

9 August 2022

## 28.25m of Spodumene-Bearing Pegmatites Intersected at Mavis Lake

### **Highlights**

Multiple spodumene-bearing pegmatite dykes intersected totalling 28.25m in step out hole in MF22-117 including 23.9m spodumene mineralisation from 126.1m to 150m downhole <sup>1,2,3</sup>

Multiple spodumene-bearing pegmatite dykes intersected totalling 14.6m in hole MF22-118 including 9.75m spodumene mineralisation from 247.75m to 257.5m downhole, demonstrating minearalisation at previously unseen depth $^{1,2,3}$ 

A total of 53 of 59 drill holes have intersected spodumene-bearing pegmatite to date, including most recent holes from MF22-117 to MF22-118

Assay work is ongoing and will be released as received, the Company continues its pursuit of a maiden JORC-compliant resource

Critical Resources Limited (ASX:CRR) ("Critical Resources" or "the Company") is pleased to announce further results from its latest drilling campaign at the Company's 100 per cent-owned Mavis Lake Lithium Project ("the Project") in Ontario, Canada.

The visual spodumene-bearing pegmatite zones intersected in MF22-117 and MF22-118 are located down dip from previously announced MF22-116 zone (August 2, 2022 ASX Announcement). These visual zones illustrate the pegmatites geometries and that the zones continue at depth, with the greatest vertical depth drilled to date of ~250m within MF22-118.

These visual zones continue to provide support of significant pinching and swelling throughout the pegmatites. The swell areas can host a significant amount of spodumene laths (as confirmed through visual identification) and provide significant thickness of mineralisation. Understanding the geometries of the pegmatites will aid in further zone delineation as we continue to test the continuity east of Pegmatite 6 and towards Pegmatite 18.



Figure 1: Close up of MF22-118 at 243-243.1m downhole. Significant white-grey large spodumene laths

<sup>&</sup>lt;sup>1</sup> In relation to the disclosure of visual mineralisation, the Company cautions that visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analysis. Laboratory assay results are required to determine the widths and grade of the visible mineralisation reported in preliminary geological logging. The Company will update the market when laboratory analytical results become available.

<sup>&</sup>lt;sup>2</sup>The reported intersections are down hole measurements and are not necessarily true width.

<sup>&</sup>lt;sup>3</sup> Descriptions of the mineral amounts seen and logged in the core are qualitative, visual estimates (they are listed in order of abundance of estimated combined percentages). Quantitative assays will be completed by Activation Labs in Dryden, Ontario.



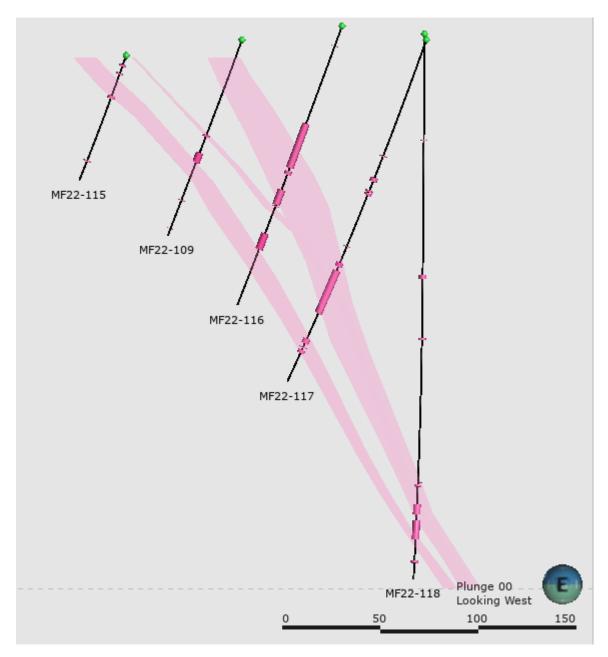


Figure 2: Cross-section, looking west, with projections of pegmatites (pink shapes) with recently drilled holes of MF22-109, MF22-115, MF22-116, MF22-117, and MF22-118 (measurement in metres)

A total of 7,960m out of 10,000m of approved drilling has been completed to date, with the Company's primary focus to continue drilling an infill program, followed by testing the approximate 3km of potential strike length towards Pegmatite 18.

Immediate 50m infill drill-hole spacing will continue to test strike length and down-dip continuity to further delineate the spodumene-bearing pegmatites to underpin the development of a maiden JORC compliant resource.

The Mavis Lake Project's location provides a strategic advantage, situated just 19km from the town of Dryden. The project area is adjacent to the main rail and road networks connecting directly to Thunder Bay, which is being touted as a proposed regional hub for lithium processing.



The region boasts excellent infrastructure including hydroelectric power located a few kilometres to the south-west of the Project.

#### **Critical Resources Chairman Robert Martin commented:**

"To intercept a further cumulative 28.25m and 14.6m of lithium-bearing pegmatites in the following two holes from one of our largest cumulative intercepts in previously untested areas at Mavis Lake builds further confidence in our program as we work towards delineating our maiden JORC Compliant Resource.

These results show the pegmatites remain open at depth and along a potential strike length of approximately 3km between our Pegmatite 6 and Pegmatite 18 prospects. We look forward to keeping the market updated as we continue our extended drilling program and when our assay results are received."

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

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#### **EXPLORATION WORK - COMPETENT PERSONS STATEMENT**

The information in this ASX Announcement that relates to Exploration Results is based on information compiled by 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 Ltd. Troy 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". Troy Gallik consents to the inclusion in this ASX Announcement of the matters based on his information in the form and context in which it appears.

#### 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.

#### **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.

#### **ABOUT THE MAVIS LAKE PROJECT**

The Mavis Lake Lithium Project is 19km east of the town of Dryden, Ontario and in close proximity to the Trans-Canada highway and railway, major transportation arteries which link larger cities such as Thunder Bay, Ontario, to the southeast and Winnipeg, Manitoba, to the west. The region boasts excellent infrastructure with hydropower located a few kilometres to the southwest of the project. The region is an emerging lithium province with multiple projects located nearby.

#### ABOUT CRITICAL RESOURCES LIMITED

Critical Resources is an ASX listed, base metals and lithium exploration and development company headquartered in Perth, Western Australia. The Company is focussed on providing shareholder value through the exploration, development and advancement of the Company's base metals asset in NSW, copper asset in Oman and its suite of hard rock lithium assets in Ontario, Canada



## **Appendix 1: Key Results**



Figure 3: Significant zone of spodumene-bearing pegmatite from MF22-117 from 120.15 to 137.5m downhole



Figure 4: Significant zone of spodumene-bearing pegmatite from MF22-117 from 137.5 to 154.65m downhole



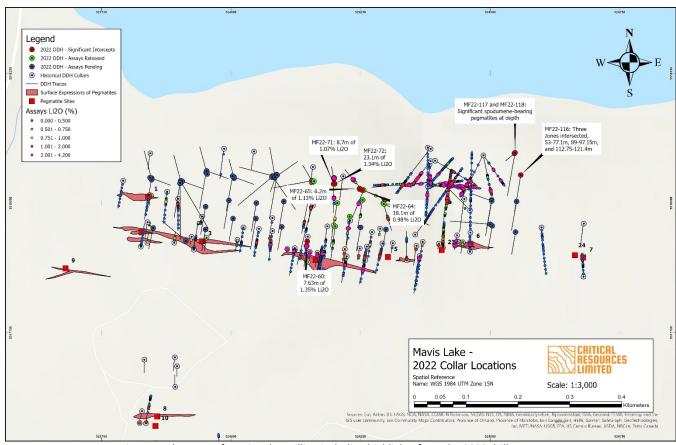


Figure 5: Plan map of Mavis Lake Drilling including highlights from the 2022 drill program

Table 1: Recent Significant Visual Estimates of Exploration Results

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				Visual Estimate		
Hole ID	From	То	Length	of Spodumene		
MF22-117	75.15	77.25	2.1	~16%		
and	121.75	124	2.25	<5%		
and	126.1	150	23.9	~27%		
MF22-118	239.75	244.6	4.85	~28%		
and	247.75	257.5	9.75	~5%		

Table 2: Drill Hole Summary

Hole ID	Date I	Drilled	UTM Zone 15N		UTM Zone 15N (NAD 83) Collar Orien		rientation Metres Drilled		Prilled
	Start Date	End Date	Easting	Northing	Elevation (m)	Az	Dip	Casing Depth	<b>End Depth</b>
MF22-117	2022-07-26	2022-07-27	524548	5518097	439	190.1	-70	3	188
MF22-118	2022-07-28	2022-08-01	524547	5518096	440	229.4	-89.5	3	278

#### **Cautionary Note:**

The Company stresses that the reported visual estimated percentages in Table 1 above relate specifically to the abundance of spodumene logged in the drill core and is not estimated lithium grade for the interval.

In relation to the disclosure of visual mineralisation, the Company cautions that visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analysis. Laboratory assay results are required to determine the widths and grade of the visible mineralisation reported in preliminary geological logging. The Company will update the market when laboratory analytical results become available.

The reported intersections are down hole measurements and are not necessarily true width. Descriptions of the mineral amounts seen and logged in the core are qualitative, visual estimates (they are listed in order of abundance of estimated combined percentages). Quantitative assays will be completed by Activation Labs in Dryden, Ontario.



# Appendix 2: JORC Table 1 - MF22-117 and MF22-118 Exploration Results

2.1 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>Oriented NQ core was cut in half using a diamond saw, with a half core sent for assay and half core retained.</li> <li>No other measurement tools other than directional survey tools have been used in the holes at this stage.</li> </ul>
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Oriented core was placed V-rail and a consistent cutline drawn along core to ensure cutting (halving) of representative samples  Core sample interval was based in logged mineralisation
	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.	<ul> <li>Determination of mineralisation has been based on geological logging and photo analysis.</li> <li>Diamond Core drilling was used to obtain 3m length samples from the barrel which are then marked in one metre intervals based on the drillers core block measurement.</li> <li>Assay samples will be selected based on geological logging boundaries or on the nominal metre marks.</li> <li>Samples will be dispatched to an accredited laboratory (ActLabs) in Dryden, Ontario, Canada for sample preparation and shipment to analysis</li> </ul>
Drilling techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>NQ2 diamond double tube coring by Cyr EF-50 rig was used throughout the hole.</li> <li>Core orientation was carried out by the drilling contractor.</li> </ul>



Criteria	JORC-Code Explanation	Commentary
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	• Lithological logging, photography  • Core samples were measured with a standard tape within the core trays. Length of core was then compared to the interval drilled, and any core loss was attributed to individual rock units based on the amount of fracturing, abrasion of core contacts, and the conservative judgment of the core logger. Results of core loss are discussed below.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	<ul> <li>Experienced driller contracted to carry out drilling.</li> <li>In broken ground the driller produced NQ core from short runs to maximise core recovery.</li> <li>Core was washed before placing in the core trays.</li> <li>Core was visually assessed by professional geologists before</li> </ul>
	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.	<ul> <li>cutting to ensure representative sampling.</li> <li>See "Aspects of the determination of mineralisation that are Material to the Public Report" above.</li> </ul>
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.		<ul> <li>Core samples were not geotechnically logged.</li> <li>Core samples have been geologically logged to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> </ul>
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	The core logging was qualitative in nature. All core was photographed
	The total length and percentage of the relevant intersections logged.	<ul> <li>Total length of the MF22-117 was 188m 100% of the relevant intersections were logged.</li> <li>Total length of the MF22-118 was 278m 100% of the relevant intersections were logged.</li> </ul>
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all cores taken.  If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.  For all sample types, the nature, quality and appropriateness of the sample preparation technique.	No sampling completed at this stage
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	



Criteria	JORC-Code Explanation	Commentary
	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.	
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	No assays have been conducted for this drill program at this time. Techniques will be updated when assays are completed.
	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 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.	No independent verification completed at this stage
	The use of twinned holes.	No holes are twins of previous holes
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Core measured, photographed and logged by geologists.     Digitally recorded plus back-up records.
	Discuss any adjustment to assay data.	No assay data received at this stage
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	• Drill collars 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.	WGG 1004 LYTH 77 15 V
	Quality and adequacy of topographic control.	• WGS 1984 UTM Zone 15N
		No specific topography survey has been completed over the project area
Data spacing and distribution	Data spacing for reporting of Exploration Results.	



Criteria	JORC-Code Explanation	Commentary
	Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	Not relevant to current drilling.  Not relevant to current drilling.
	Whether sample compositing has been applied.	
		No 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.	The orientation of the mineralisation is unknown. The drilling program is aimed at determining orientation of the mineralisation.
	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.	• If orientation of mineralisation is known or thought to be known, drill holes are planned to intersect at an appropriate angle relative to true width of the mineralisation. Intercepts with mineralisation released are given as downhole widths, not true widths untless true widths are stated
		• It is uncertain whether sampling bias has been introduced, or whether the thickness drilled is a true thickness.
Sample security	The measures taken to ensure sample security.	• Core samples will be stored the Dryden core yard before delivery to ActLabsGroups in Dryden, Ontario for analysis.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Not undertaken at this stage

## 2 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.	<ul> <li>The Mavis Lake Lithium Project consists of 189 unpatented Single Cell Mining Claims and six separate surface leases which secure the surface rights of the land required for the Project footprint.</li> <li>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.</li> </ul>	
	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.		



Criteria	JORC-Code Explanation	Commentary						
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	• Previous exp including Lun (1979-1980), 1982), Emera 2021) and Pio 2021).	-Echo Gold Tantalum M ld Field Res	! Mines Limi Iining Corpo sources (200	ted (1956) oration of 2), Intern	6), Selco Mir Canada Lit national Lith	ning Corp mited (198 hium Corp	81- (2006-
Geology	Deposit type, geological setting, and style of mineralisation.	• The Fairsers prospective fo			ospects h	ost zoned po	egmatites	that are
		H-1- ID	Eastina	NI addin a	DI	A =:dl	D:-	Doub
Drill hole Information	A summary of all information material to the understanding of	Hole ID MF22-117	Easting 524548	Northing 5518097	RL 439	Azimuth 190.1	-70	Depth 188
	the exploration results including a tabulation of the following	MF22-118	524547	5518096	440	229.4	-89.5	278
	information for all Material drill holes:  easting and northing of the drill hole collar	*Collar coora	linates are i	n WGS 1984	UTM Zo	one 15N		



Criteria	JORC-Code Explanation	Commentary
	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.	• Uncut
	Where aggregate intercepts incorporate short lengths of high-grade 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.	• All aggregate intercepts detailed on tables are weighted averages.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	• None used
Relationship between mineralisation widths and	These relationships are particularly important in the reporting of Exploration Results.	• True width not currently known. All lengths are down-hole lengths and not true width.
intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	The precise geometry is not currently known but is being tested by the planned drilling, with diamond drill hole azimuths designed to drill normal to the interpreted mineralised structure.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').	• Down-hole length reported, true width not known.
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.	The drilling is aimed at clarifying the structure of the mineralisation.
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 avoiding misleading reporting of Exploration Results.	Representative reporting of all relevant grades is provided in tables to avoid misleading reporting of Exploration Results.



Criteria	JORC-Code Explanation	Commentary
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 substances.	Overview of exploration data leading to selection of drill targets provided.      There were no deleterious elements identified.
Further work	The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).	<ul> <li>Further drilling underway to confirm, infill and extend previous drilling conducted by various parties, bringing total drilling by the Company to 10,000m</li> <li>The Company is considering a Phase 3 program to extend the current 10,000m program up to a possible 15,000m total (planning and permitting actions are still be developed).</li> </ul>