

## 2024 Activity Update

### HIGHLIGHTS

- Cross Lake Lithium Project drill permit well advanced, with drilling expected to commence in the coming months.
- Drill contractors engaged/identified, and design of the drill programme complete:
  - Initial focus is on a 2,500m phase 1 drill program aimed at testing multiple high grade spodumene bearing pegmatites.
- Cross Lake summer field work to advance targets within the +2,000km<sup>2</sup> of tenure over +70km strike of Greenstone belt.
- C\$150,000 government exploration grant received:
  - Leeuwin has submitted an application for a further C\$300,000 at Cross Lake.
- Technical review of high-grade Ni and PGE data from William Lake.
- Interpretation of a 9.5km trend of elevated REE anomalism at the Gascoyne Project.
- Additional project generation and tenement applications in Western Australia for Lithium, Gold, Iron and REE's.

Critical metals explorer **Leeuwin Metals Ltd (Leeuwin or the Company) (ASX: LMI)** is pleased to provide an update of the Company's activities across its Canadian and Australian projects.

### Managing Director, Christopher Piggott, commented:

*"We are excited with the progress we have made across the portfolio in our first year being listed. This is highlighted by the advancement at the Cross Lake lithium project, where we have identified a significant lithium occurrence, defining 4.7km of strike of Lithium rich pegmatites and sampled multiple +20m wide zone of lithium in historical drilling.*

*With the drill permit application pending, we look forward to commencing our maiden drill program at Cross Lake in the coming months, where there is significant potential for the Company to define a large-scale lithium project.*

*Leeuwin is well placed to advance exploration activities with a strong cash balance and a focused team executing the exploration programs in Canada and Western Australia."*

## Cross Lake Lithium Project in Manitoba, Canada

Work has been progressing with planning underway for the maiden drill program at the 100% owned Cross Lake Lithium Project (**Cross Lake** or the **Project**) in Manitoba, Canada.

The results from the recent 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 has not been drill tested since the 1980’s where previous explorers were targeting Tantalum and Tin. This is the first time in over 40 years that the pegmatite field will be tested.

### Work Plan

The initial 2,500m phase 1 drilling will focus on the historical intercepts which identified a 700m by 300m area of pegmatites (**Figure 1**). The Company is planning to test the shallow mineralisation and down dip extents of the system with hole depths planned between 50m to 200m.

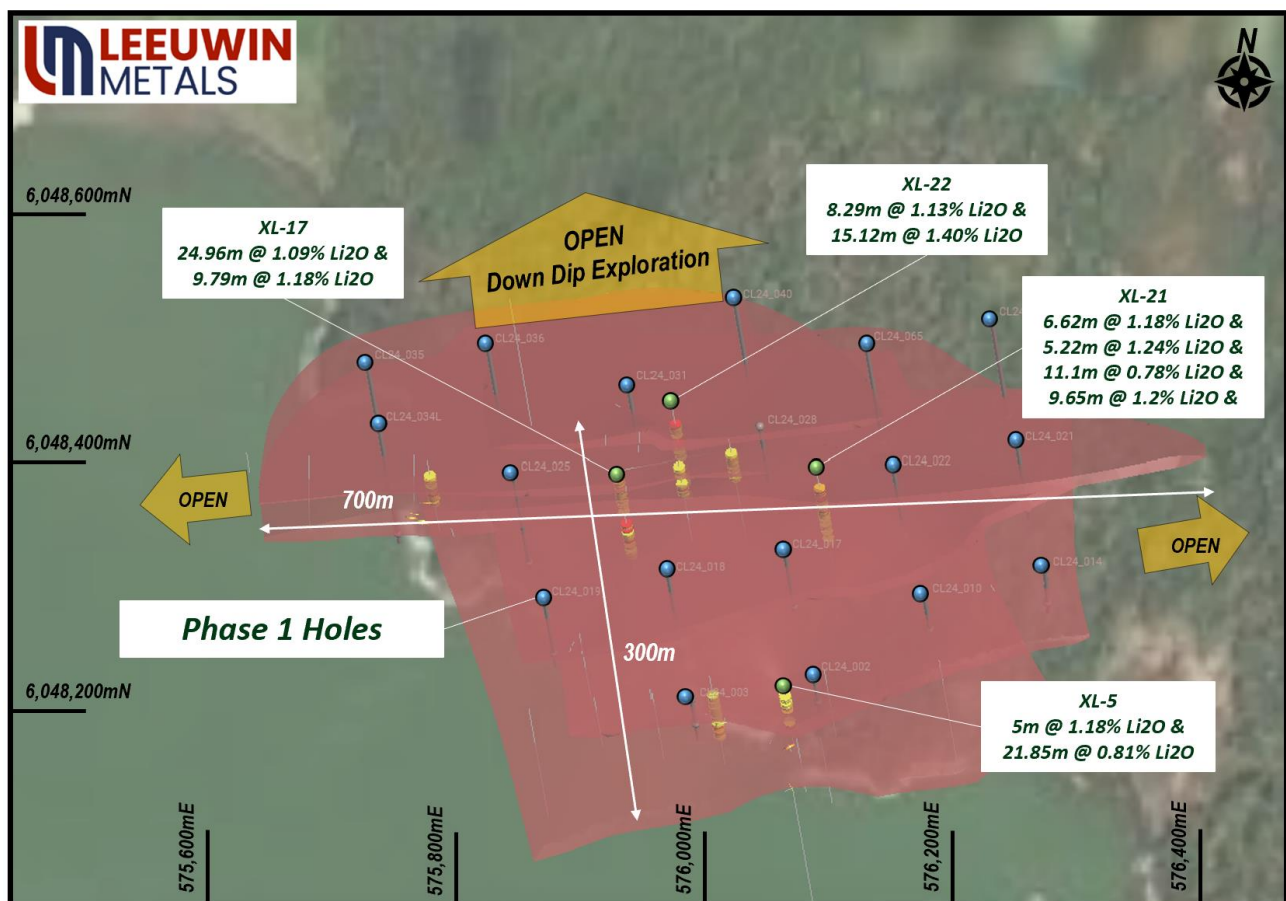


Figure 1 Phase 1 drill plan at the Cross Lake Lithium Project, for full results refer ASX 15 November 2023.

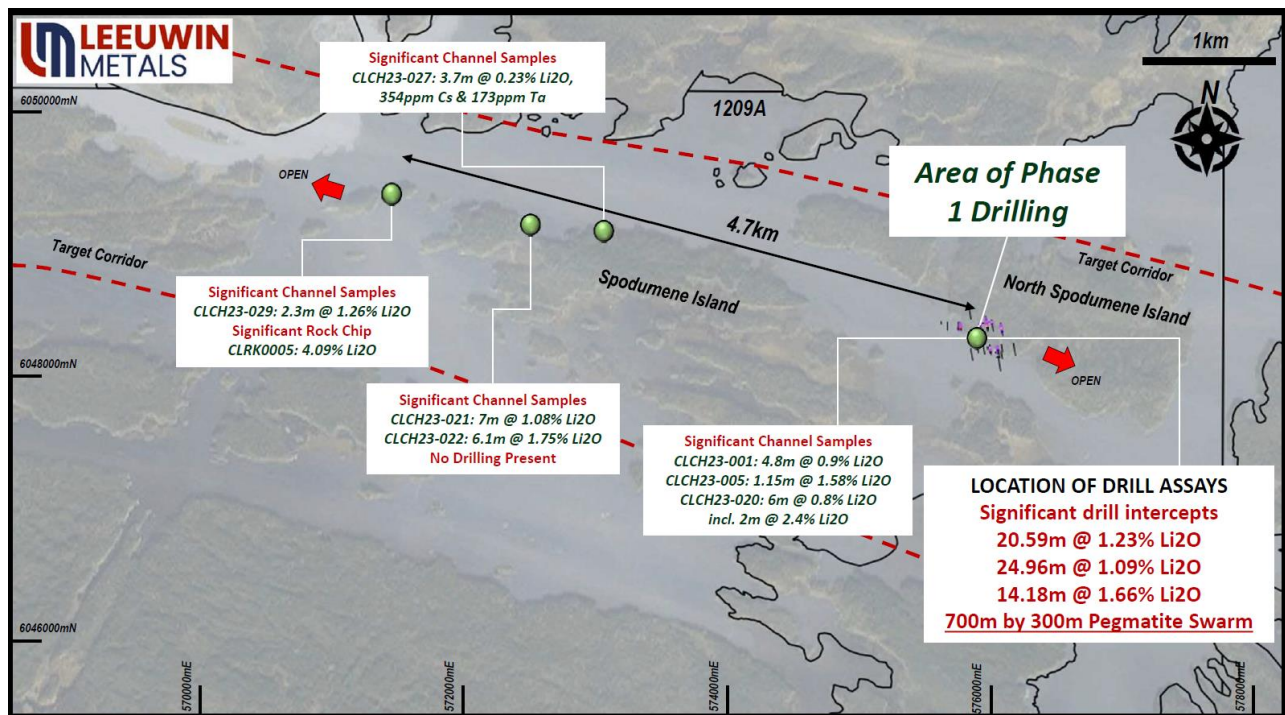
Leeuwin’s first drill program will be following up historical sampled drill results (refer ASX 15/11/2023) which include:

- **XL-17:** **24.96m @ 1.09% Li<sub>2</sub>O** from 6m; & **9.79m @ 1.18% Li<sub>2</sub>O** from 75.55m.
- **XL-10:** **20.59m @ 1.23% Li<sub>2</sub>O** from 29.87m
- **XL-06:** **5.14m @ 1.75% Li<sub>2</sub>O** from 20.77m; & **14.18m @ 1.66% Li<sub>2</sub>O** from 53m.
- **XL-22:** **8.29m @ 1.13% Li<sub>2</sub>O** from 31.69m; & **15.12m @ 1.40% Li<sub>2</sub>O** from 73.6m, incl. **11.8m @ 1.63% Li<sub>2</sub>O** from 76.2m.

Within the broader 4.7km trend (Figure 2) there remains exceptional exploration potential and the pending drill permit application covers additional drilling within this strike extent.

Planned activities for the 2024 summer season will enable further detailed work within this trend, targeting significant results obtained thus far. Mapping and geochemical sampling are scheduled for the summer season, aiming to underscore the exploration potential offered by Cross Lake.

In addition, regional exploration is being planned for the summer months within the +2,000 square kilometres tenure with regional geology interpreted to extend 40km to the east of the Cross Lake area. Field mapping, sampling and spectral analysis is anticipated to begin in the middle of the year.



**Figure 2: Leeuwin Sampling at the Spodumene and Metis Island Prospect area as reported on 15 November 2023 and 13 December 2023.**

## Government Funding

The Company has applied for funding of CAD \$300,000 from the Manitoba Mineral Development Fund (MMDF) to support the drilling at the Project. The MMDF is aimed at supporting mineral exploration in the province of Manitoba by making available funding to applicable projects in the province.

## Drill Permitting

The drill permitting process remains on schedule for the first half of 2024 with the submission of a permit application to the Manitoba Department of Economic Development, Investment and Trade.

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. The drill permit submission allows for the Company to expedite exploration on the Project with the scope of the permit allowing for 10,000m of drilling.

As part of the drill permit application a precursor to commencing exploration at Cross Lake, the Company is advancing an exploration agreement with the Cross Lake Band of Indians and Pimicikamak Cree Nation (First Nations) on whose traditional territory the Project is located.

Once the Company receives First Nations endorsement, the Manitoba permitting office will do a final review, which is expected to take two weeks. The Company anticipates that the permit will be issued thereafter.

## 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.

## William Lake Nickel Project in Manitoba, Canada

William Lake is a large scale nickel project (William Lake) located in the world class Thompson Nickel Belt.

### Work Plan

A review of the work completed in 2023 is underway. The results from this review will help guide the next phase at William Lake. In 2023 the Company completed diamond drilling at the project where significant results (refer ASX 4/09/2023) were generated:

- WL23-367:** **21.9m @ 1.02% Ni** from 206.65m Including **7.35m @ 1.07% Ni** from 206.65m; **12.15m @ 1.13% Ni** from 216.4m including **1.35m @ 5.02% Ni** from 227.2m and **4.4m @ 1.55% Ni** from 247.1m
- WL23-365:** **6.5m @ 2.56% Ni** from 439.2m Including: **1.6m @ 3.38% Ni** from 442m

There remains significant potential for additional Nickel (Ni) and Platinum Group Elements (PGE) mineralisation within the project. Currently the Company is reviewing historical data and looking for additional PGE opportunities within the historical drill core and database. Some historical Ni-PGE rich intercepts (refer to historical results in the Company's Prospectus on the ASX, dated 28/03/2023) that remain open include:

- WL92-32:** **17.09m @ 1.48% Ni** from 398.9m to EOH
- WL91-20:** **14.4m @ 1.02% Ni** from 209.4m; and **14.4m @ 1.04% Ni, 0.99g/t Pd and 0.46g/t Pt** from 343.9m; and **9.87m @ 1.48% Ni** from 436.13m

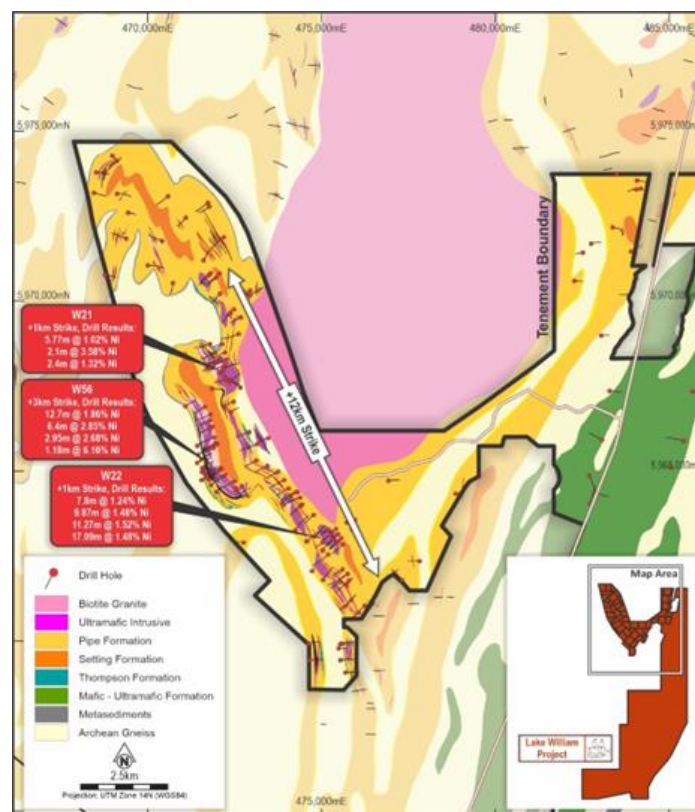
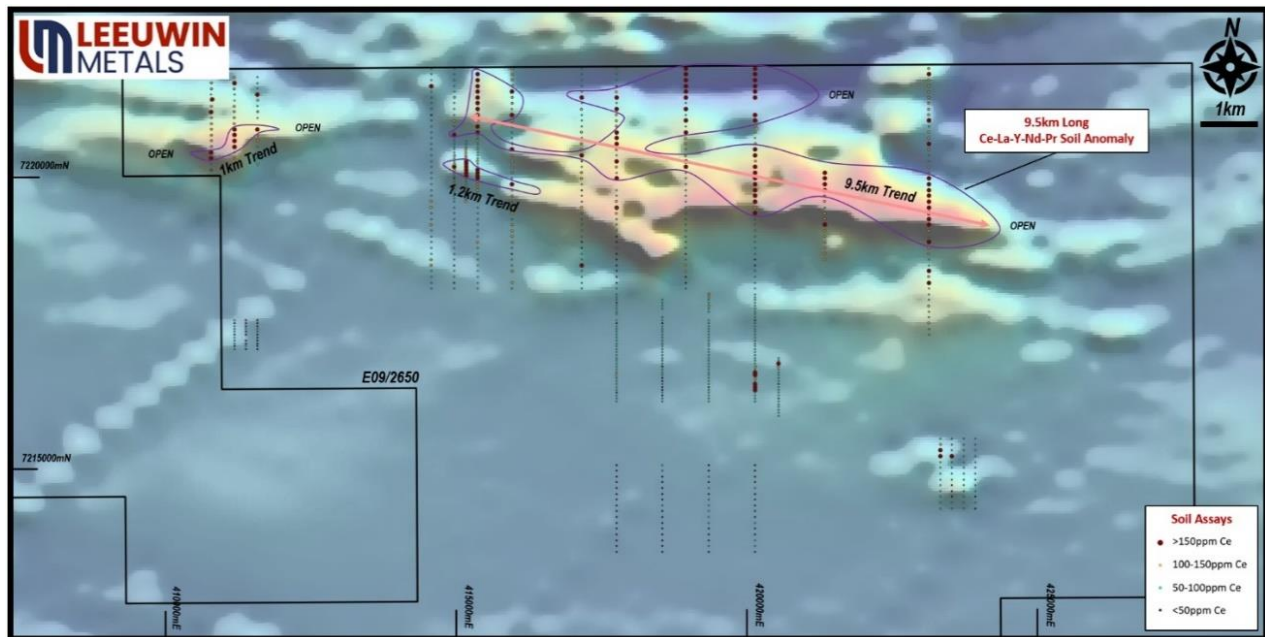


Figure 3: Plan map of the William Lake Project area showing priority target areas, extent of previous drilling and interpreted geology (Coordinates in UTM NAD83 z14N) as at 4 September 2023.

## Western Australia

Field activities commenced in early 2024 comprising reconnaissance field inspections and sampling on exploration ground in the Goldfields and Gascoyne regions of Western Australia. The results (figure 4 and for full exploration results refer to the Appendix B) of soil sampling have returned an encouraging 9.5km Rare Earth Elements (REE) soil anomaly in the Gascoyne. The Company continues to monitor open ground in the Gascoyne and recently applied for additional tenure along strike of the current licences that Leeuwin holds in the Gascoyne region. Fieldwork occurred in the March quarter of 2024, following up on the multi-line soil anomaly with mapping and surface sampling; assays are currently pending.



**Figure 4: Large scale REE anomaly at the Gascoyne Project, soils have defined a multi-line anomaly over a 9.5km strike.**

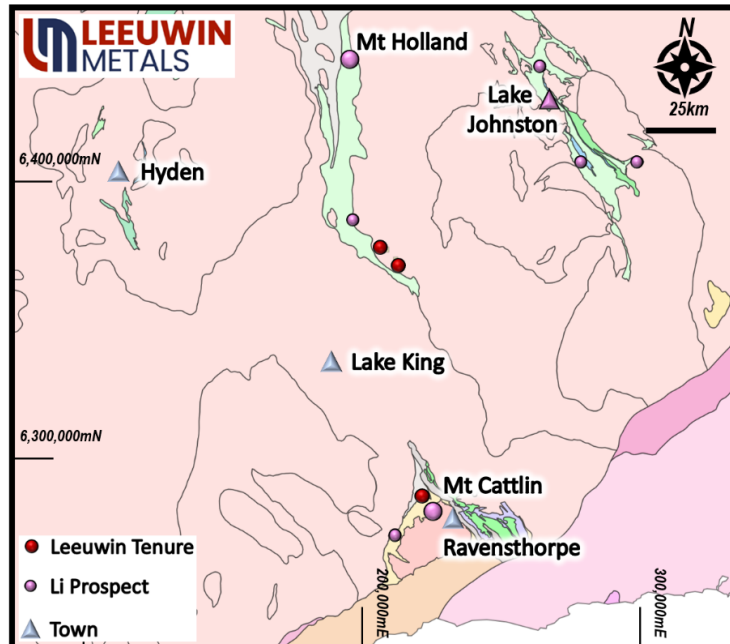
Leeuwin is committed to ensuring these projects continue to progress through a combination of owned projects and potential joint ventures. The Company has also applied for several tenement applications, some of which are currently in ballot in the Pilbara and Gascoyne regions. The Company also applied for exploration leases in the southern extension of the Southern Cross Greenstone belt and open ground in the Ravensthorpe area where the Company is exploring for Lithium and Gold.

The Company continues an active project generation programme in Canada and Australia with a focus on Lithium, and Gold.

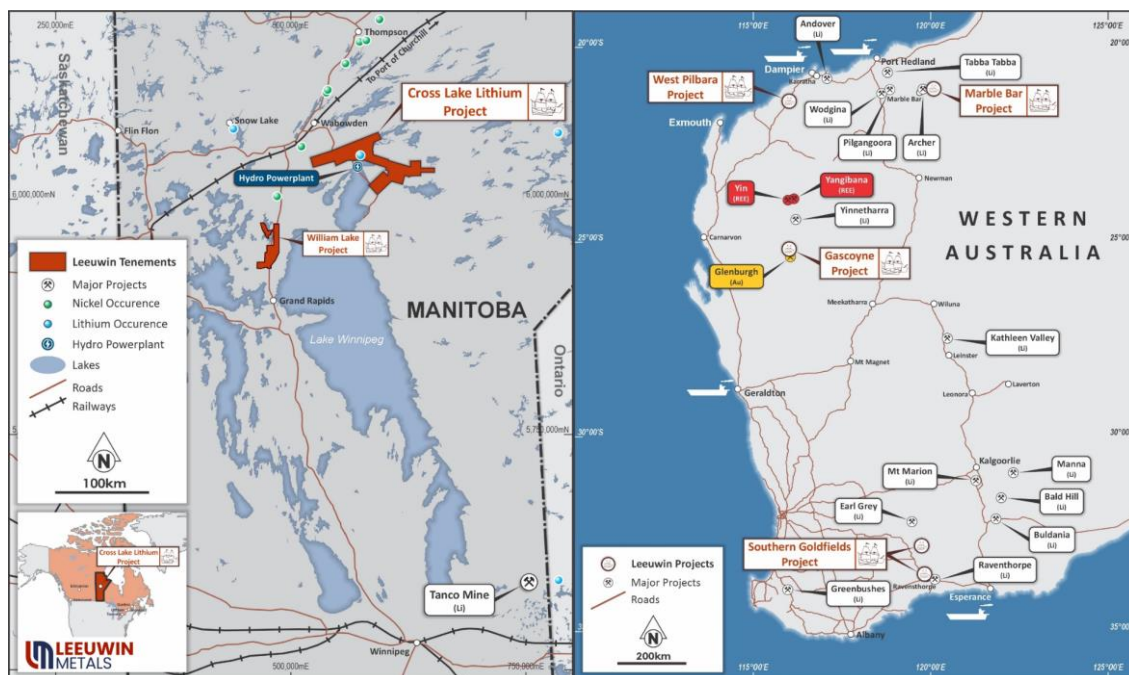
## Project Locations

Our Canadian projects are 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 (refer to Figure 6).

Leeuwin also holds multiple live and pending exploration licences in the Gascoyne, Pilbara and Goldfields regions of Western Australia that are prospective for Lithium, Rare Earths, Gold and Iron Ore, refer figures 5 and 6.



**Figure 5 Projects in the Southern Goldfields region of Western Australia.**



**Figure 6 Location of the 100% owned projects in Manitoba, Canada (Left) and Western Australia (right).**

- Ends -

This announcement has been authorised by the Board of Directors.

#### KEY CONTACTS

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Managing Director

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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% Li<sub>2</sub>O 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.



## **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 report that relates to exploration results 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.











## Section 1: Sampling techniques and data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>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').</li> <li>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.</li> </ul>	<p>Soil samples were collected from manually dug holes to 30cm, with approximately 300g sieved to -2mm.</p> <p>Soil sampling is considered indicative only and is not representative.</p>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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.).</li> </ul>	Not applicable – no drilling results reported.
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	Not applicable no drilling results reported.
<b>Logging</b>	<ul style="list-style-type: none"> <li>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 metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the</li> </ul>	Soil sample condition, colour and content was recorded by Leeuwin Field staff and verified by Leeuwin geologists.

Criteria	JORC Code explanation	Commentary
	relevant intersections logged.	
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<p>Soil samples mentioned in this report were all dry. There was no sub-sampling procedure for the samples.</p> <p>Crushing and pulverizing were subject to the regular quality control practices of the laboratory.</p> <p>The samples are not considered representative and there was no subsampling.</p> <p>Sample sizes were &gt;1kg and appropriate to the grain sized of the available outcrops.</p> <p>Soil sampling sieved to -2mm is considered an appropriate first pass exploration technique and is industry standard.</p>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<p>Soil samples collected by Leeuwin Metals Ltd. were submitted to Nagrom Laboratories, Perth Western Australia.</p> <p>At Nagrom, prepared samples were fused with sodium peroxide and digested in dilute hydrochloric acid. The resultant solution was analysed by ICP (lab code ICP008 MS) Al, Ba, Ca, Co, Cr, Cu, Fe, K, Mg, Mn, Ag, Au, As, Be, Bi, Cd, Ce, Cs, Le, La, Y, Nd, Pr.</p> <p>External laboratory checks only. One blank is run for every 40 samples. In-house control is run every 20 samples. Digested standards are run every 80 samples. After every 15 samples, a digestion duplicate is analysed. Instrument is recalibrated every 80 samples. An in-lab standard (traceable to certified reference materials) or certified reference materials are used for quality control.</p>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	Not applicable - no drilling results reported.
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<p>Soil samples are surveyed by handheld GPS. Surveys are accurate to &lt; 5m in horizontal precision.</p> <p>All Samples were collected in the UTM GDA94 z50 projection.</p> <p>Topographic control is based on handheld GPS reading. This method of topographic control is deemed adequate at this exploration stage of the project.</p>



Criteria	JORC Code explanation	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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</li> <li>Whether sample compositing has been applied.</li> </ul>	Given the reconnaissance stage of the Gascoyne Project there is no regular data spacing although recent soil samples have been collected on 50m spacing on irregularly spaced sample lines.
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	Due to the early stage of exploration at the Gascoyne project, determination of true widths and definition of potential mineralisation is not possible.
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	Leeuwin Metals Ltd. samples are removed from the field immediately upon collection and stored in a secure compound for sub sampling and preparation for lab dispatch. Samples are shipped from site to the laboratory under constant supervision by Leeuwin Metals technical personnel. Sample submission forms are sent in paper form with the samples as well as electronically to the laboratory. Reconciliation of samples occurs prior to commencement of sample preparation of dispatches.
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	No audits.

## Section 2: Reporting of exploration results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<p>Located in the Gascoyne region of Western Australia the Gascoyne Bar Project consists of a three exploration licences E09/2651, E09/2650 and E09/2721.</p> <p>Leeuwin Metals Ltd. has a 100% interest in the Exploration Licences which was acquired by direct application.</p> <p>All leases are active and in good standing.</p>

Criteria	JORC Code explanation	Commentary
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	<p>The Project area has received minor amount of exploration over the past 50 years. Exploration can be summarised as:</p> <ul style="list-style-type: none"> <li>• 1980-1985, CRA Exploration</li> <li>• 1993-1995, PNC Exploration Australia Pty Ltd</li> <li>• 1996, Helix Resources</li> <li>• 1997-1999, Wiluna Mines Limited</li> <li>• 2001-2002, Talisman and Rio Tinto</li> </ul> <p>During these early phases of exploration, samples were rarely analysed for lithium and REE, with exploration focused on Base metals and gold and later Uranium.</p> <p>No modern drilling has been completed within the Leeuwin tenements.</p>
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	<p>The Gascoyne Project is located within the Gascoyne Province of the Capricorn Orogen. This geological belt is positioned between the Archaean Yilgarn Craton to the south, and the Archaean Pilbara Craton to the north, and largely consists of a suite of Archaean to Proterozoic gneisses, granitic and metasedimentary rocks (Sheppard et al., 2007).</p> <p>The Gascoyne Project has historically been explored for structurally controlled gold, unconformity style uranium and strata bound base metals. However recent discoveries of REE's and lithium mineralisation in LCT pegmatites in the Gascoyne Province, has provided a new lithium exploration model to explore within the Project.</p> <p>Recent REE discoveries in the Gascoyne Province are commonly located close to crustal boundary faults and contained within iron rich carbonatite dyke intrusions.</p> <p>The Company's tenements in the Gascoyne Mineral Field are prospective for rare earth mineralisation associated with carbonatite intrusions and associated fenitic alteration.</p>
<b>Drillhole information</b>	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:</li> <li>• easting and northing of the drillhole collar</li> <li>• elevation or RL (elevation above sea level in metres) of the drillhole collar</li> <li>• dip and azimuth of the hole</li> <li>• downhole length and interception depth hole length.</li> </ul>	Not applicable - no drilling results reported.
<b>Data aggregation methods</b>	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.	Not applicable - no drilling results reported.

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<b>Relationship between mineralisation widths and intercept lengths</b>	<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>	Not applicable - no drilling results reported.
<b>Diagrams</b>	<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.
<b>Balanced reporting</b>	<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>	Not applicable - no drilling results reported.
<b>Other substantive exploration data</b>	<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>	None applicable.
<b>Further work</b>	<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 information contained in the body of this release.