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ASSESSMENT REPORT  
BASED ON THE  
**2022 MAPPING PROGRAM**  
COMPLETED ON THE  
**TANGO LITHIUM PROJECT**  
(Formally Georgia Li Project)  
FOR  
**EXIRO MINERALS CORP.**

BARBARA LAKE AREA TOWNSHIP, ONTARIO, CANADA

NTS: 042E05

LATITUDE: 49° 19' 25.2876" N

LONGITUDE: 87° 51' 53.5932" W

Chris Watters, B.A.Sc., GIT, Project Geologist, Orix Geoscience 2018 Inc.  
September 23<sup>rd</sup>, 2022

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## SUMMARY

Over recent years exploration companies in Ontario are beginning to focus efforts on understanding the potential of pegmatite dikes to host economic concentrations of rare elements. This understanding is being driven by both the global transition to green energy movement and political influences for countries to control resources for critical minerals. Encouraging results have been coming out of exploration endeavors within the historically known pegmatite fields in Northern Ontario. This led Exiro Minerals to acquire a property within the Georgia Lake area.

The Georgia Lake area is known to host significant rare-element pegmatites, which have a widespread distribution in the Quetico Subprovince covering at least a 540 km strike length from west to east (Breaks, Selway and Tindle, 2005). This has been supported by the preliminary economic assessment published on Sedar by Rock Tech Lithium, documenting a NI43-101 compliant resource and processing plan for lithium bearing pegmatites. Pegmatites in the Postagoni Lake field and Georgia Lake group can be classified as albite-spodumene type pegmatites. Therefore, spodumene is the primary lithium bearing mineral within the fields and the only economic phase within these dike systems.

This report documents the exploration activities completed during the summer of 2022 on Exiro's Tango Lithium Project, which have resulted in the discovery of three new pegmatite dikes. There was significant variation in the pegmatite dike composition between outcrops, which possibly is due to zonation within the systems.

Analytical results are currently pending for all samples collected. However, since spodumene is the primary lithium bearing mineral in these systems, continued exploration will be required to fully evaluate the potential for economic deposits to exist within the Property. This could be challenging due to the potential zonation that occurs within these dikes, the exposed portion of the pegmatite may not be the economic pulse, whereas buried at depth is the economic portion of the system.

Based on the preliminary information available, continued exploration is recommended in 2023 with a focus on stripping to expose more of the known pegmatites. It is important that the next phase of exploration focus on understanding the mineralogical and geochemical variations within the pegmatites to help with vectoring towards the economic portions of the dikes. Additionally, soil geochemistry across the Property may assist with identification of new occurrences of the lithium bearing pegmatites. A final recommendation is to investigate geophysical properties for both the host rocks and pegmatites to determine if there is a method that would allow for indirect detection of buried pegmatites.

## 1.0 INTRODUCTION

This report describes the exploration activities completed and provides initial interpretations of the data collected on the Tango Lithium Project between July – September 2022. Exiro Minerals Corp. (“Exiro”) retained the services of Orix Geoscience 2018 Inc. (“Orix”) to explore for lithium bearing pegmatites on Exiro’s Tango Lithium Project, located in the Barbara Lake Area Township.

The Georgia Lake area is located within the Quetico Subprovince of the Superior Province. The Quetico Subprovince is bounded by the granite-greenstone Wabigoon Subprovince to the north and Wawa Subprovince to the south (Williams, 1991). The Quetico Subprovince is composed of predominantly metasediments consisting of wacke, iron formation, conglomerate, ultramafic wacke and siltstone, which deposited between 2.70 and 2.69 Ga. The earlier felsic intrusions occurred 5 to 10 million years after the accumulation of sediments and are interpreted to be I-type intrusions (White and Chapell, 1983). The later felsic intrusions occurred 20 million years after the sedimentation and are designated as S-type (White and Chapell, 1983).

The rare-element pegmatites have widespread distribution in the Quetico Subprovince covering at least a 540 km strike length from west to east and a large percentage of pegmatites occur in the centre of the Subprovince (Breaks, Selway and Tindle, 2005). Lithium occurs as spodumene in pegmatites in the Georgia Lake area. The pegmatites are hosted by metasediments and/or by their parent granite. All of the pegmatites are albite-spodumene type and spodumene is the dominant Li-bearing mineral.

Fieldwork was completed from July 27<sup>th</sup> to August 13<sup>th</sup>, 2022. This report provides documentation of the mapping program and summarizes the preliminary observation; currently due to delays at ALS Minerals, analytical data for the samples collected are not available. The work included trail clearing for property access, outcrop mapping which required stripping using geotools, grab sampling using hand tools, and finally data integration to generate this report.

Based on the preliminary information available, continued exploration is recommended in 2023. Follow up detailed stripping and trenching of the known pegmatites is recommended to help provide good exposures to collect detailed mineralogical and geochemical information; detailed mapping will provide key information to assist with drill targeting. Additionally, soil geochemistry across the Property may assist with identification of new occurrences of the lithium bearing pegmatites.

## 2.0 PROPERTY DESCRIPTION, LOCATION AND ACCESS

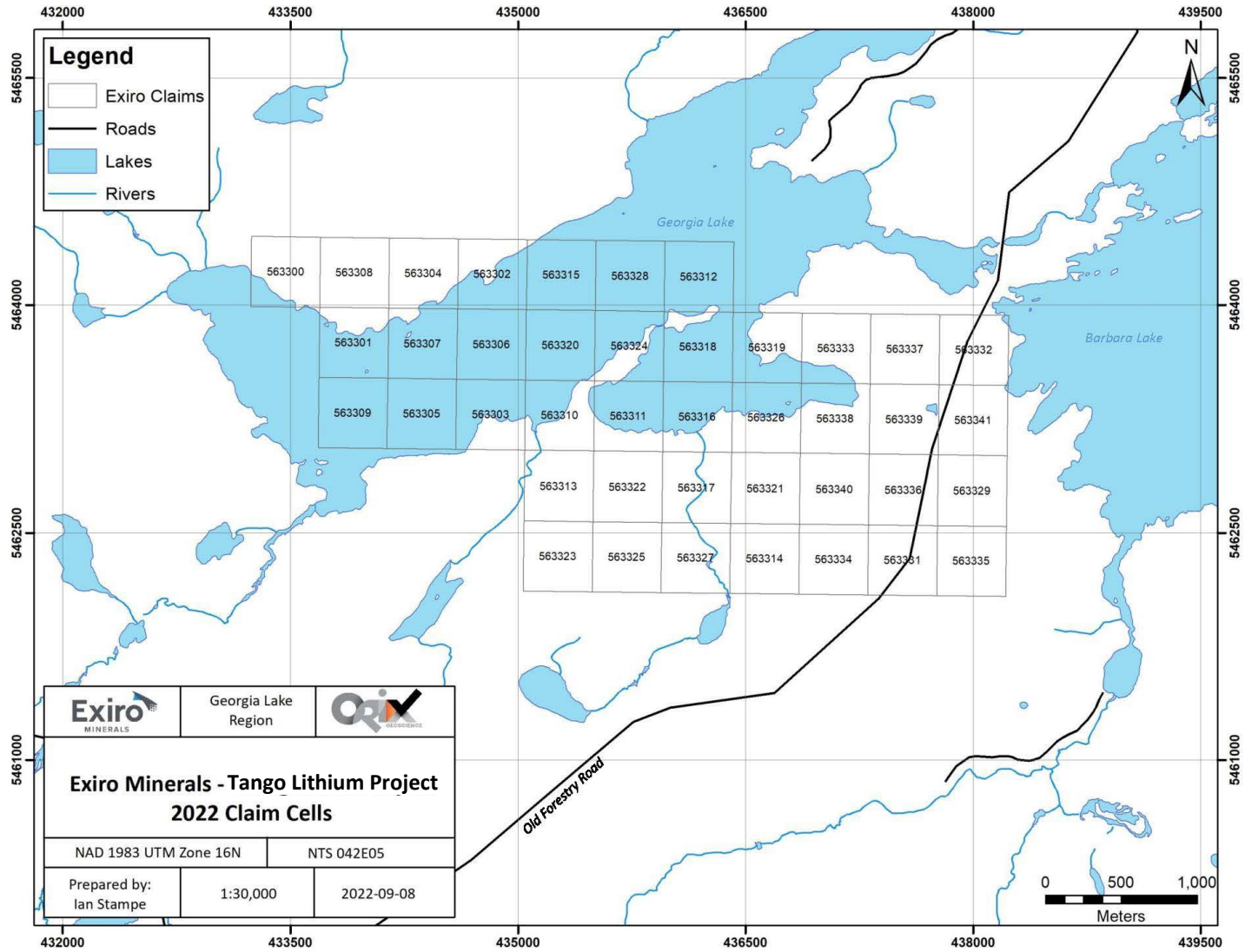
The Tango Lithium Project (“Property”) is owned by Exiro and consists of 41 contiguous mining claims (Figure 2), covering 864 ha or 8.64 km<sup>2</sup> (Table 1, Figure 2). The property is in the Barbara Lake Area township, 43.1 km northeast of Nipigon, and 31 km south-southeast of Beardmore (Figure 1).

The property is accessed using the Gorge Creek Road turn off on Highway 11. There is a turn off for an unnamed forestry road 3.78 km down Gorge Creek Road, there. The property is 20 km down this forestry road and access to Georgia lake is 21.43 km along the road. The center point of the claim block is located at UTM coordinates 435994.83E, 5463297.82N, Zone 16, NAD83.

An attempt to access the property in 2021 was unsuccessful due to flooding of the ford crossing at Clause Lake. Due to another probable flooding event, an amphibious Argo and XBH vehicle was rented for the 2022 field mapping program to ensure that the Clause Lake ford crossing was traversable.



**Figure 1:** Tango Lithium Project Location Map (Natural Resources Canada, 2002).



**Figure 2: Land Tenure Illustration of the Tango Lithium Project; August 2022.**





### 3.0 PREVIOUS WORK

The discovery of spodumene in the Georgia Lake area was summarized by Pye (1965):

“One of the topics featured on the program of the annual convention of the Prospectors and Developers Association in spring 1955 was the lithium deposits of the Preissac-Lacorne area in Quebec (Latulippe and Ingham 1955). Samples of the lithium-bearing mineral spodumene were on display. Many years ago, Eric W. Hadley of Auden had discovered a body of pegmatite forming a reef in Georgia Lake (now known as Island Deposit). He noted that the pegmatite contained a prismatic mineral, which he could not identify and which he considered then to be of no value. At the convention, however, he observed that the spodumene on display was very similar to the mineral in the pegmatite at Georgia Lake. He immediately contacted Gordon Miller of Conwest Exploration Company Limited. An examination was made at once, and impressed with the occurrence, Mr. Miller submitted samples to E.G. Pye for positive identification. Pye, in turn, presented the samples to Dr. H. Quackenbush, a Fort William dentist and amateur mineralogist, who as part of his hobby, had built a spectroscope. With this spectroscope, Dr. Quackenbush confirmed that the mineral was spodumene, and immediately Mr. Miller proceeded to stake a large group of claims for his company.”

“As news of Hadley’s discovery was publicized, prospectors entered the area. About 3,200 claims were staked and within a short time numerous additional lithium deposits were located. Many of these deposits were tested by diamond drilling in 1955 and 1956. Due to lack of adequate markets, however, none of these have been developed. Except for some limited diamond drilling by the Ontario Lithium Company Limited to test the original discovery in July 1957, the area has remained inactive since 1956” (as of Pye’s 1965 report).

A local Fort William newspaper (The Daily Times Journal) also described the Lithium rush in May and July, 1955 and May, 1956 and discussions of a possible smelter in Fort William-Port Arthur or Nipigon.

A summary of the historical exploration work completed on the Tango Lithium Project, as compiled from the MNDM assessment file is shown in Table 2.

**Table 2:** Summary of Historical Exploration Activities on the Tango Lithium Project.

<u>Year</u>	<u>Company</u>	<u>Townships</u>	<u>Description</u>
1955	E.W. Hadley	Barbara Lake	Discovery of spodumene on Island Showing
1955	Gordon Miller	Barbara Lake	Staked Jackpot claims
1955	Conwest Exploration Corp.	Barbara Lake	Transfer of Jackpot claims to Conwest Exploration Corp.
1956	Ontario Lithium	Barbara Lake	Conwest Exploration Corp. transfers claims to Ontario Lithium Corp
1957	Ontario Lithium	Barbara Lake	Eight holes drilled at the Island Showing
1960	Ontario Lithium	Barbara Lake	Jackpot claims converted to leases
1965	Ontario Lithium	Thunder Bay District	Mapping and research by Pye

### 4.0 GEOLOGICAL SETTING AND MINERALIZATION

#### 4.1 Quetico Subprovince Geological Setting

The Georgia Lake area is located within the Quetico Subprovince of the Superior Province (Figure 3). The Quetico Subprovince is bounded by the granite-greenstone Wabigoon Subprovince to the north and Wawa Subprovince to the south (Williams, 1991). The Quetico Subprovince is composed of predominantly metasediments consisting of wacke, iron formation, conglomerate, ultramafic wacke,

and siltstone, which deposited between 2.70 and 2.69 Ga. The igneous rocks in the Quetico Subprovince include abundant felsic and intermediate intrusions, metamorphosed rare mafic and felsic extrusive rocks and an uncommon suite of gabbroic and ultramafic rocks. The earlier felsic intrusions occurred 5 to 10 million years after the accumulation of sediments and are interpreted to be I-type intrusions (White and Chapell, 1983). The later felsic intrusions occurred 20 million years after the sedimentation and are designated as S-type (White and Chapell, 1983). The Glacier Lake Batholith is the largest felsic intrusive, occurring in the southern portion of the Quetico Subprovince (Figure 4). Breaks, Selway and Tindle summarize the geology of the Georgia lake and the Quetico Subprovince in their paper “The Georgia Lake Rare-Element Pegmatite Field and Related S-Type, Peraluminous Granites, Quetico Subprovince, North-Central Ontario” (Breaks, Selway and Tindle, 2008).

The Quetico Subprovince was subjected to four deformational events between approximately 2700 and 2660 million years (Williams, 1991). The predominant stratigraphic-facing direction is north (Carter, 1984, 1987, 1988; Harris, 1970; Perdue, 1938; Williams, 1988). Regional schistosity is variably developed and oriented and is interpreted to be the result of regional shortening and dextral shearing.

Four major faults cut through the Quetico Subprovince: the easterly trending Quetico fault (Fumerton, 1982; Bau, 1979; Kennedy, 1984), the Rainy Lake-Seine River fault (Fumerton, 1982, Davis et al., 1989), the northeasterly trending Gravel River fault (Williams, 1989) and the Kapuskasing Structural Zone (Percival, 1989).

Metamorphism, migmatite formation and granite intrusion occurred between 2.67 and 2.65 Ga (Williams, 1991). The grade of metamorphism ranges from lower greenschist to amphibolite facies and tends to be lower in the marginal rocks of the Subprovince and higher in the core regions (Percival, 1989).

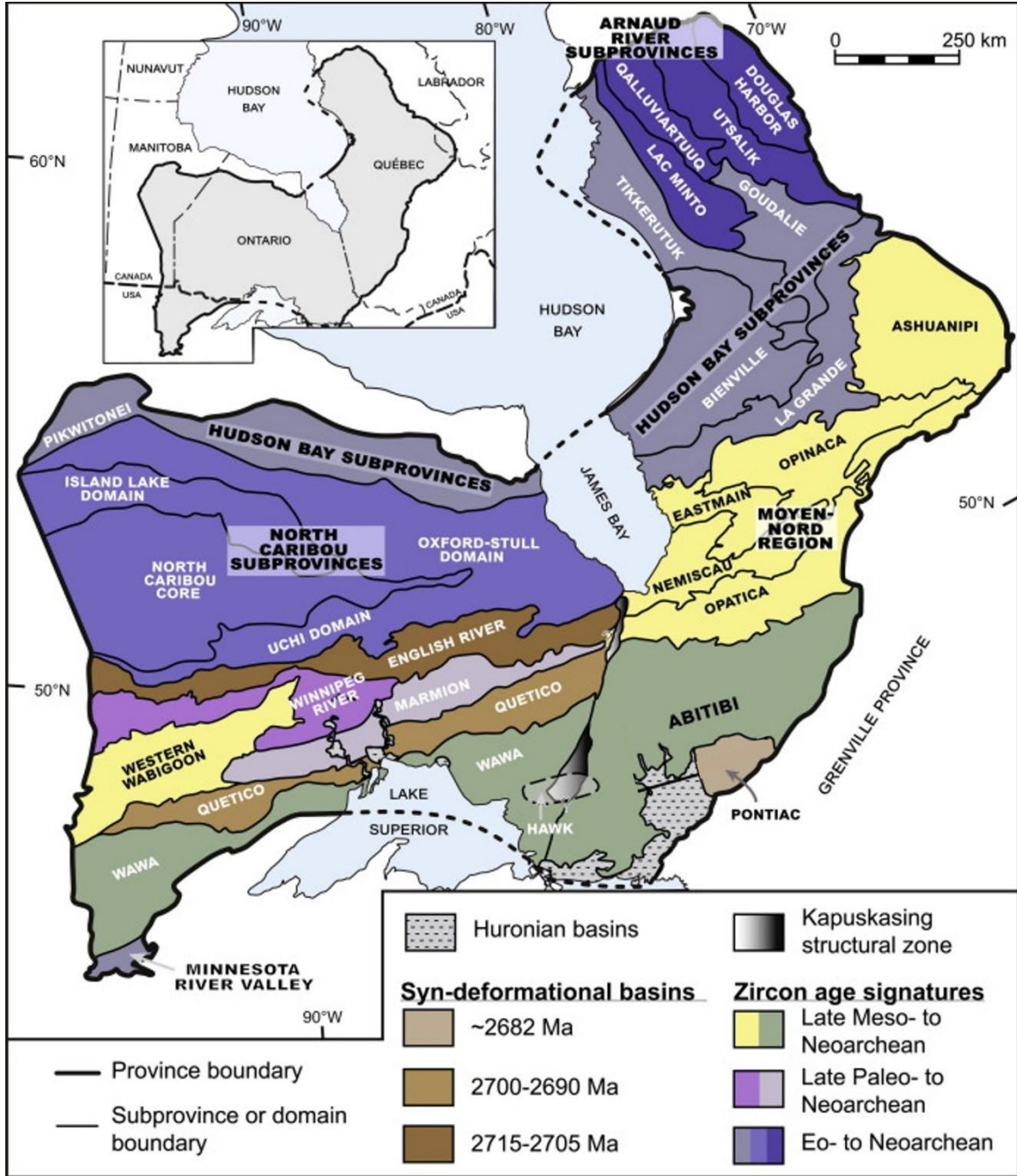


Figure 3: Subprovinces of the Superior Province (modified from Frieman, et al., 2017).

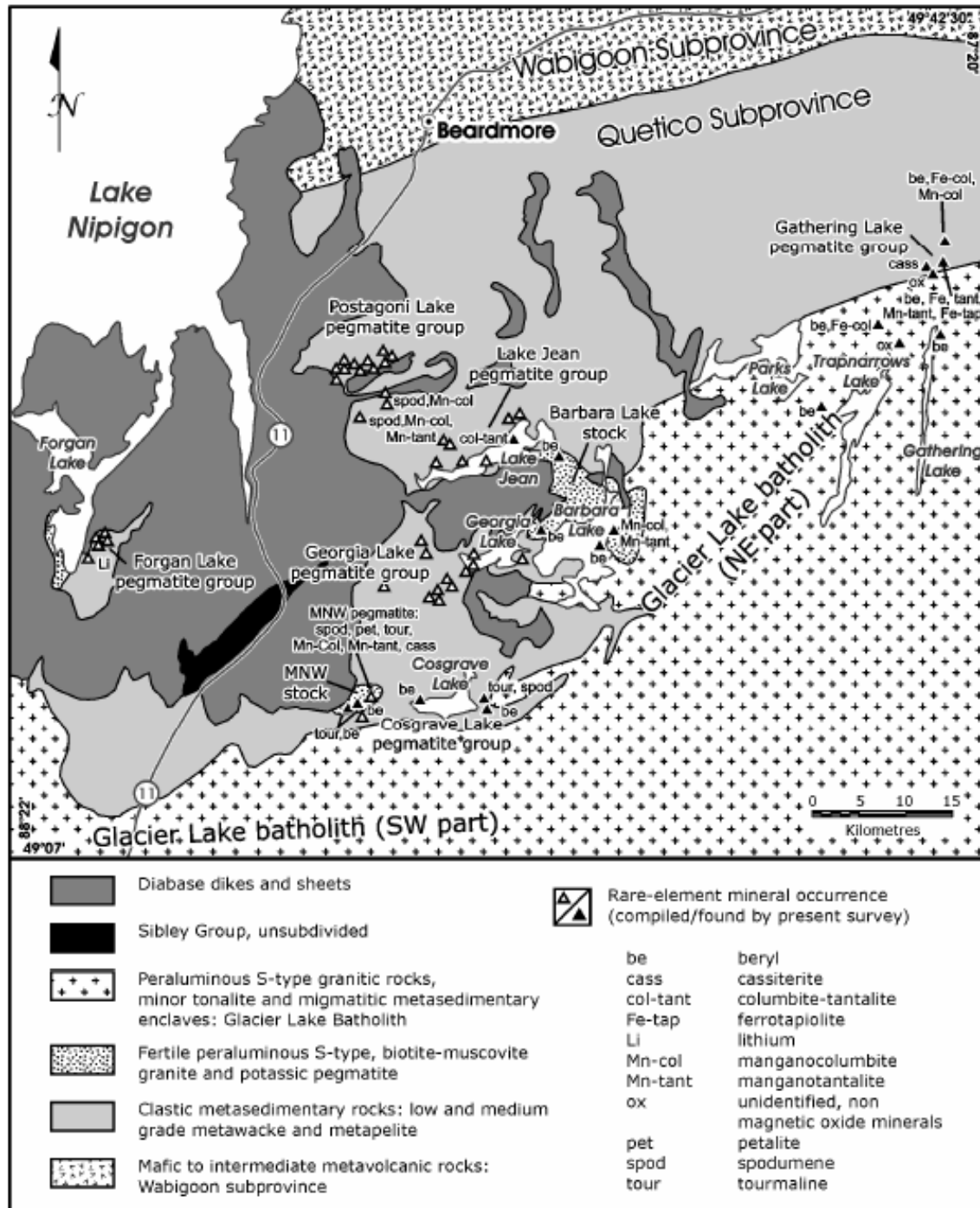


Figure 4: Geological map of the Quetico Subprovince (Breaks, Selway, Tindle, 2008 p.34).



## 4.2 Tango Lithium Project Mineralization

The Quetico Subprovince is not generally known for hosting significant economic mineralization as compared to the adjacent greenstone dominated terranes (Williams, 1991). Minor gold mineralization is associated with veining along the Quetico Fault (Poulsen, 1983). Molybdenite occurs in biotite leucogranites in the Dickinson Lake area (Carter, 1975, 1985).

The only potentially important mineralized deposit type consists of the late-stage pegmatites that contain the rare elements lithium, beryllium, tantalum, niobium and tin (Williams, 1991). The rare-element pegmatites have widespread distribution in the Quetico Subprovince covering at least a 540 km strike length from west to east and a large percentage of pegmatites occur in the center of the Subprovince (Breaks, Selway and Tindle, 2005):

1. Spodumene-subtype pegmatites at Wisa Lake, Lac La Croix area.
2. Fertile granites and beryl-type pegmatites in Niobe-Nym lakes and Onion Lake areas.
3. Albite-Spodumene-type pegmatites of the Georgia Lake area.
4. Complex-type, lepidolite subtype Lowther Township pegmatite near Hearst.

The pegmatites in the Quetico Subprovince are hosted by metasediments and/or by their parent granite (Pye, 1965; Breaks, Selway and Tindle, 2003a, 2003b).

## 5.0 DEPOSIT TYPE

### 5.1 Rare Element Pegmatite Dikes

Rare-element pegmatites may host several economic commodities, such as tantalum (Ta-oxide minerals), tin (cassiterite), lithium (ceramic-grade spodumene and petalite), rubidium (lepidolite and K-feldspar), and cesium (pollucite) collectively known as rare elements, and ceramic-grade feldspar and quartz (Selway et al., 2005). Two families of rare-element pegmatites are common in the Superior Province, Canada: Li-Cs-Ta enriched (“LCT”) and Nb-Y-F enriched (“NYF”). LCT pegmatites are associated with S-type, peraluminous (Al-rich), quartz-rich granites. S-type granites crystallize from a magma produced by partial melting of pre-existing sedimentary source rock. They are characterized by the presence of biotite and muscovite, and the absence of hornblende. NYF pegmatites are enriched in rare earth elements (“REE”), U, and Th in addition to Nb, Y, F, and are associated with A-type, subaluminous to metaluminous (Al-poor), quartz-poor granites or syenites (Černý, 1991a).

Rare-element pegmatites derived from a fertile granite intrusion are typically distributed over a 10 to 20 km<sup>2</sup> area within 10 km of the fertile granite (Breaks and Tindle, 1997). A fertile granite is the parental granite to rare-element pegmatite dykes. The granitic melt first crystallizes several different granitic units (e.g., biotite granite to two mica granite to muscovite granite), due to an evolving melt composition, within a single parental fertile granite pluton. The residual melt enriched in incompatible elements (e.g., Rb, Cs, Nb, Ta, Sn) and volatiles (e.g., H<sub>2</sub>O, Li, F, BO<sub>3</sub>, and PO<sub>4</sub>) from such a pluton can then migrate into the host rock and crystallize pegmatite dykes. Volatiles promote the crystallization of a few large crystals from a melt and increase the ability of the melt to travel greater distances. This results in pegmatite dykes with coarse-grained crystals occurring in country rocks considerable distances from their parent granite intrusions.

There are several geological features that are common in rare-element pegmatites of the Superior province of Ontario (Breaks and Tindle, 2001; Breaks et al., 2003) and Manitoba (Černý et al., 1981; Černý et al., 1998) (Selway et al., 2005):

1. Subprovincial boundaries: The pegmatites tend to occur along subprovincial boundaries.
2. Metasedimentary-Dominant Subprovince: Most pegmatites in the Superior province occur along subprovince boundaries, except for those that occur within the metasedimentary Quetico subprovince.
3. Greenschist to Amphibolite Metamorphic Grade: Pegmatites are absent in the granulite terranes.
4. Fertile Parent Granite: Most pegmatites in the Superior province are genetically derived from a fertile parent granite.
5. Host Rocks: Highly fractionated spodumene- and petalite-subtype pegmatites are commonly hosted by mafic metavolcanic rocks (amphibolite) in contact with a fertile granite intrusion along subprovincial boundaries. Pegmatites within the Quetico subprovince are hosted by metasedimentary rocks or their fertile granitic parents.
6. Metasomatized Host Rocks: Biotite and tourmaline are common minerals, and holmquistite is a minor phase in metasomatic aureoles in mafic metavolcanic host rocks to spodumene- and petalite-subtype pegmatites. Tourmaline, muscovite, and biotite are common, and holmquistite is rare in metasomatic aureoles in metasedimentary rocks.
7. Li Minerals: Most of the complex-type pegmatites of the Superior province contain spodumene and/or petalite as the dominant Li mineral, except for a few pegmatites, which have lepidolite as the dominant Li mineral.
8. Cs Minerals: Cesium-rich minerals only occur in the most extremely fractionated pegmatites.
9. Ta-Sn Minerals: Most pegmatites in the Superior province contain ferrocolumbite and manganocolumbite as the dominant Nb-Ta-bearing minerals. Some pegmatites contain manganotantalite or wodginite as the dominant Ta-oxide mineral. Tantalum-bearing cassiterite is relatively rare in pegmatites of the Superior province.
10. Pegmatite Zone Hosting Ta Mineralization: Fine-grained Ta-oxides (e.g., manganotantalite, wodginite, and microlite) commonly occur in the aplite, albitized K-feldspar, mica-rich, and spodumene core zones in pegmatites in the Superior province.

## 5.2 Georgia Lake Pegmatite Field Description

The majority of the pegmatites in the Postagoni Lake group and Georgia Lake group can be classified as albite-spodumene type pegmatites. Albite-Spodumene type pegmatites are characterized by homogenous dikes with coarse-grained spodumene + K-feldspar aligned perpendicular to the dike walls, spodumene is the dominant or only Li-bearing mineral and albite is more abundant than K-feldspar.

## 6.0 2022 MAPPING PROGRAM SUMMARY

Due to strong interest in critical mineral, Exiro acquired the Tango Lithium Project, which covers a portion of the Georgia Lake pegmatite field and is known to host significant occurrences of lithium bearing pegmatites. Currently, Rock Tech Lithium has published a preliminary economic assessment in 2021 documenting the results of their study on a portion of the Postagoni Lake group of pegmatites with updated NI43-101 resources. Additionally, Rock Tech Lithium has press released encouraging drilling results from their portion of the Georgia Lake group of pegmatites (Jan 12, 2022).

While there was an attempt made in 2021 to complete some early-stage exploration within the Property, access to the Property was blocked due to flooding of the forestry road. Therefore, Exiro’s Tango Lithium Project remains an early-stage exploration project and requires significant geoscience exploration activities to understand its full potential.

The focus for 2022 was to simply access the Property and begin the process of exploring for new pegmatite occurrences. Unfortunately, accessibility continues to be an issue with portions of the property, historically significant pegmatite occurrences located along the lake shore were not accessible. Future exploration programs should consider utilizing a good boat for water access.

Additionally, based on the failed attempt to complete exploration in 2021, there was a significant investment of time in coordination with local individuals to check access and clear the trails of debris. As well, there was time spent ensuring that a strong emergency response plan was in place, which was almost enacted when the team experience a mechanical failure on the Argo.

A summary of the timelines for the various contractors and consultants involved in the execution of this program is provided in Table 3.

A daily log of all activities was recorded, and a summary of the logbook can be found in Appendix C. All work has been completed using metric units and Universal Transverse Mercator with a NAD83 datum and zone 16N.

**Table 3:** Logistical Information Pertaining to 2022 Exploration Program.

Contractor	Activity	From	To	Total People Days on Property
Northwest All Terrain Vehicles	Reconnaissance, trail repairs, and technical assistance during the initial stage of exploration and demobilization	July 27 <sup>th</sup> , 2022	August 12 <sup>th</sup> , 2022	4
Orix Geoscience 2018	Geological consulting services for the completion of fieldwork, logistical support, geological descriptions of activities, interpretations, map creation, and reporting	July, 2022	September, 2022	22
ALS Minerals	Completed analytical work for samples collected from the pegmatite outcrops	August 12 <sup>th</sup> , 2022	Results Pending	0

### 6.1 Reconnaissance & Trail Repairs

Attempts to access the site in the spring of 2021 were unsuccessful due to flooding of the ford crossing at Clause Lake. The elevated water prohibited river crossing by ATV. For the 2022 program, an Argo Magnum Amphibious vehicle was rented to ensure the river crossing. Nick Kaplanis and John Kaplanis from Northwest All Terrain Vehicles were contracted to check site access and clear the forestry road before the mapping team arrived on site. This work was completed on July 27<sup>th</sup>, 2022.

Nick successfully accessed the site and cleared significant windfall along the 25 km forestry access road. Notes and photos were taken to document the challenges associated with the trip as well as old claim posts of the property were identified and photographed when they arrived at the Property.



## 6.2 Geological Mapping Program

From August 4<sup>th</sup> to August 12<sup>th</sup>, Orix performed 1:2000 mapping on the Tango Lithium Project. The purpose of the program was to map the geology, identify new pegmatite dikes and complete geological sampling of exposed pegmatites for geochemical analyses. The only previous mapping of the area was from Pye (1965). One hundred outcrops, ranging from 1-10 m<sup>2</sup> in size were discovered during this fieldwork. Almost all the outcrops required stripping of overburden to expose any rock, and of the 100 outcrops encountered, 23 were composed of pegmatites. Fifteen samples were submitted to ALS Minerals for follow up analytical work; results currently are pending.

The Orix mapping crew consisted of Christopher Watters (Project Geologist, GIT), Ian Stampe (Geologist, GIT), and Nick Kaplanis (Assistant).

Locating outcrops on the Tango Lithium Project was challenging due to the poor bedrock exposure. Sixty-five of the outcrops encountered needed to be stripped to expose any rock. The only visible outcrop that did not require stripping is located at the southeast portion of the Property and is characterized by ridges composed of diabase. Outcrops were identified through systematic digging of topographic highs, and by slight changes in overburden height or vegetation growth. During the mapping campaign, four major lithology packages were encountered: 1) Metasediments; 2) Mafic intrusive previously interpreted as Diabase; 3) Granitic intrusive; 4) Pegmatite dikes. The units generally strike E-W, but sections have a NW-SE strike. The rock packages observed were consistent with Pye's observations, documented in "Geology and Lithium Deposits of Georgia Lake Area District of Thunder Bay" (Pye, 1965).

### 6.2.1 Mapped Lithologies

Four lithological units were encountered during mapping, these units confirm the lithologies mapped by Pye 1965, and Pleson 2017. These lithological units are, Metasediments, Pegmatite, Granite, and Diabase. The reader is referred to Pye 1965 for a detailed review of the local geology. Below are short descriptions based on the field observation, as well, included are a series of photos illustrating key features in the outcrops. Furthermore, Appendix A provides detailed maps of all the outcrops and an updated preliminary geological interpretation for the region covered by this work.

#### Metasediments

The oldest lithology is the metasediments, which are the host of the other intrusive lithologies encountered while mapping (Pye, 1965). The metasediments encountered in the mapped area are composed of 40-50% biotite, 20-30% quartz, 20-30% feldspar, and 5-10% muscovite. Metasediment outcrop was difficult to locate due to the rheological nature of this biotite rich unit. Outcrops with exposed metasediments were generally in areas of low elevation such as bogs or marsh, and topographic lows with no outcrop were thought to represent sections of metasediments. When pegmatite–metasediment contacts were uncovered, the metasediments were on the edge of the outcrop and had poor exposure due to weathering. Metasediment boulders were often found in glacial features and silty soils around elevated pegmatite, granite, or diabase ridges. The more resistant pegmatite, granite and diabase were identified by looking for hills and ridges, and while hiking the ridge, periodically digging to see if there was outcrop that could be exposed under several inches of vegetation. To the south of the Property, metasediments with well defined granoblastic garnet and

staurolite phenocrysts were identified along the road, but porphyroblasts were not observed in the metasediment outcrops on the Property.

### **Diabase Dikes**

The lithological unit with the most outcrop exposure is the intrusive, medium grained, massive diabase, which occurs in the southern portion of the property. The diabase is composed of medium grained amphiboles and pyroxenes in a quartz-feldspar crystalline matrix. Diabase ridges were able to be traced for 2 km along the southern portion of the Property. Mapping by Pye 1965 was used to identify the location of diabase dikes, and by periodically digging along the topographic high ridges. Through this process the extent of previously mapped diabase was extended.

### **Granite**

A medium grained, massive, felsic intrusive was encountered in the northeast portion (OC36) of the Property, as well as in the east central portion (OC13) of the Property. The unit is composed of medium grained equigranular quartz, feldspar, hornblende, and biotite. The central granite outcrop (OC13) had a contact with a pink, K-spar rich pegmatite, striking 310 degrees and dipping 45 degrees NE. Outcrop OC36 had a contact between granitic intrusive and metasediments, which struck 77 degrees at an approximate dip of 33 degrees south. This outcrop is interesting due to the shallow dipping of the contact to the south, while most units mapped by Pye dip sub vertically or have a slight dip to the north.

### **Pegmatites**

Two types of pegmatites were mapped during the program and were classified using k-feldspar content and colour.

The first type of pegmatite observed within the Property, is enriched in potassium feldspars, resulting in a general pinkish appearance. These pegmatites are typically composed predominantly of orthoclase, quartz, tourmaline, and minor amounts of muscovite.

The second type of pegmatite was much whiter in colour. The white colour and habit of the feldspars suggested they were albite, possibly of the cleavelandite variety. Outcrop OC12 was composed almost entirely of albite and quartz, with minor amounts of muscovite. Only one outcrop of the albite pegmatite was found; see Appendix A for detailed outcrop location maps. It is possible the white feldspar is the potassium feldspar microcline, which also has blocky habit and is white in colour.

#### ***6.2.2 Alteration and Mineralization***

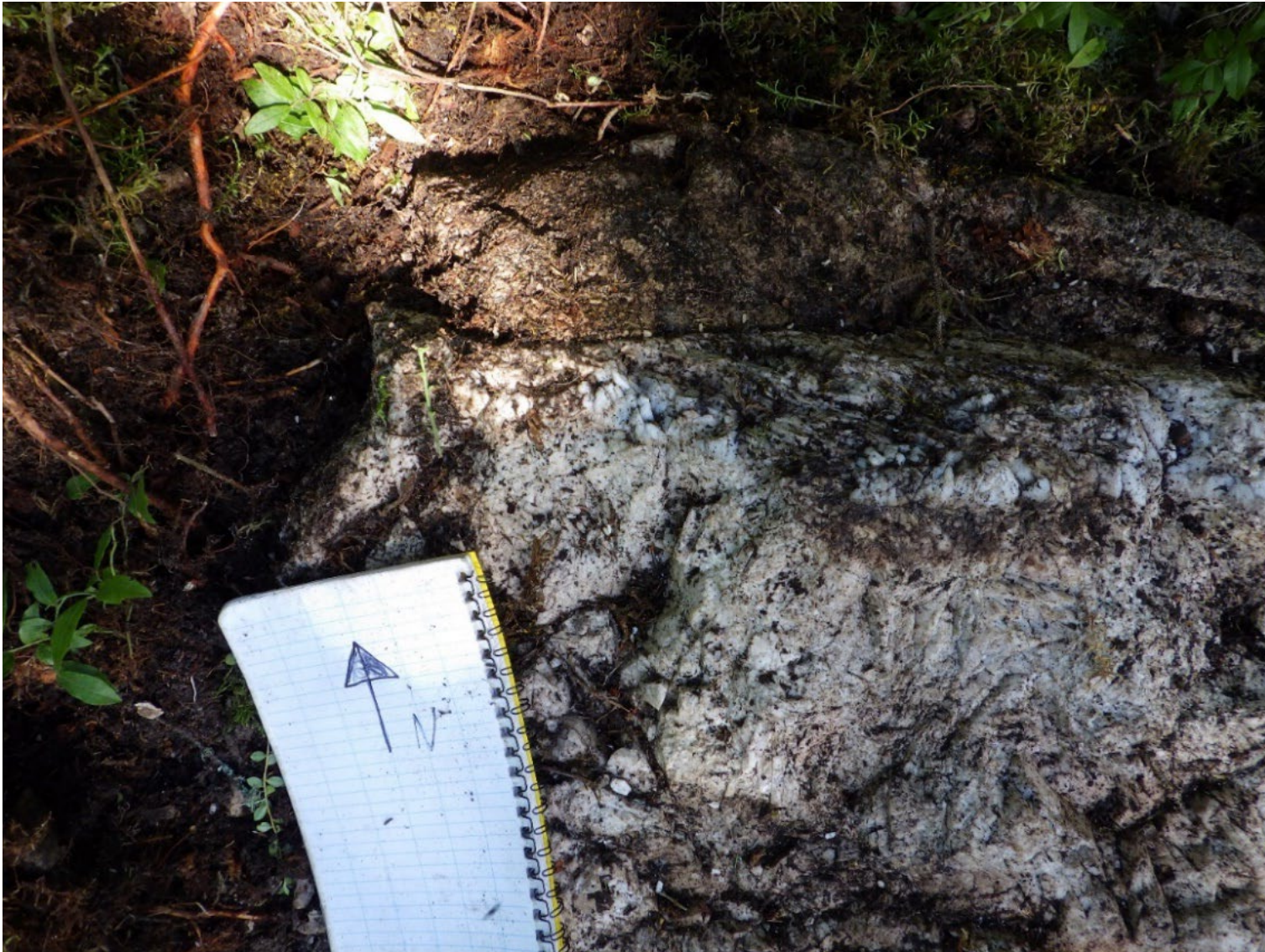
The main alteration assemblage observed is in the Archean metasediments, which has very strong biotization of all mafic material. The metasediments are composed of 50-60% biotite, with a moderate to strong foliation. The diabase, granite, and pegmatites have no significant alteration. Minor chlorite alteration is expected in the diabase but is not visible in hand samples.

Three pegmatite dikes were discovered on the property, but no significant spodumene mineralization was identified. Two of the pegmatite dikes were composed of potassium rich feldspar, which according to Break (2003), suggested they were derived from peraluminous parent granites, but not fractionated enough to contain economic lithium mineralization. One of the pegmatite dikes was much whiter in

colour, contained more albite, and might represent a lithium bearing pegmatite. Samples have been submitted to ALS Minerals and results are currently pending.

### *6.2.3 Structures*

The local stratigraphy trends E-W to ENE-WSW and dips sub-vertically. Rare crenulation cleavage was observed in metasediment outcrops OC2 and OC35C (Figure 9). Minor faulting was observed in OC33, where a granitic dike intruded a diabase outcrop, and was then faulted and offset by 5 cm (Figure 11).



**Figure 5:** Outcrop 12-Contact between albite pegmatite and metasediments. Contact strikes 287 degrees and dips 60 degrees north.





**Figure 6:** Outcrop 12- Blocky texture of white albite. Quartz vein in the lower portion of photo. Quartz clots occur throughout pegmatite.





**Figure 7:** Outcrop 46- Contact between medium grained granite at the top of the photo, and alkaline feldspar rich pegmatite at the bottom of the photo. Contact strikes 310 degrees and dips 45 degrees to the north.





**Figure 8:** Outcrop 46- Contact between granite (bottom) and alkaline feldspar rich pegmatite (top). Contact strikes 310 degrees and dips 45 degrees northeast.





**Figure 9:** Outcrop 35C- Metasediments with moderate foliation, and crenulation features. Foliation 107 degrees, no dip available. Crenulation features strikes 85 degrees and 150 degrees, no dip available.





**Figure 10:** Outcrop 36- Contact between massive medium grained granite (right, south) and weak-moderate foliated metasediments (left, north). Contact strikes 77 degrees and has dip of 30 degrees to the south.





**Figure 11:** Outcrop 33- Granitic dikes intruding diabase. Five centimeters offset along small-scale fault indicating that faulting occurred after granite was emplaced. Fault on the left strikes 350 and fault on the right strikes 285. No dips measurements were available.





**Figure 12:** Outcrop 32- Contact between metasediments (left) and pegmatite (right). Pegmatite was pink, composed of 45% alkaline feldspar, 40% quartz, 10% muscovite, 5% tourmaline. Contact had a strike of 330 degrees. The dip was not measurable.

## **7.0 SAMPLE PREPARATION, ANALYSES AND SECURITY**

### **7.1 Sample Preparation**

Over the course of the 2022 exploration program a total of 15 surface grab samples were collected from various locations within the Property to confirm the presence of lithium bearing minerals. The samples were selected as being representative of potential lithium bearing minerals from within zones of pegmatitic dikes. A sample description and site location, obtained from a handheld GPS, were noted in field books, and later entered into an Excel database. Pre-numbered sampling booklets were used, and all samples collected were placed in industry standard plastic bags with the sample numbers. Sample descriptions include lithology, structural measurements, mineralization, and alteration. Sample descriptions and locations are described in Appendix B.

### **7.2 Sample Security**

The sample batches were transported from the field to the motel room each day, where the samples were stored until the end of the program. Then the samples were transported by the field crew to the ALS Minerals facility located in Thunder Bay, Ontario. Following the preparation work, samples were then forwarded onto ALS Minerals laboratory in North Vancouver, British Columbia. The samples were submitted while demobilizing on August 13<sup>th</sup>, 2022. However, due to significant delays in turn-around-times at the laboratory, the results are currently pending for all samples, these expenses have not been claimed and will be included as an amendment or additional report in the future.

### **7.3 Sample Analyses**

The sample preparation consisting of drying, as required, and crushing to 70% less than 2 mm or better using a jaw and/or roller crusher. The crushed sample was split using a riffle splitter and an approximately 1000 g split was pulverized to 90% less than 75 microns or better using a ring and puck grinding mill. The pulverized splits of the samples were transported by ALS Minerals to their facility in North Vancouver for analyses.

Samples were analyzed using the ME-MS89L™ sample method for multiple elements using a near total digestion method. Sodium carbonate, sodium peroxide and sodium hydroxide is a potent mixture of three fluxes. This very basic, strongly oxidizing mixture renders most refractory minerals soluble. Sodium peroxide fusion is commonly used to decompose the most refractory minerals. Low sample/flux ratios and a suitable dilution will produce a solution with acceptable levels of total dissolved solids for ICP-AES analysis.

Elements are determined by inductively coupled plasma – mass spectroscopy (ICP-MS). This technique provided a suite of trace elements that can be utilized for exploration in pegmatite bodies prospective for Li and other commodities.

### **7.4 Data Verification**

ALS Minerals has internal QAQC samples, and these were the only QAQC samples used. The nature of grab sampling and objective for the program to identify anomalous material meant that the internal laboratory QAQC material is sufficient for this program. Any anomalous values should be followed up with additional channel samples to better test the nature of the mineralization, at which point a rigorous QAQC program should be implemented.

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

The Georgia Lake area is known to host significant rare-element pegmatites, which have a widespread distribution in the Quetico Subprovince covering at least a 540 km strike length from west to east (Breaks, Selway and Tindle, 2005). This has been supported by the preliminary economic assessment published on Sedar by Rock Tech Lithium, documenting a NI43-101 compliant resource and processing plans for lithium bearing pegmatites. Pegmatites in the Postagoni Lake group and Georgia Lake group can be classified as albite-spodumene type pegmatites. Therefore, spodumene is the primary lithium bearing mineral within the fields and the only economic phase within these dike systems. Pye (1965) mentions that several of the pegmatite dikes in the Georgia Lake area are zoned with multiple pulses of pegmatite and only some pulses have economic spodumene. These pulses can occur at depth and might not be displayed on surface exposures.

*“It is evident from the drilling that the Giles deposit is zoned, with a spodumene-rich section enclosed by low-grade muscovite-quartz-feldspar pegmatite. It is of interest that the only indication of this zoned structure at the surface is found at the east end of the deposit. Here, on the shore of the island, the pegmatite is exposed over a width of 20 feet and is found to be made up of a 16-foot-wide central section, rich in spodumene, flanked by two 2-foot-wide wall zones of tourmaline-bearing rock, relatively rich in muscovite but containing little or no spodumene.” – Pye, 1965.*

This report documents the exploration activities completed during the summer of 2022 on Exiro’s Tango Lithium Project, which has resulted in the discovery of three new pegmatite dikes. There was significant variation in the pegmatite dike composition between outcrops, which possibly is due to the above-mentioned zonation within the systems. Furthermore, the host lithology for the new dikes was both the metasedimentary and granitic units, suggesting that there is potential for a significant amount of pegmatite to exist within the Property.

These new occurrences should be exposed more to determine length and width of the dike on surface. Stripping and exposing the dike will also help determine if there is compositional zoning in the pegmatite occurrence. It is important to be clear that even though the analytical data is currently pending, since lithium is directly linked to the presence of spodumene there are no geochemical markers that can reliability provide a gauge for the potential of an economic pulse to be present within the pegmatite. Systematic sampling of all pegmatites is required to fully understand the potential of these dikes to host economic grades and volumes.

Based on the preliminary information available continued exploration is recommended in 2023. As mentioned above detailed stripping and trenching of all the known pegmatites is recommended to help provide good exposures to collect detailed mineralogical and geochemical information; detailed mapping will provide key information to assist with drill targeting. Additionally, soil geochemistry across the Property may assist with identification of new occurrences of the lithium bearing pegmatites. A final recommendation is to investigate geophysical properties for both the host rocks and pegmatites to determine if there is a method that would allow for indirect detection of buried pegmatites.



## 9.0 REFERENCES

- Breaks, F.W., Selway, J.B. and Tindle, A.G. 2008. The Georgia Lake rare-element pegmatite field and related S-type, peraluminous granites, Quetico Subprovince, north-central Ontario; Ontario Geological Survey, Open File Report 6199, 176p.
- Breaks, F.W. and Tindle, A.G. (1997): Rare-metal exploration potential of the Separation Lake area: an emerging target for Bikita-type mineralization in the Superior Province of northwestern Ontario; Ontario Geological Survey, Open File Report 5966, 27p.
- Breaks, F.W. and Tindle, A.G., 2001: Rare element mineralization of the Separation Lake area, northwest Ontario: Characteristics of a new discovery of complex type, petalite-subtype, Li-Rb-Cs-Ta pegmatite. In *Industrial Minerals in Canada*. Edited by S. Dunlop and G.J. Simandl. Canadian Institute of Mining, Metallurgy and Petroleum, Special Volume 53, p. 159-178.
- Breaks, F.W., Selway, J.B. and Tindle, A.G. (2003a): Fertile and peraluminous granites and related rare-element mineralization in pegmatite, Superior Province, northwest and northeast Ontario: Operation Treasure Hunt; Ontario Geological Survey, Open File Report 6099, 179p.
- Breaks, F.W., Selway, J.B. and Tindle, A.G. (2003b): Fertile and peraluminous granites and related rare-element pegmatite mineralization, Barbara-Gathering-Barbaro lakes area, north-central Ontario: in *Summary of Field Work and Other Activities, 2003*, Ontario Geological Survey, Open File Report 6120, p.14-1 to 14-13.
- Breaks, F.W., Selway, J.B. and Tindle, A.G. 2005. A review of Rare-Element (Li-Cs-Ta) Pegmatite Exploration Techniques for the Superior Province, Canada, and Large Worldwide Tantalum Deposits; *Exploration and Mining Geology*, Vol 14.
- Černý, P., (1991): Rare element granitic pegmatites. Part I: Anatomy and internal evolution of pegmatite deposits. *Geoscience Canada*, 18, p. 49-67.
- Černý, P., Ercit, T.S. and Vanstone, P.J., (1998): Mineralogy and petrology of the Tanco rare element pegmatite deposit, southeastern Manitoba. *International Mineralogical Association, 17th General Meeting, Field Trip Guidebook B6*, 74 p.
- Frieman, B., M., Kuiper, Y., D., Kelly, N., M., Monecke, T., Kylander-Clark, A., 2017. Constraints on the geodynamic evolution of the southern Superior Province: U-Pb LA-ICP-MS analysis of detrital zircon in successor basins of the Archean Abitibi and Pontiac subprovinces of Ontario and Quebec, Canada. *Precambrian Research*, Vol 292.
- Robert P., Kornick M., Selway J., 2011. Assessment File Report, Jackpot and Salo Properties, Georgia Lake Pegmatite Field, Beardmore, Ontario, Canada.
- Percival, J.A. (1989): A regional perspective of the Quetico metasedimentary belt, Superior Province, Canada; *Canadian Journal of Earth Sciences*, v.26, p.677-693.
- Pirzada P., Pleson, A.J., Assessment Work Report on the Tango Lithiumthium Pegmatite Property, Thunder Nay Mining District, Northwestern Ontario, Canada; Ontario Geological Survey, Open File Report 49996
- Pye, E.G. 1965. *Geology and Lithium Deposits of Georgia Lake Area District of Thunder Bay*, Ontario Department of Mines, Geological Report No. 31
- White, A.J.R. and Chappell, B.W. (1983): Garnitoid types and their distribution in the Lachlan Fold Belt, southeastern Australia; in *Circum-Pacific Plutonic Terranes*, Geological Society of America, Memoir 159, p.21-34.

Williams, H.R. (1988): Geological studies in the Wawa, Quetico and Wabigoon subprovinces, with emphasis on structure and tectonic development; in Summary of Field Work and Other Activities 1988, Ontario Geological Survey, Miscellaneous Paper 141, p.169-172.

Williams, H.R. (1989): Geological studies in the Wabigoon, Quetico and Abitibi-Wawa subprovinces, Superior Province of Ontario, with emphasis on the structural development of the Beardmore-Geraldton Belt; Ontario Geological Survey, Open File Report 5724.

Williams, H.R. (1991): Quetico Subprovince; in Geology of Ontario, Ontario Geological Survey, Special Volume 4, p.383-404.

## 10.0 CERTIFICATE OF QUALIFICATION

I, Chris Watters, B.A.Sc., GIT, of Winnipeg do hereby certify that:

- 1) I am a Project Geologist and GIT for Orix Geoscience 2018 Inc., with a business address at 25 Adelaide Street East, Suite 1400, Toronto, On, M5C 3A1.
- 2) I am a Practicing Member of Engineers Geoscientist Manitoba, with membership number 36843.
- 3) I graduated with a B.A.Sc. (Geological Sciences) degree in 2011 from University of Manitoba.
- 4) I have written this report titled '2022 Georgia Lake Mapping Assessment Report' for Exiro Minerals Corp. dated September 23<sup>rd</sup>, 2022.

Signed and dated this September 23<sup>rd</sup>, 2022, in Winnipeg Manitoba

Chris Watters, B.A.Sc., GIT  
Project Geologist, GIT  
Orix Geoscience 2018 Inc.



## **APPENDIX A: HIGH RESOLUTION MAP**

### Legend

• Samples

### Lithology

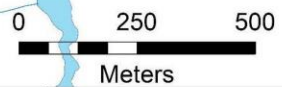
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- Granite
- Metased
- Metased Boulder
- Pegmatite
- Pegmatite Boulder
- Subcrop Metased

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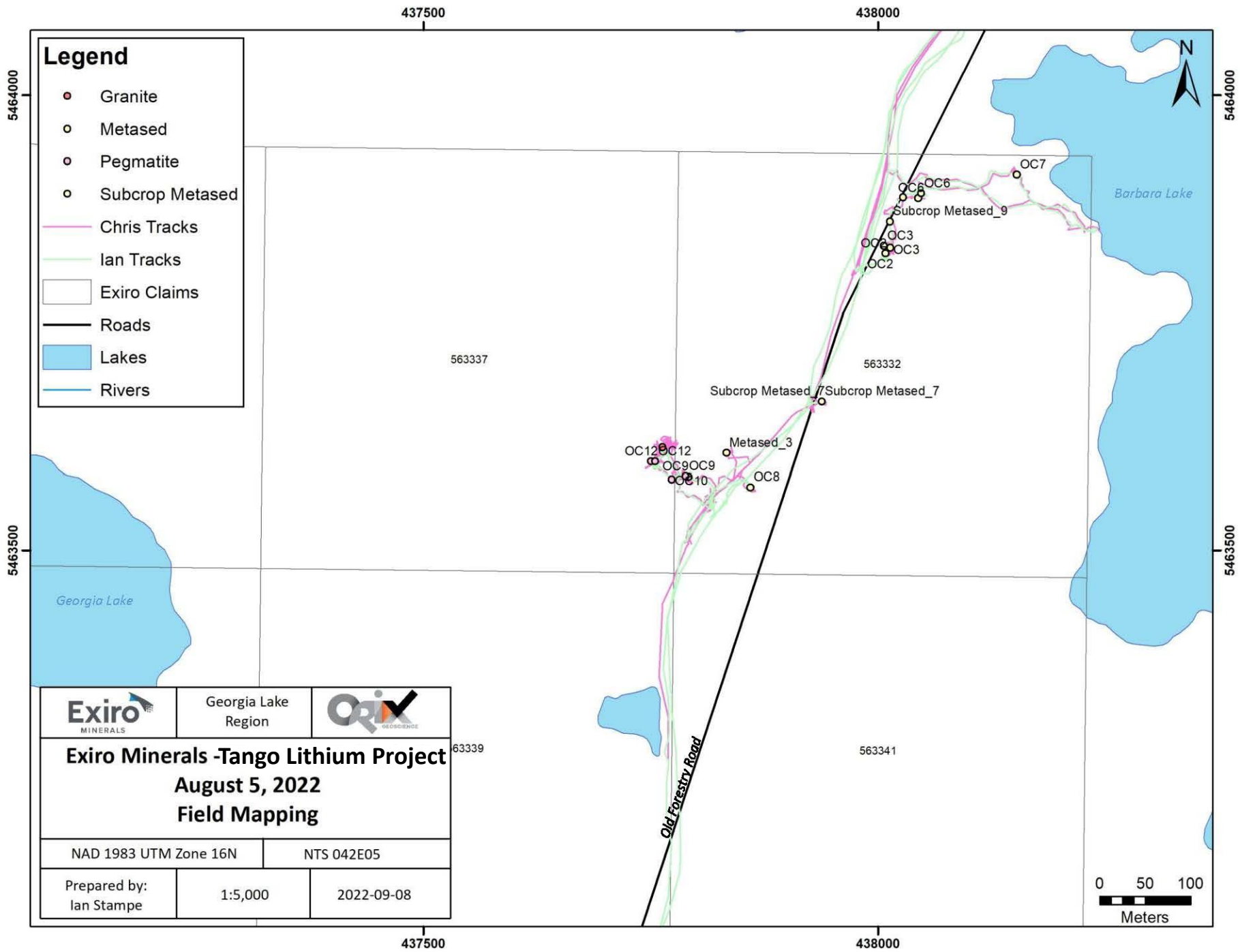
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- August 6, 2022
- August 7, 2022
- August 8, 2022
- August 9, 2022
- August 10, 2022
- August 12, 2022
- Exiro Claims
- Rivers
- Lakes
- Roads



	Georgia Lake Region	
<b>Exiro Minerals</b> <b>Tango Lithium Project</b> <b>2022 Field Mapping</b>		
NAD 1983 UTM Zone 16N		NTS 042E05
Prepared by: Ian Stampie	1:5,000	2022-09-08



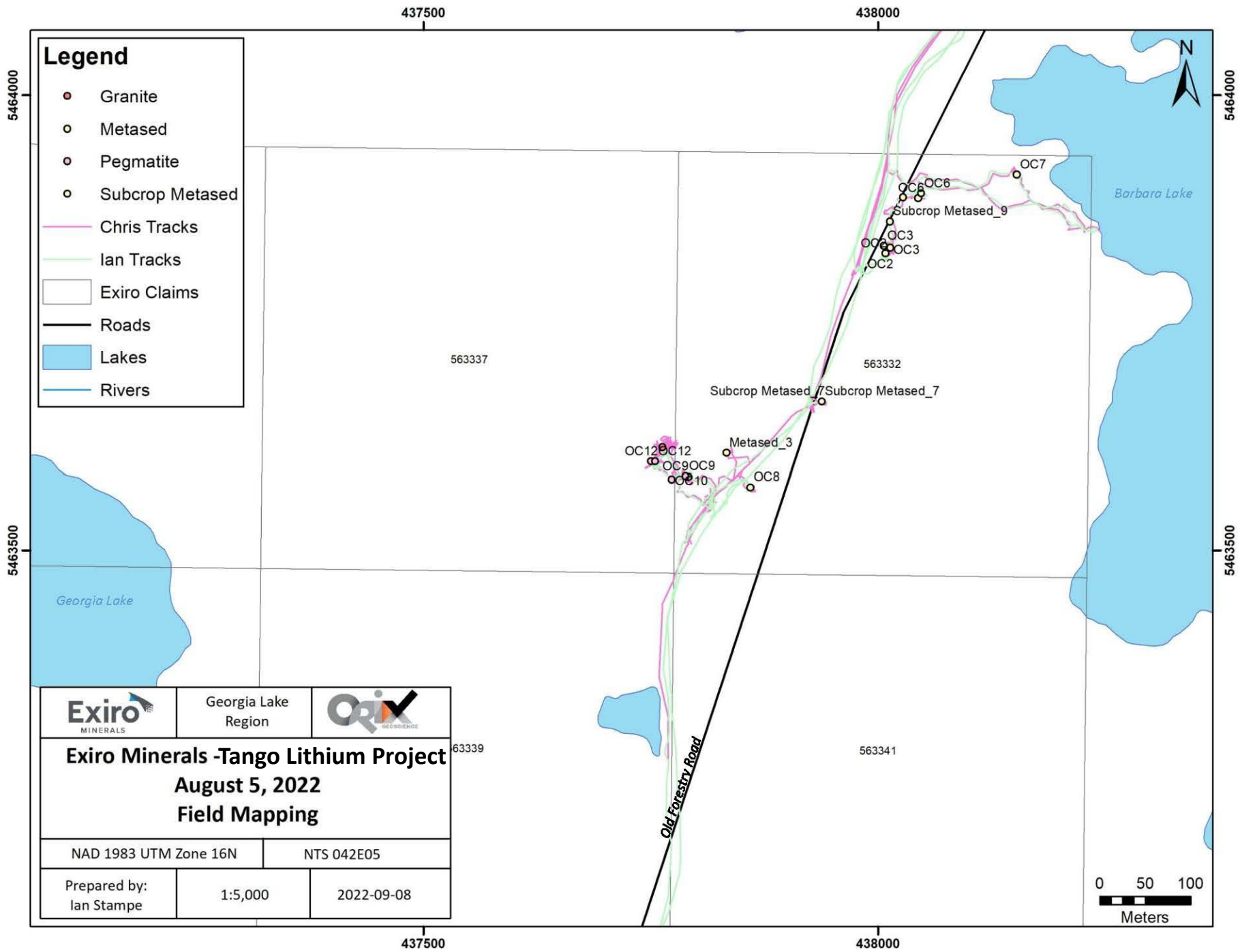
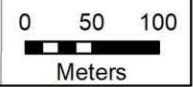


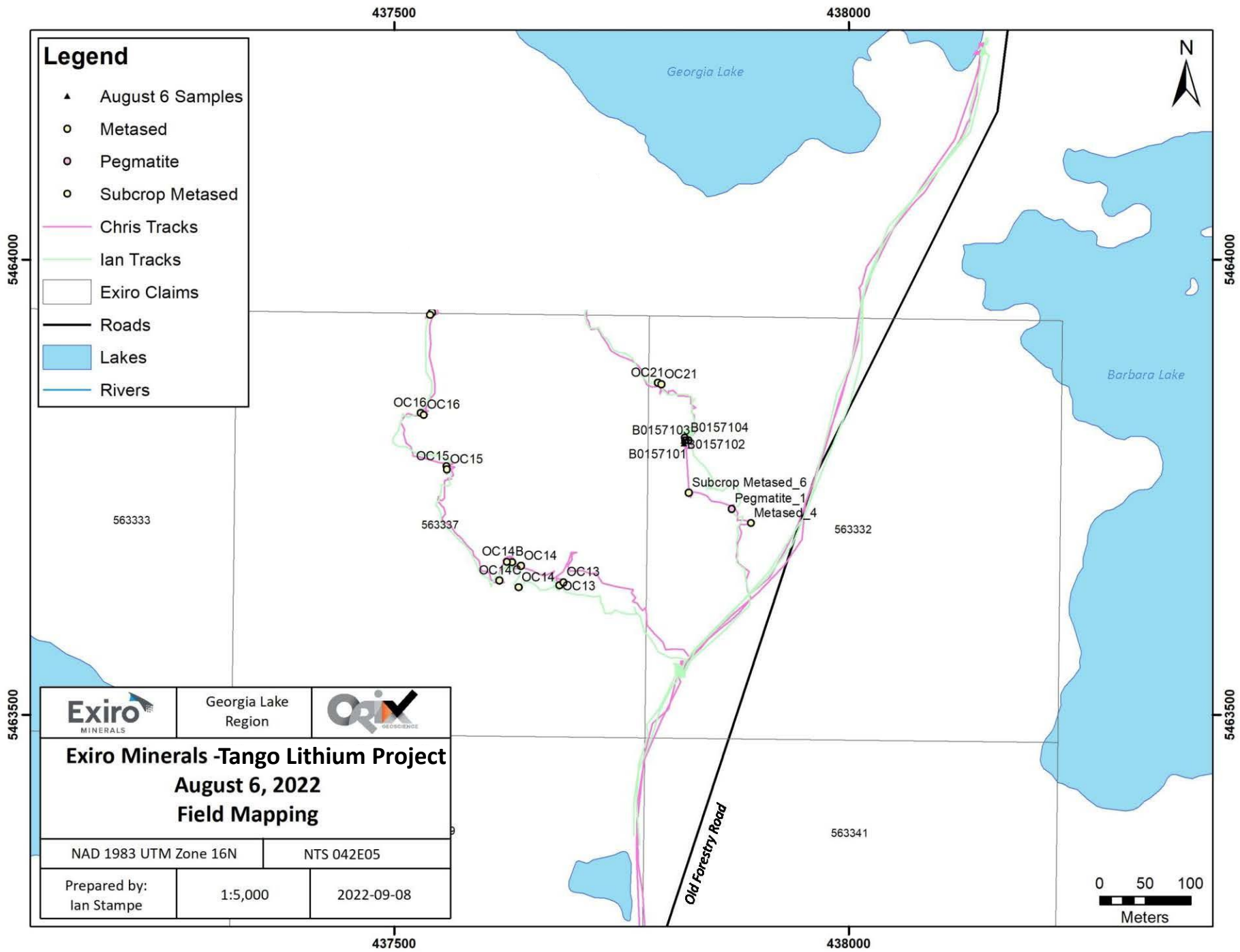


**Legend**

- Granite
- Metased
- Pegmatite
- Subcrop Metased
- Chris Tracks
- Ian Tracks
- Exiro Claims
- Roads
- Lakes
- Rivers

	Georgia Lake Region	
<b>Exiro Minerals -Tango Lithium Project</b> <b>August 5, 2022</b> <b>Field Mapping</b>		
NAD 1983 UTM Zone 16N		NTS 042E05
Prepared by: Ian Stampe	1:5,000	2022-09-08

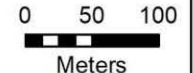




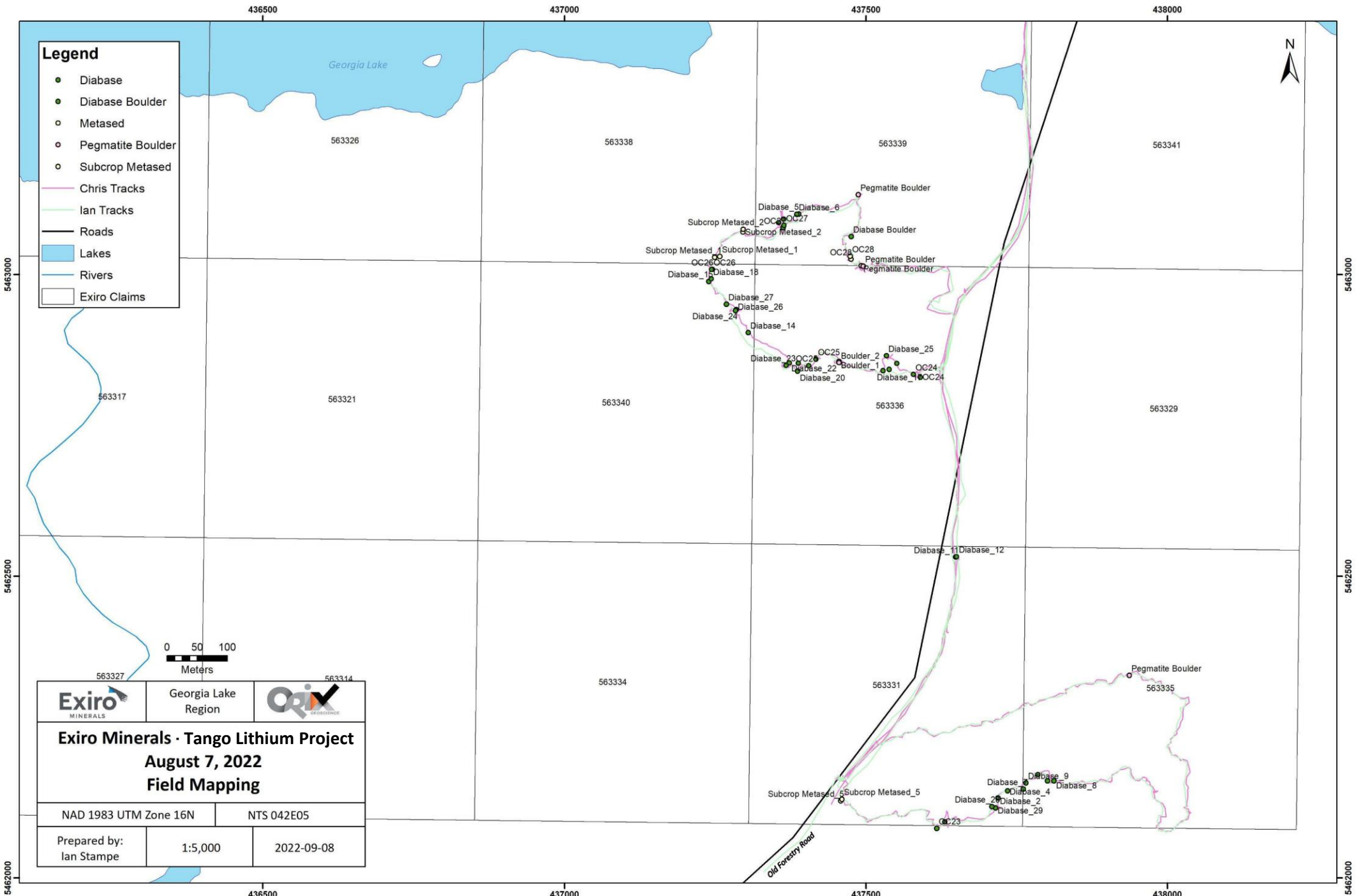
**Legend**

- ▲ August 6 Samples
- Metased
- Pegmatite
- Subcrop Metased
- Chris Tracks
- Ian Tracks
- Exiro Claims
- Roads
- Lakes
- Rivers

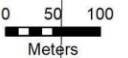
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NAD 1983 UTM Zone 16N		NTS 042E05
Prepared by: Ian Stampe	1:5,000	2022-09-08







- Legend**
- Diabase
  - Diabase Boulder
  - Metased
  - Pegmatite Boulder
  - Subcrop Metased
  - Chris Tracks
  - Ian Tracks
  - Roads
  - Lakes
  - Rivers
  - Exiro Claims



	Georgia Lake Region	
<b>Exiro Minerals - Tango Lithium Project</b> <b>August 7, 2022</b> <b>Field Mapping</b>		
NAD 1983 UTM Zone 16N	NTS 042E05	
Prepared by: Ian Stampe	1:5,000	2022-09-08

5463000

5462500

5462000

5463000

5462500

5462000

436500

437000

437500

438000

436500

437000

437500

438000

Georgia Lake



Old Forestry Road

563317

563321

563340

563329

563327

563314

563334

563331

563335

563326

563338

563339

563341

Subcrop Metased\_2

OC26

OC27

OC28

Subcrop Metased\_1

Subcrop Metased\_2

OC29

OC30

Diabase\_18

Diabase\_19

Diabase\_20

Diabase\_21

Diabase\_22

Diabase\_23

Diabase\_24

Diabase\_25

Diabase\_26

Diabase\_27

Diabase\_14

Diabase\_15

Diabase\_22

Diabase\_23

Diabase\_20

Diabase\_25

Diabase\_11

Diabase\_12

Boulder\_1

Boulder\_2

Diabase\_1

Diabase\_9

Diabase\_8

Diabase\_2

Diabase\_4

Diabase\_29

Subcrop Metased\_5

Subcrop Metased\_6

Diabase\_2

Diabase\_2

Diabase\_2

OC23

Diabase\_2

Diabase\_2

Diabase\_2

Diabase\_2

Pegmatite Boulder

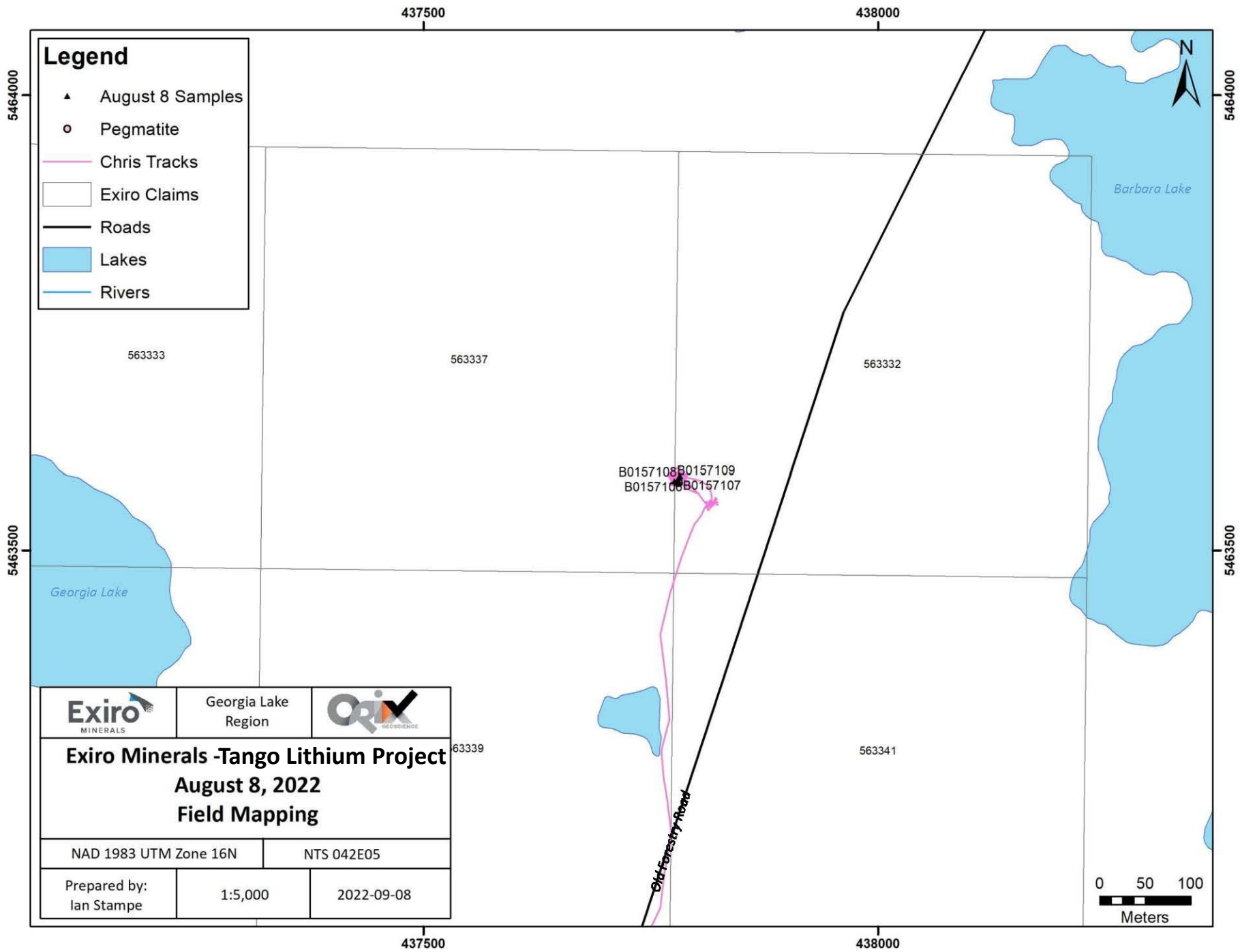
Pegmatite Boulder

Diabase Boulder

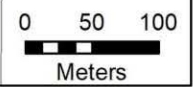
Pegmatite Boulder

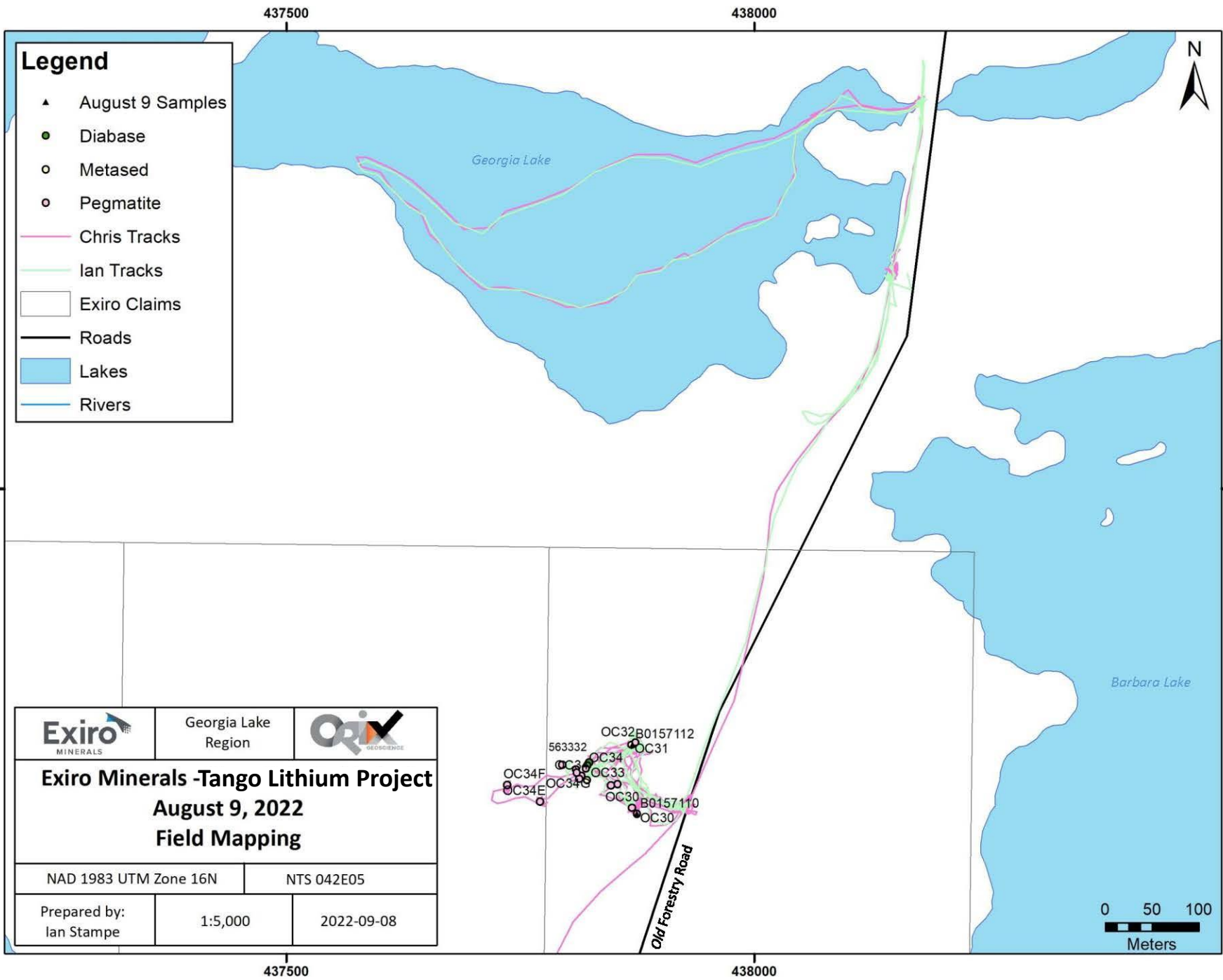
Pegmatite Boulder

Pegmatite Boulder



	Georgia Lake Region	
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NAD 1983 UTM Zone 16N		NTS 042E05
Prepared by: Ian Stampe	1:5,000	2022-09-08





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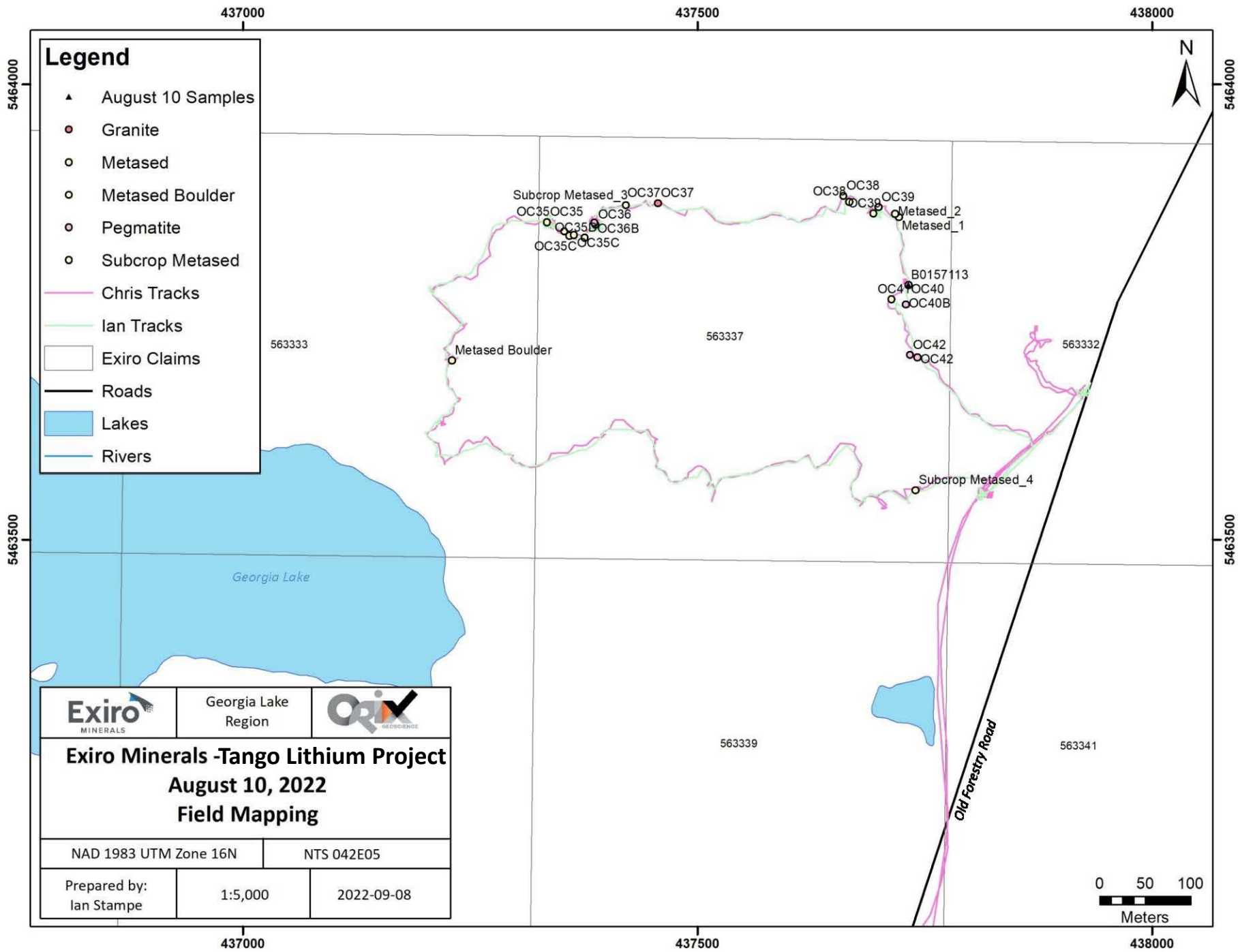
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- Diabase
- Metased
- Pegmatite
- Chris Tracks
- Ian Tracks
- Exiro Claims
- Roads
- Lakes
- Rivers

	Georgia Lake Region	
<b>Exiro Minerals -Tango Lithium Project</b> <b>August 9, 2022</b> <b>Field Mapping</b>		
NAD 1983 UTM Zone 16N		NTS 042E05
Prepared by: Ian Stampe	1:5,000	2022-09-08

OC32B0157112  
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 OC34  
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 OC34F  
 OC34E  
 OC34G



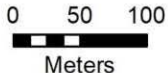




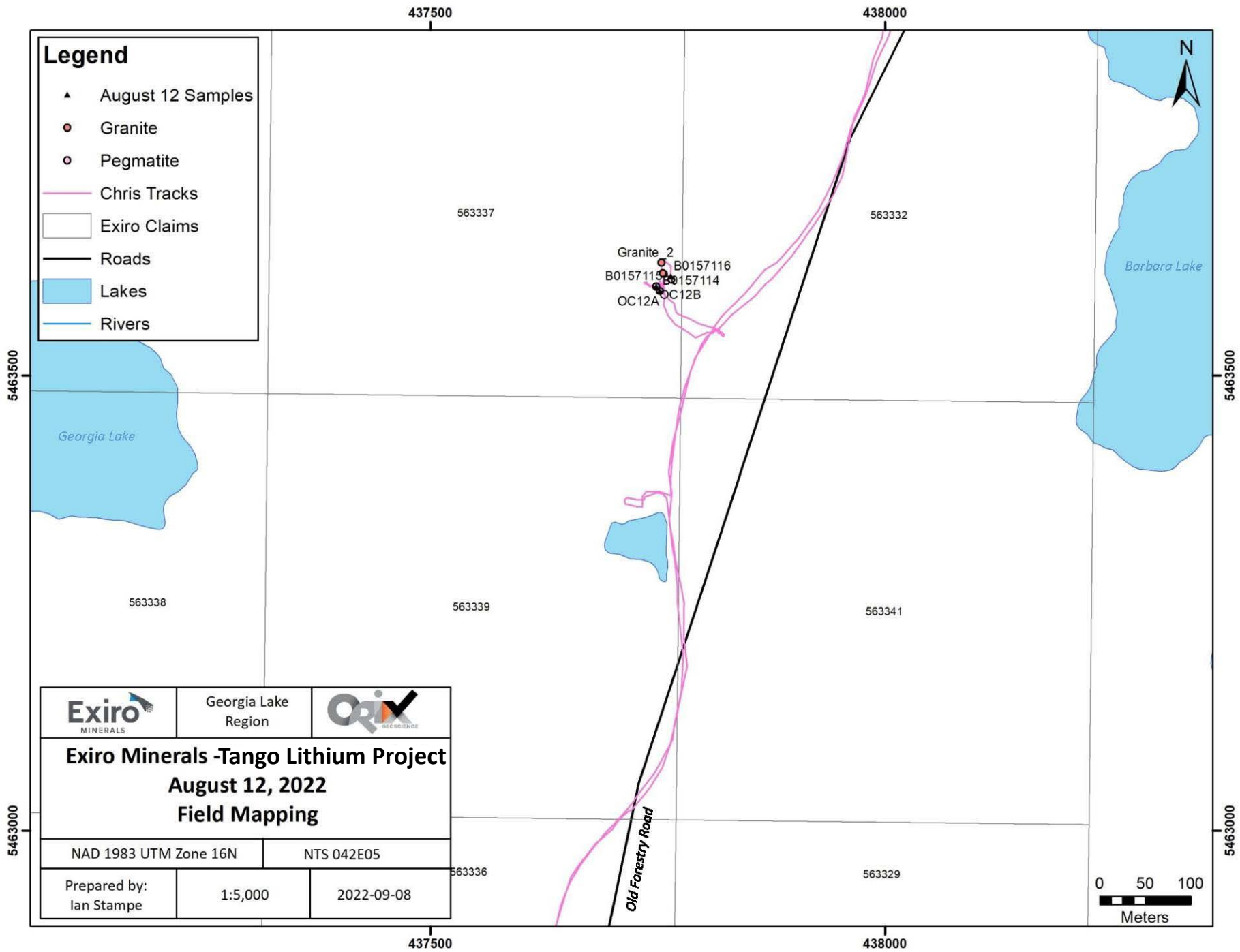
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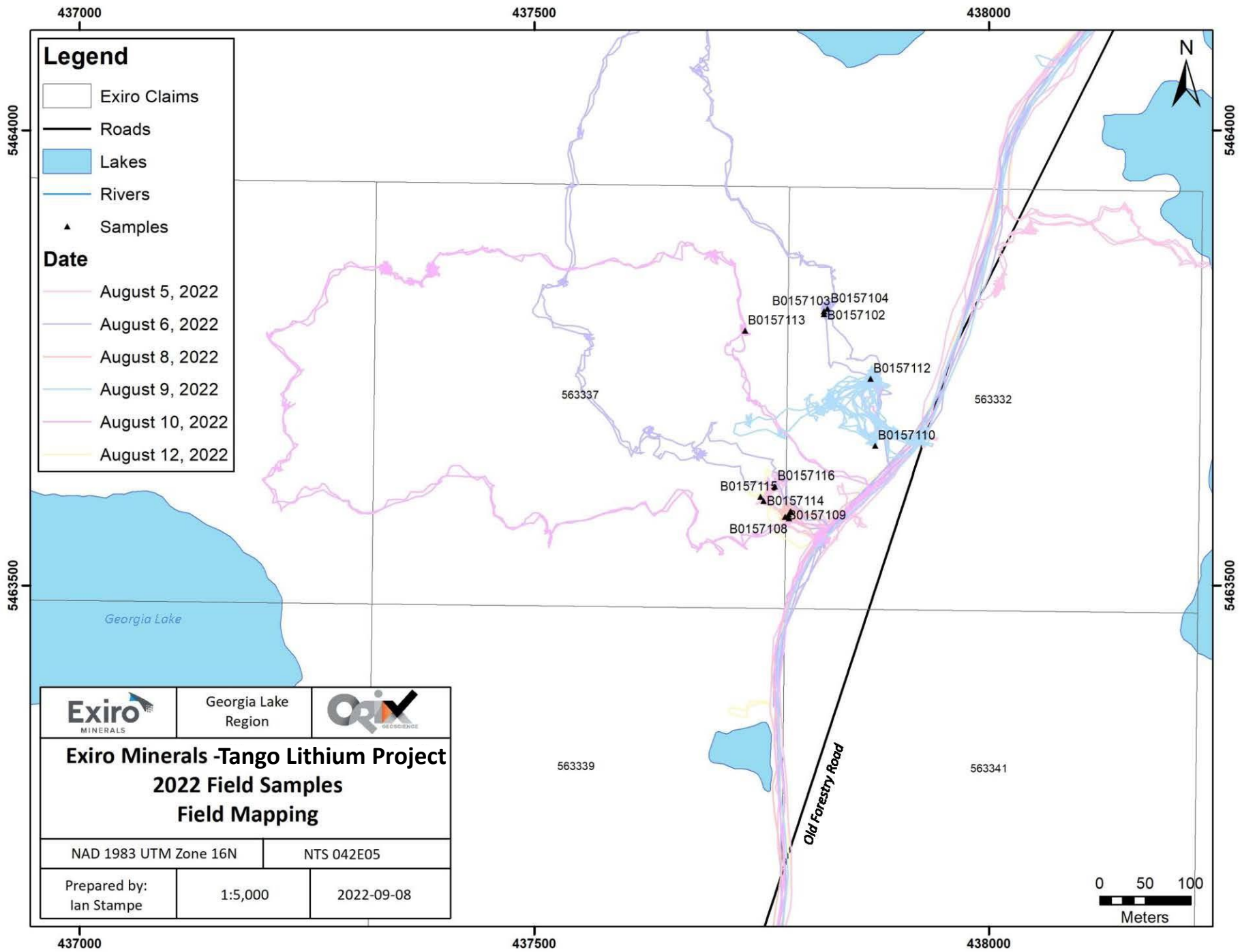
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- Metased
- Metased Boulder
- Pegmatite
- Subcrop Metased
- Chris Tracks
- Ian Tracks
- Exiro Claims
- Roads
- Lakes
- Rivers

	Georgia Lake Region	
<b>Exiro Minerals -Tango Lithium Project</b> <b>August 10, 2022</b> <b>Field Mapping</b>		
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Prepared by: Ian Stampe	1:5,000	2022-09-08











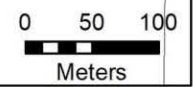
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- Exiro Claims
- Roads
- Lakes
- Rivers
- ▲ Samples

**Date**

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- August 6, 2022
- August 8, 2022
- August 9, 2022
- August 10, 2022
- August 12, 2022

	Georgia Lake Region	
<b>Exiro Minerals -Tango Lithium Project 2022 Field Samples Field Mapping</b>		
NAD 1983 UTM Zone 16N		NTS 042E05
Prepared by: Ian Stampe	1:5,000	2022-09-08





**Legend**

**Topography**

- Lake
- River
- Road

**2022 Outcrops and Waypoints**

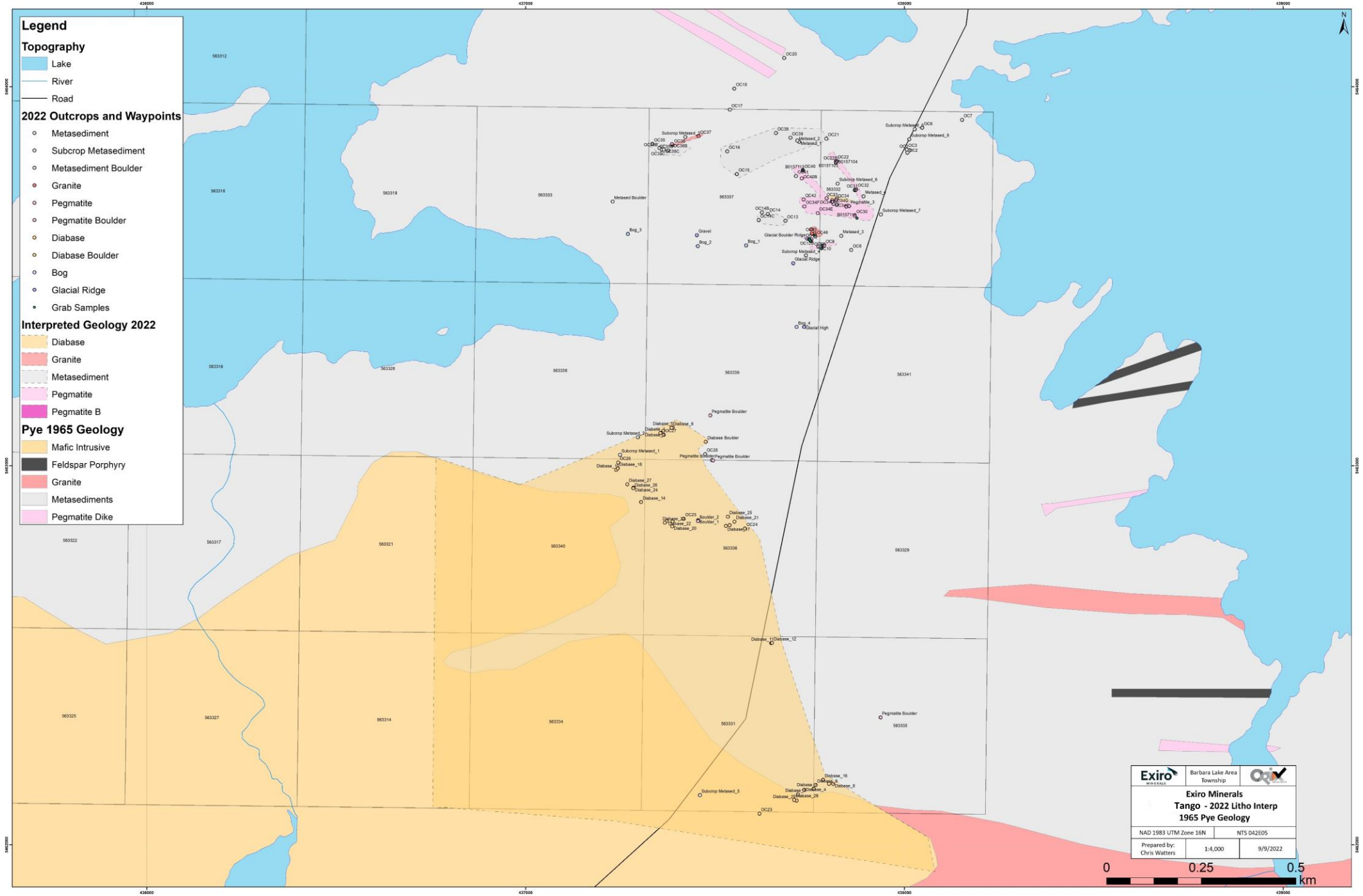
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- Metasediment Boulder
- Granite
- Pegmatite
- Pegmatite Boulder
- Diabase
- Diabase Boulder
- Bog
- Glacial Ridge
- Grab Samples

**Interpreted Geology 2022**

- Diabase
- Granite
- Metasediment
- Pegmatite
- Pegmatite B

**Pye 1965 Geology**

- Mafic Intrusive
- Feldspar Porphyry
- Granite
- Metasediments
- Pegmatite Dike



	Barbara Lake Area Township	
<b>Exiro Minerals</b>		
<b>Tango - 2022 Litho Interp</b>		
<b>1965 Pye Geology</b>		
NAD 1983 UTM Zone 16N	NTS 042E05	
Prepared by: Chris Watters	1:4,000	9/9/2022



**Legend**

**Topography**

- Lake
- River
- Road

**2022 Outcrops and Waypoints**

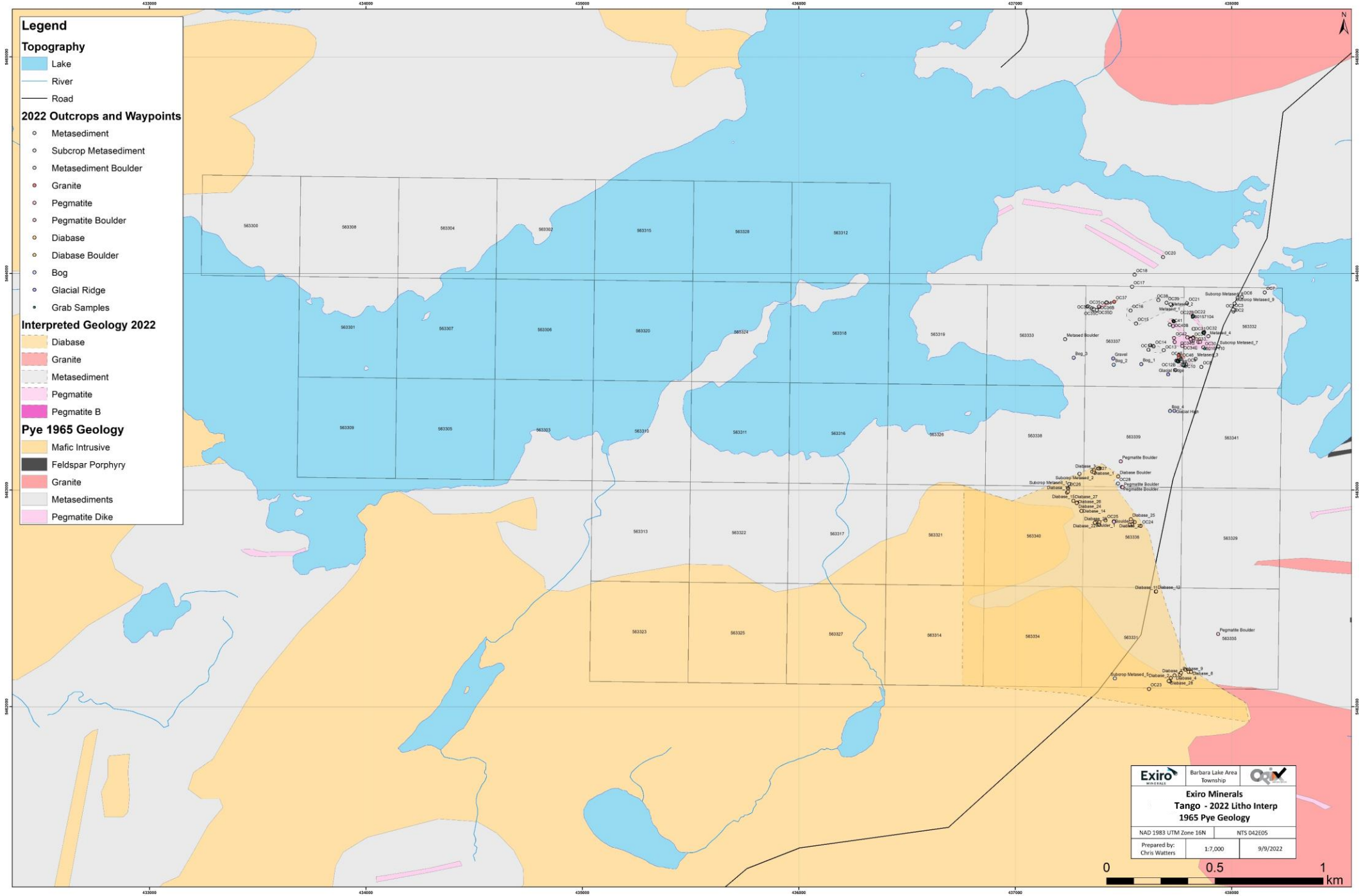
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- Subcrop Metasediment
- Metasediment Boulder
- Granite
- Pegmatite
- Pegmatite Boulder
- Diabase
- Diabase Boulder
- Bog
- Glacial Ridge
- Grab Samples

**Interpreted Geology 2022**

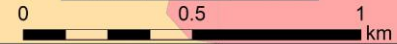
- Diabase
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- Metasediment
- Pegmatite
- Pegmatite B

**Pye 1965 Geology**

- Mafic Intrusive
- Feldspar Porphyry
- Granite
- Metasediments
- Pegmatite Dike



	Barbara Lake Area Township	
<b>Exiro Minerals</b>		
<b>Tango - 2022 Litho Interp</b>		
<b>1965 Pye Geology</b>		
NAD 1983 UTM Zone 16N		NTS 042E05
Prepared by: Chris Watters	1:7,000	9/9/2022



## **APPENDIX B: ROCK SAMPLE DESCRIPTIONS**



Sample Number	Sample Type	Outcrop Number	Description	Easting	Northing	Li2O (%)	Certificate
B0157101	Grab	OC21A	Pink, very coarse grained, pegmatite. K-spar, Quartz, Tourmaline, Muscovite.	437789.75	5463864.5	Pending	Pending
B0157102	Grab	OC21B	Pink, very coarse grained, pegmatite. K-spar, Quartz, Tourmaline, Muscovite.	437789.75	5463864.5	Pending	Pending
B0157103	Grab	OC21B	Quartz vein in pegmatite. Mostly quartz vein, with minor pegmatite wall rock, composed of K-spar, Quartz, Tourmaline, Muscovite.	437789.75	5463864.5	Pending	Pending
B0157104	Grab	OC21C	Pink, very coarse grained, pegmatite. K-spar, Quartz, Tourmaline, Muscovite.	437789.75	5463864.5	Pending	Pending
B0157105	Grab	OC9	Pink, very coarse grained, pegmatite. K-spar, Quartz, Tourmaline, Muscovite.	437779.75	5463578	Pending	Pending
B0157106	Grab	OC9	Pink, very coarse grained, pegmatite. K-spar, Quartz, Tourmaline, Muscovite.	437791.26	5463580.5	Pending	Pending
B0157107	Grab	OC9	Pink, very coarse grained, pegmatite. K-spar, Quartz, Tourmaline, Muscovite.	437791.26	5463580.5	Pending	Pending
B0157108	Grab	OC9B	Metasediment. Fine grained, biotite, quartz and feldspar.	437778.52	5463579	Pending	Pending
B0157109	Grab	OC9B	Pink, very coarse grained, pegmatite. K-spar, Quartz, Tourmaline, Muscovite.	437778.52	5463579	Pending	Pending
B0157110	Grab	OC30	Pink, very coarse grained, pegmatite. K-spar, Quartz, Tourmaline, Muscovite.	437874.86	5463653.1	Pending	Pending
B0157112	Grab	OC32	Pink, very coarse grained, pegmatite. K-spar, Quartz, Tourmaline, Muscovite.	437868.46	5463730.4	Pending	Pending
B0157113	Grab	OC40	Pink, very coarse grained, pegmatite. K-spar, Quartz, Tourmaline, Muscovite. Prominent muscovite seems.	437731.96	5463779.5	Pending	Pending
B0157114	Grab	OC12A	White, very coarse, blocky, pegmatite. Albite, Quartz, Muscovite.	437752.44	5463592.8	Pending	Pending
B0157115	Grab	OC12B	White, very coarse, blocky, pegmatite. Albite, Quartz, Muscovite.	437748.79	5463597.5	Pending	Pending
B0157116	Grab	OC46	Red Pegmatite occurring at contact with Granite intrusive.	437764.61	5463608.9	Pending	Pending

**APPENDIX C: DAILY LOG**

Date	Plan	Work Completed	Samples Collected	Outcrops encountered
27-Jul	Nick will travel to claim site with an assistant, to ensure access is possible for crew and boat. Clear windfall if necessary.	The site was accessed after extensive clearing of the trail. Significant overgrowth was encountered after 9 km along the unnamed forestry road. Photos were taken of the ford crossing, forks in the road, old claim posts and significant overgrowth.		
3-Aug	Arrive in Thunder Bay from Winnipeg. Pick-up truck and equipment, shop for supplies and groceries, travel to Reflection Lake Resort.	Arrived in Thunder Bay at 10am, after 2-hour delay. Picked up equipment and traveled to camp, arriving at 9pm.		
4-Aug	Meet Nick at trail Gorge Creek Road, travel to Georgia Lake in Argo and XBH, bring in canoe using XBH. Nick travels back to Thunder Bay with XBH and trailer.	Drove to site. Cleared more trail to make access quicker. A short paddle and portage were needed to access Georgia Lake by canoe. The canoe was stored at Georgia Lake		
5-Aug	Ian and Chris travel to Georgia Lake and began mapping and prospecting in Northeast corner of claims.	Traveled to site. Walked to northeast corner of claims. One metasediment outcrop with crenulation cleavage was encountered. Topography had low relief. Completed one loop and decided to visit higher relief areas to increase chance of seeing outcrop. Pegmatite was discovered and the outcrop was stripped by hand. Mapping of outcrop. No samples collected. Will return to site to sample.		OC2, OC3, OC6, OC7, OC8, OC9, OC10, OC12
6-Aug	Large loop planned, to follow up on pegmatite that was discovered. Plan is to travel north south along claims, to cross east-west trending dikes.	Follow up mapping surrounding OC 9-10-12. Completed larger mapping loop to try and find more pegmatite dikes between newly discovered OC9 and previously mapped pegmatites by Pye 1965, occurring on the south shore of Georgia Lake. The previously mapped pegmatites by Pye were not found, but another pegmatite outcrop was mapped and sampled. OC 21	B0157101, B0157102, B0157103, B0157104	OC13, OC14, OC15, OC16, OC 17, OC18, OC19-off property, OC20, OC21, OC22, and Metased-4
7-Aug	Plan to walk another large loop in the southern portion of the property, where the topographic relief is higher, and more potential outcrop is visible from satellite images.	Completed two loops in the southern portion of the property. Only encountered diabase ridges. This extends the previously mapped diabase, completed by Pye in 1965, further north.		OC28, OC27, OC26, OC25, OC24, and Diabase ridge followed for 18 outcrop exposures.

Date	Plan	Work Completed	Samples Collected	Outcrops encountered
8-Aug	Boating to Island reef	Rain in the morning, weather prevented boating. Fuel run to Nipigon and picked up some supplies. Traveled to site in the afternoon and stripped, mapped and sampled OC9. Uncovered contact between pegmatite and metasediments	B0157105, B0157106, B0157107, B0157108	OC9 revisited and sampled
9-Aug	Boating to Island reef. If stopped by weather, channel sample OC 32, then complete another small loop around found pegmatites.	Attempted trip to island reef showing, but weather/wind speeds caused us to turn back. Major white caps, too large for canoe. White caps were not visible from the north bay of the lake we launched from. Went to channel sample OC32 but channel saw recoil broke. Unable to fix recoil. Completed grab samples of OC 32	B0157109, B0157110	OC30, OC31, OC32, OC33, OC34- Pegmatite followed for 6 more outcrops
10-Aug	Boating to Island reef. If stopped by weather, complete another mapping loop.	Weather prevented boating. Completed larger loop around previously identified pegmatites. Identified granite-metasediment contact in the northeast portion of the property. Pegmatites dikes can be associated with the granitic intrusions, so this could be a target for follow up work.	B0157112, B0157113	OC35 - Traced for B, C, D; OC36, OC37, OC38, OC39, OC40, OC41, OC42,
11-Aug	Complete another mapping loops. Return to and sample OC12 and OC9.	Argo broke down for 2.5+ hours, marked as "Stall". Multiple repair attempts failed, and on the 4 or 5th try after changing the spark plugs, the machine started. Traveled back to camp, to avoid being stuck in the bush at the end of the day, which would be a safety risk.		
12-Aug	Demobilize boat, one more mapping loop. Sample OC 9-12.	Demobilized boat sampled OC 9 and 12, and checked out claim 56339, which is mostly bog. Local topographic high was searched, but it was a glacial feature.	B0156114, B0156115, B0156116	
13-Aug	Travel to Thunder Bay, return equipment, drop off samples, fly home to Winnipeg.	Traveled to Thunder Bay, returned equipment, arranged for sample drop off during work week, flu to Winnipeg.		

## STATEMENT OF EXPENDITURES

In 2022, the total expenditures for the Exiro Minerals Corp. exploration program completed on their Tango Lithium Project were \$60,473. The report titled “Assessment Report Based on the 2022 Mapping Program Completed on the Tango Lithium Project for Exiro Minerals Corp.” provides technical documentation regarding the exploration activities that were undertaken. Herein is a break-down of those expenditures and invoices.

**Table:** Summary of Expenditures Related to the 2022 Exploration Program.

Category	Item	Cost
	<b>Corporate Traveller &amp; Orix Geoscience 2018 Inc.</b>	
Travel	Flights to Thunder Bay <i>(Adjusted for Ontario Portion Only)</i>	\$2,240.05
	<b>Northwest All Terrain Vehicles &amp; Enterprise &amp; Orix Geoscience 2018 Inc.</b>	
Equipment Rental	Equipment Rental	\$6,847.32
Food	<b>Orix Geoscience 2018 Inc.</b> Per Diem (\$50 per day)	\$1,100.00
Accommodation	<b>McCollum’s Lake Resort</b> 10 Nights Stay	\$1,760.00
Field Supplies	<b>Orix Geoscience 2018 Inc.</b> Field Consumables & Gasoline	\$1,349.79
Contractor Mob/Demob	<b>Northwest All Terrain Vehicles</b> Contracting Services: Aug 2022	\$2,700.00
Access Trail Building	<b>Northwest All Terrain Vehicles</b> Contracting Services: Aug 2022	\$1,950.00
Field Work & Logistical Support	<b>Orix Geoscience 2018 Inc.</b> Consulting Services: Jul – Aug 2022	\$27,494.80
Report	<b>Orix Geoscience 2018 Inc.</b> Consulting Services: Aug – Sept 2022	\$15,031.00
	<b>Total Exploration Costs</b>	<b>\$60,472.96</b>