# **Trinex Lithium Limited**

A subsidiary of



Project Description for the Halo-Yuri Project V1.1

Prepared for the MacKenzie Valley Land and Water Board 22 January 2025



### **Document Maintenance and Control**

Trinex Lithium Limited is responsible for the distribution, maintenance and updating of this document. This document will be reviewed annually at least, and more frequently to include any changes in the Project, best practices, guidelines, advice from the Inspector, contact information, environmental factors, or following a spill incident. Revised versions will be provided to the Mackenzie Valley Land and Water Board for approval and circulated accordingly.

#### **Revision History**

Revision #	Section(s) Revised	Description of Revision	Date
0	N/A	First version	1 November 2024
1	3.1	Figure 5: Camp layout added	22 January 2025





# **Table of Contents**

1.	INT	RODUCTION	4
	1.1.	Project Contacts	4
	1.2	.1 Primary Contact	4
	1.2	.2 Secondary Contact	4
2.	PRI	EVIOUS STUDIES UNDERTAKEN	7
2	2.1.	Historical Exploration	7
2	2.2.	2024 Exploration Program	7
2	2.3.	Archaeological Studies 1	0
2	2.4.	Environmental Studies1	0
3.	PL/	ANNED EXPLORATION	0
3	3.1.	Water Withdrawal 1	1
AP	PEN	DIX 1 – ECE MANAGEMENT RECOMMENDATIONS LETTER	3





# 1. INTRODUCTION

The Halo-Yuri Lithium Project covers approximately 450 square kilometres and comprises 37 contiguous claims. It is located approximately 250 kms northeast of Yellowknife (Figure 1) on the Gahcho Kue annual winter road which provides good access for drilling and is within a few hundred metres of the 'OIG' spodumene occurrence. Historically, exploration in the area has focused on diamonds with little or no previous work on pegmatites albeit there is documented spodumene bearing pegmatites with numerous unexplored targets.

As the Project is located on the barren-lands, vegetation clearing will be limited. Water for drilling will be drawn from local water sources. Water use will be below 99 cubic meters per day, so a water licence is not required. Water will be sourced from Aylmer Lake and other lakes within the Mineral Claims.

The Project area falls within the Taiga shield high subarctic ecoregion which is characterized by bedrock with shrub and lichen tundra.

Exploration across the Project will include surface sampling, geological mapping and drill programs. The drill program will start upon approval of a Type A Land Use Permit. Clearing of vegetation is unlikely but may be required on drill pads and on skid trails during summer exploration. Water for drilling will be drawn from several localities within the Lake systems across the project area. Water use will be below 99 m<sup>3</sup> per day, so a water license is not sought. A camp will be established to accommodate up to 20 people at a site close to the Winter Road, amenable to both summer and winter use and aircraft access (Figure 2).

#### **1.1. Project Contacts**

#### **1.2.1 Primary Contact**

David Cornish – Exploration Manager Address: 128 Churchill Ave, Subiaco WA 6008, AUSTRALIA Email: dcornish@trinexminerals.com.au Website: www.trinexminerals.com.au Phone: +61 403 880 873

#### 1.2.2 Secondary Contact

Nate Schmidt – Senior Geologist (Dahrouge Geological Consulting) Address: 103-10183 112th Street, Edmonton, Alberta, CANADA Email: Nate.Schmidt@dahrouge.com Website: www.dahrouge.com Phone: 780-434-9808











Figure 1: Halo-Yuri Project location map.







Figure 2: Halo-Yuri project area showing Land Use Permit application boundary, initial drilling target areas and potential camp site locations.





# 2. PREVIOUS STUDIES UNDERTAKEN

# **2.1. Historical Exploration**

Historical work across the project by Southern Era noted that most outcrop on the property consisted on granitoids, metasediments and pegmatites with large NW-SE trending pegmatites of the MacKenzie Dyke Swarm crossing the property.

Spodumene is mapped at the 'OIG' pegmatites in the northwest of the project (Figure 3) and also at the 'Sweet' pegmatite which is located a few hundred metres to the east of the project. The OIG pegmatites are described in a 1991 Master's thesis by Paul Tomascak submitted to the University of Manitoba which states "The four dikes of this series all contain spodumene and little K-feldspar, although OIG-4 is largely aplitic and the spodumene is not as coarse as it is in all other dikes of the series. Despite the presence of extensive spodumene, dikes are poorly zoned. Dikes are elongate, in general striking north-south. Contact relations are incomplete, but most dikes appear concordant with metasediment schistosity. Lengths of dikes range from 6 to 18 m. Texturally and mineralogically these dikes appear to belong to Cerny's (1982) albite-spodumene type, bearing similarities to the King's Mountain pegmatites of North Carolina, U.S.A.(Kesler, 1976)."

Furthermore Tomascak goes on to say "OIG-1, 2, 3 : These dikes are spodumene-rich and poorly zoned. They consist of a random assemblage of 0.5-4.0 cm spodumene + quartz + plagioclase (usually cleavelandite)  $\pm$ muscovite  $\pm$ K-feldspar (some megacrysts up to 5 cm). Randomly distributed pods of blocky spodumene + K-feldspar  $\pm$  cleavelandite also are present in these dikes. Aside from spodumene they remarkably lack other rare-element minerals.

OIG-4: This dike is much smaller than the others and appears extensively metasomatized. It contains a near-homogeneous and relatively fine-grained assemblage of cleavelandite + spodumene +muscovite+ quartz."

# 2.2. 2024 Exploration Program

On ground exploration activities for the summer 2024 Canadian field season commenced at the Halo-Yuri Lithium Project in June to enable the Company to rapidly assess a large number of pegmatite systems identified through satellite image interpretation.

The 3-week mapping campaign at the Halo-Yuri Project discovered numerous new areas of spodumene-bearing pegmatite mineralisation, across the northern area of the project (Figure 4). The terrain in the northern area is flat-lying tundra dominated by glacial till, boulder fields, marshes, and lakes, with limited in situ outcrop. Spodumene-bearing pegmatite encountered was typically as boulders, with 278 mineralised boulders observed, and 24 mineralised outcrops mapped. Due to the high abundance of mineralised boulders encountered, only 99 of the 278 boulders were sampled, in addition to 22 samples taken from spodumene-bearing outcrop. Assay results have not yet been received.

Three new trends of spodumene-bearing boulders were discovered: Kick, Jagged, and Amber (Figure 4). While the historical OIG spodumene occurrence was confirmed and sampled. Due to the size, density, and angularity of the boulders, they are likely sourced relatively locally. This is supported by the discovery of spodumene-bearing pegmatite outcrop along these trends in the later stages of the mapping program.

With the clear potential of the north-east area of the project, a further two mineral claims (ML 37 & ML 38) were staked during the program.

The work program completed at Halo-Yuri was targeted using true colour satellite imagery, which identified hundreds of potential pegmatite boulders & outcrop (Figure 3). The targeting was successful with many of the spodumene-bearing boulders and outcrops identified through this





method, down to boulders of 50cm in size. As mapping progressed, it was realised numerous mineralised outcrops discovered are not readily apparent in satellite imagery, likely due to the lichen and moss common on these outcrops. This suggests there is potential for the discovery of further spodumene-bearing pegmatites outcrop across the northern part of the project. The Company is looking into other techniques, such as high-resolution hyperspectral imagery, to aid further discoveries in areas of poor outcrop.



Figure 3: Halo-Yuri Project with known LCT and pegmatie occurences..





# Project Description Halo-Yuri Project



Figure 4: Halo-Yuri Project showing all areas of mapping and sampling...



# 2.3. Archaeological Studies

A desktop Archaeological Overview Assessment (AOA) was completed across the Halo-Yuri Project Area to identify potential archaeological constraints. A search of the GNWT (Government of the Northwest Territories) database indicates 38 recorded archaeological sites within the Project area. A review of the landscape has also identified 53 additional Target Areas which exhibited high archaeological potential. A GNWT ECE (Education, Culture and Environment) review has recommended that all previously recorded sites (38) be avoided, with a buffer of 150m in place and those sites of high archaeological potential (53) similarly be avoided, or an Archaeological Impact Assessment be undertaken in advance of any ground disturbance activities. Fortunately all these sites are outside target areas and will be avoided with no further review or assessment required. The management recommendations letter issued by the ECE has been appended to this report (Appendix 1).

# 2.4. Environmental Studies

No environmental studies have been completed across the Project area. A Wildlife Management and Monitoring Plan (WMMP) has been developed to accompany this application for a Land Use Permit. As part of the WMMP a Biodiversity Report, Species at Risk Report and Wildlife Management and Monitoring Plan questionnaire has been completed for the area covered by the permit application.

# 3. PLANNED EXPLORATION

The purpose of the proposed exploration by Trinex is to further investigate the potential for lithium within the Project area and expand areas of known mineralization. The following exploration has been proposed following the initial field program in 2024:

#### Reconaissance Mapping and Sampling

Additional mapping and sampling to further outline target areas for drilling.

#### Aerial Geophysical Surveys

Aerial geophysical surveys may be undertaken if deemed appropriate

#### Drill Program

A 1,000-3,000m drill program will be undertaken to test the depth, extent, and overall size of the spodumene bearing dykes in the initial target areas (Figure 2). Emphasis on structural and emplacement controls may yield a more accurate and predictive model to target concealed pegmatites within the lithium zone.

Initial drilling will take place during winter months when the ice and snow will support the weight of equipment, vehicles and machines. Overland portages will have sufficient snowpack to prevent rutting and gouging of the ground surface ensuring that movement between drill sites will result in no damage to the ground surface.

Additional exploration will be planned after results from the initial phase have been received with several additional phases of drilling possible. These may take place winter, summer or fall as determined by availability of contractors and site conditions. Helicopter assisted programs would most likely be necessary during summer due to the multitude of water bodies in the area, and clearing would likely be restricted to drill sites only. If additional access trails and overland movement of drill rigs and vehicles between drill sites was necessary clearing would be kept to a minimum and trails would not be permanent.



# 3.1. Camp

Camp location and details are yet to be determined. The camp will be situated in a location amenable to both summer and winter use and ease of aircraft access (see Figure 2).

Camp use will be seasonal, with accommodation for up to 24 personnel. The number of people on site at any one time will vary from 0 to 24. Camp will be constructed using non-permanent structures, including a combination of insulated tents, tent frames and plywood constructed cabins. A suggested camp layout is shown in Figure 5.

Camp water use is estimated at 1 cubic per day, withdrawn twice per week. Sewage will either be composted of deposited in a sump/pit (at least 100m from the high-water mark), or returned to Yellowknife for disposal (to be determined by the camp contractor). Camp grey water will be deposited in a sump at least 100m from the high water mark.

Aircraft support will be by helicopter and float plane.

Access will be constructed to the camp site from the Gahcho Kué spur road during the winter months. If exploration is undertaken during the summer months some overland access and therefore minimal clearing, may be required.

#### 3.2. Water Withdrawal

Water for drilling will be drawn from local water sources. Water use will be below 99 cubic meters per day, so a water licence is not required. Water will be sourced from Reid Lake, Margaret Lake and/or other lakes within the Mineral Claims.

It is estimated that each drill rig (up to two will be used as required) will use up to 40m<sup>3</sup> of water per 24 hour period.







Figure 5: Suggested/schematic camp layout.





Project Description Halo-Yuri Project

# **APPENDIX 1 – ECE MANAGEMENT RECOMMENDATIONS LETTER**

**TX3** 



May 6, 2024 BY EMAIL

Patrick Young WSP Canada Inc. 1721 8<sup>th</sup> Street East Saskatoon, SK S7H 0T4

Dear Patrick,

#### Re. Archaeological Overview Assessment of the Trinex Minerals Inc. Halo-Yuri Lithium Project

The Department of Education, Culture, and Employment (ECE) has reviewed the Archaeological Overview Assessment (AOA) for Trinex Minerals Inc.'s Halo-Yuri Lithium Project. We concur with the recommendations for the proposed project as outlined in the AOA.

ECE's management recommendations include:

- All areas of high archaeological potential (n=53) should be avoided or subject to an Archaeological Impact Assessment (AIA) in advance of any ground disturbance activities;
- All previously recorded archaeological sites (n=38) should be avoided by a minimum of 150 m.

Any changes to the scope of the proposed project should be discussed with the project archaeologist and ECE to determine if additional archaeological work is required.

Sincerely, Norman N

Naomi Smethurst Assessment Archaeologist Education, Culture, and Employment