

Additional High-Grade Lithium Drill Assays Received from the Cross Lake Lithium Project

HIGHLIGHTS

- Leeuwin is pleased to announce assays received for a further three drill holes, with significant widths of high-grade lithium mineralisation present in all holes.
- Multiple, shallow, significant intercepts, of spodumene bearing pegmatites include:
 - o XL-17: **24.96m @ 1.09% Li₂O** from 6m; &

9.79m @ 1.18% Li₂O from 75.55m.

- o XL-19: 7.21m @ 1.94% Li₂O from 19m.
- o XL-4: 4.73m @ 1.78% Li₂O from 45.27m.
- The results delineate a significant pegmatite swarm, currently defined by historical drilling over 400m's of strike within a 6km prospective corridor.
- A drill permit application has been submitted, with the aim to commence drilling in the first half of 2024.
- Samples from the recently completed field work have been submitted, with results expected during the March quarter of 2024.
- Significant prospect and regional scale upside remain within the Cross Lake Lithium Project with a land position of +2,000 km².

Managing Director, Christopher Piggott, commented:

"Building on our successful re-assay of historical drill holes for lithium, today's findings reinforce the presence of high-grade lithium and contribute to the substantial scale and potential of the Cross Lake Project.

Despite the fact that the region remains under explored, promising indications of a large-scale mineralised system have been observed in the field. The high-grade lithium assays from the historical resampling program have significantly enhanced the project's value, making it a top priority for the Company leading in to 2024.

Geographically, Manitoba is centrally located in North America, providing significant benefits to the project, this includes its close proximity to major railway, hydro power, and year-round road access.

Leeuwin is well-capitalised to advance into the next phase of exploration, and the Company looks forward to providing regular updates to the market as we advance our activities."

W: leeuwinmetals.com



Critical metals explorer **Leeuwin Metals Ltd** (**LM1** or the **Company**) (**ASX: LM1**) is pleased to announce further high-grade results from three holes at our 100% owned Cross Lake Lithium project (**Cross Lake** or the **Project**) in Manitoba, Canada.

Cross Lake represents a large-scale opportunity, featuring mapped pegmatite swarms extending over 6km of strike. To date, this vast region has remained largely unexplored despite its lithium potential.

High-Grade Lithium Results

The results detailed in this release, taken from recent sampling of three historic drill holes, are extremely positive and confirm the Project as an emerging lithium discovery. A total of nine holes have been assayed, all of which have shown significant widths and grades of lithium mineralisation. These results indicate that the system remains open in all directions, even with the limited drill testing that has occurred to date (for full exploration results, please refer to Appendix B).

These sampled holes were part of a historical drill core resampling initiative by Leeuwin, of which all available holes have now been sampled.

Latest key intersections include:

- XL-17: 24.96m @ 1.09% Li₂O from 6m;
 2.68m @ 1.12% Li₂O from 65m;
 1.54m @ 1.13% Li₂O from 70.71m;
 9.79m @ 1.18% Li₂O from 75.55m; & 1m @ 1.65% Li₂O from 91m.
- XL-19: 7.21m @ 1.94% Li₂O from 19m; & 5m @ 0.86% Li₂O from 40m.
- XL-4: 1.69m @ 2.3% Li₂O from 24.31m; & 4.73m @ 1.78% Li₂O from 45.27m.

Previous high-grade intersections reported on 21 August 2023 include:

- XL-06: 5.14m @ 1.75% Li₂O from 20.77m;
 1.18m @ 0.73% Li₂O from 27.82m;
 8.38m @ 0.57% Li₂O from 35m; &
 14.18m @ 1.66% Li₂O from 53m.
- XL-21: 6.62m @ 1.18% Li₂O from 28.38m;
 5.22m @ 1.24% Li₂O from 39.78m;
 11.lm @ 0.78% Li₂O from 50.9m; &
 9.65m @ 1.20% Li₂O from 91.35m.
- XL-18: 5.2lm @ 0.74% Li₂O from 5.79m;
 2.0m @ 0.75% Li₂O from 16m; &
 13.87m @ 1.17% Li₂O from 27.13m.
- XL-05: 5.0m @ 1.18% Li₂O from 17m; & 21.85m @ 0.81% Li₂O from 26m.



Previous high-grade intersections reported on 17 April 2023 include:

- XL-10: 20.59m @ 1.23% Li₂O from 29.87m.
- XL-22: 8.29m @ 1.13% Li₂O from 31.69m; &

15.12m @ 1.40% Li₂O from 73.6m, incl. **11.8m @ 1.63% Li₂O** from 76.2m.

Resampled historical drill holes have successfully intersected multiple, sub-parallel spodumene bearing Lithium-Caesium-Tantalum (LCT) pegmatites, exhibiting thicknesses of up to 20 meters and exceeding 400 meters of strike length.

Results to date continue to demonstrate that this region is extremely prospective and has the potential to play an integral role in ongoing work programs for future success at Cross Lake.

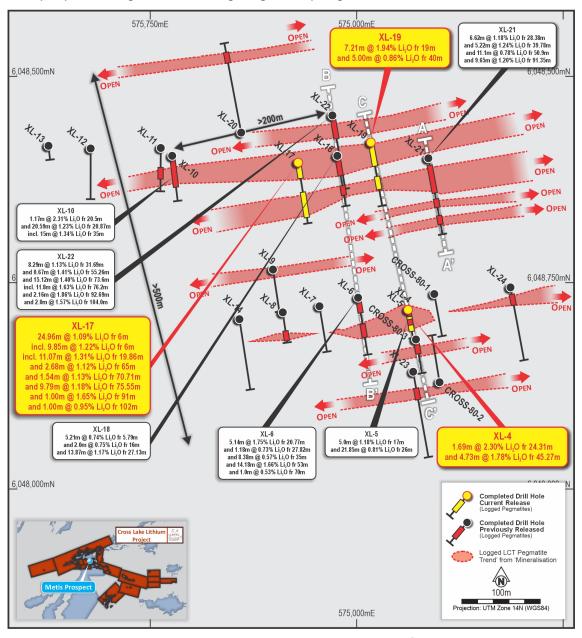


Figure 1: Current results and previously released results (see the Company's ASX announcements of 17 April 2023 and 21 August 2023) of historical drill holes (Coordinates in UTM NAD83 z14N) (refer to Appendix B, Table 1).



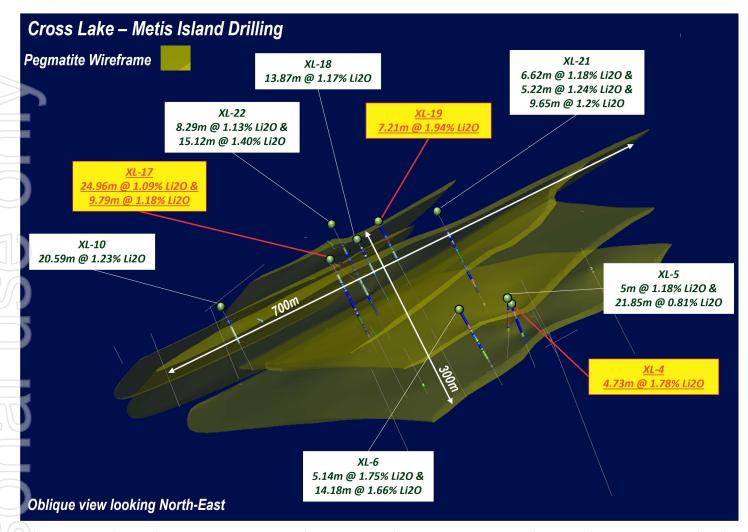


Figure 2: Oblique view of current geological model with assays from available drill holes. Modelling is based on lithium re-assaying and geological logging, demonstrating multiple stacked pegmatites present at the Metis Island drilling. Note drill holes without assay results are unavailable for assay (see current results and previously released Company ASX announcements of 26 June 2023, 17 April 2023 and 21 August 2023).



Future Plans

With the completion of 2023 field work and the receipt of all remaining drill assays the Company is very encouraged by the results and is aiming to complete a maiden drill program at the Project in the first half of 2024. A drill permit application has been submitted to the Permitting Offices of the Manitoba Department of Economic Development, Investment and Trade for an initial 10,000m of drilling, this process runs parallel with the Company's ongoing engagement with First Nations and government departments.

Additionally, the Company has applied for Manitoba Mineral Development Fund (**MMDF**) for up to \$300,000 CAD. The MMDF is aimed at supporting mineral exploration in the province of Manitoba. The outcome of this is expected to be known in the March quarter of 2024.

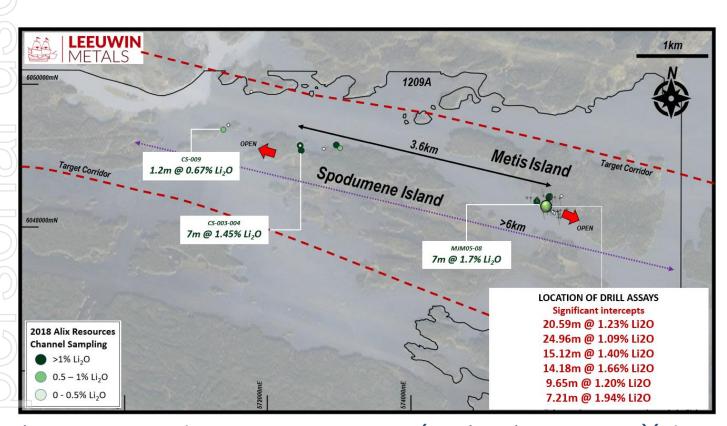


Figure 3: Local Geology of Spodumene Island Prospect area (Coordinates in UTM NAD83 z14N) (refer to Appendix B, Table 1 and for further details of historical channel sampling refer to the ITAR in the Company's prospectus released to the ASX on 28 March 2023).



Infrastructure and Location

The Project is located in the Canadian province of Manitoba, approximately 120km to the south of the major regional mining centre of Thompson. The Project has all year-round accessibility via by Provincial Highway 6 and has the potential to be serviced by a hydroelectric power station to the south.

The Project is 100% owned by Leeuwin and consists of 2,002km² of granted and pending Mineral Exploration Licences (refer to Figure 4).

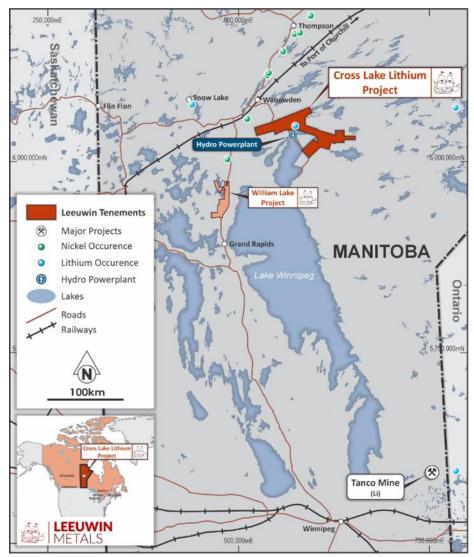


Figure 4: Location of the 100% owned Cross Lake Lithium Project MELs. Coordinates in UTM NAD 83 z14.

This announcement has been approved for release by the Board.

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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.

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.

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.

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

Australian Projects Canadian Projects Maniloba Gascoyne REE & Li Project William Lake Ni Project Ignace Li Project



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.



APPENDIX B: JORC CODE, 2012 EDITION

Table 1: Significant Intercept Table

Cut-off grade of >0.5% Li₂O and allowing for up to 2m interval of internal waste. Intercept lengths may not add up due to rounding to appropriate precision. Coordinates are in UTM NAD 83 zl4 projection.

Hole ID	Easting	Northing	RL	EOH Depth (m)	Azimuth	Dip	From (m)	To (m)	Interval (m)	Li ₂ O (%)	Ta₂O₅ (ppm)
XL-4	576062	6048217	225	90.2	170	-60	24.31	26	1.69	2.3	87
							45.27	50	4.73	1.78	102
XL-5	576062	6048217	225	89	360	-90	17	22	5	1.18	104
							26	47.85	21.85	0.81	45
XL-6	576002	6048232	225	102.4	170	-45	20.77	25.91	5.14	1.75	158
							27.82	29	1.18	0.73	13
							35	43.38	8.38	0.57	1
							53	67.18	14.18	1.66	126
							70	71	1	0.53	2
XL-10	575776	6048404	225	89.3	170	-50	20.5	21.67	1.17	2.31	485
							29.87	50.46	20.59	1.23	194
						incl:	35	50	15	1.34	194
1							51.32	52.12	0.8	0.84	4
XL-17	575929	6048395	225	123.7	170	-50	6	30.96	24.96	1.09	61
						incl:	6	15.85	9.85	1.22	70
						incl:	19.86	30.96	11.07	1.31	86
							65	67.68	2.68	1.12	90
							70.71	72.25	1.54	1.13	26
/							75.55	85.34	9.79	1.18	117
							91	92	1	1.65	265
7							102	103	1	0.95	237
XL-18	575977	6048404	225	102.4	170	-50	5.79	11	5.21	0.74	14
							16	18	2	0.75	127
							27.13	41	13.87	1.17	106
XL-19	576017	6048420	225	126.8	170	-50	19	26.21	7.21	1.94	159
							40	45	5	0.86	247
XL-21	576087	6048401	225	150.3	170	-50	28.38	35	6.62	1.18	93
							39.78	45	5.22	1.24	159
							50.9	62	11.1	0.78	50
							91.35	101	9.65	1.2	182
XL-22	575971	6048452	225	154.2	170	-50	31.69	39.98	8.29	1.13	153
							55.26	55.93	0.67	1.41	107
							72.83	72.9	0.07	0.78	10
							73.6	88.72	15.12	1.4	159
						incl:	76.2	88	11.8	1.63	143
							92.69	94.85	2.16	1.86	50
		1	J				02.00	J -1 .05	2.10	1.00	00



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	All drilling quoted is from Historical Operators. Drill is predominantly AQ diameter and is now stored at the
9	specific specialised industry	· · · · · · · · · · · · · · · · · · ·
	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.	Recent re-sampling of the drill core was ¼ core of residual reference core under the supervision of a qualified geologist on nominal 1m intervals. Interval lengths were adjusted to logged geological intervals. ¼ core samples were taken from the split core using a core saw with half the core placed in plastic sample bags and the remaining half left in the core box. For consistency the same half of core was collected for successive samples.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Re-sampling of the drill core was ¼ core of residual reference core under the supervision of a qualified geologist on nominal Im intervals. Interval lengths were adjusted to logged geological intervals. ¼ core samples were taken from the split core using a core saw with half the core placed in plastic sample bags and the remaining half left in the core box. For consistency the same half of core was collected for successive samples.
		Sampling was completed based on geological intervals on a nominal 1m interval but can range between 0.2m and up to 2m's. The holes have meter marks down holes. Sample sizes are considered appropriate and correctly represent the style and type of mineralisation.
		Field standards, laboratory standards and laboratory repeats were used to monitor quality of analysis.
	•	



Criteria	JORC Code explanation	Commentary
Drilling techniques	,,	All drilling quoted is from Historical Operators, Tanco Mining. Drilling is predominantly AQ diameter. Diamond Drill core was not historically oriented.
Drill sample recovery		All drilling quoted is AQ diamond core. There is no recorded RQD data as is standard by observations by Leeuwin Minerals geologists do not record significant zones of core loss.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Unknown, not recorded by previous operators.
	•	There is no relationship between sample recovery and grade indicated by previous operators of the project.
Logging	been geologically and geotechnically logged to a level of detail to support appropriate Mineral	All samples were geologically logged on site by professional geologists. Details on the host lithology, deformation, dominant minerals including sulphide species and alteration minerals plus veining are recorded. Logging is to a sufficient standard to support Mineral Resource Estimation, mining studies and metallurgical studies.
	quantitative in nature. Core (or	All samples have been qualitatively logged for lithology, alteration, weathering, and foliation and qualitatively logged for vein percentage, mineralisation/sulphide percentage.
	The total length and percentage of the relevant intersections logged.	All samples were geologically logged on site by professional geologists. Details on the host lithology, deformation, dominant minerals including sulphide species and alteration minerals plus veining are recorded.
Subsampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Sampling of mineralised intervals was done on a geological basis under supervision of the responsible geologist. Recent re-sampling of the drill core was ¼ core of residual reference core under the supervision of a qualified geologist on nominal 1m intervals. Interval lengths were adjusted to logged geological intervals. ¼ core samples were taken from the split core using a core saw with half the core placed in plastic sample bags and the remaining half left in the core box. For consistency the same half of core was collected for successive samples.



Criteria	JORC Code explanation	Commentary
	sampled, rotary split, etc. and whether sampled wet or dry.	Not applicable as no non-core is being sampled.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sampling techniques are industry standard and deemed appropriate.
	Quality control procedures adopted for all subsampling stages to maximise representivity of samples.	•
		The Quality assurance procedures of historical operators and laboratories are unknown.
	Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.	The samples are considered representative.
	•	Given the reconnaissance nature of the drilling sample sizes are deemed industry standard for LCT Pegmatite exploration.
Quality of assay data and	The nature, quality and appropriateness of the assaying and	core which was split for sample submission.
laboratory tests	laboratory procedures used and whether the technique is considered partial or total.	Resampled ¼ core was submitted to Actlabs Laboratories in Thunder Bay. The entire sample was crushed to a nominal -2 mm, mechanically split to obtain a representative sample, and then pulverized to at least 95% -105 microns (µm). Samples were then assayed by Peroxide 'Total' Fusion ICP-OES+ICP-MS (laboratory package Ultratrace 7). Samples assaying above 10,000ppm Li were then analysed by ore grade analysis through Peroxide Fusion ICP-OES. This analysis technique is considered total.
	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.	·
	Nature of quality control procedures	For ¼ core resampling Laboratory QAQC procedures



Criteria	JORC Code explanation	Commentary
	adopted (e.g. standards, blanks, duplicates, external laboratory	include the insertion of certified reference materials as assay standards as well as including blank and sample
	checks) and whether acceptable	duplicates.
5	levels of accuracy (i.e. lack of bias) and precision have been established.	Company QAQC protocols include the insertion of certified reference materials and blanks every 25
		samples or at geologist discretion.
		Lab and company QAQC samples were both reported within QAQC tolerance.
Verification of	The verification of significant	Historical results have not been reviewed and verified by
sampling and assaying	intersections by either independent or alternative company personnel.	Leeuwin Metals professional geologists; however, the diamond drill core is stored by the Manitoban Geological survey and has been reviewed and intersections are coincident with LCT pegmatite occurrences in the drill holes.
		Results from recent sampling has been under the supervision of Leeuwin Geologists and has been verified by professional consultant geologists.
, 1	The use of twinned holes.	There are no twinned holes in the dataset but a comparison of the results of different drilling generations showed that results were comparable.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Details of primary data acquisition, data entry and verification procedures utilised by previous operators are unavailable, but logging and data entry was captured on paper logs, now in Manitoba Assessment report no: 93742.
)		Recent sampling and assay results have been documented in digital format, verified, and stored by the Company.
	Discuss any adjustment to assay data.	No adjustments were made to assay data in results quoted.
Location of data points	to locate drillholes (collar and	Drill holes were collared in local grid coordinates. Later the grids were georeferenced manually to take advantage of GIS mapping technology.
	Specification of the grid system used.	Drill holes were collared in local grid coordinates. Later the grids were georeferenced manually to take advantage of GIS mapping technology. The mainly idealized grids were approximately positioned by rotation and translation to fit with known topographic features, and collars were positioned on the georeferenced grids and in turn georeferenced. Drilling is now recorded in the UTM NAD 83 coordinate system Zone 14.
	Quality and adequacy of	Topographic control is based on government topographic maps. This method of topographic control



Criteria	JORC Code explanation	Commentary
	topographic control.	is deemed adequate at this exploration stage of the project.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Due to the reconnaissance stage of the Cross Lake Project the hole spacing is highly variable and of a progressive exploration in nature. However, a nominal spacing of 100m line spacing over the drill areas has been completed.
	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	geological and grade continuities for Mineral Resource
	Whether sample compositing has been applied.	No sample compositing has been applied.
Orientation of data in relation to geological structure		perpendicular or sub-perpendicular to the orientation of the intersected mineralisation. Drilling was typically
	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.	
Sample security	The measures taken to ensure sample security.	Measures taken to ensure sample security by historic operators are unknown.
		Recent resampling was secured at the Manitoba Geological survey prior to shipping by Leeuwin personnel directly to the Actlabs laboratory in Thunder Bay for assay.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	There have been no audits or reviews of sampling techniques and data.



Section 2: Reporting of exploration results

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

('	Criteria listea in	the preceding section also apply to this sect	lon.)		
•	Criteria	JORC Code explanation	Commentary		
i I	Mineral Lenement and and 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.	and six Mineral Exploration Licence (MEL) applications covering a total area of 2,202km2 surrounding the granted MEL1209A, 1229A, 1213A, 1212A,		
Section 1	Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	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. 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.		
	Geology	Deposit type, geological setting and style of mineralisation.	Pegmatites in the Cross Lake area is enriched in lithium, niobium, qua. 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. The Moslon Lake domain is dominated by granodiorites, with widespread granitic rocks, granites, and pegmatites; monzodiorites and gabbroic dykes are also present. The Gods Lake domain is characterised by amphibolite facies mafic and ultramafic metavolcanics and metasedimentary rocks. Lithium mineralisation is associated with REE pegmatites and lithium-tin-tantalum pegmatites.		



Criteria	JORC Code explanation	Commentary
Drillhole	A summary of all information material to the	Please refer to Appendix B, Table 1 in the body of the
information	understanding of the exploration results	release.
	including a tabulation of the following	
	information for all Material drillholes:	
	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	
Dt	depth hole length.	All shill be be interested in American
Data	1	All drill hole intersections are reported in Appendix I
aggregation methods	averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high	in the body of the release, with no upper cut off grade applied.
illetilous	grades) and cut-off grades are usually Material	
	and should be stated.	Metal equivalent values are not used.
Relationship	If the geometry of the mineralisation with	The majority of the drill holes are drilled as close to
between	respect to the drillhole angle is known, its nature	orthogonal to the plane of the mineralised lodes as
mineralisation	should be reported.	possible. A number of drill holes have intersected the
widths and	The state of the s	mineralisation at high angles.
intercept lengths	If it is not known and only the down hole lengths	Only down hole lengths are reported.
7	are reported, there should be a clear statement	offiny down from lengths are reported.
	to this effect (e.g. 'downhole length, true width	
	not known').	
Diagrams	Appropriate maps and sections (with scales)	Exploration plans and further diagrams are included
	<u>-</u>	in the body of this release as deemed appropriate by
	included for any significant discovery being	the competent person.
Í	reported These should include, but not be	
	limited to a plan view of drillhole collar locations	
	and appropriate sectional views.	
Balanced	, , , , ,	All drill hole intersections >0.5% Li ₂ O are reported in
reporting	· ·	Appendix B in the body of the release, with no uppe cut off grade applied. Up to 1.5m of internal waste has
)	, , ,	been allowed in the reporting of significant intervals
\	avoid misleading reporting of Exploration	been allowed in the reporting of significant intervals
)	Results.	
Other		All substantive exploration data as known at the time
substantive	material, should be reported including (but not	•
exploration data	limited to): geological observations;	No metallurgical test work has been completed or
	geophysical survey results; geochemical survey	the property to date.
Y	results; bulk samples – size and method of	the property to date.
	treatment; metallurgical test results; bulk	
	density, groundwater, geotechnical and rock	
	characteristics; potential deleterious or	
	contaminating substances.	
Further work	The nature and scale of planned further work	Please refer to the body of this release.
	(e.g. tests for lateral extensions or depth	
	extensions or large-scale step-out drilling).	