## **ASX Announcement**



22 August 2024

# Exceptional Lithium Results up to 3.79% Li<sub>2</sub>O from Channel Program at Tot Pegmatite

### **Highlights**

- High Grade Li<sub>2</sub>O Results: Northern Prospects mechanical stripping program returns exceptional channel assay results, including:
  - CH002: 7m at 1.21% Li<sub>2</sub>O
  - CH003: 6m at 1.57% Li<sub>2</sub>O with the highest grading sample yielding an impressive 3.79% Li<sub>2</sub>O over 1m (Sample ID: 341781).
  - CH006: 6m at 1.33% Li<sub>2</sub>O
- Continuous High-Grade Mineralisation: The Tot pegmatite is now exposed along a continuous 50-meter strike length with an estimated true width of 8m, demonstrating substantial high-grade spodumene mineralisation throughout
- Summer field program results at Mavis Lake reinforcing the Company's announced Exploration Target of 18 – 29Mt at 0.8 – 1.2% Li<sub>2</sub>O\* (excludes current Mineral Resource Estimate of 8Mt@1.07% Li<sub>2</sub>O)
- Targeted drill program planning progresses across the Mavis Lake Project Area
- 8km of highly prospective anomalies and follow-up targets identified at Tot and Gullwing Prospects
- The Company is well placed to benefit from the increased M&A and partnerships activity happening throughout the lithium sector

Lithium exploration and project development company Critical Resources Limited **ASX:CRR** ("Critical Resources" or "the Company") is pleased to announce outstanding assay results from its recently completed mechanical stripping program at the Company's 100%-owned Northern Prospects Tot pegmatite occurrence within the Mavis Lake Lithium Project in Ontario, Canada.

The mechanical stripping program focused on exposing the Tot pegmatite to assess the continuity of its strike length, take structural measurements, and evaluate the extent of spodumene mineralisation. The program has successfully extended the known mineralised zone, revealing significant high-grade lithium mineralisation that will be incorporated directly into future resource models and exploration programs. The Tot prospect has been identified as a high priority for immediate follow-up exploration due to its high-grade and consistent mineralisation.

Highlights of significant mineralisation are shown in Table 1 and Figure 1, with full exploration results provided in Appendix 1.

\* Refer Announcement 22 May 2024. The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Hole ID	From (m)	To (m)	Down Hole Interval (m)	Li2O (%)	True Width (m)
CH002	3	10	7	1.21	7.0
CH003	1	7	6	1.57	6.0
including	3	6	3	2.80	3.0
CH004	2	5	3	1.16	3.0
CH006	2	8	6	1.33	6.0

Table 1: Highlights from Tot Channel Intercepts

## Mechanical Stripping and Channel Sampling Program

In July, the Company commenced mechanical stripping around the Tot Pegmatite. During this program, six channels were cut perpendicular to strike, for a total of 56 meters, and 56 samples were collected, with high-grade lithium oxide assay results of up to 3.79% Li<sub>2</sub>O over 1m, as shown in Tables 1 and 3.

The exploration efforts successfully extended known footprint of the Tot Pegmatite to a strike length of approximately 50 meters, with an average width of 8 meters. Although the pegmatite's strike is anticipated to continue further, its surface expression is covered by thick glacial lacustrine clay overburden, which has halted further exposure along strike by the excavator. The Tot Pegmatite's strike aligns with the previously reported ~1.25 km MMI survey Lithium anomaly and will be further investigated through drilling which is anticipated to commence imminently.

Previously, the Tot Pegmatite was believed to have a shallow dip towards the east. However, upon further exposure, it is appearing to have a near-vertical dip at the surface. This data is crucial for the upcoming drill planning and program, as the new structural orientations will help more effectively guide the drilling strategy.

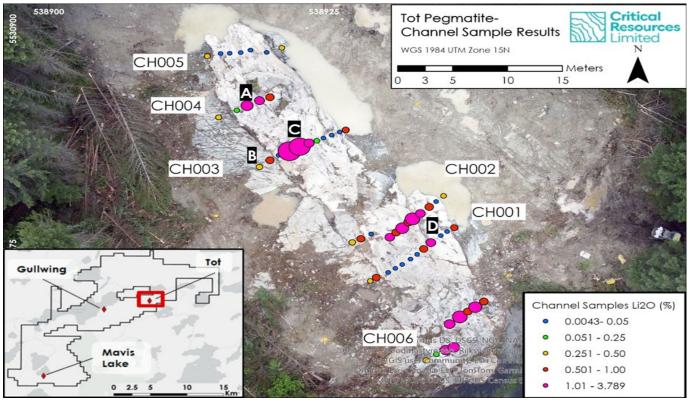


Figure 1: Drone image of the Tot pegmatite, with sample locations & assay results up to 3.79% Li<sub>2</sub>O



Figure 2: Multiple photos of Tot pegmatite with locations shown in figure 1. (A) Coarse spodumene laths intersecting in an X like pattern. (B) Sharp near vertical contact of the pegmatite and the mafic volcanic host rock. (C) Metre-scale pink spodumene (kunzite) crystal. (D) Quartz-core zone hosting an abundance of spodumene mineralisation.

#### Exploration Manager, Troy Gallik commented:

"The assay results from the Tot pegmatite mechanical stripping program are extremely encouraging, highlighting the significant lithium potential of both the Tot Pegmatite and the broader, underexplored Northern Prospects region of the Mavis Lake Project Area. The confirmation of high-grade lithium mineralisation validates our exploration strategy and underscores the prospectivity of this asset. We look forward to commencing our upcoming drilling program, with a focus on expanding our resource base and unlocking additional value for our shareholders."

The Northern Prospects comprises pegmatites that form an East-North-East trending cluster spanning approximately 2km wide and extending over an 8km strike. This highly prospective area encompasses various pegmatite dykes, including the Gullwing spodumene pegmatite swarm, Tot spodumene pegmatite, Coates beryl-molybdenite pegmatite, and a further 15 LCT pegmatite dykes.

The summer field program results, including the discovery of surface extensions and new outcrops (refer to ASX announcement 29 May 2024), together with the subsequent receipt of assay results from these areas (refer to ASX announcement 2 July 2024), and recent mechanical stripping and channel results from Tot pegmatite, underscores the exceptional potential of the Mavis Lake Project for continued Resource growth and, ultimately, the ability to deliver on the Company's recently announced JORC compliant Exploration Target of 18 - 29Mt at 0.8-1.2% Li<sub>2</sub>O\*. This Target, aimed at achieving a significant Resource base in North-western Ontario, excludes the current 8.0Mt @ 1.07% Li<sub>2</sub>O Inferred Mineral Resource Estimate (MRE).

Cautionary statement - The Exploration Target has been prepared and reported in accordance with the 2012 edition of the JORC Code. The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

#### **Future Work**

Critical Resources is poised to launch a diamond drilling program across the Mavis Lake Project area. This initiative is expected to significantly enhance both exploration and resource expansion efforts. The program will strategically target the Tot and Gullwing pegmatites within the Northern Prospects, as well as extend the Main Zone to drive immediate resource growth. These efforts are central to our 2024 drilling campaign, aimed at fully realizing the mineral potential of this highly promising project area.

#### References

- 1. Refer to ASX announcement 18 March 2024 1.25km Li Trend at Tot Confirms District-Scale at Mavis Lake
- 2. Refer to ASX announcement 17 April 2024 8km of Highly Prospective Anomalies Identified at Gullwing Tot
- 3. Refer to ASX announcement 22 May 2024 Mavis Lake Exploration Target highlights scale potential
- 4. Refer to ASX announcement 29 May 2024 Major New LCT Pegmatite System Discovered at Mavis Lake East
- 5. Refer to ASX announcement 2 July 2024 Exceptional Assay results of up to 5.12% Li<sub>2</sub>O at Mavis Lake
- 6. Refer to ASX announcement 24 July 2024 Mechanical Stripping Program Commences at Tot Prospect

## This announcement has been approved for release by the Board of Directors.

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**ABOUT CRITICAL RESOURCES LIMITED** Critical Resources is focused on the exploration, development and delivery of the critical metals required for a decarbonized future, underpinned by a portfolio of lithium projects in Ontario, Canada which are ideally positioned to participate in the rapidly growing North American battery materials supply chain.

The Company's principal focus is on its flagship Mavis Lake Lithium Project in Ontario, Canada, where it has completed over 45,000m of drilling and defined a maiden Inferred Mineral Resource of 8Mt grading 1.07% Li<sub>2</sub>O. Recent exploration success has demonstrated substantial potential to expand this resource and make new discoveries in the surrounding area. Critical is progressing a dual-track strategy at Mavis Lake of targeting resource growth in parallel with multiple permitting and project development workstreams.

**COMPETENT PERSONS COMPLIANCE STATEMENTS** The information in this ASX Announcement that relates to Exploration Results is based on information compiled by Mr. Troy Gallik (P. Geo), a Competent Person who is a Member of the Association of Professional Geoscientists of Ontario. Troy Gallik is a full-time employee of Critical Resources. Mr. Gallik 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. Gallik consents to the inclusion in this Announcement of the matters based on his information in the form and context in which it appears.

This document contains information on the Mavis Lake Lithium Project, Canada extracted from ASX market announcements dated 20 December 2022, 29 December 2022, 18 May 2023, 17 July 2023, 2 November 2023 and 18 March 2024, 17 April 2024, 22 May 2024, 29 May 2024, 2 July 2024 and 24 July 2024 reported in accordance with the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" ("2012 JORC Code") and available for viewing at https://www.criticalresources.com.au/ or https://www.asx.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original ASX market announcements.

This document contains information relating to the Mineral Resource estimate for the Mavis Lake Lithium Project is extracted from the Company's ASX announcement dated 5 May 2023 and reported in accordance with the 2012 JORC Code and available for viewing at criticalresources.com.au. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimate continue to apply and have not materially changed.

FORWARD LOOKING STATEMENTS This announcement may contain certain forward-looking statements and projections. Such forward looking statements/projections are estimates for discussion purposes only and should not be relied upon. Forward looking statements/projections are inherently uncertain and may therefore differ materially from results ultimately achieved. Critical Resources Limited does not make any representations and provides no warranties concerning the accuracy of the projections and disclaims any obligation to update or revise any forward-looking statements/projects based on new information, future events or otherwise except to the extent required by applicable laws. While the information contained in this report has been prepared in good faith, neither Critical Resources Limited or any of its directors, officers, agents, employees or advisors give any representation or warranty, express or implied, as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this announcement.

## Appendix 1: Results from Tot Pegmatite Channel Sampling Program

**Table 2: Channel Locations** 

1 44510 11 0114111101 12 0 44110110					
Hole ID	Easting	Northing	Az	Dip	End Depth
CH001	538929	5530872	58	0	12
CH002	538927	5530876	49	0	12
CH003	538919	5530885	49	0	11
CH004	538915	5530890	55	0	5
CH005	538914	5530897	49	0	7
CH006	538935	5530863	58	0	9

Table 3: Assay Table

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Channel ID	Sample ID	From	То	Li2O (%)	Channel ID	Sample ID	From	То	Li2O (%)
CH001	341751	0	1	0.280	CH003	341782	4	5	3.445
CH001	341752	1	2	0.693	CH003	341783	5	6	1.167
CH001	341753	2	3	0.029	CH003	341784	6	7	0.243
CH001	341754	3	4	0.014	CH003	341785	7	8	0.015
CH001	341755	4	5	0.021	CH003	341786	8	9	0.015
CH001	341756	5	6	0.017	CH003	341787	9	10	0.021
CH001	341757	6	7	0.019	CH003	341788	10	11	0.523
CH001	341758	7	8	0.784	CH004	341789	0	1	0.334
CH001	341759	8	9	1.038	CH004	341791	1	2	0.200
CH001	341761	9	10	0.019	CH004	341792	2	3	1.548
CH001	341762	10	11	0.024	CH004	341793	3	4	1.135
CH001	341763	11	12	0.579	CH004	341794	4	5	0.797
CH002	341764	0	1	0.413	CH005	341795	0	1	0.301
CH002	341765	1	2	0.693	CH005	341796	1	2	0.020
CH002	341766	2	3	0.023	CH005	341797	2	3	0.005
CH002	341767	3	4	1.068	CH005	341798	3	4	0.005
CH002	341768	4	5	0.810	CH005	341799	4	5	0.004
CH002	341769	5	6	1.744	CH005	341801	5	6	0.010
CH002	341771	6	7	0.967	CH005	341802	6	7	0.252
CH002	341772	7	8	2.067	CH006	341803	0	1	0.441
CH002	341773	8	9	1.064	CH006	341804	1	2	0.239
CH002	341774	9	10	0.807	CH006	341805	2	3	1.427
CH002	341775	10	11	0.023	CH006	341806	3	4	1.264
CH002	341776	11	12	0.273	CH006	341808	5	6	2.054
CH003	341777	0	1	0.407	CH006	341809	6	7	0.842
CH003	341778	1	2	0.754	CH006	341811	7	8	1.759
CH003	341779	2	3	0.019	CH006	341812	8	9	0.822
CH003	341781	3	4	3.789					

## Section 1: Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

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 down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	<ul> <li>56 samples were collected from 2 channels were cut using a diamond saw.</li> <li>The total length of channel samples was 56m.</li> <li>Samples varied in length 1m.</li> <li>The channel samples were approximately 4 cm wide and up to 10cm deep.</li> <li>Samples varied in weight from 1.45kg up to 7.4kg.</li> </ul>
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Samples were dispatched to an accredited laboratory (ActLabs) in Dryden, Ontario, Canada for sample preparation and shipment to analysis.
	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.	
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, facesampling bit or other type, whether	No drilling was undertaken.

Criteria	JORC-Code Explanation	Commentary
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	• No drilling was undertaken.
	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.	
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 metallurgical studies.	Channel samples were not geotechnically logged. Channel samples have been geologically logged to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. The sample descriptions was qualitative in nature. All channel was photographed
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.  The total length and percentage of the relevant intersections logged.	
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.  If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	The channel samples were collected from outcropping pegmatite. The samples were prepared (crushed and pulverised) in the ActLabs in Dryden, Ontario and analysis was conduct by ActLabs in Ancaster, Ontario

Criteria	JORC-Code Explanation	Commentary
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	
	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.	
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
data and appropriateness of the assaying laboratory tests and laboratory procedures used and whether the technique is considered partial or total.  used: UT-7 (Li up to 5%) Considered partial or total.	UT-7 (Li up to 5%) QOP Sodium Peroxide (Sodium Peroxide Fusion	
	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.	recent drilling are within acceptable margins of error.  • Activation Laboratory performs internal QA/QC measures. Results are released once all internal QA/QC is verified and confirmed to be acceptable.
	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.	
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	
	The use of twinned holes.  Documentation of primary data, data entry procedures, data	

Criteria	JORC-Code Explanation	Commentary
		No independent verification completed at this stage.
l	and electronic) protocols.	The data regarding sampling location and sample
		information is stored in tabular format and is appended
	Discuss any adjustment to assay data.	to this report.
		• Assays results have been reported as %Li <sub>2</sub> O, and
		there was no adjustment to assay data
		Samples were measured, photographed and logged by geologists. Digitally recorded plus back-up records.
		All assay results are provided.
		No adjustments to the assay data.
		No assay cut off grades are applied.
Location of data points		Samples recorded with Garmin GPS that has an accuracy in the order of ±3 metres for location. A registered surveyor will be contracted to accurately survey all drill collars at completed of drill program.
	Specification of the grid system used.	• WGS 1984 UTM Zone 15N.
	Quality and adequacy of topographic control.	<ul> <li>No specific topography survey has been completed over the project area.</li> </ul>
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Channels were taken appropriately to be utilized for future resource models as its shows representation of a continuous sample along the start and end of mineralisation.
	Whether the data spacing, and distribution is sufficient to establish the degree of geological and	• Channels were taken ~10m from another to avoid higses from
	grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	•Core sample intervals were based in logged mineralisation and no sample composting applied. Reporting of final results includes many weighted average- composting of assay data.
	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.	Orientation of mineralisation is known or thought to be known, channels are planned to intersect at an appropriate angle relative to true width of the mineralisation. Intercepts with

Criteria	JORC-Code Explanation	Commentary
	drilling orientation and the orientation of key mineralised	mineralisation released are given as apparent widths, not true widths unless true widths are stated  • It is uncertain whether sampling bias has been introduced, or whether the thickness drilled is a true thickness.
Sample security	sample security.	Channel samples were stored at the Dryden core yard and core shack under lock and key before delivery to ActLabsGroups in Dryden, Ontario for analysis.
	The results of any audits or reviews of sampling techniques and data.	Not undertaken at this stage.

## 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	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	The Mavis Lake Lithium Project consists of 1097 unpatented Single Cell Mining Claims and six separate surface leases which secure the surface rights of the land required for the Project footprint.  All claims and leases are active and in good standing. The leases have a term of 21 years and are not set to expire until 2032, at which time they can be renewed for an additional 21 years if required.
	any known impediments to obtaining a licence to operate in the area.	
Exploration done by other parties		Previous exploration has been conducted by a number of parties including Lun-Echo Gold Mines Limited (1956), Selco Mining Corporation (1979-1980), Tantalum Mining Corporation of Canada Limited (1981-1982), Emerald Field Resources (2002), International Lithium Corp (2006-2021) and Pioneer Resources Limited/Essential Metals Limited (2018-2021).
Geology	Deposit type, geological setting and style of mineralisation.	The Fairservice and Mavis Lake Prospects host zoned pegmatites that are prospective for lithium and tantalum
Drill hole Information	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:	• No drilling was undertaken.
	Easting and northing of the drill hole collar	

Criteria	JORC-Code Explanation	Commentary
	Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar Dip and azimuth of the hole down hole length and interception depth	
	hole length.  If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	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.	<ul> <li>• Uncut.</li> <li>• All aggregate intercepts detailed on tables are weighted averages.</li> </ul>
	Where aggregate intercepts incorporate short lengths of highgrade 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.	• None used.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	
Relationship between mineralisation widths and	important in the reporting of	True width is calculated from logging geologists structural measurements from upper and lower contacts of pegmatite dyke and the host rock. Resource shapes and geometries may aid in determine true widths as the pegmatites chaotic contacts
ilitercept lerigitis	mineralisation with respect to the drill hole angle is known, its nature should be reported.	can be miss leading. True widths are provided unless otherwise stated.  The precise geometry is not currently known but is being tested by the planned drilling, with diamond drill hole azimuths designed
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this	to drill normal to the interpreted mineralised structure.  • Apparent length reported, true width has not yet been interpreted.

Criteria	JORC-Code Explanation	Commentary
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.	Refer to images in the main document.
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.	Representative reporting of all relevant grades is provided in tables to avoid misleading reporting of Exploration Results.
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, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating	Overview of exploration data leading to selection of drill targets provided.
Further work	extensions or depth extensions or	Further work planned at Mavis Lake Lithium Project includes exploration and resource growth drilling to confirm, and extend known and unknown mineralisation, field mapping, geochemistry, geophysics and prospecting works.