

Commencement of Fieldwork at Cross Lake Lithium Project

HIGHLIGHTS

- Summer field work has commenced at the highly prospective Cross Lake Lithium Project.
- 2024 program will build on the successful field campaign completed last year, which confirmed the presence of high-grade spodumene mineralisation across a 4.7km prospective corridor.
- Field mapping has identified multiple targets for follow up work to expand the current mineralisation with identified LCT pegmatites from literature never visited by Leeuwin personnel with reconnaissance underway.
- The team will also focus on advancing targets prospective for high-grade lithium and Copper, Gold and Silver prospects located within the +2,000km² of tenure in the highly fertile Cross Lake greenstone belt.
- Hyperspectral imagery and desktop targeting has identified over 300 walk up targets for field inspection in 2024.
- Results from the summer field program will further assist with the upcoming drill program, with the drill permit well advanced, and is expected to commence in the coming months.

Critical metals explorer **Leeuwin Metals Ltd (Leeuwin or the Company) (ASX: LMI)** is pleased to announce the commencement of fieldwork at its emerging Cross Lake Lithium Project in Manitoba, Canada.

Managing Director, Christopher Piggott, commented:

“The summer field season will see Leeuwin significantly expanding on the fieldwork that was completed at the end of last year. Fieldwork is planned to target interpreted spodumene bearing LCT pegmatites in unexplored areas of the project to expand mineralisation and drill targeting.

The Cross Lake Lithium project currently spans a well-defined trend of 4.7 km, based on sampling and historical drilling. We believe there is significant potential to further expand the scale of the project. Additionally, we are also pleased to see the Fraser Institute has now ranked Manitoba at 6th best place for mining investment attractiveness worldwide.

With the commencement of work programs and the progression of the drill permit, we have multiple high impact exploration activities planned for the second half of 2024. We look forward to providing updates as we progress with our work programs”

Cross Lake Lithium Project in Manitoba, Canada

Summer field work has commenced at the 100% owned Cross Lake Lithium Project (**Cross Lake** or the **Project**) in Manitoba, Canada.

The results from 2023 channel sampling and re-sampling of historical drill core have identified multiple spodumene-bearing pegmatites, revealing a significant large scale high-grade system at Cross Lake. The work Leeuwin has completed to date has provided a solid geological model that will be tested in the coming months with Leeuwin’s first drill program. The Cross Lake pegmatite field is has not been explored since the 1980’s where previous explorers were targeting Tantalum and Tin. The under explored potential of the project is further highlighted by +300 targets identified from spectral imaging recently completed. These targets provide additional areas to explore in the 2024 summer field season.

Work Plan

The field work will initially focus on the know occurrences within the 4.7km trend (**Figure 1**) with field work progressing to additional regional targets within the 70km strike of the greenstone belt (**Figure 2**). Field work has identified additional Lithium-Caesium-Tantalum (LCT) pegmatites not visited in the 2023 work program, this example demonstrates the underexplored nature of the region. The target was identified from a thesis by the University of Manitoba¹, this thesis was focused on the mapping of the Cross Lake pegmatite field. There is additional targets from this mapping that requires follow up over the coming months. The ability to map pegmatites in this region demonstrates the significant upside present within the project.

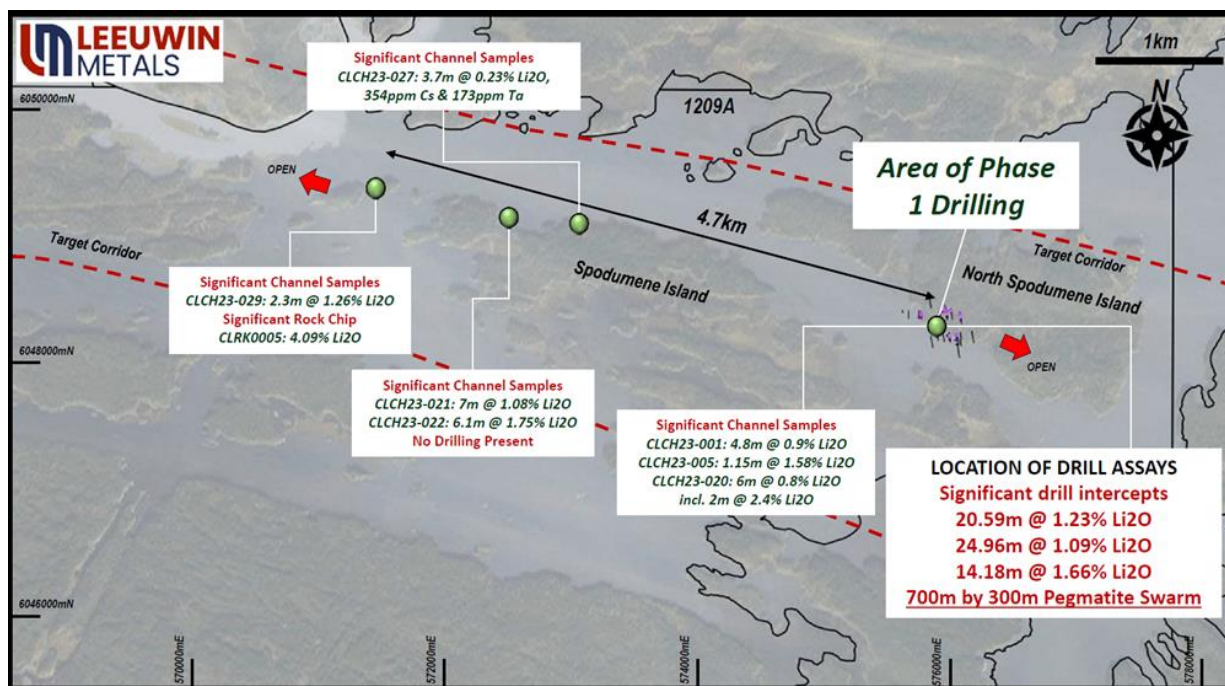


Figure 1: Leeuwin Sampling at the Spodumene and Metis Island Prospect area as reported on 15 November 2023 and 13 December 2023 and proposed phase one drilling area.

¹ Anderson, A.J. 1984: The geochemistry, mineralogy and petrology of the Cross Lake pegmatite field, central Manitoba; M.Sc. thesis, University of Manitoba, Winnipeg, Manitoba.

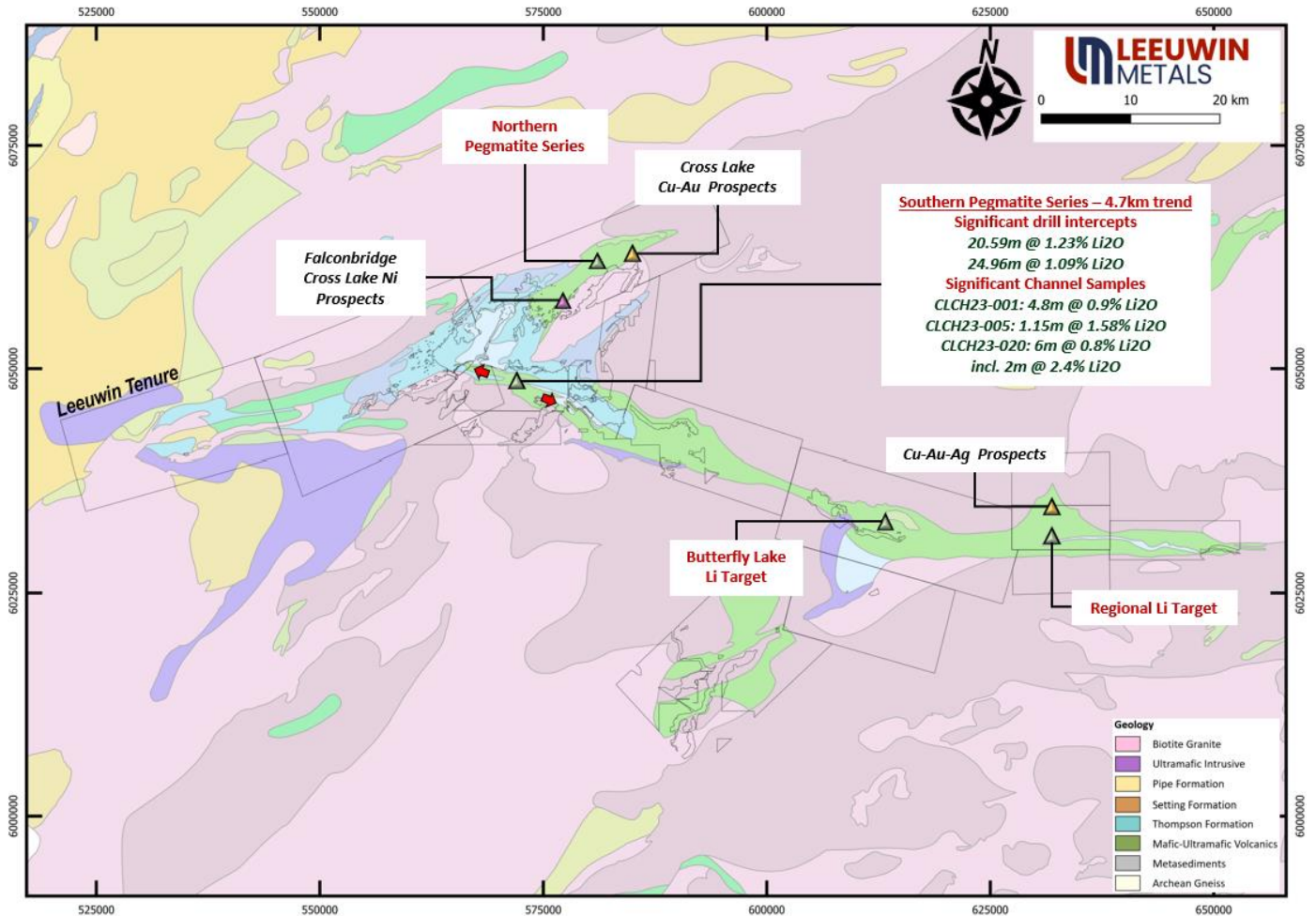


Figure 2: Regional Geology with exploration potential and prospects within LMI tenure at Cross Lake. Targets are not limited to Lithium, with historical prospects for Copper, Silver, Nickel and Gold remain under explored, as reported in the IGR from IPO 28 March 2023 and drill intercepts and channel samples as reported on 15 November 2023 and 13 December 2023.

Drill Permitting

The drill permitting process remains on schedule with the Company planning to commence drilling in the second half of 2024. Leeuwin has an experienced permitting team that has facilitated the Company’s proactive advancement of the permit approval process. The permit enables the execution of the proposed 2024 drill program, and future drill programs for up to three years following approval.

Community Engagement

Leeuwin is committed to a mutually beneficial relationship and is working closely with First Nations stakeholders to facilitate positive communication and respectful consultation process. The aim is to preserve and boost the knowledge base used by First Nations to enhance effective decision making for the benefit of all parties and ensuring First Nations culture and traditional activities are respected.

Project Location

Cross Lake is located in the province of Manitoba, approximately 120km to the south of the major regional mining centre of Thompson. The projects enjoy year-round accessibility via by Provincial Highway 6 and have the potential to be serviced by a hydroelectric power station to the south (**Figure 3**).

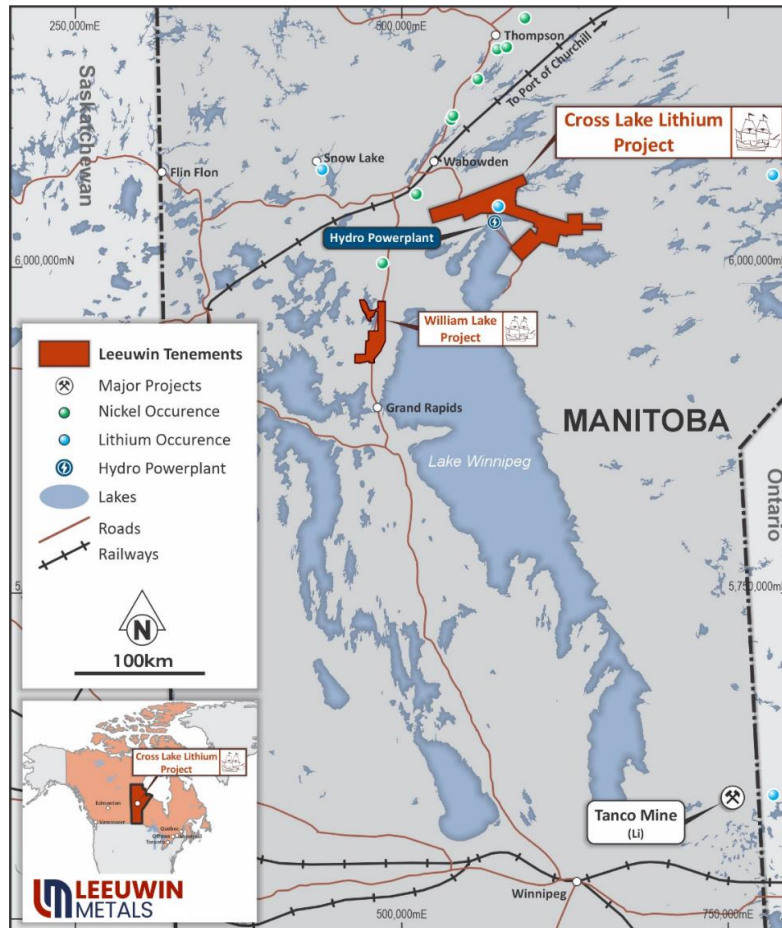


Figure 3: Location of the 100% owned projects in Manitoba, Canada.

The Fraser Institute's Annual Survey of Mining Companies 2023¹ report recently highlighted the positive changes in Manitoba's mineral industry, ranking it sixth globally in the Investment Attractiveness Index due to improved geological potential and policy environment. Manitoba's rise, driven by policy updates and the introduction of the Manitoba Mineral Development Fund (MMDF), reflects its commitment to making investment more appealing, and to date Leeuwin has been fortunate to receive C\$400k from the MMDF. This funding has been invested back into the province by way of exploration activities, first nation training and employment.

- Ends -

¹ <https://www.fraserinstitute.org/studies/annual-survey-of-mining-companies-2023>

This announcement has been authorised by the Board of Directors.

KEY CONTACTS

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About Us

Leeuwin Metals Ltd (**Leeuwin**) is a mineral explorer committed to securing critical metals vital for the advancement of electric vehicles and renewable energy.

Leeuwin has five projects, three located in Canada and two Western Australia which are highly prospective for Nickel, Copper, PGE, and Lithium.

Our goal is to contribute to the global shift towards decarbonisation and electrification, working towards a greener future. Led by a skilled team with expertise in project generation, discovery, development, operations, and transactions.

Cross Lake Lithium Project is highly prospective for LCT type pegmatites. The project is located in the Cross Lake greenstone belt with previous drilling intercepting Spodumene bearing pegmatites with grades of +1% Li₂O present.

William Lake Nickel Project is the flagship asset where the Company is exploring for high-grade Nickel, Copper and PGE mineralisation hosted in sulphides. The project is located in the Thompson Nickel Belt, which is highly fertile with several existing nickel mines in production.

Complimentary Projects located in Western Australia and Ontario targeting Lithium and REE's.

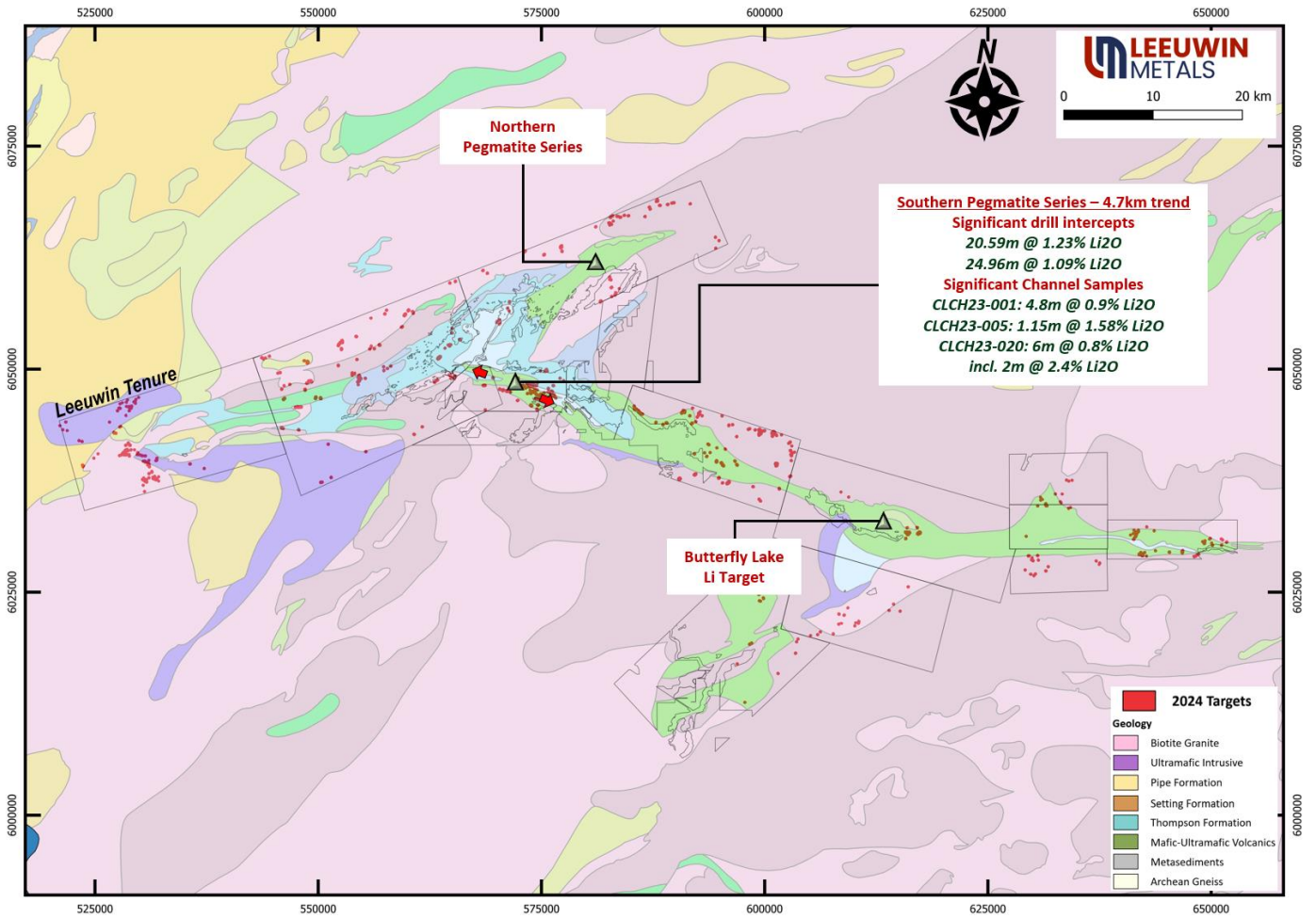


Figure 4: Hyperspectral imagery and desktop targeting has identified over 300 walk up targets for field inspection in 2024.

APPENDIX A: IMPORTANT NOTICES

No new information

Except where explicitly stated, this announcement contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements.

Competent Person Statement

The information in this announcement that relates to geology and planning is based on and fairly represents information compiled by Mr Christopher Piggott, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and the Managing Director of the Company. Mr Piggott has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Piggott consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Forward Looking Statements

Various statements in this announcement constitute statements relating to intentions, future acts, and events. Such statements are generally classified as "forward looking statements" and involve known and unknown risks, uncertainties and other important factors that could cause those future acts, events, and circumstances to differ materially from what is presented or implicitly portrayed herein. The Company gives no assurances that the anticipated results, performance, or achievements expressed or implied in these forward-looking statements will be achieved.

APPENDIX B: JORC CODE, 2012 EDITION

Section 1: Sampling techniques and data

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	Not applicable as no new sampling has been undertaken.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Not applicable as no new sampling has been undertaken.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.	Not applicable as no new sampling has been undertaken.
Drilling techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g., 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.).	Not applicable as no drilling has been undertaken.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Not applicable as no drilling has been undertaken.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Not applicable as no drilling has been undertaken.
	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.	Not applicable as no drilling has been undertaken.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and	Not applicable as no new drilling or sampling is being reported.

Criteria	JORC Code explanation	Commentary
	metallurgical studies.	
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Not applicable as no new drilling or sampling is being reported.
	The total length and percentage of the relevant intersections logged.	Not applicable as no new drilling or sampling is being reported.
Subsampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable as no new sampling has been undertaken.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Not applicable as no new sampling has been undertaken.
	For all sample types, the nature, quality, and appropriateness of the sample preparation technique.	Not applicable as no new sampling has been undertaken.
	Quality control procedures adopted for all subsampling stages to maximise representivity of samples.	Not applicable as no new sampling has been undertaken.
	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.	Not applicable as no new sampling has been undertaken.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Not applicable as no new sampling has been undertaken.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Not applicable as no new sampling has been undertaken.
	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.	No handheld XRF or spectrometer data was utilised.
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	Not applicable as no new sampling has been undertaken.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Not applicable as no new sampling has been undertaken.
	The use of twinned holes.	Not applicable as no new sampling has been undertaken.
	Documentation of primary data, data entry	Not applicable as no new sampling has been undertaken.

Criteria	JORC Code explanation	Commentary
	procedures, data verification, data storage (physical and electronic) protocols.	undertaken.
	Discuss any adjustment to assay data.	Not applicable as no new sampling has been undertaken.
Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Not applicable as no new sampling has been undertaken.
	Specification of the grid system used.	Any grid references are presented in UTM NAD 83 coordinate system Zone 14.
	Quality and adequacy of topographic control.	Topographic control is based on government topographic maps. This method of topographic control is deemed adequate at this exploration stage of the project.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Not applicable as no new drilling or sampling is being reported.
	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	Not applicable as no new drilling or sampling is being reported.
	Whether sample compositing has been applied.	Not applicable as no new drilling or sampling is being reported.
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.	Not applicable as no new drilling or sampling is being reported.
	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.	Not applicable as no new drilling is being reported.
Sample security	The measures taken to ensure sample security.	Not applicable as no new drilling or sampling is being reported.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not applicable as no new drilling or sampling is being reported.

Section 2: Reporting of exploration results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<p>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.</p> <p>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.</p>	<p>The Cross Lake Project is comprised of eight granted and six Mineral Exploration Licence (MEL) applications covering a total area of 2,202km² surrounding the granted MEL1209A, 1229A, 1213A, 1212A, 1228A, 1214A, 1227A and 1230A licences for 1405.6km².</p> <p>All drilling and results reported in the body of this release are from within the granted MEL1209A licence.</p> <p>Leeuwin Metals has submitted applications based on the Manitoban Staking process and as such will have a 100% interest in the project areas.</p>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<p>The area covering the Cross Lake Project has been the subject of exploration since the 1950s, by XL Syndicate – 1958, Noranda Exploration Company (Noranda) – 1959 to 1968, Falconbridge – 1963, Guggenheim Exploration (1969), Tantalum Mining Corporation of Canada Ltd (TANCO) – 1970 to 1982, Cross Lake Indian Band (1988), Gossan Resources Ltd – 1994 to 1995, and Alix Resources (Alix) – 2016 to 2018.</p> <p>TANCO discovered tantalum and niobium oxide mineralisation in granitic pegmatites in the project area in 1979 and drilled 23 holes in 1980 but did not assay for Lithium. These holes are the subject of this release.</p>
Geology	Deposit type, geological setting and style of mineralisation.	<p>Pegmatites in the Cross Lake area are enriched in lithium, niobium, tantalum and may contain spodumene, tourmaline, muscovite, beryl and apatite.</p> <p>The Cross Lake area is underlain by rocks of the Archean Superior Province. The area is subdivided into the Molson Lake domain in the southern area and the Gods Lake domain in the northern area.</p> <p>The Moslon Lake domain is dominated by granodiorites, with widespread granitic rocks, granites, and pegmatites; monzodiorites and gabbroic dykes are also present.</p> <p>The Gods Lake domain is characterised by amphibolite facies mafic and ultramafic metavolcanics and metasedimentary rocks.</p> <p>Lithium mineralisation is associated with REE pegmatites and lithium-tin-tantalum pegmatites.</p>

Criteria	JORC Code explanation	Commentary
Drillhole 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 drillholes:</p> <ul style="list-style-type: none"> • easting and northing of the drillhole collar • elevation or RL (elevation above sea level in metres) of the drillhole collar • dip and azimuth of the hole • downhole length and interception depth hole length. 	No new drilling activities are being reported.
Data aggregation methods	<p>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.</p>	Not applicable as no new results are being reported.
Relationship between mineralisation widths and intercept lengths	<p>If the geometry of the mineralisation with respect to the drillhole 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 (e.g., 'downhole length, true width not known').</p>	No drilling activities are being reported.
Diagrams	<p>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 drillhole collar locations and appropriate sectional views.</p>	Exploration plans and further diagrams are included in the body of this release as deemed appropriate by the competent person.
Balanced reporting	<p>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.</p>	All relevant and material exploration data for the target areas discussed, has been reported or referenced.
Other substantive exploration data	<p>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, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</p>	Leeuwin Metals engaged Terra Resources Ltd to process and analyse both Aster and Sentinel-2 satellite imagery over the project. Targets were generated in conjunction with proprietary algorithms from Terra. Additionally LMI technical staff have identified several additional targets from satellite imagery and publicly available Manitoba Government geophysical data sets refer Figure 4 in the body of this release.
Further work	<p>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</p>	Please refer to the body of this release, noting further exploration is warranted across the Mineral Exploration Licence to improve the understanding of the mineralisation.