

# Cultural Heritage Survey to Commence at Lake Johnston

#### **Highlights**

- o Cultural Heritage Survey due to commence 30 November 2023
- o Program of Works for maiden Lake Johnston drilling program has been approved
- Earlier fieldwork identified outcropping pegmatitic rocks at Rubix's Lake Johnston project, with in-soil anomalies supporting the project's lithium prospectivity
- The observed pegmatites occur as veins injected into rocks believed to represent the Lake Johnston Greenstone Belt
- The Lake Johnston Greenstone Belt is host to recent lithium mineralisation discoveries at Mount Day and Medcalf (Charger Minerals ASX:CHR) as well as the Burmeister Lithium Project (TG Metals ASX:TG6)



Figure 1 – Mines and projects nearby the Lake Johnston project



Rubix Resources Limited (ASX: RB6) (**Rubix** or the **Company**) is pleased to announce the imminent commencement of a Cultural Heritage Survey at Lake Johnston. Together with the registered Native Title Holders, the Ngadju People, Rubix will work with a consultant ethnographer/anthropologist, Heritage Liaison Officer and a Survey Team to review the sites of proposed new access tracks and drillholes.

The West Australian Department of Mines, Industry Regulation and Safety ("DMIRS") has approved Rubix's Program of Works comprising up to 35 drillholes designed to test the mineralisation potential of both the Jimberlana Dyke and the Lake Johnston Greenstone Belt, including outcropping pegmatites (e.g. **Figure 2**).



Figure 2 - Weathered pegmatites observed in outcrop in the project area

A number of outcropping pegmatite rocks were observed during fieldwork in 2022 at several locations within the Lake Johnston project (**Figure 3**). The pegmatites were observed in association with the Lake Johnston Greenstone Belt, interpreted from high-resolution magnetic data collected by Rubix. The Lake Johnston Greenstone Belt (LJGB) is host to recent lithium mineralisation discoveries at Mount Day and Medcalf (Charger Minerals ASX:CHR), and at the Burmeister Lithium Project (TG Metals ASX:TG6), located to the northwest and south of Rubix' license.

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Figure 3 – Location of pegmatite outcrops and Li in soil results. Labelled individual soil assay results are in Li ppm.

#### Lithium in soil anomalism

Soil geochemistry obtained by Rubix identified several locations in which lithium values in soil were > 95 ppm Li (i.e., > 205 ppm Li2O, **Figure 3**). These results were reported to the market on 8 February 2023. Importantly, the soil results are located close to both outcropping pegmatites and the interpreted position of the LJGB through the Project. Rock chip samples collected from outcropping pegmatites in the project area returned no notable assay results.

Like recent observations made at the nearby Burmeister Project (TG Metals), Rubix considered that the weathered nature of these pegmatites might have contributed to the decomposition of any lithium-bearing minerals present.

A Program of Works to drill test both soil anomalies and outcropping pegmatites was approved by DMIRS on 10 October 2023, and Rubix now awaits final Cultural Heritage Clearance to commence exploration activities.

#### Lithium mineralisation in the Lake Johnston Greenstone Belt

Lithium-bearing pegmatites at the Burmeister Project (**Figure 4**) comprise a shallowly (10-15°) west-dipping series of stacked pegmatites between 8 and 12m thick, which are mineralised with spodumene<sup>1</sup>. Near surface and at shallow depths, the tenor of mineralisation is poor due to the decomposition of spodumene.

At Medcalf, pegmatites occur as a swarm of anastomosing tabular bodies up to 5m thick, hosted in foliated amphibolites. Both the enclosing host rocks and pegmatites strike northwest, and pegmatites have a dip of approximately 40° to the southwest<sup>2</sup>.

<sup>&</sup>lt;sup>1</sup> TG Metals ASX release dated 30<sup>th</sup> October 2023

<sup>&</sup>lt;sup>2</sup> Charger Metals ASX release dated 19 January 2023

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#### Cautionary note:

The presence of pegmatite, pegmatite granite or visual spodumene does not equate to economic levels of lithium mineralization. The Company is encouraged by the geology and regional geophysical data currently available, but no further quantitative or qualitative assessment of mineralization is possible at this stage. The Company plans to undertake further work to test for potential lithium mineralization.



Figure 4 – Subcropping granitic pegmatites in the project area

#### Next steps

- Cultural heritage clearance survey (CHS) will commence 30 November 2023
- o Pending results of the CHS, creation of drill lines and pads will follow
- Commencement of drilling program

#### Lake Johnston Project Overview

Rubix's Lake Johnston Project in south-central Western Australia comprises a single license, E63/2091, held 100% by Rubix. The project is prospective for gold (Au), nickel (Ni), platinum group metals (PGEs) and lithium (Li) mineralisation.

The project encompasses a structural deflection of the Jimberlana Dyke, a layered mafic intrusion with features comparable to the Great Dyke of Zimbabwe, which is prospective for nickel and platinum group metals. The project encompasses the same geology of the Lake Johnston Greenstone Belt which is host to massive sulphide nickel deposits and lithium-tantalum pegmatite fields.

Rubix' tenure is located 12 km east of the Maggie Hays and Emily Ann nickel mines (owned by Poseidon), and the Mount Day Projects (Charger Metals), and 30 km to the north of the Medcalf Spodumene project (Charger Metals). The Earl Grey / Mt Holland lithium mine and concentrator (Covalent Lithium) is approximately 85km to the west of the Lake Johnston project (**Figure 5**)

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#### Authorised for released by the board of Rubix Resources Limited.

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#### **About Rubix Resources**

Rubix Resources Limited (ASX: RB6) has a diversified base metal and gold asset portfolio providing opportunities for new discoveries in proven districts. The company's assets comprise ten exploration licenses across four projects in Northern Queensland and Western Australia, and the Ceiling Lithium Project in James Bay, Quebec.

| Project                   | Tenement   | Status  | % Held |
|---------------------------|------------|---------|--------|
| Paperbark                 | EPM 14309  | Granted | 100%   |
| Etheridge                 | EPM 27377  | Granted | 100%   |
| Etheridge                 | EPM 27253  | Granted | 100%   |
| Etheridge                 | EPM 27294  | Granted | 100%   |
| Etheridge                 | EPM 27295  | Granted | 100%   |
| Lake Johnston             | E 63/2091  | Granted | 100%   |
| Redbeds (Paperbark South) | EPM 28439  | Granted | 100%   |
| Redbeds (Paperbark South) | EPM 28440  | Granted | 100%   |
| Redbeds (Paperbark South) | EPM 28441  | Granted | 100%   |
| Redbeds (Paperbark South) | EPM 28442  | Granted | 100%   |
| Ceiling Lithium Project   | 101 active | Granted | 100%   |
| (Quebec)                  | properties |         |        |

#### Table 1 – Details of Rubix Resources' exploration licenses, granted and pending

#### **Competent Person Statement**

The information in this announcement is based on, and fairly represents information compiled by Dr. Casey Blundell, a Competent Person who is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which she has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Blundell consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

#### **Forward Looking Statements**

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.



#### Appendix 1 JORC Code, 2012 Edition – Table 1 Report

#### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

| Criteria  | JORC Code Explanation  | Commentary   |
|---|--|--|
| Sampling<br>techniques                                  | <ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity 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.</li> <li>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> | <ul> <li>Soil sampling results and assay methods were originally reported in ASX Release dated February 8, 2023.</li> <li>Sampling techniues are repeated here for the reader's review. The reader is encouraged to review the relevant release for full assay results.</li> <li>63 soil samples were collected using hand tools from pre-selected sites in the project area</li> <li>Samples of approx. 2-3kg were taken from the B-horizon where possible, with care taken to avoid collection of calcrete and lateritic duricrust</li> <li>Samples were collected in labelled calico bags and a GPS point taken using a Garmin handheld GPS</li> <li>At the end of each day, collected samples were sieved twice to remove coarse sands, gravel and any organic material. The remaining portion of fines was collected in a labelled cardboard sample sleeve</li> </ul> |
| Drilling<br>techniques                                  | <ul> <li>Drill type (e.g. core, reverse circulation, open-hole<br/>hammer, rotary air blast, auger, Bangka, sonic, etc.) and<br/>details (e.g. core diameter, triple or standard tube, depth<br/>of diamond tails, face-sampling bit or other type,<br/>whether core is oriented and if so, by what method,<br/>etc.).</li> </ul>  | No drilling undertaken   |
| Drill sample<br>recovery                                | <ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>   | No drilling undertaken   |
| Logging   | <ul> <li>Whether core and chip samples have been geologically<br/>and geotechnically logged to a level of detail to support<br/>appropriate Mineral Resource estimation, mining studies<br/>and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature.<br/>Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant<br/>intersections logged.</li> </ul>  | No drilling undertaken   |
| Sub-sampling<br>techniques<br>and sample<br>preparation | <ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>   | No drilling undertaken   |

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|   | <ul> <li>Measures taken to ensure that the sampling is<br/>representative of the in-situ material collected, including<br/>for instance results for field duplicate/second-half<br/>sampling.</li> <li>Whether sample sizes are appropriate to the grain size<br/>of the material being sampled.</li> </ul>   |  |
|---|---|--|
| Quality of<br>assay data<br>and laboratory<br>tests                 | <ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul> | The company submitted 63 fine soil<br>samples to Labwest (Perth) for Ultrafine+<br>analysis.<br>The Ultrafine+ technique uses the<br><2micron soil fraction to deliver Au +<br>multielement analytical data results from<br>small sample sizes, with better elemental<br>detection.<br>Samples were prepared using a<br>microwave-assisted aqua regia digest<br>and finished by ICP-MS/OES.<br>For further details on the Ultrafine+<br>method, please refer to:<br>https://www.labwest.net/ultrafine/ and<br>details therein. |
| Verification of<br>sampling and<br>assaying                         | <ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>   | Samples were collected at pre-selected<br>sample sites, with coordinates for each<br>sample checked and noted upon arrival<br>and departure.<br>At the end of each day, collected samples<br>were verified and a copy of the data was<br>made and stored separately from the<br>working field dataset.   |
| Location of<br>data points  | <ul> <li>Accuracy and quality of surveys used to locate drill holes<br/>(collar and down-hole surveys), trenches, mine workings<br/>and other locations used in Mineral Resource<br/>estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>   | <ul> <li>Datapoints were verified using a<br/>handheld Garmin GPS device with<br/>an accuracy of up to 5m.</li> </ul>  |
| Data spacing<br>and<br>distribution                                 | <ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>  | <ul> <li>Five soil traverses were conducted<br/>at a sample spacing of 50-100m in a<br/>north south direction.</li> <li>Remaining samples were collected<br/>from directly above anomalous<br/>magnetic features, the coordinates of<br/>which were previously identified and<br/>input as waypoints to the handheld<br/>GPS.</li> <li>No sample composites were applied.</li> </ul>   |
| Orientation of<br>data in<br>relation to<br>geological<br>structure | <ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>  | Soil traverses were designed to capture<br>data across the Jimberlana Dyke,<br>perpendicular to the strike of the dyke.<br>No drilling was undertaken.   |
| Sample<br>security  | • The measures taken to ensure sample security  | Labelled samples were prepared each day by Rubix staff and handed directly to Labwest employees.   |



|                      |   | Samples were labelled to preserve the anonymity of project and location. |
|----------------------|---|--|
| Audits or<br>reviews | The results of any audits or review of sampling techniques and data | The data has not been audited and reviewed.                              |

### **Section 2 Reporting of Exploration Results**

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

| Criteria                                      | JORC Code explanation  | Commentary  |
|---|--|---|
| Mineral tenement<br>and land tenure<br>status | <ul> <li>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.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to</li> </ul>   | The Lake Johnston Project comprises a<br>single granted exploration licence, 100%<br>owned by Rubix Resources Ltd.<br>The Project is located within the Ngadju<br>Native Title Determination area, and Rubix<br>Resources has entered ino a Ngadju Heritage<br>Protection Agreement for E63/2091.   |
|   | obtaining a licence to operate in the area.  | The Project is positioned partially over the<br>registered Lake Johnston Native Heritage<br>Area: Maggie Hays Ethnographic Site 3.  |
| Exploration done<br>by other parties          | <ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>  | Relatively limited exploration activities have<br>been carried out in the tenement area.<br>Tempest airborne EM data was collected over<br>the Jimberlana Dyke by Anaconda Limited in<br>1999 to determine the potential for bedrock<br>conductors. Modelling of the wide-spaced<br>airborne EM data has revealed several strong<br>bedrock conductors located within the Dyke<br>margins as well as the host rocks.<br>Avoca Resources Limited undertook a<br>structural interpretation using all available<br>aeromagnetic<br>data which included historic contour plans of<br>data collected by WMC along N-S flight lines<br>and an image created for a portion of the<br>Dyke.<br>Regional geophysical data also exists from |
| Geology                                       | <ul> <li>Deposit type, geological setting and style of<br/>mineralisation.</li> </ul>  | The Lake Johnston Project is located in the<br>Lake Johnston Greenstone Belt of the<br>Younami Terrane and is positioned over a<br>segment of the Jimberlana Dyke.<br>The Project is prospective for vein-hosted<br>gold, magmatic Ni-Cu-PGE and lithium-<br>pegmatite mineralisation.  |
| Drill hole<br>information                     | <ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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</li> </ul> | Not applicable, no drilling completed   |

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| Criteria   | JORC Code explanation  | Commentary   |
|--|--|--|
|  | understanding of the report, the Competent<br>Person should clearly explain why this is the<br>case.   |  |
| Data aggregation<br>methods  | <ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul> | Not applicable, no drilling completed  |
| Relationship<br>between<br>mineralisation<br>widths and<br>intercept lengths | <ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>   | Not applicable, no drilling completed  |
| Diagrams   | <ul> <li>Appropriate maps and sections (with scales) and<br/>tabulations of intercepts should be included for<br/>any significant discovery being reported. These<br/>should include, but not be limited to a plan view of<br/>drill hole collar locations and appropriate sectional<br/>views.</li> </ul>   | Appropriate plans are included in this release   |
| Balanced<br>reporting  | <ul> <li>Where comprehensive reporting of all Exploration<br/>Results is not practicable, representative<br/>reporting of both low and high grades and/or<br/>widths should be practiced to avoid misleading<br/>reporting of Exploration Results.</li> </ul>  | The release is considered to be balanced,<br>with all relevant information included in the<br>release.   |
| Other substantive<br>exploration data  | <ul> <li>Other exploration data, if meaningful and material,<br/>should be reported including (but not limited to):<br/>geological observations; geophysical survey<br/>results; geochemical survey results; bulk samples         <ul> <li>size and method of treatment; metallurgical test<br/>results; bulk density, groundwater, geotechnical<br/>and rock characteristics; potential deleterious or<br/>contaminating substances.</li> </ul> </li> </ul>   | To the best of the Company's knowledge, no material exploration data or information has been omitted from this Release.                                  |
| Further work   | <ul> <li>The nature and scale of planned further work<br/>(e.g., tests for lateral extensions or depth<br/>extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of<br/>possible extensions, including the main geological<br/>interpretations and future drilling areas, provided<br/>this information is not commercially sensitive.</li> </ul>   | Cultural Heritage Surveys<br>Track clearing & maintenance work<br>Drill line and pad creation<br>Aircore drilling program<br>Soil and rock chip sampling |