NI 43-101 EARLY-STAGE EXPLORATION PROPERTY REPORT

MOUND LAKE PROPERTY
THUNDER BAY DISTRICT, ONTARIO, CANADA

For: Rift Lithium Inc.

Prepared By: Mark C. Smyk *P.Geo.*

December 17, 2022

CERTIFICATE OF QUALIFIED PERSON

Mark C. Smyk, P.Geo., 500 Catherine Street, Thunder Bay ON P7E 1L1

I, Mark C. Smyk, *P.Geo.* am employed as a Consulting Geologist.

This certificate applies to the technical report titled "NI 43-101 EARLY-STAGE EXPLORATION PROPERTY REPORT, MOUND LAKE PROPERTY, THUNDER BAY DISTRICT, ONTARIO, CANADA" that has an effective date of 17 December 2022 (the "Report").

I am a member of the Professional Geoscientists of Ontario.

I graduated from Lakehead University with an Honours Bachelor of Science (H.B.Sc.) degree in Geology in 1984 and received a Master of Science (M.Sc.) degree in Geology from Carleton University in 1987.

I have practiced in my profession since 1982 and worked as a geologist and manager with the Ontario Geological Survey from 1984 to 2019.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101).

I visited the Mound Lake Property on October 06 and 23, 2022.

I am independent of Rift Lithium Inc. as independence is described by Section 1.5 of NI 43–101.

I have read NI 43–101 and the sections of the Technical Report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated: 17 December 2022

"Signed and sealed"

PROFESSIONAL GEOSCIENTIST
MARK C. SMYK
PRACTISING MEMBER
0316
ONTARIO

Mark C. Smyk, *P.Geo.*

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1. Summary

The Mound Lake Property is an Early-Stage Exploration property located approximately 90 km northeast of Thunder Bay, Ontario. It comprises 243 unpatented single cell mining claims in the townships of Cockeram, Church, McIvor and Adamson, Thunder Bay District, currently registered to Adam Mogil. An airborne magnetometer survey was conducted over the Property in June, 2022. A reconnaissance geological and geochemical sampling program was undertaken on the Property in October, 2022. New field data support the previous geological interpretation that the Property is underlain by granitic rocks with mineralogical and geochemical attributes similar to those that characterize 'fertile' granites (i.e., those that have the potential to give rise to lithium-cesium-tantalum (LCT) pegmatites and related mineralization. The Mound Lake Pluton (i.e., much of the current Property) and its environs represent a good, early-stage exploration target for LCT pegmatite and associated rare metal deposits. Further work in assessing its rare metal potential is warranted.

2. Introduction

This Report on the Mound Lake Property, Thunder Bay District, Ontario (the Qualifying Property) was prepared for Rift Lithium Inc. to support their listing on the Canadian Securities Exchange.

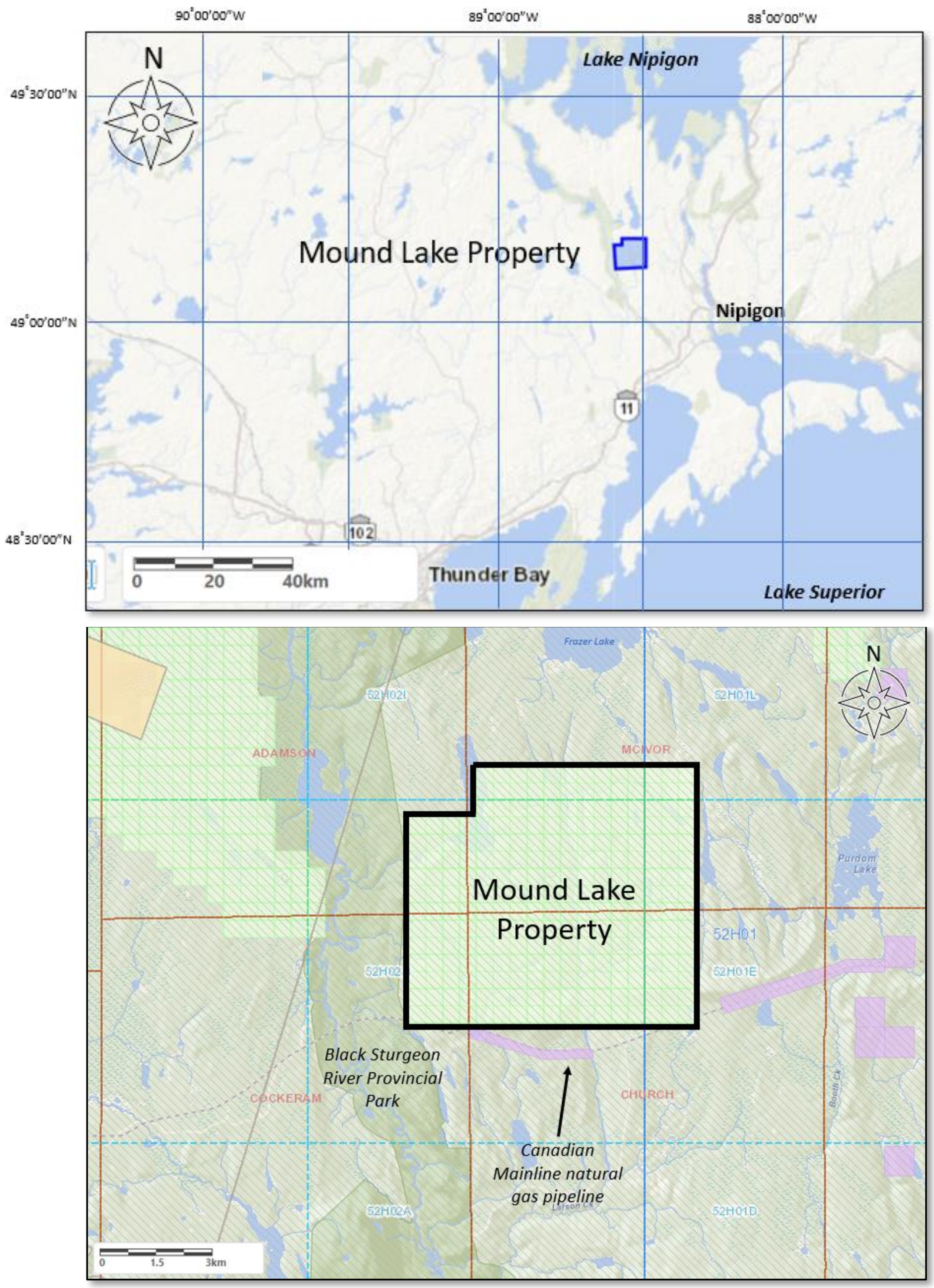
Information contained therein was gleaned from both public domain sources and from field examination during property visits by the Qualified Person on October 6 and 23, 2022. Cited references are provided throughout the text and are listed at the end of this Report. The Report uses Canadian English and metric units, unless otherwise indicated.

3. Reliance on Other Experts

This Report relies, in part, on information provided by other geoscientists and exploration professionals. They have been acknowledged and referenced throughout. Wherever possible, the Qualified Person has reviewed references and cited materials and verified both their authenticity and accuracy.

4. Property Description and Location

The Mound Lake Property, covering an area of approximately 5200 hectares (ha), comprises 243 unpatented single cell mining claims in the townships of Cockeram, Church, McIvor and Adamson, Thunder Bay District, Ontario (Figure 1). The claims are numbered 695867 through 696109, inclusive, and registered to Adam Neil Mogil (as of December 17, 2022; Appendix A; Figure 2). The property is situated between latitudes 49˚06’43” and 49˚10’30” N and longitudes 88˚28’45” and 88˚35’19” W.



Figures 1a,b: Location of Mound Lake Property. Claim map from https://www.lioapplications.lrc.gov.on.ca/MLAS/Index.html?viewer=MLAS.MLAS&locale=en-CA (accessed December, 2022).

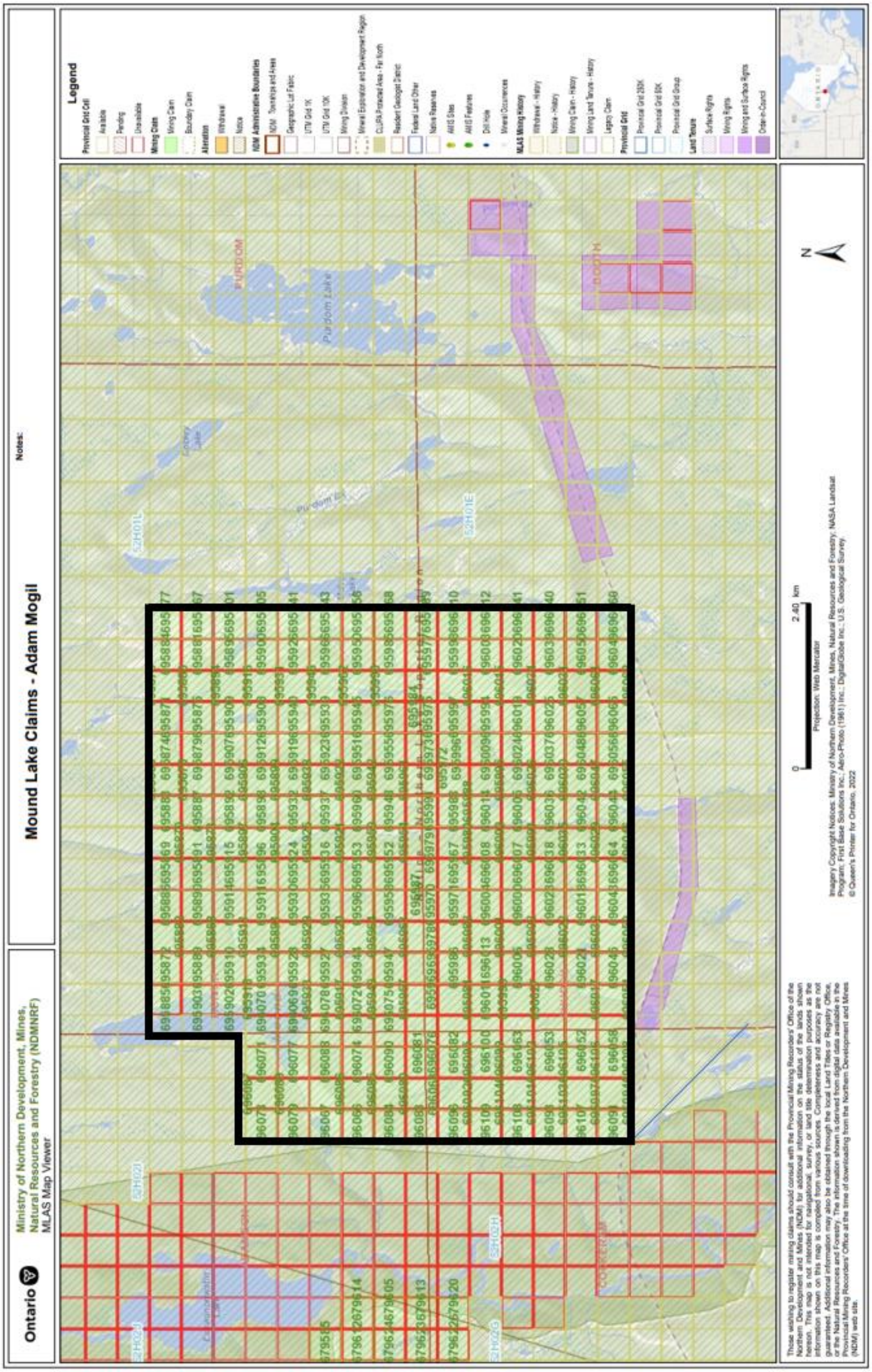


Figure 2. Detailed mining claim map of the Mound Lake Property (black outline), from https://www.lioapplications.lrc.gov.on.ca/MLAS/Index.html?viewer=MLAS.MLAS&locale=en-CA; accessed December, 2022

4.1 Exploration Plans and Permits

An **Exploration Plan** is a document provided to the Ontario Ministry of Mines (MOM) by an early exploration proponent indicating the location and dates for prescribed early exploration activities. Exploration plans are used to inform Aboriginal communities, government, surface rights owners and other stakeholders about these activities. In order to undertake certain prescribed exploration activities, an exploration plan must be submitted, and any surface rights owners must be notified. Aboriginal communities potentially affected by the exploration plan activities will be notified by the MOM and have an opportunity to provide feedback before the proposed activities can be carried out (https://www.ontario.ca/page/mining-sequence).

Activities that require an Exploration Plan:

- line cutting that is a width of 1.5 m or less
- geophysical surveys on the ground requiring the use of a generator
- mechanized stripping a total surface area of less than 100 m^2 within a 200-m radius
- excavation of bedrock that removes 1 m^3 and up to 3 m^3 of material within a 200-m radius
- use of a drill that weighs less than 150 kg.

(https://www.ontario.ca/page/exploration-plans)

An **Exploration Permit** allows a proponent to carry out specific early exploration activities at specific times and in specific locations. Exploration Permits include terms and conditions that may be used to mitigate potential impacts identified through the consultation process. Some prescribed early exploration activities will require an exploration permit. Those activities will only be allowed to take place once the permit has been approved by MOM. Surface rights owners must be notified when applying for a permit. Aboriginal communities potentially affected by the exploration permit activities will be consulted and have an opportunity to provide comments and feedback before a decision is made on the permit. Permit proposals will be posted for comment on the Ontario Ministry of the Environment Environmental Registry for 30 days (https://www.ontario.ca/page/exploration-permits).

Activities that require an Exploration Permit:

- line cutting that is a width greater than 1.5 m
- mechanized stripping of a total surface area of greater than 100 m^2 within a 200-m radius and below Advanced Exploration thresholds
- excavation of bedrock that removes more than 3 m^3 of material within a 200-m radius
- use of a drill that weighs more than 150 kg.

(https://www.ontario.ca/page/exploration-permits).

There are currently no applications nor approved Exploration Plans or Permits for the Mound Lake Property. Applications for Exploration Plans and/or Permits will be submitted by Rift Lithium Inc. when any prescribed early exploration activities are planned in the future.

5. Accessibility, Climate, Local Resources, Infrastructure and Physiography-

5.1 Physiography and Surficial Geology

The Mound Lake Property, south of Lake Nipigon, is situated in typical, flat to rolling, Canadian Shield topography, where relief rarely exceeds 60 m. Elevations on the property range from ca. 310 m to 400 m Above Sea Level. Prominent, isolated ridges and mesas, up to 150 m high, reflect the presence of erosion-resistant diabase sills and dykes in the underlying bedrock. The property comprises several small lakes and part of Mound Lake. It is cut by numerous small creeks and ravines. In the vicinity of the property, bedrock is overlain by thin, discontinuous glacial drift. Glaciofluvial outwash deposits of sand and gravel occur along the Black Sturgeon River. Peaty organic deposits occur in swampy, low-lying areas south of Frazer Lake; glaciolacustrine clay deposits occur in the southeastern corner of the property (Barnett et al. 1991; Dyer and Russell 2002; Mollard and Mollard 1981, Figures 3,4). Many of the outcrops on the Mound Lake property display evidence of glacial scouring and polishing, resulting in many flat, very smooth outcrop surfaces (e.g. frontispiece photo). Glacial striae and other such features indicate that the main ice flow direction in the area was to the southwest.

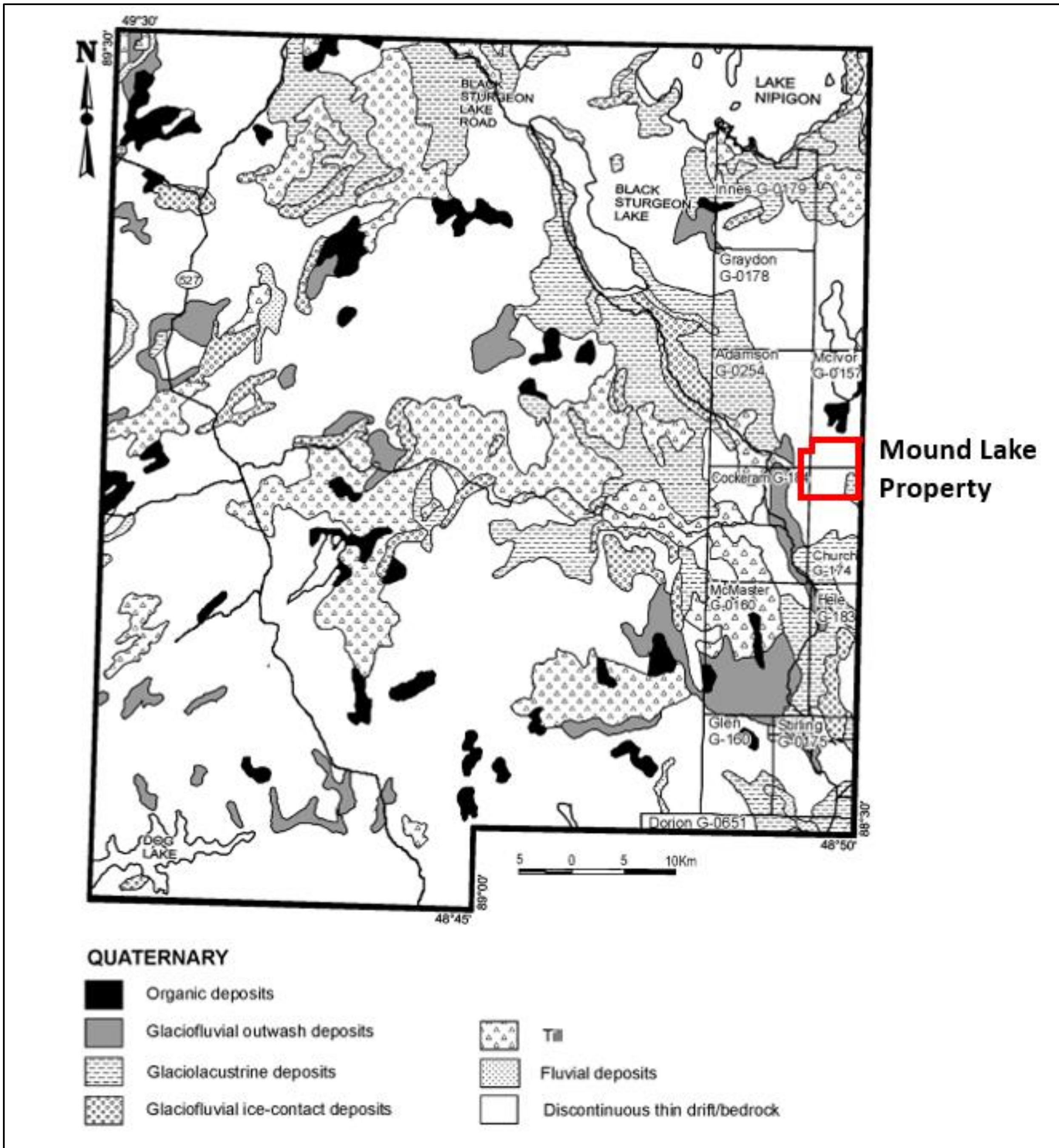
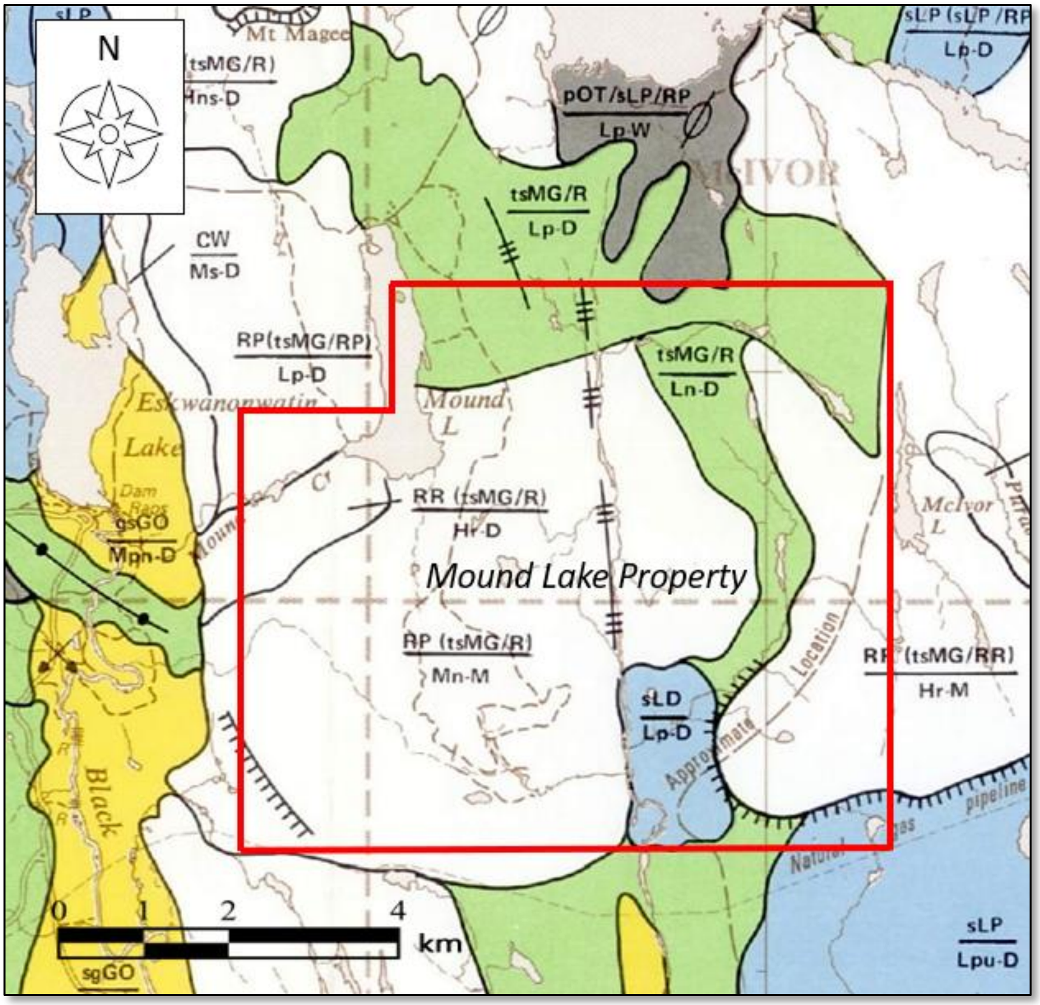
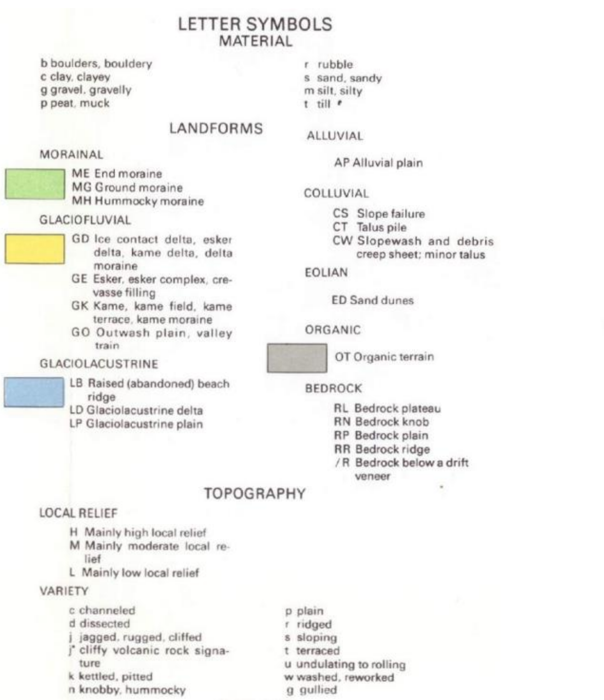


Figure 3. Generalized Quaternary geology of the area south of Lake Nipigon (Barnett et al. 1991; Dyer and Russell 2002).





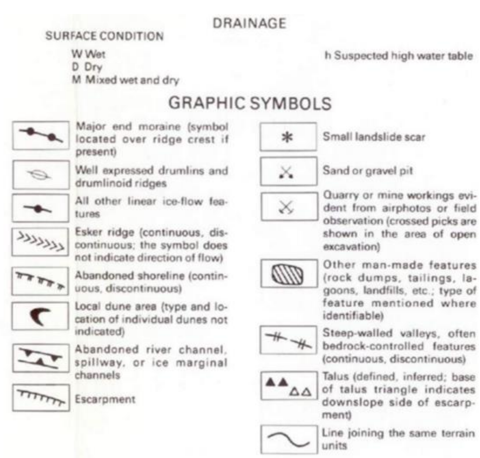


Figure 4. Detailed surficial geology and geomorphology of the Mound Lake Property area (Mollard and Mollard 1981).

5.2. Climate and Local Resources

The Mound Lake Property is situated within Black Spruce Forest is located in the MNRF's Northwest Region (https://nrip.mnr.gov.on.ca/s/fmp-online?language=en_US). For forest management purposes, the Ministry has issued a sustainable forest licence to Resolute FP Canada Inc. Clear-cut logging operations target stands of coniferous softwood (e.g. black spruce, jack pine) and deciduous hardwood (e.g. trembling aspen). Deciduous forest fire cycles range between 70 and 210 years, and fires tend to be variable in intensity. Jack pine forest fire cycles are somewhat shorter, between 50 and 187 years, and fires tend to be stand-replacing. Growing season moisture deficits compounded by shallow substrates result in an intense fire regime characterized by relatively frequent and large fires (https://files.ontario.ca/mnrf-ecosystemspart1-accessible-july2018-en-2020-01-16.pdf). A large forest fire occurred in the area approximately 20 years ago, as evidenced by immature stands of jack pine on the property.

In addition to fibre for commercial use, the Forest supports wildlife and ecosystem functions such as carbon sinks and water conservation. There are many productive areas in terms of moose populations. In addition, woodland caribou are known to use the northern and northeastern portions of the Forest, including the shoreline of Lake Nipigon. Through logging, silviculture, and milling activities, the Black Spruce Forest provides employment directly and indirectly to numerous industrial suppliers and contractors and supports widespread commercial and recreational opportunities, including trapping, angling, and hunting and is used extensively by the public (https://ero.ontario.ca/notice/019-1460). The area falls within Ontario climatic zone "H", based on its average frost-free period of between 100 and 110 days (http://www.omafra.gov.on.ca/english/crops/facts/climzoneveg.htm) and is characterized by brief, hot summers and cold, snowy winters, typical of a moist continental climate. As part of the Lake Nipigon Ecoregion, it is characterized as a Moist Mid-Boreal Ecoclimatic Region (https://files.ontario.ca/mnrf-ecosystemspart1-accessible-july2018-en-2020-01-16.pdf).

5.3 Accessibility and Infrastructure

The Mound Lake Property is located approximately 90 km north-northeast of the City of Thunder Bay and 25 km northwest of the Town of Nipigon (Figure 5). The property is accessible via the all-season, gravelled Black Sturgeon Road, approximately 30 km from Highway 11-17, and then via the gravelled Camp 42 / Church Lake and Rollercoaster roads, which cut through the eastern part of the property (Figure 6). Overgrown logging roads extend into other parts of the property and are only accessible via all-terrain vehicle.

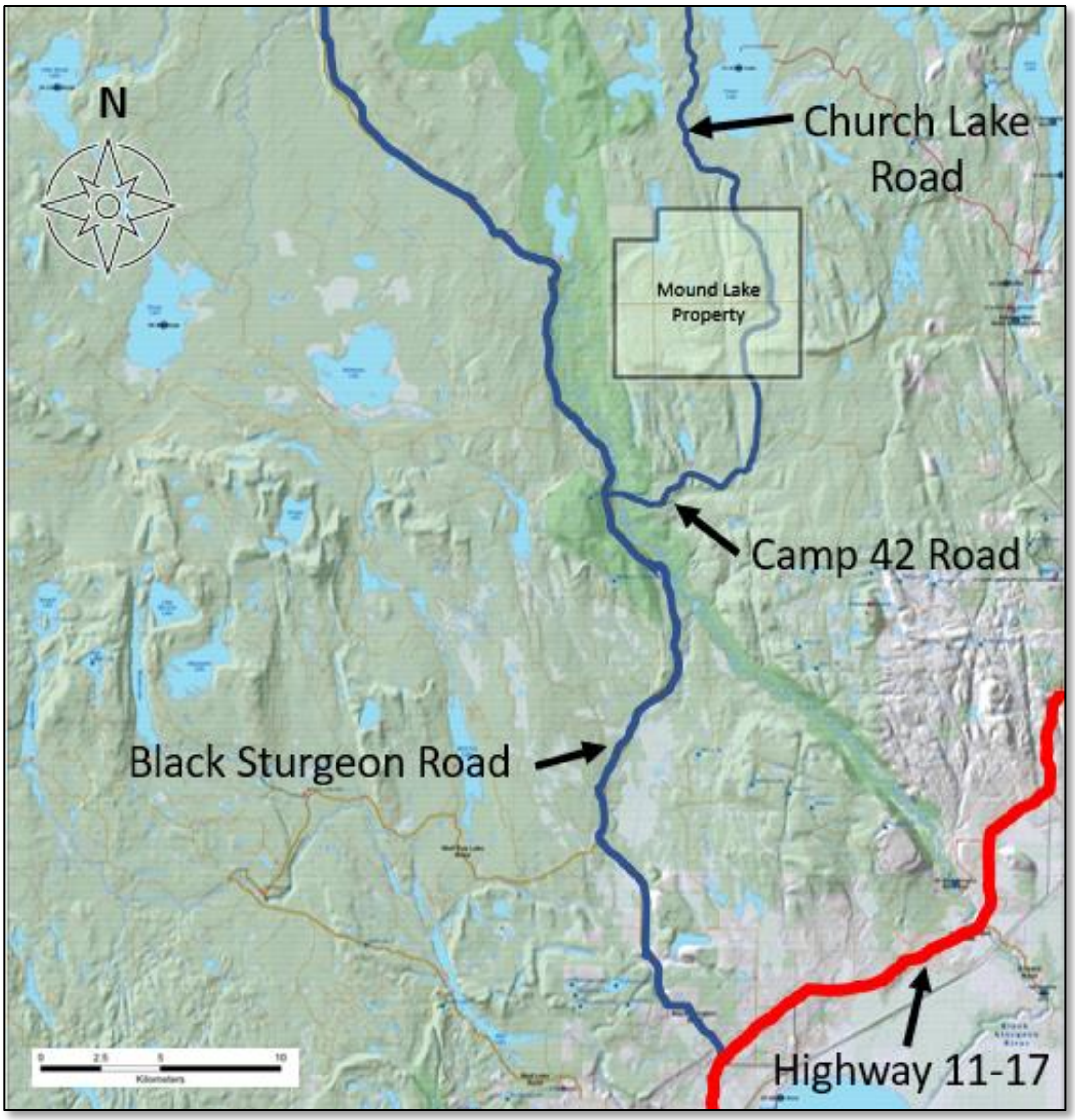


Figure 5. Road access to Mound Lake Property (map from https://nipigon.com/nipigonmap/)

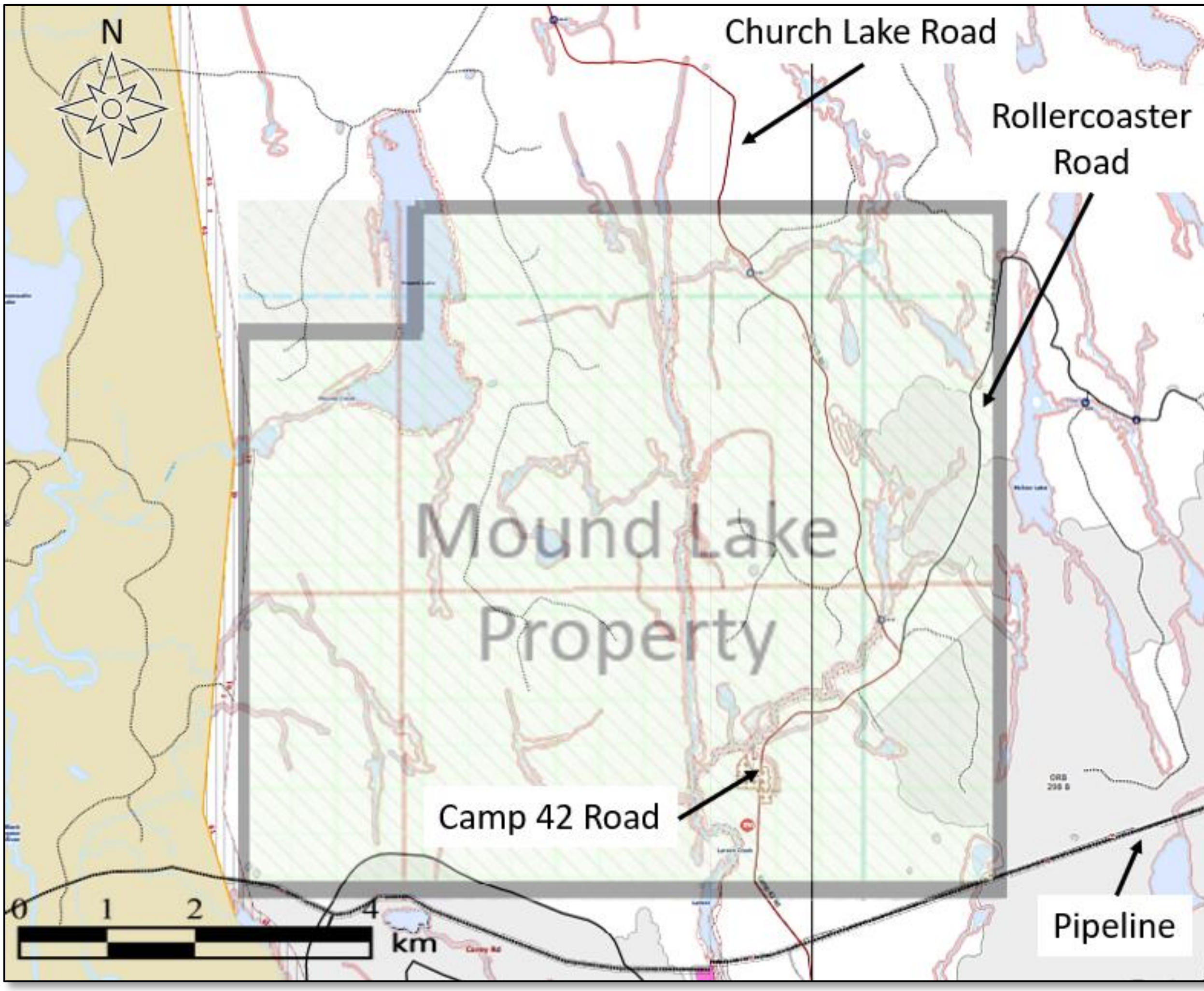


Figure 6. Logging road network, Mound Lake Property area (Map from https://nrip.mnr.gov.on.ca/s/published-submission?language=en_US&recordId=a0z3g000000zTYmAAM)

The Canadian Mainline natural gas pipeline, operated by TC Energy, extends just below the southern border of the property. The Canadian Pacific Railway and electrical transmission corridors parallel Highway 11-17 to the southeast. The property lies within the Black Sturgeon General Use Area (G2683) in Nipigon and Thunder Bay districts of the Ministry of Natural Resources and Forestry. A full range of resource and recreational uses can be permitted within a GUA. Black Sturgeon River Provincial Park (P2250) extends along the western edge of the property. Several private cottaging lots exist on the shoreline of Frazer Lake, a few kilometres north of the property (Crown Land Use Policy Atlas (gov.on.ca).

5.4. Neighbouring Communities

The property is situated within the area covered by the Robinson-Superior Treaty, 1850. Nearby Métis and First Nation (FN) communities include Red Rock Indian Band (Lake Helen 53A, Red Rock 53), Biinjitiwaabik Zaaging Anishinaabek (Rocky Bay FN), Bingwi Neyaashi Anishinaabek (Sand Point FN), Fort William FN and Kiashke Zaaging Anishinaabek (Gull Bay FN).

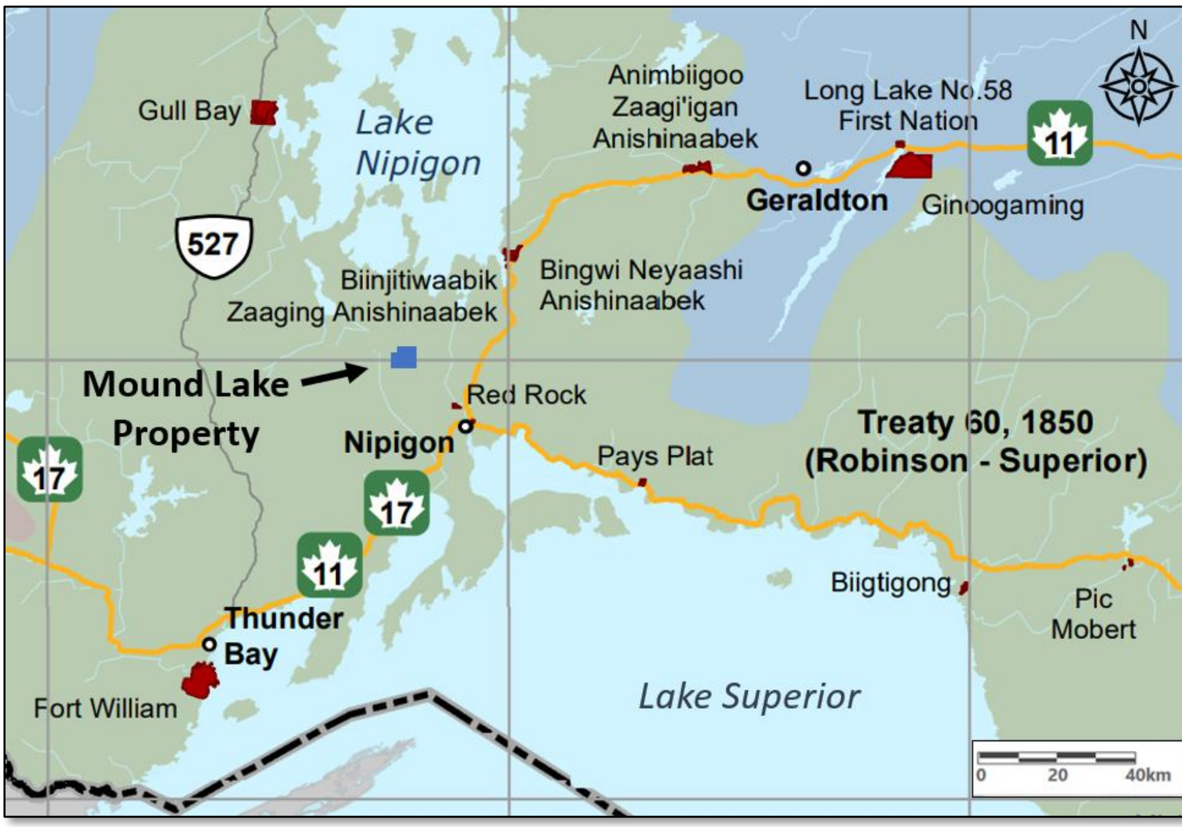


Figure 7. Location of Mound Lake Property, showing neighbouring First Nation communities.

6. History

6.1. Previous Exploration

The Mound Lake property, registered as 243 Single-Cell Mining Claims by Adam Neil Mogil in October, 2021, has experienced very little staking and exploration activity in the past. The vast majority of the nearby, recorded assessment work was associated with uranium exploration over the past 40 years. No recorded exploration work for lithium/rare metals is known in the vicinity of the property. Table 1, below, provides a summary of this work; Figure 8 depicts the location of the properties on which this work was conducted.

Compilation data were gleaned from .kml files housed the OGS Earth website (https://www.geologyontario.mndm.gov.on.ca/ogsearth.html).

File ID	File Type	Primary Township or Area	Secondary Township or Area	NTS	AFRO Number	Resident Geologist Office File Number(s)	Year Work Performed	Work Performed For	Type of Work
52H08SE0004	Approved Assessment	Graydon	Adamson, McIvor, Oskawe Lake Area, Sprout Lake Area	52H08SE	2.4082	52H01NW-5, 52H02NE-2, 52H08SW-2	1981	Uranerz Exploration and Mining Limited	Airborne Electromagnetic, Airborne Magnetometer
20000002235	Approved Assessment	Adamson	Church, Cockeram, McIvor, North of Purdom Twp. Area, Shillabeer Lake Area, Sprout Lake Area	52H01NW, 52H01SW, 52H02NE, 52H02SE	2.35313	52H01NW-9, 52H01SW-3, 52H02NE-004ab, 52H02SE-12, W0740.01252	2007	Benton Resources Inc.	Geochemistry; Prospecting
20000008921	Approved Assessment	Oskawe Lake Area	McIvor	52H01NW	2.54887	52H01NW-11	2012-2014	HTX Minerals Corp.	Diamond Drilling; Geochemistry; Ground Geophysics (Gravity)
52H02SE0004	Approved Assessment	Leckie	Anders Lake Area, Church, Cockeram, Leckie Lake Area, Little Sturge Lake Area, McMaster, Shillabeer Lake Area, Wolf Lake Area	52H02SE	2.2778	52A15NE-2, 52A15NW-002ab, 52H02SE-1, 52H02SW-1	1978	Asarco Exploration Company of Canada Ltd.	Airborne Magnetometer
52H02SE9196	Approved Assessment	Leckie Lake Area	Cockeram, Hele, Little Sturge Lake Area, McMaster, Shillabeer Lake Area, Wolf Lake Area	52H02SE	2.2967	52A15NE-2, 52A15NW-002ab, 52H02SE-1, 52H02SW-1	1978	Asarco Exploration Co of Canada Ltd.	Airborne Radiometric
52H02SE0003	Approved Assessment	Cockeram		52H02SE	2.3023	52H02SE-8	1979	Uranerz Exploration and Mining Ltd.	Airborne Radiometric; Airborne Magnetometer
20000002236	Approved Assessment	Anders Lake Area	Cockeram, Glen, Leckie Lake Area, McMaster, Shillabeer Lake Area, Stirling, Wolf Lake Area	52A15N, 52A15NW, 52H02SE, 52H02SW	2.35295	52A15NE-10, 52A15NW-12, 52H02SE-11, 52H02SW-34	2007	Benton Resources Inc., Tri-Gold Resources Corp.	Airborne Magnetometer; Airborne Electromagnetic
52H01NW9210	Approved Assessment	Purdom	North Of Purdom Twp. Area	52H01NW	2.5090	52H01NW-3	1982	Uranerz Exploration and Mining Ltd.	Geochemical; Geological / Mapping; Ground Radiometric; Ground Magnetometer; Ground VLF-Electromagnetic; Bedrock Trenching; Overburden Stripping
52H07SW0001	Approved Assessment	Mikinak Lake Area	McIvor, North of Purdom Twp. Area, Purdom	52H07SW	63.4151		1982	Uranerz Exploration and Mining Ltd.	Geochemical; Geological Survey / Mapping; Ground VLF-Electromagnetic; Ground Magnetometer Survey; Ground Radiometric; Bedrock Trenching
20000003445	Approved Assessment	McIvor	North Of Purdom Twp. Area, Purdom	52H01NW	2.38719	52H01NW-10	2007	RPT Uranium Corp.	Diamond Drilling; Overburden Stripping

52H01NW2002	Approved Assessment	Purdom		52H01NW	2.20712	52H01NW-8	2000	Kenneth George Fenwick	Diamond Drilling; Geochemistry
52H01NW2001	Approved Assessment	Purdom		52H01NW	2.20008	52H01NW-7	1999 to 2000	East West Resources Corp	Induced Polarization; Magnetometer Survey; Open Cutting

Table 1. Previous exploration work on or near the Mound Lake Property. Data gleaned from https://www.geologyontario.mndm.gov.on.ca/ogsearth.html.

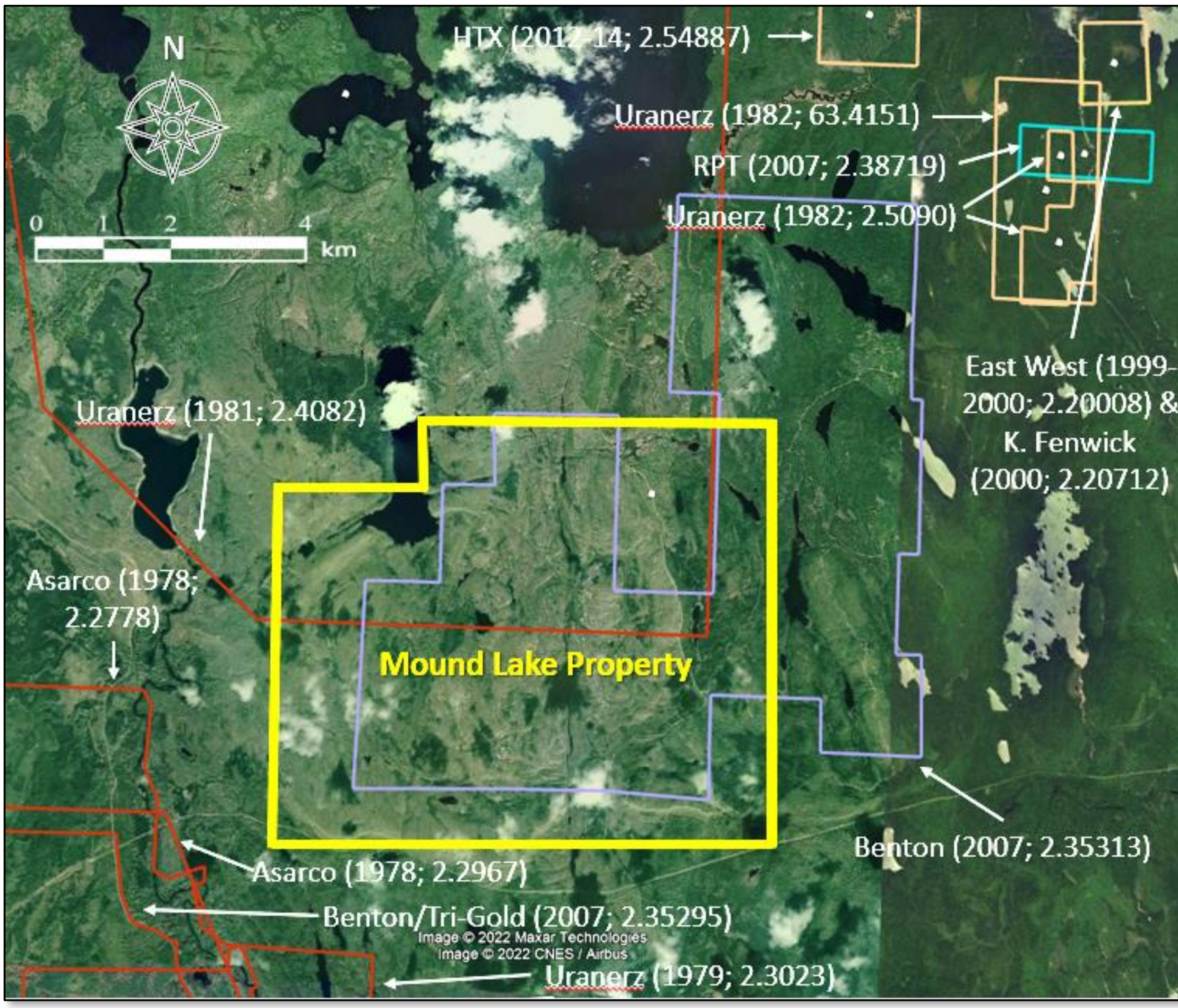


Figure 8. Polygons showing properties on which previous exploration work was filed for assessment credit in the Mound Lake Property area (https://www.geologyontario.mndm.gov.on.ca/ogsearth.html). AFRO numbers identify specific properties/activities, as listed in Table 1, above.

Only two properties on which exploration was undertaken overlap onto the current Mound Lake property: Benton Resources Inc.'s program of geochemistry and prospecting in 2007 and an airborne electromagnetic and magnetometer survey carried out by Uranerz Exploration and Mining Limited in 1981.

Prospecting and sampling were conducted in 2007 on Benton Resources', Block B uranium property (Sims 2007). Prospecting was designed to explore regions where uranium content was high, as gleaned from an airborne gamma-ray spectrometer survey performed as part of the Lake Nipigon Regional Geoscience Initiative (Ontario Geological Survey 2004). Prospectors ground-truthed uranium targets using scintillometers and spectrometers. Samples of granitoid rocks were submitted for geochemical analysis and returned up to 8600 ppm uranium (U); lithium (Li) values ranged between 4 ppm and 121 ppm. The highest lithium value of 121 ppm Li was returned from a sample (#608504; UTM 16U, 387317E/5446486N) described as a "hematite-rich, altered breccia" (Sims 2007). Further work was recommended, but not pursued.

7. Geological Setting and Mineralization

7.1 Geological Mapping History

The first geological work in the area south of Lake Nipigon was undertaken by the Geological Survey of Canada (Bell 1870; McInnes 1896; Parks 1901). Coleman (1909) of the Ontario Bureau of Mines investigated some iron occurrences east of Black Sturgeon Lake. Mapping by Coates (1972) of the Ontario Geological Survey was completed in the Black Sturgeon Lake area at a scale of 1:63 360 and included interpreted geological sections.

The most recent and detailed mapping in the area of Mound Lake was carried out by the Ontario Geological Survey in 2004, leading to the publication of Map P.3562 (Hart et al. 2005). Open File Report 6165 (Hart 2005a) and an accompanying Miscellaneous Release-Data (Hart 2005b). This mapping was part of the Lake Nipigon Region Geoscience Initiative (LNRGI), a 3-year collaborative geoscience (i.e. geology, geochemistry, geophysics) data acquisition and compilation project that focused on the Lake Nipigon area and involved partnerships between mineral industry, university, and provincial and federal government geoscientists. A major objective of the initiative was to collect new geoscience information to better understand the geological history of the Nipigon region to inform land-use planning, identify areas of high mineral potential and attract mineral exploration (Hollings et al. 2007). Complementary studies included surficial geology, geochronology, airborne and ground-based geophysical surveys and university research (Easton et al. 2007 and references therein). In 2003, a 49,693 line-km, high-resolution, fixed-wing magnetic and spectrometric survey was carried out over a large part of the Nipigon Embayment, including the Mound Lake area, as part of the Lake Nipigon Region Geoscience Initiative (Ontario Geological Survey 2004a). A ground-based gravity survey was also completed (Ontario Geological Survey 2004b).

7.2 Regional Geology

The Mound Lake property is underlain by a variety of rocks of both the Neoarchean Quetico Subprovince and the Mesoproterozoic Nipigon Embayment of the Superior and Southern provinces, respectively (Figure 9). The property lies within the central Quetico Subprovince in the Superior Province of the Canadian Shield. This ~1100 km-long strip of predominantly metasedimentary and granitoid rocks is flanked to the north and south by the Wabigoon and Wawa subprovinces, respectively (Williams 1991). Some of these granitic rocks (i.e. “S-type granites”), derived from the melting of metasedimentary rocks, consist of two-mica granites that are peraluminous and may be fertile for the generation of lithium-cesium-tantalum (LCT) pegmatites (Breaks et al. 2003).

Metamorphic rocks of the Quetico Subprovince locally consist of upper greenschist- to lower amphibolite facies, biotite and/or andalusite schists, derived largely from clastic metasedimentary rocks, and amphibolites. Locally, these rocks may be a complex mixture of gneisses and leucogranite have been classified as migmatite. These metamorphosed supracrustal rocks are intruded by a variety of granitoid rocks. East of the Black Sturgeon River, there are many coarse-grained to pegmatitic irregular bodies and dikes of the muscovite granite suite (Hart 2005a). Irregular bodies of medium- to coarse-grained rocks of the biotite granite suite intrude amphibolites and may form the leucosome of the migmatitic rocks (ibid).

Widely spaced, weakly deformed and metamorphosed, north-trending diabase dikes intrude the Archean rocks of the Quetico Subprovince (Hart 2005a). A paleomagnetic study by Ernst et al. (2005) of similar dikes located west of the area has interpreted these dikes to be part of the Paleoproterozoic (2121–2101 Ma) Marathon dike swarm.

The Archean basement rocks are unconformably overlain by Mesoproterozoic (ca. 1.4 Ga) sedimentary rocks of the Sibley Group (cf. Rogala et al. 2007). The 950 m thick Sibley Group is a relatively flat-lying assemblage of siliciclastic and chemical sedimentary rocks, locally exposed or in subcrop in an ovoid area ~175 km wide and 400 km long, from the northwest shore of Lake Superior to northwest of Lake Nipigon.

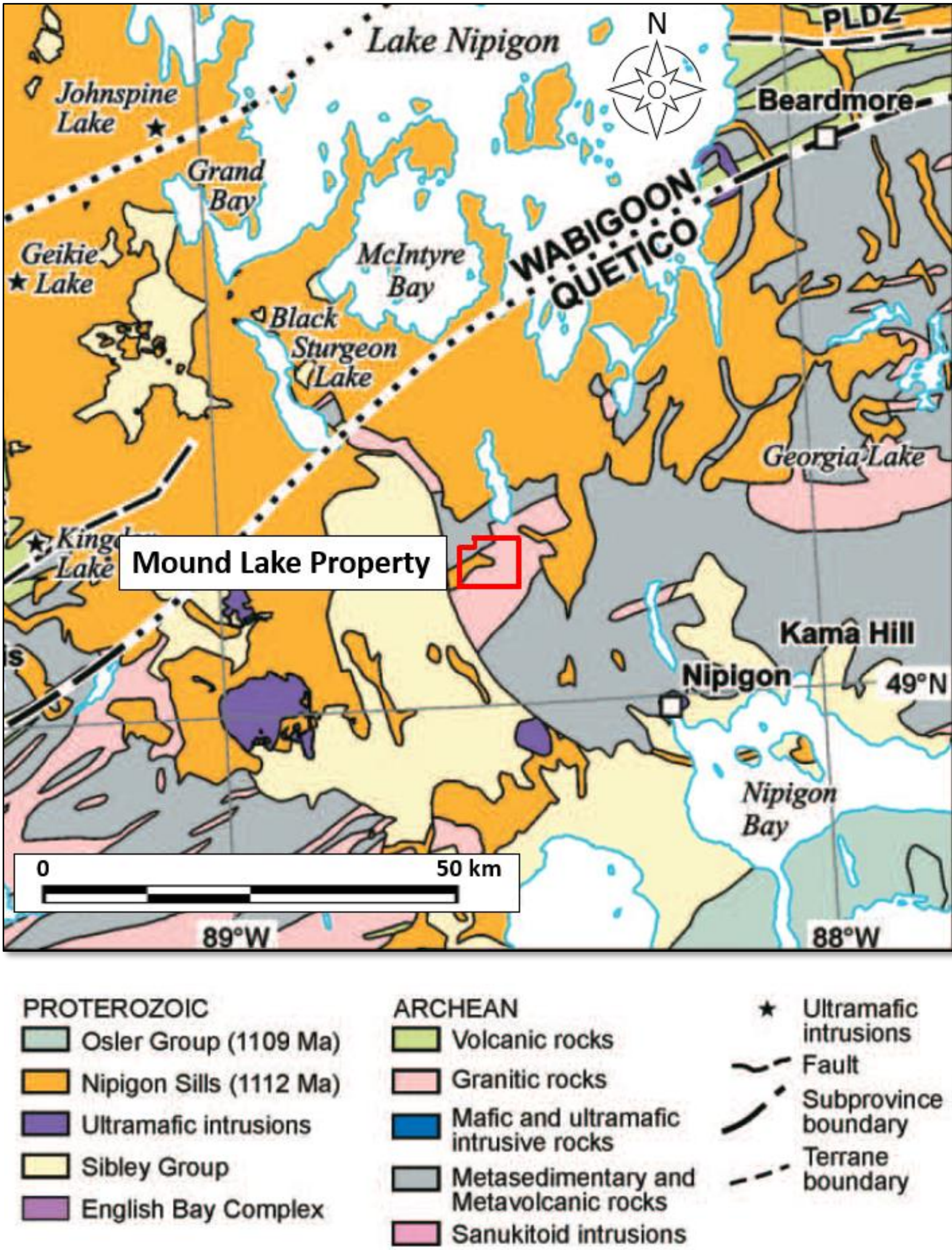


Figure 9. Generalized regional bedrock geology, south of Lake Nipigon (from Hart and MacDonald 2007)

All aforementioned rocks are intruded by ~1.1 Ga mafic to ultramafic dykes and sills of the Midcontinent Rift System. These intrusive rocks are predominantly manifested as a series of shallow-dipping diabase sills that commonly form erosion-resistant, topographic "highs". The sills range in thickness from less than 5 m to greater than 180 m (Hart 2005a). They are the youngest rocks in the area.

In the vicinity of the property, eroded bedrock is overlain by thin, discontinuous glacial drift. Glaciofluvial outwash deposits of sand and gravel occur along the Black Sturgeon River. Peaty organic deposits occur in swampy, low-lying areas south of Frazer Lake; glaciolacustrine clay deposits occur in the southeastern corner of the property (Barnett et al. 1991; Dyer and Russell 2002; Figures 3,4).

As noted by Hart (2005a), metasedimentary rocks of the Quetico Subprovince have experienced multiple phases of ductile deformation. Schistosity is well developed along the bedding planes and may obscure primary structures. Folding on all scales has accompanied this deformation. North- and northwest-trending regional faults have displaced the Sibley Group sedimentary rocks, and a northeast-trend may only represent minor late movement along older Archean structures. North- and northwest-trending faults define what has been interpreted to be the *en échelon* Black Sturgeon fault zone, resulting in the formation of a block-faulted asymmetric basin or graben (e.g. Coates 1972). Northwest-trending faults display vertical movement with no apparent horizontal displacement and may be traced to the west into the adjacent Wabigoon Subprovince.

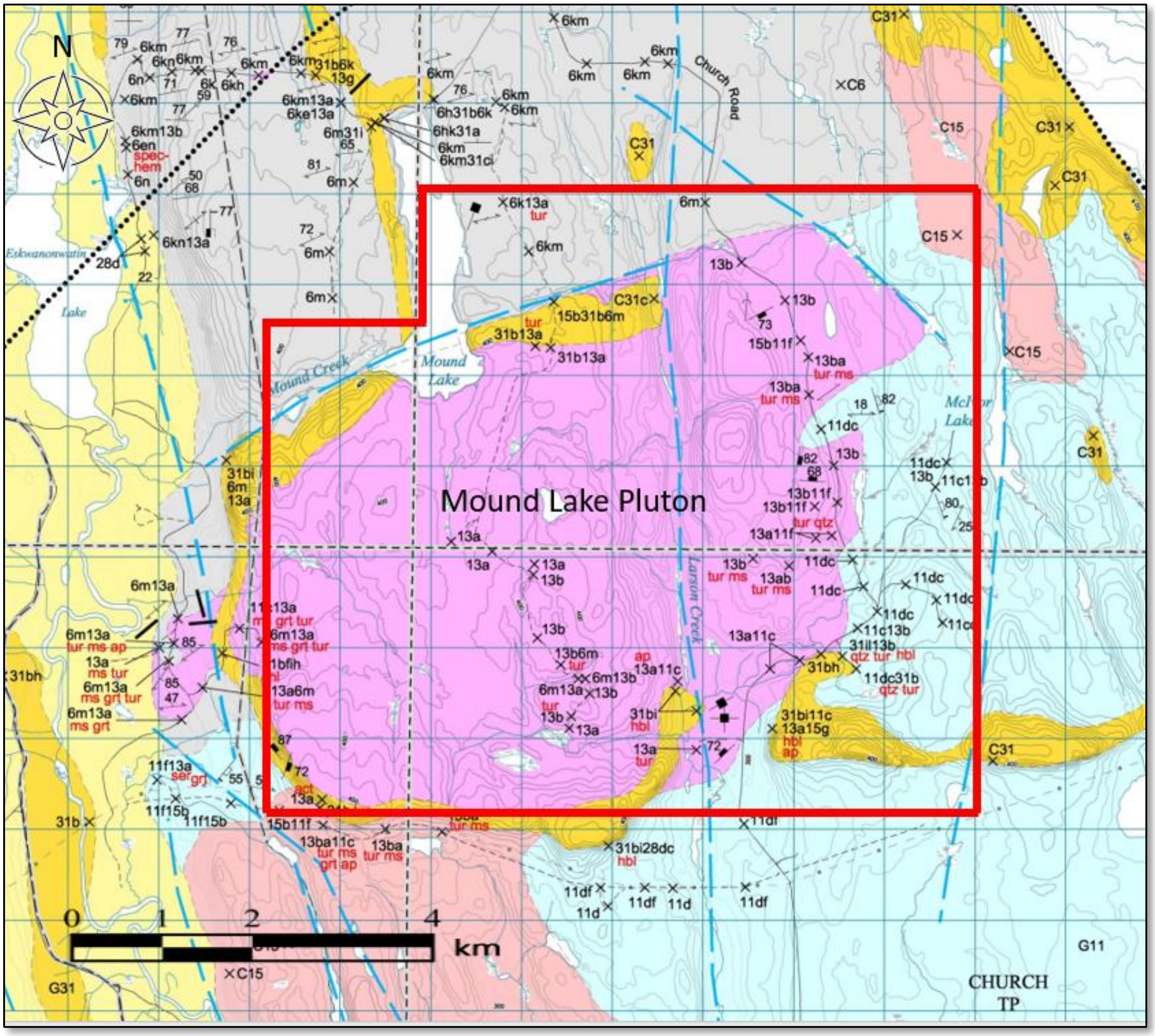
The felsic intrusive (i.e. granitoid) rocks in the area have been tentatively subdivided into 2 suites by Hart (2005a): biotite granite and muscovite granite suites, based on their field characteristics. There is the possibility that they may be petrogenetically related. Both suites intrude the metasedimentary and gneissic rocks of the Quetico Subprovince and are intruded by the Nipigon diabase sills.

As described by Hart (2005a) the biotite granite suite occurs as irregular bodies and dikes that are light pinkish grey to light pink, massive, medium- to coarse-grained, with rare very coarse grained to pegmatitic sections, and are composed of quartz and feldspar with typically less than

10% biotite. These rocks intrude, and commonly contain xenoliths of the biotite schists and amphibolites. The xenoliths are commonly a few metres in diameter and, in some locations, the presence of multiple xenoliths in a large-scale, *lit-par-lit* texture suggests intrusion of the granite along the fabric of the pre-existing amphibolites.

The muscovite granite suite suggested by Hart (2005a) occurs as a body located south of Mound Lake and as dikes intruding the metasedimentary and gneissic rocks to the north and south. Hart (2005a) noted:

> “The body is light grey, pinkish grey, to white, massive, medium to very coarse-grained with occasional pegmatitic sections, composed of quartz and potassium feldspar, and plagioclase with typically less than 5% muscovite. Irregular to tabular xenoliths of metasedimentary and gneissic rocks up to a few metres in diameter are present throughout but appear to be more common towards the margins of the body. Numerous muscovite granite dikes commonly a few metres wide, but locally up to a few tens of metres wide, intrude the massive body and the surrounding country rocks and may constitute up to 30% of the outcrop. The dikes are composed of pegmatitic quartz, potassium feldspar, and plagioclase and frequently contain graphic intergrowths of quartz and feldspar, black, coarse-grained to pegmatitic, tabular tourmaline usually graphically intergrown with quartz and plumose intergrowths of muscovite-quartz. Trace to 1% fine-grained, disseminated, subhedral, reddish brown garnet, fine-grained light green mica or rosy quartz were identified in a few of the dikes. In the area along the Black Sturgeon River, southwest of Mound Lake, a larger pegmatitic dike or body of granite displays irregular compositional layering and possible igneous foliation of the potassium feldspar crystals. The lower mica content and variation in grain size along the strike length of the dikes hinders differentiation of the leucogranite dikes of the muscovite and biotite [granite] suites.”



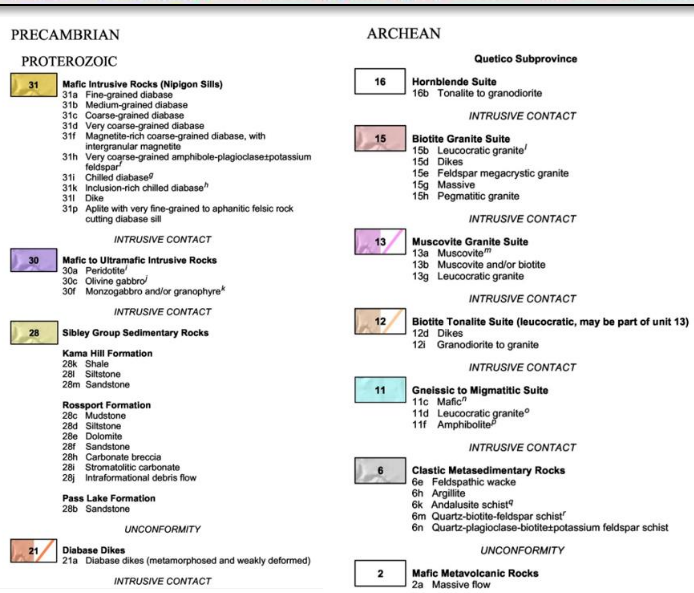


Figure 10. Bedrock geology of the Mound Lake Property and surrounding area, Ontario Geological Survey, Preliminary Map P.3562, scale 1:50 000 (Hart et al. 2005).

7.3 Property Geology

The Mound Lake Property comprises a variety of Archean basement rocks and Mesoproterozoic Nipigon diabase; Sibley Group rocks are not exposed on the property but do occur immediately west of it (Hart et al. 2005a; Figure 10). The property claim block was acquired to fully cover the aforementioned body of muscovite granite that occurs south and east of Mound Lake, as mapped by Hart et al. (2005a). For the purposes of this report, it will be referred to as the Mound Lake Pluton.

The Mound Lake Pluton is ovoid in plan view, measuring approximately 7 km in diameter. It intrudes Quetico metasedimentary rocks (i.e., andalusite schist, quartz-biotite-feldspar schist, and migmatitic rocks) and an older, gneissic to migmatitic granitoid suite. The Mound Lake Pluton appears to be bounded along its southern, western and northwestern margins by Nipigon diabase, which largely occupies the intrusive contact zone of the pluton with the older country rocks. Bounding faults along the pluton's northern and northeastern margins were suggested by Hart et al. (2005). The pluton was mapped by Hart et al. (2005) as muscovite- and muscovite-and/or biotite-bearing granite. Several occurrences of accessory mineral phases, such as garnet, tourmaline and apatite, were also mapped.

A brief, reconnaissance geological survey carried out by Smyk (2022) supported the mapped interpretation of the property geology by Hart (2005a) and Hart et al. (2005).

Quetico metasedimentary country rocks flank the Mound Lake Pluton to the north and may occur as sheared, migmatitic enclaves of various size in younger granitic rocks along the eastern margin of the pluton where exposed along the Church Lake Road. They are typically quartz-biotite-feldspar schists, locally displaying folded quartzo-feldspathic neosome veins in a recrystallized, fine-grained, mafic matrix. Porphyroblastic andalusite occurs locally in the more aluminous metasedimentary rocks.

The Mound Lake Pluton comprises a variety of granitic rocks with complex compositional and textural variations that suggest a complex magmatic and intrusive history. Medium-grained, massive, grey to pink, locally K-feldspar-phyric, muscovite- and biotite-bearing granite predominates. It commonly contains irregular pegmatitic patches and miarolitic cavities with large, drusy K-feldspar crystals and patches of quartz. Both granite and pegmatitic patches may be crosscut by later granitic pegmatite dykes and finer-grained aplitic dykes. Composite, sheeted/banded, aplitic to pegmatitic dykes are suggestive of multiple generations of melt emplacement. Some pegmatite dykes contain large (≤ 15 cm), conspicuous feldspar megacrysts. Graphic textures, developed in quartz and feldspar, are locally developed. Coarse packets and "sprays" of muscovite were noted in some locations, as were tourmaline, garnet and possibly apatite.

The banded, pegmatitic dykes observed in many of the outcrops of medium-grained granite may, in part, represent unidirectional solidification textures that occur in the uppermost zone of a granitic pluton, typically with oriented quartz +/- feldspar crystals growing downwards into granitic rocks. They are commonly interlayered with aplitic to porphyritic rocks and represent the transition between magmatic and hydrothermal processes (cf. Shannon et al. 1982).

Figure 11. Typical exposure of migmatitic Quetico metasedimentary country rocks, showing folded quartzo-feldspathic neosome veins in a recrystallized, fine-grained, mafic matrix. Metamorphic andalusite occurs locally in the more aluminous metasedimentary rocks (Church Lake Road, north of sample ML-22-MS-01).

Figure 12. Typical exposure of equigranular, medium-grained, pink muscovite granite with pegmatitic patch (under hammer). Where possible, samples of both medium-grained and pegmatitic phases were sampled in the same location (Church Lake Road, near samples ML-22-MS-01, -02).

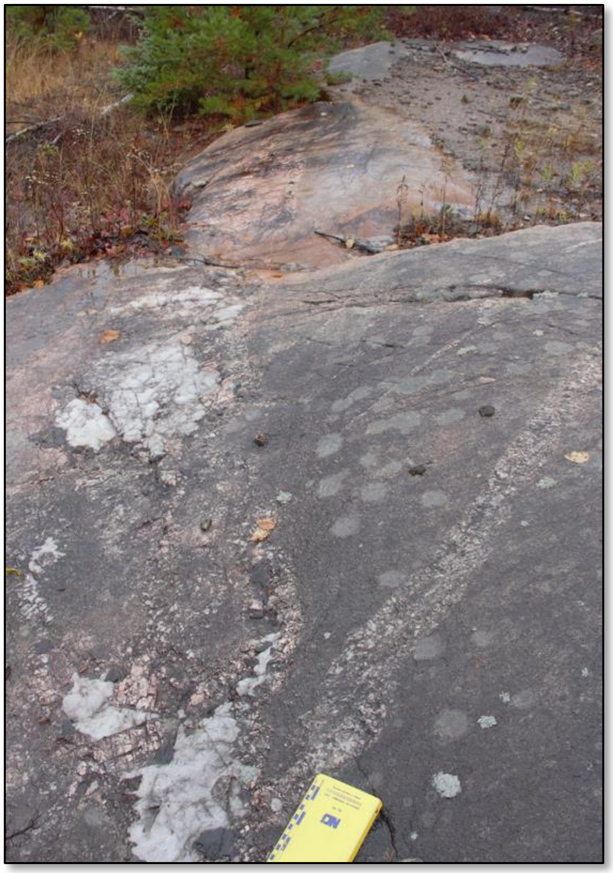


Figure 13. Exposure of medium-grained granite, hosting irregular, quartz-rich pegmatite patches with large, drusy K-feldspar crystals, and crosscut by pegmatite dykes (Church Lake Road, near sample site ML-22-MS-03, -04).

Figure 14. Pegmatite dyke in medium-grained granite. Small, subhedral garnets occur within the K-feldspar-dominant dyke (Church Lake Road, sample site ML-22-MS-03, -04).

Figure 15. Upper photo: Composite, sheeted/banded, aplitic to pegmatitic dyke in medium-grained granite, suggestive of multiple generations of melt emplacement

Figure 16. Lower photo: Subparallel, banded aplitic dykes in granite, cut by pegmatite dyke (

(Both photos, Church Lake Road, near sample ML-22-MS-05).

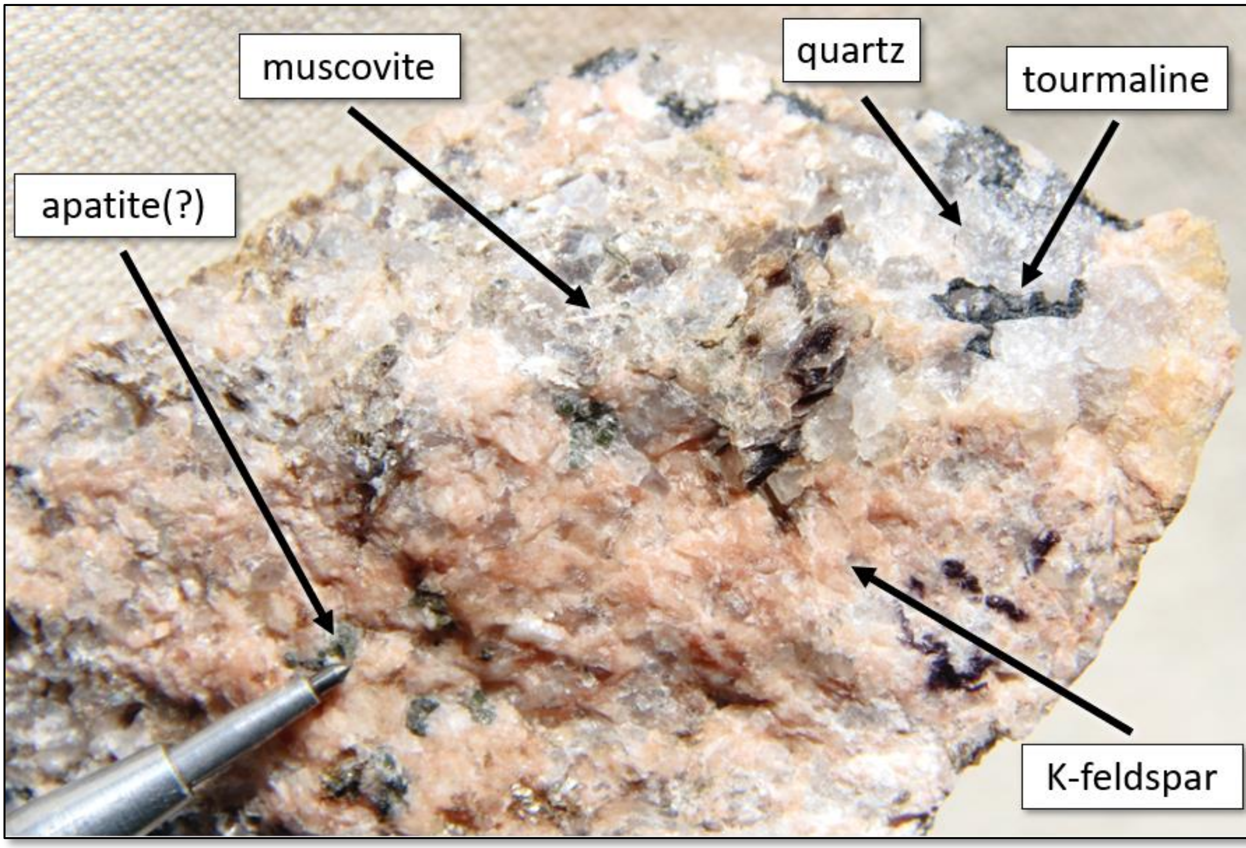


Figure 17. Photograph of pegmatite in hand sample ML-22-MS-13, Church Lake Road. Note intergrowth of tourmaline and quartz and possible subhedra of green apatite. Pen scribe for scale.

Figure 18. Pegmatite dyke in metasedimentary country rock enclave. Note large, white feldspar megacrysts. (Church Lake Road, near sample ML-22-MS-15).

Figure 19. Schlieric migmatite as enclaves of country rock in pink, medium-grained granite, near presumed contact zone of intrusion (Church Lake Road, near sample ML-22-MS-16).

Figures 20 a, b. (Upper photo) Narrow granitic pegmatite dyke in Quetico metasedimentary country rocks (andalusite schist), southwestern shore of Frazer Lake.

(Lower photo) Close-up view of freshly broken face of pegmatite dyke (above), showing prominent, coarse-grained books of muscovite mica (Frazer Lake, sample ML-22-MS-32).

7.4 Mineral Occurrences

There are no known mineral occurrences on the Mound Lake Property. The Ontario Mineral Inventory (https://www.geologyontario.mndm.gov.on.ca/OMI_description.html; accessed via OGS Earth) lists several mineral occurrences in the vicinity of the property (Figure 21):

Mineral Occurrence	Primary Commodity	Record Number
Roland Lake	Uranium, Thorium	MDI000000001143
Frazer Creek	Uranium	MDI000000001915
Malborne Lake	Uranium	MDI000000003027
Jessie Lake	Uranium	MDI000000001225
Gresky	Marl	MDI52H02SE00002

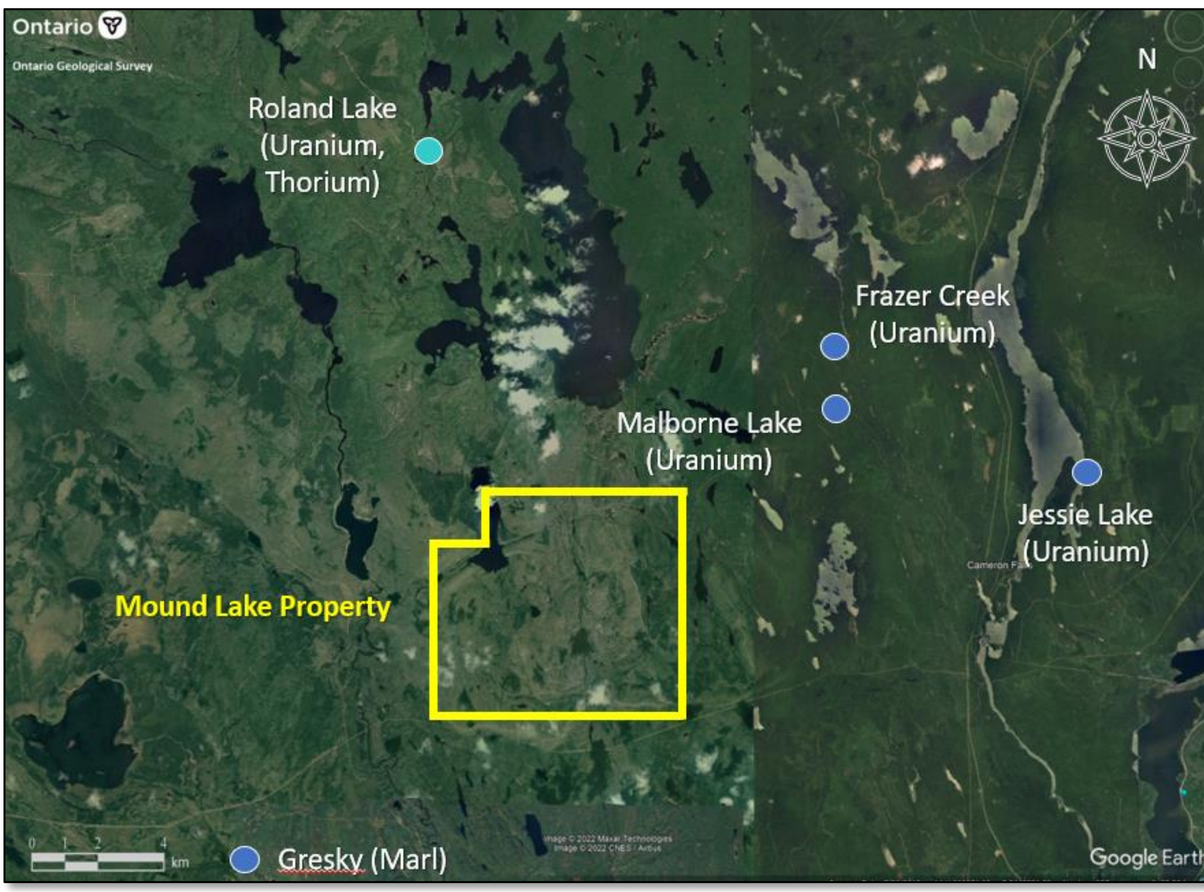


Figure 21. Mineral occurrences in the vicinity of the Mound Lake Property (https://www.geologyontario.mndm.gov.on.ca/ogsearth.html)

The Pine Portage occurrence (MDI52H08SW00003) is the closest, known lithium occurrence, lying approximately 25 km northeast of the Property, near Forgan Lake. At least six spodumene-bearing, near-vertical dykes occur in Quetico metasedimentary rocks, in close spatial association with the fertile Pine Portage pegmatitic granite and are thought to represent the far northwestern margin of the Georgia Lake pegmatite (Osmani et al. 2011; Figure 22).

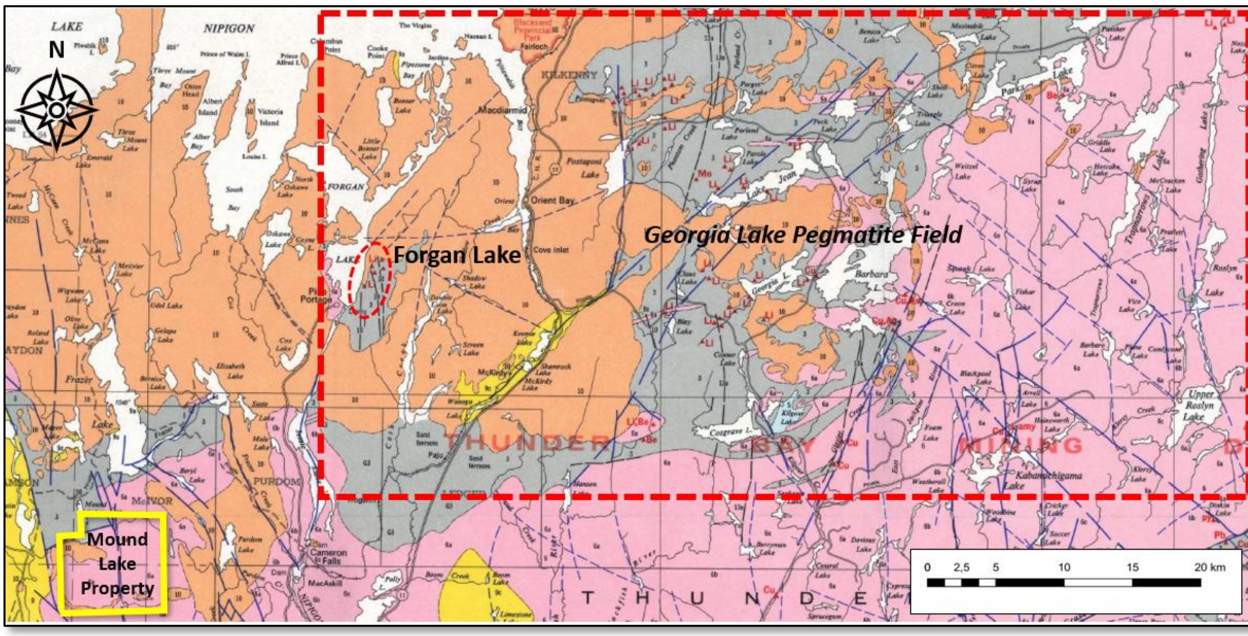


Figure 22. Generalized regional bedrock geology map (M.2232, Carter et al. 1973), showing location of Mound Lake Property relative to the Forgan Lake (Pine Portage) lithium-bearing pegmatites and the broader Georgia Lake Pegmatite Field.

8. Deposit Types

8.1 Overview of LCT Pegmatite Deposits

Lithium-cesium-tantalum (LCT) pegmatite deposits account for approximately one-third of global lithium production, most of the tantalum, and all of the cesium (United States Geological Survey 2011). They may also host significant rubidium (Rb), thallium (Tl), beryllium (Be), niobium (Nb), gallium (Ga) and germanium (Ge). The identification of a parental, fertile granite, from which such pegmatites originate, is critical in assessing an area for LCT pegmatite potential (cf. Selway et al., 2005; Bradley et al. 2017).

The majority of the Mound Lake Property is underlain by a muscovite-bearing granite which had been the basis of a recommendation for lithium and other rare metals by Hart (2005a) and a *Recommendation For Explor*ation by staff of the Ontario Ministry of Mines Resident Geologist Program in 2018 (Puumala et al. 2019). Based on the presence of intergrowths of tourmaline and quartz, and muscovite and quartz, it was thought that this granitic body may represent a fertile granite, that is, one capable of hosting and/or spawning rare metal mineralization. This was the basis of the staking of the current property, covering the mapped extent of the granite south and east of Mound Lake. This granite has only been examined, sampled and analyzed to a cursory degree, both by government geologists and industry explorationists up to this point.

Pegmatites are essentially igneous rocks, commonly of granitic composition, that are distinguished by their extremely coarse but variable grain size, or by an abundance of crystals with skeletal, graphic, or other strongly directional growth-habits (London 2008). Bradley and McCauley (2016) have summarized LCT pegmatite characteristics:

> “LCT pegmatites are a petrogenetically defined subset of granitic pegmatites that are associated with certain granites. They consist mostly of quartz, potassium feldspar, albite, and muscovite. Common accessory minerals include garnet, tourmaline, and apatite. The major lithium ore minerals are spodumene, petalite, and lepidolite; cesium mainly comes from pollucite; and tantalum mostly comes from columbite-tantalite. The

tin ore, cassiterite, and the beryllium ore, beryl, also occur in LCT pegmatites, as do a number of gemstones and high-value museum specimens of rare minerals. Among the gemstones are: the beryl varieties emerald, heliodor, and aquamarine; the spodumene varieties kunzite and hiddenite; and "watermelon" tourmaline. LCT pegmatites are also mined for ultrapure quartz, potassium feldspar, albite, and muscovite."

LCT pegmatites represent the most highly differentiated and last-crystallizing components of certain granitic melts (Figure 23). Parental granites are typically peraluminous, S-type granites. LCT pegmatites are enriched in the incompatible elements lithium, cesium, tin, rubidium, and tantalum, and are distinguished from other rare-element pegmatites by this diagnostic suite of elements (Bradley and McCauley 2016).

The whole-rock and trace element geochemical data for the collected rock samples have been analyzed to determine if some or all of the data meet the established criteria for rare metal prospectivity associated with fertile granites (e.g. Selway et al. 2005).

Most critically, it must first be determined that it is a **peraluminous** granite.

$$\text{(i.e. } Al_2O_{3\,(mol)}/(CaO+Na_2O+K_2O)_{(mol)} > 1.0\text{)}$$

If it is peraluminous, then the next step is to determine if the granite pluton is barren or fertile.

Fertile granites have:

- elevated rare element contents;
- Mg/Li ratios < 10; and
- Nb/Ta ratios < 8;

and commonly contain:

- blocky K-feldspar
- green muscovite.

Key fractionation indicators can also be plotted on a map of the fertile granite pluton to determine the fractionation direction:

- presence of tourmaline, beryl, and ferrocolumbite;
- Mn content in garnet;

- Rb content in bulk K-feldspar; and
- Mg/Li and Nb/Ta ratios in bulk granite samples.

Pegmatite dykes with the most economic potential for lithium-cesium-tantalum (Li-Cs-Ta) deposits may occur the greatest distance (up to 10 km, and perhaps $\leq$ 20 km) from the parent granite. Individual pegmatites have various forms, including tabular dikes, tabular sills, lenticular bodies, and irregular masses. Even the biggest LCT pegmatite bodies are much smaller than typical granitic plutons (Bradley and McCauley 2016).

Most LCT pegmatites intruded metasedimentary rocks, typically at low-pressure amphibolite to upper greenschist facies (Ĉerný, 1992); a few LCT pegmatites are in granite (Ĉerný et al. 2005) or in other igneous rocks. Their location is to some extent structurally controlled, largely depending on the depth of their emplacement. At shallower crustal depths, for example, pegmatites tend to be intruded along anisotropies such as faults, fractures, and foliation/bedding planes (Brisbin 1986). In higher-grade metamorphic host rocks, pegmatites are typically concordant with the regional foliation, and form lenticular, ellipsoidal, or turnip-shaped bodies (Fetherston 2004).

Pegmatites with the highest degree of fractionation (and thus the most economic potential for Li-Cs-Ta) contain:

- blocky K-feldspar with >3000 ppm Rb, K/Rb < 30, and >100 ppm Cs; and
- coarse-grained green muscovite with >2000 ppm Li, >10000 ppm Rb, >500 ppm Cs, and >65 ppm Ta (Selway et al. 2005).

Electron microprobe and bulk analyses of fertile peraluminous granites and related rare-element pegmatites from the Superior Province were provided by Tindle et al. (2002).

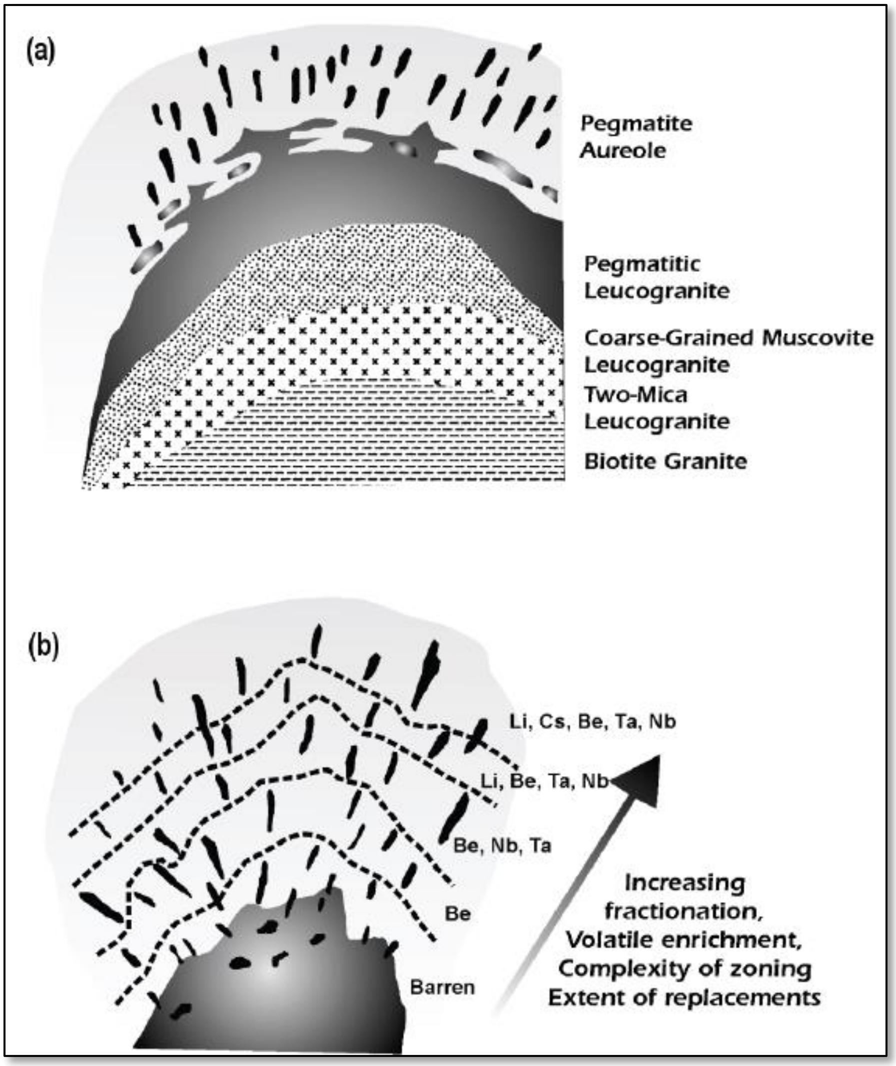


Figure 23. Regional zoning in fertile granites and pegmatites (Selway et al. 2005; modified from Černý 1991)

a) regional zoning of a fertile granite (outward-fractionated) with an aureole of exterior lithium pegmatites;

b) schematic representation of regional zoning in a cogenetic parent granite + pegmatite group. Pegmatites increase in degree of evolution with increasing distance from the parent granite.

8.2 LCT Pegmatite Deposits in Ontario

Rare element-bearing pegmatites and chemically evolved, S-type, peraluminous granite / pegmatitic granite in the Superior Province of Ontario are most commonly associated with the boundary zones between high-grade metamorphic, metasedimentary subprovinces (such as the Quetico and English River) and adjoining, greenstone-rich subprovinces (e.g. Uchi, Wabigoon, Abitibi; Breaks et al. 2006). Several deposits in northwestern Ontario currently have known Resources, as listed in the table and map below (both from Ontario Geological Survey 2022).

Location	Name	Resources (Mt = million tonnes; t = tonne)
1	Separation Rapids	Measured & Indicated: 8.40 Mt @ 1.408% Li_2O + 3 additional oxides; Inferred: 1.79 Mt @ 1.349% Li_2O + 3 additional oxides
2a	Spark pegmatite	Indicated: 14.414 Mt @ 1.40% Li_2O; Inferred: 18.118 Mt @ 1.37% Li_2O
2b	Pakeagama Lake pegmatite	Measured & Indicated: 5.964 Mt @ 1.81% Li_2O + 3 additional oxides; Inferred: 0.68 Mt @ 1.75% Li_2O + 3 additional oxides
3	McCombe	Historical: 1.3 Mt @ 1.3% Li_2O
4a	Nama	Indicated: 4.18 Mt @ 1.01% Li_2O; Inferred: 6.31 Mt @ 1.0% Li_2O
4b	Vegan	Historical: 750,000 t @ 1.38% Li_2O
4c	Jackpot	Historical: 2 Mt @ 1.09% Li_2O
4d	Jean Lake	Historical: 1.689 Mt @ 1.30% Li_2O
4e	Aumacho	Historical: 759,475 t @ 1.65% Li_2O
5a	North Aubry	Indicated: 2.13 Mt @ 1.29% Li_2O + 1 additional oxide; Inferred: 1.7 Mt @ 1.5% Li_2O + 1 additional element
5b	South Aubry	Inferred: 1.0 Mt @ 0.8% Li_2O

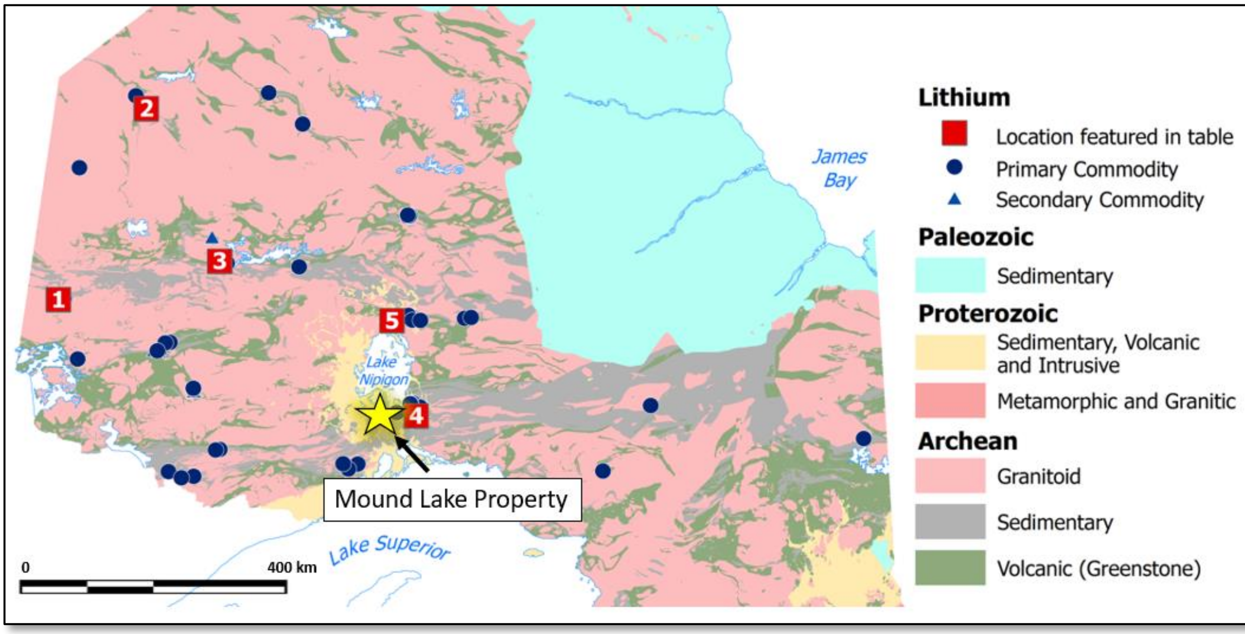


Table 2 and Figure 24. Pegmatite deposits with lithium resources in Ontario (https://www.geologyontario.mndm.gov.on.ca/mines/ogs/rgp/Ontarios_Critical_Minerals_Introduction.pdf).

The Pine Portage occurrence is the closest, known lithium occurrence, lying approximately 25 km northeast of the Mound Lake Property. At least six spodumene-bearing, near-vertical dykes occur in Quetico metasedimentary rocks, in close spatial association with the fertile Pine

Portage pegmatitic granite and are thought to represent the far northwestern margin of the Georgia Lake pegmatite field (Osmani et al. 2011). The Georgia Lake field, comprising dozens of rare-element occurrences and several spodumene-bearing pegmatite deposits (e.g. Nama, Vegan, Jackpot, Jean Lake, Aumacho; Table 2), represents the largest concentration of rare-element mineralization in the Superior Province of Ontario (Breaks et al. 2008). The Onion and Walkinshaw lakes area, 60 km southwest of the Mound Lake property was recommended for follow-up pegmatite exploration by Breaks et al. (2003), based on the presence of chemically evolved pegmatitic rocks. The occurrence of lithium-bearing pegmatites and granites with favourable geochemistry in this part of the Quetico Subprovince support the prospectivity of the Mound Lake property and environs for LCT pegmatite deposits.

Steiner (2019) provided examples of tools and workflows for grassroots Li–Cs–Ta (LCT) pegmatite exploration.

9. Exploration

9.1 Aeromagnetic Survey

A helicopter-borne, 619 line-km, triaxial gradiomagnetic survey was carried out for Rift Lithium Inc. over the Mound Lake Property on June 27 and June 28, 2022 (Kouhi 2022; Figure 25). The purpose of the project was to record detailed magnetic data over the property to provide information that could be used in supporting mapped geological interpretations and in identifying geological structures. This was accomplished by using the Multi-Parameter Airborne Survey System (M-PASS) which consisted of three high-sensitivity potassium vapour magnetic sensors mounted on a towed-bird platform (GEM system). All ancillary instrumentation, such as the Global Positioning System (GPS) and the radar altimeter, were mounted directly on the bird for higher accuracy measurements with no variable lag. The survey data were acquired, processed, and compiled by GoldSpot Discoveries Corp. (Kouhi 2022).

Block Name	Traverse Direction	Traverse Spacing	Control Direction	Control Spacing	Total Line Km
Mound Lake	090-270º	100 m	000-180º	1,000 m	619 km

Table 3: Mound Lake block flight path specification (Kouhi 2022)

Two GEM System Overhauser-type ground magnetometers linked to GPS receivers recorded the Earth's total magnetic intensity and GPS time, respectively. The ground-based magnetometers were set up near Nipigon at a magnetic noise-free location, away from moving steel objects, vehicles, and DC electrical power lines. Both base stations operated throughout the airborne data acquisition to ensure continuous monitoring of the magnetic diurnal activity (Kouhi 2022).

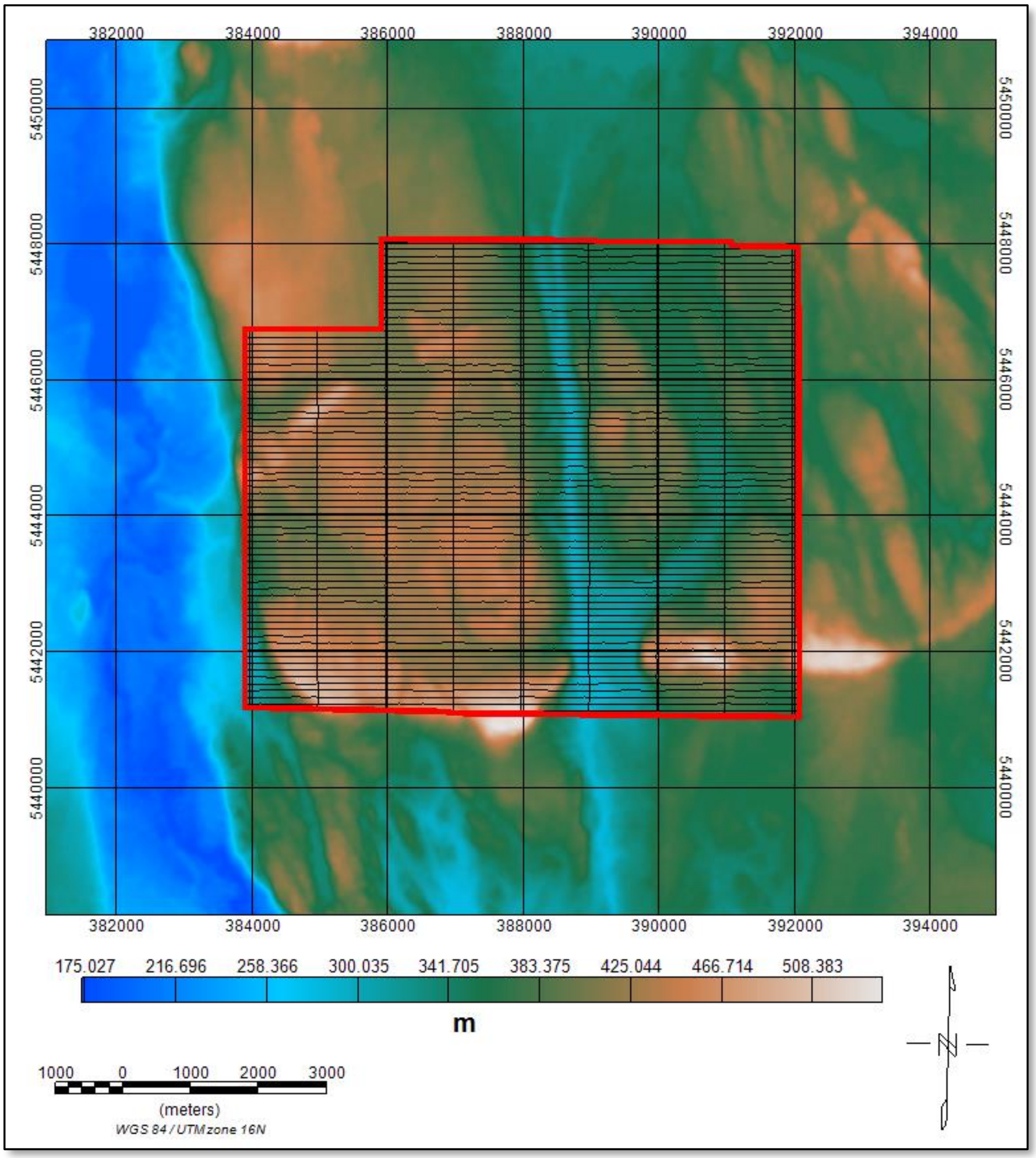


Figure 25. Topography and flight lines over the survey area (Kouhi 2022). Elevation in metres above sea level.

A total of four flights at a 100 m flight line spacing were required to cover the Mound Lake survey area. The speed of the aircraft remained consistently at an average of 30 m/s and the height of the bird was maintained at 53 m above ground clearance. A copy of the base station recordings and flight data were transferred from the field to the processing PC. These were then merged into an OASIS Montaj database on a flight-by-flight basis (Kouhi 2022). This process allows for the creation of maps which can be linked to the data profiles such that the positional and geophysical data can be examined for Quality Control. The field data verification consisted of the following steps:

- Import the base station and survey data into OASIS Montaj database
- Generate survey flight path and compare with the planned flight path.
- Examine the velocities and speed of the GPS data.
- Verify the radar altimeter data to see if flight altitude has been maintained.
- Correct magnetic data for spikes by inspecting the fourth difference trace.
- Apply 0.2 second lag to the magnetic data
- Check for diurnal variation.
- Call for re-flight if the recorded data are out of specification

The noise envelope derived from the fourth difference of the magnetic trace was well within the acceptable limits. The diurnal variation remained relatively quiet during the entire acquisition period.

A variety of products were generated by this airborne survey (Table 4; Kouhi 2022):

Map Archive File Description		
Map File name	**Description**	**Unit**
MoundLake_FP.map	Flight Path Map	
MoundLake _TMI.map	Total Magnetic Intensity	nT
MoundLake _RMI_RTP.map	Residual Magnetic Intensity Reduced to the Pole	nT
MoundLake _RMI_RTP_VD1.map	First Vertical Derivative of the Residual Magnetic Intensity Reduced to the Pole	nT/m
MoundLake _RMI_RTP_AS.map	Analytic Signal of the Residual Magnetic Intensity Reduced to the Pole	nT/m
MoundLake _MHG.map	Measured Horizontal Magnetic Gradient	nT/m
MoundLake _MVG.map	Measured Vertical Magnetic Gradient	nT/m

Grid Archive File Description		
Grid File name	**Description**	**Unit**
MoundLake _TMI.grd	Total Magnetic Intensity	nT
MoundLake _RMI.grd	Residual Magnetic Intensity	nT
MoundLake _RMI_RTP.grd	Residual Magnetic Intensity Reduced to the Pole	nT
MoundLake _RMI_RTP_VD1.grd	First Vertical Derivative of Residual Magnetic Intensity Reduced to the Pole	nT/m
MoundLake _RMI_RTP_AS.grd	Analytic Signal of Residual Magnetic Intensity Reduced to the Pole	nT/m
MoundLake _MHG.grd	Measured Horizontal Magnetic Gradient	nT/m
MoundLake _MVG.grd	Measured Vertical Magnetic Gradient	nT/m

Table 4. Map and grid products generated by the 2022 aeromagnetic survey (Kouhi 2022)

All grids were delivered in both Geosoft and GeoTIFF formats. The grid cell size is 25 m.

9.1.1 Interpretation of Aeromagnetic Survey

The following figures depict comparative features of the bedrock geology and aeromagnetic response for major lithologic units and structural features.

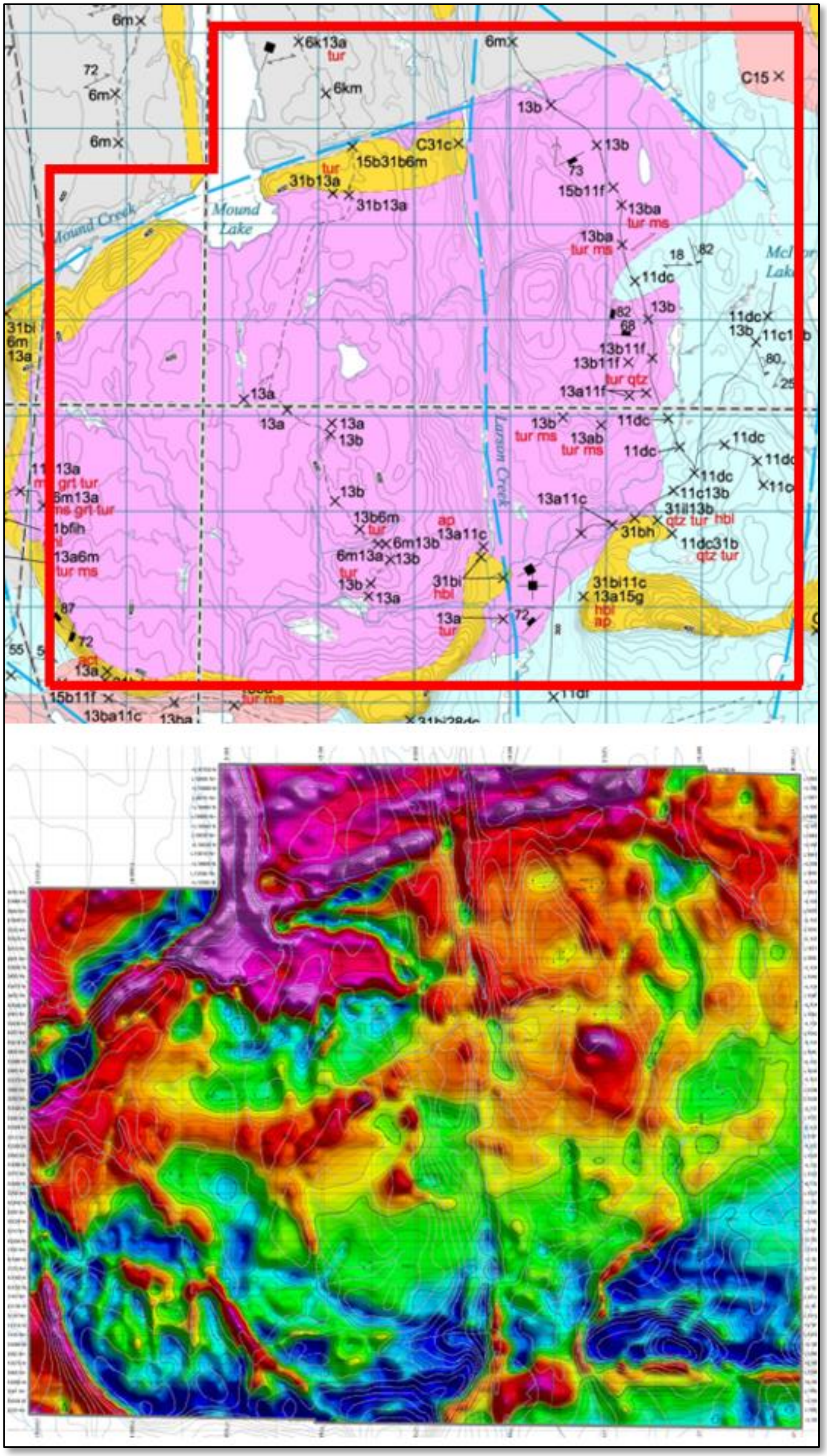
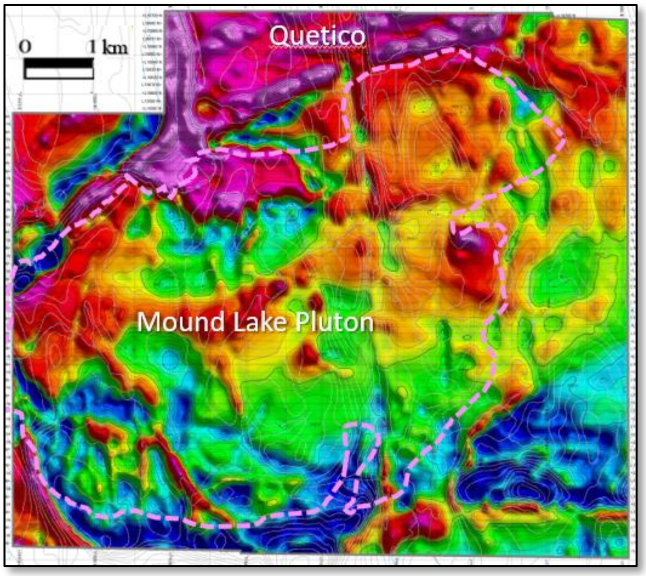
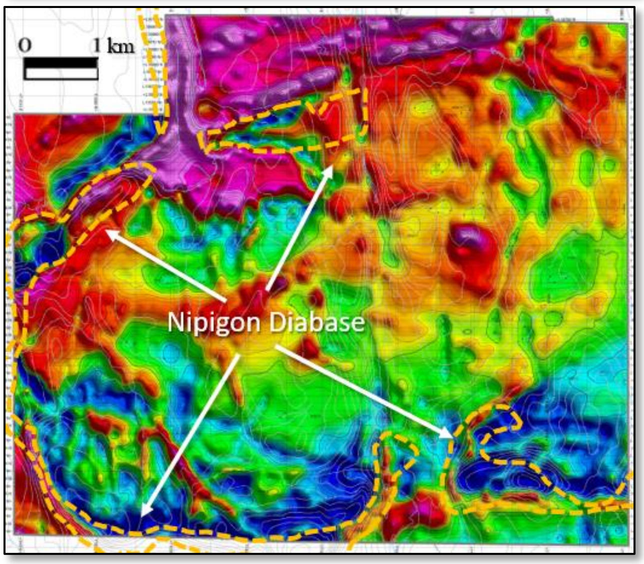


Figure 26. Comparison of bedrock geology (top; Hart et al. 2005) with Total Magnetic Intensity map (Kouhi 2022). Several major, mapped lithologic units can be distinguished, as shown in the following figures.

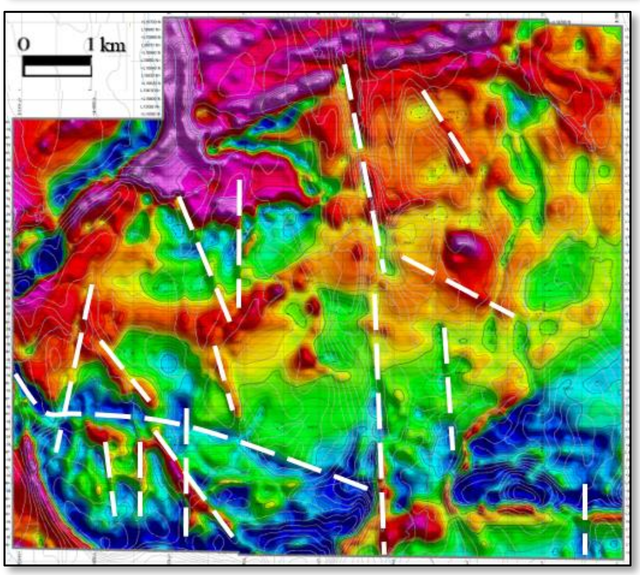


Figures 27a,b,c. Mapped extents of major lithologic units (Hart et al. 2005), superimposed on Total Magnetic Intensity map (Kouhi 2022).

27a. Mound Lake Pluton, granitic rocks with relatively low magnetic susceptibility, flanked to the north by Quetico metasedimentary country rocks with relatively high magnetic susceptibility. The east-northeast trend of the magnetic "highs" reflects that of the regional structural fabric.



27b. Nipigon diabase sills are typically strongly magnetic but locally produce narrow magnetic "lows" due to the reversed polarity of the remanent magnetism of the sill edges exposed at or near surface. A prominent feature extending along the length of Mound Lake may reflect a feeder/conduit to what is likely a saucer-shaped sill that likely extends to the east of the Mound Lake Property (Figure 28).



27c. A number of variably oriented, linear magnetic anomalies (white dashed lines) that may represent faults/lineaments and/or mafic dykes that occupy them. They are delineated by both contrasts in total magnetic intensity and by offsets in the magnetic response of the rocks that they transect. Prominent, north-trending anomalies may represent Paleoproterozoic Marathon diabase dykes.

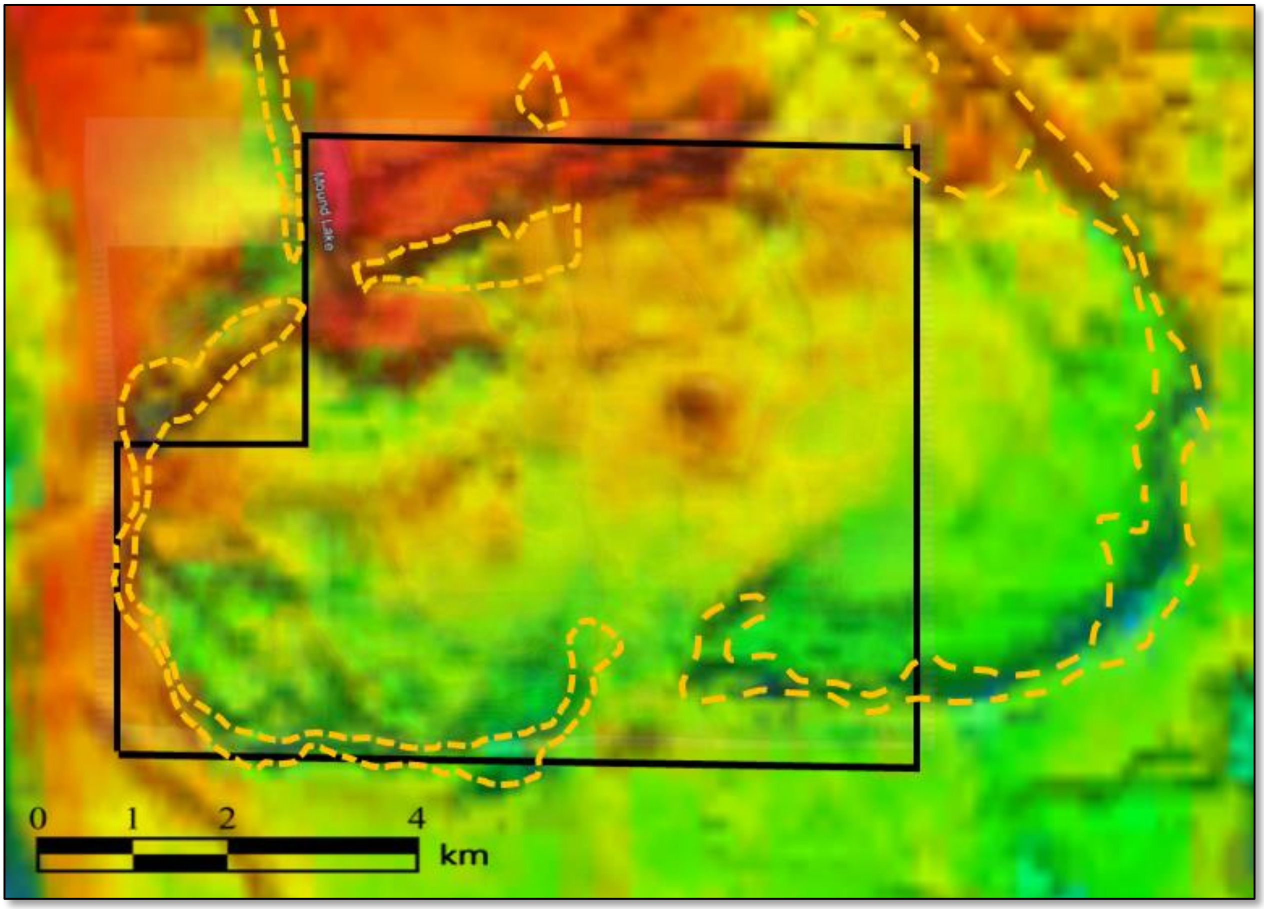


Figure 28. Regional Magnetic Residual Intensity map (https://www.geologyontario.mndm.gov.on.ca/ogsearth.html), showing prominent, narrow, ovoid magnetic anomaly, likely produced by a saucer-shaped Nipigon diabase sill. Mapped extent of Nipigon diabase sill (Hart et al. 2005; dashed orange lines) have been superimposed. Mound Lake Property is shown in black polygon.

9.2 Lithogeochemical and Reconnaissance Geological Survey

In October, 2022, a lithogeochemical sampling and reconnaissance geological survey was undertaken on behalf of Rift Lithium Inc. by M.C. Smyk, *P.Geo*. (Smyk 2022). Twenty-five (25), 2-4 kg grab samples of granitic rocks were collected from outcrops along a ~6 km stretch of Church Lake Road for petrographic and geochemical analysis. This constituted a representative transect through what is believed to be the eastern margin of the Mound Lake Pluton where it is in contact with Quetico metasedimentary country rocks. Another six (6) samples were collected along an old logging road, southeast of Mound Lake, near the center of the pluton. A granitic pegmatite dyke in andalusite schist was also sampled on the shore of Frazer Lake, approximately 4 km north of the pluton/current property. Where possible, samples of both medium-grained granite and coarse-grained to pegmatitic granite were collected at the same location for comparative purposes. Efforts were made to collect samples of all of the various granitoid rocks, especially pegmatitic phases in which tourmaline, garnet or coarse muscovite were noted. Representative hand samples were retained for future reference.

Sample location details and descriptions are provided in Table 5. (Smyk 2022).

Mound Lake Lithogeochemical Samples – Church Lake Road Transect					
	Location				
Sample Number	**Zone**	**Easting**	**Northing**	**Waypoint No.**	**Description**
ML-22-MS-01	16	389402	5447223	90	medium-grained, equigranular, pink granite; biotite > muscovite ≤ 5%
ML-22-MS-02	16	389402	5447223	90	irregular, patchy pegmatitic pods and dykes in equigranular pink granite (-01); pink K-spar with whitish cores predominate, minor quartz ± muscovite
ML-22-MS-03	16	389669	5447094	91	medium-grained, pink-grey, equigranular granite; beige muscovite ≤5%
ML-22-MS-04	16	389669	5447094	91	irregular, patchy pegmatitic pods and dykes in equigranular pink granite (-03); K-spar-dominant, with interstitial quartz and conspicuous, beige muscovite books; small garnet subhedra were noted in some dykes

ML-22-MS-05	16	389767	5447047	93	medium-grained, equigranular, pink muscovite granite, with local aplitic to pegmatitic dykelets; garnet was noted in aplitic rocks
ML-22-MS-06	16	389930	5446720	94	medium-grained, equigranular biotite granite
ML-22-MS-07	16	389930	5446720	94	coarse-grained to pegmatitic patch in -06, K-spar-quartz intergrowths, with conspicuous muscovite books
ML-22-MS-08	16	389976	5446553	95	fine- to medium-grained, pink-grey biotite granite; biotite creates weak PDO/igneous foliation(?)
ML-22-MS-09	16	389976	5446553	95	pink K-spar-dominant pegmatitic patch in -08, with minor interstitial quartz, biotite
ML-22-MS-10	16	390168	5446224	96	fine- to medium-grained, pink granite; interstitial biotite euhedra and local muscovite (sericite-rimmed feldspar?)
ML-22-MS-11	16	390168	5446224	96	pegmatitic patch in -10, K-spar-dominant, with vermicular quartz and muscovite
ML-22-MS-12	16	390124	5446045	97	fine-grained, aplitic, pink biotite granite
ML-22-MS-13	16	390120	5445951	98	coarse-grained to pegmatitic, pink biotite granite; patches of quartz with interstitial dark green-black tourmaline + large muscovite books; rare anhedra of paler green apatite(?); K-spar-megacrystic patches noted nearby
ML-22-MS-14	16	390147	5445771	99	massive, medium-grained, pink, equigranular granite with minor, small biotite subhedra and (secondary?) sericite
ML-22-MS-15	16	390301	5445366	100	pale pink-white, K-spar(?) dominant, 2 m wide, pegmatitic dyke in migmatites; vermicular quartz; sericite/muscovite books and minor biotite
ML-22-MS-16	16	390383	5445145	101	fine- to medium-grained, equigranular pink granite with wispy, intergranular muscovite/sericite and minor biotite; K-spar-megacrystic patches
ML-22-MS-17	16	390418	5445028	102	medium- to coarse-grained, equigranular to pegmatitic, quartz-rich biotite granite; muscovite predominates in pegmatitic sections
ML-22-MS-18	16	390418	5445028	102	pegmatitic patch in -17, K-spar-dominant, with vermicular quartz and biotite
ML-22-MS-19	16	390463	5444931	103	medium-grained, equigranular, pink biotite granite; parallel domains of relatively biotite-rich and -poor granite
ML-22-MS-20	16	390423	5444674	104	pale pink, coarse-grained, equigranular biotite + muscovite granite
ML-22-MS-21	16	390446	5444561	105	greyish-white, medium-grained, equigranular to K-spar megacrystic biotite granite with metasedimentary enclaves (near contact?)

ML-22-MS-22	16	390497	5444272	106	pink, medium-grained, equigranular, biotite granite
ML-22-MS-23	16	390543	5444129	107	coarse-grained to pegmatitic, white biotite granite; biotite blades and books ≤ 4 cm
ML-22-MS-24	16	390050	5442911	108	coarse-grained, white, equigranular biotite granite; intergranular biotite books and blades ≤ 1cm
ML-22-MS-25	16	389920	5442869	109	coarse-grained, white, equigranular biotite granite

Mound Lake Lithogeochemical Samples – Southeast of Mound Lake; Frazer Lake					
ML-22-MS-26	16	387368	5442945	110	medium-grained, pink to grey, equigranular to graphic, K-spar-phyric biotite granite
ML-22-MS-27	16	387306	5442947	111	similar to ML-26, but containing sprays and packets of coarse muscovite; tourmaline noted in pegmatitic patches nearby
ML-22-MS-28	16	387086	5443222	112	medium-grained, pink, equigranular biotite granite
ML-22-MS-29	16	387047	5443517	113	grey-white, equigranular, biotite leucogranite; local epidotized(?) feldspar
ML-22-MS-30	16	387145	5446034	114	medium-grained, pink, equigranular biotite granite
ML-22-MS-31	16	387375	5446469	115	medium-grained, pink, equigranular biotite granite
ML-22-MS-32	16	388031	5451369	116	075˚-striking, 25 cm wide pegmatite dyke in andalusite schist; dominated by intergrown quartz + very coarse-grained (≤3 cm), transparent, colourless to beige muscovite; southwestern shore of Frazer Lake

N.B. All samples are non-magnetic and lack phaneritic opaque minerals

Table 5. Sample locations and descriptions, 2022 reconnaissance survey (Smyk 2022).

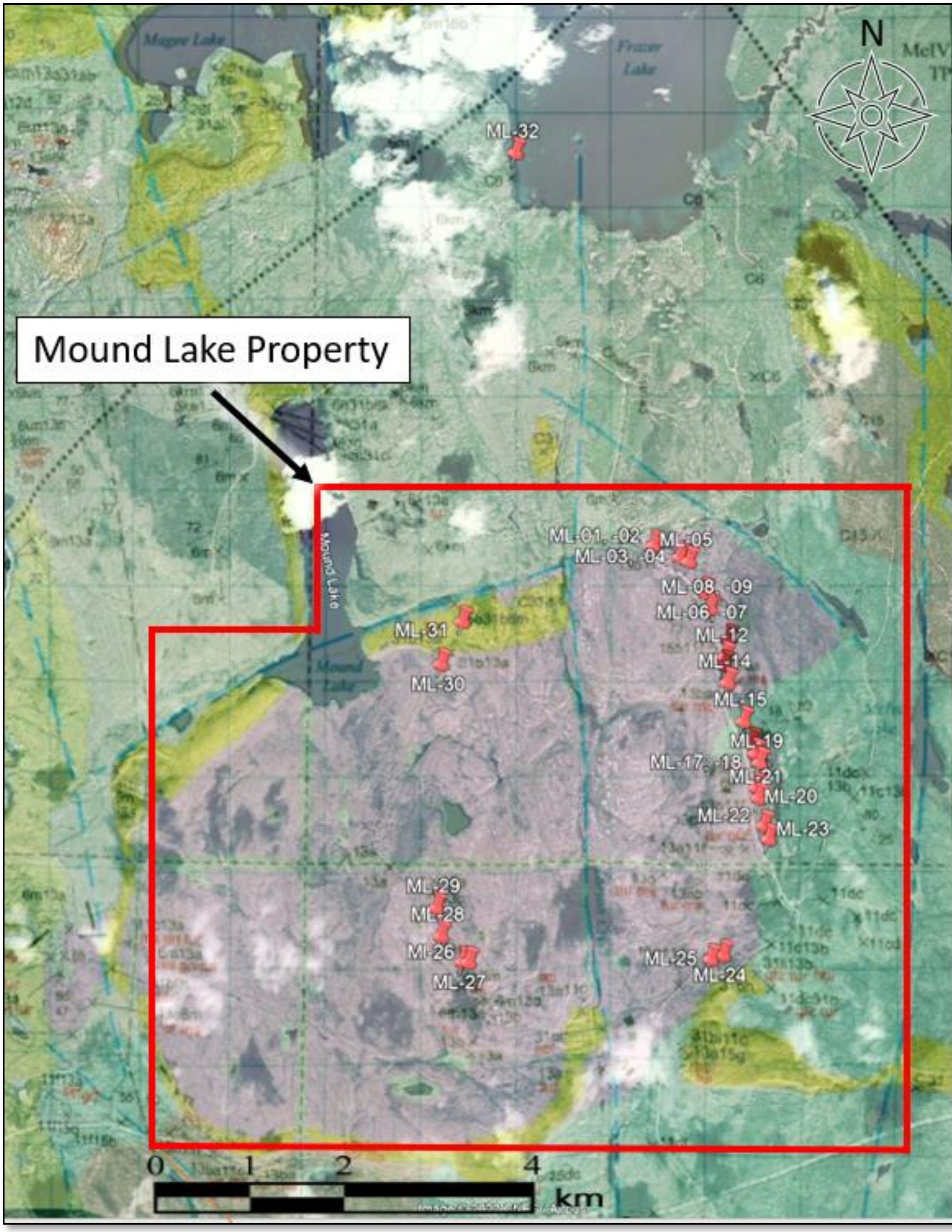


Figure 29. Bedrock sample locations of Smyk (2022), overlain on Google Earth imagery and bedrock geology (Map P.3562, Hart et al. 2005). Sample labels have been abbreviated for clarity.

9.2.1 Property Geology

The observed geology and outcrop locations correlated very well with recently published Ontario Geological Survey sources, namely Map P.3562 (Hart et al. 2005) and Open File Report 6165 (Hart 2005a). The sampled rocks comprise a variety of muscovite- and/or biotite-bearing granites and pegmatite dykes in the Mound Lake Pluton (see Figures 12-19). Limited field time and the complexity of the intrusive/magmatic relationships precludes a definitive, initial assessment of the distribution/zonation of these granitic phases. Medium-grained, massive, grey to pink, locally K-feldspar-phyric, muscovite- and biotite-bearing granite predominates. It commonly contains irregular pegmatitic patches and miarolitic cavities with large, drusy K-feldspar crystals and patches of quartz. Both granite and pegmatitic patches may be crosscut by later granitic pegmatite dykes and finer-grained aplitic dykes. Composite, sheeted/banded, aplitic to pegmatitic dykes are suggestive of multiple generations of melt emplacement. Outcrops of Quetico metasedimentary rocks (Figure 11) and Nipigon diabase were examined but not sampled for the purposes of lithogeochemistry.

9.2.2 Lithogeochemistry

Rock samples were submitted to ALS for Complete Characterization Package geochemical analysis, yielding both major and trace element chemistry (Table 6, below). Analytical results are provided in Appendix B.

CODE	ANALYTES AND RANGES (ppm)							
ME-ICP06	SiO_2	0.01-100%	MgO	0.01-100%	TiO_2	0.01-100%	BaO	0.01-100%
	Al_2O_3	0.01-100%	Na_2O	0.01-100%	MnO	0.01-100%	LOI	0.01-100%
	Fe_2O_3	0.01-100%	K_2O	0.01-100%	P_2O_5	0.01-100%		
	CaO	0.01-100%	Cr_2O_3	0.002-100%	SrO	0.01-100%		
ME-IR08	C	0.01-50%	S	0.01-50%				
ME-MS81™	Ba	0.5-10,000	Gd	0.05-1,000	Sm	0.03-1,000	W	0.5-10,000
	Ce	0.1-10,000	Hf	0.05-10,000	Sn	0.5-10,000	Y	0.1-10,000
	Cr	5-10,000	Ho	0.01-1,000	Sr	0.1-10,000	Yb	0.03-1,000
	Cs	0.01-10,000	La	0.1-10,000	Ta	0.1-2,500	Zr	1-10,000
	Dy	0.05-1,000	Lu	0.01-1,000	Tb	0.01-1,000		
	Er	0.03-1,000	Nb	0.05-2,500	Th	0.05-1,000		
	Eu	0.02-1,000	Nd	0.1-10,000	Tm	0.01-1,000		
	Ga	0.1-1,000	Pr	0.02-1,000	U	0.05-1,000		
	Ge	5-1,000	Rb	0.2-10,000	V	5-10,000		
ME-MS42™*	As	0.1-250	In	0.005-250	Se	0.2-250		
	Bi	0.01-250	Re	0.001-250	Te	0.01-250		
	Hg	0.005-25	Sb	0.05-250	Tl	0.02-250		
ME-4ACD81	Ag	0.5-100	Cu	1-10,000	Ni	1-10,000	Zn	2-10,000
	Cd	0.5-1,000	Li	10-10,000	Pb	2-10,000		
	Co	1-10,000	Mo	1-10,000	Sc	1-10,000		

Table 6. List of analytes, ranges and analytical methods (ALS Geochemistry, Schedule of Fees and Services, 2022)

Analyses of the major elements (i.e. Na, K, Ca, Si) confirms that the sampled felsic intrusive rocks are granites, as is shown on the total alkali-silica (TAS) diagram (Figure 30). Silica (SiO_2) values range from 68.2 to 77.9%, averaging 74.8%. Alumina (Al_2O_3) values range from 12.55 to

17.3%, averaging 14.1%. Average values for other major element oxides include 0.48% CaO, 3.28% Na_2O and 5.62% K_2O. Similar major element values were noted in a granite from the Church Road area by Hart (2005b).

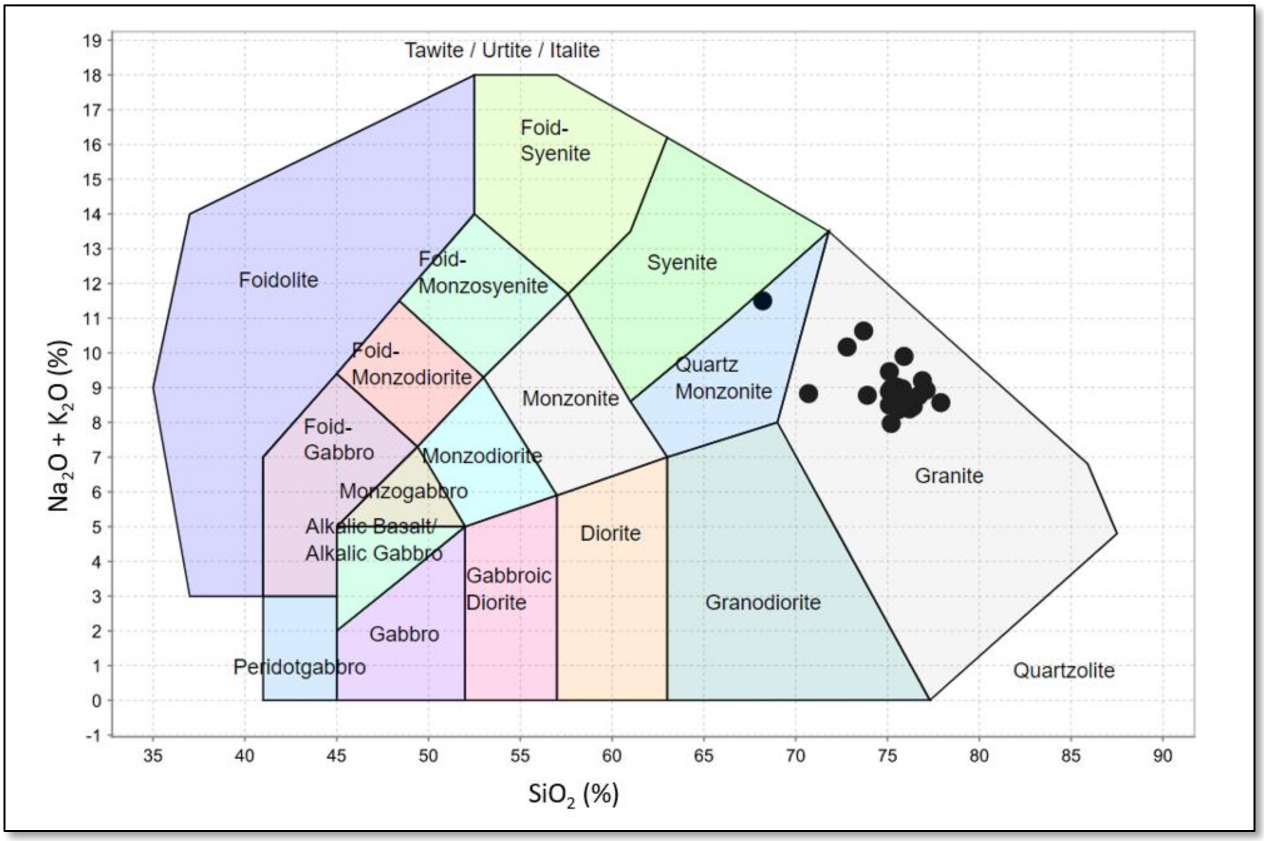


Figure 30. Total alkali-silica (TAS) diagram (Middlemost 1994), showing that Mound Lake samples fall predominantly in the granite field.

As shown in the Alumina Saturation Index diagram (Figure 31), the Mound Lake samples are all weakly to strongly peraluminous.

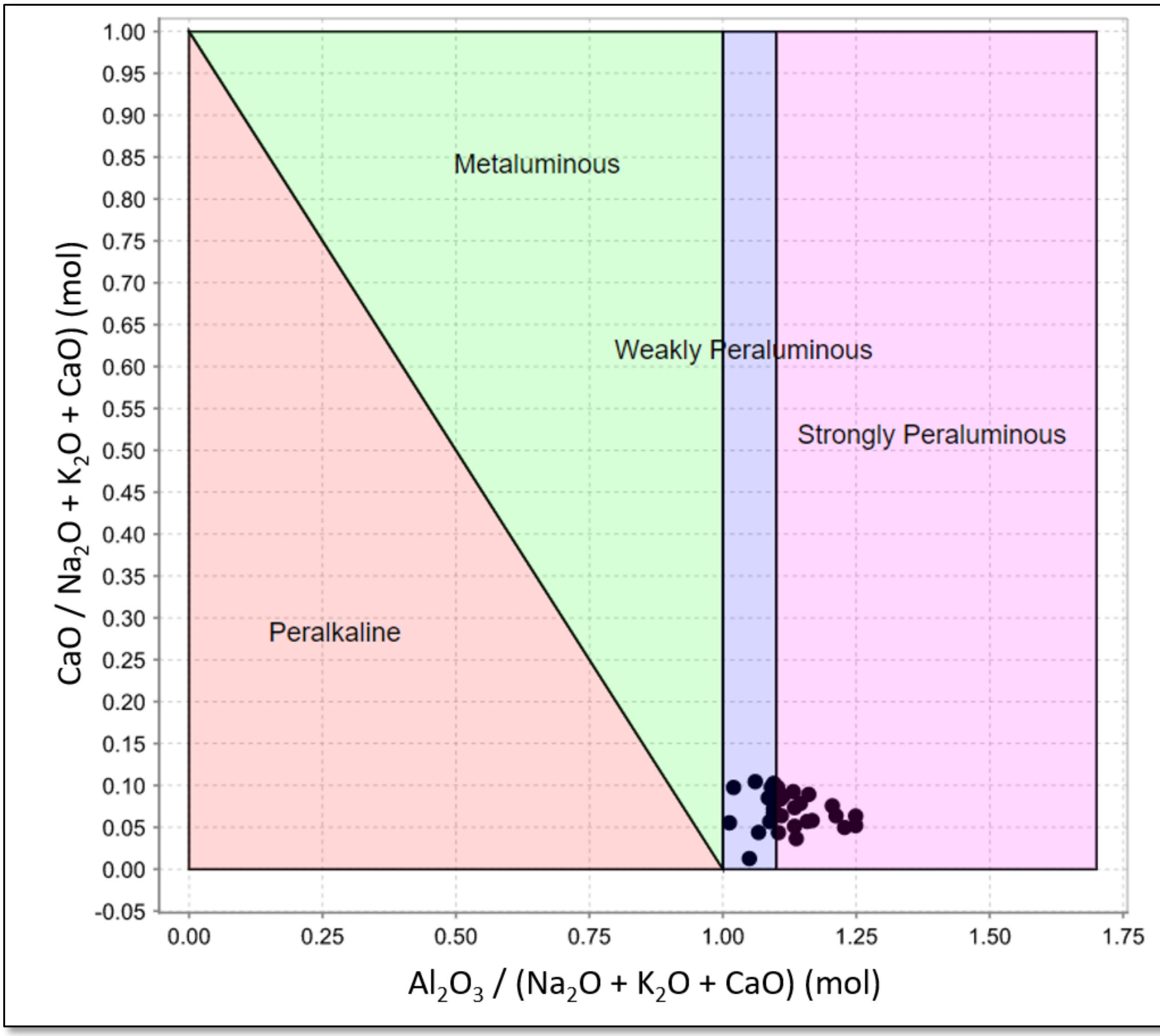


Figure 31. Aluminous Saturation Index (Barton and Young 2002), showing that the Mound Lake samples range from weakly to strongly peraluminous.

Nb/Ta ratios, which ideally should be less than 8 for fertile granites, range in the Mound Lake samples from 3.54 to 22.7, averaging 10.4. The majority of the Nb/Ta values <8 were returned from medium-grained granite samples, rather than cross-cutting pegmatites. However, the pegmatite dyke sampled on the shore of Frazer Lake, north of the Mound Lake Property, returned the lowest Nb/Ta value (0.28) and 110.5 ppm Nb and 395 ppm Ta.

Lithium values in the Mound Lake samples ranged up to 70 ppm.

10. Drilling

No drilling has yet been completed on the Mound Lake Property.

11. Sample Preparation, Analyses and Security

11.1 Sample Preparation Methods and Quality Control Measures

Thirty-two (32) 2-4 kg hand samples of granitic rocks were collected by Smyk (2022). Sample locations were recorded in field notebook and stored as waypoints in a Garmin GPSMAP® 78s. Samples were immediately bagged and double-labelled in the field. Prior to submission for analysis, samples were washed to remove soil and other contaminants and placed in new, clean sample bags. Representative samples were retained for future reference.

Samples were delivered in two batches (i.e. ML-22-MS-01 to -25, inclusive; and ML-22-MS-26 to -32, inclusive) to ALS Canada Ltd., 645 Norah Crescent, Thunder Bay, Ontario. Initial sample preparation there consisted of:

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

Crushed and pulverized samples were shipped to ALS Canada Ltd.'s laboratory in North Vancouver, British Columbia for analysis. Analysis in the North Vancouver laboratory included:

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
ME-MS81	Lithium Borate Fusion ICP-MS	ICP-MS
ME-MS42	Up to 34 elements by ICP-MS	ICP-MS
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
TOT-ICP06	Total Calculation for ICP06	
ME-4ACD81	Base Metals by 4-acid dig.	ICP-AES
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
C-IR07	Total Carbon (IR Spectroscopy)	LECO
S-IR08	Total Sulphur (IR Spectroscopy)	LECO

The Quality Control Certificates of Analysis can be found in Appendix C. ALS' global quality program includes inter-laboratory test programs and regularly scheduled internal audits that meet all requirements of ISO/IEC 17025:2017 and ISO 9001:2015. All ALS Geochemistry hub and many multi-purpose laboratories are accredited to ISO/IEC 17025:2017 for specific analytical procedures. The physical sample preparation involving accredited test methods as listed on an analytical laboratory's ISO/IEC 17025:2017 Scope of Accreditation may be performed at that location, or at off-site sample preparation laboratories that are monitored regularly for quality control and quality assurance practices. In certain instances, an ISO/IEC accreditation body may allow for these off-site sample preparation facilities to be listed on the laboratory's Scope.

The author(s) of this Report are satisfied that all sample preparation and analytical methods have adhered to all security, Quality Control and Quality Assurance measures.

12. Data Verification

The Qualified Persons have verified, wherever possible, data and information included in this report. Sources of data and information have been (re)visited and referenced as required. Websites, including those maintained by the Ontario Ministry of Mines, have been referenced and accessed in December, 2022. The collection of all field information/data was overseen and conducted by the Qualified Person. No external data verification was required.

13. Mineral Processing and Metallurgical Testing

No mineral processing nor metallurgical testing analyses have been carried out on the Mound Lake Property.

14. Mineral Resource Estimates

No Mineral Resource Estimates have yet been undertaken on the Mound Lake Property.

15. Mineral Reserve Estimates

No Mineral Reserve Estimates have yet been undertaken on the Mound Lake Property.

16. Mining Methods

(Not applicable to Mound Lake Property)

17. Recovery Methods

(Not applicable to Mound Lake Property)

18. Project Infrastructure

(Not applicable to Mound Lake Property)

19. Market Studies and Contracts

(Not applicable to Mound Lake Property)

20. Environmental Studies, Permitting and Social or Community Impact

(Not applicable to Mound Lake Property)

21. Capital and Operating Costs

(Not applicable to Mound Lake Property)

22. Economic Analysis

(Not applicable to Mound Lake Property)

23. Adjacent Properties

This Report does not rely on any information or data from any property adjacent to the Mound Lake Property.

24. Other Relevant Data and Information

No other additional information or explanation is deemed necessary to make this Report understandable and not misleading.

25. Interpretation and Conclusions

Information used in assessing the early-stage exploration potential of the Mound Lake Property has been gleaned from three main sources:

1) Published sources, including
   a. Previous work undertaken by explorationists
   b. Federal and provincial government geological, geophysical and geochemical surveys
   c. Scientific literature;
2) An aeromagnetic survey conducted over the Mound Lake Property for Rift Lithium Inc. in June, 2022 (Kouhi 2022); and
3) A reconnaissance geological and geochemical sampling program carried out on and around the Mound Lake Property for Rift Lithium Inc. in October, 2022 (Smyk 2022).

Interpretation of the aforementioned data has led to the following conclusions:

1) The Mound Lake Property is underlain by a granite that displays many of the features of a 'fertile' granite that is capable of producing lithium-cesium-tantalum (LCT) pegmatites and rare metal mineralization, namely:
   a. Consistent, weakly to strongly peraluminous bulk-rock geochemistry
   b. Elevated rare element contents and low Nb/Ta values
   c. Locally blocky K-feldspar and coarse muscovite.

2) The general geology of the Property is consistent with the previous interpretation of Hart (2005a) and Hart et al. (2005). This interpretation is supported by new aeromagnetic data (Kouhi 2022) that also delineate cross-cutting lineaments that may

be key structures in pegmatite dyke emplacement, both within the Mound Lake Pluton and in surrounding country rocks.

3) The Mound Lake Pluton (i.e. much of the current Property) and its environs represent a good, early-stage exploration target for LCT pegmatite and associated rare metal deposits. Further work in assessing its rare metal potential is warranted.

26. Recommendations

Based on the scarcity of pre-existing data and a limited amount of new data, further work is recommended to assess the rare metal potential of the Mound Lake Property and its environs.

26.1 Desktop Studies

Follow-up, detailed studies of the sampled rocks should be undertaken to further characterize and subdivide prospective areas within Mound Lake granitic rocks. Key elemental ratios and fractionation indicators could be determined and then plotted on a map to determine the fractionation direction. Discrimination criteria include:

- presence of tourmaline, beryl, and ferrocolumbite;
- Mn content in garnet;
- Rb content in bulk K-feldspar; and
- Mg/Li and Nb/Ta ratios in bulk granite samples.

Petrographic and mineralogic analyses to determine the aforementioned criteria may comprise:

- scanning electron microscope, electron microprobe and/or x-ray diffraction analyses of specific minerals (e.g. garnet, K-feldspar, micas); and
- detailed petrographic description of samples via microscopic thin section analysis to determine their mineralogy and textural characteristics.

26.2 Field Work

Desktop analysis, research, modelling and subsequent assessment may prompt the consideration of follow-up field work, which may include:

- additional claim acquisition in the country rocks surrounding the current property up to several kilometres from the Mound Lake granite (i.e., current Property);

- property- to larger-scale prospecting and additional/in-fill rock sampling to both add to existing database and look for pegmatitic rocks and dykes. The discovery of a rare element-enriched pegmatite dyke north of the current Property by Smyk (2022) underscores the value of such prospecting, which may be accompanied by:
  - geological mapping
  - stripping, trenching
  - structural/lineament analysis
  - lithogeochemical sampling to determine Li, Rb, Cs, and B contents in country rocks to identify possible pegmatite-related metasomatism; and/or
- other surficial geochemical surveys (e.g. 'B' or 'C' horizon soils; stream sediment).

A detailed, budgeted outline for a proposed 2023 initial exploration program on the Mound Lake Property is provided in Appendix D.

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APPENDIX A. MINING CLAIMS, MOUND LAKE PROPERTY

Township / Area	Tenure ID	Tenure Type	Anniversary Date	Status	Tenure %	Work Required
MCIVOR	695867	Single Cell Mining Claim	2023-12-10	Active	100	400
MCIVOR	695868	Single Cell Mining Claim	2023-12-10	Active	100	400
MCIVOR	695869	Single Cell Mining Claim	2023-12-10	Active	100	400
MCIVOR	695870	Single Cell Mining Claim	2023-12-10	Active	100	400
MCIVOR	695871	Single Cell Mining Claim	2023-12-10	Active	100	400
MCIVOR	695872	Single Cell Mining Claim	2023-12-10	Active	100	400
MCIVOR	695873	Single Cell Mining Claim	2023-12-10	Active	100	400
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MCIVOR	695876	Single Cell Mining Claim	2023-12-10	Active	100	400
MCIVOR	695877	Single Cell Mining Claim	2023-12-10	Active	100	400
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ADAMSON, COCKERAM	696068	Single Cell Mining Claim	2023-12-10	Active	100	400
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ADAMSON, MCIVOR	696075	Single Cell Mining Claim	2023-12-10	Active	100	400
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CHURCH, COCKERAM	696082	Single Cell Mining Claim	2023-12-10	Active	100	400
ADAMSON, COCKERAM	696083	Single Cell Mining Claim	2023-12-10	Active	100	400
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COCKERAM	696109	Single Cell Mining Claim	2023-12-10	Active	100	400

SAMPLE	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME ICP0
	%	%	%	%	%	%	%	%	%
SAMPLE ID	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO
ML-22-MS-01	73.9	13.85	1.44	0.75	0.28	3.89	4.89	<0.002	0.1
ML-22-MS-02	75.8	14.05	0.98	0.38	0.14	3.08	5.89	<0.002	0.0

APPENDIX B. WHOLE ROCK LITHOGEOCHEMICAL DATA

SAMPLE	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06
	%	%	%	%	%	%	%	%
SAMPLE ID	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3
ML-22-MS-01	73.9	13.85	1.44	0.75	0.28	3.89	4.89	<0.002
ML-22-MS-02	75.8	14.05	0.98	0.38	0.14	3.08	5.89	<0.002
ML-22-MS-03	75.6	13.35	1.16	0.58	0.2	3.81	4.56	<0.002
ML-22-MS-04	72.8	14.15	0.66	0.32	0.14	2.97	7.2	<0.002
ML-22-MS-05	75.2	13.1	1.62	0.3	0.45	2.34	5.63	<0.002
ML-22-MS-06	75.1	12.55	1.5	0.66	0.3	3.38	5.12	<0.002
ML-22-MS-07	76.4	14.25	0.69	0.39	0.13	4.16	4.3	<0.002
ML-22-MS-08	75.6	14.2	1.54	0.7	0.3	3.64	5.32	0.002
ML-22-MS-09	75.9	13.3	0.73	0.4	0.12	3.01	6.89	<0.002
ML-22-MS-10	75.5	14.55	1.13	0.71	0.26	3.81	5.21	<0.002
ML-22-MS-11	76.9	13.35	1.07	0.29	0.28	2.85	6.35	0.002
ML-22-MS-12	75.5	13.95	1.36	0.59	0.27	3.25	5.17	0.002
ML-22-MS-13	75.4	14.5	1.14	0.5	0.32	3.3	5.26	0.002
ML-22-MS-14	75.9	14.35	0.95	0.32	0.36	3.13	5.5	0.002
ML-22-MS-15	75.2	15.4	0.48	0.43	0.1	3.27	5.7	<0.002
ML-22-MS-16	76.2	14.2	0.61	0.41	0.12	2.97	5.62	0.002
ML-22-MS-17	76.2	13.3	0.92	0.33	0.26	3.63	4.76	0.002
ML-22-MS-18	73.7	13.55	0.26	0.09	0.02	2.2	8.43	0.002
ML-22-MS-19	70.7	14.05	2.22	0.53	0.56	3.1	5.73	0.004
ML-22-MS-20	77.1	13.4	0.43	0.45	0.06	3.12	5.81	0.003
ML-22-MS-21	76.7	14	0.67	0.58	0.2	3.72	5.05	0.003
ML-22-MS-22	75.1	13.6	0.97	0.43	0.28	3.29	5.6	0.002
ML-22-MS-23	68.2	16.45	2.21	0.29	0.65	2.64	8.86	0.002
ML-22-MS-24	77.9	12.55	0.68	0.36	0.23	2.85	5.72	0.002
ML-22-MS-25	75.1	14.65	0.58	0.53	0.15	3.87	5.59	<0.002
ML-22-MS-26	72.7	13.8	1.52	0.71	0.34	3.53	5.08	0.002
ML-22-MS-27	73.1	14.65	1.38	0.63	0.66	3.62	5.6	0.002
ML-22-MS-28	72.2	13.75	1.54	0.49	0.42	2.97	5.86	<0.002
ML-22-MS-29	74.9	14.15	1.58	0.61	0.28	3.35	5.93	0.002
ML-22-MS-30	74.4	14	1.18	0.63	0.18	3.4	5.2	<0.002
ML-22-MS-31	75.4	14.45	1.26	0.7	0.31	3.83	5.12	<0.002
ML-22-MS-32	74.4	17.3	0.73	0.48	0.17	2.96	2.83	<0.002

SAMPLE NUMBER	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	ME-ICP06	OA-GRA05	TOT-ICP06
	TiO_2	MnO	P_2O_5	SrO	BaO	LOI	Total
	%	%	%	%	%	%	%
ML-22-MS-01	0.15	0.02	0.15	0.01	0.03	0.47	99.83
ML-22-MS-02	0.07	0.05	0.14	<0.01	0.02	0.72	101.32
ML-22-MS-03	0.09	0.01	0.17	0.01	0.02	0.67	100.23
ML-22-MS-04	0.04	0.03	0.15	0.01	0.02	0.66	99.15
ML-22-MS-05	0.11	0.01	0.15	0.01	0.02	1.27	100.21
ML-22-MS-06	0.13	0.01	0.08	0.01	0.03	0.41	99.28
ML-22-MS-07	0.04	0.01	0.16	0.01	0.02	0.79	101.35
ML-22-MS-08	0.15	0.01	0.12	<0.01	0.03	0.39	102
ML-22-MS-09	0.05	0.01	0.12	0.01	0.03	0.44	101.01
ML-22-MS-10	0.11	0.01	0.14	0.01	0.02	0.49	101.95
ML-22-MS-11	0.1	0.01	0.15	0.01	0.03	0.48	101.87
ML-22-MS-12	0.1	0.02	0.11	0.01	0.02	0.57	100.92
ML-22-MS-13	0.09	0.01	0.15	0.01	0.04	0.72	101.44
ML-22-MS-14	0.11	0.01	0.14	<0.01	0.03	0.84	101.64
ML-22-MS-15	0.02	0.01	0.12	0.01	0.05	0.65	101.44
ML-22-MS-16	0.03	0.01	0.16	<0.01	0.03	0.61	100.97
ML-22-MS-17	0.09	0.01	0.12	<0.01	0.04	0.63	100.29
ML-22-MS-18	0.01	<0.01	0.1	0.01	0.06	0.22	98.65
ML-22-MS-19	0.25	0.02	0.15	0.02	0.07	0.69	98.09
ML-22-MS-20	0.02	0.01	0.08	0.01	0.03	0.3	100.82
ML-22-MS-21	0.04	0.01	0.06	0.01	0.04	0.43	101.51
ML-22-MS-22	0.05	0.01	0.06	0.01	0.04	0.53	99.97
ML-22-MS-23	0.16	0.03	0.17	0.01	0.06	0.58	100.31
ML-22-MS-24	0.04	0.01	0.06	0.01	0.04	0.51	100.96
ML-22-MS-25	0.02	0.01	0.1	0.01	0.04	0.61	101.26

ML-22-MS-26
ML-22-MS-27
ML-22-MS-28
ML-22-MS-29
ML-22-MS-30
ML-22-MS-31
ML-22-MS-32

SAMPLE NUMBER	C-IR07	S-IR08	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
	C	S	Ba	Ce	Cr	Cs	Dy
	%	%	ppm	ppm	ppm	ppm	ppm
ML-22-MS-01	0.06	0.01	304	63.2	14	9.43	1.4
ML-22-MS-02	0.15	0.01	161.5	29.5	6	15.25	0.83
ML-22-MS-03	0.05	0.01	163	31.9	13	8.86	0.98
ML-22-MS-04	0.08	0.01	173.5	7.3	7	14.6	0.46
ML-22-MS-05	0.02	0.01	197	42.9	12	6.54	1.69
ML-22-MS-06	0.01	0.01	294	73.2	14	3.67	2.09
ML-22-MS-07	0.02	0.01	160.5	5.4	7	4.28	1.17
ML-22-MS-08	0.02	0.01	239	67.1	16	4.4	1.65
ML-22-MS-09	0.05	0.01	255	14.5	9	3.06	0.77
ML-22-MS-10	0.03	0.01	226	39.6	15	2.64	1.06
ML-22-MS-11	0.03	0.01	262	3	16	5.04	0.31
ML-22-MS-12	0.06	0.01	238	48.6	12	2.43	1.65
ML-22-MS-13	0.09	0.02	352	38.3	11	5.76	1.06
ML-22-MS-14	0.09	0.02	328	44	11	2.92	1.41
ML-22-MS-15	0.03	0.02	469	6.4	12	3.09	1.19
ML-22-MS-16	0.03	0.02	306	7.4	16	7.23	1.65
ML-22-MS-17	0.04	0.02	350	65.9	21	3.21	1.64
ML-22-MS-18	0.05	0.01	595	3.2	35	3.85	0.16
ML-22-MS-19	0.04	0.02	646	123.5	26	5.91	2.67
ML-22-MS-20	0.04	0.01	284	3.3	11	8.18	0.17
ML-22-MS-21	0.02	0.01	372	13.3	18	6.36	0.45
ML-22-MS-22	0.01	0.02	399	49.5	28	3.62	1.29
ML-22-MS-23	0.02	0.01	652	59.6	22	23.7	2.73
ML-22-MS-24	0.08	0.02	381	12.8	14	2.72	0.34
ML-22-MS-25	0.12	0.01	389	9.7	11	11.25	0.57
ML-22-MS-26	0.03	<0.01	322	75.7	13	3.14	1.99
ML-22-MS-27	0.04	<0.01	336	32.9	17	3.64	1.19
ML-22-MS-28	0.12	<0.01	402	91.9	8	3.44	1.82
ML-22-MS-29	0.03	<0.01	426	59.7	13	2.93	1.65
ML-22-MS-30	0.09	<0.01	250	46.9	9	7.31	1.73
ML-22-MS-31	0.07	<0.01	259	40.8	9	6.38	1.63
ML-22-MS-32	0.06	<0.01	75	3	8	48.6	0.19

SAMPLE NUMBER	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
	Er	Eu	Ga	Gd	Ge	Hf	Ho
	ppm	ppm	ppm	ppm	ppm	ppm	ppm
ML-22-MS-01	0.52	0.43	25.7	2.83	1.2	3.86	0.21
ML-22-MS-02	0.35	0.18	27.7	1.44	2	2.47	0.14
ML-22-MS-03	0.45	0.19	28.8	1.52	1.5	2.65	0.14
ML-22-MS-04	0.24	0.17	28.7	0.57	1.7	1.01	0.08
ML-22-MS-05	0.78	0.24	29.9	2.27	1.4	3.12	0.26
ML-22-MS-06	0.81	0.4	21.1	3.8	1	4.06	0.35
ML-22-MS-07	1.03	0.17	28.3	0.69	1.4	0.61	0.29
ML-22-MS-08	0.6	0.3	25.2	3.4	1.2	3.91	0.22
ML-22-MS-09	0.4	0.24	17.2	0.84	1.1	1.13	0.17
ML-22-MS-10	0.41	0.3	20.9	1.82	1	2.74	0.19
ML-22-MS-11	0.2	0.2	17.7	0.28	1	0.33	0.06
ML-22-MS-12	0.81	0.31	18.3	2.91	1.2	3.51	0.3
ML-22-MS-13	0.43	0.39	22.5	2.2	1	2.8	0.16
ML-22-MS-14	0.55	0.3	22	2.4	1.1	2.71	0.26
ML-22-MS-15	0.69	0.32	20.4	0.84	1.2	0.83	0.24
ML-22-MS-16	0.77	0.24	19.9	1.39	1.3	1.56	0.32
ML-22-MS-17	0.56	0.48	17.5	3.49	1.1	4.9	0.27
ML-22-MS-18	0.07	0.26	14	0.21	1	0.28	0.03
ML-22-MS-19	0.88	0.67	20.3	4.62	1.2	7.64	0.42
ML-22-MS-20	0.1	0.33	14.3	0.2	1	1.53	0.03
ML-22-MS-21	0.1	0.37	14.4	0.86	0.7	2.19	0.07
ML-22-MS-22	0.38	0.5	15.7	2.43	1	3.63	0.17
ML-22-MS-23	1.29	0.5	24.6	3.66	1.4	3.32	0.49
ML-22-MS-24	0.08	0.3	14.7	0.84	0.9	1.19	0.05
ML-22-MS-25	0.23	0.32	18	0.59	1.3	0.42	0.1
ML-22-MS-26	0.65	0.41	20.9	4.03	0.9	4.15	0.27
ML-22-MS-27	0.31	0.43	21.9	2.05	1.1	2.8	0.15
ML-22-MS-28	0.62	0.51	19.2	4.25	1	4.09	0.28
ML-22-MS-29	0.56	0.43	20.5	3.45	0.9	4.08	0.21
ML-22-MS-30	0.8	0.32	26	2.54	1.1	3.15	0.26
ML-22-MS-31	0.65	0.35	24.1	2.16	1	3.26	0.26
ML-22-MS-32	0.06	0.36	21.7	0.27	4.9	4.34	0.04

SAMPLE NUMBER	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
	La	Lu	Nb	Nd	Pr	Rb	Sm
	ppm	ppm	ppm	ppm	ppm	ppm	ppm
ML-22-MS-01	30.7	0.06	14.3	27	7.58	329	5.11
ML-22-MS-02	14.7	0.07	16.65	12.5	3.48	434	2.21
ML-22-MS-03	15.2	0.05	17.8	13.5	3.65	338	2.74
ML-22-MS-04	3.8	0.04	12.15	3.1	0.84	479	0.68
ML-22-MS-05	21.3	0.08	16.15	17.6	4.97	395	3.83
ML-22-MS-06	35.5	0.08	13.1	32	8.57	290	6.42
ML-22-MS-07	2.9	0.15	10.35	2.2	0.58	233	0.65
ML-22-MS-08	32.5	0.06	14.6	27.7	7.84	244	5.96
ML-22-MS-09	6.6	0.06	3.82	5.8	1.75	238	1.46
ML-22-MS-10	17.4	0.05	8.12	15.8	4.65	181	2.81
ML-22-MS-11	1.5	0.03	8.46	1.3	0.36	232	0.23
ML-22-MS-12	21.7	0.12	9.07	19.6	5.76	176	4.12
ML-22-MS-13	17	0.04	13.8	16.3	4.66	205	3.42
ML-22-MS-14	19.6	0.04	11.7	18.2	5.24	219	3.78
ML-22-MS-15	2.9	0.07	2.36	2.5	0.75	178.5	0.72
ML-22-MS-16	3.1	0.07	3.61	3.7	0.99	196	0.94
ML-22-MS-17	29.1	0.06	6.3	27	7.59	164.5	5.25
ML-22-MS-18	1.8	0.01	0.9	1.2	0.38	261	0.3
ML-22-MS-19	57.5	0.09	10.4	47.9	14.5	208	7.99
ML-22-MS-20	1.6	0.02	1.32	1.2	0.36	163.5	0.27
ML-22-MS-21	5.9	0.01	2.54	5.4	1.4	138.5	1.32
ML-22-MS-22	20.6	0.04	3.69	19.2	5.64	159	4.18
ML-22-MS-23	26.7	0.16	14.25	22.4	6.75	322	4.88
ML-22-MS-24	5.6	0.02	2.87	4.9	1.55	141	1.13
ML-22-MS-25	4.6	0.03	3.89	3.7	1.06	158	0.71
ML-22-MS-26	35.1	0.05	13.05	31.3	8.91	186	6.93
ML-22-MS-27	14.6	0.02	7.12	14	3.97	190	3.31
ML-22-MS-28	40.8	0.06	11.05	38.3	10.75	217	7.3
ML-22-MS-29	25.7	0.05	9.58	23.8	6.89	224	5.34
ML-22-MS-30	21	0.06	14.9	19.6	5.61	294	4.34
ML-22-MS-31	15.8	0.05	14.6	16.2	4.43	293	3.08
ML-22-MS-32	1.7	0.01	110.5	1.4	0.39	241	0.38

SAMPLE NUMBER	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
	Sn	Sr	Ta	Tb	Th	Tm	U
	ppm	ppm	ppm	ppm	ppm	ppm	ppm
ML-22-MS-01	6.1	90.4	2	0.32	20.9	0.06	7.97
ML-22-MS-02	11.5	50.8	1.9	0.16	10.5	0.06	2.09
ML-22-MS-03	9.4	51.2	2.3	0.19	11.2	0.06	2.49
ML-22-MS-04	7.4	50.6	1.5	0.09	2.27	0.04	1.34
ML-22-MS-05	7	43.2	2.1	0.32	13.75	0.09	3.26
ML-22-MS-06	4.5	90.1	1.9	0.43	23.1	0.11	4.68
ML-22-MS-07	7.7	60.7	1.9	0.14	1.71	0.18	0.69
ML-22-MS-08	4.7	71.7	0.9	0.4	19.8	0.06	5.33
ML-22-MS-09	1.9	67.1	0.3	0.15	4.45	0.06	2.51
ML-22-MS-10	2.3	75.4	0.4	0.23	12.5	0.05	4.54
ML-22-MS-11	3.2	62.2	0.6	0.06	0.65	0.04	0.7
ML-22-MS-12	3.2	69.4	0.4	0.39	15.65	0.13	3.01
ML-22-MS-13	5	85.2	1.3	0.28	9.25	0.05	3.48
ML-22-MS-14	3.2	68.9	0.6	0.32	11.5	0.08	4.19
ML-22-MS-15	2.3	98.8	0.2	0.19	2.06	0.09	2.09
ML-22-MS-16	2.3	72.1	0.5	0.29	3.24	0.11	9.92
ML-22-MS-17	3.7	88.9	0.7	0.46	16.75	0.09	5.33
ML-22-MS-18	1.7	107	0.1	0.03	0.79	0.01	0.22
ML-22-MS-19	5.6	126.5	1	0.56	31.7	0.12	5.65
ML-22-MS-20	1.5	92.2	0.3	0.04	1.06	0.02	2.27
ML-22-MS-21	1.5	114	0.3	0.11	4.72	0.02	3.76
ML-22-MS-22	1.3	112	0.3	0.31	16.4	0.05	3.13
ML-22-MS-23	6.4	127	1.8	0.59	21.1	0.19	19.05
ML-22-MS-24	1.1	109	0.2	0.09	8.39	0.01	3.49
ML-22-MS-25	4.5	127	1.1	0.12	3.6	0.04	3.65
ML-22-MS-26	2.8	91.7	0.7	0.51	23.2	0.06	5.2
ML-22-MS-27	2.3	109.5	0.5	0.26	13.85	0.03	4.9
ML-22-MS-28	3.5	94.5	1	0.52	25.9	0.07	3.75
ML-22-MS-29	2.5	110	0.8	0.39	20.6	0.07	4.53
ML-22-MS-30	6.2	69.3	1.4	0.35	14.9	0.1	3.07
ML-22-MS-31	5.7	76.3	1.7	0.34	18.2	0.08	3.08
ML-22-MS-32	102.5	76.9	395	0.03	0.5	0.01	16.1

SAMPLE NUMBER	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS42	ME-MS42
	V	W	Y	Yb	Zr	As	Bi
	ppm	ppm	ppm	ppm	ppm	ppm	ppm
ML-22-MS-01	9	0.9	5.8	0.4	123	<0.1	2.75
ML-22-MS-02	<5	1.4	4.1	0.45	68	0.1	0.89
ML-22-MS-03	5	1.2	4.8	0.38	75	0.1	0.36
ML-22-MS-04	<5	1.5	2.6	0.26	20	0.2	0.35
ML-22-MS-05	14	8.7	8.1	0.64	93	0.2	0.49
ML-22-MS-06	6	0.6	8.4	0.62	127	<0.1	0.24
ML-22-MS-07	<5	3.4	9.7	1.24	14	0.3	0.15
ML-22-MS-08	7	0.6	6.7	0.37	116	<0.1	0.1
ML-22-MS-09	<5	0.8	4.9	0.37	28	0.2	0.14
ML-22-MS-10	6	<0.5	5	0.3	76	<0.1	0.18
ML-22-MS-11	6	0.9	2.3	0.24	7	0.2	0.23
ML-22-MS-12	9	0.5	8.2	0.92	104	0.1	0.08
ML-22-MS-13	6	1.4	5.2	0.3	79	0.1	0.09
ML-22-MS-14	6	<0.5	7.6	0.34	81	<0.1	0.21
ML-22-MS-15	5	0.6	8.7	0.47	17	0.6	0.16
ML-22-MS-16	<5	1.1	10.1	0.56	31	1	0.3
ML-22-MS-17	9	1.1	8	0.41	139	0.4	0.4
ML-22-MS-18	<5	0.6	0.9	0.06	6	0.1	0.11
ML-22-MS-19	23	1.3	11.8	0.64	255	0.1	0.37
ML-22-MS-20	<5	0.6	1	0.09	28	0.2	0.19
ML-22-MS-21	9	0.6	1.9	0.13	55	0.5	9.27
ML-22-MS-22	<5	0.5	5.2	0.3	98	0.3	0.45
ML-22-MS-23	16	1.3	14.5	0.84	79	0.4	7.96
ML-22-MS-24	<5	0.9	1.2	0.07	28	0.2	0.09
ML-22-MS-25	5	0.8	3.4	0.25	9	0.4	0.16
ML-22-MS-26	6	0.7	7.7	0.34	125	0.1	0.11
ML-22-MS-27	6	0.9	3.7	0.19	68	1.4	0.18
ML-22-MS-28	<5	0.6	7.4	0.36	127	0.2	0.09
ML-22-MS-29	7	<0.5	5.8	0.34	122	0.1	0.08
ML-22-MS-30	7	0.7	8.4	0.56	100	0.1	0.19
ML-22-MS-31	5	1.7	6.9	0.43	102	<0.1	0.43
ML-22-MS-32	<5	5.1	1.3	0.08	47	8.3	0.09

SAMPLE NUMBER	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42	ME-MS42
	Hg	In	Re	Sb	Se	Te	Tl
	ppm	ppm	ppm	ppm	ppm	ppm	ppm
ML-22-MS-01	0.022	0.007	<0.001	<0.05	<0.2	0.01	0.43
ML-22-MS-02	0.016	<0.005	<0.001	<0.05	<0.2	<0.01	0.12
ML-22-MS-03	0.014	0.005	<0.001	<0.05	<0.2	<0.01	0.22
ML-22-MS-04	0.01	<0.005	<0.001	<0.05	<0.2	<0.01	0.08
ML-22-MS-05	0.009	<0.005	<0.001	<0.05	<0.2	<0.01	0.1
ML-22-MS-06	0.006	0.013	<0.001	<0.05	<0.2	0.01	0.42
ML-22-MS-07	0.005	0.005	<0.001	<0.05	<0.2	0.01	0.05
ML-22-MS-08	<0.005	0.027	<0.001	<0.05	<0.2	<0.01	0.35
ML-22-MS-09	<0.005	0.005	<0.001	<0.05	<0.2	<0.01	0.05
ML-22-MS-10	<0.005	0.006	<0.001	<0.05	<0.2	<0.01	0.09
ML-22-MS-11	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.04
ML-22-MS-12	<0.005	0.006	<0.001	<0.05	<0.2	<0.01	0.08
ML-22-MS-13	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.08
ML-22-MS-14	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.05
ML-22-MS-15	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.04
ML-22-MS-16	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.04
ML-22-MS-17	<0.005	0.006	<0.001	<0.05	<0.2	<0.01	0.04
ML-22-MS-18	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.04
ML-22-MS-19	<0.005	0.013	<0.001	<0.05	<0.2	<0.01	0.23
ML-22-MS-20	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.03
ML-22-MS-21	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.05
ML-22-MS-22	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.05
ML-22-MS-23	<0.005	0.013	<0.001	<0.05	<0.2	<0.01	0.47
ML-22-MS-24	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.05
ML-22-MS-25	<0.005	<0.005	<0.001	<0.05	<0.2	<0.01	0.04
ML-22-MS-26	<0.005	0.014	<0.001	<0.05	<0.2	<0.01	0.26
ML-22-MS-27	<0.005	0.006	<0.001	<0.05	<0.2	<0.01	0.19
ML-22-MS-28	<0.005	0.011	<0.001	<0.05	<0.2	<0.01	0.18
ML-22-MS-29	<0.005	0.011	<0.001	<0.05	<0.2	<0.01	0.29
ML-22-MS-30	<0.005	0.007	<0.001	<0.05	<0.2	<0.01	0.41
ML-22-MS-31	<0.005	0.006	<0.001	<0.05	<0.2	<0.01	0.35
ML-22-MS-32	0.005	<0.005	<0.001	<0.05	<0.2	0.01	0.14

SAMPLE NUMBER	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81
	Ag	**Cd**	**Co**	**Cu**	**Li**	**Mo**
	ppm	**ppm**	**ppm**	**ppm**	**ppm**	**ppm**
ML-22-MS-01	<0.5	<0.5	1	<1	60	<1
ML-22-MS-02	<0.5	<0.5	1	<1	40	<1
ML-22-MS-03	<0.5	<0.5	1	<1	70	<1
ML-22-MS-04	<0.5	<0.5	<1	<1	40	<1
ML-22-MS-05	<0.5	<0.5	2	3	60	<1
ML-22-MS-06	<0.5	<0.5	2	<1	30	<1
ML-22-MS-07	<0.5	<0.5	1	2	10	<1
ML-22-MS-08	<0.5	<0.5	1	<1	50	<1
ML-22-MS-09	<0.5	<0.5	<1	<1	20	<1
ML-22-MS-10	<0.5	<0.5	1	<1	20	<1
ML-22-MS-11	<0.5	<0.5	2	<1	10	<1
ML-22-MS-12	<0.5	<0.5	1	1	10	<1
ML-22-MS-13	<0.5	<0.5	1	<1	10	<1
ML-22-MS-14	<0.5	<0.5	1	<1	20	<1
ML-22-MS-15	<0.5	<0.5	1	1	10	<1
ML-22-MS-16	<0.5	<0.5	1	2	10	<1
ML-22-MS-17	<0.5	<0.5	1	3	10	1
ML-22-MS-18	<0.5	<0.5	<1	1	10	<1
ML-22-MS-19	<0.5	<0.5	3	7	30	2
ML-22-MS-20	<0.5	<0.5	<1	3	10	<1
ML-22-MS-21	<0.5	<0.5	<1	<1	20	<1
ML-22-MS-22	<0.5	<0.5	1	1	20	<1
ML-22-MS-23	<0.5	<0.5	3	4	60	1
ML-22-MS-24	<0.5	<0.5	1	1	10	<1
ML-22-MS-25	<0.5	<0.5	1	3	10	<1
ML-22-MS-26	<0.5	<0.5	1	1	30	1
ML-22-MS-27	<0.5	<0.5	5	2	40	<1
ML-22-MS-28	<0.5	<0.5	1	1	30	<1
ML-22-MS-29	<0.5	<0.5	1	1	60	<1
ML-22-MS-30	<0.5	<0.5	<1	1	50	<1
ML-22-MS-31	<0.5	<0.5	1	2	30	<1
ML-22-MS-32	<0.5	<0.5	<1	5	20	<1

SAMPLE NUMBER	ME-4ACD81	ME-4ACD81	ME-4ACD81	ME-4ACD81
	Ni	Pb	Sc	Zn
	ppm	ppm	ppm	ppm
ML-22-MS-01	3	30	2	39
ML-22-MS-02	<1	22	2	14
ML-22-MS-03	1	23	2	31
ML-22-MS-04	1	27	2	6
ML-22-MS-05	2	21	2	10
ML-22-MS-06	2	31	3	32
ML-22-MS-07	<1	16	2	6
ML-22-MS-08	1	30	2	39
ML-22-MS-09	<1	34	1	11
ML-22-MS-10	<1	30	2	10
ML-22-MS-11	<1	27	2	5
ML-22-MS-12	1	36	3	12
ML-22-MS-13	1	28	2	7
ML-22-MS-14	1	26	3	4
ML-22-MS-15	<1	38	1	5
ML-22-MS-16	5	29	1	9
ML-22-MS-17	4	28	2	12
ML-22-MS-18	3	37	<1	<2
ML-22-MS-19	9	33	4	43
ML-22-MS-20	3	43	<1	8
ML-22-MS-21	4	34	1	9
ML-22-MS-22	3	37	2	16
ML-22-MS-23	10	68	5	47
ML-22-MS-24	2	54	1	10
ML-22-MS-25	2	37	2	10
ML-22-MS-26	4	41	4	34
ML-22-MS-27	16	37	2	18
ML-22-MS-28	2	37	3	31
ML-22-MS-29	4	41	3	36
ML-22-MS-30	2	28	5	30
ML-22-MS-31	3	27	2	28
ML-22-MS-32	7	21	<1	16

APPENDIX C. QUALITY CONTROL CERTIFICATES OF ANALYSIS

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QC CERTIFICATE TB22297833

This report is for 25 samples of Rock submitted to our lab in Thunder Bay, ON, Canada on 17-OCT-2022.

The following have access to data associated with this certificate:
MARK SMYK

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-MS81	Lithium Borate Fusion ICP-MS	ICP-MS
ME-MS42	Up to 34 elements by ICP-MS	ICP-MS
OA-GRA05	Loss on Ignition at 1000C	WST-SEQ
TOT-ICP06	Total Calculation for ICP06	
ME-4ACD81	Base Metals by 4-acid dig.	ICP-AES
ME-ICP06	Whole Rock Package - ICP-AES	ICP-AES
C-IR07	Total Carbon (IR Spectroscopy)	LECO
S-IR08	Total Sulphur (IR Spectroscopy)	LECO

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

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

Signature:
Saa Traxler, Director, North Vancouver Operations

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QC CERTIFICATE OF ANALYSIS TB22297833

Sample Description / Method / Analyte / Units / LOD	ME-ICP06 SiO2 % 0.01	ME-ICP06 Al2O3 % 0.01	ME-ICP06 Fe2O3 % 0.01	ME-ICP06 CaO % 0.01	ME-ICP06 MgO % 0.01	ME-ICP06 Na2O % 0.01	ME-ICP06 K2O % 0.01	ME-ICP06 Cr2O3 % 0.002	ME-ICP06 TiO2 % 0.01	ME-ICP06 MnO % 0.01	ME-ICP06 P2O5 % 0.01	ME-ICP06 SrO % 0.01	ME-ICP06 BaO % 0.01	OA-GRA05 LOI % 0.01	TOT-ICP06 Total % 0.01
STANDARDS															
AMIS0085	71.0	10.90	3.46	3.17	1.72	1.66	4.64	0.076	0.21	0.06	0.06	0.01	0.04		99.55
AMIS0085															100.25
Target Range - Lower Bound															97.99
Upper Bound															>102.00
AMIS0167	91.6	2.42	3.38	0.13	0.24	0.08	0.49	0.059	0.15	0.02	0.04	<0.01	0.01		
Target Range - Lower Bound	89.6	2.29	3.28	0.10	0.21	0.06	0.45	0.049	0.12	<0.01	<0.01	<0.01	<0.01		
Upper Bound	93.3	2.55	3.62	0.16	0.27	0.12	0.55	0.067	0.18	0.04	0.05	0.02	0.02		
AMIS0167	91.7	2.37	3.31	0.14	0.24	0.08	0.50	0.060	0.15	0.02	0.04	<0.01	0.01		100.24
Target Range - Lower Bound	89.6	2.29	3.28	0.10	0.21	0.06	0.45	0.049	0.12	<0.01	<0.01	<0.01	<0.01		97.99
Upper Bound	93.3	2.55	3.62	0.16	0.27	0.12	0.55	0.067	0.18	0.04	0.05	0.02	0.02		>102.00
AMIS0304															
AMIS0304															
Target Range - Lower Bound															
Upper Bound															
AMIS0304	12.15	1.43	20.4	28.7	2.83	0.09	0.26	0.013	1.76	0.43	18.30	0.38	0.28		94.76
Target Range - Lower Bound	11.90	1.42	20.3	27.7	2.72	0.06	0.25	0.005	1.69	0.41	17.80	0.36	0.25		
Upper Bound	12.75	1.62	21.6	29.3	3.02	0.12	0.31	0.016	1.91	0.51	18.90	0.44	0.31		
AMIS0343															
Target Range - Lower Bound															
Upper Bound															
AMIS0461														38.9	
Target Range - Lower Bound														36.9	
Upper Bound														40.9	
AMIS0547														38.4	
Target Range - Lower Bound														36.6	
Upper Bound														40.4	
AMIS0571														3.48	
Target Range - Lower Bound														3.18	
Upper Bound														3.54	
BCS-512	0.45	0.07	0.04	30.4	21.3	0.11	0.01	<0.002	<0.01	<0.01	<0.01	0.02	<0.01		52.40
BCS-512	0.45	0.04	0.03	29.5	20.5	0.11	<0.01	<0.002	<0.01	<0.01	0.01	0.02	<0.01		50.66
Target Range - Lower Bound	0.34	0.03	<0.01	29.8	20.9	0.09	<0.01	<0.002	<0.01	<0.01	<0.01	<0.01	<0.01		
Upper Bound	0.42	0.08	0.05	31.4	22.2	0.15	0.02	0.004	0.02	0.02	0.02	0.05	0.02		

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

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QC CERTIFICATE OF ANALYSIS TB22297833

Sample Description / Method	C-IR07	S-IR08	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
Analyte	C	S	Ba	Ce	Cr	Cs	Dy	Er	Eu	Ga	Cd	Ge	Hf	Ho	La
Units	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LOD	0.01	0.01	0.5	0.1	5	0.01	0.05	0.03	0.02	0.1	0.05	0.5	0.05	0.01	0.1
STANDARDS															
AMIS0085			357	73.1	614	4.11	11.25	8.81	1.06	13.9	7.45	1.5	4.87	2.67	37.1
AMIS0085															
Target Range - Lower Bound															
Upper Bound															
AMIS0167															
Target Range - Lower Bound															
Upper Bound															
AMIS0167															
Target Range - Lower Bound															
Upper Bound															
AMIS0304			2710	8590	102	0.40	130.0	34.5	149.0	2.5	341	10.6	28.3	18.05	3560
AMIS0304			2640	8150	99	0.45	134.0	34.5	145.0	6.6	354	8.4	28.3	18.65	3370
Target Range - Lower Bound			2340	7280	78	0.35	119.0	30.6	135.0	14.3	309	6.2	25.2	16.20	3250
Upper Bound			2860	8900	108	0.45	145.5	37.4	165.0	17.7	377	8.9	30.9	19.80	3970
AMIS0304			2620	8420	105	0.65	137.5	34.3	155.5	5.4	357	9.4	30.0	18.35	3460
Target Range - Lower Bound			2340	7280	78	0.35	119.0	30.6	135.0	14.3	309	6.2	25.2	16.20	3250
Upper Bound			2860	8900	108	0.45	145.5	37.4	165.0	17.7	377	8.9	30.9	19.80	3970
AMIS0343															
Target Range - Lower Bound															
Upper Bound															
AMIS0461															
Target Range - Lower Bound															
Upper Bound															
AMIS0547															
Target Range - Lower Bound															
Upper Bound															
AMIS0571															
Target Range - Lower Bound															
Upper Bound															
BCS-512			6.1	0.5	<5	0.09	<0.05	<0.03	<0.02	0.2	<0.05	<0.5	<0.05	0.01	0.3
BCS-512															
Target Range - Lower Bound															
Upper Bound															

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Sample Description / Method	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81	ME-MS81
Analyte	Lu	Nb	Nd	Pr	Rb	Sm	Sn	Sr	Ta	Tb	Th	Tm	U	V	W
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
LOD	0.01	0.05	0.1	0.02	0.2	0.03	0.5	0.1	0.1	0.01	0.05	0.01	0.05	5	0.5
STANDARDS															
AMIS0085	1.51	11.35	27.7	7.90	240	6.40	3.1	104.5	2.5	1.56	53.0	1.50	272	45	1.8
AMIS0085															
Target Range - Lower Bound															
Upper Bound															
AMIS0167															
Target Range - Lower Bound															
Upper Bound															
AMIS0167															
Target Range - Lower Bound															
Upper Bound															
AMIS0304	2.09	>2500	4230	>1000	12.2	624	25.3	3620	12.1	34.2	466	3.55	22.8	392	4.9
AMIS0304	1.99	>2500	4210	>1000	11.5	612	26.5	3590	12.7	34.9	452	3.58	22.1	371	5.0
Target Range - Lower Bound	1.84	4670	3610	925	9.3	543	22.0	3060	11.1	30.8	406	3.14	21.6	331	3.8
Upper Bound	2.27	>2500	4410	>1000	11.8	664	28.0	3740	13.8	37.7	496	3.86	26.5	415	6.3
AMIS0304	2.14	>2500	3980	>1000	15.2	588	24.8	3610	13.1	35.4	452	3.70	23.1	410	5.1
Target Range - Lower Bound	1.84	4670	3610	925	9.3	543	22.0	3060	11.1	30.8	406	3.14	21.6	331	3.8
Upper Bound	2.27	>2500	4410	>1000	11.8	664	28.0	3740	13.8	37.7	496	3.86	26.5	415	6.3
AMIS0343															
Target Range - Lower Bound															
Upper Bound															
AMIS0461															
Target Range - Lower Bound															
Upper Bound															
AMIS0547															
Target Range - Lower Bound															
Upper Bound															
AMIS0571															
Target Range - Lower Bound															
Upper Bound															
BCS-512	0.01	0.12	0.3	0.07	0.6	0.06	<0.5	199.0	0.8	0.01	0.09	0.01	2.16	5	<0.5
BCS-512															
Target Range - Lower Bound															
Upper Bound															

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QC CERTIFICATE OF ANALYSIS TB22297833

Sample Description	Method Analyte Units LOD	ME-MS81 Y ppm 0.1	ME-MS81 Yb ppm 0.03	ME-MS81 Zr ppm 1	ME-MS42 As ppm 0.1	ME-MS42 Bi ppm 0.01	ME-MS42 Hg ppm 0.005	ME-MS42 In ppm 0.005	ME-MS42 Re ppm 0.001	ME-MS42 Sb ppm 0.05	ME-MS42 Se ppm 0.2	ME-MS42 Te ppm 0.01	ME-MS42 Tl ppm 0.02	ME-4ACD81 Ag ppm 0.5	ME-4ACD81 Cd ppm 0.5	ME-4ACD81 Co ppm 1
STANDARDS																
AMIS0085		76.2	10.00	158												
AMIS0085																
Target Range - Lower Bound																
Upper Bound																
AMIS0167																
Target Range - Lower Bound																
Upper Bound																
AMIS0167																
Target Range - Lower Bound																
Upper Bound																
AMIS0304		435	16.45	1150												
AMIS0304		427	16.35	1215												
Target Range - Lower Bound		369	15.25	1005												
Upper Bound		451	18.75	1230												
AMIS0304		431	18.00	1180												
Target Range - Lower Bound		369	15.25	1005												
Upper Bound		451	18.75	1230												
AMIS0343														<0.5	<0.5	1
Target Range - Lower Bound														<0.5	<0.5	<1
Upper Bound														1.1	1.0	5
AMIS0461																
Target Range - Lower Bound																
Upper Bound																
AMIS0547																
Target Range - Lower Bound																
Upper Bound																
AMIS0571																
Target Range - Lower Bound																
Upper Bound																
BCS-512		0.2	0.03	1												
BCS-512																
Target Range - Lower Bound																
Upper Bound																

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QC CERTIFICATE OF ANALYSIS TB22297833

Sample Description	Method Analyte Units LOD	ME-4ACD81 Cu ppm 1	ME-4ACD81 Li ppm 10	ME-4ACD81 Mo ppm 1	ME-4ACD81 Ni ppm 1	ME-4ACD81 Pb ppm 2	ME-4ACD81 Sc ppm 1	ME-4ACD81 Zn ppm 2
STANDARDS								
AMIS0085								
AMIS0085								
Target Range - Lower Bound								
Upper Bound								
AMIS0167								
Target Range - Lower Bound								
Upper Bound								
AMIS0167								
Target Range - Lower Bound								
Upper Bound								
AMIS0304								
AMIS0304								
Target Range - Lower Bound								
Upper Bound								
AMIS0304								
Target Range - Lower Bound								
Upper Bound								
AMIS0343		52	7120	4	15	8	<1	82
Target Range - Lower Bound		47	6300	<1	11	<2	<1	70
Upper Bound		56	7730	6	17	10	2	90
AMIS0461								
Target Range - Lower Bound								
Upper Bound								
AMIS0547								
Target Range - Lower Bound								
Upper Bound								
AMIS0571								
Target Range - Lower Bound								
Upper Bound								
BCS-512								
BCS-512								
Target Range - Lower Bound								
Upper Bound								

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

APPENDIX D. PROPOSED 2023 INITIAL EXPLORATION PROGRAM, MOUND LAKE PROPERTY

Activity Type	Activity	Details	Duration (man-days)	Daily Cost	Item Cost	Number of Items	Total
Desktop	Database Creation	Compilation, digitization and geo-referencing of existing geological data; literature review	5	$ 800.00			$ 4,000.00
	Analysis of Geochemical Data	Review of exisiting whole rock geochemical data and calculation of prospectivity indices (e.g. Mg/Li and Nb/Ta ratios in bulk granite samples); geo-referencing	1	$ 800.00			$ 800.00
	Petrographic Analysis	Preparation and petrographic analysis of 10 thin sections			$ 300.00	10	$ 3,000.00
	Electron Microprobe Analysis	Electron microprobe analysis of K-feldspar, muscovite, garnet, etc.	1	$ 1,750.00			$ 1,750.00
	Structural Analysis	Compilation, digitization and geo-referencing of structural data (e.g. regional fabrics, faults, lineaments)	1	$ 800.00			$ 800.00
Field Work	Prospecting	Road-supported prospecting traverses and sampling	15	$ 400.00			$ 6,000.00
		Helicopter-supported traverses and sampling	4	$ 400.00			$ 1,600.00
		Helicopter support for prospecting (@ $2000/hour)	1	$ 16,000.00			$ 16,000.00
		Road travel (250 km round-trip @$1.00/km)	15	$ 250.00			$ 3,750.00
		Geochemical analyses (whole rock samples)			$ 120.00	75	$ 9,000.00
	Surficial Geochemical Survey	'B' or 'C' horizon soils and/or stream sediment sampling	5	$ 400.00			$ 2,000.00
		Geochemical analysis of soil/alluvium samples			$ 75.00	50	$ 3,750.00
		Helicopter support for surficial geochemical survey (@ $2000/hour)	1	$ 16,000.00			$ 16,000.00
	Geological Survey	Detailed geological mapping and whole rock sampling (Geologist + Field Assistant)	15	$ 1,200.00			$ 18,000.00
		Geochemical analyses (whole rock samples)			$ 120.00	75	$ 9,000.00
		Helicopter support for geological survey	1	$ 16,000.00			$ 16,000.00
		Road travel (250 km round-trip @$1.00/km)	15	$ 250.00			$ 3,750.00
	Mechanized Stripping	Float (mob/demob from Thunder Bay @$750/hour)			$ 750.00	4	$ 3,000.00
		Backhoe (@ $200/hour)	5	$ 1,600.00			$ 8,000.00
		Stripping and channel sampling equipment rental (@ $150/day)	15	$ 150.00			$ 2,250.00
		Stripping. washing and channel cutting	15	$ 400.00			$ 6,000.00
		Geologist + Field Assistant (trench/strip mapping and sampling)	5	$ 1,200.00			$ 6,000.00
		Geochemical analyses (whole rock samples)			$ 120.00	75	$ 9,000.00
		Road travel (250 km round-trip @$1.00/km)	20	$ 250.00			$ 5,000.00
Desktop	Report	Compilation of field and geochemical data and report preparation	10	$ 800.00			$ 8,000.00
						TOTAL	$162,450.00