ASX ANNOUNCEMENT



15 June 2023 ASX: LM1

Jenpeg High-Grade Lithium Project Tenure Increased by 130%

HIGHLIGHTS

- Expansion of regional footprint by 130%, to over 1,700km² of Mineral Exploration Licences (MELs) at Leeuwin's 100% owned Jenpeg High-Grade Lithium Project in Manitoba, Canada
- District-scale land position pegged following significant high-grade lithium results
- Strategic expansion of ground holding by staking an additional 6 MELs
- Jenpeg now has over 50km of prospective greenstone geology under licence
- Ongoing works include:
 - Discussions with the Manitoba government advancing for sampling additional historic drill core for lithium
 - Engagement with First Nation community
 - Remote sensing contractor engaged to target regional pegmatites
 - Summer field program to expand existing 6km mineralised footprint with mapping and geochemical sampling is expected to commence in the coming month

Managing Director, Christopher Piggott, commented:

"The Jenpeg project is an emerging lithium discovery within Manitoba. Historical drilling and generative geological work has identified an underexplored, regional scale pegmatite field which is highly prospective for hard rock lithium.

Leeuwin's first mover advantage in the Jenpeg area has allowed us to consolidate almost the entire Cross Lake greenstone belt and as a result planned regional work will be able to fully develop the prospectivity of this large-scale exploration opportunity.

We look forward to updating the market on Jenpeg activities over the coming months as well as our William Lake Project where we are currently drill testing nickel targets."



Critical metals explorer **Leeuwin Metals Limited** (**LM1** or the **Company**) (**ASX: LM1**) is pleased to announce the additional staking of 6 MELs to bring the total regional footprint to +1,700km² at our 100% owned Jenpeg Lithium project in Manitoba, Canada ("Jenpeg").

The Jenpeg project is in an area with mapped pegmatite swarms over +6km of strike that remains inadequately tested for lithium.

Review by Leeuwin personnel of the area presented further prospectivity and regional upside. The opportunity to consolidate the greenstone belt will allow Leeuwin to advance the project across all aspects of the project pipeline from greenfields to drill intercepts.

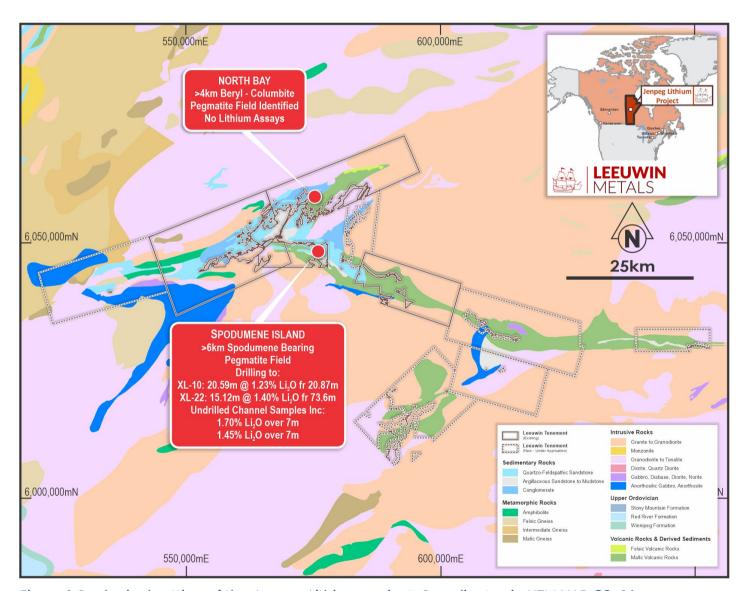


Figure 1 Geological setting of the Jenpeg Lithium project. Coordinates in UTM NAD 83 z14.



Jenpeg Lithium Project – Manitoba, Canada

Additional Staking and Regional Exploration Upside

Results to date from the project have been extremely encouraging and accordingly Leeuwin has staked an additional 1,000km² of tenure taking the total project area to ~1,750km² (refer figure 1).

Desktop reviews and remote sensing are underway to map and classify further pegmatites outside of the defined 6km of prospective strike mapped out by drilling, rock chipping and channel sampling at the Spodumene Island prospect area.

As the summer field season approaches, the Company plans to commence boots on ground exploration activities, focusing on additional rock chip and channel sampling, detailed geological mapping and utilising remote sensing tools. This work will provide a targeting hierarchy for planned regional exploration programs and help define mineral zonation and targeting vectors within the regional scale pegmatite field identified at Jenpeg.

Previous Results

The project was drilled in the early 1980's by TANCO, and although significant widths of spodumene, were logged they were never assayed for lithium (refer to the ITAR in the Company's prospectus on the ASX 28/03/2023). To date Leeuwin has sampled two holes and is currently in discussion with the Manitoba Government to sample further historic drill core stored in the Winnipeg Core Library.

Significant results from historic core sampling include (Refer ASX release on 17/04/2023):

- XL-10 1.17m @ 2.31% Li₂O from 20.5m; and 20.59m @ 1.23% Li₂O from 29.87m, incl. 15m @ 1.34% Li₂O from 35m.
- XL-22 8.29m @ 1.13% Li₂O from 31.69m; 0.67m @ 1.41% Li₂O from 55.26m; 15.12m @ 1.40% Li₂O from 73.6m, incl. 11.8m @ 1.63% Li₂O from 76.2m; 2.16m @ 1.86% Li₂O from 92.69m; and 2.0m @ 1.57% Li₂O from 104.0m.

Although only limited lithium focused regional exploration has occurred, previously reported rock chips and historic channel sampling from spodumene bearing pegmatites returned 13 samples out of 29 with assay results greater than 1% Li2O. These results can be referenced in the Company's prospectus on the ASX dated 28 March 2023, notable results include:

- 1.7% Li₂O over 7m;
- 1.45% Li₂O over 7m;
- 1.11% Li₂O over 4.4m; and
- 0.94% Li₂O over 9.2m.

Combined with the historical drilling and sampling these results define more than 3.6km of prospective strike extent for Lithium-Caesium-Tantalum Pegmatite mineralisation which remains open in all directions.



Infrastructure and Location

The Project is located in the Canadian province of Manitoba, around 120km south of the major regional mining centre of Thompson. The project is accessed by Provincial Highway 6 and is well serviced by hydro-power from the Jenpeg power station to the south.

The 100% owned Project consists of the 57.4km² granted Mineral Exploration Licences within a larger area of 9 applications covering more than +1,700m2 (refer figure 2).

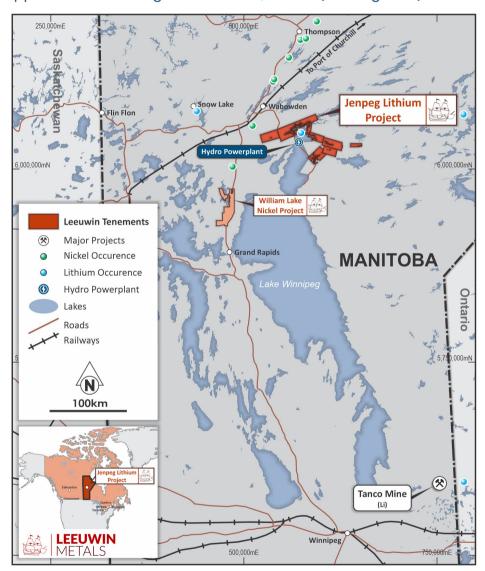


Figure 2 Location of the 100% owned Jenpeg Lithium Project in Manitoba, Canada. Coordinates in UTM NAD 83 z14.

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About Leeuwin

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

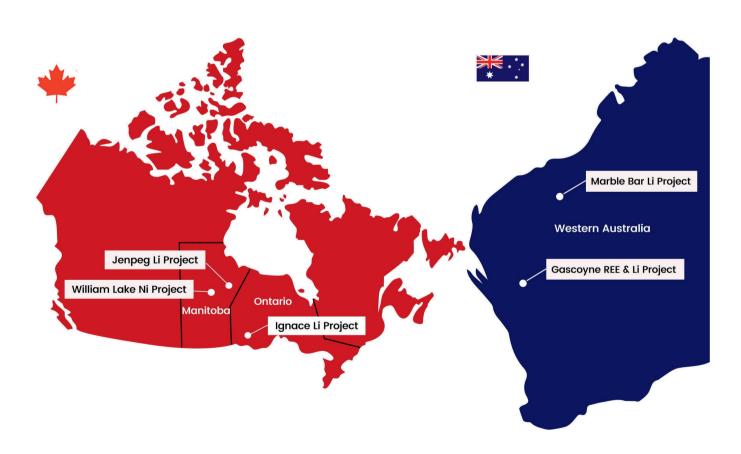
Leeuwin has five projects, three located in Canada and two Western Australia which are highly prospective for Nickel, Copper, PGE, and Lithium.

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.

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, this belt is highly fertile with several existing nickel mines currently in production.

Jenpeg 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.

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



15 June 2023



APPENDIX A: IMPORTANT NOTICES

Competent Person's Statement

This announcement contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company.

The information in this release that relates to previously reported Exploration Results was released on the 17 April 2023 and in the Company's prospectus dated 10 February 2023 (see LMI ASX release dated 28 March 2023). The Company confirms that it is not aware of any new information or data that materially affects the information in the above-mentioned releases and that the material assumptions and technical parameters underpinning these estimates continue to apply and have not materially changed.

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.