

# PRELIMINARY METALLURGICAL TEST WORK YIELDS 3.75% LI<sub>2</sub>O IN LEPIDOLITE CONCENTRATE

# **Highlights**

- Flotation test on a high-grade sample achieved a 80.5% lithia recovery to a lepidolite concentrate grading 3.75% Li<sub>2</sub>O.
- The concentrates produced contained very low levels of iron contaminants at 0.07% Fe<sub>2</sub>O<sub>3</sub>.

Eastern Resources Limited ("Eastern Resources" or the "Company") is pleased to announce results from the metallurgical test work on samples from the Lepidolite Hill Project ("Project") performed by leading independent metallurgical laboratory Nagrom.

Excellent metallurgical results were achieved in the preliminary test work, which demonstrated that recoveries range between 80% to 82% producing a 3.7% Lithia in lepidolite concentrate could be achieved using a combination of magnetic separation and conventional flotation.

## **Results Summary**

A summary of recoveries and grades for lithium (Li<sub>2</sub>O) and iron (Fe<sub>2</sub>O<sub>3</sub>) are presented in Table 1

Fraction	Mass	Grade	Recovery	Grade	Recovery
		Li <sub>2</sub> O	Li <sub>2</sub> O	Fe <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>
Re-cleaner conc	44.1%	3.75%	80.53%	0.07%	9.82%
Cleaner tails.	5.9%	1.38%	3.86%	0.07%	1.16%
Scavenger tails	39.2%	0.28%	5.34 %	0.01%	1.17%
Magnetics	1.4%	1.53%	1.07%	12.43%	53.08%
Slimes	9.4%	2.01%	9.20%	1.24%	34.78%
Feed	100.0%	2.07	100.00%	0.05	100.00%

Table 1: Flotation Results



#### **Metallurgical Test Work Overview**

The first batch of 27 kg composite samples selected from the Project was delivered to Nagrom metallurgical and analytical laboratory in Perth, to conduct metallurgical test work. The metallurgical test program was designed to test the ability to produce a commercial lithium concentrate by conventional multi-stage flotation technology.



Figure 1: Location of stockpile for the first batch of samples



## Flotation

Flotation is the most widely used technique for the beneficiation of lithium-bearing minerals and is more suited to the processing of fine particle size feed. The processing route selected was as follows:

- Stage Crush (~20kg) to P100 =3.35mm
- Grind (17x 1kg) to P80= 0.106mm
- Cyclone Deslime (17kg) to produce one (1) Overflow and one (1) Underflow fraction, with target Cut-Point @D50 =10-20µm
- WHGMS145 (~15kg) to produce one (1) Overflow and one (1) Underflow fraction, at 3000 Gauss
- Sighter Multi-Stage Flotation (1kg) to produce up to ten (10) fractions
- All tests were done in Perth tap water

All samples were analysed via ICP/XRF for  $Li_2O$ ,  $Fe_2O_3$ , CaO,  $K_2O$ , MgO, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, Na<sub>2</sub>O, Ta<sub>2</sub>O<sub>5</sub>, Nb<sub>2</sub>O<sub>5</sub> and LOI1000.

### LEPIDOLITE HILL LITHIUM PROJECT

The Lepidolite Hill Lithium Project is strategically located in the Southern Yilgarn lithium belt. The Project is located approximately 18 km south-southwest of Coolgardie WA, and 32 km west of the Mt Marion Lithium mine.

The Project was a historical old lepidolite and petalite mine in the early 1970's. Lithium-rich pegmatites are common in the Lepidolite Hill project area.

An exploration drilling program conducted by the Company in February 2024 discovered further lithium mineralisation at the Project. Pegmatite horizons were encountered in 6 out of 37 drill holes, with an outstanding result of lithium bearing pegmatite grading 13m @ 1.47% Li<sub>2</sub>O from 19m within drill hole EFLHRC011. Mine stockpiles and limited drilling have confirmed high grade lithium, tantalum and rubidium.

The Project has significant potential for further discoveries of lepidolite, petalite and spodumene. The Company's partner Yongxing Special Materials has strong demand for lepidolite and notes the promising test work completed by Lithium Australia which indicates potential for high recovery of lithium.





Figure 2: Location of Lepidolite Hill Project





## ABOUT EASTERN RESOURCES LIMITED

Eastern Resources Limited (ASX: EFE) is an Australia based ASX-listed, emerging lithium focused exploration and development company.

The Company holds four lithium assets in WA as follows:

- 100% interest in the Trigg Hill Lithium-Tantalum project which is strategically located in the historical lithium-tin-tantalum district in the Pilbara,
- 70% interest in the Lepidolite Hill Lithium project located in Southern Yilgarn Lithium Belt (30% interest held by Lithium Australia),
- 100% interest in the Lake Johnston project located in the Southern Yilgarn Lithium Belt,
- 100% interest in the Yalgoo West Lithium project located in Yalgoo lithium province.

The Company is also developing the Nowa Nowa Iron project in East Gippsland, VIC.

The Company has formed a strategic partnership with Ya Hua International Investment and Development Co. Ltd, a wholly owned subsidiary of Yahua Group which is one of the largest Chinese lithium converters, to acquire and develop spodumene projects. The Company also has executed a Strategic Partnership Agreement with Yongxing Special Materials Technology Co. Ltd. ("Yongxing") to acquire and develop lepidolite projects. Yongxing is one of the major Chinese lithium converters using lepidolite concentrates as feed to produce battery grade lithium carbonate. These two strategic relationships provide Eastern Resources with excellent coverage over the primary lithium sources.

#### **INVESTOR INFORMATION**

Further information, previous Company announcements and exploration updates are available at the Investors tab on the Company's website – www.easternresources.com.au

This announcement has been authorised for release by the Board of the Company.

#### Eastern Resources Limited

Myles Fang Executive Director

#### ASX: EFE

For enquiries on your shareholding or change of address please contact: Automic at hello@automicgroup.com.au or 1300 288 664 (within Australia) or +61 2 9698 5414



#### **COMPETENT PERSONS STATEMENT**

The information in this release that relates to Exploration Results is based on, and fairly represents information and supporting documents complied by Mr Glenn Coianiz, consultant to the Company. Mr. Coianiz is a Registered Professional Geoscientist and Member of the Australian Institute of Geoscientists. Mr. Coianiz has sufficient relevant 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 within the definition of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("JORC Code). Mr Coianiz consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

The information in this release that relates to Metallurgical Results is based on, and fairly represents, information and supporting documentation prepared and reviewed by Mr Noel O'Brien, FAusIMM, MBA, B. Met Eng. Mr. O'Brien is a consultant of the company and is a Fellow of the Australasian Institute of Mining and Metallurgy. He has sufficient experience with the style of processing response and type of deposit under consideration, and to the activities undertaken, to qualify as a competent person as defined in the 2012 edition of the "Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr O'Brien consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

#### FORWARD LOOKING STATEMENTS

This announcement includes certain "forward-looking statements". All statements, other than statements of historical fact, are forward looking statements that involve risks and uncertainties. There can be no assurances that such statements will prove accurate, and actual results and future events could differ materially from those anticipated in such statements. Such information contained herein represents management's best judgement as of the date hereof based on information currently available. The Company does not assume any obligation to update forward looking statements. Any forward-looking statements in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law and the ASX Listing Rules, the Company, its directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of the events referred to in this announcement will occur as contemplated.



# Appendix A JORC Code Table 1: Exploration Results

# 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 specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma	Samples were taken as grab samples selected from a single stockpile, comprising historical mineralised waste, immediately adjacent to the Lepidolite Hill open pit.
	These examples should not be taken as limiting the broad meaning of sampling.	The stockpile was selected for sampling as it is the largest stockpile on site, containing the greatest size range of mineralised material.
	<ul> <li>Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.</li> <li>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.</li> </ul>	Mineralised material was selected (by a suitably qualified and experienced geologist) to include approximately 60% lepidolite (by visual estimate), with mineralised material taken as a representative sample across the surface of the entire stockpile. 60% Lepidolite was nominated to approximate expected ore mineralogy and allows sufficient waste mineralogy to facilitate concentration by flotation. Rocks ranging from 7 – 15cm were taken, to allow better estimation of lepidolite percentage, and to provide a better representation of in-situ mineralised materials. 27 kg of sample was collected on site to allow for the overall material to be reviewed visually for suitability prior to submission.
Drilling	Drill type (e.g. core, reverse circulation, open-	No drilling was done for sample collection.
techniques	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.).	
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	No drilling was done for sample collection.
	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.	



Criteria	JORC Code Explanation	Commentary
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.	Detailed logging of individual samples was not undertaken; however, the stockpile material consists of a mixture of unmineralised and lepidolite-mineralised pegmatite.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography	The extent of the sampling was recorded by handheld GPS.
	The total length and percentage of the relevant intersections logged.	
Sub-sampling techniques	If core, whether cut or sawn and whether quarter, half or all core taken.	The composite sample was submitted to Nagrom Laboratory in Perth and was dried
and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	and crushed to a top size of 3.35mm. The crushed sample was pulverised to 80% passing 106 microns prior to analysis.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The preparation methods are appropriate for the sampling method.
	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.	
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.	At Nagrom, prepared samples were fused with sodium peroxide and digested in dilute hydrochloric acid. The resultant solution was analysed by ICP (lab code ICP004_MS) for
	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.	Be, Cs, Li, K, Nb, Rb, Sn, Ta, Y, U, Fe, Mg. The sodium peroxide fusion – hydrochloric digest method offers total dissolution of the sample and is useful for LCT mineral matrices that may resist acid digestions
	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.	Industry, normal practice, QAQC procedures were followed by Nagrom.



Criteria	JORC Code Explanation	Commentary
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Not applicable for the early-stage exploratory programs undertaken.
	The use of twinned holes.	reporting values as common oxides.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	
	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.	All locations have been presented in zone 50 GDA 1994 MGA.
	Specification of the grid system used.	
	Quality and adequacy of topographic control.	
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The current sample is a composite of material that was collected across an area
	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.	A total of 27kg of material was selected on site.
	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.	The samples were recovered from a stockpile and the orientation of the geological structure was not part of this exercise.
	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.	For the purposes of the current study, the sample is suitably representative of a stockpile of previously mined mineralisation from the Lepidolite Hill ore body.
Sample security	The measures taken to ensure sample security.	Samples were collected by the site geologist, stored in secure premises pending review,
		and delivered by the site geologist to the Nagrom laboratory.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews of sampling techniques has been undertaken.



# Section 2 Reporting of Exploration Results

Criteria	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 any known impediments to obtaining a licence to operate in the area.	Prospecting licences P15/5739, P15/5574 and P15/5575 subject to the application for Mining Lease 15/1874 are located 19km WS of Coolgardie in the Eastern Goldfields and held in the name of Lithium Australia Ltd. The Company has 70% legal and beneficial ownership of the tenement and Lithium Australia Ltd has 30% legal and beneficial ownership of the tenement.
		The Licences are subject to a registered native titled claim in the name of Marlinyu Ghoorlie.
Exploration done by other	Acknowledgment and appraisal of exploration by other parties.	This report refers to prior exploration results previously announced on ASX on:
parties		8 May 2023 'Eastern Resources Acquires Lepidolite Hill Lithium Project'
Geology	Deposit type, geological setting and style of mineralisation.	The local geology consists of a folded sequence of metamorphosed komatiite and basalt of the Hampton Hill Formation and the greenstones of the Eastern Goldfields Superterrane. Granitic rocks of the Yilgarn Craton granites outcrop within 1km. Two bodies of pegmatites outcrop at Lepidolite Hill within the greenstone. The first strikes northeast, dipping northwest, with variable widths to 90m. The second is a south pointing "L" shaped pegmatite with dips to the northeast and northwest. The pegmatites are of the LCT (Lithium- Caesium-Tantalum) type containing the lithium-bearing minerals, lepidolite, petalite and zinnwaldite. It is also the first documented occurrence of pollucite, a caesium-bearing zeolite.
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 done in this programme
	<ul> <li>easting and northing of the drill hole collar</li> </ul>	
	<ul> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> </ul>	
	dip and azimuth of the hole	
	<ul> <li>down hole length and interception depth</li> </ul>	
	hole length.	



Criteria	Explanation	Commentary
	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.	No top cuts were applied. No metal equivalent values used.
	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 between	These relationships are particularly important in the reporting of Exploration Results.	No drilling was done in this programme.
mineralisation widths and intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported	
	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').	
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	No drilling was done in this programme. A schematic of the stockpile has been included showing positioning of the sample sites.
	locations and appropriate sectional views.	
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.	No drilling was done in this programme.
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;	All relevant and material exploration data for the target areas discussed, has been reported.



Criteria	Explanation	Commentary
	potential deleterious or contaminating substances.	
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).	Eastern Resources Limited is planning to undertake further drilling, mapping and sampling within the area.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

