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Assessment Report on the Burchell Lake Project
High-Resolution Heliborne Magnetic Survey

Prepared for
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NTS Sheet 52 B/10
Thunder Bay Mining Division

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1.0 SUMMARY

Prospectair conducted a heliborne high-resolution magnetic (MAG) survey for Paleo Resources Inc on their Burchell Project located in the Burchell Lake Area Township, Thunder Bay Mining division, Ontario. The heliborne survey was flown between April 2nd to April 4th, 2019. A total of 707-line kilometers were flown over six (6) production flights.

The Burchell Lake Project (the 'Property') is located 110 kilometers west of the city of Thunder Bay in the Shebandowan Greenstone Belt. The property is situated in Burchell Lake Area Township within NTS Sheet 52 B/10 in the Thunder Bay Mining Division. The approximate UTM center point of the Property is 678164E, 5381185N (NAD 83 Zone 15N).

The Burchell Lake Property is comprised of 255 claims totalling 4806 hectares. The claims are shown in Figure 2 and are listed in Appendix I. The total work requirements for the claims is $91,600 annually.

Figure 1: Burchell Lake Project Location Map

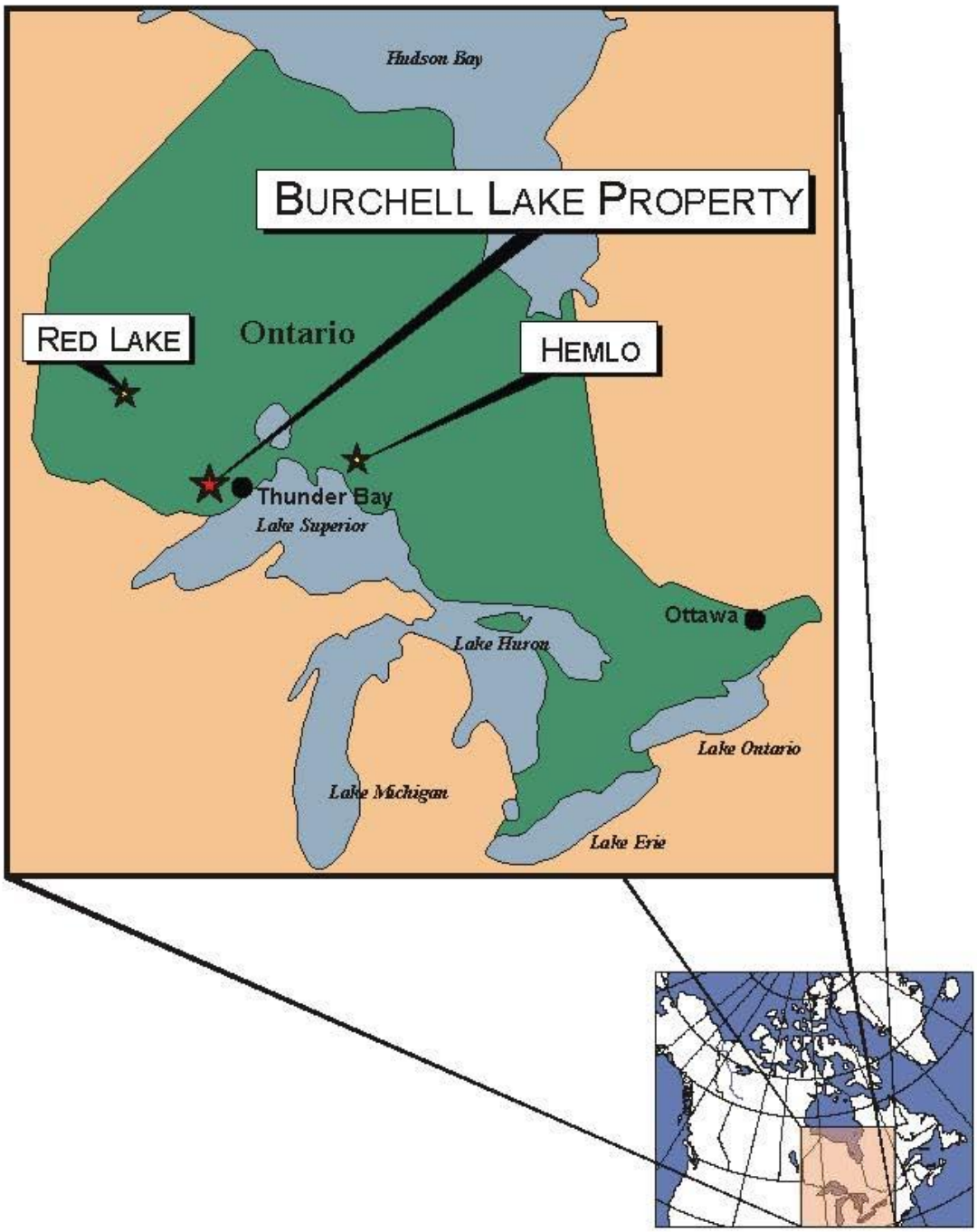
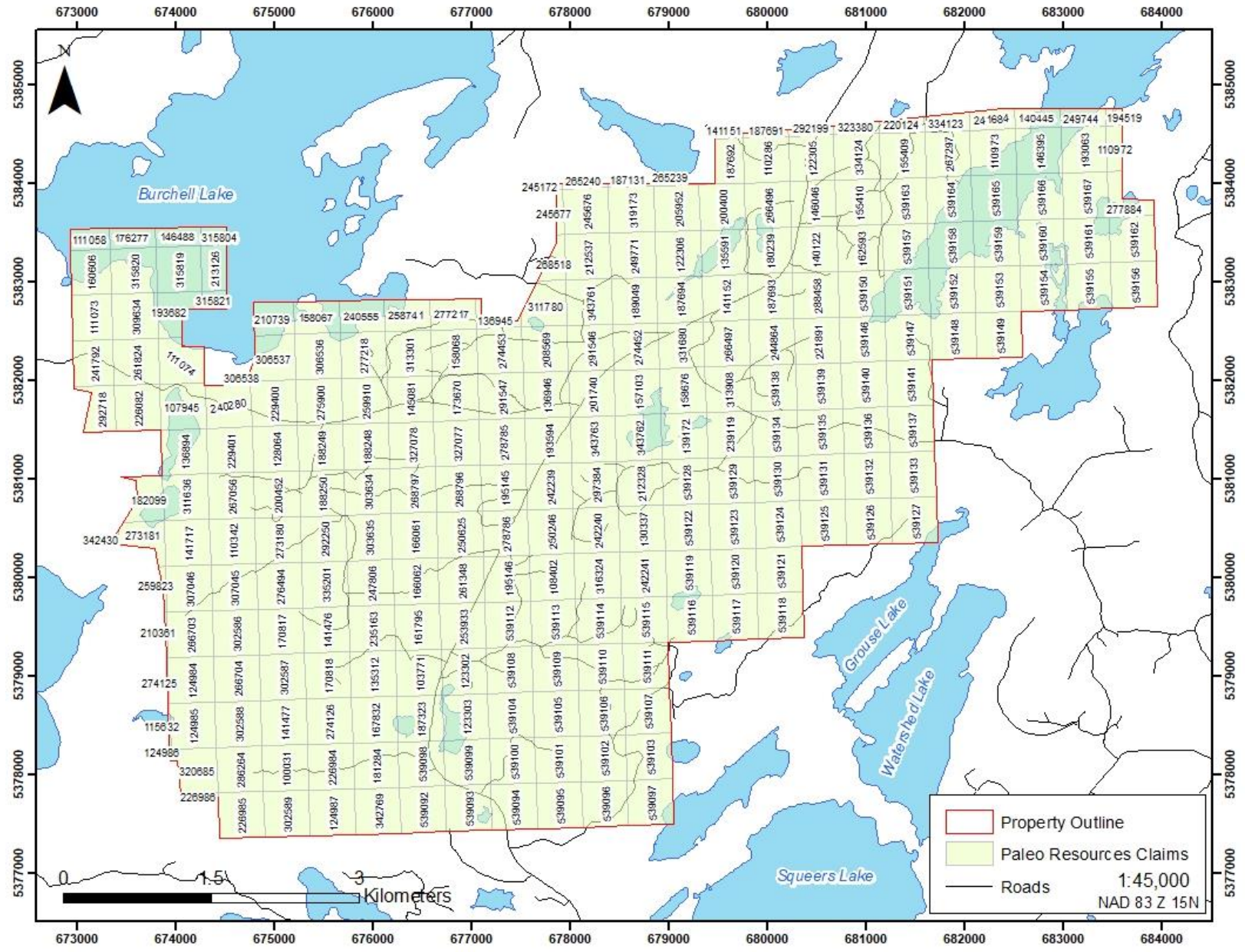


Figure 2: Burchell Lake Property Claim Map



2.0 LOCATION AND ACCESS

The Burchell Lake Property is located approximately 110 km west of the city of Thunder Bay, Ontario. Vehicle access to the Property is afforded by paved highway 17 and 71 from Thunder Bay to the town of Kashabowie, Ontario, then south for 15 km along highway 802 to the Camp 517 Road, a major logging road which traverses the centre of the Property (Figure 2).

Topography in the area is subdued with gently rolling hills covered by mixed pine, spruce and poplar boreal forest and shallow lakes and swamps, with elevations ranging from about 435 to 485m above sea level. Precipitation averages 740 mm a year with and average snowfall of 220 cm per year. Temperatures range from -30^{o} to $+30^{o}$ with approximately 153 frost free days a year. Bedrock exposure is limited in the area to approximately 1-5% except near Hermia Lake where uncharacteristically thick glacial sediments (up to 40 m) cover the area and reduce bedrock exposures to less than1%.

3.0 REGIONAL GEOLOGY

Adapted from D. Hunt 2010

"The Burchell Lake Property lies within the western extension of the Shebandowan Greenstone Belt (SGB), which is part of the Wawa Subprovince of the Archean Superior Province in the Canadian Shield. The Wawa Subprovince is an east-northeast trending belt of rocks that continues under the Proterozoic cover in the Superior Basin and below Lake Superior and re-emerges on the east side of Lake Superior. Bounding the SGB to the north are high-grade metamorphic sedimentary rocks of the Quetico Subprovince and to the south by Proterozoic sedimentary and intrusive cover rocks (Chorlton, 1987).

Meta-volcanic rocks are the dominant rock type in the SGB with lesser amounts of intercalated coeval intrusive and meta-sedimentary rocks. These rocks of two different ages, the older dominated by meta-volcanic rocks (>2700 Ma) and a younger meta-sedimentary dominated assemblage that unconformably overlies the older meta-volcanic assemblage (Chorlton, 1987). Intruding the meta-volcanic and meta-sedimentary assemblages are feldspar- and quartz-feldspar porphyritic quartz diorite, as well as younger granite and quartz-syenite, hornblende lamprophyre dykes, and composite ultramafic to felsic intrusions.

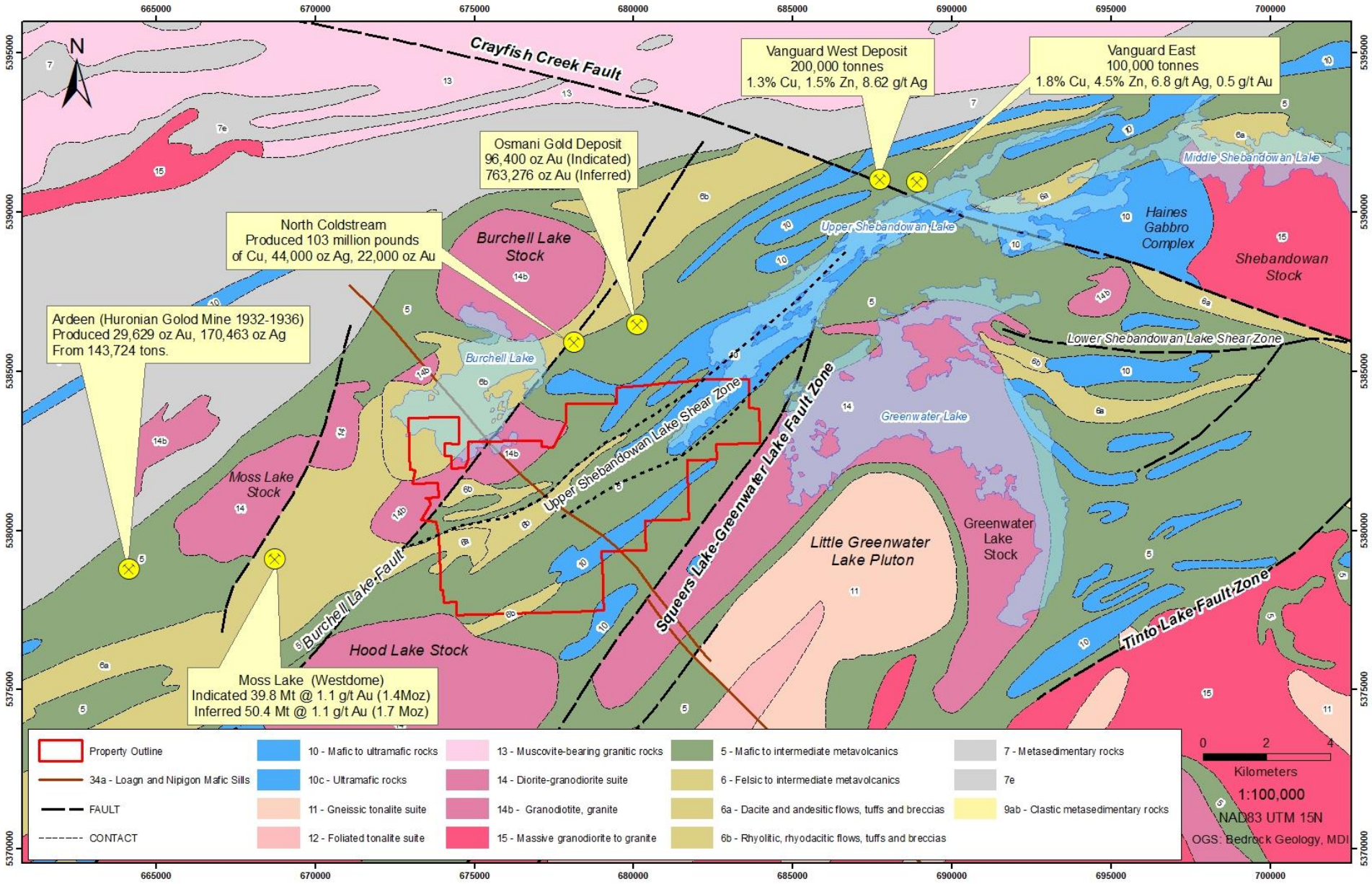
Metamorphic grade in the western SGB is greenschist facies and has been subjected to three phases of deformation that are represented by: (1) isoclinal nappes, D_1, (2) steep east trending folds, D_2, and (3) gentle north trending folds, D_3. Northeast trending faults/shear zones are interpreted to cut through the area including the Knife Lake Fault (Chorlton, 1987) also named the North Coldstream Shear Zone (Osmani, 1993). According to Osmani (1993) the trace of this structure cuts through North Coldstream deposit area and through Hermia Lake and the Burchell Lake Property. These structures were not mapped or observed by previous workers (i.e. Giblin, 1964) probably because they are inferred mainly from aero-magnetic data and as such some may or may not be real geological features.

Underlying the Burchell Lake Property are felsic to mafic meta-volcanic rocks, lesser chemical meta-sedimentary rocks (chert and iron formation) and concordant gabbro and diorite intrusive bodies. These rocks are complexly folded and deformed and are intruded by the syenitic Hermia Lake Stock (Osmani, 1997).

More recent Pleistocene glaciation has scoured the entire area, usually depositing thin unconsolidated sediments (1-3 m), except in the Hermia Lake area where glacial deposits are up to 40 metres thick in what is interpreted as a north- south deep pre-glacial valley (Giblin, 1964).

Within the western SGB there are two previous producing mines; the North Coldstream copper mine and Ardeen gold mine, and two developed prospects; the Moss Lake gold prospect and the East Coldstream (Osmani) gold prospect. The East and North Coldstream deposits are less than 5 km to the northeast of the Burchell Lake Property and the Ardeen and Moss Lake deposits are approximately 10 km and 5 km to the west-southwest respectively."

Figure 3: Burchell Lake Project Regional Geology



4.0 PROPERTY GEOLOGY

Adapted from D. Hunt 2010

The general geology of the Burchell Lake property is shown in Figure 4. Bedrock consists mainly of a southwesterly striking, steeply dipping sequence of mafic volcanic flows and tuffs intercalated with varying thicknesses of intermediate and felsic tuffaceous and coarser pyroclastic units. Minor chemical and clastic sedimentary horizons are intercalated with the volcanics and minor intermediate to felsic porphyritic intrusions occasionally intrude older volcanic rocks.

There is evidence of thrust faulting parallel to, and along the contacts of intermediate and felsic volcanic units and folding also occurs in the southwestern part of the property, possibly associated with the Burchell Lake Fault and a band of late felsic to mafic intrusive rocks striking north-easterly through Hermia Lake.

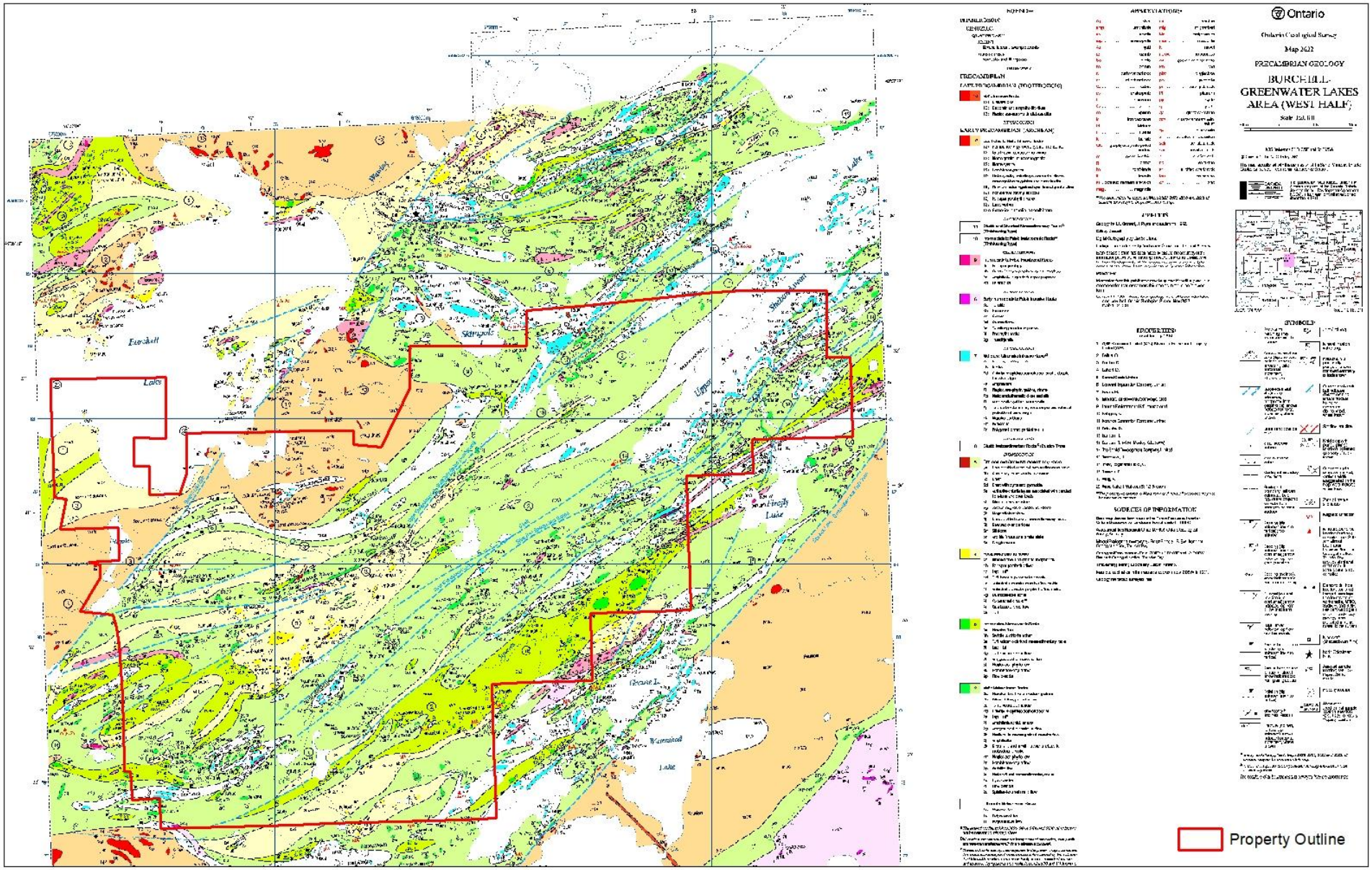
5.0 MINERALIZATION

Adapted from D. Hunt 2010

The most significant mineralization identified on the Burchell Lake Property is south and east of Herminia Lake and consists of disseminated sulphides containing Cu-Au, with trace Mo and Ag, hosted generally within felsic volcanic rocks, chert, and silicified amphibole-magnetite-chlorite schist (mafic schist). There is no outcrop in this vicinity as it is covered by a thick glacial till. Economic minerals in this zone comprise chalcopyrite, minor bornite, malachite, arsenopyrite and molybdenite. East and northeast trending shears that contain disseminated and massive sulphide layers cut the mineralized area and may or may not control the distribution of the copper and gold mineralization. Mineralization appears to be E-W oriented and has been traced for at least 400 m along strike.

Historical drilling in the late 1950's, early and mid 1970's and early 1980's in this zone reported intersections up to 114.4 m grading 0.13% Cu and 96 m returning 0.23% Cu (Belore 1976) and single intersections as high as 5.08% Cu. Generally, the copper mineralization contains copper grades between 0.25% and 1.1% over intervals less than 10m, with the longer intersections (15.2 to 114.4m) containing 0.13% to 0.29% Cu. It appears from some of the historical drill holes that there may be more than one copper-mineralized zone as some holes contain several copper mineralized intersections.

Figure 4: Burchell Lake Project Property Geology



5.0 EXPLORATION HISTORY

The area covered by the current Burchell Lake Property has changed ownership, names and been re-staked several times since the first recorded work, in 1956. Descriptions of previous work in the area presented below are from a report by D, Hunt, 2010 as well as additions from the author.

The information used to construct this work history bas been taken from the Ontario Ministry of Energy, Northern .Development and Mines Assessment Report and Ontario Geological Survey ("OGS") geological and mineral assessment reports; hence work that was not submitted for assessment work credits may not be included below.

1953 – Great Lakes Copper Mines Ltd

No assessment reports were found for this work, but it is mentioned in several assessment reports and in the 1964 OGS Burchell Lake Geology report and appears to be the first exploration activity of merit in the area. This programme consisted of geological mapping, prospecting and 10 short drill holes (Giblin,1964).

1954 – Newkirk Mining Corp. (OAFD# 52B10SE0156)

Newkirk apparently optioned the ground from Great Lakes Copper Mines and completed a resistivity survey before returning the property back to Great Lakes Copper.

1956 and 1957 – Great Lakes Copper Mines Ltd. (OAFD 52B10SE0134)

Some of this work appears to be recorded in the assessment files for the area, but the record is somewhat incomplete. According to Giblin (1964) company reports by Great Lakes Copper Mines, a total of 15 holes (5477 feet or 1669 m) were drilled including electro-magnetic geophysical surveying. Also, at this time 12 different copper showings were apparently identified of which drill testing of #3 and # 12 yielded encouraging results and are listed in the table below. Most of the showings and drilling occur near Hermia Lake (Figure 5). Of note, an assessment report by Gulf Minerals in 1982 states that diamond drill hole T2-8 was drilled by the Mining Corp. of Canada but the results and expenditures are in Great Lake Copper Mines assessment report.

Copper mineralization at occurrence #3 (SE of Fountain Lake) is hosted by "…chert, which locally grades to cherty rhyolite." (Giblin, 1964) that is within a mafic meta-volcanic assemblage. Another drilled occurrence, #12 (E of Hermia Lake) is described as striking easterly and was traced for at least 1300 feet (~400 m) along strike. At occurrence #12, copper mineralization is disseminated and occurs as stringers within felsic meta-volcanic rocks, which are locally brecciated. Glacial cover in the occurrence 12 area is reported to be as much as 150 feet (~45 m) thick.

Highlights from Great Lakes Copper Mines drilling on Burchell Lake Property (Giblin, 1964).

Hole #	From (m)	To (m)	Length (m)	Rock Type	Cu %	Au opt
6	-	-	-	Depth of sample 20.7 m; occurrence #3	1.98	
5	-	-	-	Depth of sample 5.8 m; occurrence #3	0.46	
5	-	-	-	Depth of sample27.4 m; occurrence #3	5.08	
M7	70.1	74.4	4.3	Chert/rhyolite bx; siliceous matrix; occ. #12	0.80	
M7	84.4	87.0	5.6	Chert/rhyolite bx; siliceous matrix: occ. #12	1.00	
M7	99.7	102.1	2.4	Sheared diorite; occ #12	0.60	
M9	153.6	155.8	2.2	Syenite; occ. #12	0.35	0.02
M9	180.7	183.2	2.5	Felsic meta-volcanic rocks; occ. #12	0.31	0.02
M9	199.6	200.9	1.3	Felsic meta-volcanic rocks; bx; occ. #12	1.10	0.03
M9	*203.3*	*207.0*	*6.7*	*Felsic meta-volcanic rocks; bx; occ. #12*	*0.61*	*0.02*
M9	*209.7*	*214.3*	*4.6*	*Felsic meta-volcanic rocks; bx occ. #12*	*0.43*	*0.02*

1962 – International Nickel Corporation (OAFD 52B10SE0138)

Two diamond drill holes totaling 210m (691ft). Highest assay Sample F215334 0.05% Cu and 0.18% Ni over 1ft in DDH 15764.

1964 – Noranda Exploration (OAFD 52B10SE0137)

Three (3) diamond drill holes totaling 317m (1042ft). Sample 2812 0.02 oz/ton Au, Sample 2840 8.6% Cu over 0.7ft. Drill holes located at the southwestern end of Upper Shebandowan Lake.

1964 – Mining Corporation of Canada (OAFD 52B10SE0168)

This work was comprised of 16-line km of ground magnetic and electro-magnetic ("Mag-EM") geophysical survey, over an area approximately 1 km east of Hermia Lake. A few conductive zones were delineated by the survey, which coincide with the Hermia Lake stock contact with the surrounding meta-volcanic assemblages.

1965 – Consolidated Mining and Smelting (OAFD 52B10SE0166)

Consolidated Mining and Smelting conducted a large airborne Mag-EM geophysical survey over much of the Moss Township and part of the Burchell Lake area. Most of this work occurred southwest of the current property, but it extends onto it and is a very good regional guide to structures that may continue from the old Ardeen/Huronian mine or Snodgrass/Moss Lake advanced prospect, to the southwest.

1965 – Noranda Exploration

The only evidence for this work programme is from a 1983 compilation map by Belore Mines Ltd and Falconbridge Copper.

1965 – Mining Corporation of Canada Ltd.

One Diamond Drill Hole totaling 144m (475ft) in Burchell Lake Township. No assays reported. (OAFD 52B10SE0127)

Two Diamond Drill Holes totaling 122m (400ft). No assays reported. (OAFD 52B10SE0124)

1969 and 1970- Canadian Nickel Co Ltd (Inco)

Inco drilled 8 diamond drill holes (41069, 41070, 41071, 41073, 41074, 41076, 41079) totaling 805.5m (2642 ft). No assays reported and submitted over five assessment reports. (OAFD 52B10SE0122, 123, 128, 132, 136)

1971 and 1972 – Freeport Sulphur

Drilled two diamond drill holes totaling 453m (1488ft). Sample 13-450, 13-455 returned 0.76% Cu and 0.78% Cu respectively, over 5ft. (OAFD 52B10SE0125)

A 1982 Gulf Minerals assessment report (Solonyka, 1982) on the property notes that Freeport Sulphur drilled 9545.5 feet (~2909 m) in 16 holes on the property in 1971 and 1972. Positive results from the holes, are reported in the Gulf Minerals assessment report, are listed in table 4-2. Apparently, these holes were drilled in the same area as Gulf's holes in 1982, and a compilation map produced by Belore Mining in 1983 also shows this. However, no assessment report for this work was found during the author's search.

1975 – McIntyre Mines Ltd.

According to the Belore Mines assessment report (1976) McIntyre Mines completed an induce-polarization ("IP") survey over the area east of Hermia Lake where Belore Mines conducted their 1976 drilling programme. No report for the McIntyre Mines work has been located.

1976 Belore Mines (OAFD 52B10SE0121)

Belore Mines drilled three holes east of Hermia Lake, totalling 1543 feet (~470m). These holes were a few hundred metres east of previous drilling in the area to follow-up on the IP survey by McIntyre Mines the previous year. One of the three holes was sampled extensively with the other two holes intersecting several disseminated and semi-massive pyrite zones without visible chalcopyrite. Most of the second hole was assayed as it intersected two zones of wide low-grade visible copper mineralization, which returned 96 m of 0.232% Cu and 9.1 m of 0.292% Cu. Drill logs also reported several zones of pyrite, chalcopyrite, molybdenite, hematite, and/or magnetite, which were not analyzed.

1977 – Rio Tinto Canadian Exploration

Rio Tinto conducted a total of 585-line miles (~941.5 m) of airborne magnetic geophysical survey over three areas in the Shebandowan belt including the area covering the current property. Conclusions reached from this survey were limited except that the Hermia Lake stock is unusually magnetic, and the data appears to delineate gabbro bodies south of the property.

1980 to 1982 – Gulf Minerals (OAFD 52B10SE0118, 119, 120)

Gulf Minerals completed approximately 26-line miles (~41.8 km) of ground EM and magnetic geophysical surveying at 400-foot (~121.9 m) line spacing and stations spaced at 100-foot (~30.5 m) intervals. They also drilled six holes totalling 6028 feet (~1837 m) on the property. Most of the holes were not assayed but some of the better drill intercepts are presented in the table below. Furthermore, large zones (10's to >100 m) of low-grade copper (0.1 to 0.2%) were encountered within the first three holes with only sparse copper mineralization within the rest of the holes.

Highlights from 1980-1981 drilling by Gulf Minerals.

Hole #	From (m)	To (m)	Length (m)	Rock Type	Cu %	Au opt	Ag opt
BU-1	104.2	146.8	42.5	Cherty rhyolite and magnetite	0.29	-	-
incl			8.4		0.41		0.05
BU-2	211.9	213.4	1.5	Dacitic tuff (pyritic)	1.09		0.11
BU-2			114.4	* comp from Noranda 1990	0.13	tr	
BU-3	122.4	124.4	2.0	Massive sulphide zone	0.68	0.02	0.18
BU-3			40.5	* comp from Noranda 1990	0.22	tr	

1982 – Canadian Nickel Co.

At this time the Canadian Nickel Company (INCO) held a property at the southwest end of Burchell Lake and west of Hermia Lake, which encompassed the northwestern portion of Helm's current claim holdings. INCO performed a 2252-line km airborne electro-magnetic and radiometric survey over their claims and most of the surrounding area including the entire current property. The survey was flown N-S at a line spacing of ~200 m. Data presented in the 1982 assessment report is minimal including only a few maps.

1983 and 1984 – Tenajon Silver Corp. (OAFD 52B10SE0108, 0116)

The area that Tenajon worked on is to the northeast and a small portion covered the northeast claim, on the current property. They conducted a ground very low frequency electro-magnetic (VLF-EM) geophysical survey and multi-element geochemical soil survey over their claims, followed up by one drill hole collared on the eastern portion of the Burchell Lake Property, totalling 221.9 m. Several EM anomalies were delineated in which one was the target of the two drill holes just south of Burchell Lake and off the current claim block. Neither the drilling nor the geochemical survey proved to be successful. A conclusion by the author of the Tenajon reports (J. McLeod) was that the EM anomalies on the south portion of their claims and on Helm's Burchell Lake Property were still prospective targets since they are in a different rock assemblage.

1987 and 1988 – Newmont Exploration (OAFD 52B10SE0087, 0092)

Newmont held claims that covered the entire southwest end of Burchell Lake and a small portion of the south and west shore. Their ground encompassed the northwest claim block of the current property and skirted the northern property boundary.

During 1987 and 1988 Newmont conducted 76.4-line km of VLF-EM geophysical surveying followed by drilling of 8 drill holes totalling 1850 m to test geophysical anomalies. The drilling reports also reference an IP survey, but this does not appear to have been submitted for assessment. Gold was the focus of this drilling and except for a few copper assays the only element analyzed for was gold. Many narrow gold mineralized zones (~1-4 gpt over 0.1 to 0.7 m) were encountered by the drilling including some broader anomalous gold zones (~100- 200 ppb over several meters). Two of the better intersections are 1.05 gpt over 3.36 m from hole 88-07, hosted in a sericite-pyrite felsic crystal tuff, and 0.8 gpt over 6.8 m (including 1.8 gpt over 1.65 m) from hole 88-04 within a sheared sericitic and pyritic rhyodacite.

1988 – ELE Energy Corporation (OAFD 20000005389)

Orequest carried out a program of line cutting, geological mapping, prospecting, rock, humus, and biogeochemical sampling, ground magnetometer and VLF-EM geophysics and selected induced polarization. The work outlined several targets that warranted follow up work. The property was located east of Hermina Lake.

1988 – JET Mining Exploration (OAFD 52B10SE0054)

Terraquest performed an airborne magnetic VLF-EM geophysical survey for JET Mining Exploration over the east side of the current property and continuing east and southeast of the property. A total of 155-line km were flown and surveyed at 100 m line spacing in a NW-SE orientation. Several northeast trending VLF-EM and magnetic linear features were identified by this survey many of which are on or continue onto the current property.

1989 – Golden Myra Resources Inc. (OAFD 52B10SE8101)

A.P. Pryslak carried out geological mapping and prospecting program over an 82-claim block east of Hermina Lake. No assays reported.

1989 to 1991– Noranda Exploration Ltd. (OAFD 52B10SE0053, 8114, 0424, 0028)

In 1989 Noranda Exploration flew a DigHem III survey over the entire western and of the Shebandowan Greenstone Belt. It comprised 2622-line km of surveying at a 200 m line separation. This data has not all been included in assessment reports.

Noranda held three separate claim blocs (East, Central and West) during 1989 to 1991 of which the East claim block covers an area nearly identical to claims that comprise the current property. On the East block, Noranda completed geological mapping, geochemical rock sampling, re-analysis of two 1981 Gulf Minerals drill holes (103 samples analyzed for gold from BU-1 and 2) and 22-line km's of IP-resistivity geophysical surveying.

Results from the geochemical rock sampling found "magnetite rich volcanic rocks" that returned assays of 0.27% and 0.65% Cu and trace Au, carbonatized boulders with 10% pyrite and 0.038 opt Au and several other areas of anomalous gold and/or copper. Notably the sampling and mapping programme did not find any significant mineralized zones on the two Noranda claim blocs west of the Burchell Lake Property. The IP-resistivity survey delineated many NE trending anomalies that were not drill tested.

1991 – Central Crude (OAFD 52B10SE0031)

Conducted a diamond drilling program consisting of one (1) drill hole totaling 360m south of Burchell Lake. No assays reported.

1992 – Art Wallace (OPAP) (OAFD 52B10SE0034 & 52A05N8205)

The claims held by Art Wallace at this time occur over at the eastern extent of the property near Firefly Lake. Work performed during the 1992 field season included geological mapping, geochemical rock and chip sampling, trenching and the re-analysis of part of a 1991 drill hole, which was collared east of helm's claims.

Most of the mapping and sampling took place on the Burchell Lake Property and produced numerous anomalous multi-element assay (Cu, Zn, Au, Ag,) results. The most significant results from geochemical sampling are from chip sampling across a vein structure and include 2.9 gpt Au over 0.30 m, 0.97 Au gpt over 0.91 m, 3.4 gpt Au over 0.30 m, 19.3 gpt Au over 0.61 m, and 42.2 gpt Au over 0.61 m. These chip samples are from the same vein at different points for ~34 m along strike.

1993 – J Trenowsky & O. Belisle (OAFD 52B10SE0007)

Conducted a field mapping and geophysical survey of the Fountain Lake Property which lies east of Fountain Lake. Detailed mapping along 30 kilometer of grid lines east of Fountain lake located a favourable contact between felsic and mafic volcanic units. This contact had been previously investigated, with some old trenches and pits present. Sample revealed 'highly anomalous' gold values (20ppb to 900ppb) along with copper values (up to 5000ppm) along the contact.

2003 – Maple Minerals Inc (OAFD 52B10SE2021)

Conducted an Airborne Time Domain Magnetic-Electromagnetic Survey totaling 49.7-line kilometers. This survey falls along the eastern edge of the current property with the biggest group of anomalies located south-east of the centre of the historic property block.

2004 – East West Resources Corp& Maple Minerals Corp (OAFD 52B10SE2027)

Conducted a Time Domain Airborne Geophysical Survey on their property between south of Burchell Lake and Greenwater Lake totaling 429-line kilometers with a line spacing of 150m. This coincides with the south eastern portion of the current property boundary. The survey outlines a strong NE trending structure following the mafic and ultramafic metavolcanics in the "Upper Shebandowan Shear Zone System". In the northern part of the survey area a magnetic high is interpreted as part of the mafic to ultramafic intrusions near Burchell Lake. The EM survey results showed conductors closely following the magnetics.

2004 – Maple Minerals Corp (OAFD 52B10SE2028)

Conducted a diamond drilling program consisting of two (2) drill holes totaling 356.7m. One sample 386971 returned gold values of 0.083ppm. Anomalous copper values were also obtained 20-383ppm. Drill hole B03-1 is located southwest of upper Shebandowan Lake (Legacy Claim 301101) and B04-02 is located west of upper Shebandowan lake (Legacy Claims 3011095)

Mengold Resources Inc. (2004-2010)

Mengold carried out prospecting and sampling programs on the property in 2004. A 43-101 technical report was prepared in 2006 (Wetherup et al., 2006). Also, in 2006, additional prospecting, sampling and ground-truthing were carried out, and five diamond drill holes, totalling 669m, were drilled to test several V-TEM conductor axes. Results were reported by Allard, 2007.

In 2007 – 2008 a basal till geochemical survey was carried out over portions of the property (Scodnick, 2008). Several areas containing gold, silver, copper, lead, zinc, molybdenum and arsenic anomalies, many of which were coincident with previous induced polarization chargeability and/or resistivity anomalies, and horizontal loop

electromagnetic anomalies. Additional line cutting, a reconnaissance soil geochemistry survey was recommended to follow up these results.

In 2008 21 diamond drill holes were completed on the property totaling 3,346m (19 were submitted for assessment). Two broad areas on significant but low-grade gold values were returned from the drilling. The first are in immediately east of Hermia Lake where previous widespread mineralization has been noted. Most of the significant gold values are associated with intermediate to felsic fine-grained tuffaceous rocks with associated pyrite mineralization. Rare intersections of low-grade copper mineralization were also returned. The highest gold value 7.188 g/t over 0.4m in hole BU08-7, is associated with mafic ash tuff mineralized with fine pyrite.

The second cluster of gold intersection is concentrated in the southwest corner of the property where more low gold value was intersected in five holes. In this area low grade gold mineralization is associated predominantly with basaltic rocks containing quartz veins and variable amounts of pyrite. Three intersections of low-grade zine were also noted.

DDH	From	To	Interval	Au g/t	Cu ppm	Zn ppm	Description
BU08-7	176.60	177.00	0.40	7.188			Mafic ash tuff with fine pyrite
BU08-9	143.00	146.00	3.00	1.810			Composite of 2 samples. Cherty felsic ash tuff with pyrite
	147.50	148.65	1.15	2.291			Description same as above
BU08-10	81.85	83.00	1.15	1.065			Mafic ash tuff with 3-10% pyrite, disseminated and locally concentrated in bands parallel to foliation.
	121.75	123.20	1.45	1.682			Intermediate and felsic ash tuff with fine pyrite.
BU08-11	27.00	28.45	1.45	1.677			Composite of 2 samples. Intermediate and felsic ash tuff with trace to 5% disseminated pyrite.
	29.45	31.30	1.85	1.442			Composite of 2 samples. Same description as above.
	44.40	45.40	1.00	1.076			Intermediate and felsic ash tuff. Trace to 8% pyrite concentrated along foliation planes.
BU08-12	66.50	68.00	1.50		4635		Felsic ash tuff, trace pyrite and chalcopyrite.
	127.55	128.55	1.00		4083		Mafic to felsic ash tuff. Trace to 5% pyrite, trace to 8% pyrrhotite and trace chalcopyrite.
BU08-15	157.00	158.00	1.00		4144		Haematitic felsic ash tuff.
BU08-16	35.50	36.50	1.00	1.156			Intermediate to felsic ash tuff. Pyrite up to 4%.
	182.30	182.80	0.50	1.235			Magnetic basalt with a thin seam of 30-35% pyrite.

DDH	From	To	Interval	Au g/t	Cu ppm	Zn ppm	Description
BU08-17	26.00	26.30	0.30	3.908			Magnetic basalt with 5% pyrrhotite and trace pyrite.
BU08-18	135.50	137.80	2.30	1.635			Composite of 3 samples. Massive basalt cut by a quartz vein. 10% pyrrhotite, 5% pyrite and 1% chalcopyrite.
	153.25	153.65	0.40	1.311		>5000	Basalt with 10% quartz veining, 75% pyrrhotite and 15% pyrite.
BU08-20	20.00	21.10	1.10	1.525			Basalt cut by quartz vein.
	49.50	49.85	0.35	1.179			Basalt, locally epidotized.
BU08-21	23.95	24.85	0.90	2.985			Basalt, with 5% pyrite and trace pyrrhotite.
	95.30	97.30	2.00			4825	Silicified and epidotized basalt with a few thin massive pyrrhotite stringers.
BU08-22	115.60	116.10	0.50			5877	Mafic cherty tuff with 15% quartz veining and 2% pyrite.
BU08-25	53.70	54.50	0.80	2.542			Mafic cherty tuff with heavy pyrite.
	70.80	73.30	2.50	1.294			Composite of 2 samples. Mafic cherty tuff with 8% pyrite.

6.0 HELIBORNE HIGH-RESOLUTION MAGNETIC SURVEY

Prospectair conducted a heliborne high-resolution magnetic (MAG) survey for Paleo Resources on their Burchell Lake Property from April 2nd to 4th, 2019. One survey block was flown for a total of 707-line kilometers with traverse lines at 75 metre spacing and control lines spaced every 750 metres.

The residual Total Magnetic Intensity (TMI) of the Burchell block, presented in Figure 5, is very active and varies over a range of 31,135 nT, with an average of 172nT and a standard deviation of 884 nT.

Most of the survey block is affected by linear magnetic features characteristic of alternating sequences of mafic volcanic rocks with sedimentary or intermediate to felsic volcanics, with possibly some small size intrusive stocks or dykes locally. A few areas are magnetically depressed and less active, such as in the northwestern part of the block, which is characteristic of sedimentary or felsic volcanic rocks. Other areas show extremely strong magnetic values typical of mafic/ultramafic intrusive rocks with significant magnetite concentrations, such as in the southeastern corner of the block. The strongest magnetic anomalies are best seen on Figure 7 – Appendix II which shows the residual TMI data with a linear color distribution.

The vast majority of magnetic lineaments found in the block are trending from E-W to NESW, except in a few areas where outlier lineaments are rather striking NW-SE (dykes?), or where they are significantly curved. These curved lineaments are mostly found in the western half of the block. Many are likely pertaining to folding, but some are possibly associated to the outline of intrusions, especially those depicting partial pseudo-elliptic shapes. 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 Burchell 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 6) and on the TILT (Figure 7) 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 5: Residual Total Magnetic Intensity with equal area color distribution

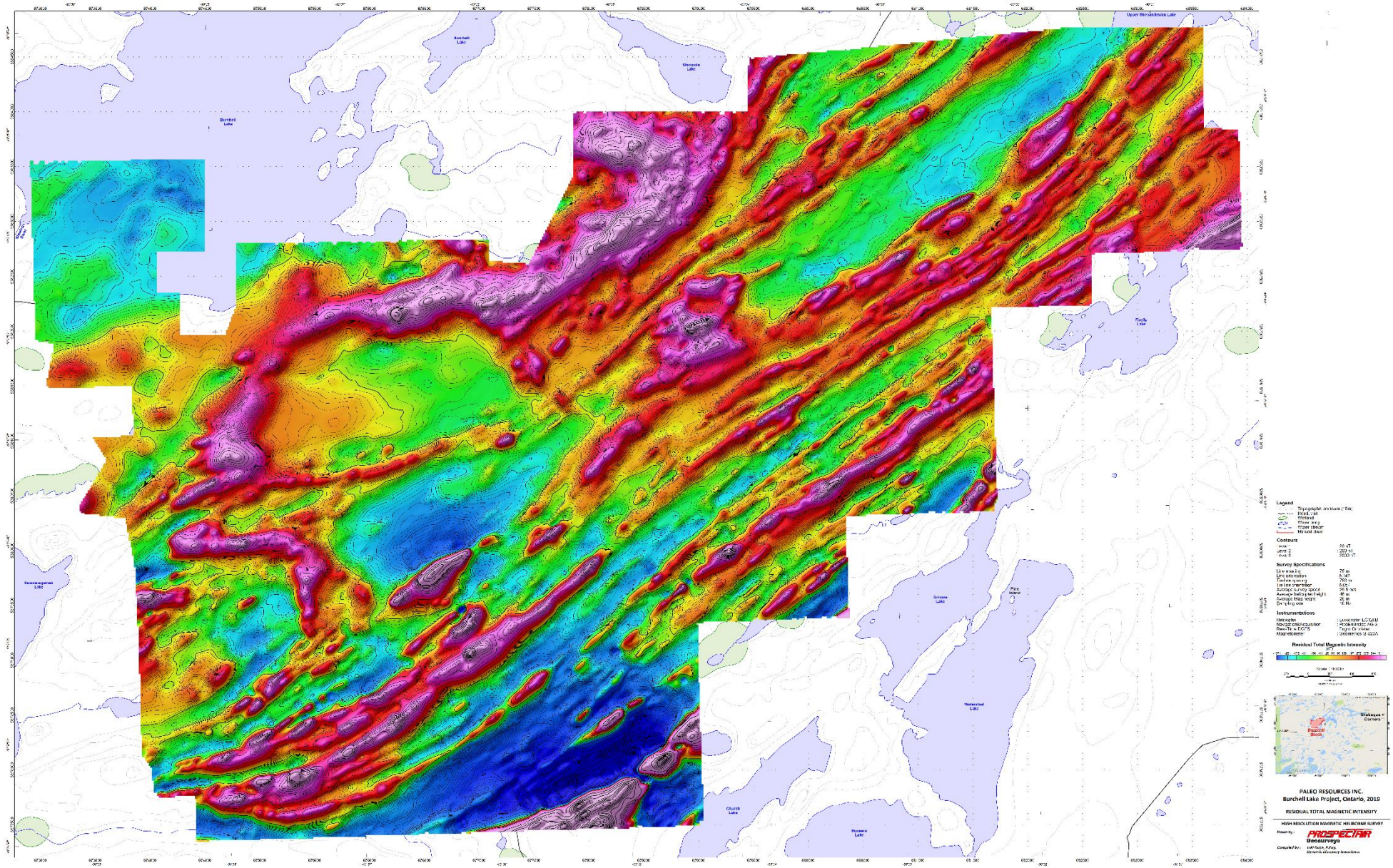


Figure 6: First Vertical Derivative of TMI

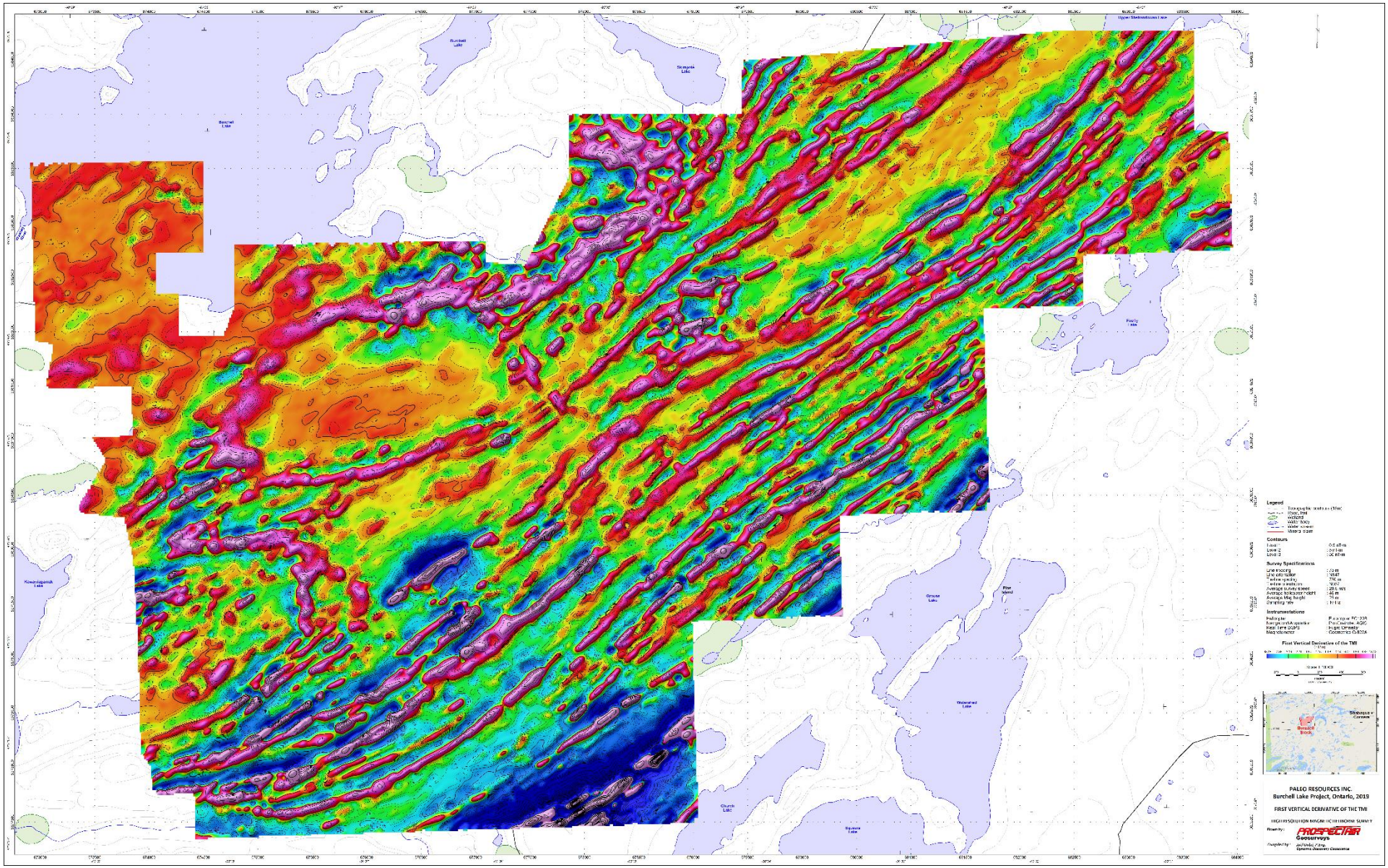
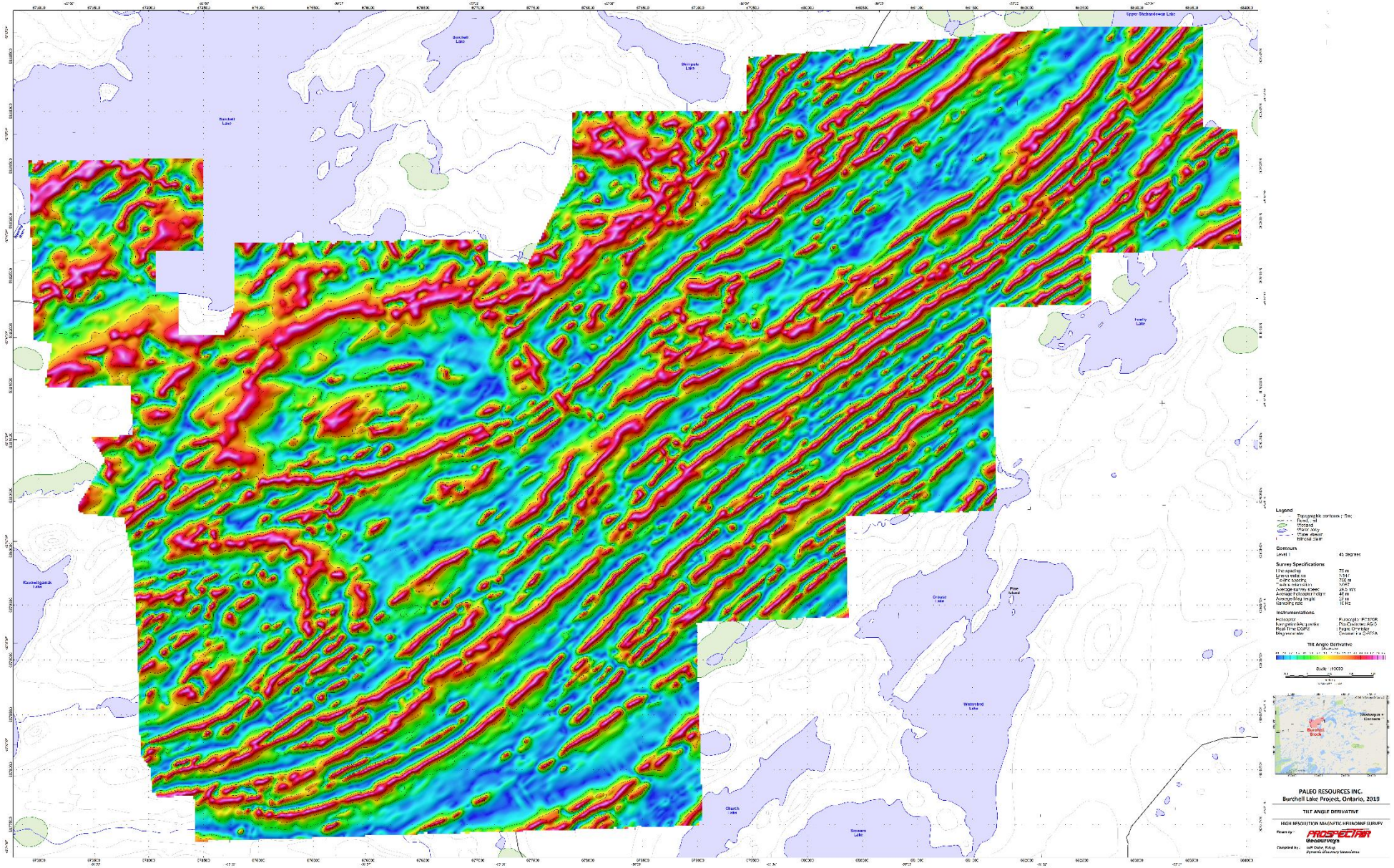


Figure 7: Tilt Angle Derivative



7.0 CONCLUSIONS AND RECOMMENDATIONS

The heliborne high-resolution electromagnetic survey conducted on the Burchell Property by Prospectair was successful in identifying prospective magnetic features for mineral exploration. The survey block is affected by linear magnetic features characteristic of alternating sequences of mafic volcanics with sedimentary or intermediate to felsic volcanics, with small intrusive stocks or dykes locally. The majority of the magnetic liniments trend E-W to NE-SW with the exception of some being curved in the western half of the property which are most likely related to folding or possibly associated to the outline of intrusions. 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.

The Upper Shebandowan Shear Zone trends NE-SW through the property and this general tend is confirmed by the magnetic lineaments. The intersection of these interpreted structures could serve as a fluid trap with potential for hosting economic gold or base metals mineralization similar to that found at North Coldstream or Moss Lake.

It is recommended that a data compilation be undertaken for the property to better assess and correlate historic working with the high-resolution magnetic data. A program of ground follow-up and soil sampling over prospective lineaments would aid in future drill site selection.

8.0 REFERENCES

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9.0 CERTIFICATE AND QUALIFICATIONS

Brent Clark
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Canada, P7B 5Z4
Telephone: 807-622-3284, Fax: 807-622-4156

CERTIFICATE OF QUALIFIED PERSON

I, Brent Clark, do hereby certify that:

1. I graduated with the degree of Honours Bachelor of Science (Earth Sciences) from Carleton University, Ottawa, Ontario in 2014.

2. "Assessment Report" refers to the report titled "Assessment Report on the Burchell Lake Property"

3. I am a registered Geologist in Training (G.I.T) the Professional Geoscientists of Ontario (#10506).

4. I have worked as a Geologist for 5 years since my graduation from university.

5. I have had no other prior involvement with the mineral Property that forms the subject of this Technical Report.

6. 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 24th day of August 2019.

SIGNED

"Brent Clark"

_____

Brent Clark, G.I.T

APPENDIX I

Burchell Lake Project Claims List

Tenure ID	Tenure Type	Township / Area	Anniversary Date	Tenure Status	Work Required
327077	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-15	Active	$177
327078	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-15	Active	$400
188248	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
188249	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
259910	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
110342	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
342430	Boundary Cell Mining Claim	BURCHELL LAKE AREA, MOSS	2019-02-16	Active	$200
141717	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
182099	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$200
188250	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
273180	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
273181	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$200
292250	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
303634	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
303635	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
145081	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
173670	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
291547	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
136945	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$200
158067	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$200
158068	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
210739	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$200
240555	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$200
258741	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$200
274453	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
277217	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$200
277218	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
306536	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
306537	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$200

Tenure ID	Tenure Type	Township / Area	Anniversary Date	Tenure Status	Work Required
306538	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$200
313301	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-02-16	Active	$400
122306	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$400
135591	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$400
187131	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$200
187692	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$200
200400	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$400
205952	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$400
212537	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$400
245172	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$200
245676	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$400
245677	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$200
249771	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$400
265239	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$200
265240	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$200
268518	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$200
319173	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-04-05	Active	$400
292718	Boundary Cell Mining Claim	BURCHELL LAKE AREA, MOSS	2019-07-06	Hold Pending extension of time	$200
241792	Boundary Cell Mining Claim	BURCHELL LAKE AREA, MOSS	2019-07-06	Hold Pending extension of time	$200
160606	Boundary Cell Mining Claim	BURCHELL LAKE AREA, MOSS	2019-07-06	Hold Pending extension of time	$200
111073	Boundary Cell Mining Claim	BURCHELL LAKE AREA, MOSS	2019-07-06	Hold Pending extension of time	$200
111058	Boundary Cell Mining Claim	BURCHELL LAKE AREA, MOSS	2019-07-06	Hold Pending extension of time	$200
111074	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$200
146488	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$200
176277	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$200
193682	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$200
213126	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$200
226082	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$400
261824	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$400

Tenure ID	Tenure Type	Township / Area	Anniversary Date	Tenure Status	Work Required
309634	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$400
315804	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$200
315819	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$400
315820	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$400
315821	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-06	Hold Pending extension of time	$200
107945	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-07	Hold Pending extension of time	$200
100031	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
115632	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$200
124985	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
124986	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$200
124987	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
141476	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
141477	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
170817	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
170818	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
226984	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
226985	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
226986	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$200
266704	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
274126	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
286264	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
302586	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
302587	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
302588	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
302589	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
320685	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$200
128064	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
229400	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
229401	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400

Tenure ID	Tenure Type	Township / Area	Anniversary Date	Tenure Status	Work Required
240280	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$200
275900	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
136894	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
200452	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
267056	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
311636	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-07-15	Hold Pending extension of time	$400
124984	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-08-29	Active	$400
266703	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-08-29	Active	$400
274125	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-08-29	Active	$200
210361	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2019-08-29	Active	$200
136946	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
201740	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
208569	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
291546	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
343763	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
166061	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
166062	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
250625	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
261348	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
268796	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
268797	Single Cell Mining Claim	BURCHELL LAKE AREA	2019-12-28	Active	$400
157103	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
189049	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
193594	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
212328	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
242239	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
274452	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
297384	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
311780	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200

Tenure ID	Tenure Type	Township / Area	Anniversary Date	Tenure Status	Work Required
343761	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
343762	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
195145	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
195146	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
278786	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
161795	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
253933	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
110286	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
122305	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
140122	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
141151	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
141152	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
146046	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
180239	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
187691	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
187693	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
187694	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
221891	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
244864	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
266496	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
266497	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
288458	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
292199	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
110973	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
155409	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
155410	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
162593	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
220124	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
241684	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200

Tenure ID	Tenure Type	Township / Area	Anniversary Date	Tenure Status	Work Required
267297	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
323380	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
334123	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
334124	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
110972	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
140445	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
146395	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
193063	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
194519	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
249744	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
277884	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$200
139172	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
158676	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
239119	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
313908	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
331680	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
108402	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
130337	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
242240	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
242241	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
250246	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
316324	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
103771	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
123302	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
123303	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
135312	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
167832	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
181284	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
187323	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400

Tenure ID	Tenure Type	Township / Area	Anniversary Date	Tenure Status	Work Required
342769	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-01-11	Active	$400
278785	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-02-05	Active	$400
235163	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-02-05	Active	$400
247806	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-02-05	Active	$400
259823	Boundary Cell Mining Claim	BURCHELL LAKE AREA	2020-02-05	Active	$200
276494	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-02-05	Active	$400
307045	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-02-05	Active	$400
307046	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-02-05	Active	$400
335201	Single Cell Mining Claim	BURCHELL LAKE AREA	2020-02-05	Active	$400
539092	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539093	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539094	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539095	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539096	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539097	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539098	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539099	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539100	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539101	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539102	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539103	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539104	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539105	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539106	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539107	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539108	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539109	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539110	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539111	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400

Tenure ID	Tenure Type	Township / Area	Anniversary Date	Tenure Status	Work Required
539112	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539113	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539114	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539115	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539116	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539117	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539118	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539119	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539120	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539121	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539122	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539123	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
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539125	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
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539127	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539128	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539129	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539130	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539131	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539132	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539133	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539134	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539135	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539136	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539137	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539138	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539139	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539140	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400

Tenure ID	Tenure Type	Township / Area	Anniversary Date	Tenure Status	Work Required
539141	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539146	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539147	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539148	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539149	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539150	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539151	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539152	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539153	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539154	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539155	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539156	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539157	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539158	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539159	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539160	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539161	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539162	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539163	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539164	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539165	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539166	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400
539167	Single Cell Mining Claim	BURCHELL LAKE AREA	2021-01-14	Active	$400

APPENDIX II

Technical Report

High-Resolution Heliborne Magnetic Survey

Prospectair

Technical Report

High-Resolution Heliborne Magnetic Survey

Burchell Project, Shebandowan Greenstone Belt Area
Thunder Bay Mining Division, Ontario, 2019

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Prospectair Geosurveys

Dynamic Discovery Geoscience

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I. INTRODUCTION

Prospectair conducted a heliborne high-resolution magnetic (MAG) survey for the mineral exploration company Paleo Resources Inc. on its Burchell Property located in the Shebandowan Greenstone Belt area, Thunder Bay Mining Division, Province of Ontario (Figure 1). The survey was flown from April 2nd to 4th 2019.

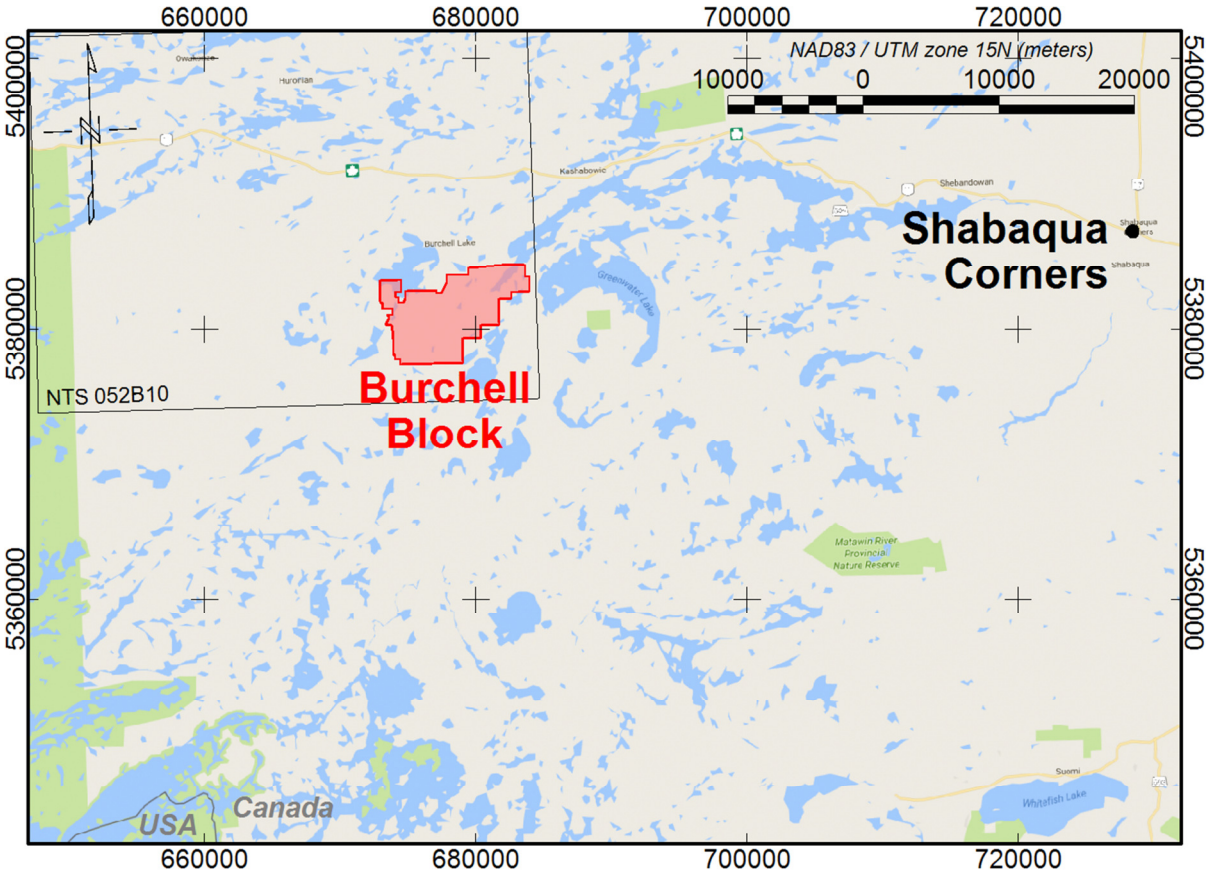
Figure 1: **General Survey Location**

One survey block was flown for a total of 707 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 Thunder Bay Airport and of Shabaqua Corners, which is located about 50 km to the east of the block (Figure 2).

Table 1: **Survey block particulars**

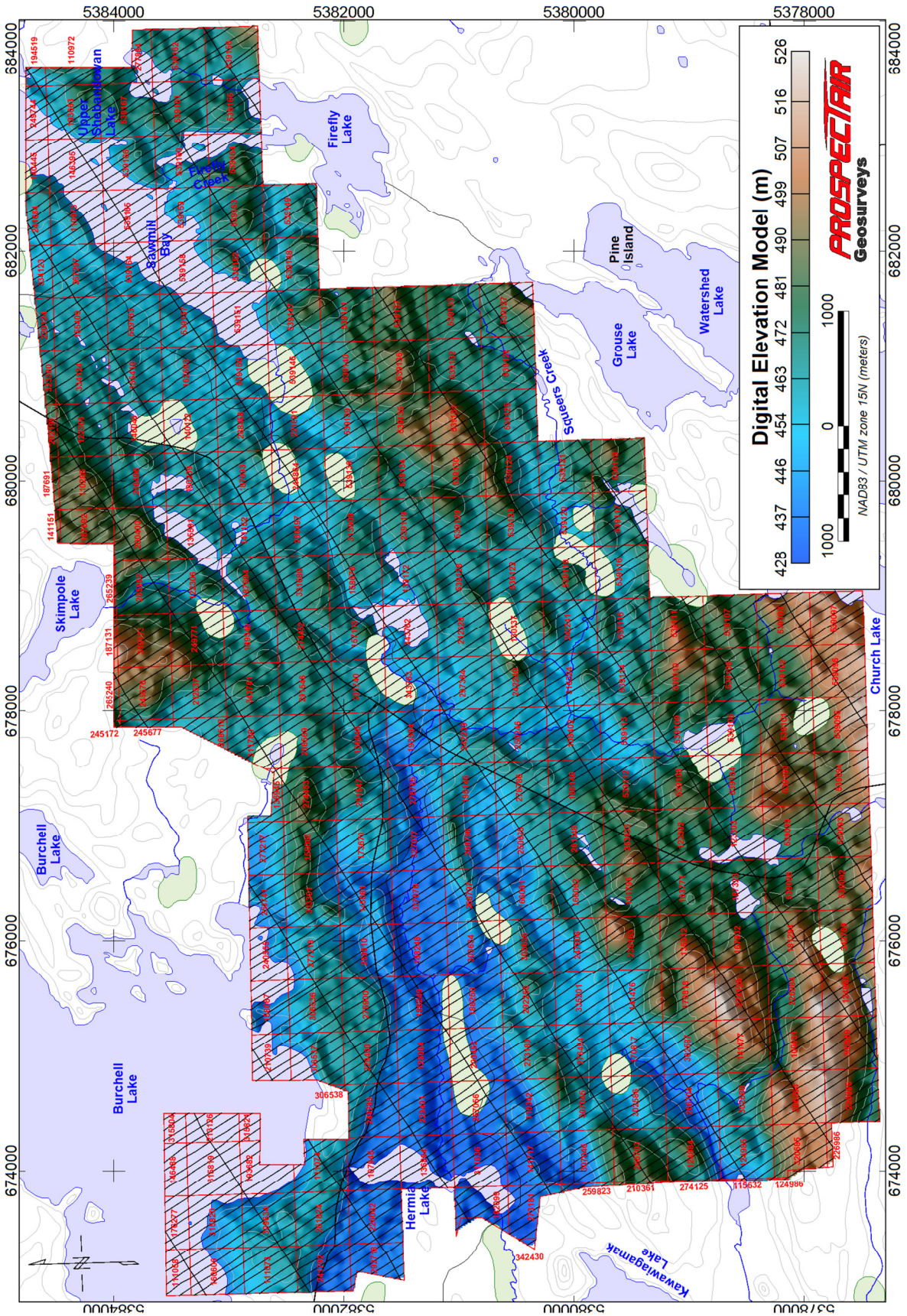
Block	NTS Mapsheet	Line-km flown	Flight numbers	Dates Flown
Burchell	052B10	707 l-km	Flt 1 to 6	April 2nd to 4th

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



The Burchell block was flown with traverse lines at 75 m spacing and control lines spaced every 750 m. The survey lines were oriented N147. The control lines were oriented perpendicular to traverse lines. The average height above ground of the helicopter was 46 m and the magnetic sensor was at 25 m. The average survey flying speed was 29.5 m/s. The survey area is covered by forest, lakes and wetlands, and, aside from a few dispersed hills, the topography is mostly gently undulating, which are fairly typical characteristics of the Shebandowan area. The elevation is ranging from 428 to 526 m above mean sea level (MSL). The Burchell Lake is located at the northwest corner of the survey block. The Property can be easily accessed by forestry roads connecting to Highway 11, which passes about 7 km to the north of the block's northern edge. The block is located approximately 100 km west of Thunder Bay. Coordinates outlining the survey block are given in Appendix A, with respect to NAD-83 datum, UTM projection zone 15N. The location of the Burchell 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 Burchell 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 21 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 1s 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 Burchell Block:

  Traverse lines: Azimuth N147, 75 m spacing.

  Control Lines: Azimuth N057, 750 m spacing.

IV. SYSTEM TESTS

Magnetometer System Calibration

The survey configuration using a bird towed 21 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 1.95 s for this survey.

V. FIELD OPERATIONS

The survey operations were conducted out of the Thunder Bay Airport, with some support from facilities established in Shabaqua Corners, from April 2nd to 4th, 2019. 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 survey block besides Squeers Lake, in a magnetically quiet area, at latitude 48.5111734°N, longitude 90.5519274°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 desktop computers optimized for quick daily QC and processing tasks. Geosoft software Oasis Montaj version 9.3.3 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 1.95 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.

Levelling corrections were performed using intersection statistics from traverse and tie lines. After statistical levelling was considered satisfactory, decorrugation was applied on the data to completely remove any 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 25 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 were created with 15 m grid cell size, appropriate for the survey lines spaced at 75 m. 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 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 Burchell block, presented in Figure 6, is very active and varies over a range of 31,135 nT, with an average of 172 nT and a standard deviation of 884 nT.

Most of the survey block is affected by linear magnetic features characteristic of alternating sequences of mafic volcanic rocks with sedimentary or intermediate to felsic volcanics, with possibly some small size intrusive stocks or dykes locally. A few areas are magnetically depressed and less active, such as in the northwestern part of the block, which is characteristic of sedimentary or felsic volcanic rocks. Other areas show extremely strong magnetic values typical of mafic/ultramafic intrusive rocks with significant magnetite concentrations, such as in the southeastern corner of the block. The strongest magnetic anomalies are best seen on Figure 7 which shows the residual TMI data with a linear color distribution.

The vast majority of magnetic lineaments found in the block are trending from E-W to NE-SW, except in a few areas where outlier lineaments are rather striking NW-SE (dykes?), or where they are significantly curved. These curved lineaments are mostly found in the western half of the block. Many are likely pertaining to folding, but some are possibly associated to the outline of intrusions, especially those depicting partial pseudo-elliptic shapes. 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 Burchell 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**

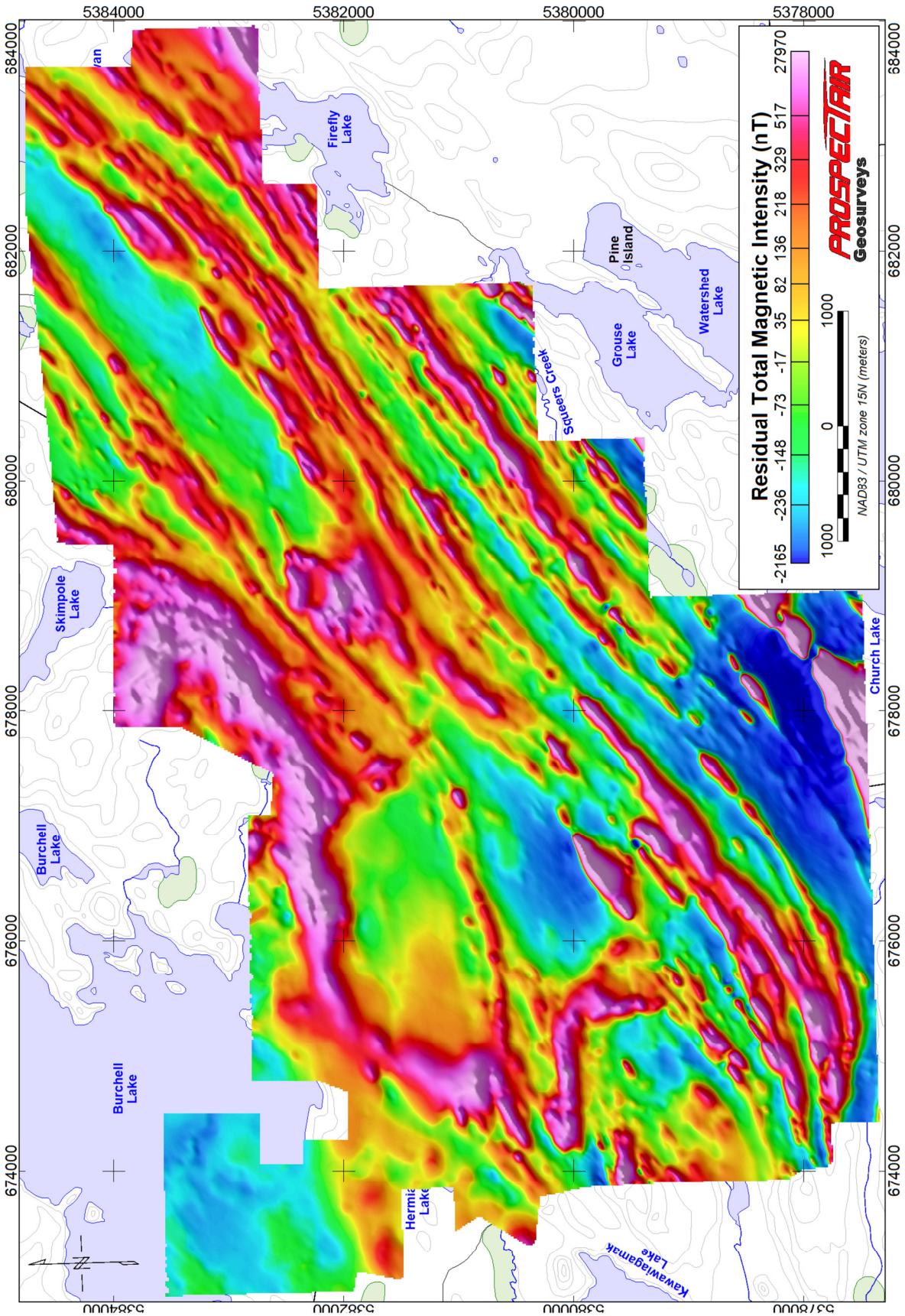


Figure 7: **Residual Total Magnetic Intensity with linear color distribution**

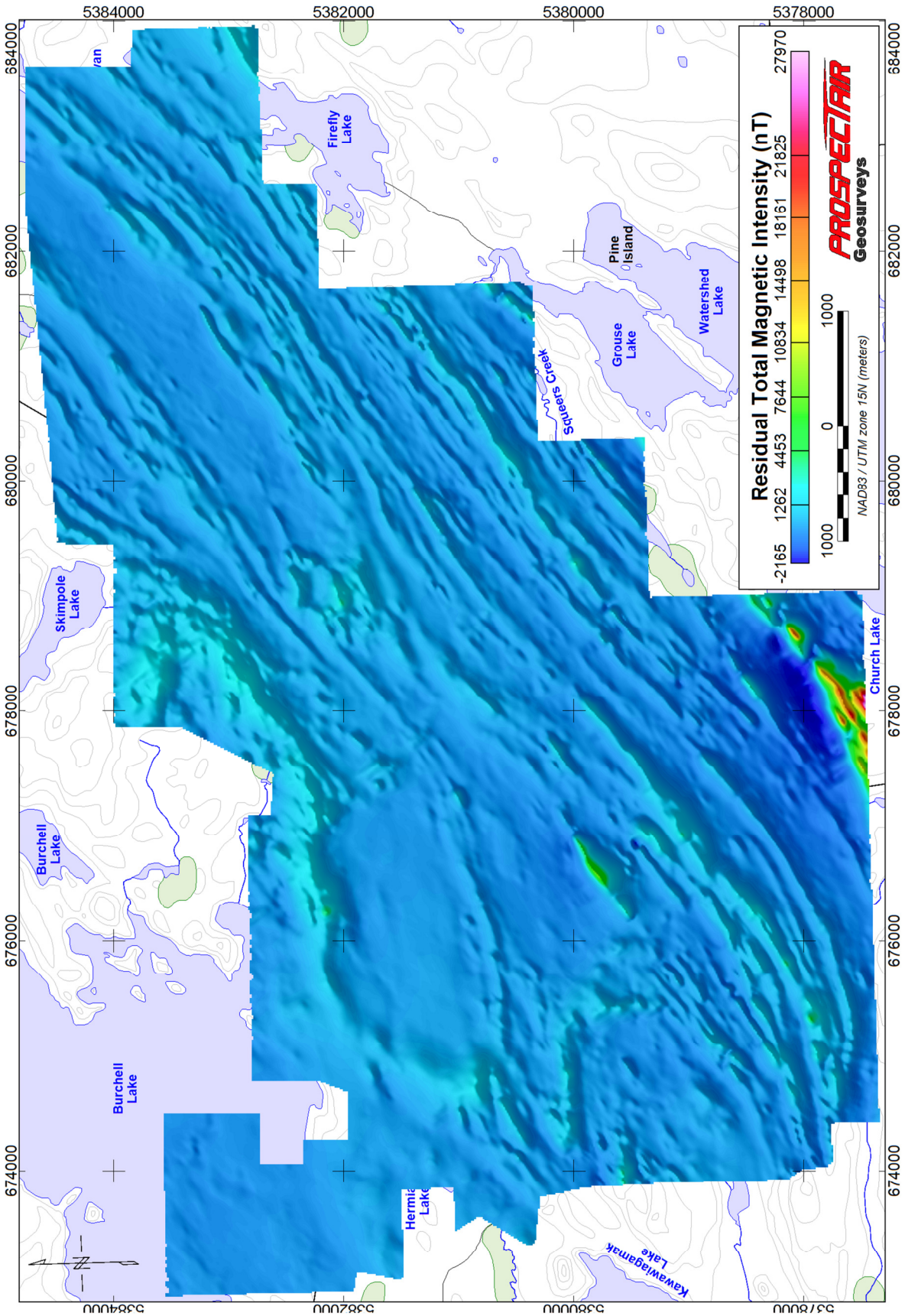


Figure 8: **First Vertical Derivative of TMI**

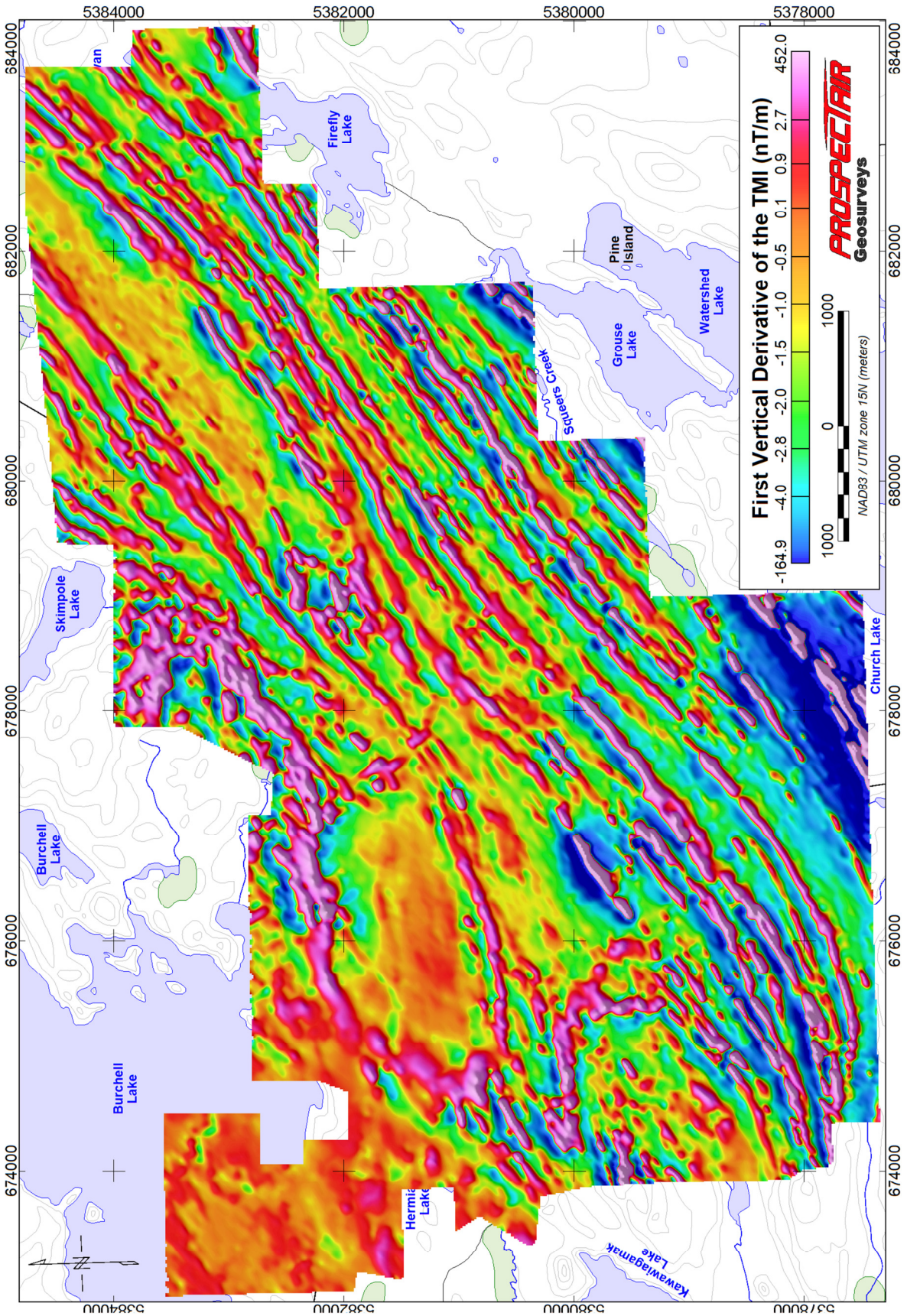
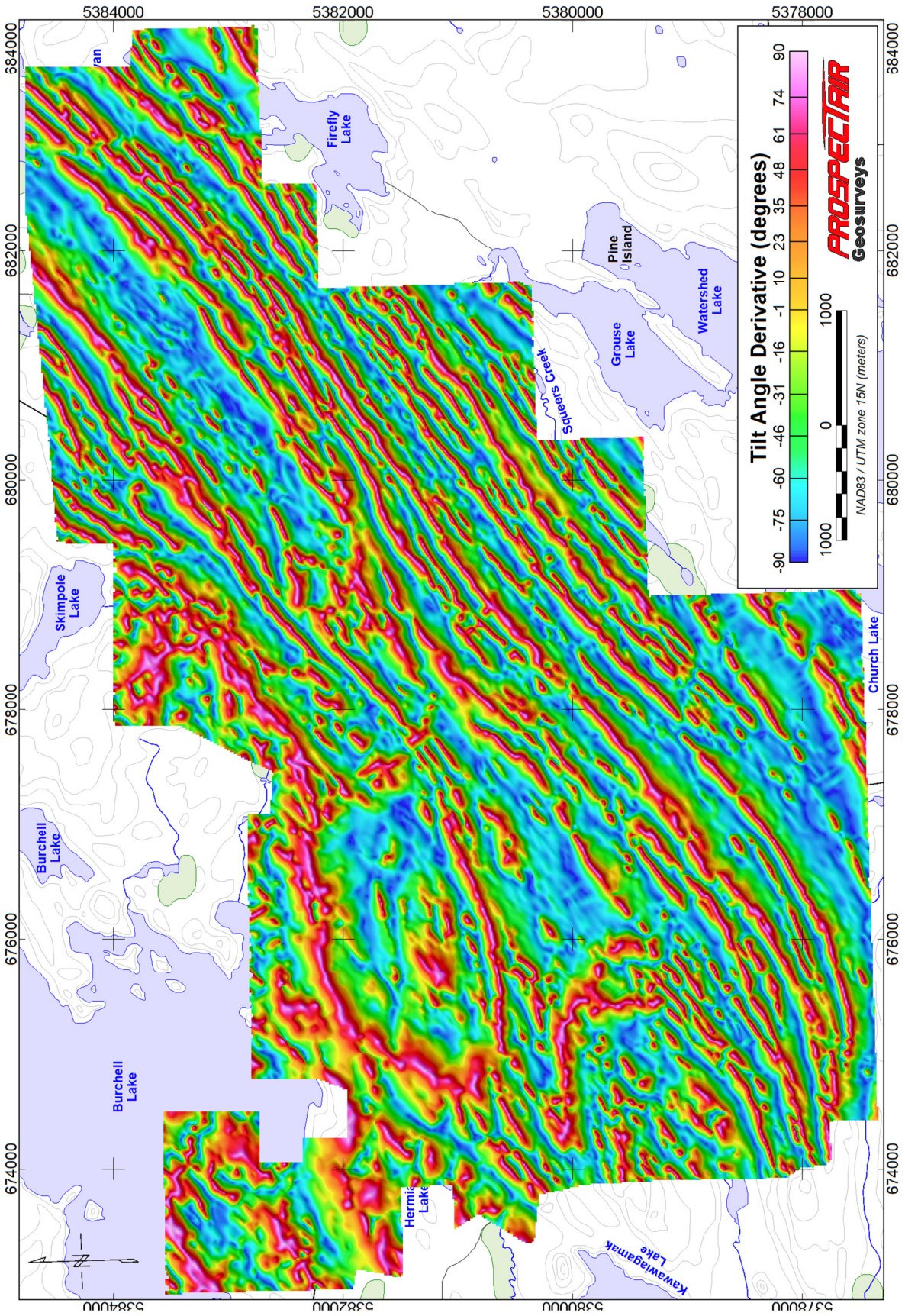


Figure 9: **Tilt Angle Derivative**



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	CDED_DEM	CDED Digital Elevation Model (w.r.t. MSL)	m
8	Terrain	Calculated Digital Elevation Model (w.r.t. MSL)	m
9	GPS_Z	Helicopter altitude (w.r.t. MSL)	m
10	Mag_Raw	Raw magnetic data	nT
11	Mag_Lag	Lagged magnetic data	nT
12	Gnd_mag	Base station magnetic data	nT
13	Mag_Cor	Magnetic data corrected for diurnal variation	nT
14	TMI	Fully levelled Total Magnetic Intensity	nT
15	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 1:10,000 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 15m 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^2
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.
May 22nd, 2019

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), and with Engineers Geoscientists Manitoba, No. 43414. (CofA No. 6897).

4. I have practised my profession for 20 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 22nd of May, 2019

_____
Joël Dubé, P.Eng. #100194954

X. Appendix A – Survey block outline

Burchell Block

Easting	Northing
679047	5377491
674427	5377347
674414	5377763
674036	5377747
674016	5378008
673925	5378140
673896	5379188
673858	5379891
673772	5380294
673318	5380344
673593	5380804
673591	5380846
673476	5381032
673851	5381043
673837	5381500
673047	5381477
673123	5381869
673110	5381888
672955	5381916
672911	5383546
674246	5383567
674502	5383569
674502	5382724
674057	5382729
674061	5382346
674277	5382351
674278	5381957
674687	5381968
674785	5382232
674781	5382798
677088	5382840
677089	5382646
677094	5382638
677456	5382613
677854	5383409
677854	5384003
679454	5384001
679455	5384491
680207	5384553
682398	5384770
683600	5384768
683600	5383848
683922	5383842
683942	5383215

Easting	Northing
683958	5382749
683033	5382719
682575	5382704
682590	5382241
681667	5382211
681727	5380358
680343	5380314
680373	5379388
678989	5379343

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

Claim number
334123
334124
539162
539154
539100
539117
539128
539137
100031
103771
107945
110286
110342
111058
111073
111074
110972
110973
108402
115632
122305
122306
123302
123303
124984
124985
124986
124987
128064
130337
135312
135591
136894
136945
136946
141476
141477
139172
140122
140445
141151
141152
145081
146046
141717
146488

Claim number
146395
157103
155409
155410
158676
158067
158068
160606
161795
162593
166061
166062
167832
170817
170818
173670
176277
180239
182099
181284
187131
187323
188248
188249
188250
539093
539092
539094
539095
539096
539097
539098
539099
187691
187692
187693
187694
189049
193063
193594
539109
539110
539111
539112
539113
539114
539115

Claim number
539116
193682
539101
539102
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539104
539105
539108
539106
539107
194519
195145
195146
539118
539119
539120
539121
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539124
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539126
539127
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201740
200452
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539138
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539148
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539149
539151
539152
539153
205952

Claim number
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539164
539165
539166
539167
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220124
226082
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229401
226984
226985
226986
235163
239119
240280
241684
242239
242240
242241
240555
241792
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245172
247806
245676
245677
249744
250625
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250246
253933
258741
259910

Claim number
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265240
261348
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267297
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268797
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273180
273181
274125
274126
277217
277218
277884
275900
276494
278785
278786
286264
288458
292199
292250
291546
291547
292718
297384
302586
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311636
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315820

Claim number
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313301
313908
315804
323380
320685
319173
327077
327078
335201
343761
343762
343763
342430
342769
331680