

9 October 2024

# HIGH PRIORITY REE AND LITHIUM CONCESSION GRANTED IN BRAZIL

- Concession 830154/2024, 1957.31Ha has been granted to complete our package of seven contiguous concessions located in the Aracuai Lithium valley less than 60km from the Sigma Lithium mine in Minas Gerais.
- Only three of the Company's 25 concessions are waiting authorisation, 860164-165 beside the CMOC niobium mine that has evidence of fenitization in the area and rare earth minerals\* and 830175/2024 which one of a package of 12 contiguous concessions.
- The Company holds five major concession packages covering
   41,746 Has consisting of 830151-157, 830167,69-70, 830171174-176-179, 830192-196 and 860164-65.

**Patagonia Lithium Ltd (ASX:PL3, Patagonia** or **Company)** is pleased to advise that it has been granted exploration rights for three years on 830154/2024 which is one claim in a group of seven covering 12,032 Has. Phillip Thomas, Executive Chairman commented "We now have a major component of our exploration concessions granted and are actively assessing the potential for other minerals in addition to lithium, such as antimony, niobium and gold where the granites and ultramafic rocks are present."

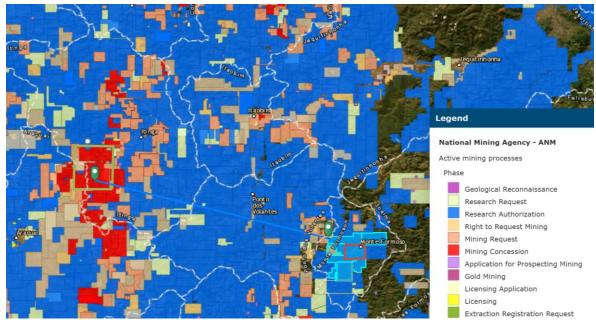


Figure 1. Aracuai Lithium Valley where Sigma Mine (TSXV:SGML) is located and granted concession (research authorization)(light blue shaded) 830154/2024 (red outline) is 61.7km away (blue line). Other adjacent concessions are prospective for granites or lithium.

#### Capital structure

59.7m - PL3 shares 14.6m - PL3O quoted options 7.1m - unquoted options 0.3m - unquoted convertible notes Patagonia Lithium Ltd Level 6, 505 Little Collins Street Melbourne VIC 3000 https://patagonialithium.com.au/ Board Phil Thomas - Exec Chair Rick Anthon - NED Sam Qi - NED Jarek Kopias - Co Sec

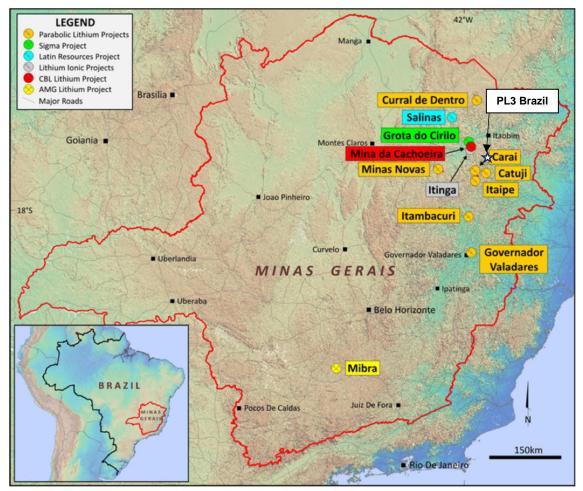
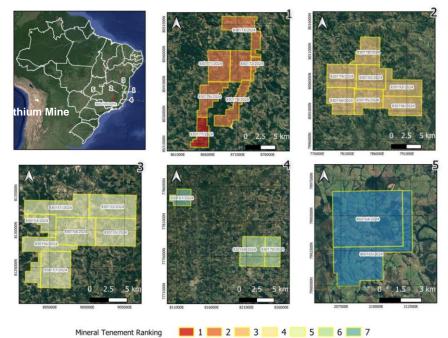


Figure 2. Location of Patagonia Lithium concessions 830151-157/2024 ranked for pegmatites in Aracuai Lithium Valley.



#### LCT Pegmatites Ranking

Figure 3. Ranking of the concession packages granted and applied for pegmatites (lithium).

Authorised for release by the Board of the Company.

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Our socials - linkedin, twitter@pataLithium, Instagram, facebook, pinterest and youtube

## About Patagonia Lithium Ltd

Patagonia Lithium has two major lithium brine projects – Formentera/Cilon in Salar de Jama, Jujuy province covering 1752 Has and Tomas III at Incahuasi Salar in Salta Province of northern Argentina in the declared lithium triangle. It has also applied **for 41,746 Has** of concessions over 25 concessions of which 22 have been granted. Initial exploration is focussed on exploring for **ionic REE clays, Niobium, Antimony and lithium in pegmatites**. The Company has five exploration concession packages.

Since listing on 31 March 2023, surface sampling and MT geophysics have been completed at the Jama lithium brine project, drill holes JAM 24-01, 24-02, and 24-03 have been completed and JAM 24-10 (well 4) is underway. Progress to date has been exceptional as measured by lithium assays. The MT Geophysics at Tomas III on Incahuasi salar is very prospective. In July 2023, a 10 hole drill program was approved for Formentera and a three well program for Cilon has been approved. Samples as **high as 1,100ppm lithium** ("Sampling at Formentera and Cilon Assays 1,122ppm Lithium" released on 2 June 2023) were recorded at Formentera and a lithium value of **591ppm in well JAM 24-01** ("Outstanding Assay Results from First Drilling in Argentina" released on 3 May 2024). Very low resistivities were recorded to more than a kilometre depth during the MT Geophysics survey at Formentera.

The Company confirms it is not aware of any new information or data that materially affects the information cross referenced in this announcement. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcement.

\* ASX announcement "Brazil Exploration Update" released on 6 March 2024.

## **Competent Person Statement**

The information in this announcement that relates to exploration results is based on, and fairly represents information compiled by Phillip Thomas, MAIG FAusIMM, Technical Adviser and Executive Chairman of Patagonia Lithium Ltd, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Thomas has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he 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. Mr Thomas consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

# JORC Code, 2012 Edition – Table 1 report Patagonia Lithium Ltd ASX:PL3 Goais State exploration

## **Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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 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 (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> <li>Random chips and samples taken from road cutting and extensive exposures of weathered faces were taken. Of the estimated 40 samples 13 were sent for assay using ICP-OES analysis with lithium borate.</li> <li>The soil samples were taken with a shovel, then rifled into 1/8<sup>th</sup> of the total soil in the area and then a 500gm sample was bagged and labelled for analysis.</li> <li>The samples were assayed using three different types of analysis to determine the presence of Rare Earth elements, lithium and with two quartz rock chip samples gold.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic,</li> </ul>	<ul> <li>No drilling was undertaken.</li> </ul>

Criteria	JORC Code explanation	Commentary
	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).	
Drill sample 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>	<ul> <li>No drilling was undertaken.</li> <li>Minerals such as garnet were identified which are pathfinders for rare earth mineralisation.</li> <li>In the pegmatite rocks some phenocrysts were possible spodumene but assay will be used to positively identify their mineralogy.</li> </ul>
Logging	<ul> <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> <li>GPS references were taken for the location of the samples and a description of each samples mineralogy. Clays were identified as either saprolites, kaolin, or other.</li> <li>A large tabular kaolin outcrop was identified but not sampled.</li> <li>No strike or length of mineralisation was recorded as the exploration was focussed on determining sample composition and concentration of elements.</li> </ul>
Sub-sampling techniques and sample 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 subsampling 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</li> </ul>	<ul> <li>Not applicable as no drilling or augur sampling was undertaken.</li> <li>Samples of 5 kg were taken in soils and approximately 1kg rock chip samples and these were reduced to 500gm samples through rifling to 1/8<sup>th</sup> -1/10<sup>th</sup> of the sample size for soils and rock chips were broken into 500gm lots.</li> <li>ICP-OES used 10gm of each sample.</li> </ul>

Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> <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> <li>13 samples have been sent for assay from this lot of samples collected.</li> <li>No field analysis was undertaken.</li> <li>MC-PL-011-01 (pegmatite) Determination by Fusion with Sodium Peroxide - ICP OES / ICP MS MC-PL-011-02 (halo of change - contact) Determination by Fusion with Sodium Peroxide - ICP OES / ICP MS MC-PL-011-03 (hosted) Determination by Fusion with Sodium Peroxide - ICP OES / ICP MS MC-PL-013 (pegmatite) Determination by Fusion with Sodium Peroxide - ICP OES / ICP MS MC-PL-014-01 (pegmatite) Determination by Fusion with Sodium Peroxide - ICP OES / ICP MS MC-PL-014-01 (pegmatite) Determination by Fusion with Sodium Peroxide - ICP OES / ICP MS MC-PL-014-02 (pegmatite gravel pit) Determination by Fusion with Sodium Peroxide - ICP OES / ICP MS MC-PL-036 (pegmatite) Determination by Fusion with Sodium Peroxide - ICP OES / ICP MS MC-PL-036 (pegmatite) Determination by Fusion with Sodium Peroxide - ICP OES / ICP MS MC-PL-036 (gold in quartz veins) FAA505 - Determination of Gold by Fire Assay - AAS - 50 g Fusion MC-PL-046 (gold in quartz veins) FAA505 - Determination of Gold by Fire Assay - AAS - 50 g Fusion MC-PL-047 (Fe-rich mica schist) ICP95A/IMS95A - Determination of 48 elements by fusion with lithium metaborate - ICP OES/MS MC-PL-048 (Fe-rich mica schist) ICP95A/IMS95A - Determination of 48 elements by fusion with lithium metaborate - ICP OES/MS</li> <li>OREAS standards were used with ICP-OES</li> <li>Single analysis was done on each sample with no duplicates</li> </ul>
Verification of sampling and 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> </ul>	<ul> <li>GE21 staff are independent of Patagonia Lithium staff and they have been contracted to obtain samples and interpret the extensive geophysics.</li> <li>Giselle Kempter provided the short wave and infra red analysis.</li> </ul>

Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <li>Discuss any adjustment to assay data.</li> <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> <li>Accuracy of the data locations are between 2-4m.</li> <li>The grid system used was WGS84 and ESPG 4326.</li> <li>Topographic control was within 1m.</li> </ul>
Data spacing and 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>Aggregate exploration results have been reported, with only locations and numbering of samples taken.</li> <li>Sampling was carried out to define presence of elements rather than concentrations due to access constraints.</li> <li>Sampling is NOT sufficient to carry out grade continuity estimates.</li> </ul>
Orientation of data in relation to geological 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>	No auger or drill samples were taken.
Sample security	• The measures taken to ensure sample security.	• Samples were secured after riffling, in calico bags tied with wire and tagged. The lab is recording the chain of custody to ensure the wire is still twisted into the tag and not been removed.
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	Not applicable as no audits have been undertaken.

# Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<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 obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Mining concessions granted include 830.151/2024 to 830.153/2024, 830.155/2024 to 830.157/2024, 830.167/2024, 830.169/2024, 830.171/2024, 830.172/2024, 830.176/2024, 830.192/2024, 830.193/2024, 830.195/2024, 830.196/2024</li> <li>830.164/2024 and 830165/2024 in the state of Goais, Brazil – the concessions granted are 100% owned by Patagonia Lithium subsidiary PL3 Mineracao Brazil Ltda. The licence is for a 3 year period unless it is renewed for a further period. It has been referenced for lithium exploration</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>No exploration has been undertaken on these concessions From the ANm database it is not apparent that these concessions have been explored previously.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The REE first target zone, of greatest importance, is the metasomatic zone. The second, an anomaly of Thorium and Uranium located within a structure aligned to the 125-degree Azimuth, is characterised by a topographic low that may be associated with the accumulation of radioactive minerals (possibly Monazites?) and potentially, Rare Earth Elements. The third zone, the second anomaly situated northwest of the area, also enriched in Uranium and Thorium, is located at the summit of a topographic elevation. This anomaly may represent an igneous body with chemical characteristics similar to carbonatite, albeit smaller, not identified in the MVI magnetic geophysics data.</li> <li>The Catalão I alkaline–carbonatite–phoscorite complex (ferro niobium mine adjacent) contains both fresh rock and residual (weathering-related) niobium mineralization. The fresh rock niobium deposit consists of two plug-shaped orebodies named Mine II and East Area, respectively emplaced</li> </ul>

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		<ul> <li>in carbonatite and phlogopitite. Together, these orebodies contain 29 Mt at 1.22 wt.% Nb2O5 (measured and indicated). In closer detail, the orebodies consist of dyke swarms of pyrochlore-bearing, olivine-free phoscorite-series rocks (nelsonite) that can be either apatite-rich (P2 unit) or magnetite-rich (P3 unit). Dolomite carbonatite (DC) is intimately related with nelsonite. Natropyrochlore and calciopyrochlore are the most abundant niobium phases in the fresh rock deposit. Pyrochlore supergroup chemistry shows a compositional trend from Ca–Na dominant pyrochlores toward Ba-enriched kenopyrochlore in fresh rock and the dominance of Ba-rich kenopyrochlore in the residual deposit. Carbonates associated with Ba-, Sr-enriched pyrochlore show higher õ180SMOW than expected for carbonates crystallizing from mantle-derived magmas. We interpret both the õ180SMOW and pyrochlore chemistry variations from the original composition as evidence of interaction with low-temperature fluids which, albeit not responsible for the mineralization, modified its magmatic isotopic features. The origin of the Catalão I niobium deposit is related to carbonatite magmatism but the process that generated such niobium-rich rocks is still being determined and might be related to crystal accumulation and/or emplacement of a phosphate–iron-oxide magma.</li> <li>Lithium</li> <li>The Araçuaí Orogen, as one of the Neoproterozoic orogenic systems of Brazil (Pedrosa Soares et al., 2001), occupies the area between the São Francisco Craton and the Brazilian eastern continental margin. Among the lithostratigraphic units that take part in it are the Sainas, São Domingos, Chapada Acauã, and Capelinha formations. The Brazilian pegmatitic provinces were defined by Paiva (1946), based on the</li> </ul>

Criteria	JORC Code explanation	Commentary
		geographic distribution of these rock bodies across the national territory. The Eastern Pegmatitic Province encompasses the states of Bahia, Minas Gerais, Espírito Santo, and Rio de Janeiro, over an area of approximately 150,000 km <sup>2</sup> . However, more than 90% of this area is in the eastern part of Minas Gerais state, specifically within the geotectonic unit called the Araçuaí Orogen (Figure 3-1). Granitic rocks, ranging in age from the late Neoproterozoic to the Cambrian-Ordovician, including pegmatites, cover around 1/3 of this region (Pedrosa-Soares et al., 2009). The pegmatitic bodies in this large region are mainly related to the granitic magmatism that developed during the Brasiliano Event, between 630 Ma and 490 Ma, along the Araçuaí Orogen (Dardenne & Schobbenhaus, 2003; Pedrosa-Soares et al., 2009). They can be of two types: anatectic (directly formed from the partial melting of regional rocks) or residual (silicate melts resulting from the fractional crystallization of the parent granites) (Correia Neves et al., 1984; Pedrosa-Soares et al., 2009). Considering field relationships, geochemical and petrological attributes, as well as U-Pb geochronological data on zircons, the granitic rocks of the Araçuaí orogen were grouped into five different supersuites, designated as G1, G2, G3, G4, and G5 (Pedrosa Soares et al., 2001, 2008; in Pedrosa-Soares et al., 2009). Regarding the stages of development of the Araçuaí Orogen, supersuite G1 is pre- collisional (630-585Ma), G2 is syn-collisional (585-560Ma), G3 is late to post collisional (545-520Ma), and G4 and G5 are post-collisional (535-490Ma) (Pedrosa-Soares et al., 2009, 2011). Among these five characteristic granitic suites, the main mineralized pegmatites of the Eastern Province are mostly derived from the syn-collisional granites of suite G2 and post-collisional granites of suites G4 and G5 (Heilbron et

Criteria	JORC Code explanation	Commentary
		al., 2004). The pegmatites of suite G2 are rich in gemstones and industrial minerals in the Conselheiro Pena region; those of suite G4 exhibit abundance in gemstones, mainly tourmaline and morganite, lithium minerals, rare metal minerals, and minerals destined for ceramic and glass industries; and those of suite G5 are rich in aquamarine and topaz (Heilbron et al., 2004).
Drill hole 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 understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul> <li>The main geophysical data coming from georeferenced PDFs, highlighted by the correlation between samples is the F parameter, followed by the thorium-uranium ratio. There is a high correlation between Kd potassium factor and Thorium.</li> <li>Numerous outcrops of saprolitic ionic clays and pegmatite phenocrysts were identified by the two geologists who undertook the sampling.</li> </ul>
Data aggregation methods		<ul> <li>Not applicable – 1D inversion was used to better define the fenitization in the radiometric and magnetic surveys in the tonalites.</li> <li>No assay data has been received to date of this report.</li> </ul>
Relationship between mineralisation widths and intercept lengths		Not Applicable as no drilling was undertaken.

Criteria	JORC Code explanation	Commentary
	there should be a clear statement to this effect (eg 'down hole length, true width not known').	
Diagrams	<ul> <li>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.</li> </ul>	<ul> <li>Not Applicable as no drilling was undertaken.</li> </ul>
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>Not Applicable as no drilling was undertaken.</li> </ul>
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul> <li>Apart from the geophysics reported previously there has been no drilling, or sampling work done on the projects.</li> <li>The mining done on adjacent concessions has been to extract granite as industrial works.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>We intend to commence auger sampling and further rock chip sampling at the targets set out in figure 1.</li> </ul>