

## **Completion of Phase 1 program at Isabella Project with spodumene-bearing pegmatite trends over 1km**

### **HIGHLIGHTS**

- Successful completion of Phase 1 program at the Isabella Lithium Project, Lithium Valley, Brazil:
  - Multiple spodumene (See Figure 5) occurrences identified, with mineralised trends exceeding 1km and open along strike.
  - Additional targets indicating potential parallel structures outside the main corridors, supporting evidence of further potential occurrences within the license area.
  - Extensive artisanal workings continue to guide and fast-track exploration understanding via access to subsurface geology with tunnels extending up to 150m.
  - Multiple batches totalling 88 rock chip samples to be received by labs in Brazil with results expected over the next in 4-8 weeks.



**Figure 1 & 2 : Images of spodumene occurrences at Isabella Project.<sup>1</sup>**

- Pre-acquisition rock chip sampling by Perpetual has **already confirmed high grades of up to 5.62% Li<sub>2</sub>O** from artisanal workings<sup>2</sup>.
- Perpetual's Isabella license is located adjacent to two confirmed spodumene projects;
  - **0.5 km from Atlas Lithium's flagship Das Neves Project** (NASDAQ:ATLX, Market Cap: US\$110 million), where an intersection of 1.47% Li<sub>2</sub>O over 95.2 meters was reported. Atlas

<sup>1</sup>Refer to Appendix 1 for full rock descriptions & locations.

<sup>2</sup>Refer to ASX announcement dated 24th July 2024.

Lithium is currently constructing a lithium processing plant at Das Neves, which is expected to come online in Q4 2024.<sup>3</sup>

- <3km from the Sigma Lithium's (NASDAQ:SGML, Market Cap: US\$1.4 billion) Sao Jose Project which is an advanced spodumene exploration project.
- Perpetual expects to report the first set of **rock chip results within ~2-4weeks**, with exploration efforts ongoing targeting identification of drill targets for a maiden drilling campaign in 1H 2025.
- Perpetual is undertaking additional reconnaissance trips in November to continue target development and initiate environmental and local landowner approvals, advancing the formal drilling approval process.

**Perpetual Resources Ltd ("Perpetual" or "the Company") (ASX: PEC)** is pleased to provide an update after the completion of its maiden exploration program at the recently acquired Isabella Lithium Project, located in Brazil's prolific Lithium Valley.

The program was centred on a high-impact sampling campaign, targeting known spodumene-bearing artisanal workings while expanding exploration across the broader license area. The surface reconnaissance aims to identify high-potential LCT-bearing pegmatite drill targets, which will position the Isabella Project as a leading lithium exploration opportunity in Brazil's Lithium Valley, adjacent to other large, advanced spodumene projects.

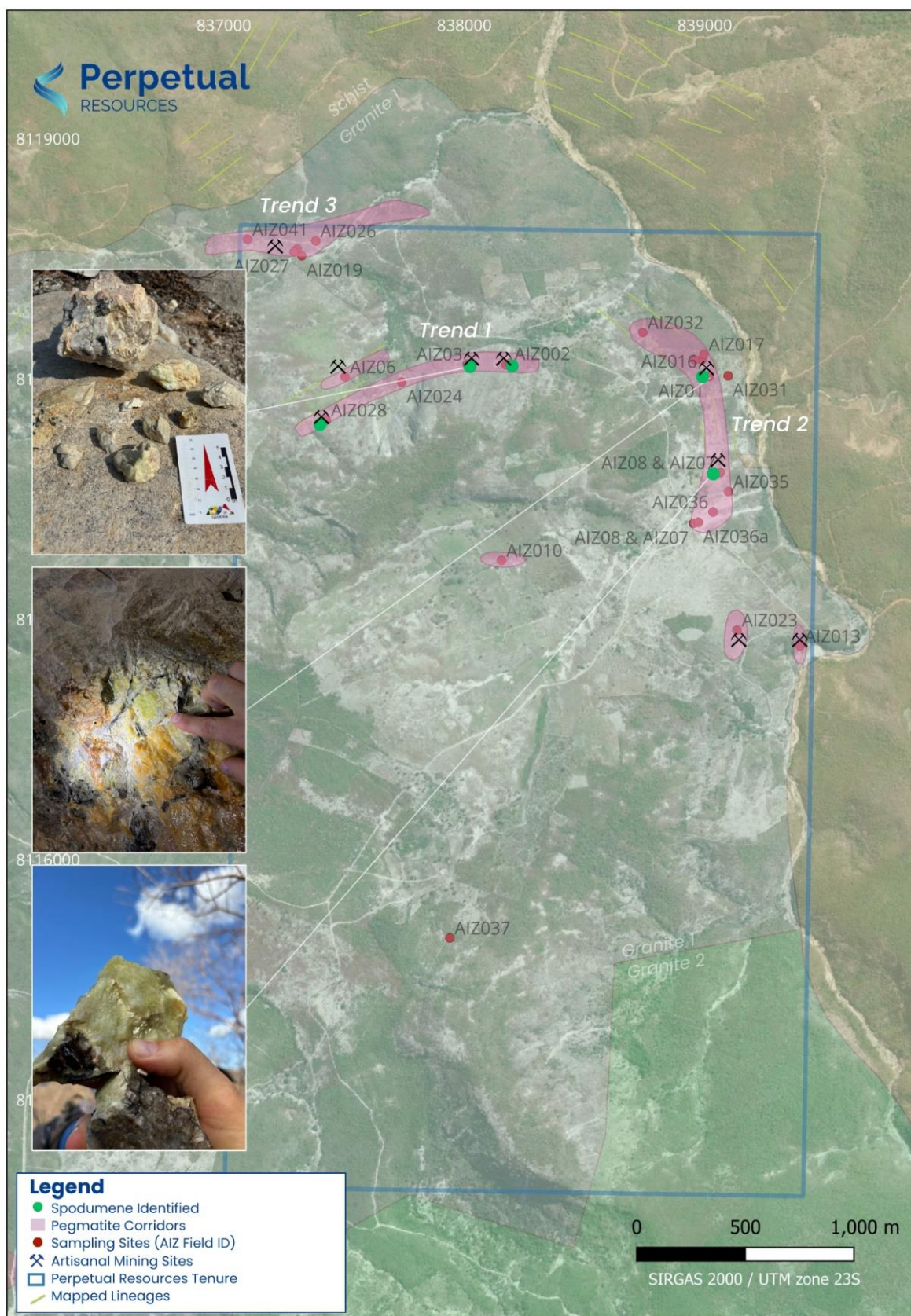


**Figure 3 & 4: Images of artisanal workings occurrences at Isabell Project.** <sup>4</sup>

<sup>3</sup> <https://www.atlas-lithium.com/news/atlas-lithium-progresses-with-dms-plant-construction-remains-on-schedule-for-q4-2024-production/>

<sup>4</sup> Refer to ASX Appendix 1 for full rock descriptions & locations.





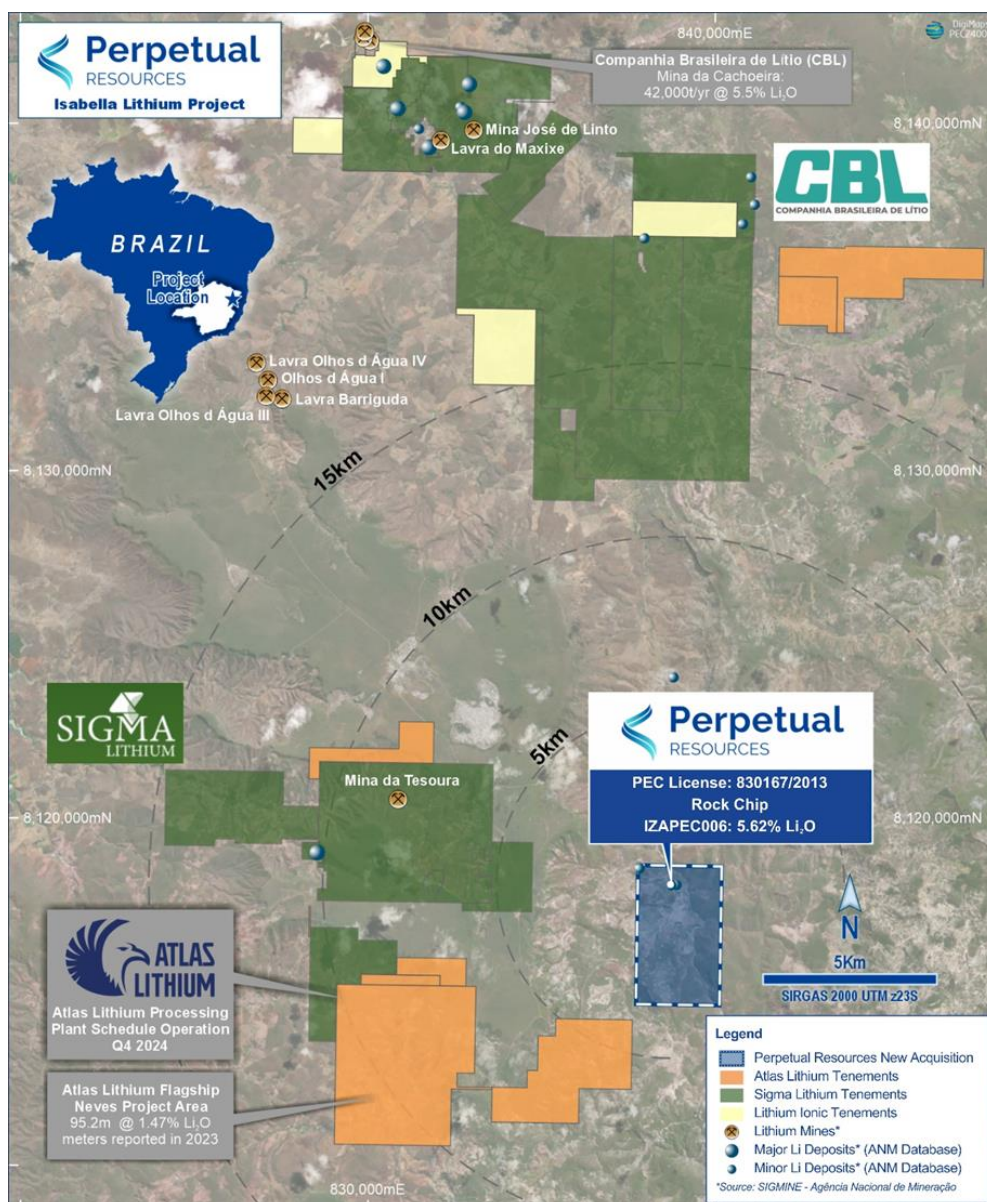
**Figure 5: Map showing sampling locations, identified spodumene occurrences, artisanal workings, and pegmatite trends, with an inset photo from field sample work at the Isabella Project. <sup>5</sup>**

<sup>5</sup> Refer to ASX Appendix 1 for full rock descriptions & locations.



**Perpetual's Exploration Manager, Mr. Allan Stephens, commented;**

*The Isabella Project is quickly proving itself as a prime exploration opportunity in the heart of the prolific Lithium Valley in Brazil. In just a few months, we have expanded on initial reconnaissance findings, identifying multiple pegmatite trends with spodumene mineralization continuity over 1km, with potential for further growth. The presence of multiple strong targets, close in proximity, reinforces our confidence in uncovering further linkages within this pegmatite system at depth, which we are eager to develop and unlock. We look forward to sharing the upcoming results with you soon.*



**Figure 6 – Regional map of Isabella Project area adjacent to Atlas Lithium and Sigma<sup>678</sup>.**

<sup>6</sup> Refer to CBL's website as of 22nd March 2024: <https://www.cblitio.com.br/en/mining>

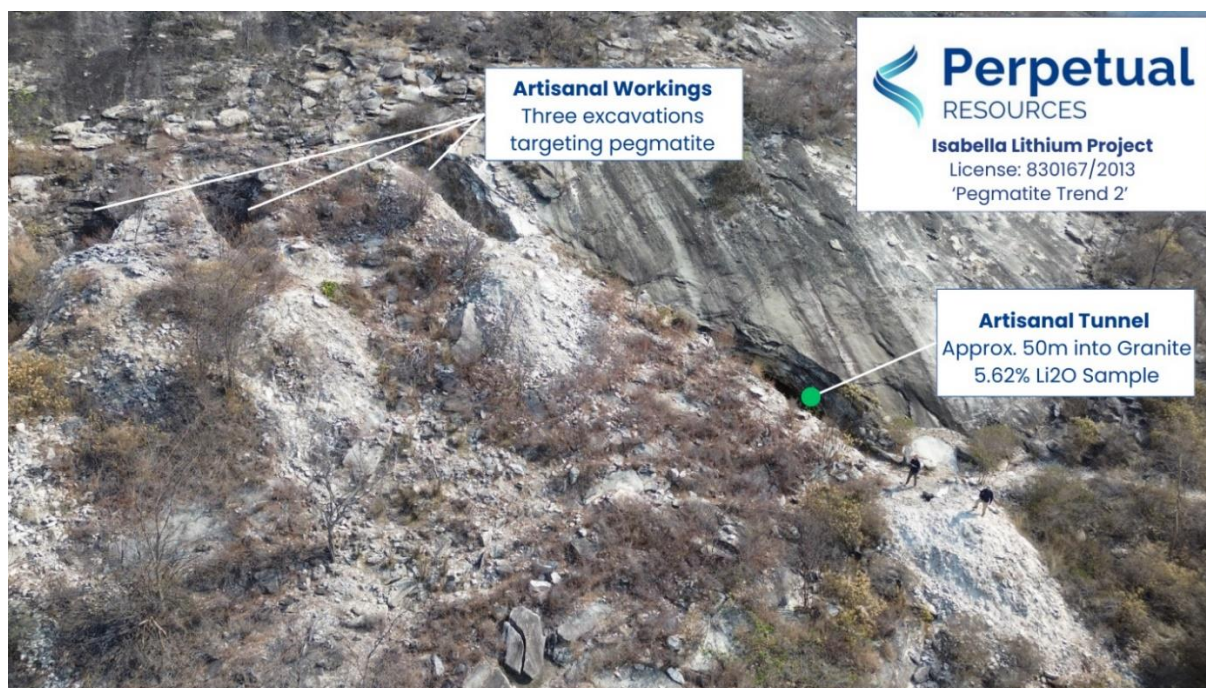
<sup>7</sup> <https://www.atlas-lithium.com/news/atlas-lithium-intersects-1-47-li2o-over-95-2-meters/>

<sup>8</sup> Lithium Mines & Li Deposit points available from ANM Online Database: <https://geo.anm.gov.br/portal>

## Key Findings Highlight Project Prospectivity

Perpetual has developed a strong initial technical understanding of the Isabella Project, underscoring its high potential for lithium mineralization. Spodumene occurrences have been confirmed at five key locations along Trends 1 and 2 (See Figure 5), following well-defined lineages. Additionally, multiple outcrops and artisanal workings have revealed mineral assemblages, including green tourmaline (elbaite) and cleavelandite, both recognized as strong indicators of lithium-enriched environments.

With over 30 artisanal mines and workings within the license area, previously focused on pegmatites for green tourmaline and other precious gemstones, Perpetual believes these historical workings provide a valuable foundation for interpreting pegmatite geometry, mineral assemblages, and broader regional prospectivity. From a targeting perspective, these findings offer multiple opportunities to test across a broad, scalable area.



**Figure 7. Artisanal workings on 'Trend 2' and location of high-grade assay from Isabella Project, license 830167/2013, (Refer to ASX Appendix 1 for full rock descriptions) <sup>9</sup>.**

## Background to the Isabella Project

Perpetual's acquisition of permit 830167/2013 in July 2024 marked a significant advancement in Perpetual's Brazilian lithium exploration efforts. This permit included multiple spodumene-pegmatite occurrences and several historical

<sup>9</sup> Refer to ASX announcement dated 24th July 2024



artisanal mining areas, with tunnels extending up to 150m, exposing interpreted LCT-bearing pegmatites suitable for initial testing.

The Isabella Project has confirmed high-grade lithium mineralization, with rock-chip assays revealing **values up to 5.62%  $\text{Li}_2\text{O}$** . Refined structural mapping has interpreted multiple high-confidence spodumene-pegmatite trends extending up to 1,000m and open along strike, delineated by artisanal workings targeting the pegmatites. Over 30 artisanal excavations have been identified, featuring substantial underground workings. The current exploration program is expected to delineate near-term drill targets, which are expected to be targeted by Perpetual in 1H 2025.



**Figures 8 & 9 – Artisanal mine (left) & Spodumene with Orthoclase & Tourmaline located from within artisanal mine (right) from Isabella Project, license 830167/2013, (Refer to ASX Appendix 1 for full rock descriptions)<sup>10</sup>**

## Next Steps

Perpetual is undertaking additional reconnaissance programs at the Isabella Lithium Project in November, which will continue to target known and prospective LCT-bearing occurrences. Efforts will also include an initiation of environmental and local landowner approvals, as well as advancing the formal drilling approval process. Initial laboratory test results are expected in the next 2-4 weeks, with further results over coming 4-8 weeks.

<sup>10</sup> Refer to ASX Appendix 1 for full rock descriptions & locations.

Perpetual expects that the outcomes of these exploration efforts will enable the commencement of a maiden drill program at the Isabella Project in 1H 2025.

**- ENDS -**

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

**KEY CONTACT**

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### About Perpetual Resources Limited

Perpetual Resources Limited (Perpetual) is an ASX listed company pursuing exploration and development of critical minerals essential to the fulfillment of global new energy requirements.

Perpetual is active in exploring for lithium, rare earth elements (REE) and other critical minerals in the Minas Gerais region of Brazil, where it has secured approximately 12,500 hectares of highly prospective lithium and REE exploration permits, within the pre-eminent lithium (spodumene) and REE bearing region that has become known as Brazil's "Lithium Valley".

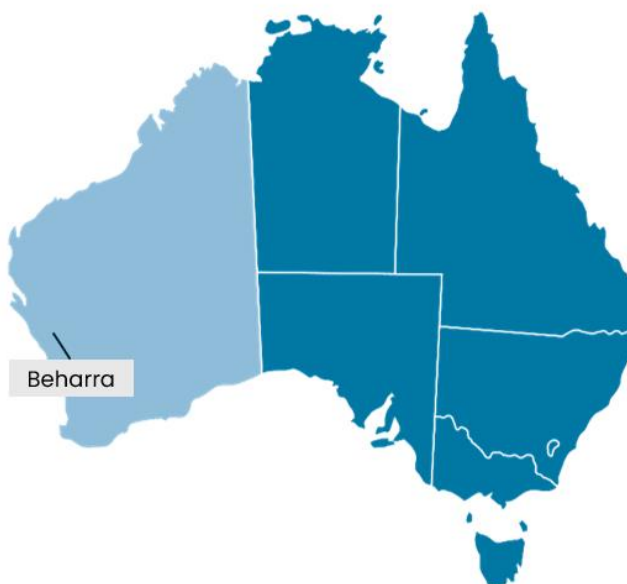
Perpetual also operates the Beharra Silica Sand development project, which is located 300km north of Perth and is 96km south of the port town of Geraldton in Western Australia.

Perpetual continues to review complementary acquisition opportunities to augment its growing portfolio of exploration and development projects consistent with its critical minerals focus.

#### Brazilian Projects



#### Western Australian Projects





## **COMPLIANCE STATEMENTS**

### **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.

### **Reporting visual estimates of mineralisation**

Visual assessments of mineral abundance should never be viewed as a stand-in for laboratory analyses, especially when concentrations or grades are of primary economic importance. Visual estimates may also fail to provide any insight into impurities or detrimental physical properties that are pertinent to valuations.

### **Competent Person Statement**

The information in this report related to Geological Data and Exploration Results is based on data compiled by Mr. Allan Harvey Stephens. Mr. Stephens is an Exploration Manager at Perpetual Resources Limited and is a member of both the Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists (AIG). He possesses sound experience that is relevant to the style of mineralisation and type of deposit under consideration, as well as the activities he is currently undertaking. Mr. Stephens qualifies as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves.' He provides his consent for the inclusion of the matters based on his information, as well as information presented to him, in the format and context in which they appear within this report.

### **Forward-looking statements**

This announcement contains forward-looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

## Appendix A – Rock Type Descriptions

**Table 1 – Sample Descriptions and Locations**

*Coordinate Presented in SIRGUS 2000 24S*

Figure	Easting	Northing	Lithology	Commentary
1	200055	8117996	Spodumene (30%), Quartz (40%), Albite (20%) & Muscovite (10%)	Marquinho's Garimpo. Two-linked tunnels ~20–30m targeting pegmatite. Fresh Rock.
2	200102	8118609	Orthoclase (30%), Albite (30%), Muscovite (15%), Spodumene (10%) & other (15%)	25m Vertical Tunnel (Tovinho's Garimpo) in sub-outcrop.
3	200250	8117558	Granite (~80%), Pegmatite (~20%)	Garimpo/Artisanal Mine in weather granite host rock with Pegmatite.
4	200102	8118609	Granite (~80%), Pegmatite (~20%)	Garimpo/Artisanal Mine in weather granite host rock with Pegmatite.
5	199114	8118629	Spodumene (~80%), Albite/Orthoclase (20%)	Top left hand corner sub-insert-image. Samples collected exhibiting majority spodumene minerals
9	199114	8118629	Spodumene (50%), Orthoclase (45%) & Tourmaline (5%)	Sample obtained from 30m within tunnel.



## Appendix B: JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg 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 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>Current rock chip samples, weighing around 0.25–5 kilograms each, are being taken from exposed outcrops and weathered areas in the field. It's important to note that these samples do not accurately reflect the potential mineral grade at greater depths.</li> <li>The type of mineralisation being sought after is associated with pegmatite intrusions that host rare earth and LCT-pegmatites, and the likely sources are specific S-type Granites and Leucogranites</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</li> </ul>	<ul style="list-style-type: none"> <li>No Drilling Completed</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>No Drilling Completed</li> </ul>

Criteria	JORC Code explanation	Commentary
	sample bias may have occurred due to preferential loss/gain of fine/coarse material.	
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All samples <u>are being and continue to be</u> logged sufficiently for geological interpretation.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <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> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>No Drilling Completed</li> <li>All samples <u>are to be</u> fully crushed, and either a split or the entire sample was pulverized to create a representative composite rock chip sample, depending on the laboratory's procedure.</li> <li>The samples from the current program, with an average size of 2-5 kilograms, are being collected for lithium presence confirmation rather than the assessment of grade in potentially non-representative and weathered samples.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Samples <u>will be</u> assayed by ALS Belo Horizonte via ME-ICP89. Procedures are considered appropriate for Lithium and multi elemental analysis.</li> <li>Checks of the analytical values of CRM's <u>will be used</u> used by the laboratory against the CRM specification sheets were made to assess whether analyses were within acceptable limits.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>No verification will be undertaken for these initial samples that will not be used in any resource estimate. The samples are to determine the levels of Li and other valuable elements in grab samples</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>All sample locations <u>will be</u> measured using a handheld Garmin GPS using WGS84 and UTM coordinates – Coordinates provided in SIRGUS 2000 /UTM 23S &amp; 24S.</li> <li>The accuracy is considered sufficient for a first pass sampling program.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>No Drilling Conducted</li> <li>No sample compositing has been applied.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>Not applicable for the early-stage exploratory programs undertaken.</li> <li>No Drilling Conducted.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples <u>will be</u> securely packed in polyweave bags and sealed with cable ties to mitigate contaminants or un-approved handling.</li> <li>Samples travelled to Belo Horizonte with Exploration Manager, Allan Stephens.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No reviews or audit completed to date.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <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 obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>PEC own's 100% exploration rights on Isabelle Project: 830167/2013 which comprises of 9.6km<sup>2</sup> located in Minas Gerais, Brazil, through its wholly owned subsidiary Perpetual Resources Do Brasil LTDA.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>No prior formal exploration is known however there has been some informal exploration and artisanal mining.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The geological features of the areas consist of granite &amp; sedimentary rocks from the Neoproterozoic era within the Araçuaí Orogen. These rocks have been intruded by fertile pegmatites rich in lithium, which have formed through the separation of magmatic fluids from peraluminous S-type granitoids and leucogranites associated with the Araçuaí Orogen.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling activities are being reported.</li> <li>The general location of visual occurrences photographed have been provided, in Appendix A, Table 1.</li> <li>The co-ordinates of the rock chip samples have been provided with the relevant assay information in Appendix A.</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>No drilling activities are being reported.</li> <li>No aggregation methods applied.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>No drilling activities are being reported.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Maps and images are included within body of text.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>All relevant and material exploration data for the target areas discussed, has been reported or referenced.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk</i></li> </ul>	<ul style="list-style-type: none"> <li>All relevant and material exploration data for the target areas discussed, has been reported or referenced.</li> <li>The general location of visual occurrences photographed have been provided, in Appendix A, Table 1.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></p>	
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Field work will continue until mid-Oct with assay to be received and reviewed after. Next stages will be dependent on the results.</li> </ul>