

## **Exploration Programs Underway at Ross Lake and MAC with Immediate Success- Clarification**

**Dahrouge Geological Consulting leading an initial geochemical sampling and mapping program that confirms the presence of spodumene at Ross Lake**

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### **Key Points:**

- **Immediate success with the identification of significant spodumene bearing pegmatite dykes at the Ross Lake Lithium Project as part of a broader helicopter-based field program underway in the Northwest Territories.**
- **The presence of spodumene in outcropping dykes is consistent with the potential for Ross Lake to host significant lithium mineralisation.**
- **The pegmatite dykes are located within a gneissic unit adjacent to broad zone of mafics and turbidites that extend under the upper Ross Lake area.**
- **Mapping and sampling traverses will be completed at the Ross Lake and the MAC Projects over the next ten days, which are designed to delineate areas for drilling as soon as practicable and for follow up work during the 2024 Canadian summer.**
- **The Shareholder meeting to approve the issue of securities pursuant to the acquisitions of the three lithium projects and associated capital raising will take place on 6 November 2023.**
- **If shareholder approval is obtained and completion occurs, the Company will have the largest 100% owned exploration footprint in the Northwest Territories of any ASX listed company.**

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Todd River Resources Limited (**ASX: TRT**) (**Todd River** or the **Company**) refers to its announcement dated 27 September 2023 regarding the agreements to acquire three lithium focussed exploration projects in the Northwest Territories of Canada (Figure 1) (**September Announcement**). The Company is pleased to announce that on-ground exploration activities, which are being coordinated and led by Dahrouge Geological Consulting (on behalf of the Company), have commenced at the Ross Lake Lithium Project with immediate on ground success. The purpose of this first phase field work to be completed before the Canadian winter is to enable the Company to prepare for an initial drilling campaign and further mapping, sampling and prospecting during 2024 (subject to completion occurring).



Mapping and sampling in the western half of the Ross Lake Lithium Project (Figure 2) has confirmed the presence of significant spodumene in outcropping pegmatite dykes. Figures 3, 4 and 5 show spodumene in outcrop and hand samples indicate the potential of the project to host significant lithium mineralisation across the property and at depth. Table 1 contains the sample location data and a visual description of the material sampled. To date this is the entire set of samples taken from the Ross Lake Project with a further update to be provided at the conclusion of the field program.

The spodumene bearing pegmatites outcrop over 200-300m of strike and are up to 25m thick at surface with further work being carried out over the coming days to determine full extent, geometry and further mineralogical information. Figures 2 and 7 show the distribution of pegmatites across the project and highlight the area of spodumene on the western side of the project.

As specified in the September Announcement, completion of the acquisitions is subject to (among other things) shareholder approval to issue the relevant securities under the acquisitions and the capital raising. The general meeting to seek this approval will take place on 6 November 2023.

**Will Dix, Managing Director of Todd River Resources, commented:**

*“The field program that the Dahrouge crew have put together at Ross Lake and the MAC Project that has confirmed the existence of spodumene that we hoped we would find at Ross Lake on day one. The program was put together really well to take advantage of the last few weeks of amenable weather. Now we hope to cover as much ground as we can in the lead up to putting together a drilling program for execution as soon as practicable in 2024.*

*We hope to be able to commence our consultation and information sessions with the First Nations communities in the area in the coming weeks. We recognise that this is a really important process for us to get right and we understand the significance of gaining community support for our work in the Northwest Territories. We are committed to conducting our exploration activities with the utmost respect for the environment, wildlife, and cultural heritage and believe that early and regular consultation will go a long way to achieving this.”*

Further sampling and mapping traverses will concentrate on building on the knowledge gained in the initial days of fieldwork to develop drilling targets for testing in 2024. It is expected that further exploration activities at the Ross Lake and MAC Projects will be completed in the next two weeks prior to the onset of winter.

Samples collected from the field work will be submitted to SGS Laboratory for total digestion sodium peroxide assay analysis, with results anticipated in approximately 6 weeks.

**Cautionary Statement:** Visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analyses where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations. The presence of pegmatite or visual



spodumene does not equate to economic lithium mineralisation. The Company is encouraged by the geology identified but no quantitative assessment has been undertaken at this stage. Laboratory analysis of rock chip samples is required to determine whether this is present.

Concurrent with field exploration being undertaken at the Ross Lake and MAC Projects, a number of programs are underway that will ensure the Company will be in a position to submit a Land Access Permit Application as soon as practicable that will pave the way for drilling during 2024. These programs include an Archaeological Overview Assessment (AOA) which is a desktop study completed by a professional archaeologist that determines where a further study, consisting of an Archaeological Impact Assessment (AIA), would be required. An AIA is a field-based study that confirms the presence or absence of archaeological sites, which is again conducted by a professional archaeologist and determines areas available for drilling.

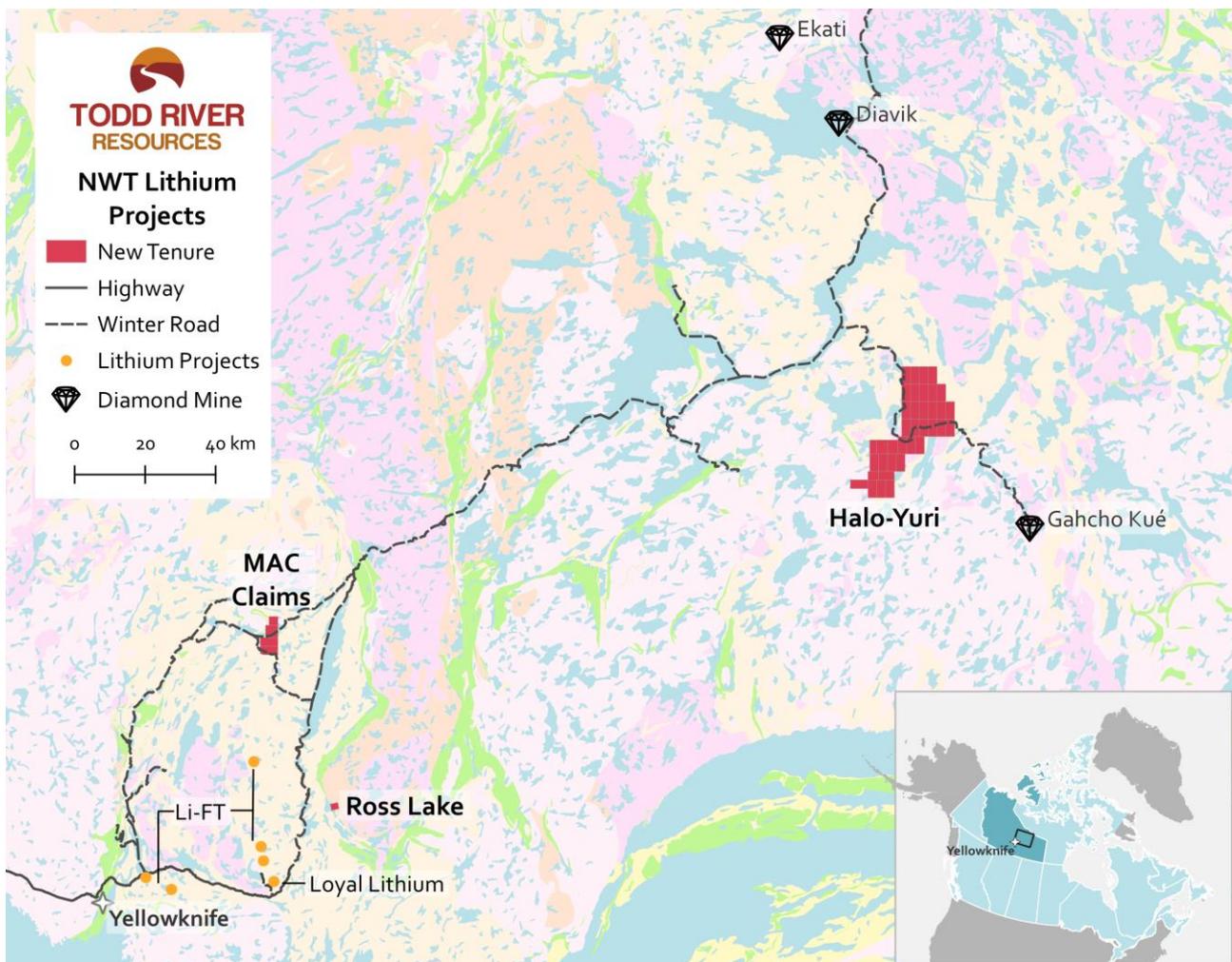
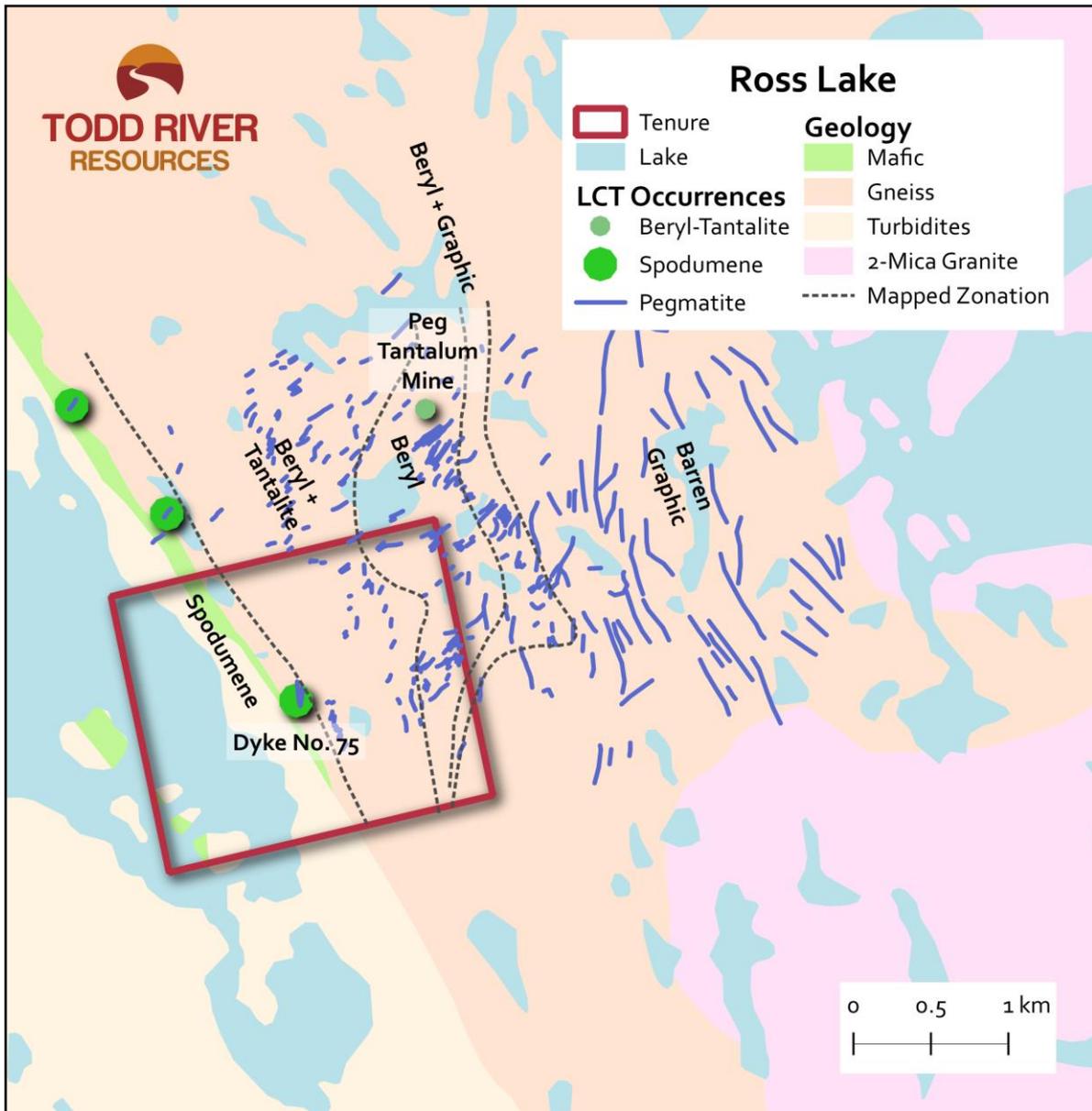


Figure 1 – Canadian Projects - Northwest Territories, Canada



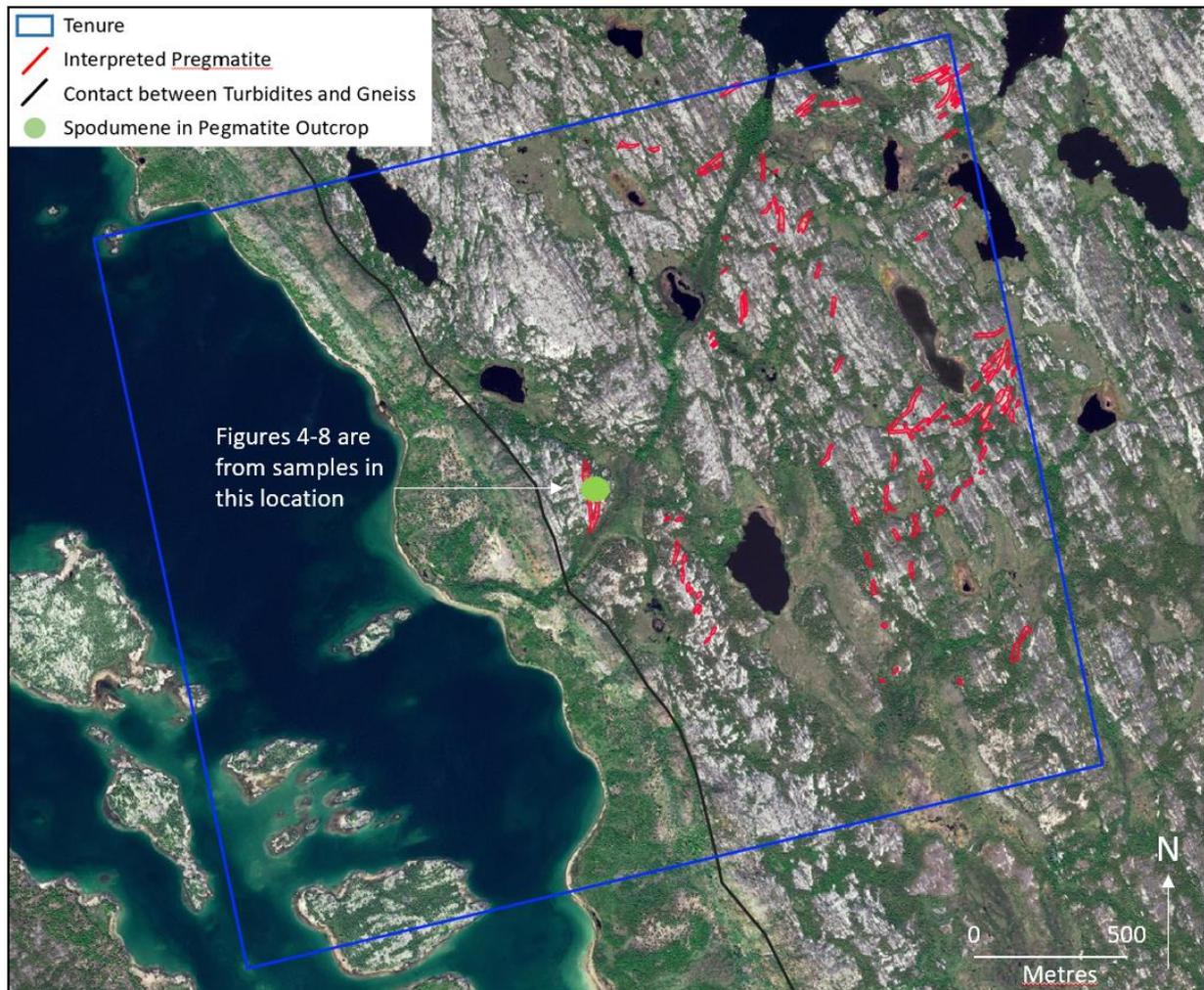
**Figure 2** – Ross Lake Lithium Project showing the location of the spodumene bearing pegmatites in and adjacent to the claim, the classical LCT pegmatite zonation and the location of the historical Peg Tantalum Mine.



**Figures 3-5.** Todd River Resources' Managing Director, Will Dix at Ross Lake with a sample of spodumene bearing pegmatite, Type examples of the spodumene in pegmatite found at Ross Lake.



**Figure 6.** Type samples of the spodumene bearing pegmatite found at Ross Lake in natural (left) and under UV (right). The spodumene shows as orange/red luminescence under long wave length UV light. Refer to Cautionary Statement above.



**Figure 7** – Natural Colour Satellite Image of the Ross Lake Lithium Project showing the location of the outcropping spodumene bearing pegmatites and other pegmatites to be mapped and sampled as part of the initial exploration program currently underway.

### **Ross Lake Lithium Project**

The Ross Lake Lithium Project is a single claim situated approximately 70 kilometres east-northeast of Yellowknife and 25 kilometres away from the Hidden Lake Lithium Project (Loyal Lithium ASX:LLI). The claim is surrounded by the South Slave/North Slave Land withdrawal with one live claim to the north covering the now closed Peg Tantalum Mine which operated in the 1940's.

The Ross Lake Lithium Project area was first examined between 1944 and 1955 by the Geological Survey of Canada (GSC) who carried out an extensive study of the zoning of pegmatites in the region around the Ross Lake Lithium Project as depicted in Figure 2. The study confirmed distinct zones of mineralisation related to the Redout Granite which is to the southeast of the project with the claim itself lying over the zones noted



to contain lithium + niobium +/- tantalum and beryl + niobium +/- tantalum and contains over 100 mapped pegmatites. This affirms the prospectivity of the project.

Given the number of pegmatites, the presence of spodumene and favourable indicator mineralogy, there is potential for mineralisation across the property and at depth.

Refer to the September Announcement for further information.

### Release authorised by the Board of Todd River Resources

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**Table 1: Sample location details and visual description**

Sample ID	Project	Easting NAD83 UTM Zone 12	Northing NAD83 UTM Zone 12	Rock Type	Sample Type	Texture	Spodume % Estimate Range
D00179803	Ross Lake	391857.0	6957077.5	Pegmatite Dyke	Outcrop Grab	Coarse	0
D00179804	Ross Lake	391861.1	6957069.8	Pegmatite Dyke	Outcrop	Very Coarse	10-20
D00179805	Ross Lake	391853.8	6957053.0	Pegmatite Dyke	Outcrop	Very Coarse	10-20
D00179806	Ross Lake	391855.1	6957042.2	Pegmatite Dyke	Outcrop	Very Coarse	20-25
D00179807	Ross Lake	391855.7	6957035.2	Pegmatite Dyke	Outcrop	Very Coarse	5-10
D00179808	Ross Lake	391858.0	6957022.5	Pegmatite Dyke	Outcrop	Very Coarse	5-10

### About Todd River Resources

Todd River Resources (ASX: TRT) is an Australian-based resources company that is focused on critical minerals that are essential for the future. The Company is in the process of acquiring several lithium focused projects in Canada and continues to own a base metal resource at its Mt Hardy Project in the Northern Territory as well as several exciting Ni-Cu-PGE and base metal projects in Western Australia.

With a strong management team and strong financial position, Todd River is well placed to pursue additional critical mineral opportunities across Canada and Australia.

### Forward Looking Statements

This announcement includes forward-looking statements. These statements relate to the Company's expectations, beliefs, intentions or strategies regarding the future. These statements can be identified by the use of words like "will", "progress", "anticipate", "intend", "expect", "may", "seek", "towards", "enable" and similar words or expressions containing same.

The forward-looking statements reflect the Company's views and assumptions with respect to future events as of the date of this announcement and are subject to a variety of unpredictable risks, uncertainties, and other unknowns. Actual and future results and trends could differ materially from those set forth in such statements due to various factors,



many of which are beyond our ability to control or predict. Given these uncertainties, no one should place undue reliance on any forward looking statements attributable to the Company, or any of its affiliates or persons acting on its behalf. The Company does not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Neither the Company nor any other person, gives any representation, warranty, assurance, nor will guarantee that the occurrence of the events expressed or implied in any forward-looking statement will actually occur. To the maximum extent permitted by law, the Company and each of its advisors, affiliates, related bodies corporate, directors, officers, partners, employees and agents disclaim any responsibility for the accuracy or completeness of any forward-looking statements whether as a result of new information, future events or results or otherwise.

### **Competent Person Statement**

The information in this report that relates to Exploration Results is based on information compiled by William Dix, who is a full time employee of Todd River Resources. Mr Dix is a Fellow of the Australian Institute of Mining and Metallurgy. Mr Dix has sufficient experience of relevance to the style of mineralization and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Dix consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

### **JORC Tables**

The following Tables are provided to ensure compliance with the JORC code (2012) edition requirements for the reporting of exploration results.

#### **JORC Table One – Sampling Techniques and data**

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report.	Sampling has been completed across selected pegmatites and samples will be submitted to SGS Canada for assay. No drilling has been completed by the company.  Spodumene and other LCT pegmatite mineral occurrences were identified by field mapping  Historical work was completed by the Geological Survey of Canada and University of Manitoba and is publicly available.  Initial field work has verified the historical work.
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	No drilling has been completed on the projects
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No drilling has been completed on the projects
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of	Samples collected in the field are logged for mineral content and form.



Criteria	JORC Code explanation	Commentary
	<p>detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</p> <p>The total length and percentage of the relevant intersections logged.</p>	
Sub-sampling techniques and sample preparation	<p>If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>Qualitative sampling of pegmatites and cogenetic granites is underway for identification of minerals and wholerock geochemistry of granites and surrounding rocks. Methods to be used include XRD, and electron microprobe to aide mineral identification on top of field identification.</p> <p>Samples for assay will be tested at SGS laboratories using a total digestion sodium peroxide assay analysis.</p>
Quality of assay data and laboratory tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</p> <p>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</p>	<p>SGS is a world renowned assay laboratory</p>
Verification of sampling and assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	<p>Standards will be inserted to each batch of samples sent to SGS</p>
Locations of data points	<p>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<p>Map figures in the release are in NAD83 / UTM zone 12N (EPSG:26912).</p> <p>Accuracy of reported LCT pegmatite occurrence locations are measured using GPS technology and accurate to &lt;50cms</p> <p>Outcrop matching historical mapping is visible in satellite imagery.</p>
Data spacing and distribution	<p>Data spacing for reporting of Exploration Results.</p> <p>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p>	<p>No drilling has been completed and historical mapping is not sufficient for Mineral Resource or Ore Reserve purposes.</p>



Criteria	JORC Code explanation	Commentary
	Whether sample compositing has been applied.	
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Geological mapping will provide information on pegmatite dyke orientations and continuity once verified in the field.
Sample security	The measures taken to ensure sample security.	Samples were bagged on site and sent to the laboratory via a 3 <sup>rd</sup> party transport company.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been completed.  Publicly available historical work has been reviewed by the Competent Person.



## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	There are a number of claims that make up the 3 Projects – all due diligence has been completed and the claims are all in good standing are not subject to any joint ventures
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<p><b>Ross Lake:</b> Government mapping is detailed in the following reports:</p> <p>Fortier, Y. O. (1947). Ross Lake Map-Area Descriptive Notes, Northwest Territories. <i>Geological Survey of Canada</i>, Paper 47-16.</p> <p>Hutchinson, R. W. (1955). Regional zonation of pegmatites near Ross Lake, District of Mackenzie, Northwest Territories. <i>Geological Survey of Canada</i>, Bulletin 34.</p> <p><b>MAC Claims:</b> Government mapping is detailed in the following report:</p> <p>Jolliffe, A. W. (1944). Rare-element minerals in pegmatites, Yellowknife-Beaulieu area, Northwest Territories. <i>Geological Survey of Canada</i>, Paper 44-12.</p> <p><b>Halo-Yuri:</b> Historical exploration work focused on diamond-kimberlite exploration and is detailed in the following NTGS assessment reports:</p> <p>AR 83358; AR 83372; AR 83904; AR 84107; AR 84563; AR 84705; AR 84825; AR 85032</p> <p>Academic work is available in these public reports:</p> <p>Tomascak, P. (1991). Granites and rare-element pegmatites of the Aylmer Lake pegmatite field, Slave Structural Province, N.W.T. <i>Master's Thesis, University of Manitoba</i>.</p> <p>Tomascak, P. B. (1994). Reconnaissance studies of four pegmatite populations in the Northwest Territories. <i>Studies of Rare-Metal Deposits in the Northwest Territories; Geological Survey of Canada</i>, Bulletin 475, 33-62.</p>



Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	<p>The projects are hosted in the Archean Slave Province. The pegmatites as described in the report are spatially associated with 2-mica granites and show classic regional zonation proximal to the granites. At Ross Lake, the pegmatites are hosted in felsic to mafic gneiss. At MAC and Halo-Yuri, the pegmatites are hosted in meta-turbidites.</p> <p>Mineralisation style sought is typical rare-element Li-Cs-Ta (LCT) pegmatite mineralisation that forms proximal to a cogenetic peraluminous fractionated granite.</p>
Drill hole Information	<p>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</p> <ul style="list-style-type: none"> <li>○ Easting and northing of the drill collar</li> <li>○ Elevation of RL (Reduced Level – elevation above sea level in metres) of the drill collar</li> <li>○ Dip and azimuth of the hole</li> <li>○ Down hole length and interception depth</li> <li>○ Hole length</li> </ul>	No drilling has been completed on the projects.
Data aggregation methods	<p>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</p> <p>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	No data aggregation methods have been used as each sample collected is a point sample
Relationship between mineralisation widths and intercept lengths	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p> <p>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</p>	No drilling has been completed on the projects.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	See Figures in the document for mapping locations.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All relevant information is reported.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density,	No substantial new information is available other than that reported above.



Criteria	JORC Code explanation	Commentary
Further work	<p>groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</p> <p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	Geochemical sampling and mapping is underway and due to be completed prior to the end of October 2023 with initial drilling planned for 2024.