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Assessment Report
On the
Pakwash Lake Property
Red Lake Mining Division
Northwestern Ontario,
Canada

NTS 052K11, 12 & 13

Prepared for

Silver Dollar Resources Inc.
179 - 2945 Jacklin Road, Suite 416
Victoria, BC, V9B 6J9

Prepared by:

Brent Clark, P.Geo

Clark Exploration and Consulting
941 Cobalt Crescent
Thunder Bay, ON

14 April 19, 2022

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1.0 SUMMARY

Prospectair Geosurveys conducted a heliborne high-resolution magnetic (MAG) survey for the mineral exploration company Silver Dollar Resources Inc. on its Pakwash Lake Property located in the Ear Falls Area, Red Lake Mining Division, Province of Ontario. The survey was flown from February 24th to 27th 2022.

The Pakwash Lake Project is comprised of 18 multicell claims containing 208 cells (4252 ha) located within the Red Lake Mining District. The property is approximately 16 km west of the town of Ear Falls and 400 km northwest from Thunder Bay within NTS sheet location NTS 052K11, 12 & 13. The centre of the property is located approximately at 463063 5618560 UTM NAD83 Zone 15N.

The property straddles the boundary of the Uchi subprovince of the North Caribou terrane in the north and the English River subprovince in the south. These two subprovinces are separated by the Pakwash Lake Fault Zone, a probable splay of the east-west-trending, brittle-ductile Sydney Lake Fault Zone. The property is intersected by both the Pakwash Lake Fault Zone and Sydney Lake Fault Zone and part of the northwest-southeast-trending Keelson Fault. The majority of the property is underlain by the psammitic to pelitic metasedimentary rocks of the English River subprovince. The northern part of the property, where the field work presented in this report was performed, is underlain by mafic volcanic rocks and clastic sedimentary rocks, including units of conglomerate. These rock units have been intruded by granite, granodiorite and diorite intrusions, including the Pakwash Lake Pluton and the Bruce Lake Pluton. A possible satellite from a granitic body outside of the property intrudes along the Pakwash Lake Fault in the northeast portion of property. The property is being explored for the potential to host Archean lode gold mineralization and its potential to host Volcanogenic Massive Sulphide (VMS) base metal deposits. The geological setting of intermediate to felsic intrusions within volcanic and marine sedimentary rocks has proven to be conducive to Archean lode gold deposition in various locations across the Superior Province, including the world class Hemlo deposit (Render et al., 2010a). The major fault system of the area (including Pakwash Lake Fault, Sydney Lake Fault and Keelson Fault) may also act a conduit and host for gold deposition.

All rock grab samples from the field work program presented in this report returned Au assay results below the lab detection limit (<5 ppb). Grab sample 934312 returned anomalous assay results of 451 ppm Cr, 167 ppm Cu, and 447 ppm Ni. Of the soil geochemical samples, 4 samples returned assay results of >10 ppb Au, with the highest result of 31 ppb (sample 934019).

To better understand property geology and potential mineralization, detailed mapping, prospecting and sampling program along the Pakwash Lake shore intersecting the southwest portion of the Pakwash Lake Property is recommended. The presence of anomalous gold in soil samples of this program may warrant an extension of the soil sampling grid and further prospecting in the area. Because the property is largely lake-covered, ground-based exploration is limited.

The Stud Anomaly (Figure 3), as detected by Laurentian Goldfields in 2010 (Render, 2010a) falls partially on the property and could be potential target for a future large-scale lake sediment sampling program of Pakwash Lake.

2.0 INTRODUCTION

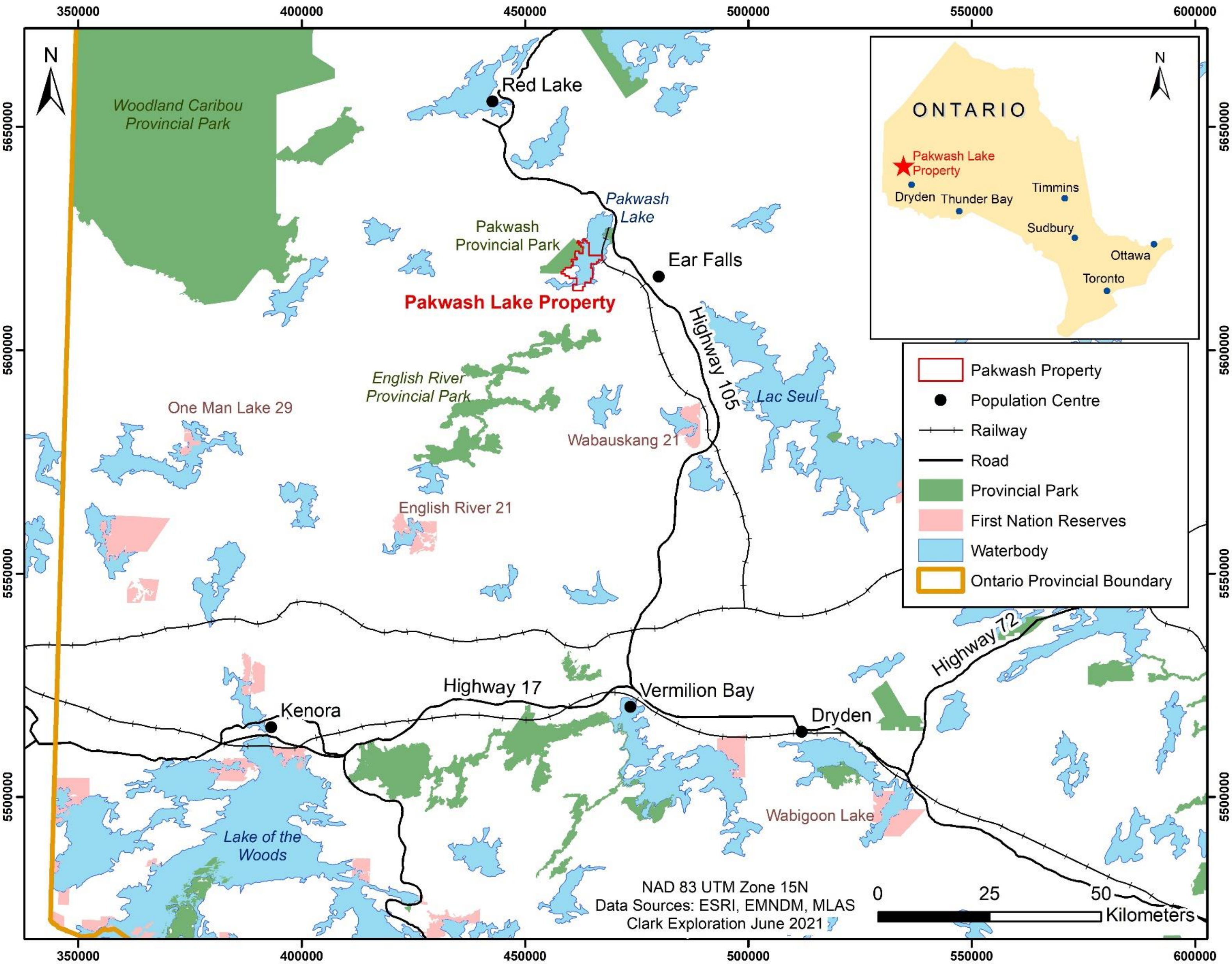
Prospectair Geosurveys conducted a heliborne high-resolution magnetic (MAG) survey for the mineral exploration company Silver Dollar Resources Inc. on its Pakwash Lake Property located in the Ear Falls Area, Red Lake Mining Division, Province of Ontario. The survey was flown from February 24th to 27th 2022

The Property lies in the Red Lake Mining Division of Northwestern Ontario (Figure 1). The Report is based on published literature and Ministry of Energy Northern Development and Mines (MENDM) assessment files and work carried out by Clark Exploration and Consulting.

The property straddles the boundary of the Uchi subprovince of the North Caribou terrane in the north and the English River subprovince in the south. These two subprovinces are separated by the Pakwash Lake Fault Zone, a probable splay of the east-west-trending, brittle-ductile Sydney Lake Fault Zone. The property is intersected by both the Pakwash Lake Fault Zone and Sydney Lake Fault Zone and part of the northwest-southeast-trending Keelson Fault. The majority of the property is underlain by the psammitic to pelitic metasedimentary rocks of the English River subprovince. The northern part of the property hosts mafic volcanic rocks and clastic sedimentary rocks, including units of conglomerate. These rock units have been intruded by granite, granodiorite and diorite intrusions, including the Pakwash Lake Pluton and the Bruce Lake Pluton. A possible satellite from a granitic body outside of the property intrudes along the Pakwash Lake Fault in the northeast portion of property. The property is being explored for the potential to host Archean lode gold mineralization. The geological setting of intermediate to felsic intrusions within volcanic and marine sedimentary rocks has proven to be conducive to Archean lode gold deposition in various locations across the Superior Province, including the world class Hemlo deposit (Render et al., 2010a). The major fault system of the area (including Pakwash Lake Fault, Sydney Lake Fault and Keelson Fault) may also act a conduit and host for gold deposition.

The Property is located approximately 400 km northwest of the City of Thunder Bay and 17 km west of Ear Falls in Northwestern Ontario. Silver Dollar Resources Inc. has the right to acquire a 100 % interest in the Property encompassing 18 mining cells subject to the terms of the Option Agreement.

Figure 1: Location of the Pakwash Lake Property



3.0 PROPERTY DESCRIPTION AND LOCATION

The Property is located approximately 400 km northwest of the City of Thunder Bay and 17 km west of the town Ear Falls (Figure 1) in the Cabin Bay Area, Dixie Lake Area, Camping Lake Area townships within the Red Lake Mining Division (NTS 052K11, 12 & 13). The centre of the Property is located approximately at 463063 5618560 UTM NAD83 Zone 15N.

The Property is comprised of 18 single-cell and multi-cell claims (208 cells) totalling 4252 hectares. The claims are shown in Figure 2 and are listed in Table 1. The total work requirements for all claims totals $83,200 annually. 13 of the claims are held 100% by EMX Royalties Canada.

On April 10, 2018, Ontario converted their manual system of ground and paper staking and maintaining unpatented mining claims to an online system. All active, unpatented claims were converted from their legally defined location by claim posts on the ground or by township survey to a cell-based provincial grid. Mining claims are now legally defined by their cell position on the grid and coordinate location in the Mining Land Administration System (“MLAS”) map viewer.

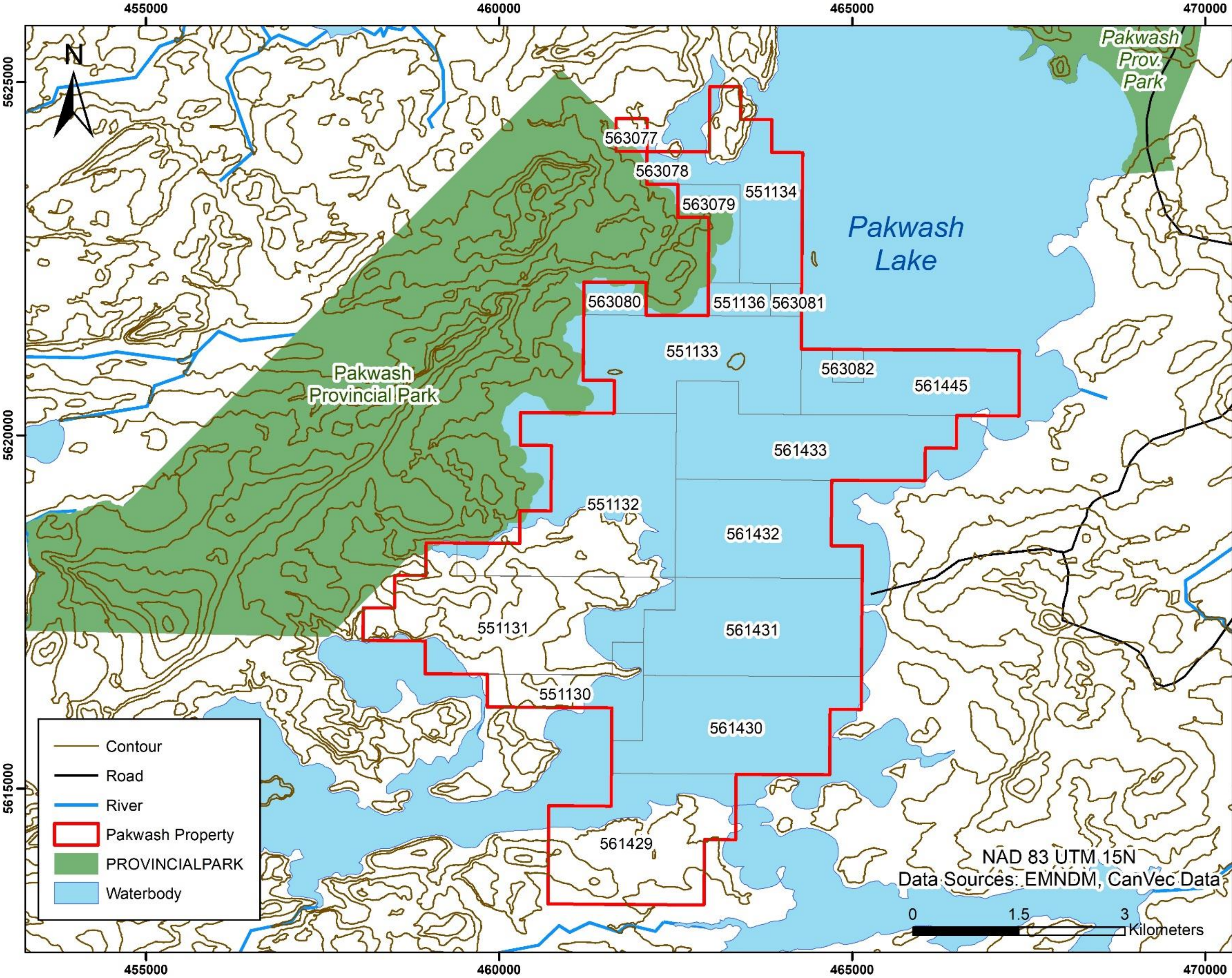
The proposed exploration program in this report is subject to the guidelines, policies and legislation of the Ontario Ministry of Energy, Northern Development and Mines (“MENDM”), the Ontario Ministry of Natural Resources and Forestry and the Federal Department of Fisheries and Oceans regarding surface exploration, stream crossings, and work being carried out near rivers and bodies of water.

It should be noted that the western boundary of the claim block abuts Pakwash Provincial Park and this area may require additional considerations during exploration planning.

Table 1: Pakwash Lake Claims

Claim	Type	Anniversary	Holder	Township	# of Cells	Work Required
551130	Multi-cell Mining Claim	2022-06-08	(100) EMX Properties (Canada) Inc.	Cabin Bay Area	7	$2,800
551131	Multi-cell Mining Claim	2022-06-08	(100) EMX Properties (Canada) Inc.	Cabin Bay Area	25	$10,000
551132	Multi-cell Mining Claim	2022-06-08	(100) EMX Properties (Canada) Inc.	Cabin Bay Area	25	$10,000
551133	Multi-cell Mining Claim	2022-06-08	(100) EMX Properties (Canada) Inc.	Cabin Bay Area	18	$7,200
551134	Multi-cell Mining Claim	2022-06-08	(100) EMX Properties (Canada) Inc.	Dixie Lake Area	13	$5,200
551136	Multi-cell Mining Claim	2022-06-08	(100) EMX Properties (Canada) Inc.	Dixie Lake Area	2	$800
561429	Multi-cell Mining Claim	2022-10-08	(100) EMX Properties (Canada) Inc.	Cabin Bay Area	20	$8,000
561430	Multi-cell Mining Claim	2022-10-08	(100) EMX Properties (Canada) Inc.	Camping Lake Area	20	$8,000
561431	Multi-cell Mining Claim	2022-10-08	(100) EMX Properties (Canada) Inc.	Camping Lake Area	20	$8,000
561432	Multi-cell Mining Claim	2022-10-08	(100) EMX Properties (Canada) Inc.	Camping Lake Area	16	$6,400
561433	Multi-cell Mining Claim	2022-10-08	(100) EMX Properties (Canada) Inc.	Camping Lake Area	19	$7,600
561445	Multi-cell Mining Claim	2022-10-09	(100) EMX Properties (Canada) Inc.	Camping Lake Area	13	$5,200
563077	Single Cell Mining Claim	2022-10-31	(100) EMX Properties (Canada) Inc.	Dixie Lake Area	1	$400
563078	Single Cell Mining Claim	2022-10-31	(100) EMX Properties (Canada) Inc.	Dixie Lake Area	1	$400
563079	Multi-cell Mining Claim	2022-10-31	(100) EMX Properties (Canada) Inc.	Dixie Lake Area	4	$1,600
563080	Multi-cell Mining Claim	2022-10-31	(100) EMX Properties (Canada) Inc.	Dixie Lake Area	2	$800
563081	Single Cell Mining Claim	2022-10-31	(100) EMX Properties (Canada) Inc.	Dixie Lake Area	1	$400
563082	Single Cell Mining Claim	2022-10-31	(100) EMX Properties (Canada) Inc.	Camping Lake Area	1	$400

Figure 2: Pakwash Lake Property



4.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Property is located approximately 400 km northwest of the City of Thunder Bay and 17 km west of the town Ear Falls (Figure 1) in Cabin Bay Area, Dixie Lake Area, Camping Lake Area townships within the Red Lake Mining Division (NTS 052K11, 12 & 13). The town of Red Lake is located 40 km north-northwest from the property and the city of Winnipeg is located 275 km southwest from the property. The centre of the Property is located approximately at 463063 5618560 UTM NAD83 Zone 15.

Ear Falls is a village situated on Highway 105 (Red Lake Highway). The community hosts a population of 995 and provides access to basic amenities such as accommodations, fuel and food. The Red Lake Road railway station is located 90 km south of the property. Hydro Power lines stretch along Highway 105 and the closest source of natural gas is a pipeline extending 15 km to both the northwest and southeast directions from Ear Falls. Red Lake, also situated north along Highway 105, has a population of 4100 and provides access to basic amenities and airport services to and from northern communities and regional commercial flights. The currently producing Red Lake Mine is located within the Red Lake area and is 40 km north-northwest from the property.

The city of Winnipeg, Manitoba (population 750 000) provides access to rail, national highway, port and international airport services. Equipment and industry support relevant to the mining industry are available in Winnipeg. Similarly, the City of Thunder Bay has a population of 110,000 and provides support services, equipment and skilled labour for both the minerals exploration and mining industries. Rail, national highway, port and international airport services are also available out of Thunder Bay.

From Thunder Bay, the Property can be reached by travelling west on Trans Canada Highway 17 for 340 km to the town of Vermillion Bay and then turning north onto Highway 105 (Red Lake Highway), continuing for 100 km to Ear Falls. From Ear Falls, the property can be accessed by logging roads of off Highway 105 and by boat through Pakwash Lake. Boat launches are available to the public in Pakwash Lake. Highway 804, a major logging road, extends westwards from Highway 105 south of the property. Minor logging roads provide access to the property off of Highway 105, south of Ear Falls. Highway 105 is paralleled by an abandoned railway bed that can be used for transportation by all-terrain vehicle or snowmobile (Render et al., 2010a)

Heavily glaciated terrains common to the Canadian Sheild are found in the Pakwash Lake Property. The topography features rocky ridges and smooth undulating planes with elevations of 350 m above sea level (ASL) (within Pakwash Lake) to 430 m ASL. South-west trending eskers and east-west trending ridges are recognized on the property. Other high relief features include resistant granitic rock units. Valleys and low-lying features are filled by swamps and small lakes (Render et al., 2010a).

A large portion of the property is cover by Pakwash Lake. Pakwash Lake has a maximum depth of 18 m and is fed by the Chukuni River and Trout River, discharging into the English River.

Second growth forest coverage of the property is dominantly pine, spruce, and fir with lesser amounts of birch, poplar, and alder. Low-lying regions typically host spruce bogs and swamps (Render et al., 2010a).

In the Ear Falls area, the warm season lasts from May 19 to September 15, with an average daily high temperature above 17 °C. The cold season lasts from November 28 to February 27, with an average daily high temperature below -5 °C.

Average annual snowfall is 204 cm and snowfall typically lasts from the beginning of November nearly until the end of April. The average precipitation from May to October is 38 cm with approximately 7 cm of precipitation per month during July, August and September

5.0 PROPERTY HISTORY

There are no mineral resources, reserve estimates, or historical gold production for the Property. Relevant historical exploration work conducted on the Property is summarized below. The dominant source of this information were assessment reports filed with the MENDM. Early exploration in the area around the Dixie Lake prospect commenced in the 1940s but there is no record of work done directly on the property until 1978.

1978 – Cominco Ltd (AFRI 52K14SW0003): An airborne magnetic survey was flown in the Pakwash Lake Area totalling 253 line km. The results indicate that the magnetic field varies between a low of 60,450 gammas and a high of 61,075 gammas throughout this area. Several anomalous highs were also indicated in the area. Rock units typical of the area that correlate to the magnetic data results include acid volcanic rocks, granitic rocks, basic volcanic rocks, metasedimentary rocks, and massive sulphides formations. High magnetic responses may be indicative of iron formations in the northern part of the survey area.

1991 – Teck Exploration Ltd. (AFRI 52K13SE0011):
Electromagnetic/resistivity/magnetic surveys were completed in the Pakwash Lake Area with survey coverage totalling 1840 line km. Magnetic units show complex patterns of folding and faulting. Electromagnetic conductors suggest the presence of sulphide bedrock zones and possibly magnetite.

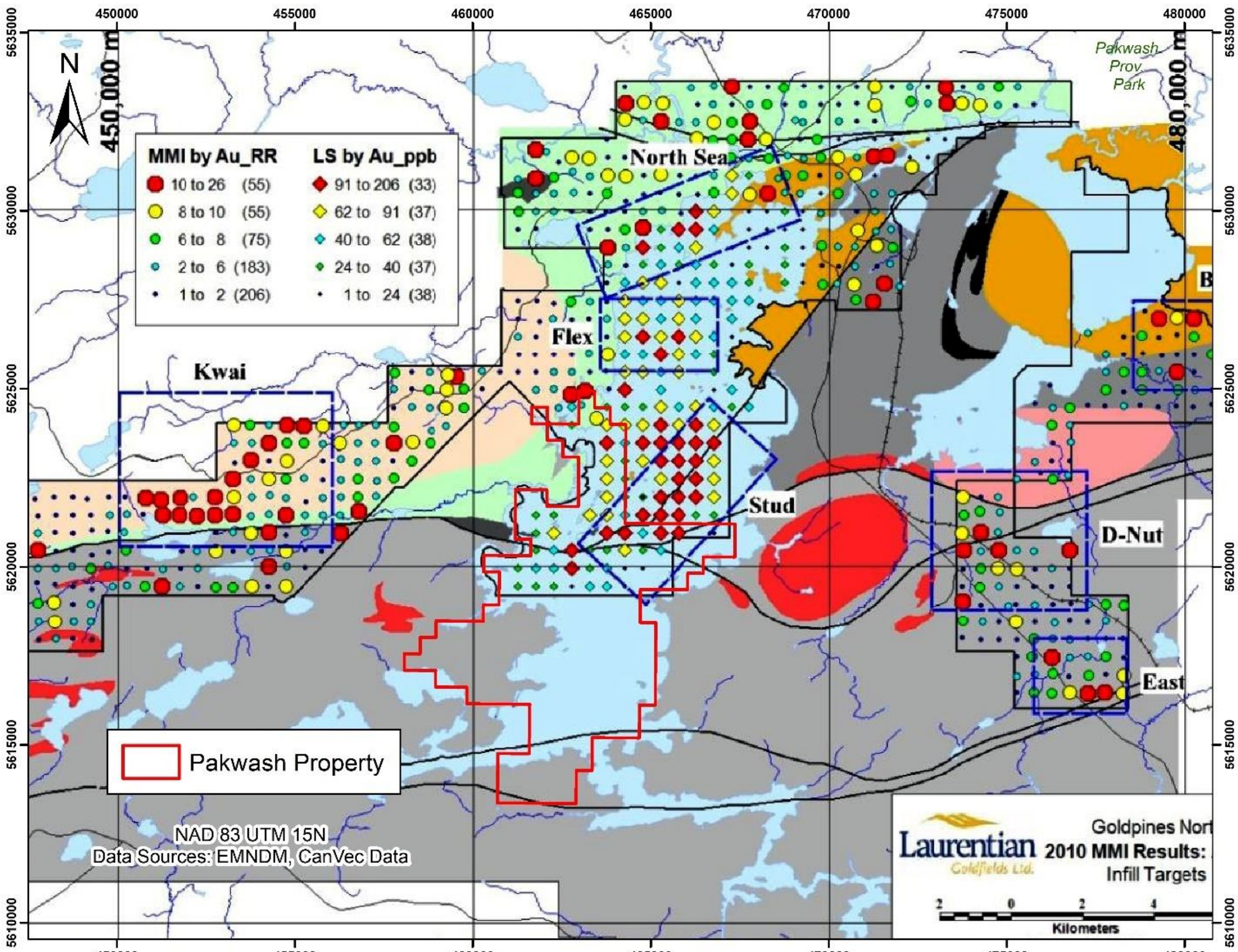
2010 – Laurentian Goldfields Ltd. (AFRI 20000006808, 20000006811):

The first phase of the Laurentian Goldfields field work program consisted of high resolution airborne magnetic and VLF-EM surveys These surveys were completed in March 2010 over the “Goldpines” property that intersects much of Pakwash Lake property. In order to target structures and lithological contacts interpreted from magnetic susceptibility mapping, the second phase of field work included comprehensive soil and lake sediment sampling as well as a mapping and prospecting program. During this program lasting from May to July 2010, 206 rock grab samples were collected sent for geochemical, spectral, and whole rock analyses.

Goldpines North Property: As part of the second phase of exploration, 575 MMI (mobile metal ion) soil and 184 lake sediment samples were collected at stations spaced 500 m x 500 m apart; the majority of which were taken from outside of the property. The Stud Anomaly, located in the southeast portion of the current property (Figure 3), was outlined through this work and returned lake sediment samples with up to 843 ppb. The Stud anomaly is coincident with a linear magnetic feature that is interpreted to be a second-order fault related to the crustal-scale Pakwash Lake-Sydney Lake Fault Zone. A third phase of field work targeted areas of anomalous gold concentrations identified by the previous programs and was conducted from mid-August to mid-October. During this phase, 1736 infill MMI and 1020 Lake sediment samples were collected with anomalous gold assay results were returned from samples outside of the property.

Goldpines South Property: During the second phase of exploration, 1067 MMI (mobile metal ion) soil and 156 lake sediment samples were collected at stations spaced 500 m x 500 m apart, the majority of which lie outside of the current property. Several areas of anomalous gold concentrations were identified, including the western portion of the property within faulted and deformed metasedimentary rocks. The Chukuni anomaly was identified from the lake sediment sampling within Pakwash Lake with sample assay results returning up to 1980 ppb Au. During the third phase of field work, 2135 infill MMI and 348 lake sediment samples were collected during this phase with sample stations spaced 100 m x 200 m apart. Anomalous gold assay results were returned from samples outside of the property.

Figure 3: Anomalous Zones as defined by Laurenian Goldfields Ltd. Adapted after Render et al., 2010a. Note Location of Stud Anomaly.



2011 – Laurentian Goldfields Ltd. (AFRI 20000007672, 20000007991): In early 2011, the Stud anomaly was targeted by nine (9) drill holes totalling 2362 m. Drill hole results confirmed the source of the magnetic anomaly can be attributed to a magnetite-bearing granite similar to those mapped elsewhere on the property. A total of 836 samples were assayed during the drilling program and returned gold values averaging slightly above detection limit with a maximum value of 40 ppb. To supplement the drill program data, two ground IP/resistivity surveys were completed. The survey targeted the drill holes that transect the Keelson Fault to detect possible gold-bearing sulphides within the fault zone. The thick overburden could not be fully penetrated; however, three (3) weak anomalies were identified, suggesting the presence of conductive body at Keelson Fault.

In summer 2011, 3 out of 43 rock samples were taken around the edges of the Pakwash Lake Property with no anomalous Au assays returned.

Other exploration during 2011 and 2012 was focused on targets outside of the current property.

In 2020 Clark Exploration and Consulting employees carried out soil geochemical sampling and rock sampling surveys on the Pakwash Lake Property. A total of 44 soil samples and 15 rock grab samples were collected from the northern portion of the property and sent for assay. The sampling programs were conducted on June 16, 17 and 19th of 2020 for a total of 3 days spent on the property. This field program was supported by boat and field crews were based out of Pakwash Lake Lodge, Ear Falls, ON. Sample 934312 returned anomalous Cr, Cu, and Ni. All grab samples returned Au values below detection limit.

Sample Number	Easting	Northing	Sample Description	Au (ppb)	Ag (ppm)	As (ppm)	Co (ppm)	Cr (ppm)	Cu (ppm)	Ni (ppm)	Pb (ppm)	Zn (ppm)
934312	463143	5624675	mafic volcanic very foliated, wall rock to quartz boudinage, a couple specks of sulphides.	< 5	0.3	< 2	62	451	167	447	19	75

6.0 GEOLOGICAL SETTING AND MINERALIZATION

Modified from Render et al., 2011.

6.1 Regional Geology

The Pakwash Lake Property is situated within the Superior Province, the largest Archean craton. The property straddles the faulted contact between the east-west trending, Mesoarchean North Caribou and Winnipeg River terranes to the north and south respectively (Figure 4). The property is underlain by rocks of to the Uchi subprovince of the North Caribou terrane to the north, and the English River subprovince to the south.

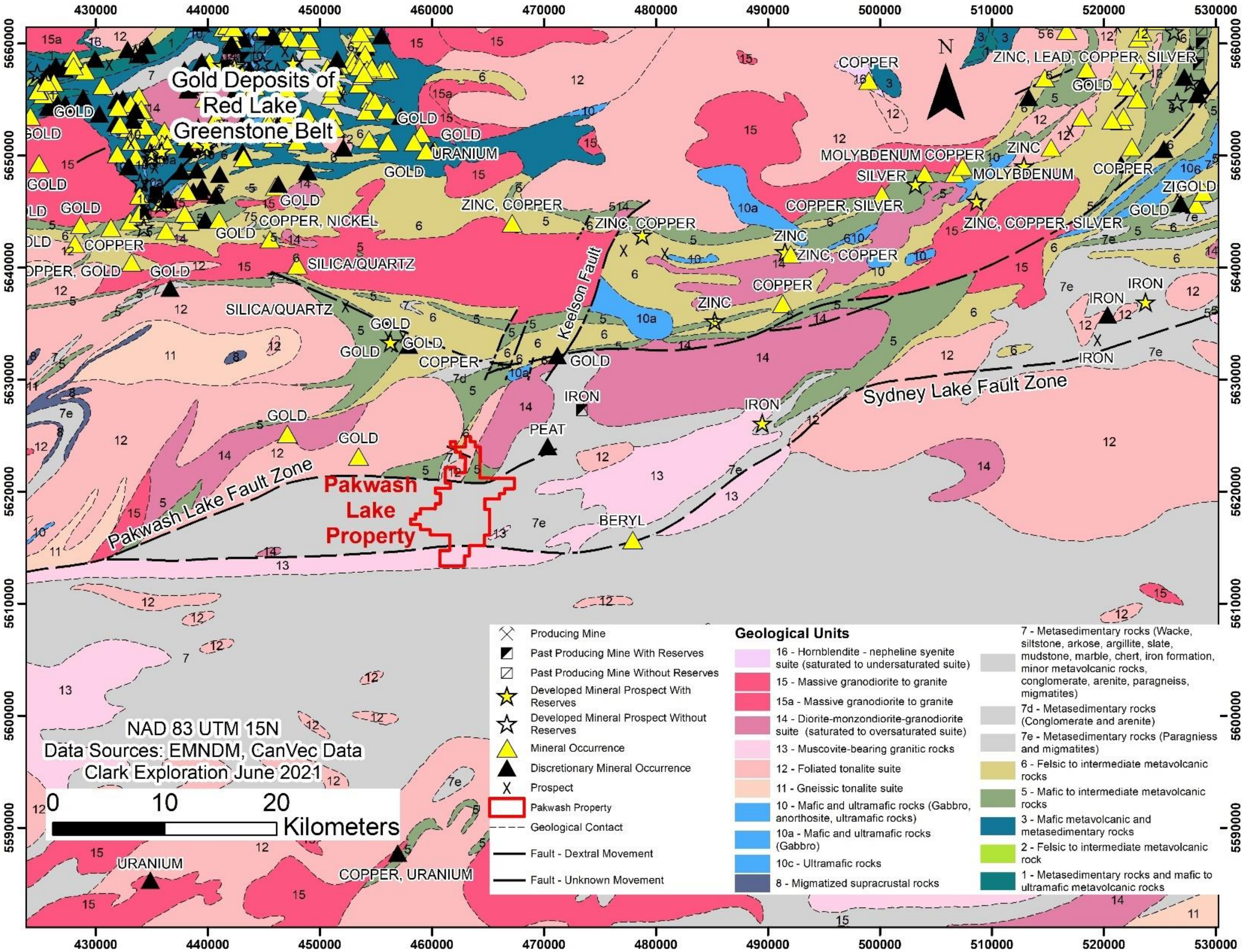
The North Caribou terrane is characterized by 3.0 Ga juvenile plutonic and minor volcanic rocks with overlying early rift-related juvenile arc sequences deposited around 2.98-2.85 Ga and 2.85-2.71 Ga (Thurston and Chivers, 1990). These rocks are preserved locally between widespread tonalitic, dioritic, granodioritic and granitic plutons that are attributed to a major period of continental arc magmatism during 2.75-2.70 Ga.

The Uchi subprovince greenstone belt hosts significant mineral deposits including the world-class Red Lake gold camp. The stratigraphy of the Uchi subprovince indicates that rifting began ca. 2.99 Ga, followed by intervals of juvenile and continental arc magmatism between 2.94 and 2.72 Ga (Percival, 2007). The youngest rocks in the belts are typically coarse clastic sediments that may correlate to facies of marine greywacke successions of the English River subprovince (Percival, 2007). Multiple regional deformation events have affected the greenstone belts in the Uchi subprovince, producing steep south-dipping composite fabrics. Gold mineralization is largely associated with D2 structures prior to 2.712 Ga and late-stage gold localization after 2.701 Ga (Percival, 2007).

The North Caribou terrane is separated from the southern Winnipeg River terrane by a narrow east-west trending belt of metasedimentary rocks known as the English River subprovince (Figure 4**Error! Reference source not found.**). The geology of the Pakwash Lake Property is dominated by these metasedimentary units deposited between 2.705 and 2.698 Ga. These units have been described as migmatite and diatexite since much of the belt has been subjected to middle amphibolite facies to low-pressure granulite facies metamorphism. Locally preserved sedimentary features suggest that the protolith of the English River schists and migmatites was immature, turbiditic greywackes of a forearc basin. Metamorphism of the sediments has been dated at 2.691 Ga, which was followed by intrusion of 2.65 Ga volatile-rich pegmatites (Percival, 2007). Structurally, the English River subprovince is characterized by a well-developed, east-west trending composite foliation fabric defined by migmatitic layering parallel to banding within metasedimentary units that has been subsequently folded by an F2 fold system (Hrabi and Cruden, 2001). Macroscale F1 folds are locally identified by their interference with this regional fold system.

The Sydney Lake Fault Zone separates the English River subprovince from the Uchi subprovince (Figure 4). This east-west-trending brittle-ductile fault zone is up to 3km wide and is interpreted to be subvertical to steeply south-dipping. The fault is estimated to have a dextral transcurrent displacement of about 30km and a south-side-up vertical displacement of about 2.5 km (Stone, 1981).

Figure 4: Regional Geology of the Pakwash Lake Property



6.2 Local Geology

Rock units of the Uchi subprovince in Pakwash Lake Property area include mafic to intermediate volcanic rocks, fine-grained, bedded volcaniclastic rocks and clastic sedimentary rocks. The sedimentary units are dominated by gritty fine-grained sandstones and greywacke. Successions of laminated argillite and interbedded argillite and greywacke are found to the northeast of the property. These successions host ironstone exploited by the past-producing Griffith Iron Mine. Minor conglomerate units have also been noted. Interbedded volcanic and sedimentary rocks are observed locally suggesting the syn-deposition of these two units. Volcanic rocks of the Uchi subprovince in the area are typically interbedded mafic to intermediate pyroclastic and volcaniclastic rocks (Render et al., 2010a). Pyroclastic rocks include lapilli, crystal, and ash tuff and mafic volcanic flows occur locally (Render et al., 2010a). The sedimentary and volcanic succession is typically strongly foliated and contains metamorphic mineral assemblages indicative of upper greenschist to lower amphibolite grade metamorphism.

These supracrustal rocks are intruded by two intermediate intrusions: a granodiorite of undetermined age in the north-west just outside of the property and late-tectonic diorite intrusions known as the Pakwash Lake Pluton and the Bruce Lake Pluton (Breaks, 1975) to the northeast of the property (Figure 5). The Pakwash Lake Pluton consists of medium-grained equigranular quartz diorite that is typically massive to weakly foliated. Outcrops of this unit on small islands in Pakwash Lake have a locally well-developed foliation moderately dipping toward the south. The sharp, intrusive contact between the diorite and the adjacent sedimentary rocks has been well-preserved and is exposed in multiple locations and often features sedimentary inclusions in the diorite and small cross-cutting diorite dykes in the sedimentary units. A smaller late-tectonic granite occurs along the Pakwash Lake Fault to the east of the property (Figure 5). The late tectonic granite has a massive, medium-grained texture and is rich in K-feldspar with significant disseminated magnetite. Magnetic susceptibility imagery reveals a distinct ellipsoid shape surrounded by several probably related smaller satellite stocks and dykes of granitic to granodioritic compositions.

Metasedimentary rocks of the English River subprovince make up the majority of the Pakwash Lake Property (Figure 5). This unit includes psammitic to pelitic rocks that are variably recrystallized, strongly foliated and banded, consisting dominantly of quartz and biotite with minor feldspar. A porphyroblastic garnet phase is indicative amphibolite facies metamorphism. Although sedimentary layering is not preserved, compositional banding defined by biotite content occurs at decimetre to meter-scales and may reflect a protolith consisting of interbedded mudstone and muddy sandstone. This is consistent with regional interpretations of the English River as a flyshoid greywacke succession. The metasediment is intruded by pegmatite dykes of tonalite with minor pegmatite dykes of granite. The dykes range from cm-wide stringers to small plutons several meters in diameter and are consistently parallel to the main foliation in the rock with varying degrees of transposition. Throughout most of the claim area pegmatite dykes are demonstrably infolded with deformed metasediment, forming tight, weakly asymmetrical fold wave trains. In high strain zones, dykes are commonly dismembered and boudinaged within the fabric of the surrounding metasediment. Thin intervals of amphibolite also occur within the metasediment, possibly representing strata of mafic volcaniclastic sediment. Amphibolitized mafic dykes are also noted throughout the English River subprovince and are highly transposed into the main foliation (Render et al., 2010a)

The English River and Uchi subprovinces in the area are separated by the Pakwash Lake Fault, a major east-west trending fault that is interpreted to splay from the Sydney Lake Fault zone (Figure 5Figure 4). The Pakwash Lake Fault is tightly constrained by mapping, but fault rocks are rarely exposed, suggesting that along much of its length it is a narrow zone of deformation. It is interpreted to be roughly parallel to the steeply south dipping foliation fabric expressed in sedimentary rocks adjacent to the fault zone. Outcrops within the deformation zone show a combination of brittle and ductile deformation features. The fault rocks typically show well-developed C-S fabrics, indicating apparent dextral shear sense. The ductile fabrics are locally overprinted by annealed, fabric-parallel brittle faults and thin horizons of fault breccia that similarly show right-lateral strike-slip movement. Second order structures in the fault zone include the northeast-trending Keelson Fault though Pakwash Lake as detected by magnetic surveys over the lake. Onshore, this fault is traced to deformation zone at the contact between a unit of greywacke and the Pakwash Lake Pluton. Northwest-southeast trending minor faults are noted in the area as detected by magnetic and electromagnetic surveys (Render et al., 2010a).

Complete replacement of euhedral metamorphic plagioclase crystals to white mica (illite and muscovite) with minor kaolinite has been observed on the southern end of Pakwash Lake. Weak chlorite and actinolite replacement has also been noted (Render et al., 2010a).

6.3 Property Geology

The majority of the Pakwash Lake Property is underlain by metasedimentary units of the English River subprovince with minor volcanic, plutonic and metasedimentary units of the Uchi subprovince in the northern portion of the property (Figure 5). Metasedimentary rocks of the English River subprovince are typically psammitic to pelitic with variable recrystallization, strong foliation, and banding. These units consist dominantly of quartz and biotite with minor feldspar and a porphyroblasts of garnet ranging from 1mm-3 cm in diameter. Compositional banding defined by biotite content occurs at decimetre to meter-scales and is interpreted to reflect a protolith consisting of interbedded mudstone and muddy sandstone.

Rock units of the Uchi subprovince in the northern part of the property include a thin unit of cobble conglomerate occurring along the trace of the Pakwash Fault (Figure 5). The conglomerate contains rounded clasts of diorite to granodiorite that are supported in a fine-grained, thinly bedded, black matrix. Minor units of sedimentary rock of the Uchi subprovince dominated by dark grey, brown weathered medium to fine-grained gritty sandstone intersect the property.

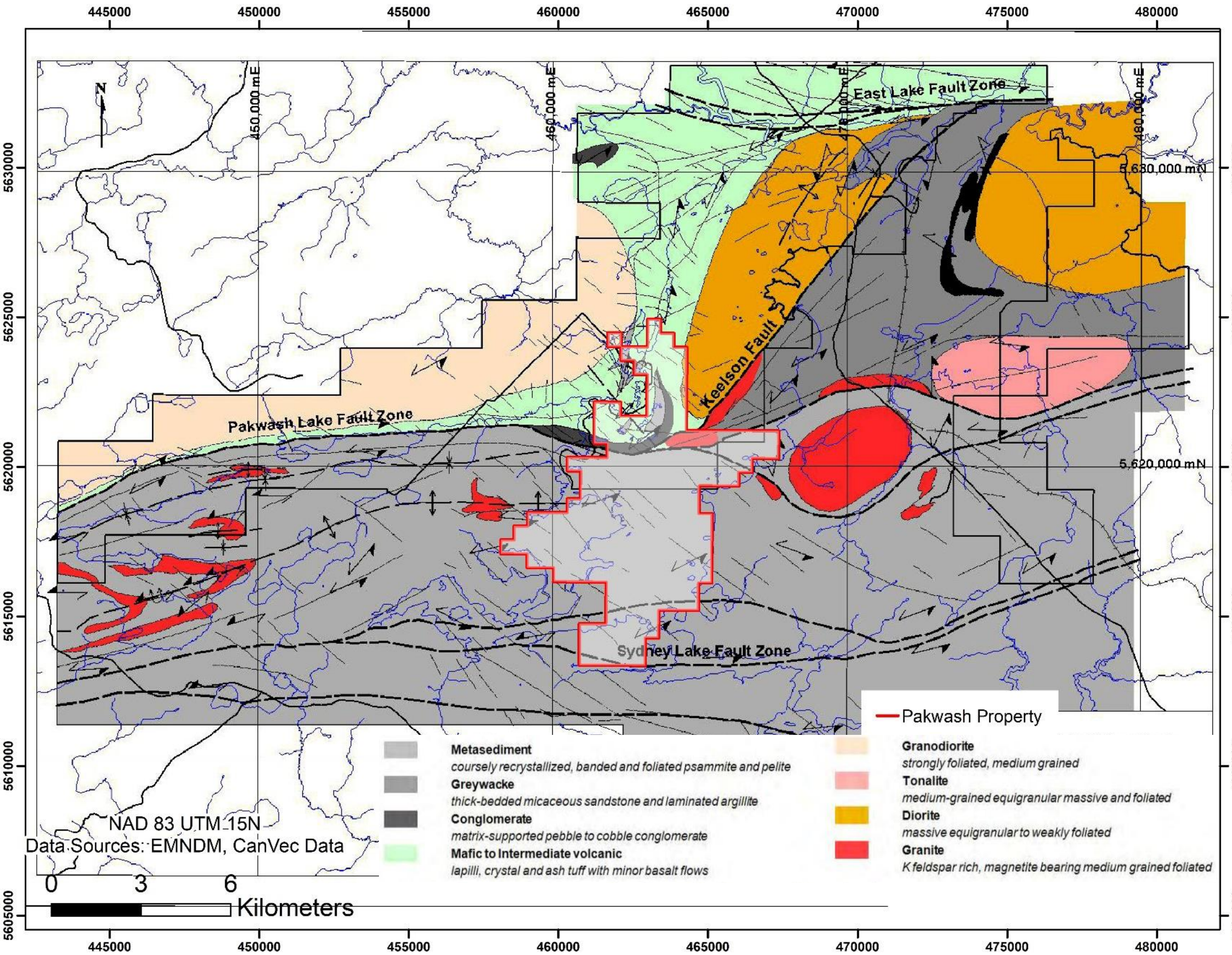
The northern tip of the property also contains mafic to intermediate pyroclastic and volcaniclastic rocks including lapilli, crystal and ash tuff. Lapilli are flattened parallel to the main foliation. Mafic ash tuff units feature finely disseminated pyrite and magnetite (Render et al., 2010a).

A ellipsoid granitic intrusion occurs to the east of the property and has a feldspar-rich composition with disseminated magnetite. A small satellite intrusion of this main granitic intrusion intersects the northeast corner of the property and is exposed along the disused railway track. This satellite has a more granodioritic composition and contains disseminated magnetite and so a genetic relation to the main pluton is not clear. Interpretation from magnetics surveys indicate that granitoid plutons intruded along the trace of the Pakwash fault and were subsequently deformed by transcurrent movement along the fault zone (Render et al., 2010a).

Fabrics within sedimentary successions of the Uchi Subprovince are defined by mineral alignment parallel to bedding suggesting a tight isoclinal F1 fold system. S2 cleavage axial planar to F1 folds is weakly developed and trends to the northeast. On the northwest part of the property, a large fold structure occurs near the Pakwash fault and mapping on the islands within Pakwash Lake indicates that the fold is an open, upright antiform that plunges moderately toward the southeast. The unusual shape of the structure is attributed to thickness variations in the folded sedimentary/volcanic succession which appears to contain a number of lensoid bodies. The folded strata consist of interbedded volcanic and sedimentary rocks, including conglomerate of the Uchi sedimentary succession. The relationship between this fold and the nearby Pakwash Lake Fault is undefined (Render et al., 2010a).

A pervasive fold system within the English River subprovince is defined by east-west trending, moderately inclined, north-verging fold wave trains. Toward the southwest, the main foliation becomes northeast-southwest trending following the broad arcuate shape of the structural panel situated between the Sydney Lake and Pakwash Lake faults (Render et al., 2010a).

Figure 5: Property Geology



6.4 Mineralization

The property has the potential to host Archean lode gold mineralization. The geological setting of intermediate to felsic Intrusions within volcanic and marine sedimentary rocks have proven to be conducive to Archean lode gold deposition in various locations across the Superior Province, including the world class Hemlo deposit (Render et al., 2010a). The major fault system of the area (including Pakwash Lake Fault, Sydney Lake Fault and Keelson Fault) may also act a conduit and host for gold deposition.

Significant mineralization has not been historically observed in the property area. Rock grab sampling, as presented in this report, indicates the presence of pyrite mineralization of up to 2% in mafic and felsic volcanic rock, 0.1% in felsic intrusive rock, and 2% within a grey-white quartz vein.

The most significant anomaly found on the property is the Stud Anomaly detected by lake sediment sampling in Pakwash Lake (Figure 3). This anomaly is northwest-southeast trending and lake sediment assays returned 215 samples assayed over 100 ppb Au and 34 assayed over 200 ppb. The highest assayed sampled returned 843 ppb Au. This anomaly extends to the east past the current property. The anomaly is thought to be a part of the damage zone around Pakwash Lake Fault.

Areas north of Pakwash Lake as investigated by Laurentian Goldfields Ltd., reveal mineralization in associated with quartz-tourmaline veining in mafic volcanic rocks (Render et al., 2010b). The veins are typically 2-5 cm wide and up to a meter long, oriented parallel to the east-trending foliation. Two samples from veins of Kwai Trenches to the west of the property (Figure 3) returned assays of 0.489 ppm and 0.328 ppm Au. Quartz veins are also noted in foliated granodiorite and sampled 0.662 ppm Au and 0.468 ppm Au. Another small quartz vein nearby these samples contained disseminated pyrite and returned 0.243 ppm Au (Render et al., 2010b)

7.0 EXPLORATION

Prospectair Geosurveys conducted a heliborne high-resolution magnetic (MAG) survey for the mineral exploration company Silver Dollar Resources Inc. on its Pakwash Lake Property located in the Ear Falls Area, Red Lake Mining Division, Province of Ontario. The survey was flown from February 24th to 27th 2022.

One survey block was flown for a total of 942 l-km. A total of 6 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 45 km to the northwest of the block

The Pakwash Lake block was flown with traverse lines at 50 m spacing and control lines spaced every 500 m. The survey lines were oriented N000 and control lines were flown perpendicular to traverse lines. The average height above ground of the helicopter was 37 m and the magnetic sensor was at 18 m. The average survey flying speed was 35.0 m/s. The survey area is mainly covered by the large Pakwash Lake, some forest and a few wetlands. The topography is mostly flat, with only a few low-level hills. The elevation is ranging from 346 to 384 m above mean sea level (MSL). From the ground, the block can be easily accessed via secondary forestry roads connecting to Road 804 to the south of the block and to Road 105, which links the town of Red Lake to Ear Falls, to the east and north of the block. Coordinates outlining the survey block are given in Appendix A, with respect to NAD-83 datum, UTM projection zone 15N.

8.0 INTERPRETATION AND CONCLUSIONS

The residual Total Magnetic Intensity (TMI) of the Pakwash Lake block, presented in Figure 6, is slightly active and varies over a range of 1,144 nT, with an average of -215 nT and a standard deviation of 143 nT.

The southern two-thirds of the block is characterized by very low amplitude magnetic signal variations, which indicates that it is likely dominated by sedimentary or felsic intrusive rocks. The strongest anomalies of the survey, which are not very strong in absolute terms, are found in the remaining northern part of the block. They could be related to intermediate/mafic intrusions, to layers of mafic volcanic rocks or to meta-sedimentary horizons enriched in magnetic minerals.

In the southern two-thirds of the block, magnetic lineaments are predominantly trending E-W, but can vary significantly locally, as they are often depicting a complex fabric of textures resembling riedel shearing structures. The northern part of the block is even more variable in lineaments' orientations. While lineaments are mostly striking N-S near the northern edge of the block, they appear heavily folded and are rapidly changing directions to dominant E-W trends as they are progressing towards the south, where they seem to stumble over a general E-W fault structure possibly located at the south end of this area with stronger magnetic background values. All of these curved magnetic lineaments, either by folding or at the contact zone with possible intrusions, are attesting that the area underwent strong deformation events in the past, and that shearing may have affected some of these lineaments. Pressure shadow areas at the contact zone with the possible intrusion to the north may also have developed. These kinds of features could be of interest for exploration. 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 Pakwash 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.

9.0 RECOMMENDATIONS

To better understand property geology and potential mineralization, detailed mapping, prospecting, and sampling program along the Pakwash Lake shore intersecting the southwest portion of the Pakwash Lake Property is recommended. The presence of anomalous gold in soil samples of this program may warrant an extension of the soil sampling grid and further prospecting in the area. Because the property is largely lake-covered, ground-based exploration is limited.

Lake sediment sampling in 2010 by Laurentian Goldfields indicated the presence of the Stud Anomaly (Figure 3) that falls partially northeast part of the property and extends to the east of the property (Render, 2010a). This could be a potential target for a future large-scale lake sediment sampling program of Pakwash Lake.

10.0 REFERENCES

Breaks, F.W., Bond, W.D., McWilliams, G.H., Gower, C.F., and Stone, D. 1975: Operation Kenora- Sydney Lake, Eagle-Sydney Lakes Sheet, District of Kenora, Ontario Division of Mines, Preliminary Map P.1026 Geology Series. Scale 1: 63 360.

Chiang, M. and Rennie, C. 2013: Goldpines North Property Summer 2011 Exploration Report Ear Falls Area, Ontario, Canada. Report . 20000007991 Laurentian Goldfields Ltd.

Hrabi, B., and Cruden, A. R. 2001: Three-dimensional geometry of the English River subprovince in the Separation Lake-Longlegged Lake area; in Harrap, R.M., and H. Helmstaedt, H., eds., Western Superior Transect Seventh Annual Workshop: Lithopropbe Report 80, Lithoprobe Secretariat, University of British Colombia, p146-148.

Janzen, J. 1991: ASSESSMENT REPORT ON THE AIRBORNE GEOPHYSICAL SURVEYS ON THE PAKWASH LAKE PROPERTY DIXIE LAKE AREA Report No. 1145NB. Report 52K13SE0011. Teck Exploration Ltd.

Melissa Render, M., Meade, S. R., and Lengyel, J. W. P. 2010a: Goldpines South Property - Ear Falls Area, Ontario, Canada. Report 20000006808. Laurentian Goldfields Ltd.

Render, M., Meade, S. R., and Lengyel, J. W. P. 2010b: Goldpines South Property - Ear Falls Area, Ontario, Canada. Report 20000006811. Laurentian Goldfields Ltd.

Render, M., Meade, S. R., and Lengyel, J. W. P. 2011: Goldpines North Property - Ear Falls Area, Ontario, Canada. Report 20000007672. Laurentian Goldfields Ltd.

Percival, J.A. 2007: Geology and metallogeny of the Superior Province, Canada, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit Types, District Metallogeny, the Evolution of the Geological Provinces, and Exploration Methods. Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 903-928.

Pollock, F. W. 1977: AIRBORNE MAGNETIC SURVEY COMINCO LIMITED PACKWASH LAKE AREA, ONTARIO FILE NO: 18060. Report 52K14SW0003. Comino Ltd.

Stone, D. 1981: The Sydney Lake fault zone in Ontario and Manitoba, Canada. Ph.D. thesis: University of Toronto, Toronto Canada.

Thurston, P.C., and Chivers, K.M. 1990: Secular variation in greenstone sequence development emphasizing Superior Province, Canada: Precambrian Research 46, p21-58.

11.0 CERTIFICATE OF QUALIFICATIONS

Brent Clark
941 Cobalt Crescent
Thunder Bay, Ontario
Canada, P7B 5Z4
Telephone: 807-622-3284, Fax: 807-622-4156
Email: brent@clarkexploration.com

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 Pakwash Lake Property, Northwestern Ontario, Red Lake Mining Division" dated April 19, 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 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 19th day of April 2022.

"Brent Clark"

APPENDIX
Prospectair Operations Report

Technical Report

High-Resolution Heliborne Magnetic Survey

Pakwash Lake Property, Ear Falls Area,
Red Lake Mining Division, Ontario, 2022

Silver Dollar Resources Inc.
179 - 2945 Jacklin Road, Suite 416
Victoria, BC, Canada
V9B 6J9

Prospectair Geosurveys

Dynamic Discovery Geoscience

Prepared by:
Joël Dubé, P.Eng.

April 2022

Dynamic Discovery Geoscience
7977 Décarie Drive
Ottawa, ON, K1C 3K3
jdube@ddgeoscience.ca
819.598.8486

Survey flown by :
PROSPECTAIR

CP 1832 Succ. Hull
Gatineau, Québec J8X 3Y8
(819)661-2029
Fax: 1.866.605.3653
contact@prospectair.ca

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FIGURES

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I. INTRODUCTION

Prospectair Geosurveys conducted a heliborne high-resolution magnetic (MAG) survey for the mineral exploration company Silver Dollar Resources Inc. on its Pakwash Lake Property located in the Ear Falls Area, Red Lake Mining Division, Province of Ontario (Figure 1). The survey was flown from February 24th to 27th 2022.

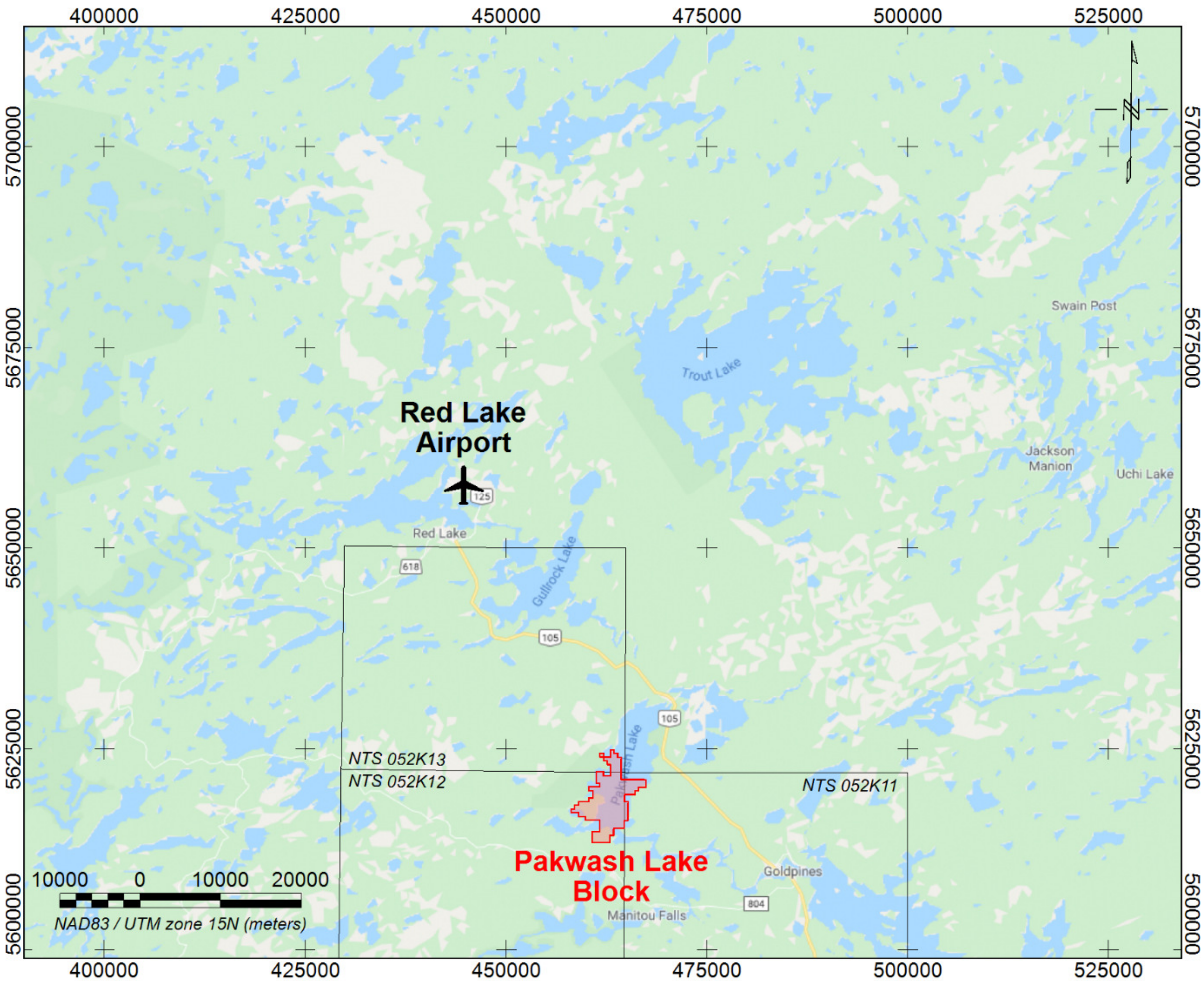
Figure 1: **General Survey Location**

One survey block was flown for a total of 942 l-km. A total of 6 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 45 km to the northwest of the block (Figure 2).

Table 1: **Survey block particulars**

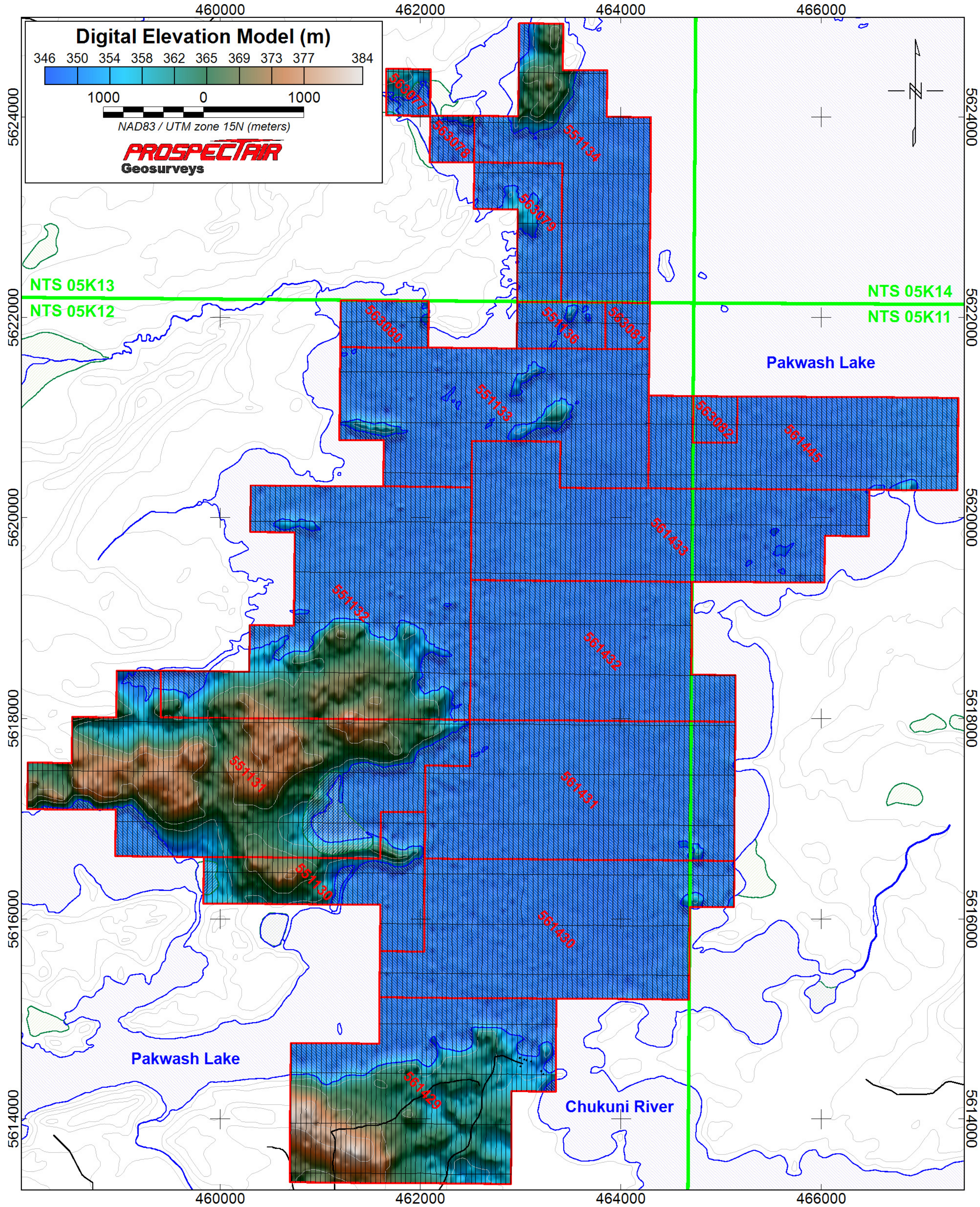
Block	NTS Mapsheet	Line-km flown	Flight numbers	Dates Flown
Pakwash Lake	52K11, 52K12, 52K13	942 l-km	Flt 1 to 6	February 24th to 27th

Figure 2: **Survey Location and base of operation**



The Pakwash Lake block was flown with traverse lines at 50 m spacing and control lines spaced every 500 m. The survey lines were oriented N000 and control lines were flown perpendicular to traverse lines. The average height above ground of the helicopter was 37 m and the magnetic sensor was at 18 m. The average survey flying speed was 35.0 m/s. The survey area is mainly covered by the large Pakwash Lake, some forest and a few wetlands. The topography is mostly flat, with only a few low-level hills. The elevation is ranging from 346 to 384 m above mean sea level (MSL). From the ground, the block can be easily accessed via secondary forestry roads connecting to Road 804 to the south of the block and to Road 105, which links the town of Red Lake to Ear Falls, to the east and north of the block. Coordinates outlining the survey block are given in Appendix A, with respect to NAD-83 datum, UTM projection zone 15N. The location of the Pakwash Lake Property claims (in red) and of the survey lines is shown on Figure 3. The Property claims numbers, as well as the approximate amount of line-km flown over each claim, are also listed in Appendix B.

Figure 3: **Survey lines and Pakwash 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 ± 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 Pakwash Lake Block:

  Traverse lines: Azimuth N000, 50 m spacing.

  Control Lines: Azimuth N090, 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 0.98 s for this survey.

V. FIELD OPERATIONS

The survey operations were conducted out of the Red Lake Airport from February 24th to 27th, 2022. The data acquisition required 6 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 close to the airport, in a magnetically quiet area, at latitude 51.0690328°N, longitude 93.7959291°W. The survey pilot was Pierre Larose 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 2021.2.1 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 0.98 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(field Inclination)sin^2(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 (θ) 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° 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° and the +45° contour lines as well as the distance between the -45° and the 0° 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 18 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 Pakwash Lake block, presented in Figure 6, is slightly active and varies over a range of 1,144 nT, with an average of -215 nT and a standard deviation of 143 nT.

The southern two-thirds of the block is characterized by very low amplitude magnetic signal variations, which indicates that it is likely dominated by sedimentary or felsic intrusive rocks. The strongest anomalies of the survey, which are not very strong in absolute terms, are found in the remaining northern part of the block. They could be related to intermediate/mafic intrusions, to layers of mafic volcanic rocks or to meta-sedimentary horizons enriched in magnetic minerals. Stronger anomalies are best seen on Figure 7 which shows the residual TMI data with a linear color distribution.

In the southern two-thirds of the block, magnetic lineaments are predominantly trending E-W, but can vary significantly locally, as they are often depicting a complex fabric of textures resembling riedel shearing structures. The northern part of the block is even more variable in lineaments' orientations. While lineaments are mostly striking N-S near the northern edge of the block, they appear heavily folded and are rapidly changing directions to dominant E-W trends as they are progressing towards the south, where they seem to stumble over a general E-W fault structure possibly located at the south end of this area with stronger magnetic background values. All of these curved magnetic lineaments, either by folding or at the contact zone with possible intrusions, are attesting that the area underwent strong deformation events in the past, and that shearing may have affected some of these lineaments. Pressure shadow areas at the contact zone with the possible intrusion to the north may also have developed. These kinds of features could be of interest for exploration. 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 Pakwash 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**

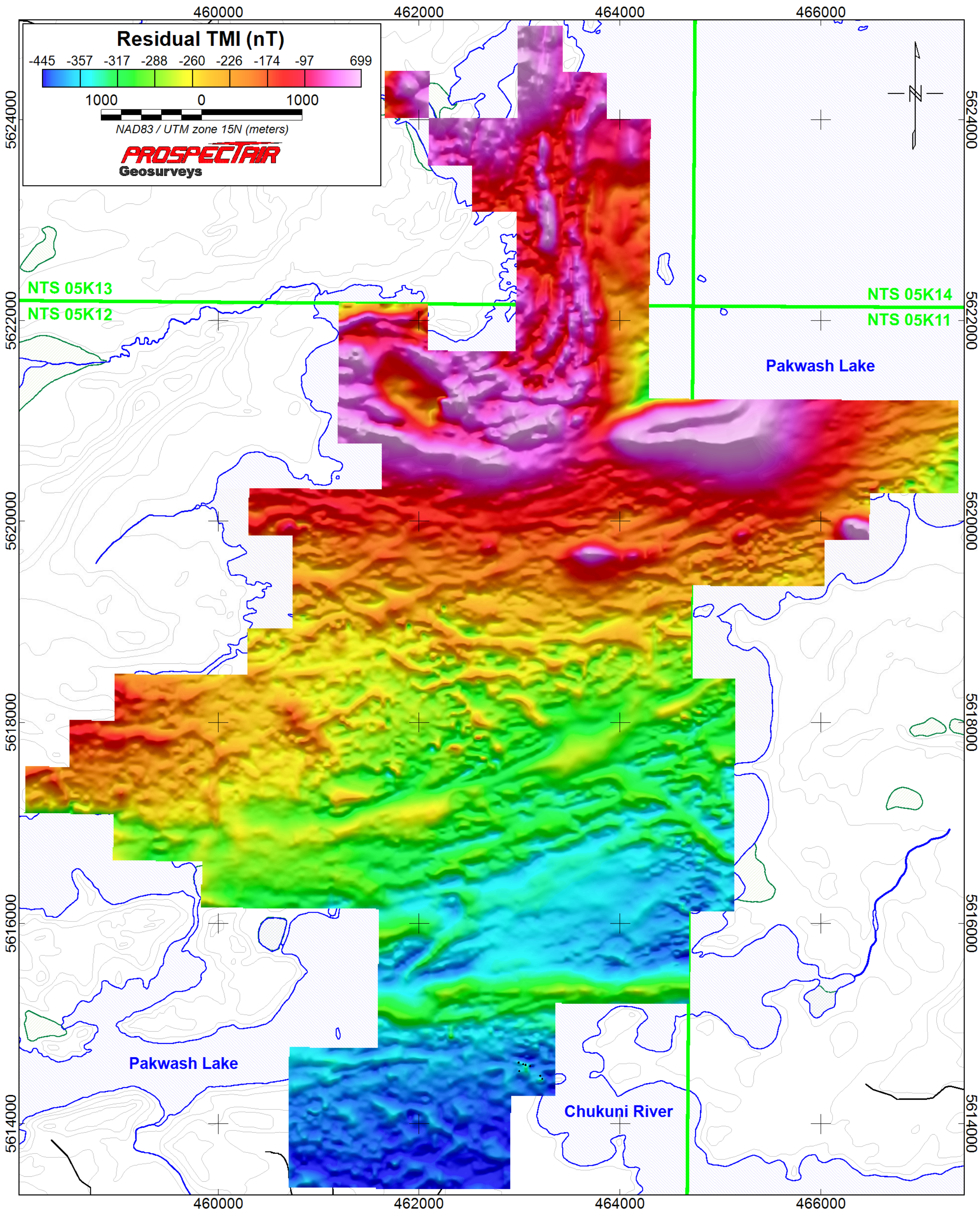


Figure 7: **Residual Total Magnetic Intensity with linear color distribution**

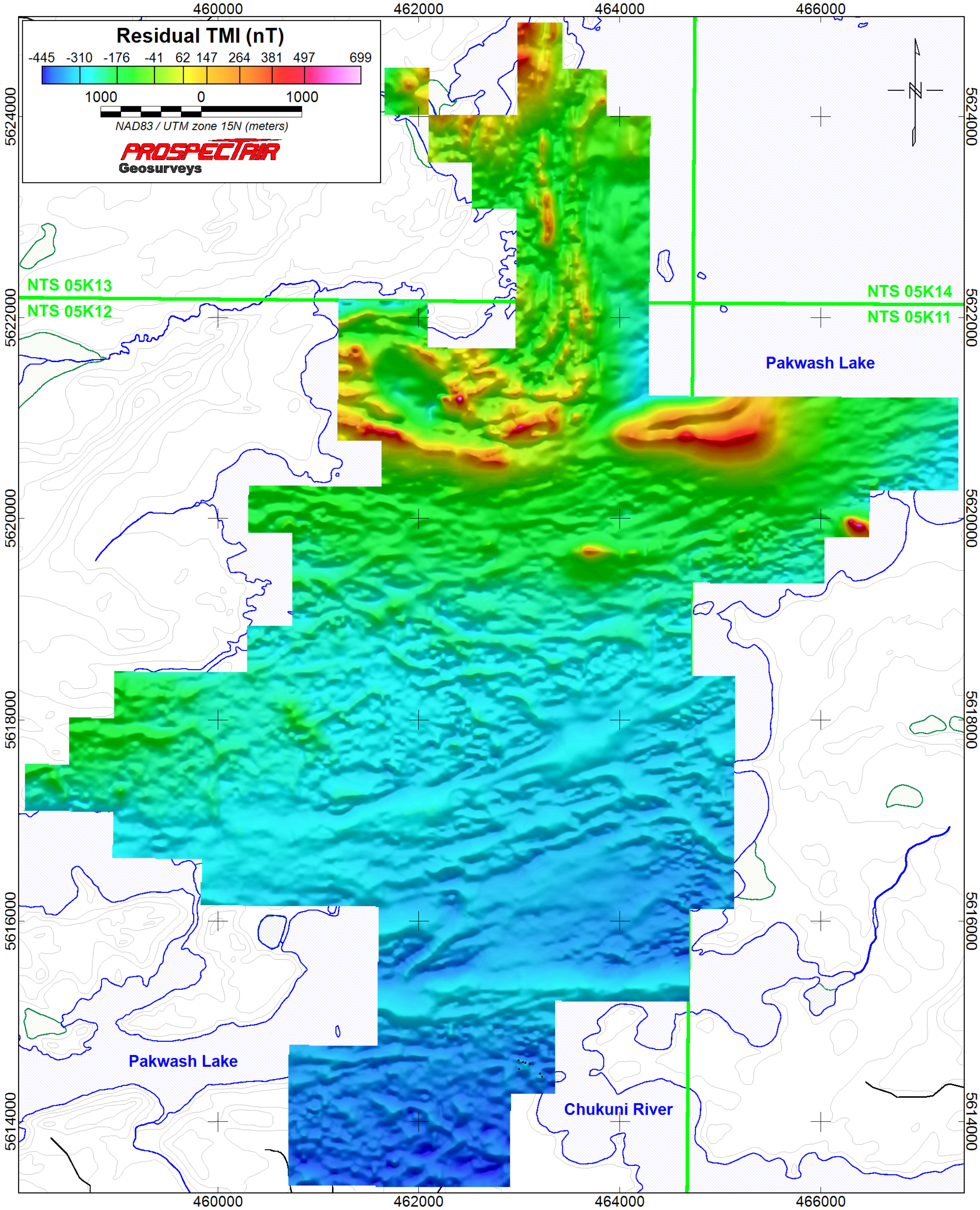


Figure 8: **First Vertical Derivative of TMI**

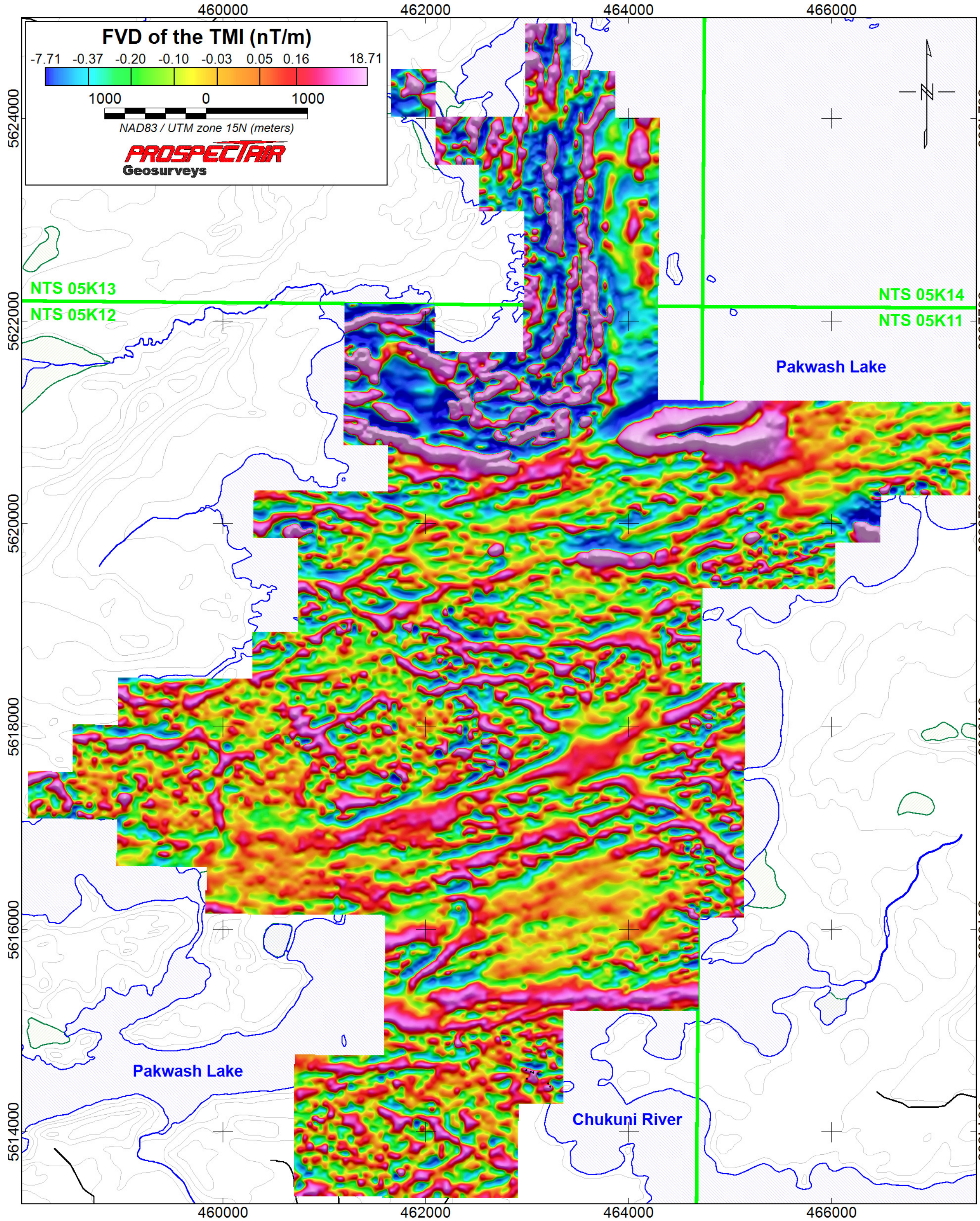
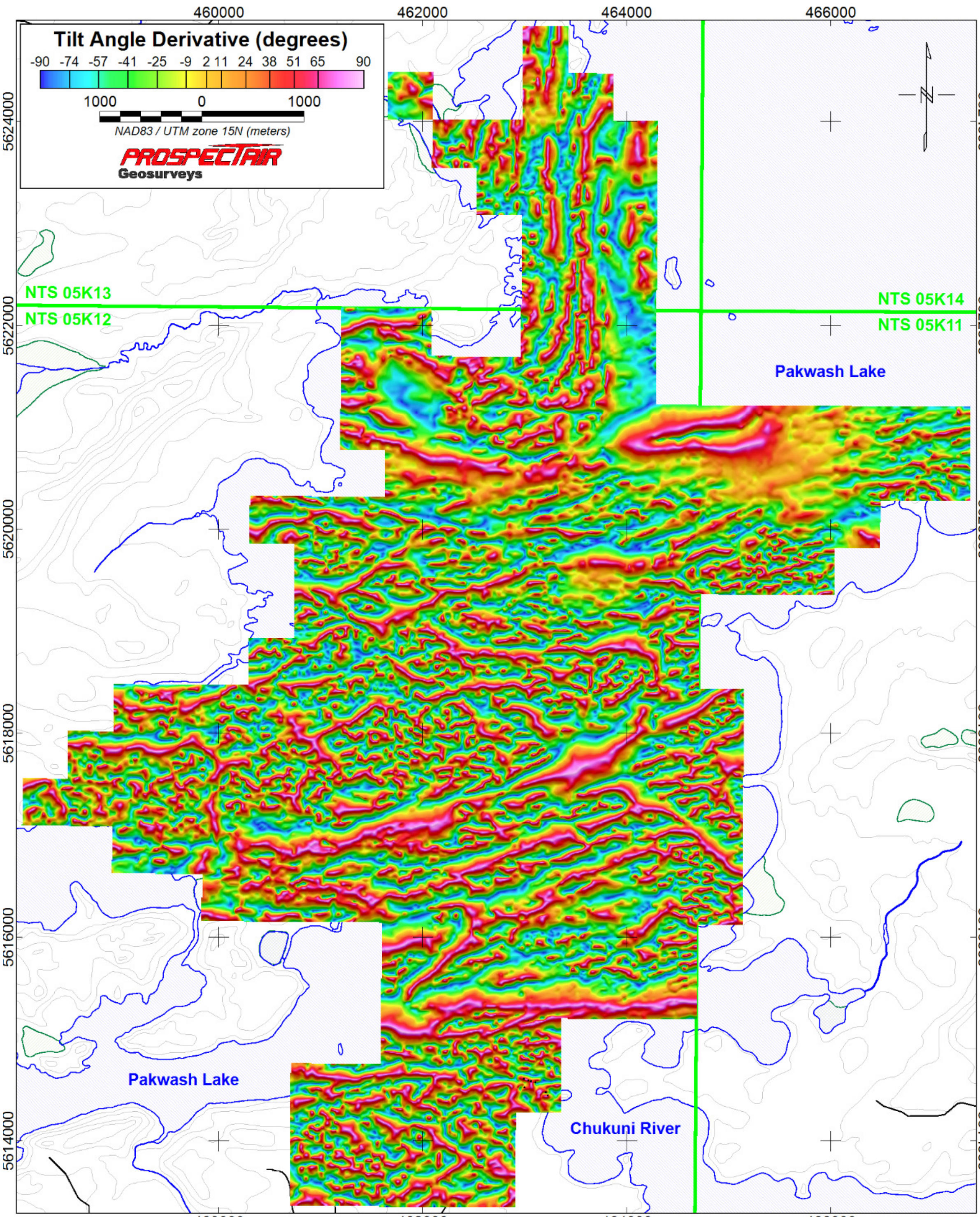


Figure 9: **Tilt Angle Derivative**



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	Terrain	Calculated Digital Elevation Model	m
2	TMI	Total Magnetic Intensity	nT
3	FVD	First Vertical Derivative of TMI	nT/m
4	SVD	Second Vertical Derivative of TMI	nT/m^2
5	TMIres	Residual TMI (IGRF removed)	nT
6	TILT	Tilt Angle Derivative	Degree

Project Report

The report is submitted in PDF format.

Respectfully submitted,

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Joël Dubé, P.Eng.
April 11th 2022

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 11th day of April, 2022

LICENSED PROFESSIONAL ENGINEER
J. P. DUBÉ
100194954
PROVINCE OF ONTARIO

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Joël Dubé, P.Eng. #100194954

X. Appendix A – Survey block outline

Pakwash Lake Block

Easting	Northing
462904	5613350
460690	5613366
460701	5614762
461584	5614755
461594	5616140
459828	5616153
459832	5616616
458949	5616623
458953	5617087
458070	5617094
458074	5617562
458515	5617558
458519	5618022
458960	5618018
458964	5618481
459891	5618475
460287	5618471
460286	5618707
460287	5618935
460732	5618931
460739	5619853
460295	5619857
460296	5619987
460301	5620325
461625	5620315
461628	5620773
461187	5620776
461197	5622171
462084	5622165
462081	5621701
462957	5621695
462958	5621916
462962	5622460
462967	5623080
462527	5623083
462530	5623547
462089	5623550
462093	5624013
461652	5624016
461655	5624485
462101	5624481
462098	5624018
462974	5624012
462977	5624446
462971	5624680

462972	5624844
462972	5624896
462975	5624939
463426	5624935
463423	5624472
463864	5624469
463861	5624006
464301	5624002
464282	5621223
467369	5621202
467363	5620271
466481	5620276
466478	5619813
466037	5619816
466034	5619353
464711	5619361
464705	5618440
465146	5618437
465130	5616115
464689	5616118
464683	5615191
463358	5615200
463352	5614274
462913	5614277
462908	5614011
462907	5613706
462907	5613620

XI. Appendix B – Property claims covered by the survey

Tenure number	Holder	l-km within claim
551130	(100) EMX Properties (Canada) Inc.	31.723
551131	(100) EMX Properties (Canada) Inc.	113.247
551132	(100) EMX Properties (Canada) Inc.	113.203
551133	(100) EMX Properties (Canada) Inc.	81.479
551134	(100) EMX Properties (Canada) Inc.	58.817
551136	(100) EMX Properties (Canada) Inc.	9.052
561429	(100) EMX Properties (Canada) Inc.	90.651
561430	(100) EMX Properties (Canada) Inc.	90.628
561431	(100) EMX Properties (Canada) Inc.	90.606
561432	(100) EMX Properties (Canada) Inc.	72.463
561433	(100) EMX Properties (Canada) Inc.	86.021
561445	(100) EMX Properties (Canada) Inc.	58.861
563077	(100) EMX Properties (Canada) Inc.	4.524
563078	(100) EMX Properties (Canada) Inc.	4.524
563079	(100) EMX Properties (Canada) Inc.	18.099
563080	(100) EMX Properties (Canada) Inc.	9.052
563081	(100) EMX Properties (Canada) Inc.	4.526
563082	(100) EMX Properties (Canada) Inc.	4.526