au-AA23</td><td>BAG-01</td><td>CRU-32</td><td>CRU-QC</td></tr><tr><td>DISP-01</td><td>DRY-22</td><td>LOG-21</td><td>ME-MS61</td></tr><tr><td>PUL-32</td><td>PUL-QC</td><td>SPL-21</td><td>WEI-21</td></tr></tbody></table>	Au-AA23	BAG-01	CRU-32	CRU-QC	DISP-01	DRY-22	LOG-21	ME-MS61	PUL-32	PUL-QC	SPL-21	WEI-21
Au-AA23	BAG-01	CRU-32	CRU-QC										
DISP-01	DRY-22	LOG-21	ME-MS61										
PUL-32	PUL-QC	SPL-21	WEI-21										



# UPPER RED LAKE – BREAKDOWN

TENURE_NUM	I-Km	Till Samples	Grab Samples	TOTAL SAMPLES	Airborne Costs per Claim	Geochemical ASSAY	Grab Sample ASSAY	ACCOMMODATION	SAMPLING WORK	MOB/DEMOB	RENTAL	SUPPLIES	SHIPPING OF SAMPLES	ASSESSMENT REPORT	SUB-TOTAL	ROUNDED
614981	80.13867682			0	\$9,776.58	0	0	0	0	0	0	0	0	375	\$10,151.58	\$10,152
614982	79.83744006	10	2	12	\$9,739.83	1875.873684	174.4015385	553.8461538	6000	3230.769231	590.4692308	1111.352308	30.95846154	375	\$23,682.50	\$23,683
614983	111.306252	5	4	9	\$13,578.89	937.9368421	348.8030769	415.3846154	4500	2423.076923	442.8519231	833.5142308	61.91692308	375	\$23,917.38	\$23,917
614984	57.68467639			0	\$7,037.29	0	0	0	0	0	0	0	0	375	\$7,412.29	\$7,412
615153	13.48731407	3		3	\$1,645.40	562.7621053	0	138.4615385	1500	807.6923077	147.6173077	277.8380769	0	375	\$5,454.77	\$5,455
615154	18.06880314		1	1	\$2,204.32	0	87.20076923	46.15384615	500	269.2307692	49.20576923	92.61269231	15.47923077	375	\$3,639.20	\$3,639
615156	8.924226988	1		1	\$1,088.72	187.5873684	0	46.15384615	500	269.2307692	49.20576923	92.61269231	0	375	\$2,608.51	\$2,609
620012	4.333257614			0	\$528.64	0	0	0	0	0	0	0	0	375	\$903.64	\$904
620013	4.406867577			0	\$537.62	0	0	0	0	0	0	0	0	375	\$912.62	\$913
620014	4.604303349			0	\$561.71	0	0	0	0	0	0	0	0	375	\$936.71	\$937
620015	4.328606323			0	\$528.07	0	0	0	0	0	0	0	0	375	\$903.07	\$903
620016	4.31120237			0	\$525.95	0	0	0	0	0	0	0	0	375	\$900.95	\$901
<b>391.4316267</b>		<b>19</b>	<b>7</b>	<b>26</b>	<b>\$47,753</b>	<b>\$3,564</b>	<b>\$610</b>	<b>\$1,200</b>	<b>\$13,000</b>	<b>\$7,000</b>	<b>\$1,279</b>	<b>\$2,408</b>	<b>\$108</b>	<b>\$4,500</b>	<b>81423.2</b>	<b>\$81,425</b>