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PATAGONIA LITHIUM

18 December 2024

39% EFFECTIVE POROSITY AT 391M RESULT FROM WELL 4 PUMP TEST

High porosity values consistent with pump flow rate of 3,551L/hour

- *Tests on 3 cores selected from well 4 showed outstanding total porosity in two units at 151m and 390m supporting the lithological analysis of a deep aquifer.*
- *Well four (JAM24-04) Pump Test achieved an outstanding **3,551 litres per hour** through a 50mm pipe using a pump from a depth of **80m**.*
- *The lithological unit at 248m was a consolidated brown reddish clay unit transitioning to a brown reddish sandy unit hence the lower porosity at this depth.*
- *Preparation of the drill pad for well 5 at Cilon is underway.*
- *Column design for application for a **1,000 tonne lithium carbonate** Ekosolve demonstration plant completed by Ekosolve.*

Patagonia Lithium Ltd (ASX:PL3, Patagonia or **Company)** is pleased to announce core porosity results from Core Laboratories on well JAM 24-04. While sample one and three were outstanding exceeding 19% effective porosity, sample two had a clay component for a few metres and had lower porosity. Other significant lithium projects operate at 6% porosity in their clay units.

SAMPLE NUMBER	CLIENT SAMPLE ID	SAMPLE		PERMEABILITY CONFINING STRESS (800psi)		TOTAL POROSITY (%)	EFFECTIVE POROSITY (%)	GRAIN DENSITY (g/cc)
		TOP DEPTH (m)	BOTTOM DEPTH (m)	Kinf (md)	Kair (md)			
JAM 24-04								
04_1		151.49	151.65	135	153	41.9	38.7	2.352
04_2		248.93	249.10	0.675	0.981	7.0	4.2	2.669
04_3		390.67	390.83	529	556	28.4	19.5	2.655

Table 1. Total and effective porosity shows why the high pump rate was achieved with total porosity above 28%.

Phillip Thomas, Executive Chairman commented *"The results are consistent with the lithology examined in the core and shows the high porosity values in the well at certain depths. This information will assist when we design the production wells in 2025. The pump test **far exceeds** what was expected and reflects the porosity of the sediments, the hydrological forces moving the brine when pumped and extended depth of the aquifers. We look forward to a borehole magnetic resonance test in early 2025 that will give us comprehensive porosity data."*

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Figure 1. Photos of the drill core tested for porosity at Core Laboratories in Perth WA.

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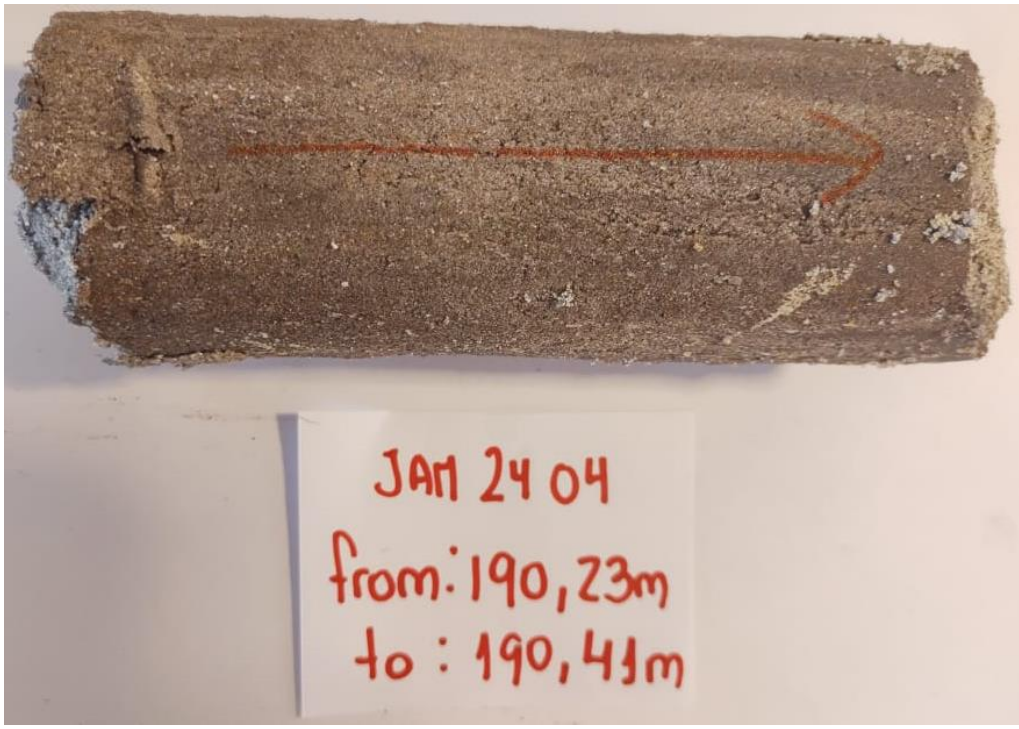

Figure 2. Shows a sandy porous unit just above the reddish sandy clay unit at 249m.

Preparation work has been initiated for drill pad number five and the BMR surveys of wells JAM 24-01 to JAM 24-04 (wells one to four) in 2025.

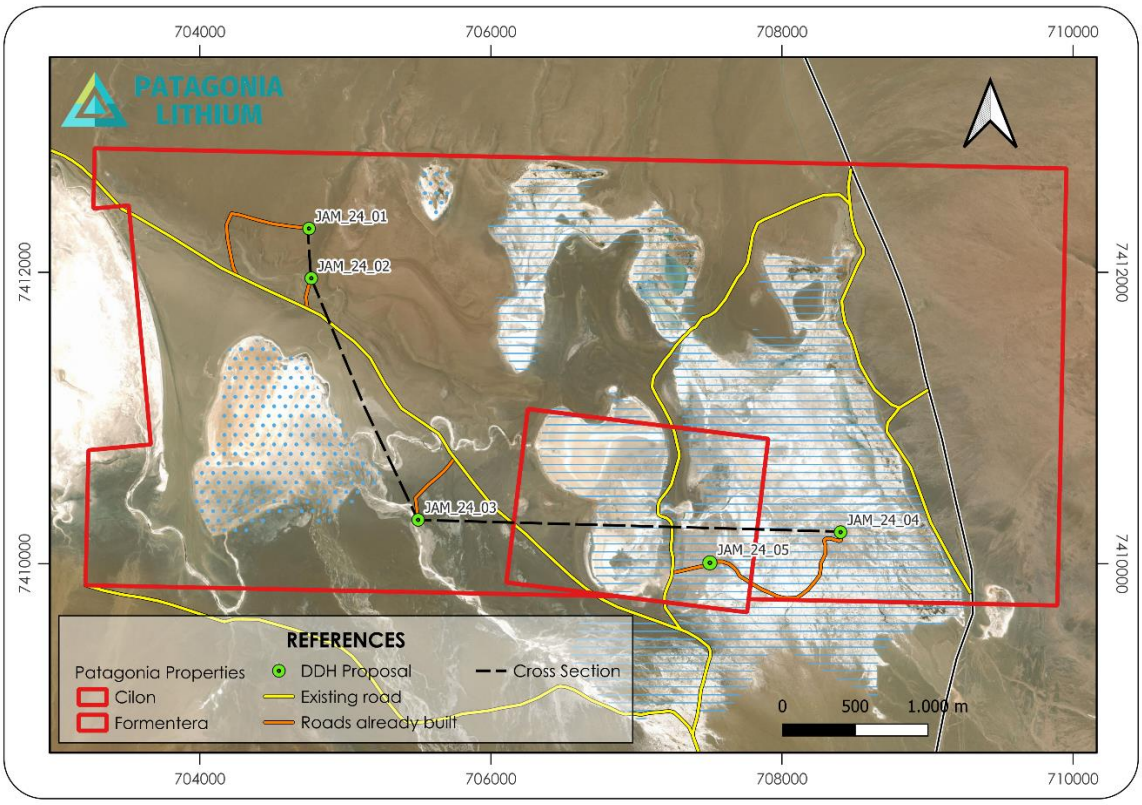

Figure 3. The location of JAM24-05 drill well is shown above on the Cilon concession of 200Has.

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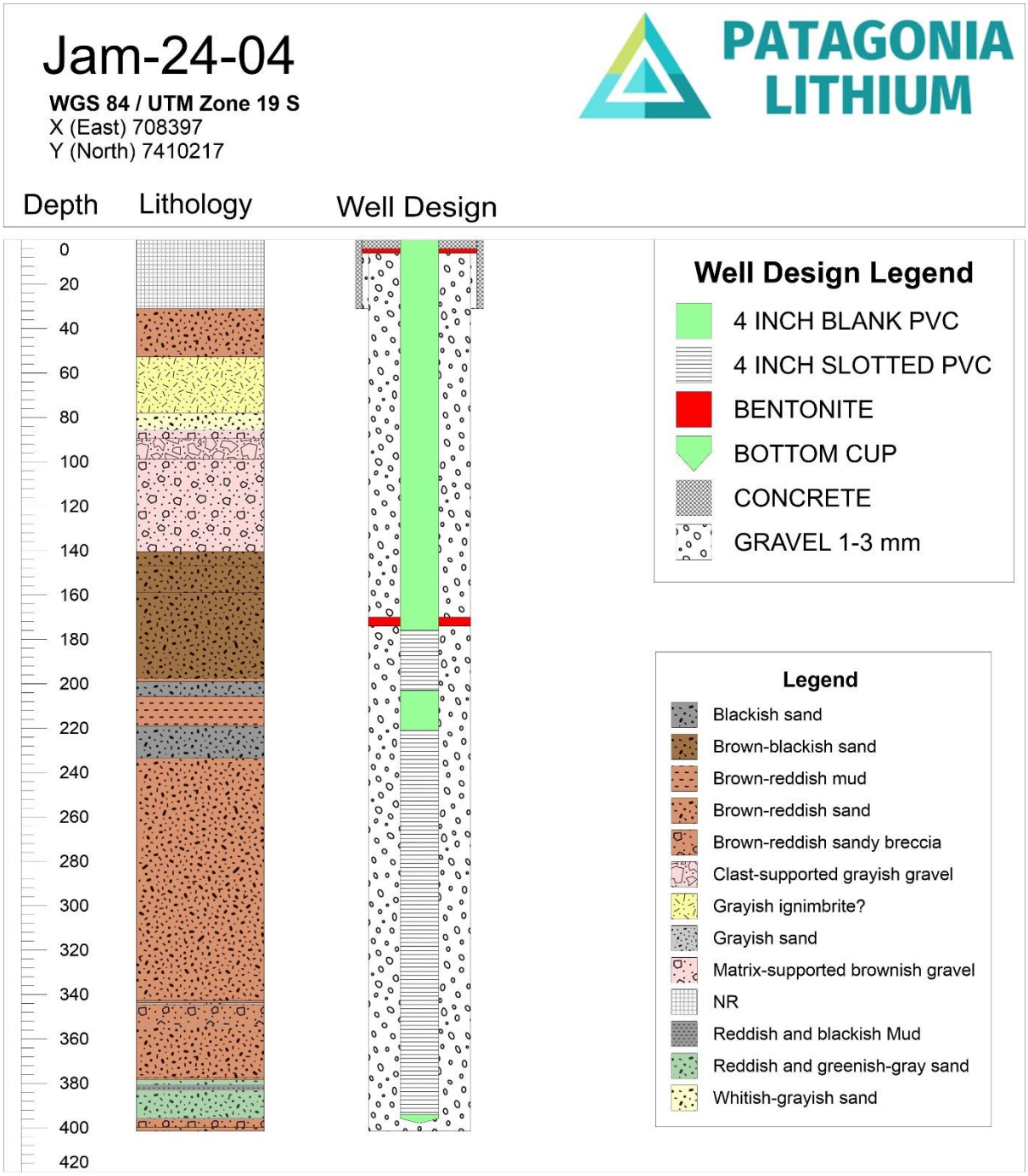

Figure 4. Log of sediments and well design with 4inch PVC lining. Porous sediments and volcanics (a source of lithium) start at 60m and brown reddish sandy Breccia is open at depth.

Well Identification details – JAM 24-04
UTM zone 19S
Collar: E 748403 N 7410216
Dip: -90 degrees, Azimuth: 0 degrees, Depth: – 407m

The co-ordinates for well five JAM 24-05 are:
UTM Zone 19S
Collar: E 707505 N 7410005
Dip: -90 degrees, Azimuth: 0 degrees, Depth:

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Authorised for release by the Board of the Company.

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About Patagonia Lithium Ltd

*Patagonia Lithium has **two major lithium brine projects** – Formentera/Cilon in Salar de Jama, Jujuy province 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 of which twenty four out of twenty five have been granted where we are exploring for **ionic REE clays, Niobium, Antimony and lithium in pegmatites**. The Company has been granted five exploration concession packages.*

*Since listing on 31 March 2023, surface sampling and MT geophysics have been completed, drill holes JAM 24-01,24-02, 24-03 and 24-04 completed. Progress to date has been exceptional as measured by lithium assays and pump tests. 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. Samples as **high as 1,100ppm lithium** (2 June 2023 announcement) 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.*

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 to Patagonia Lithium Ltd and is Executive Chairman, 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.

This announcement contains results from "High Porosity Results Achieved from Well Two at Formentera" dated 16 September 2024, "Excellent Result achieved from Well Three Porosity Core Test" dated 3 December 2024 and "Outstanding Borehole Porosity Test Results at Formentera" dated 5 December 2024. The Company confirms it is not aware of any new information or data that materially affects the information 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.

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JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data Well JAM 24-04

Criteria	JORC Code explanation	Commentary
Sampling techniques	• 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. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (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	• Diamond drilling was used to drill to 407m. The core recovery was greater than 95% where is was consolidated. An Atlas Copco Boyles C5C track-mounted diamond drill drilling HQ diameter and a tri-cone head drilling 6 inch diameter was used. • Eleven 2,000L per test packer assays extracted brine using a single packer air lift system from the 85-395m level. 106 x 200L samples from well JAM 24-04 were tested for resistivity and specific gravity and were sent for assay at two Laboratories Alex Stewart and SGS. The results are set out in the above news release. • A distilled water sample and a lithium standard sample C 3001 (400ppm) was supplied for analysis to SGS and Alex Stewart. They achieved 397ppm. • Samples were tested for conductance in micro siemens with a Hanna multi meter. The meter was calibrated prior to use with fresh standards. It has a maximum value of 200 ms. • Sediments were logged for fineness and clay content. No target minerals were encountered such as lithium carbonate or lithium chloride crystals, however at 60m there was a volcanic interval that may have spodumene. • Well JAM 24-04 was drilled vertically and had an azimuth of zero. • A Hanna Multi tester was used to measure pH, conductivity, SG and temperature for comparison purposes. • Pumping test was conducted over a 72 hour period at 80m using an airlift packer system.
Drilling techniques	• 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).	• An 83mm bit (HQ) was used with triple tube to drill the well and 3 metre long rods. A packer tool was lowered and samples taken at the nominated intervals. • A 6 inch steel pipe to 30m depth was concreted into the collar of the well. • The well was reamed out with a 61/4inch tricone to put in 4inch slotted PVC pipe.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise	• Brine samples were collected at each point relative to the porosity of the lithological unit intercepted and flow of brines when core was extracted. Two A samples were taken and

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Criteria	JORC Code explanation	Commentary
	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.	stored, two B samples stored securely and one back up sample retained. • Brine lithium assay values are not related to the quality of core samples. The porosity, transmissivity and permeability of the lithologies where samples are taken influences the rate of brine inflow and brine characteristics. • Drilling is required to determine the flow characteristics of the adjacent aquifers, whereas interpolated ICP-OES analysis tests for lithium concentrations from the brine samples were recorded.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged.	• All core was logged by two geologists. • The sediments were analysed for grain size where they were sands, consolidated and unconsolidated clays, gravel and conglomerate units and the lower conglomerate/gravel units. (refer lithological log schema and diagram). • 70%-100% of the core was retrieved and logged. Only minor amounts of core were lost to brine flow in unconsolidated sediments in some intervals.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • 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. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• Brine samples were collected by sampling the packer airlift of brine which was approximately 200 litres per lift x 10-20 lifts and bottles A and B were filled from each lift with the objective of getting the brine sample (a 10L bottle decanted into one litre bottles) from the same aquifer region in the well to avoid sampling error. • Duplicate sampling is undertaken for quality control purposes and a blank (distilled water and two standards were inserted. The lithium standard was C3001 – 400ppm lithium in solution. • No Brine samples from the pump test were sent for assay as they are an average of aquifer flow into the well. The results of field test was 1.080gm/cm^3 specific gravity and more than 160 mS/cm conductivity at 396m.
	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis	• The SGS laboratory was used for analyses and is also certified for ISO/IEC Standard 17025:2017. Alex Stewart laboratory is also certified for ISO/IEC Standard 17025:2017. • Security control was kept with each bottle being taped closed and contained in a locked chest which was opened by SGS staff/Alex Stewart

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Criteria	JORC Code explanation	Commentary
	including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • 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.	staff on delivery as part of the chain of custody protocol.
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• Field duplicates, standards and blanks are used to monitor potential contamination of samples and the repeatability of analyses. • It must be noted that each sample is a function of being averaged as approximately 200L of brine is extracted from the interval and then sampled in a 10L lot to get an average of the 200L extracted in the packer test. • One litre bottles are sent for testing.
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. • Specification of the grid system used. • Quality and adequacy of topographic control.	• The survey locations were located using handheld GPS with an accuracy of +/- 5m. • The grid System used is POSGAR 94, Argentina Zone 3. • Topographic control was obtained by handheld GPS. • The topography is flat.
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • 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. • Whether sample compositing has been applied.	• Brine samples were collected within the hole based upon the depth required to access brines. • This well is within 2850m of JAM 24-03. Block modelling will be used to estimate a resource given the basin contains flat lying sediments and can be consistent more than 2km apart.
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. • 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.	• The brine concentrations being explored for generally occur as sub-horizontal layers and lenses hosted by conglomerate, sand, halites, silt and/or clay. Vertical diamond drilling is ideal for understanding this horizontal stratigraphy and the nature of the sub-surface brine bearing aquifers. • Surface sampling allows us to determine the presence of lithium and other minerals such as boron and presence of anions eg. Ca, Mg. • The orientation was vertical for the drill, but brine was sampled not sediments.

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Criteria	JORC Code explanation	Commentary
Sample security	• The measures taken to ensure sample security.	• Data was recorded and processed by employees, consultants and contractors to the Company and overseen by senior management on-site. • Samples were transported from the drill site to secure storage at the camp on a daily basis. • Samples were then couriered by the senior Geologist to the laboratory on her shift rotation.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• Samples from JAM 24-04 were sent to two laboratories and the comparison of the results with each other and with the standard were acceptable given the sampling system. The sampling was submitted however the Company's independent consultant and Competent Person has approved the procedures to date. • The CP inspected the SGS and Alex Stewart laboratories on 6 May 2024 to ensure the laboratory contamination is non-existent and discuss and audit handling procedures with the staff.

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	• 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.	• The Formentera/Cilon Lithium Project consists of two tenements located in Jujuy Province, Argentina. The tenement is owned by Patagonia Lithium SA. The Company executed a purchase agreement on 18 December 2022 and paid for it on 19 December 2022.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• No historical exploration has been undertaken on this licence area. • The Cilon concession area has been operated as a borate mine in the past although details of production records have not been available. • The application for the drilling permit has passed all the necessary environmental stages and is ready to be issued.

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Criteria	JORC Code explanation	Commentary
Geology	• Deposit type, geological setting and style of mineralisation.	• The Formentera/Cilon licence area covers most of the salar proper with minor alluvial cover to the southwest. The lithium concentrated brine is at depth from MT geophysics sourced data and occurs locally from hot fluids passing through lithium minerals (volcanics) and altered intrusives and is concentrated in brines hosted within basin alluvial sediments and evaporites.
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: o easting and northing of the drill hole collar o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar o dip and azimuth of the hole o down hole length and interception depth o hole length o 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	• Collar: E 748403 N 7410216 UTM zone 19S Dip: -90 degrees Azimuth: 0 degrees. Depth: – 407m
Data aggregation methods	• 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. • 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.	• Assay results were analysed by SGS/Alex Stewart method using ICP-OES and interpolation to correct for errors. Measurements were taken from each brine sample. Lithium values will be reported in ppm or mg/L.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • 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 (eg 'down hole length, true width not known').	• The brine layers are horizontal to sub-horizontal therefore the intercepted thicknesses of brine layers would be true thickness as the sample hole is vertical. • The brine flowed from the walls of the hole in a section accessed by the packer tube from 2m so the intercept width is variable depending on the porosity and transmissivity of the surrounding sands and clays and where it is located in the lithological unit.

Criteria	JORC Code explanation	Commentary
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 locations and appropriate sectional views.*	• *Refer to maps in figure 3.*
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.*	• *All assay results will be reported as received from the laboratory.* • *The laboratory will provide a single value for each one litre bottle of brine.*
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; potential deleterious or contaminating substances.*	• *All meaningful and material information is reported.*
Further work	• *The nature and scale of planned further work (eg; tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• *A further well JAM 24-05 on the Cilon concession is proposed after an MRE is computed in this stage of the campaign.* • *A block model is proposed for the resource calculation by WSP Australia.* • *Six production wells and a 1,000 tonne Li_2CO_3 demonstration plant are planned.*

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