ASX Announcement



23 January 2023

First Concentrate Produced from Mavis Lake Test Work Program

Highlights

- Metallurgical test work program began in October 2022, to determine the suitability of spodumene from the Mavis Lake Lithium Project for dense media separation processing Test work is being performed on samples that provide spatial representation across the Mavis Lake Main Zone
- Samples have been assayed for head-grade lithium content, delivering 1.2% Li2O (representative) and 1.6% Li2O (high-grade) composites
- First concentrate was produced by simple heavy liquid separation, followed by
 - magnetic separation
 - Assays to determine concentrate grade and recovery/yield estimates due in March
 - Test work is being conducted concurrently with a fully funded 20,000 meter drilling
 - campaign at Mavis Lake

Overview

Critical Resources Limited (ASX:CRR) ("Critical Resources" or "the Company") is pleased to provide an update on metallurgical test work being undertaken by SGS Canada ("SGS").

Test Work Program

To support a future scoping study, the Company commissioned SGS to conduct basic heavy liquid separation (HLS) and magnetic separation test work program. The purpose of the test work is to determine the amenability of Mavis Lake Spodumene for dense media separation (DMS) processing. Mineralogical assessments will also be undertaken to better understand the presence and impact of deleterious minerals on final product quality and the mineralogical drivers of DMS processing efficacy.

In designing the sample suite for the test work program, focus was placed on representing the known Mavis Lake mineralised zone as accurately as possible. A total of 50 quarter and half core samples, from seven drill holes, were selected to provide a wide range of spatial locations, lithia grades, lithologies, spodumene intersection depths and also account for typical mining dilution. Details of drill core used to prepare the representative samples can be seen in Appendix 1.



The samples were delivered to SGS and compiled to create two composites, being a representative grade composite (SGS assays confirmed 1.2% Li2O) and a high-grade composite (SGS assays confirmed 1.6% Li2O).

First Concentrate

The Company received confirmation from SGS that the first series of test work has been completed on the high-grade composite. Test work on the representative-grade composite is due to commence shortly. Once all test work has been completed, final products will be assayed to determine concentrate grade, impurity profile and recovery/yield estimates.

Future Work

The current test work program will continue through to mid-February, with final results expected to be made available to the Company towards the end of Q1 CY23.

The test work program is a key step towards initial scoping study work for the Mavis Lake Project, the Company will provide further updates on the next phase of development in the coming weeks.

Critical Resources' Managing Director Alex Cheeseman said:

"Critical Resources has firmly taken a step forward with its development plans for Mavis Lake. The outcomes of the metallurgical test work will directly support a scoping study and significantly assist us with planning our pathway to production.

Whilst the full results from the test work will not be known until the program is completed, initial indications are that the Mavis Lake spodumene is amenable to beneficiation via DMS processing.

With a major drill campaign underway, our knowledge of the mineralisation and the characteristics of the Mavis Lake Main Zone continue to grow – setting the foundations for the next phase in this exciting project".

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

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ABOUT CRITICAL RESOURCES LIMITED

Critical Resources is advancing and developing critical metals projects for a decarbonised future. The Company holds a suite of lithium prospects across Ontario, Canada, including Mavis Lake, Graphic Lake, Plaid and Whiteloon Lake. The Company's other projects include the Halls Peak Project in NSW, Australia, a high-quality base metals project with significant scale potential and the Block 4 and Block 5 copper project, located in Oman.

The Company's primary objective is the rapid development of its flagship Mavis Lake Lithium Project. Mavis Lake is an advanced exploration project with near-term development potential. The Company completed over 19,500m of drilling in 2022 and has commenced another significant drilling program in 2023. The Company has also commenced initial studies that will underpin the transition from explorer to developer.

COMPETENT PERSONS STATEMENT



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.

The information in this ASX Announcement that relates to Metallurgical Results is based on information compiled by Mr Michael Davis, a Competent Person who is a Fellow of the Australian Institute of Mining and Metallurgy (FAusIMM). Michael Davis is the Technical Director of MineScope Services Pty Ltd (MineScope). Mr Davis has sufficient experience in mineral processing of this nature 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 Davis consents to the inclusion in this Announcement of the metallurgical test work results and mineral processing 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.



APPENDIX 1

	Drill Hole	Core Type	From (m)	To (m)	Lengt h (m)	Est. Sample (kg)
	MF22-063	Quarter NQ	64.64	65	0.36	0.38
	MF22-063	Quarter NQ	65	67	2	2.14
	MF22-063	Quarter NQ	67	69	2	2.14
	MF22-063	Quarter NQ	69	70.3	1.3	1.39
	MF22-065	Quarter NQ	126	126.41	0.41	0.44
	MF22-065	Quarter NQ	126.41	128	1.59	1.70
	MF22-065	Quarter NQ	128	128.92	0.92	0.98
Û	MF22-065	Quarter NQ	128.92	130.86	1.94	2.07
osit	MF22-065	Quarter NQ	130.86	132.63	1.77	1.89
Samples for Representative Composite	MF22-065	Quarter NQ	132.63	132.93	0.3	0.32
Co	MF22-071	Quarter NQ	110	110.52	0.52	0.56
ive	MF22-071	Quarter NQ	110.52	111.95	1.43	1.53
ntat	MF22-071	Quarter NQ	111.95	113.9	1.95	2.08
ssel	MF22-071	Quarter NQ	113.9	115.72	1.82	1.94
spre	MF22-071	Quarter NQ	115.72	117.72	2	2.14
r R∈	MF22-071	Quarter NQ	117.72	119.25	1.53	1.63
s fo	MF22-072	Quarter NQ	142.26	144.22	1.96	2.09
ple	MF22-072	Quarter NQ	144.22	146	1.78	1.90
am	MF22-072	Quarter NQ	146	148	2	2.14
S	MF22-072	Quarter NQ	148	150	2	2.14
	MF22-072	Quarter NQ	150	152	2	2.14
	MF22-072	Quarter NQ	152	152.98	0.98	1.05
	MF22-080	Quarter NQ	150.35	152.15	1.8	1.92
	MF22-080	Quarter NQ	152.15	152.5	0.35	0.37
	MF22-080	Quarter NQ	152.5	154.15	1.65	1.76
	MF22-080	Quarter NQ	154.15	156	1.85	1.98
	MF22-080	Quarter NQ	156	156.55	0.55	0.59

Table 1: List of samples taken for the representative composite averaging ~1.2% Li2O

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Table	able 2: List of samples taken for the high-grade composite averaging ~1.6% Li2O						
		Drill Hole	Core Type	From (m)	To (m)	Length (m)	Est. Sample (kg)
		MF22-117	Quarter NQ	131	133	2	2.14
		MF22-117	Quarter NQ	133	134.8	1.8	1.92
		MF22-117	Quarter NQ	134.8	136.4	1.6	1.71
		MF22-117	Quarter NQ	136.4	138.3	1.9	2.03
		MF22-117	Quarter NQ	138.3	139.3	1	1.07
		MF22-117	Quarter NQ	139.3	139.7	0.4	0.43
	site	MF22-117	Quarter NQ	139.7	140	0.3	0.32
	öd	MF22-117	Quarter NQ	140	140.5	0.5	0.53
	om	MF22-117	Quarter NQ	140.5	141.1	0.6	0.64
	e O	MF22-117	Quarter NQ	141.1	143	1.9	2.03
	Samples for High-Grade Composite	MF22-117	Quarter NQ	143	143.5	0.5	0.53
	9-L	MET22-001	Half HQ	58.4	59.8	1.4	5.33
	High	MET22-001	Half HQ	59.8	61.7	1.9	7.23
	or	MET22-001	Half HQ	61.7	63.15	1.45	5.52
	es 1	MET22-001	Half HQ	63.15	65	1.85	7.04
	mp	MET22-001	Half HQ	65	66.85	1.85	7.04
	Sal	MET22-001	Half HQ	112.4	112.75	0.35	1.33
		MET22-001	Half HQ	112.75	114.55	1.8	6.85
		MET22-001	Half HQ	114.55	116.35	1.8	6.85
		MET22-001	Half HQ	116.35	118.15	1.8	6.85
		MET22-001	Half HQ	118.15	120.15	2	7.61
		MET22-001	Half HQ	120.15	121.45	1.3	4.95
		MET22-001	Half HQ	121.45	121.75	0.3	1.14



JORC Table 1 – MF22-063, MF22-065, MF22-071, MF22-072, MF22-080, MF22-117, MET22-001

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.	 Drill core samples were provided by drill holes from the 2022 Mavis Lake Drill Program performed by Critical Resources Limited. Oriented NQ and HQ core was cut in half and quarters using a diamond saw, with a half core sent for assay and remaining core retained. No other measurement tools other than directional survey tools have been used in the holes at this stage.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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.	 Oriented core was placed V-rail and a consistent cut-line drawn along core to ensure cutting (halving) of representative samples. Sampling is conducted based on core logging, 100% of drill hole core is logged. The core logger is a geologist, has experience in lithium mineralisation, and determines the intervals of samples. All pegmatite intersections are sampled regardless of the visual presence of lithium minerals/spodumene. Host rock is typically not sampled as lithium mineralisation is localized to pegmatites (spodumene mineral) or their alteration halos (holmquistite mineral) within mafic volcanic host rock. Determination of mineralisation has been based on geological logging and photo analysis. 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. HLS testing samples are selected based on geological logging boundaries or on the nominal metre marks.

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Criteria	JORC-Code Explanation	Commentary
		• Samples sent to SGS were bagged on site with security tags. Shipped to SGS via vehicle transport and recovered by SGS Laboratory in Lakefield, Ontario, Canada.
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	 NQ2 and HQ2 diamond double tube coring by Cyr Drilling's EF-50 rig was used throughout the hole. Core orientation was carried out by the drilling contractor.
Drill sample	Method of recording and assessing core and chip sample	Lithological logging, photography
recovery	recoveries and results assessed.	 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.	 Experienced driller contracted to carry out drilling. In broken ground the drillers produced NQ core from short runs to maximise core recovery. Core was washed before placing in the core trays. Core was visually assessed by professional geologists before cutting to ensure representative sampling.
	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.	• See "Aspects of the determination of mineralisation that are Material to the Public Report" above.
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.	
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	



Criteria	JORC-Code Explanation	Commentary			
	The total length and percentage	 Core samples were not geotechnically logged. 			
	of the relevant intersections logged.	 Core samples have been geologically logged to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. 			
		• The core logging was qualitative in nature.			
		All core was photographed			
		•Total length of the MET22-001 was 149m			
		• 100% of the relevant intersections were logged.			
		Total length of the MF22-117 was 188m			
		• 100% of the relevant intersections were logged.			
		Total length of the MF22-63 was 101m			
		• 100% of the relevant intersections were logged.			
		Total length of the MF22-65 was 161m			
		• 100% of the relevant intersections were logged.			
		Total length of the MF22-71 was 158m			
		• 100% of the relevant intersections were logged.			
		Total length of the MF22-72 was 194m			
		• 100% of the relevant intersections were logged			
		Total length of the MF22-80 was 185m			
		• 100% of the relevant intersections were logged			
Sub-sampling	If core, whether cut or sawn and	•Oriented core was placed V-rail and a consistent cut-line			
techniques and sample	whether quarter, half or all core taken.	drawn along core to ensure cutting (halving) of representative samples.			
preparation	If non-core, whether riffled, tube sampled, rotary split, etc and	•Core sample intervals were based in logged mineralisation			
		•No duplicates or second half-sampling.			
	whether sampled wet or dry.	• Appropriate method: oriented NQ and HQ core cut in half using			
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	diamond saw, with a half core sent for assay and half core			
		retained.			
		• Core samples were sent to SGS Laboratory for the purposes of			
		heavy liquidation separation testing for concentrate recoveries.			
	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	y l			
	for instance results for field				
	duplicate/second-half sampling.				



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Criteria	JORC-Code Explanation	Commentary
	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.	 Samples were previously assayed from accredited lab – Activation Laboratories. Methods appropriate for style of mineralisation: UT-7 (Li up to 5%) QOP Sodium Peroxide (Sodium Peroxide Fusion ICPOES + ICPMS. Assays were released in previous announcements.
	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.	 Either standards or blanks are inserted every 10th sample interval as a part of a QAQC process. Standard and blank results from 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. HLS test work samples sent to SGS were bagged on site with security tags. Shipped to SGS via vehicle transport and recovered
	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.	by SGS Laboratory in Lakefield, Ontario, Canada • The Heavy Liquid Separation (HLS) testing samples were sent to an accredited laboratory – SGS Canada Laboratory in Lakefield, Ontario, Canada. • Additional assay analysis was conducted by SGS on the concentrates
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 verification, data storage (physical and electronic) protocols.	 No independent verification completed at this stage. MET22-001 is a twined hole of MF22-116. Core measured, photographed and logged by geologists. Digitally recorded plus back-up records. No adjustments to the laboratory assay data. No assay cut off grades are applied.
	Discuss any adjustment to assay data.	
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



Criteria	JORC-Code Explanation	Commentary
	used.	contracted to accurately survey all drill collars at completed of drill program.
	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.	• Not relevant to current drilling.
		 Not relevant to current drilling. 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	sampling of possible structures and the extent to which this is	 The orientation of the mineralisation is unknown. The drilling program is aimed at determining orientation of the mineralisation. 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
	drilling orientation and the orientation of key mineralised	mineralisation released are given as downhole 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	The measures taken to ensure sample security.	 Core samples were stored at the Dryden core yard and core shack under lock and key before delivery Samples sent to SGS were bagged on site with security tags. Shipped to SGS via vehicle transport and recovered by SGS Laboratory in Lakefield, Ontario, Canada
Audits or reviews	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	Commente	ary					
Mineral tenement and land tenure status		 <i>ing</i> Cell Mining Claims and six separate surface leases which secure the surface rights of the land required for the Project footprint. <i>ng</i> 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 repewed for an additional 21 years if required 						
	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.							
-	Acknowledgment and appraisal of exploration 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). 					inada onal	
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:	Hole ID MET22-001 MF22-117 MF22-63	Easting 524557 524548 524231	Northing 5518059 5518097 5517973	RL 437 439 446	Azimuth 190 190.1 187.4	Dip -70 -70 -70.1	To Depth 149 188 101
	Easting and northing of the drill hole collar Elevation or RL (Reduced Level – elevation above sea level in	MF22-71 524200 5518038 447 179.8 -77 19 MF22-72 524202 5518037 447 349.8 -85.9 19 MF22-80 524083 5518052 442 284.8 -74.9 18						161 158 194 185
	metres) of the drill hole collar Dip and azimuth of the hole							tion of
	down hole length and interception depth		 All drill collars are re-surveyed at a later date upon completion of drill hole for accurate collar coordinates. 					
	hole length.							
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does							



Criteria	JORC-Code Explanation	ſ
	not detract from the	ľ
	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.	F
	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.	•
)	The assumptions used for any reporting of metal equivalent values should be clearly stated.	
Relationship	These relationships are	
between	particularly important in the	r
mineralisation	reporting of Exploration Results.	c
widths and	If the geometry of the	0
intercept lengt	mineralisation with respect to	
))	the drill hole angle is known, its	
	nature should be reported.	t
	If it is not known and only the	¢
	down hole lengths are reported,	l
	there should be a clear	
	statement to this effect (e.g.,	
	'down hole length, true width not known').	
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being	r

eria	JORC-Code Explanation	Commentary
	not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
regation hods	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. • None used
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	
əralisation		• True width is calculated from logging geologists structural measurements from upper and lower contacts of pegmatite dyke and the host rock. Both apparent downhole lengths and true widths
		are provided. • 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.
	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.
	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	• The drilling is aimed at clarifying the structure of the mineralisation.



Criteria	JORC-Code Explanation	Commentary
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.
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	• Overview of exploration data leading to selection of drill targets provided.
	me natare ana ceale el plannea	 Further drilling underway to confirm, infill and extend known mineralisation. A total of 20,000 has been approved for completion in 2023 with consideration for further extensions at the Board's discretion.