

22 January 2025

## **Significant Maiden JORC Inferred MRE Lithium Resource of 3.8 million tonnes LCE** With Substantial Upgrade Upside on upcoming Drilling

- Significant maiden JORC Inferred Mineral Resource Estimate (MRE) of insitu **3,816,000 tonnes of Lithium Carbonate Equivalent (LCE)** based on an insitu **lithium metal resource of 717,000 tonnes** defined at the Formentera Lithium Brine Project (the Project) in Argentina (lithium metal to lithium carbonate factor is x 5.323).
- The 173,000 tonnes of LCE in free flowing and capillary areas (Specific Yield [Sy]) provides a **15 year mine life at 10,000 tonnes a year**.
- This maiden MRE confirms the Project as a **highly strategic lithium asset** being substantial in size with further upside targeting other high porosity areas on the salar.
- This initial 3.8 million tonne LCE MRE is within a **1,952 hectare (ha)** area with high porosity zones close to demonstration plant location.
- Further drill holes are targeting upgrades to the MRE in the Cilon concession where sub-surface samples of **1,122 parts per million (ppm) lithium<sup>1</sup>** were collected are planned.
- Infill drilling, Differential Global Positioning System (DGPS) survey and light detection and ranging (LiDAR) surveying is also planned to upgrade the Resource from an Inferred Resource category.
- Of the total MRE, **85.82% of the brine volume is above a 100 ppm lithium (Li) cut-off grade (COG)**, of which the surface siliciclastics domain comprises 0%, the main salar domain comprises 86.07% above COG, and the high porosity salar domain comprises 100% above COG.
- Notably, **the average porosity from core samples was higher than the Borehole Magnetic Resonance (BMR) derived values** as these were sampled from discrete zones of higher porosity.
- Patagonia Lithium Ltd (Patagonia) can now complete the demonstration plant application, to be followed by further drilling at Cilon, and BMR surveys to **further upgrade the initial MRE**.

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<sup>1</sup> ASX release 2 June 2023 "Sampling at Formentera and Cilon Assays 1,122ppm Lithium")

### Capital structure

74.8m - PL3 shares

14.6m - PL3O quoted options

13.2m - unquoted options

2.0m - unquoted performance rights

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### Board

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Jarek Kopias - Co Sec

**Patagonia Lithium Ltd (ASX:PL3, Patagonia or Company)** is pleased to report a maiden Inferred Mineral Resource Estimate (**MRE**) statement for its Formentera Lithium Brine Project (**the Project**) in the Jujuy province of Argentina in the “lithium triangle”. The MRE detailed in Table 1 below includes 173,000 metric tonnes (**t**) of lithium carbonate equivalent (**LCE**) with calculated mean sample values of 461.6 mg/L for lithium (Li), and 945.7 mg/L for magnesium (Mg) were applied as the **default values** for unestimated High Porosity Salar blocks and calculated mean sample values of 186.4 mg/L for Li, and 729.8 mg/L for Mg were applied as the **default values** for unestimated Salar blocks in the block model. **Lithium grades as high as 1,122 parts per million (ppm)** were measured in the subsurface and 580 ppm at 360 m depth in drill hole JAM-24-01 (ASX release 18 June 2024 – “Exceptional results achieved from Well Two at Formentera”).

Phillip Thomas, Executive Chairman commented “We are delighted to announce this **robust maiden JORC resource estimate of 3.8million tonnes LCE, with 717,000 tonnes of lithium metal insitu** which confirms our Formentera project as one of the **best undeveloped projects** in Argentina with **superior brine volumes, specific yield (Sy), high porosity and lithium grades**. The board will now progress its exploration, application for a demonstration plant, a scoping study and then definitive feasibility study with results from further exploration.

*This maiden resource exceeds our expectations both in terms of total volume, specific yield (Sy) and also in terms of the high concentration of lithium, leading us to believe Patagonia has a valuable project to be developed. We have the added benefit of proven Ekosolve™ DLE (Direct Lithium Extraction) technology that has a short construction time and already proven extraction of more than 92% lithium<sup>2</sup>, minimising pond construction risks with water table damage and K and Mg concentration risks. Considering we have drilled only 4 wells, there is still significant exploration and **resource upside potential** to expand this resource as we continue to drill out the high porosity zone and the Cilon concession. These results allow Patagonia to proceed to the next stage of our flagship project which is submitting the 1,000 tonne Ekosolve™ demonstration plant permit application, drilling exploration well five and planning production wells when the BMR surveys are finished. We are confident we will unlock additional resource and value for our shareholders.”*

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<sup>2</sup> ASX Release 12 September 2023 “92% Lithium Extraction from Formentera Brines”

## Specific Yield

A geological model was developed for the Project for this MRE. At the MRE stage, the model provides an estimate of bulk in situ brine volume, with a preliminary assessment of brine recoverability based on the porous media parameter known as Specific Yield (Sy). Effective porosity samples from each drill hole were tested at Core Laboratories Australia Pty Ltd (CLA). Validation of the effective porosity results from core samples was achieved through a downhole Borehole Magnetic Resonance (BMR) survey conducted in drill hole JAM-24-02, which provides for a continuous profile of porosity, compared to the discrete core samples.

Domain	Sediment Volume (m <sup>3</sup> )	Specific Yield (%)	Brine Volume (L)	Li Grade (mg/L) <sup>1</sup>	Li Metal (kt) <sup>2</sup>	Li Yield (kt)	LCE (kt) <sup>3</sup>	Mg Grade (mg/L) <sup>1</sup>	Mg Metal (kt)	Mg Yield (kt)
<b>Inferred Resources</b>										
<b>High Porosity Salar</b>	90,262,500	13	11,734,125,000	461.6	42	5	29	945.7	85	11
<b>Salar</b>	3,059,125,000	4	122,365,000,000	220.7	675	27	144	854.5	2,614	105
<b>Total Inferred Resources</b>	3,149,387,500		134,099,125,000	234.7	717	32	173	857.4	2,699	116

Table 1 Maiden MRE with a 100 ppm Li cut-off grade (COG) applied.

### Notes:

- 1) Grade values are the average estimated value for the domain in the Maptek Vulcan™ Block Model.
- 2) Total in situ contained lithium metal (717,000 tonnes).
- 3) Extractable LCE(173,000 tonnes).
- 4) No recovery, dilution or other similar mining parameters have been applied.
- 5) Although the Mineral Resources presented in this report are believed to have a reasonable expectation of being extracted economically, they are not Mineral Reserves. Estimation of Mineral Reserves requires the application of modifying factors and a minimum of a Pre-feasibility Study (PFS). The modifying factors include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social, and governmental factors.
- 6) Mineral Resources that are not Ore Reserves do not have demonstrated economic viability. There is no certainty that any or all of the mineral resources can be converted into mineral reserve after application of the modifying factors.

The conversion factor used to calculate the equivalents from their Li metal ions is simple and based on the molar weight for the elements added to generate the equivalent. The equations are as follows:  $\text{Li} \times 5.3228 = \text{LCE}$ . Tonnages are

rounded to the nearest thousand and grades are rounded to the nearest whole number, comparison of values may not add due to rounding.

The BMR survey identified **a zone of higher porosity**. The BMR survey was used with the Magnetotelluric (MT) survey and logged geology to model a high porosity zone within the salar. This high-porosity zone coincided with deeper clean semi consolidated to consolidated sands and was assigned a Specific Yield (Sy) value of 13%, while the remaining areas were assigned a lower value of 4%. These assignments were primarily based on the BMR results, which reflect the volume-averaged behaviour of the formation, rather than the discrete core sample results. Notably, the average porosity from core samples was higher than the BMR-derived values as these focused on discrete zones of higher porosity. Further BMR surveys will provide more data for higher statistical confidence.

### **Resource Estimation Methodology**

The initial exploration drilling program was designed to delineate the subsurface lithology and determine the potential for a Li resource within the exploration concessions. Locations for the exploration drill holes currently drilled are shown in Figure 1 with the planned drill hole JAM-24-05, and location coordinates and depths for the completed drill holes are provided in Table 2.

A total of 1,499 metres (m) were drilled in this initial program and included in the MRE. The drill holes in this initial program used the diamond drill hole method by Cuartz SRL based in Salta, Argentina. All drill holes are vertical, and depths drilled represent true thicknesses. During drilling, core samples were obtained for porosity analysis and brine samples for chemical analysis. Core samples were stored in wooden boxes and labelled with the drill hole name and depth in our Salta warehouse. Lithological descriptions were done by Patagonia geologists and reviewed by WSP Australia (WSP), the world's largest mining consultancy.

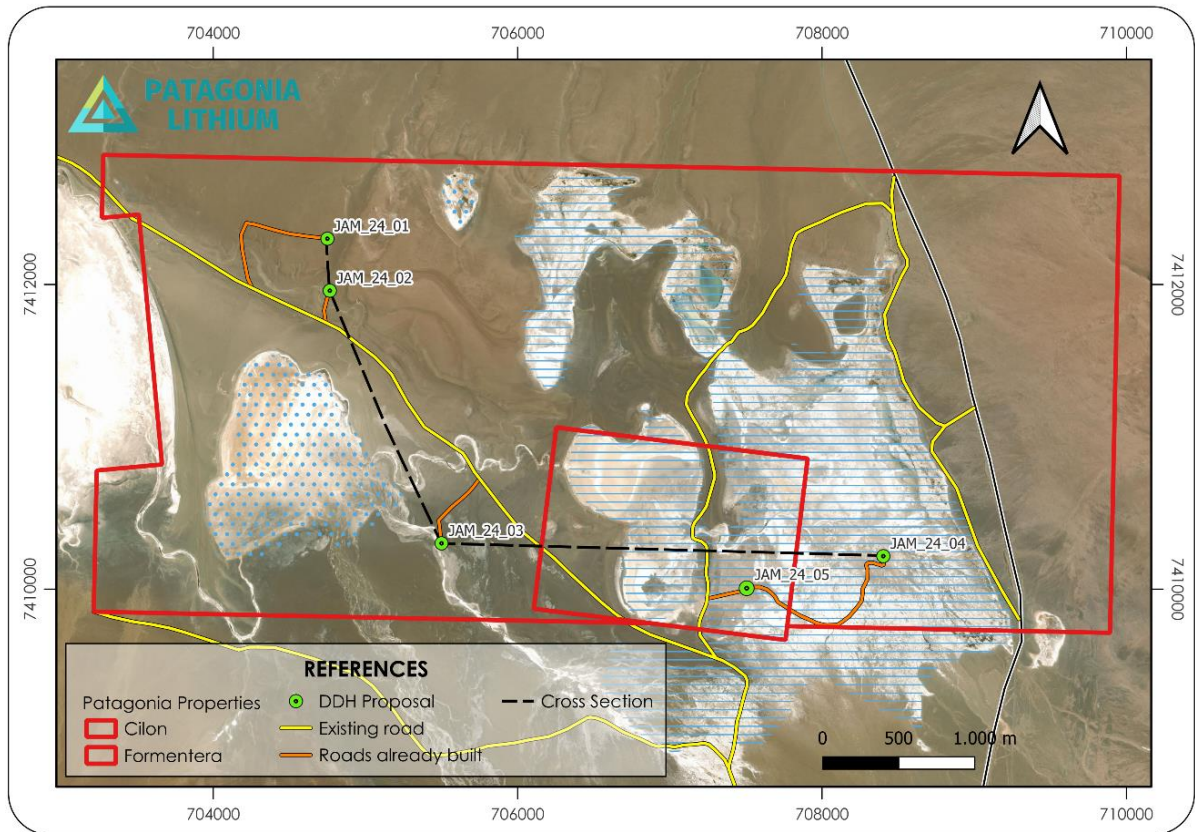


Figure 1 Location of the four completed drill holes and the next drill hole to be drilled on the Cilon concession (JAM-24-05).

Hole ID	X (Easting)	Y (Northing)	Z (RL)	TD (m)	Azimuth	Dip
<b>JAM-24-01</b>	3,398,114.081	7,414,300.298	4,095.382	370.0	0	-90
<b>JAM-24-02</b>	3,398,137.000	7,413,959.000	4,088.853	344.5	0	-90
<b>JAM-24-03</b>	3,398,906.000	7,412,316.000	4,084.180	374.5	0	-90
<b>JAM-24-04</b>	3,401,811.000	7,412,294.000	4,089.616	401.5	0	-90

Table 2 drill hole locations

Resource estimates were calculated by multiplying the block volume by the drainable porosity, then by the Li grade calculated for corresponding intervals. Subsequently, the resulting value was summed within each block. Two zones were delineated - a high porosity zone and a lower porosity zone.

The primary analytical laboratories for the data used in this MRE are Alex Stewart International (Alex Stewart) and SGS Argentina SA (SGS), both in Argentina. Both laboratories are accredited to ISO 9001:2008 and ISO14001:2004 for their geochemical and environmental labs for the preparation and analysis of numerous sample types, including brines.



## Project Background

Patagonia's 100%-owned Project is located in the Jujuy Province, Argentina and covers 19,540 hectares (ha) (19.54 square kilometres [km<sup>2</sup>]) with two mining leases owned by Patagonia's Argentine subsidiary, Patagonia Lithium Argentina SA. These are held over the complete salt lake near Jama township 1 kilometre (km) from Chile border with the lowest point (approximately 3,900 metres above sea level [masl]) of a large drainage area. The basin drains the Li bearing volcanic rocks of nearby Zapaleri volcano.



Figure 2 Location of drill hole JAM-24-05 on the Cilon concession of the Paso Salar. Weathered volcanics in background on the ridge.

## Regional Geology

Geology is characterised by Andean geomorphology, and resultant igneous and sedimentary basements ranging from Ordovician to Quaternary age. The Puna endothermic basins formed from Andean orogeny, regional sediment deposition and local arid evaporative climate. Regional outcrops include the Ordovician Puna Platform, Puna Volcanic and Puna Turbiditic Complexes. The Puna Volcanic Complex comprises a sequence of pyroclastic and sedimentary units of Early to Middle Ordovician (Arenig Llanvirn) age ranging from turbidites, debris flows, volcanoclastic, lava flows, basaltic and andesitic volcanics.

The Northern Puna Complex western region is characterized by 4,000 m of volcanoclastics originating from an Ordovician volcanic arc. Upper units are comprised of turbidites, tuffs and interbedded tuffs and felsic volcanoclastics (Bahlburg y Zimmermann, 1999). Lower units include sandstone and conglomerates in igneous lavas and breccias (Bahlburg (1990)). The Puna Turbiditic Complexes comprise a large sequence of turbidite deposits of Middle

Ordovician age, up to 3,500 m in thickness, and extending along the Sierra de Lina and El Toro volcanic fields.

Sedimentary outcrops located north of the Project area correspond to the Vizcachera Formation (of Oligocene to Middle Miocene age), and consist of sandy-conglomerate, sandy-clayey and sandy-chalky, poorly consolidated rocks. The other rocks that dominate the Project area are of volcanic origin. Volcanic rocks consist mostly of basalts, andesites, dacites, and rhyolites of upper Tertiary age. The basins between the volcanic outcrops consist of Quaternary age, poorly consolidated to unconsolidated, colluvial and alluvial sedimentary deposits. The Quaternary fill terminates, and interfingers with the evaporite deposits, which form the salar.

### **Local Geology**

The Project is located on the Paso Salar in the southwest of Jujuy Province between the **Jama Salar and Olaroz Salar** within the Puna morpho-structural plateau. It is bounded to the east by the thrust fault uplifted structures of Sierra de Lina approximately 4,914 m masl, and to the southwest by Cordón Borde de Pircas approximately 4,600 masl. The Project salar is typical of the endorheic basins of the Puna region, the basin is surrounded by the volcanic bedrock and filled with fine grained clastic lacustrine sediments with a saline crust towards the centre of the basin. The sediments host a mineral enriched brine. Surface samples with positive Li results as high as 1,122 parts per million (ppm) in brines were recorded on the sub-surface and 580 ppm at depth through the drilling and sampling programs.

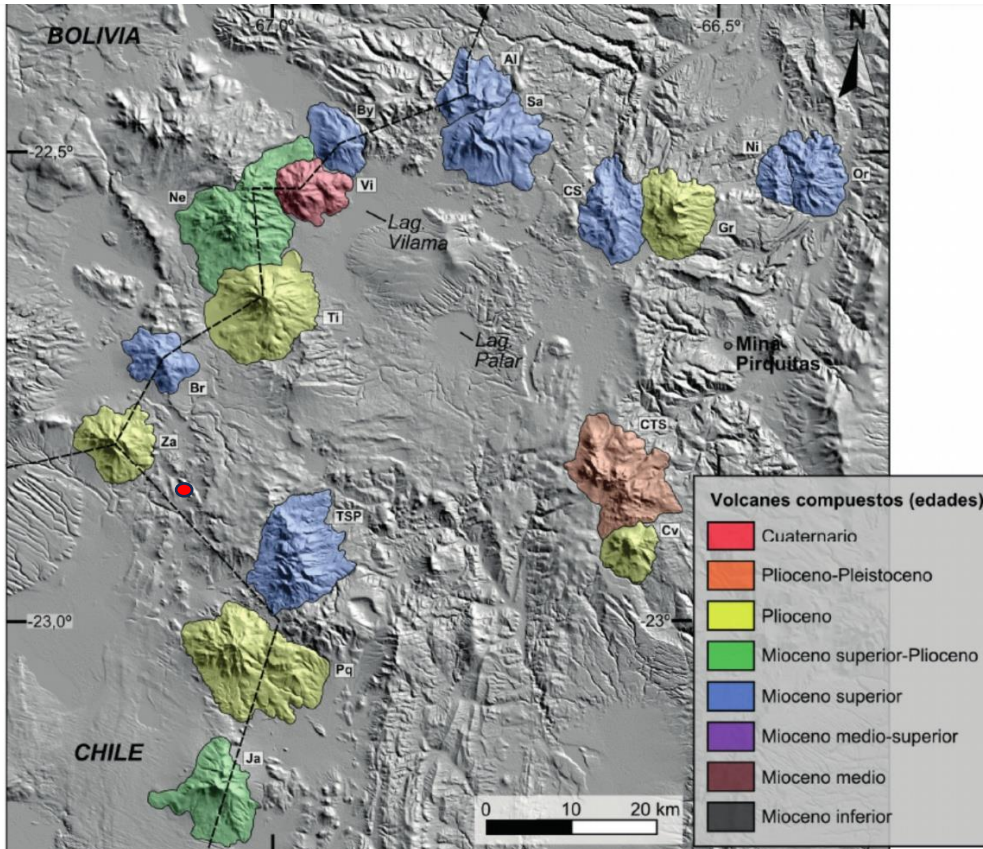


Figura 3. Modelo digital de elevación del sector Puna norte con volcanes cartografiados discriminados según edad. Volcanes: Alcoak (Al), Salle (Sa), Bayo (By), Orosmayo/Colorado (Or), Niño (Ni), Vilama (Vi), Granada (Gr), Caucani-Solterio (CS), Negro (Ne), Tinte (Ti), Brajma (Br), Zapaleri (Za), Campanario-Toma-Sipisami (CTS), Convento (Cv), Torona-San Pedro (TSP), Poquis (Pq), Jama (Ja).

Figure 3 Shows the nearby Zapaleri volcano (Za) and Torona-San Pedro (TSP) volcanoes. Formentera is shown as a red dot.

### Project Location

Formentera is located approximately 265 km north-west of San Salvador de Jujuy, the capital of the Province of Jujuy, at an altitude of approximately 4,080 masl. The paved international highway (National Route 52 - RN52), linking San Salvador de Jujuy to ports in the Antofagasta region of Chile, passes approximately 1 km west of the Project and continues to the town of Jama just 10 km away. RN52 is used by Arcadian, a subsidiary of Rio Tinto, to export lithium carbonate (Li<sub>2</sub>CO<sub>3</sub>) product and to import key chemicals used in the production of Li<sub>2</sub>CO<sub>3</sub>. Formentera is approximately six hours light vehicle travel from Salta, where Patagonia Lithium Argentina SA has a local office and warehouse.

### Drilling Programme

To date, Patagonia has completed four diamond drill holes (JAM24-01 to JAM24-04), for a total of approximately 1,499 m, in the Formentera concession. The initial 10 drill hole (approximately 5,000 m) resource definition drilling



programme is designed to target areas identified as having thick sequences of brine in porous aquifers, based on the developing geological model and the Company's extensive geophysical surveys. Drill hole JAM-24-02 has been surveyed using BMR gamma tool. The other three drill holes plus the fifth drill hole in Cilon will also be surveyed.

Drilling has encountered a major sand and gravel sequence, partially related to the current alluvial landform. There is gypsum present which was previously mined on the Cilon concession. The clays do not act as a confining layer, and exceptional porosities were recorded with packer tests extracting more than 200 litres (l) per test. A summary of the Li sampling set out below shows the depth of the aquifers containing Li.

Triple tube diamond drilling was used, with four diamond drill holes reaching total depths of between 344.5 m and 407.5 m, were completed during 2024. Initially, a pre-collar was drilled to a depth of 33 m using a tricone bit (diameter ranging from 5 ¼ inch (") [127 millimetres (mm) to 9 ¾" (247 mm)]. The pre-collar was then cased with 8" (203 mm) steel casing and cemented for safety, effectively preventing any potential upwelling from confined aquifers. HQ (63.5 mm core diameter) diamond drilling continued from the base of the pre-collar to collect continuous core for geological characterisation, porosity sampling, and brine characterisation using packer and airlift sampling.

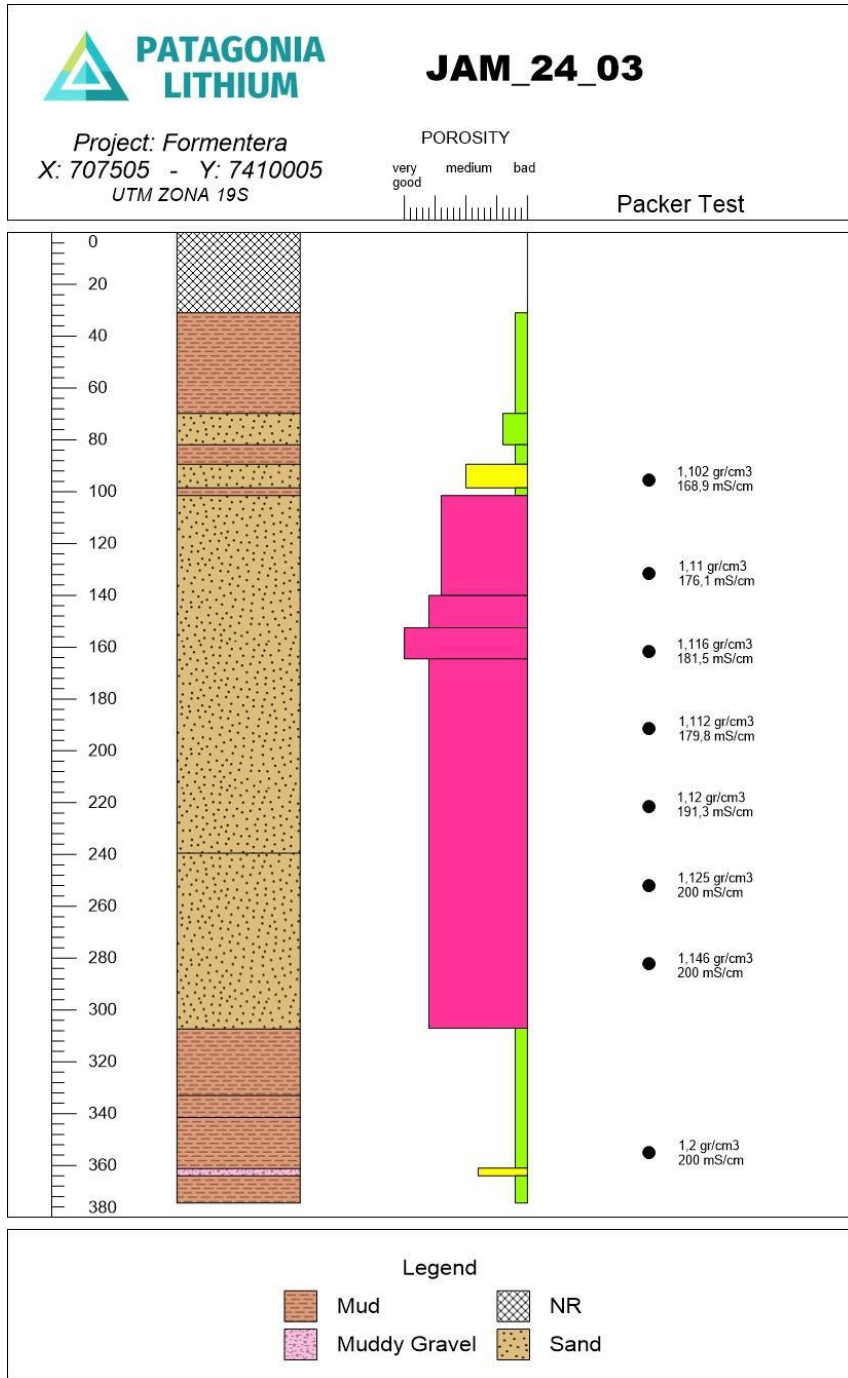


Figure 4 Lithological column showing very porous unconsolidated sands and increasing Specific gravity due to brine concentration in drill hole JAM- 24-03.

Drill Holes JAM	24-01	24-02	24-03	24-04
<b>Top Zone Li Assay (ppm)</b>	104	132	238	152
<b>Depth (m)</b>	110.0	141.8	86.50	251
<b>Bottom Zone Li Assay (ppm)</b>	591	580	413	203
<b>Depth (m)</b>	361.0	335.5	374	392.0
<b>Maximum Li Assay (ppm)</b>	591	580	413	203
<b>Li Aquifer thickness Assayed</b>	251	194	287	141

Table 3 Range of lithium values at various depths and maximum values and approximate thickness of aquifer.

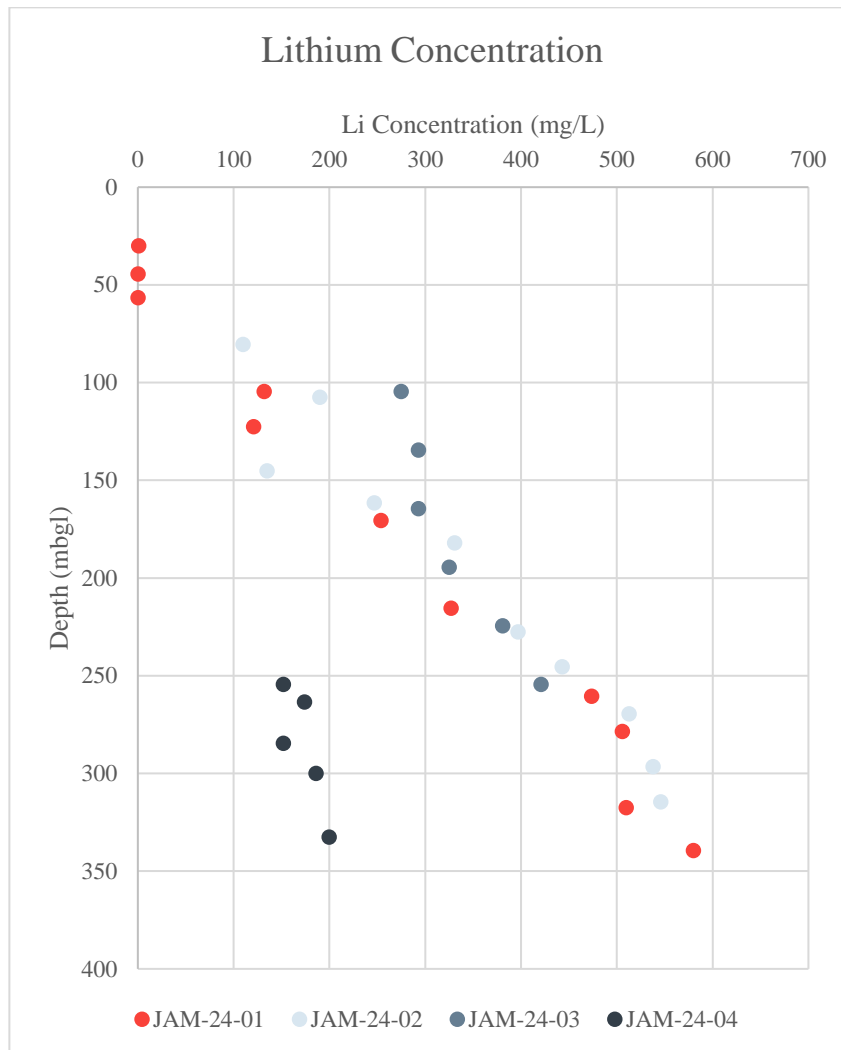


Figure 5 Plot of Li concentration versus depth by drill hole.

Drill holes JAM-24-01 – JAM-24-04 did not reach the bedrock beneath unconsolidated sediments. Drill holes JAM-24-01, JAM-24-03 and JAM-24-04 are currently pending geophysical logging, where measurements will be undertaken for total porosity, specific yield (Sy), conductivity, resistivity and spectral gamma. The drill pad for Cilon drill hole JAM-24-05 has been constructed.

Core samples for porosity analysis were sent to CLA for total and yield porosity analysis from all four drill holes. In respect of the balance of the initial 10 drill hole drilling programme:

- Up to two additional holes are planned in the Cilon concession to improve the confidence in correlation of lithology, porosity and brine concentration between existing drill holes; and

- Production well drilling will be undertaken after the hydrogeological model is constructed to evaluate the preferred areas to extract the brines.

### **Porosity Analysis**

The vertical profile of effective and total porosity derived from BMR survey data is shown in Figure 5, with core porosity results included for reference. While there is a good correlation between the BMR survey and diamond core data, the BMR survey data provides a continuous profile, with significantly higher resolution compared to the discrete core measurements. When compared to lithology for drill hole JAM-24-02, the BMR survey data distinguishes two distinct zones as follows:

- **Upper Zone:** A lower-porosity zone comprising unconsolidated to semi-consolidated fine sands with higher clay content, located above 207 m.
- **Lower Zone:** A higher-porosity zone consisting of cleaner consolidated to semi-consolidated, fine to coarse-grained sands, below 207 m, transitioning to gravels from 326 m. The mean effective porosity/ $S_y$  based on the BMR of these zones is 4% for the Upper Zone, and 13% for the Lower Zone.

The core samples provided a much higher porosity value. Diamond core results predominantly represent high-porosity zones, which can introduce bias when used in isolation. For example, the average Specific Yield ( $S_y$ ) from core samples (based on a total of five samples) is 24%, whereas the average Specific Yield ( $S_y$ ) derived from BMR survey data is 13%.

The average porosity reflects a larger data set than the zones from where brines will be pumped and further work will demonstrate this. The graph below in Figure 6. Shows the range of Specific Yield ( $S_y$ ) as high as 30% in the lower zone.

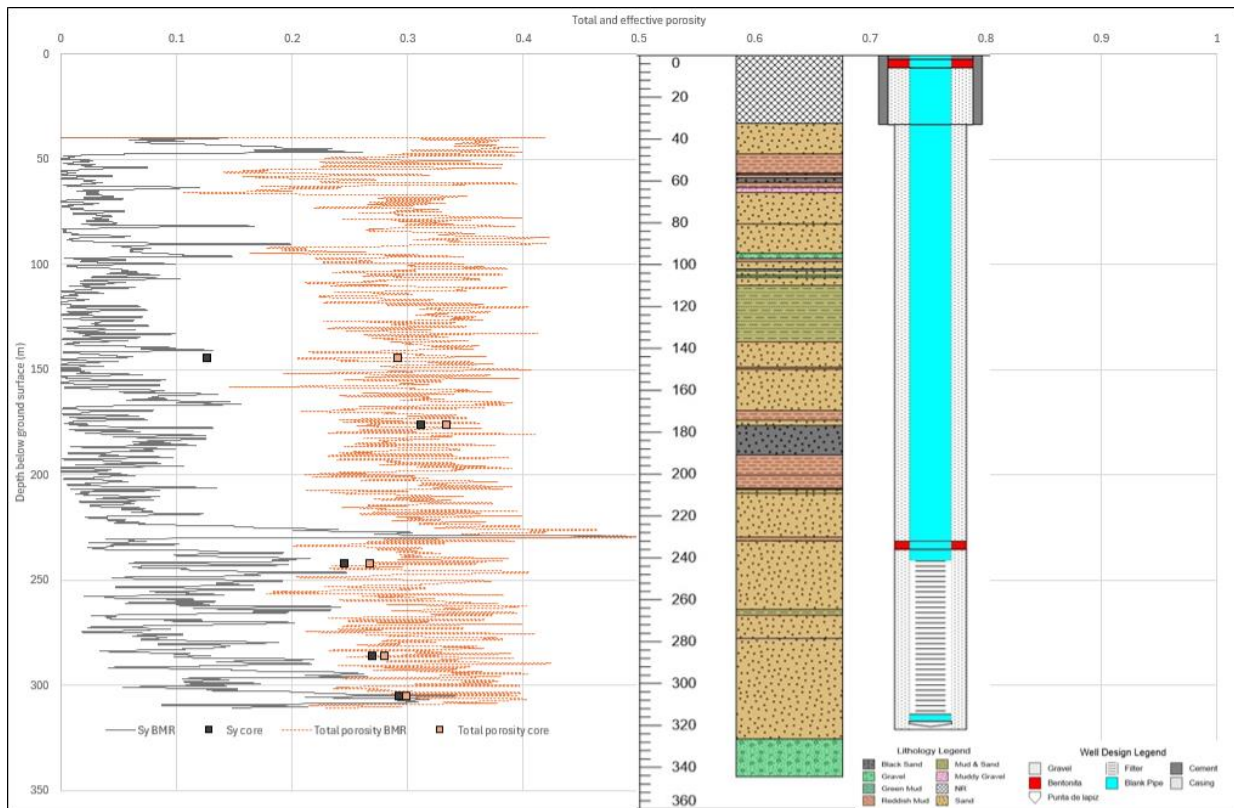


Figure 6 Vertical profile of effective and total porosity – drill hole JAM-24-02.

## Pumping Tests

72-hour pumping tests were conducted on all four drill holes achieved satisfactory to outstanding results.

At JAM-24-03, the water level before starting the test was at 10.95m:

- In 72 hours of the test, a total of 16 tanks were filled up, that is, 176,000 l of brine was extracted from the drill hole.
- This allowed us to calculate a **Flow Rate of 2,466.37 l/hour**.

The water level immediately after the test was completed was 32.39m. The static water level increased to 7.4 m.

WSP analysed the pumping test data provided for drill hole JAM-24-04. This drill hole was screened across the deeper sand aquifer from 170 m to 390 m below ground surface. The groundwater level drawdown and recovery were analysed using the industry-standard software AQTESOLV to estimate hydraulic conductivity (K), and transmissivity ( $T = K \times \text{aquifer thickness } (b)$ ). The solution was applied for the pumping and recovery phases, which models a homogeneous confined porous media aquifer with radial flow and partial penetration. The well construction and target lithology conform to these conditions.



The pumping test results are summarised as follows:

The calculated hydraulic conductivity (K) is approximately 0.1 to 0.16 metres per day (m/day), with a transmissivity ranging from 22 to 36 square metres per day (m<sup>2</sup>/day). These values align with findings from other regional studies (Houston et al. 2011). The graphical solution used to derive these results is shown at the Figure 7 below.

**The results may be underestimated** due to the narrow drill hole diameter, which can introduce wellbore skin effects. Additionally, the use of a 3-inch (") pump in a 4" well likely resulted in higher drawdown due to restricted flow dynamics and potential well efficiency losses. The narrow drill hole diameter limits water inflow, and additional resistance near the well can reduce the apparent efficiency, and transmissivity of the aquifer. Late-time drawdown data showed a flattening of the drawdown curve, which may indicate a zone of higher permeability was encountered, or that well efficiency improved with continued pumping (well development). Groundwater level recovery was swift, with nearly 80% of the drawdown recovered within 12 hours of the pumping test ceasing.

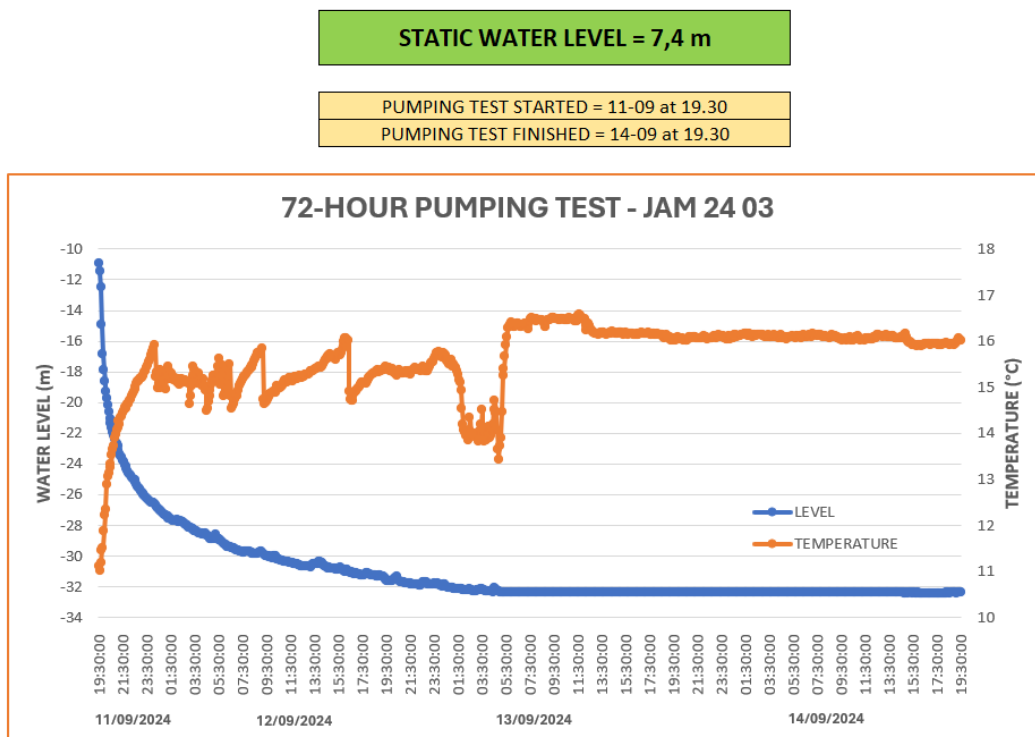


Figure 7 Aquifer test analysis - drill hole JAM-24-03.

## Geophysics Work

Three MT Surveys were completed across the project. These investigations confirmed the conductive brine body, but the reduction in conductivity (increase in resistivity) only occurs at a depth of more than 1,000 m which is

interpreted as the contact between the unconsolidated sediments and underlying consolidated bedrock, to outline the extent of the brine body.

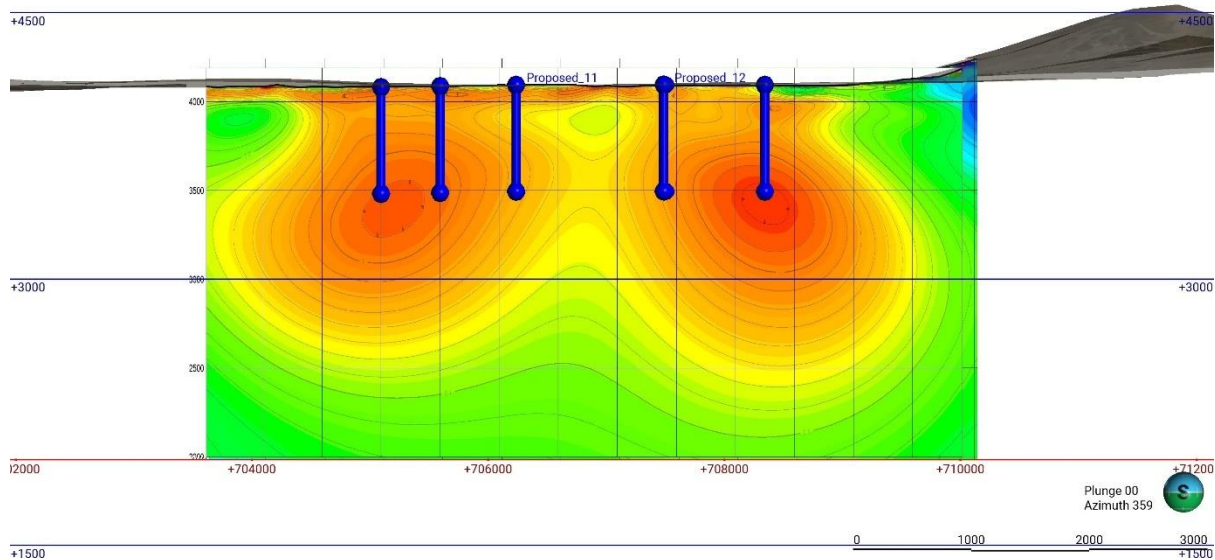


Figure 8 Geophysics line L7410300 in 2D inversion showing drill hole locations in east-west section and high conductivity (orange area) down to 3,000 masl.

The results of lines L71411300 and L71412300 in the 1D survey showed points less than 0.6 ohm/m with a thickness of the units of 2,000 m. **The 2D section inversion shows two large very low resistivity zones of less than 0.9 ohm/m resistivity of up to 1,000 m thickness.** The survey covered 19.8 km over three lines of data – L71410300, L71411300, L71412300 - with geophones placed every 200 m. The resistivity recorded was exceptionally low indicating highly conductive layers, possibly brines containing lithium to a depth of 1,000 m or more.

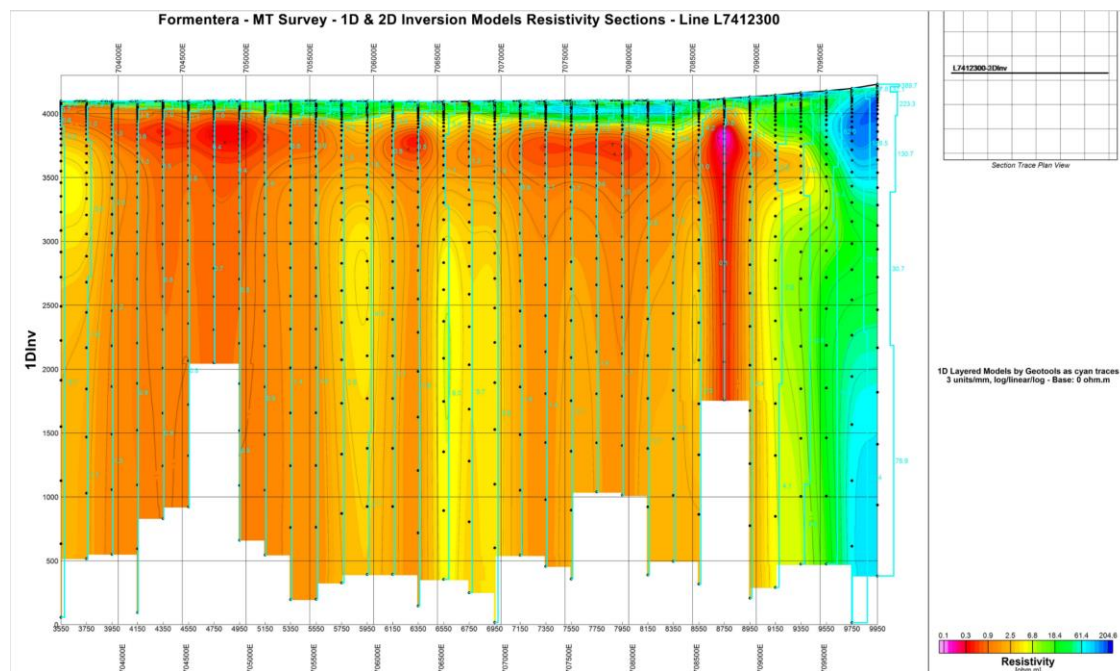
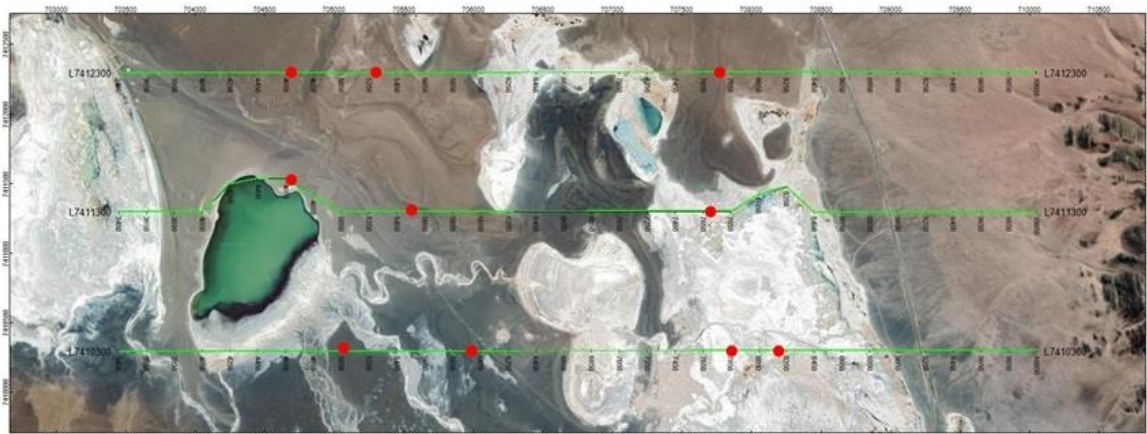


Figure 9 1D inversion line L7412300 showing highly conductive aquifer zone at 4,000-3,500 masl.



Geophysics lines 2300, 1300 and 0300 (N-S) reached a depth of 4,000m with very good resolution and continuity. The red circles are proposed drill hole locations.

The MT survey was composed of three lines of approximately 6.6km long each with stations every 200m. The 1D and 2D inversion for line 0300 is set out below.

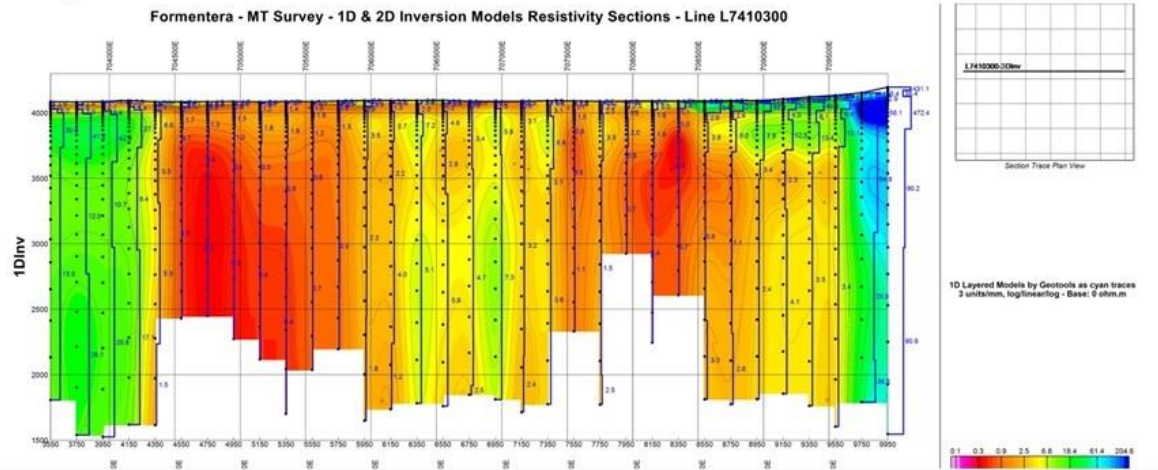


Figure 10 Map showing MT Geophysics survey lines, outline of water bodies in depressions and future proposed drill hole locations. One more drill hole will be drilled on Cilon before detailed hydrological modelling takes place.

### Geophysical Drill Hole Logging and Specific Yield Measurements

Drill holes were drilled as HQ diameter diamond holes. During the drilling, core samples were collected and plastic wrapped and sealed. The sample was labelled with top and bottom depths and sent to the CLA, a laboratory in Perth Western Australia, and a global laboratory corporation specialising in oil, gas, and brine analysis. The core samples were subjected to a number of tests to determine the total porosity and specific yield (Sy).

SAMPLE NUMBER	CLIENT SAMPLE ID	SAMPLE		PERMEABILITY		TOTAL POROSITY (%)	EFFECTIVE POROSITY (%)	GRAIN DENSITY (g/cc)
		TOP DEPTH (m)	BOTTOM DEPTH (m)	CONFINING STRESS (800psi)				
				Kinf (md)	Kair (md)			
<b>JAM2 4-02</b>								
10	-	145.10	145.25	13.7	16.6	29.3	12.7	2.665
11	-	176.90	177.08	1310	1360	33.5	31.2	2.625
12	-	242.78	242.99	178	195	26.8	24.6	2.579
13	-	286.47	286.65	306	333	28.1	27.0	2.639
14	-	305.95	306.11	5.54	7.11	29.9	29.4	2.320

Table 4 Core results from drill hole JAM-24-02 showing exceptionally high effective porosity at 31.2%



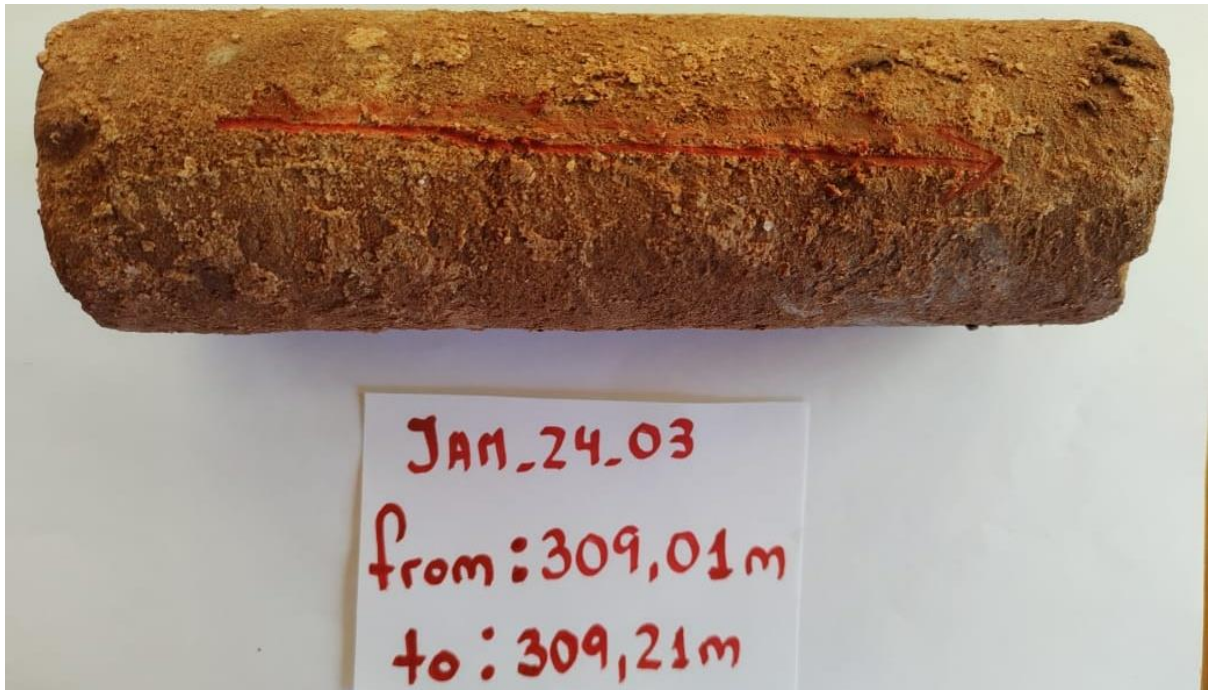


Figure 11 Sandy matrix which tested with 24.5% total porosity and at 800 pounds per square inch (psi) a permeability confining pressure (K) of 385 which was an excellent result.

CLA use The PRISM™ integrated workflow that delivers quick and accurate porosity and saturation data with insights into fluid distribution within tight pore structures. These essential measurements provide the necessary data for interpreting storage (porosity) and flow (permeability) capacity. Residual fluid saturations provide an indication of probable production metrics.

### **BMR Survey of JAM-24-02**

Zelandez conducted a BMR survey on JAM-24-02. Logging tools consisted of spectral gamma, resistivity, conductivity and BMR. BMR is a geophysical tool developed by the oil industry to measure porosity and permeability in situ in drill holes, to assist reservoir studies. The tools are maintained regularly by Zelandez in their facilities in Salta. The data acquisition and processing methodology gives information on the Total Porosity (TPOR), Specific Yield (Sy), Specific Retention and provides a computation of permeability and hydraulic conductivity with a vertical resolution of 2 centimetres (cm).

The survey was a success and was competent to 316 m. The BMR log id presented in Figure 13. TPOR, the green shaded area, shows a maximum porosity of 52%, a minimum of 11% and an average of 31%. The specific yield (Sy) shows a maximum of 50% and an average of 8%. The capillary water and movable water dramatically increases below 230 m which is the start of the Li concentration (at approximately 140 m – 132 ppm Li).

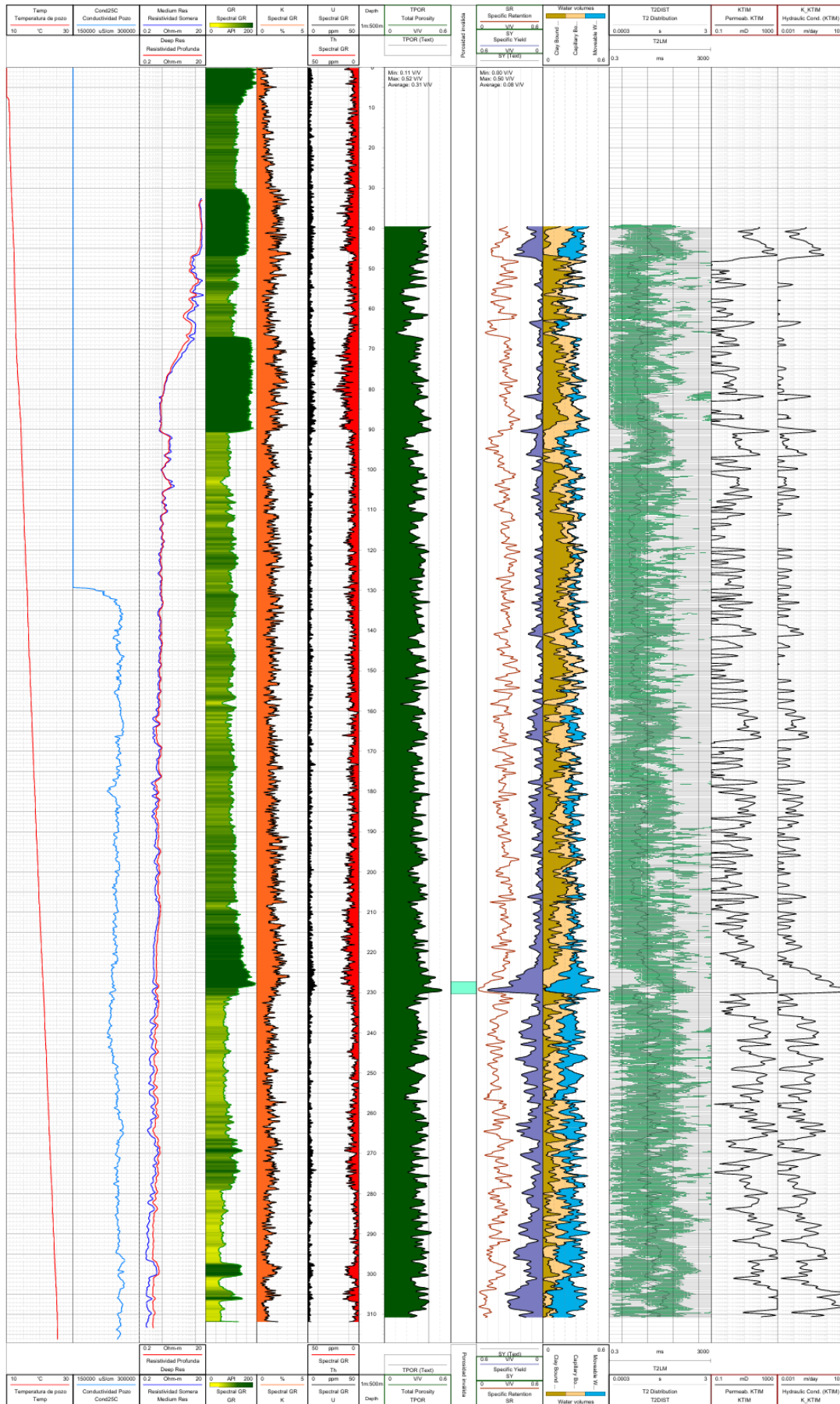


Figure 12 BMR well log showing total porosity and yield.



## **Brine Sampling and Analyses**

Brine samples were collected from holes using a packer sampling system. During drilling, samples were taken with a single packer arrangement every approximately 50 m. The packer is lowered into the hole and the chamber between the packer and the end of the hole is sealed by inflating the packer below the diamond drill bit. The packer sample is extracted from the chamber below the packer by injecting air into the top of the packer assembly, creating a suction effect which extracts brine from the chamber below the packer, flushing the brine to the surface, where it is diverted from the top of the hole via a pipe connected to the top of the drill rods.

Purging of three drill hole volumes of brine is conducted, prior to collecting samples for analysis. When the hole is completed, packer samples are also collected using a double packer arrangement, sampling from the base of the hole upward. The double (straddle) packer arrangement consists of two packers sealing below the diamond bit and another packer sealing within the drill rods, to exclude vertical inflow of brine from other sections of the hole. Double packer samples can be compared to single packer results as a Quality Assurance/Quality Control (QA/QC) procedure, along with the use of field duplicate samples, certified brine standards and blank samples as an additional check on laboratory standards and using two laboratories. Brine samples were analysed by the Alex Stewart, near San Salvador de Jujuy, which has an extensive history of analysing brine samples from a large number of projects in Argentina over more than a decade and SGS a certified laboratory in Salta.

Samples are delivered to the laboratory by Patagonia personnel, together with chain of custody data. Samples are analysed for cations using ICP-OES spectrometry. The anions are analysed using a variety of different techniques defined by ASTM International (ASTM) testing guidelines. Analyses include Li, potassium (K), Mg, calcium (Ca), boron (B), iron (Fe), manganese (Mn), strontium (Sr), barium (Ba), chloride (Cl), sulphate (SO<sub>4</sub>), carbonate and bicarbonate. Samples were submitted with unique sample numbers, related to holes and sample depths in the Project database. Two samples from JAM-24-01 were assayed for rubidium and caesium that can accumulate in brines but were too low to be economic.

## **QA/QC Regime**

Brine samples were taken in triplicate, with the primary sample sent to Alex Stewart in Jujuy and secondary sample sent to SGS. Duplicate samples,

standard and blank samples were analysed in the primary and secondary laboratories.

Sample batches consisted of field duplicates and standard and or blank samples to test for accuracy, precision and possible contamination between samples. The secondary (triplicate) check samples were sent to SGS in Salta, Argentina, and compared with the primary sample and duplicate sample analysed by Alex Stewart in Jujuy.

Master Sheet of B Sample Analyses is presented in Table 5.

Hole_ID	Sample_ID	From	To	Type Control	SAMPLE NUMBER	Ca mg/L	K mg/L	Li mg/L	Mg mg/L	Na mg/L	
JAM-24-01	FOR_001	30.00	44.50	ORIGINAL	FOR-001 B		104	32	1	9	301
JAM-24-01	FOR_002	44.50	56.50	ORIGINAL	FOR-002 B		24	7 <1		3	61
JAM-24-01	FOR_003	56.50	68.50	ORIGINAL	FOR-003 B		86	29 <1		11	227
JAM-24-01	FOR_004	BLANK			FOR-004 B		26 <2	<1		11	12
JAM-24-01	FOR_005	104.50	106.70	ORIGINAL	FOR-005 B		657	1522	132	739	24998
JAM-24-01	FOR_006	122.50	124.70	ORIGINAL	FOR-006 B		652	1463	121	653	22879
JAM-24-01	FOR_007	170.50	173.50	ORIGINAL	FOR-007 B		891	2478	254	897	46044
JAM-24-01	FOR_008	170.50	173.50	DUPLICADO	FOR-008 B		892	2486	256	902	46528
JAM-24-01	FOR_009	215.50	221.50	ORIGINAL	FOR-009 B		959	2811	327	991	55113
JAM-24-01	FOR_010	260.50	266.50	ORIGINAL	FOR-010 B		588	3761	474	979	82203
JAM-24-01	FOR_011	278.50	279.70	ORIGINAL	FOR-011 B		486	3980	506	969	89176
JAM-24-01	FOR_012	STD			FOR-012 B		495	3162	396	1483	106867
JAM-24-01	FOR_013		317.5	329.5 ORIGINAL	FOR-013 B		386	4250	510	1012	94405
JAM-24-01	FOR_014		339.5	361.2 ORIGINAL	FOR-014 B		398	4008	580	937	101158
JAM-24-02	FOR_015		75.79	80.5 ORIGINAL	FOR-0015 B		647	530	55	320	10787
JAM-24-02	FOR_016		102.79	107.5 ORIGINAL	FOR-0016 B		638	1035	110	602	21522
JAM-24-02	FOR_017		141.79	145.1 ORIGINAL	FOR-0017 B		749	1652	190	748	35555
JAM-24-02	FOR_018	BLANK			FOR-0018 B	<2	<2	<1	<1	<2	
JAM-24-02	FOR_019		157.29	161.5 ORIGINAL	FOR-0019 B		656	1159	135	642	25672
JAM-24-02	FOR_020		177.29	182 ORIGINAL	FOR-0020 B		839	2325	247	860	45041
JAM-24-02	FOR_021		222.79	227.5 ORIGINAL	FOR-0021 B		915	2766	331	895	57158
JAM-24-02	FOR_022	DUPLICADO FOR_21			FOR-0022 B		913	2777	332	880	55646
JAM-24-02	FOR_023		239.5	245.5 ORIGINAL	FOR-0023 B		775	3138	397	918	67799
JAM-24-02	FOR_024		260.5	269.5 ORIGINAL	FOR-024 B		611	3507	443	873	74171
JAM-24-02	FOR_025		281.5	296.5 ORIGINAL	FOR-025 B		499	4123	513	945	88150
JAM-24-02	FOR_026	Standard X			FOR-026 B		316	1131	104	618	112623
JAM-24-02	FOR_027		302.5	314.5 ORIGINAL	FOR-027 B		387	4376	538	985	97731
JAM-24-02	FOR_028		302.5	335.5 ORIGINAL	FOR-028 B		397	4415	546	990	98405
JAM-24-02	FOR_029	BLANK				<2	<2	<1	<1	<2	
JAM-24-02	FOR_030	DUPLICATE FOR_27		314.5	FOR-027 A						
JAM-24-03	FOR_031		86.5	104.5 ORIGINAL	FOR-31 B		664	2918	238	733	48914
JAM-24-03	FOR_032		128.5	134.5 ORIGINAL	FOR-32 B		706	3028	275	821	52158
JAM-24-03	FOR_033		158.5	164.5 ORIGINAL	FOR-33 B		719	3163	293	865	51356
JAM-24-03	FOR_034	BLANK			FOR-34 B	<2	<2	<1	<1	<2	
JAM-24-03	FOR_035		188.5	194.5 ORIGINAL	FOR-35 B		732	3114	293	895	52314
JAM-24-03	FOR_036		218.5	224.5 ORIGINAL	FOR-36 B		738	3309	325	1042	56447
JAM-24-03	FOR_037		249.79	254.5 ORIGINAL	FOR-37 B		712	3446	381	1430	61070
JAM-24-03	FOR_038	Standard B-3001 (Li 248)			FOR-38 B		504	2261	252	968	106764
JAM-24-03	FOR_039		279.79	284.5 ORIGINAL	FOR-39 B		728	3719	421	1551	70646
JAM-24-03	FOR_040		356.5	374.5 ORIGINAL							
JAM-24-04	FOR_041		57.79	62.5 ORIGINAL							
JAM-24-04	FOR_042		83.5	110.5 ORIGINAL							
JAM-24-04	FOR_043		125.5	140.5 ORIGINAL							
JAM-24-04	FOR_044	BLANK				<2	<2	<1	<1	<2	
JAM-24-04	FOR_045		158.5	170.5 ORIGINAL							
JAM-24-04	FOR_046		188.5	200.5 ORIGINAL							
JAM-24-04	FOR_047		224.5	230.5 ORIGINAL							
JAM-24-04	FOR_048	Standard C-3001 (Li 400)			FOR-048B		501	3156	397	1475	103811
JAM-24-04	FOR_049		251.5	263.5 ORIGINAL	FOR-049B		450	1409	152	855	26881
JAM-24-04	FOR_050		288	300 ORIGINAL	FOR-050B		782	1425	152	815	29041
JAM-24-04	FOR_051		324.79	332.5 ORIGINAL	FOR-051B		1079	1704	174	883	34246
JAM-24-04	FOR_052	DUPLICADO FOR_51			FOR-052B		1075	1636	173	885	34150
JAM-24-04	FOR_053		354.79	362.5 ORIGINAL	FOR-053B		1082	1758	186	921	36400
JAM-24-04	FOR_054		384.79	392.5 ORIGINAL	FOR-054B		1049	1904	200	849	36728

Table 5 Summary of B Sample Analyses of drill holes JAM-24-01-JAM-24-04, with assays from Alex Stewart, Jujuy.

## Process Testing

Bulk samples of brine were provided to Ekosolve Direct Lithium Extraction for processing. More than **92% of the Li** was extracted and 99.98% purity  $\text{Li}_2\text{CO}_3$  was produced from brines that had an average Li content of 267 ppm.

University of Melbourne Professor (Chemical Engineering) Dr Kathryn Mumford commented:

*“The lithium extraction from the Patagonia Lithium brines has proven to be efficient, especially at low A/O (brine to solvent) ratios due to the relatively high lithium concentration in the brine compared to other lithium brines tested. The lithium extraction efficiency is 31.21% after 1st EX stage pass and it increases up to 92.06% after passing through another 9 additional extraction stages (equivalent to the operating A/O ratio = 0.1). Only 50% of the finishing compound was loaded in the organic solvent during the Regeneration step. Therefore, the lithium extraction performance from Patagonia brines using the Ekosolve process can potentially be better than the current results.”*

Ekosolve™ has achieved more than 95.6% recovery and the captured more than 99.7% of the solvents used making the process extremely environmentally friendly. Ekosolve™ is currently assisting Patagonia to submit an application to build a 1,000 tonnes per annum (tpa) demonstration plant on-site.

## Resource Estimate Inputs

The Paso Salar basement contact was modelled using the 2D MT inversion model and topographic surface, however; to date no drilling has intersected the basement for confirmation. Surficial siliciclastics were modelled from satellite imagery, however; all drill holes had no return from surface to confirm the presence of shallow surface material. The lithology of drill holes JAM-24-01 and JAM-24-02 have some correlation due to their proximity, however; the drill holes are currently too sparsely spaced to refine the lithological interpretation across the salar. WSP utilised the 2D MT inversion and BMR conducted on JAM-24-02 to model a high porosity zone within the salar.

The MRE for the Project is classified and reported in accordance with the requirements of JORC 2012. The effective date of the MRE is 17 January 2025. Mean Specific Yield (Sy) values were applied to the total lithium metal tonnages to obtain the yield from the available brine. The LCE is calculated from the ratio of  $\text{Li}_2\text{CO}_3$  to Li (5.323). The calculations assume no process losses. The minimum Cut-off Grade (COG) for the Project is yet to be determined. The processing methodology proposed to be utilised by Patagonia at the Project requires a 100 (ppm) feed grade (1 ppm is equivalent to 1 mg/L). Of the total

MRE, 85.82% of the brine volume is above a 100 ppm Li COG, of which the surface siliciclastics domain comprises 0% above COG, the main salar domain comprises 86.07% above COG, and the high porosity salar domain comprises 100% above COG. The minimum COG for the Project is not yet defined.

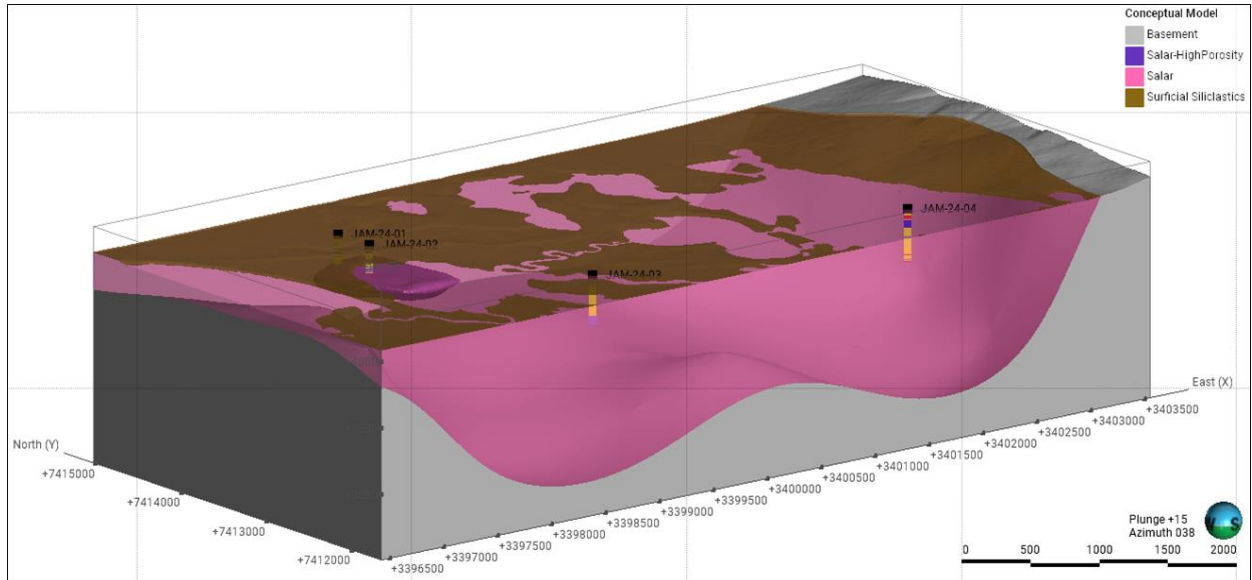


Figure 13 Geological Model of Formentera with high porosity zone near drill holes JAM- 24-01 and JAM-24-02.

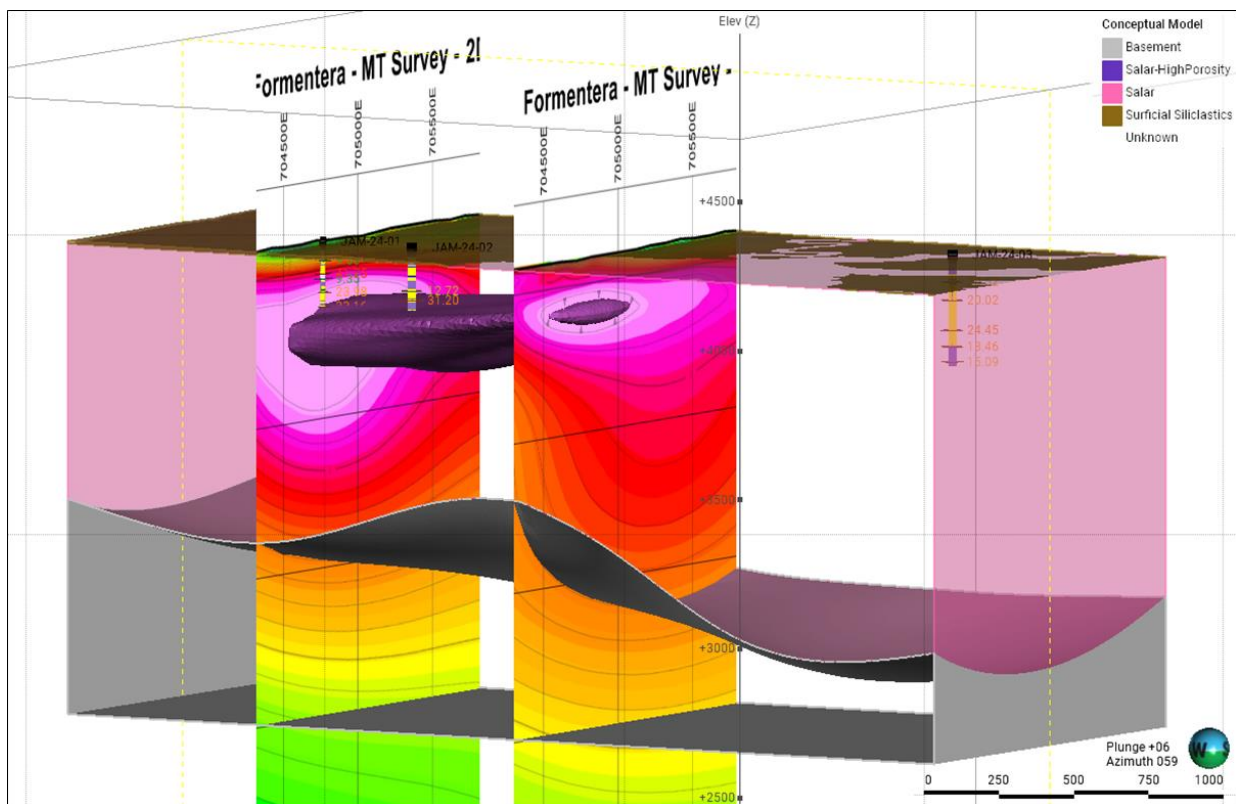


Figure 14 15 Section showing the modelled high porosity zone with 2D MT survey sections.

Analyte	Count	Minimum	Maximum	Mean	Median	CV	SD
<b>All Samples</b>							
<b>B</b>	34	3.00	503.00	345.18	369.50	0.40	138.00
<b>Ca</b>	34	24.00	1,082.00	640.74	660.50	0.40	256.19
<b>Cl</b>	34	46.00	146,136.00	74,115.00	72,700.00	0.57	42,219.08
<b>K</b>	34	7.00	4,415.00	2,478.35	2,788.50	0.53	1,302.94
<b>Li</b>	34	0.50	580.00	279.44	264.50	0.60	167.46
<b>Mg</b>	34	3.00	1,551.00	812.88	878.00	0.40	323.52
<b>Domain 2</b>							
<b>B</b>	23	3.00	494.00	297.35	339.00	0.47	139.80
<b>Ca</b>	23	24.00	1,082.00	668.87	712.00	0.41	273.74
<b>Cl</b>	23	46.00	106,535.00	51,713.26	53,202.00	0.57	29,454.89
<b>K</b>	23	7.00	3,719.00	1,875.17	1,704.00	0.59	1,107.89
<b>Li</b>	23	0.50	421.00	188.52	186.00	0.60	112.81
<b>Mg</b>	23	3.00	1,551.00	745.39	821.00	0.50	373.89
<b>Domain 3</b>							
<b>B</b>	11	346.00	503.00	445.18	465.00	0.13	56.75
<b>Ca</b>	11	386.00	959.00	581.91	499.00	0.35	202.66
<b>Cl</b>	11	85,332.00	146,136.00	120,955.00	129,388.00	0.18	21,261.60
<b>Analyte</b>	<b>Count</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Median</b>	<b>CV</b>	<b>SD</b>
<b>K</b>	11	2,766.00	4,415.00	3,739.55	3,980.00	0.15	574.08
<b>Li</b>	11	327.00	580.00	469.55	506.00	0.17	81.51
<b>Mg</b>	11	873.00	1,012.00	954.00	969.00	0.04	42.16

Table 6 Summary of univariate statistics per mineralisation domain for all domains.

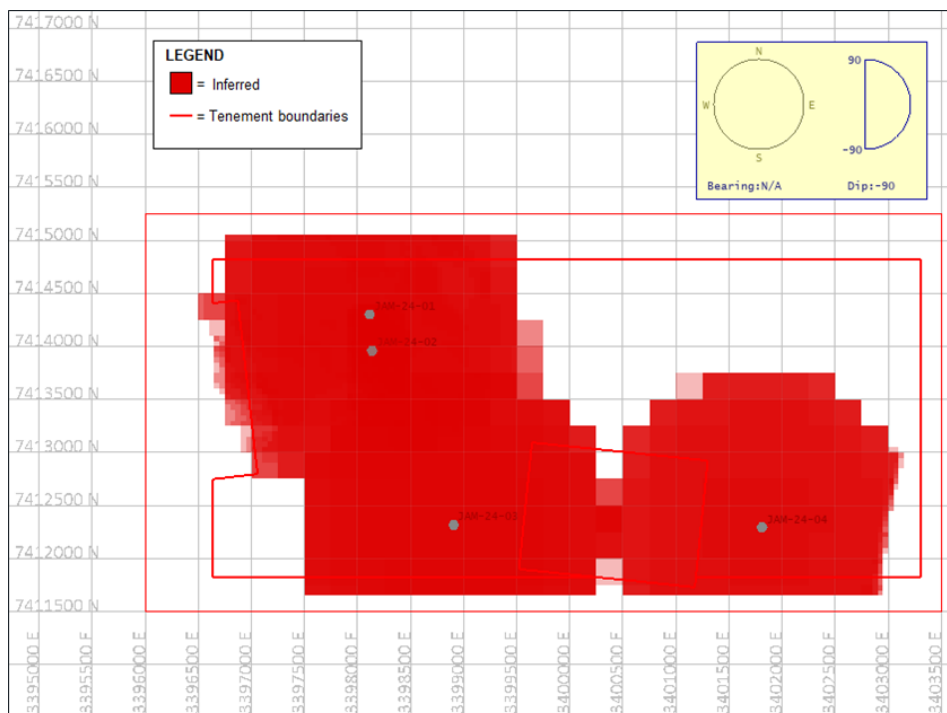


Figure 16 Plan view of the Inferred Resource classification.



### **Mineral Resource Estimation Methodology**

A geological block model was constructed using Maptek Vulcan™ software. The model was oriented parallel to the POSGAR 1994/Argentina 3 grid, and sub-blocked using the geological model volume wireframes exported from Leapfrog Geo™. The current spatial distribution of brine samples is insufficient for statistical analysis of the hydrochemistry, hence variography was not completed. The drill hole database was flagged manually using seven lithological and porosity domains. Four main lithological categories were interpreted from geophysical surveying results Basement, Salar, High Porosity Salar and Surficial Silicates. The groundwater level drawdown and recovery were analysed using the industry-standard software AQTESOLV to estimate hydraulic conductivity (K), and transmissivity ( $T = K \times \text{aquifer thickness } (b)$ ).

### **Mineral Resource Classification**

As prescribed in paragraph 21 of the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code):

- An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
- An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. This maiden MRE for the Project has been classified as an Inferred Mineral Resource, given the relatively limited drilling and sampling conducted to date. Additional drilling is expected to result in an upgraded mineral resource classification in the future. A COG of 100 ppm Li has been applied to the MRE.

### **Mining and Metallurgical Methods and Parameters**

Patagonia and WSP has made the following assumptions in consideration of **Reasonable Prospects for Eventual Economic Extraction (RPEEE)**:

### Specific Yield (Sy)

A geological model was developed for the Project for this MRE. At the MRE stage, the model provides an estimate of bulk in situ brine volume, with a preliminary assessment of brine recoverability based on the porous media parameter known as Specific Yield (Sy). The BMR survey identified a zone of higher porosity. The BMR survey was used with the MT survey and logged geology to produce a high porosity zone within the salar. This high-porosity zone coincided with deeper clean semi consolidated to consolidated sands and was assigned a Specific Yield (Sy) value of 13%, while the remaining areas were assigned a lower BMR derived value of 4%. These assignments were primarily based on the BMR results, which reflect the volume-averaged behaviour of the formation, rather than the discrete core sample results.

### Project Economics

An Ekosolve™ 1,000 tpa  $\text{Li}_2\text{CO}_3$  demonstration plant will be constructed during 2025, with waste brine being deposited into the lagoon at the western end of the Project. This demonstration plant will later be expanded to 10,000 tpa once Jujuy Mines Department approval is received.

An application is currently in preparation for the 1,000 tpa  $\text{Li}_2\text{CO}_3$  demonstration plant, with several options for disposal of waste brine. Patagonia brines have been tested and  $\text{Li}_2\text{CO}_3$  has been produced at the Ekosolve™ pilot plant facilities. A licence agreement with Ekosolve™ has been executed for the 1,000 tpa demonstration, and 10,000 tpa  $\text{Li}_2\text{CO}_3$  plants. Ekosolve™ has indicated that subject to a number of factors, the estimated cost of the 1,000 tpa demonstration  $\text{Li}_2\text{CO}_3$  plant would be approximately US\$8-9 million (M), inclusive of a plant to produce hydrochloric acid (HCl), and  $\text{Li}_2\text{CO}_3$ . The cost of the 10,000 tpa  $\text{Li}_2\text{CO}_3$  plant with 4 x Direct Lithium Extraction (DLE) columns is approximately US\$70-\$90M. Because Ekosolve™ will use Potassium Carbonate ( $\text{K}_2\text{CO}_3$ ) to produce  $\text{Li}_2\text{CO}_3$ , and the water used will be recycled after the KCl is crystallised, the KCl is a potential by-product fertiliser that could be sold.

Operating Expenditure (OPEX) is estimated at US\$2,500 to US\$3,000/t, plus Ekosolve™ licence fee costs of US\$500/t based on a US\$10,000/t Free on Board (FOB) price, Argentina government royalty costs of US\$450/t, for a total of US\$3,700/t FOB. Estimated recovery from 20 l of brine processed to date with a Li concentration of 266 ppm was 91%, having achieved 92.6% in pilot plant work, and 99.82% purity  $\text{Li}_2\text{CO}_3$ . The highest recovery achieved by Ekosolve™ to date is 95.6%. Discussions held with potential off-take partners have shown

keen interest in buying a 99.5%+ Li<sub>2</sub>CO<sub>3</sub>, which is the production grade planned to be produced.

- At the current (14 January 2025) Li<sub>2</sub>CO<sub>3</sub> price of Chinese Yuan (CNY) 77,850 or at (US:CNY = 7.28) US\$10,693/tonne (source: [www.tradingeconomics.com/lithium](http://www.tradingeconomics.com/lithium)), annual revenue is estimated at US\$10M for the 1,000 tpa demonstration plant, and US\$100M for the 10,000 tpa plant.

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 ha** 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, JAM-24-02, JAM-24-03 and JAM-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 drill hole drill program was approved for Formentera and a three drill hole program for Cilon. Samples as **high as 1,122 ppm Li** (2 June 2023 announcement) were recorded at Formentera and a Li value of **591 ppm in drill hole JAM-24-01** (Outstanding Assay Results from First Drilling in Argentina released on 3 May 2024). Very low resistivities were recorded to more than 1 km depth during the MT Geophysics survey at Formentera.

## Competent Person Statement

The information in this announcement that relates to Inferred Mineral Resource Estimate is based on, and fairly represents information compiled by Jason Van den Akker, MAusIMM Principal Hydrogeologist, WSP Australia Pty Ltd (WSP) provided by Patagonia Lithium Ltd, and who is a member of the Australasian Institute of Mining and Metallurgy. Mr Van den Akker 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 van den Akker consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the parts of the Technical Report for which I am responsible, contain(s) all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.



Jason Van den Akker MAusIMM  
Principal Hydrogeologist  
WSP Australia

The Company confirms it is not aware of any new information or data that materially affects the information in this announcement from previous announcements listed below. 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.

Sampling at Formentera and Cilon Assays 1,122ppm Lithium	2 June 2023
MT Geophysics Defines Significant Prospective Drill Targets	15 June 2023
Geophysics Generates Significant Prospective Drill Targets	4 July 2023
92% Lithium Extraction from Formentera Brines	12 September 2023
99.9% Lithium Carbonate Produced from Formentera Brines	16 October 2023
Completion of First Hole at Formentera Lithium Project	5 April 2024
Completion of First Hole at the Formentera Lithium Project	16 April 2024
Successful Pump Test at Maiden Formentera Project Well	24 April 2024
Outstanding Assay Results from First Drilling in Argentina	3 May 2024
Assay Results from Drilling in Argentina	15 May 2024
Second Well at Formentera Completed	29 May 2024
Exceptional Results Achieved from Well Two at Formentera	18 June 2024
Strong Brine Flow - Well Three Formentera Lithium Project	14 August 2024
Strong Results Achieved from Well Three at Formentera	11 September 2024
High Porosity Results Achieved from Well Two at Formentera	16 September 2024
Outstanding Result Achieved from Well Three Pump Test	18 September 2024
Well 3 Cores Sent for Porosity Testing	19 September 2024
Well Four Completed at Formentera	17 October 2024
Outstanding Results from Well 4 Pump Test	18 November 2024
Excellent Result achieved from Well Three Porosity Core Test	3 December 2024
Outstanding Borehole Porosity Test Results at Formentera	5 December 2024
Outstanding Porosity Result from Well 4 Pump Test	18 December 2024

**WSP JORC Table 1**

**Section 1 – Sampling Techniques and Data**


<b>JORC Code Assessment Criteria</b>	<b>Comment</b>
<p><b>Sampling Techniques</b></p> <p>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 downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</p> <p>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</p> <p>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</p>	<ul style="list-style-type: none"> <li>- <i>Lithological samples (HQ [63.5 mm core diameter] diamond core samples) were systematically taken every 3 meters (length of the inner tube), stored in core trays, photographed and logged by a geologist.</i></li> <li>- <i>Brine samples were collected at various depths using airlift and packer tests, with 500 millilitre (ml) samples secured in bottles for analysis. Field tests measured parameters such as density, conductivity, redox potential (Eh), Total Dissolved Solids (TDS) in parts per million (ppm), Specific Gravity (SG), and acidity (pH). Calibration fluids were used on-site to ensure accurate field instrumentation. Laboratory analyses focused on Lithium (Li), Magnesium (Mg), Boron (B), Potassium (K), Sodium (Na), pH and conductivity.</i></li> <li>- <i>Approximately 200 litres (l) of brine was extracted per packer test (requiring 11-13 lifts) to clear drilling fluid contamination before final sampling, ensuring samples were representative of the aquifer being tested. Samples were confirmed to be free of drilling muds, and storage and holding times were adhered to.</i></li> <li>- <i>HQ diamond core samples were retrieved from the core barrel at intervals of between 16 and 145 m, with an average interval of 48 m. These samples were typically taken from the same intervals as each packer test. The minimum length of each diamond core sample was 15 centimetres (cm). Upon retrieval, diamond core samples were immediately wrapped in plastic cling</i></li> </ul>



JORC Code Assessment Criteria	Comment
	<p>wrap, taped to preserve moisture content and structure, and further protected by being placed within Polyvinyl Chloride (PVC) casing capped with end caps at both ends. Core samples were analysed by Core Laboratories Australia Pty Ltd (CLA) for hydrogeological properties including total porosity, permeability, effective porosity/Specific Yield (Sy), permeability and grain density. The drainable porosity values from the laboratory were compared to the Borehole Magnetic Resonance (BMR) drainable porosity (i.e., Specific Yield [Sy]) estimates.</p> <ul style="list-style-type: none"> <li>- Downhole geophysical survey (including BMR) was undertaken to validate Sy HQ diamond core results in drill hole JAM-24-02.</li> <li>- Single or double packer tests were conducted in conjunction with HQ drilling to isolate specific sections of the drill hole (and aquifer), and to enable the collection of brine samples from each interval. Brine samples were collected for laboratory analysis by Alex Stewart International (Alex Stewart) and SGS Argentina SA (SGS) laboratories, thus providing independent results. Additionally, duplicate samples and distilled water samples were collected for Quality Assurance/Quality Control (QA/QC) purposes.</li> <li>- Packer testing through the HQ drilling rods was conducted at intervals where changes in lithology were observed, and at porous intervals. In this case, a packer was utilised to isolate the 2 to 33 m interval for brine sample collection. Eleven packer tests were performed on</li> </ul>

<b>JORC Code Assessment Criteria</b>	<b>Comment</b>
	<p>drill holes JAM-24-01, JAM-24-02 and JAM-24-04, whilst seven packer tests were performed on drill hole JAM-24-03.</p> <ul style="list-style-type: none"> <li>- A typical volume lifted per packer was recorded, typically requiring 11 to 13 lifts, totalling approximately 200 l of brine removal to clear contamination by drilling fluids prior to final brine sample collection. This ensured that the brine samples were representative of the aquifer, and free of drilling muds or fluids.</li> <li>- A 72-hour pumping test was conducted on drill hole JAM-24-04 between 5 and 9 November 2024 to provide estimates of aquifer hydraulic conductivity (permeability). Pumping was conducted using a submersible 3-inch (") pump powered by a portable generator.</li> </ul>
<b>Drilling Techniques</b>	
<p>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.), and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</p>	<ul style="list-style-type: none"> <li>- Four diamond drill holes reaching total depths of between 344.5 and 374.5 metres (m) Initially, a pre-collar was drilled to a depth of 33 m using a tricone bit (diameter of 9 3/4" (247 mm)]. The pre-collar was then cased with 8" (203 mm) steel casing and cemented for safety, effectively preventing any potential upwelling from confined aquifers.</li> <li>- HQ diamond drilling continued from the base of the pre-collar to collect continuous core for geological characterisation, porosity sampling, and brine characterisation using packer and airlift sampling.</li> <li>- Drillholes were reamed to accommodate either 2-inch diameter or 4-inch diameter PVC casing, with machine slotted screens placed over the aquifer interval, ranging from 80 to 220 m, followed by filter pack and bentonite seal in the well annulus. Conversion to monitoring wells</li> </ul>

<b>JORC Code Assessment Criteria</b>	<b>Comment</b>
	<i>facilitates airlift testing (to obtain brine samples representative of the screened interval), pumping tests and downhole geophysics.</i>
<p data-bbox="201 432 547 465"><b>Drill Sample Recovery</b></p> <p data-bbox="201 477 754 600">Method of recording and assessing core and chip sample recoveries and results assessed.</p> <p data-bbox="201 611 770 734">Measures taken to maximise sample recovery and ensure representative nature of the samples.</p> <p data-bbox="201 745 762 1003">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.</p>	<ul style="list-style-type: none"> <li data-bbox="807 432 1511 645">- <i>HQ diamond drill core was recovered in 3 m length intervals in the drilling triple (split) tubes. Appropriate additives were used for hole stability to maximize core recovery.</i></li> <li data-bbox="807 656 1511 779">- <i>Additives and muds are used to maintain drill hole stability and minimize sample washing away from the triple tube.</i></li> <li data-bbox="807 790 1511 1093">- <i>Brine samples were collected at discrete depths during the drilling using a single or double packer over variable intervals of between 2 to 33 m (to isolate intervals of the sediments and obtain samples from airlifting brine from the sediment interval isolated between the packers).</i></li> </ul>
<p data-bbox="201 1104 331 1137"><b>Logging</b></p> <p data-bbox="201 1149 786 1406">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.</p> <p data-bbox="201 1417 715 1585">Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.), photography.</p> <p data-bbox="201 1597 762 1675">The total length and percentage of the relevant intersections logged.</p>	<ul style="list-style-type: none"> <li data-bbox="807 1104 1473 1227">- <i>Diamond drill holes are logged by a geologist who also supervised taking of samples for laboratory porosity analysis</i></li> <li data-bbox="807 1238 1433 1317">- <i>Lithological samples (HQ cores) were systematically taken every 3 m.</i></li> <li data-bbox="807 1328 1489 1675">- <i>The relative proportions of different lithologies which have a direct bearing on the overall porosity, contained and potentially extractable brine are noted, as are more qualitative characteristics such as the sedimentary facies and their relationships. Cores are photographed for reference, prior to storage.</i></li> </ul>
<p data-bbox="201 1693 683 1771"><b>Sub-Sampling Techniques and Sample Preparation</b></p> <p data-bbox="201 1783 715 1906">If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p data-bbox="201 1917 715 2040">If non-core, whether riffled, tube sampled, rotary split, etc., and whether sampled wet or dry.</p>	<ul style="list-style-type: none"> <li data-bbox="807 1693 1511 2040">- <i>HQ diamond drill core samples were retrieved from the core barrel at intervals of between 16 and 145 m, with an average interval of 48 m. These samples were typically taken from the same intervals as each packer test. The minimum length of each diamond core sample was 15 cm. Upon retrieval,</i></li> </ul>

<b>JORC Code Assessment Criteria</b>	<b>Comment</b>
<p>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.</p>	<p>diamond core samples were immediately wrapped in plastic cling wrap, taped to preserve moisture content and structure, and further protected by being placed within PVC casing capped with end caps at both ends.</p>  <p>The images show ten individual diamond core samples, each wrapped in clear plastic cling wrap and secured with yellow tape. The samples are placed inside white PVC casing. Each sample has a small white label with handwritten text in red and black ink. The labels provide the sample ID (JAM 2402) and the depth range in meters (From and To). The samples are numbered 5 through 10.</p>
<p><b>Quality of Assay Data and Laboratory Tests</b></p> <p>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 including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory</p>	<ul style="list-style-type: none"> <li>- Brine samples were sent to Alex Stewart and SGS laboratories for analysis, ensuring accuracy and QA/QC compliance. Duplicate and distilled water samples were collected for QA/QC purposes were used to evaluate potential sample contamination.</li> <li>- The Alex Stewart and SGS laboratories are ISO 9001 and ISO 14001 certified and are specialised in the chemical analysis of brines and inorganic salts, with experience in this field.</li> <li>- Samples were analysed for conductivity using a hand-held multiprobe on site, to collect field parameters. Regular calibration of the field equipment using</li> </ul>

<b>JORC Code Assessment Criteria</b>	<b>Comment</b>
checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<p><i>standards and buffers is being undertaken.</i></p> <ul style="list-style-type: none"> <li>- <i>Downhole geophysical survey of drill hole JAM-02-02 was undertaken by Zelandez.</i></li> </ul>
<b>Verification of Sampling and Assaying</b>	<ul style="list-style-type: none"> <li>- <i>Blanks, standards, and duplicates, have been used to monitor potential contamination of samples and the repeatability of analyses. Accuracy has been monitored by the insertion of standards, or Certified Reference Material (CRM) samples.</i></li> <li>- <i>Duplicate samples in the analysis chain were submitted to Alex Stewart and SGS laboratories as unique samples (blind duplicates).</i></li> <li>- <i>Stable blank samples (distilled water) were used to evaluate potential sample contamination.</i></li> </ul>
<p>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.</p>	
<b>Location of Data Points</b>	<ul style="list-style-type: none"> <li>- <i>HQ diamond drill hole collar surface brine sample location co-ordinates were captured using a handheld GPS.</i></li> <li>- <i>The Project is located in the Argentine POSGAR grid system Zone 3.</i></li> <li>- <i>No topographic surface was provided by Patagonia. A topographic surface with a resolution of 30 m was created using the Copernicus Global Digital Elevation Model (DEM). A GeoTIFF of the DEM was downloaded with the OpenTopography DEM Downloader plugin in the Geographic Information System (GIS) software QGIS™. Contour lines were extracted from the GeoTIFF at a spacing of 10 m. The contour lines were reprojected from WGS 84 to POSGAR 94/Argentina 3 and exported to DXF format. A surface triangulation was created in using Maptek Vulcan™ software. The triangulated surface was then imported in Leapfrog Geo™.</i></li> </ul>
<p>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control.</p>	



<b>JORC Code Assessment Criteria</b>	<b>Comment</b>
<p><b>Data Spacing and Distribution</b></p> <p>Data spacing for reporting of Exploration Results.</p> <p>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.</p> <p>Whether sample compositing has been applied.</p>	<ul style="list-style-type: none"> <li>- HQ diamond drill hole spacing ranges from approximately 350 to 3,000 m.</li> <li>- Data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation procedure(s) and classifications applied to the MRE. Recommendations for further work have been made that have the potential to increase overall resource confidence.</li> <li>- Sample compositing has not been applied.</li> </ul>
<p><b>Orientation of Data in Relation to Geological Structure</b></p> <p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>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.</p>	<ul style="list-style-type: none"> <li>- Salar deposits that contain mineralised brines generally occur as horizontal to sub-horizontal bodies.</li> <li>- Vertical HQ diamond drill holes provide the best understanding of the stratigraphy nature of the local geological setting and brine-bearing aquifers.</li> <li>- Geological structures are not well known across the Project area. Recommendations for further work have been made that have the potential to increase geological confidence.</li> </ul>
<p><b>Sample Security</b></p> <p>The measures taken to ensure sample security.</p>	<ul style="list-style-type: none"> <li>- Samples were transported by a member of the exploration team to the Alex Stewart and SGS laboratories for analysis in sealed 0.5 l plastic bottles with unique sample numbers clearly identified.</li> <li>- HQ diamond drill core samples were taken from the drill hole site to a secure storage facility on a daily basis.</li> </ul>
<p><b>Audits and Reviews</b></p> <p>The results of any audits or reviews of sampling techniques and data.</p>	<ul style="list-style-type: none"> <li>- Sampling techniques and data were reviewed by the Competent Person for Mineral Resources as part of the resource estimate and were deemed fit for purpose.</li> </ul>

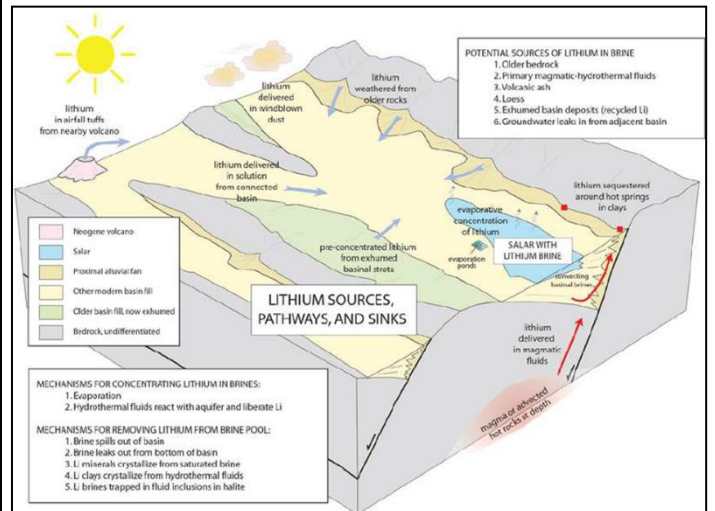




## Section 2 – Reporting of Exploration Results

<p><b>Mineral Tenement and Land Tenure Status</b></p>	<ul style="list-style-type: none"> <li>- The Project covers approximately 19.5 square kilometres (km<sup>2</sup>) and is located within the Puna de Atacama (Atacama Plateau) region, in the western sector of the Jujuy Province, northwest Argentina. The Project is located approximately 165 kilometres (km) from the town of San Antonio de los Cobres, 290 km northwest of the city of San Salvador de Jujuy, and 335 km northwest of the city of Salta (Figures 1.1 and 1.2 of the Summary Report).</li> <li>- The Project consists of two adjacent tenements, Mina Formentera (Expediente No 518-P-2006), and Mina Cilon (Expediente 121-I-1983), and is located on Paso Salar, Jujuy Province, northwest Argentina.</li> <li>- The tenements are believed to be in good standing.</li> <li>- There are no known impediments to obtaining a licence to operate in the area.</li> </ul>
<p>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.</p> <p>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.</p>	<ul style="list-style-type: none"> <li>- Patagonia is the only company to have conducted exploration for lithium brine across the Project area.</li> </ul>
<p><b>Exploration Done by Other Parties</b></p> <p>Acknowledgment and appraisal of exploration by other parties.</p>	<ul style="list-style-type: none"> <li>- The deposit type is a lithium-enriched, saline brine aquifer occurring in a hydraulically closed basin at high altitude. The conceptual geological model of salars by Bradley et al. (2013) [shown below] concurs with conditions observed in salars located in the Puna region of Northern Argentina. In closed basin systems where evaporation potential exceeds precipitation input, freshwater evaporates, inducing an elemental concentration in the water and generating brines. When even minuscule quantities of lithium are</li> </ul>
<p><b>Geology</b></p> <p>Deposit type, geological setting and style of mineralisation.</p>	

present in the freshwater, lithium has the potential to evapo-concentrate considering it does not easily crystallise into mineral form until essentially all water is evaporated. Consequently, lithium stays in solution in the aquifer, producing a lithium-rich brine in closed basins where conditions are excellent for its evapo-concentration.



- The 2024 exploration program and proposed future exploration programs are based on the theory that extractable brines are found in permeable aquifer materials, such as porous halite, or permeable clastic sediments.
- Consequently, exploration drilling aims to target permeable aquifer material. Exploration also tends to target the thickest parts of the sedimentary sequence, where the greatest thickness of aquifer material is present. The aquifer tends to increase in thickness toward the basin centre, however resistivity lowers to the west. The ability of the brine to be pumped from the basin is dependent on the thickness, and hydraulic conductivity of the aquifer. It is not reliant on the content of lithium in the brine.

**Drillhole Information** Diamond drill hole details are as follows:

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:

- Easting and northing of the drill hole collar
- Elevation or RL (Reduced Level- elevation above sea level in metres) of the drill hole collar
- Dip and azimuth of the hole
- Down hole length and interception depth
- Hole length

Hole ID	X( Easting)	Y (Northing)	Z (RL)	TD	Azimuth	Dip
JAM-24-01	3,398,114.081	7,414,300.298	4,095.382	370.0	0	-90
JAM-24-02	3,398,137.000	7,413,959.000	4,088.853	344.5	0	-90
JAM-24-03	3,398,906.000	7,412,316.000	4,084.180	374.5	0	-90
JAM-24-04	3,401,811.000	7,412,294.000	4,089.616	401.5	0	-90

Notes: ID = Identifier, RL = Relative Level, and TD = Total Depth. Projection = POSGAR 1994/Argentina 3.

Diamond drill hole interception depths and thicknesses are as follows:

Hole ID	Sample ID	From (m)	To (m)	Thickness (m)	
JAM-24-01	FOR-001_B	30.00	44.50	14.50	
	FOR-002_B	44.50	56.50	12.00	
	FOR-003_B	56.50	68.50	12.00	
	FOR-005_B	104.50	106.70	2.20	
	FOR-006_B	122.50	124.70	2.20	
	FOR-007_B	170.50	173.50	3.00	
	FOR-009_B	215.50	221.50	6.00	
	FOR-010_B	260.50	266.50	6.00	
	FOR-011_B	278.50	279.70	1.20	
	FOR-013_B	317.50	329.50	12.00	
	FOR-014_B	339.50	361.20	21.70	
	JAM-24-02	FOR-015_B	75.79	80.50	4.71
		FOR-016_B	102.79	107.50	4.71
		FOR-017_B	141.79	145.10	3.31
FOR-019_B		157.29	161.50	4.21	
FOR-020_B		177.29	182.00	4.71	
FOR-021_B		222.79	227.50	4.71	
FOR-023_B		239.50	245.50	6.00	
FOR-024_B		260.50	269.50	9.00	
FOR-025_B		281.50	296.50	15.00	
FOR-027_B		302.50	314.50	12.00	
FOR-028_B		302.50	335.50	33.00	

Hole ID	Sample ID	From (m)	To (m)	Thickness (m)
JAM-24-03	FOR-031_B	86.50	104.50	18.00
	FOR-032_B	128.50	134.50	6.00
	FOR-033_B	158.50	164.50	6.00
	FOR-035_B	188.50	194.50	6.00
	FOR-036_B	218.50	224.50	6.00
	FOR-037_B	249.79	254.50	4.71
	FOR-039_B	279.79	284.50	4.71
JAM-24-04	FOR-049_B	251.50	263.50	12.00
	FOR-050_B	288.00	300.00	12.00
	FOR-051_B	324.79	332.50	7.71
	FOR-053_B	354.79	362.50	7.71
	FOR-054_B	384.79	392.50	7.71

<b>Data Aggregation Methods</b>	
<p>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.</p> <p>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.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<ul style="list-style-type: none"> <li>- The majority of samples were sent to two separate laboratories (Alex Stewart and SGS). Alex Stewart samples were used for resource estimation.</li> <li>- The predominate sampling intervals are 4.7 and 6 m, however; due to the limited quantity of sample data, straight composites were generated for both Lithium (Li) and Magnesium (Mg).</li> <li>- Straight composites were used for the purpose of Mineral Resource estimation and reporting.</li> <li>- No top-cutting of Li or Mg assays was undertaken.</li> </ul>
<b>Relationship between Mineralisation Widths and Intercept Lengths</b>	
<p>These relationships are particularly important in the reporting of Exploration Results.</p>	<ul style="list-style-type: none"> <li>- Mineralisation is interpreted to be horizontal. All drilling is vertical, hence; intersections are considered to be true thicknesses.</li> </ul>

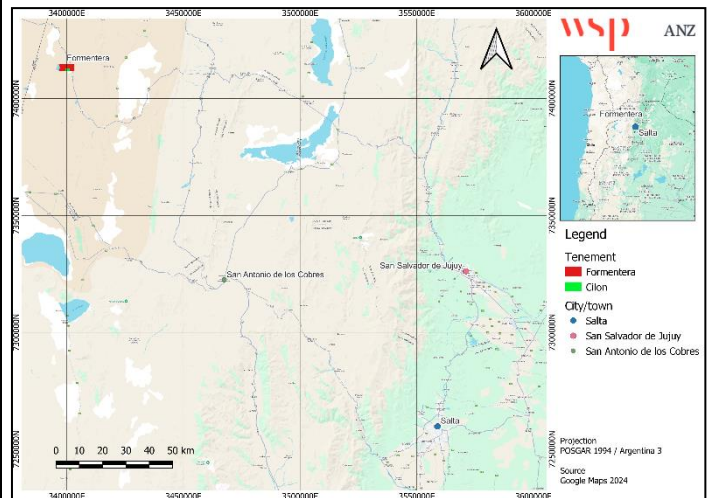
If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.

If it is not known and only the down-hole lengths are reported, there should be a clear statement to this effect (e.g. 'downhole length, true width not known').

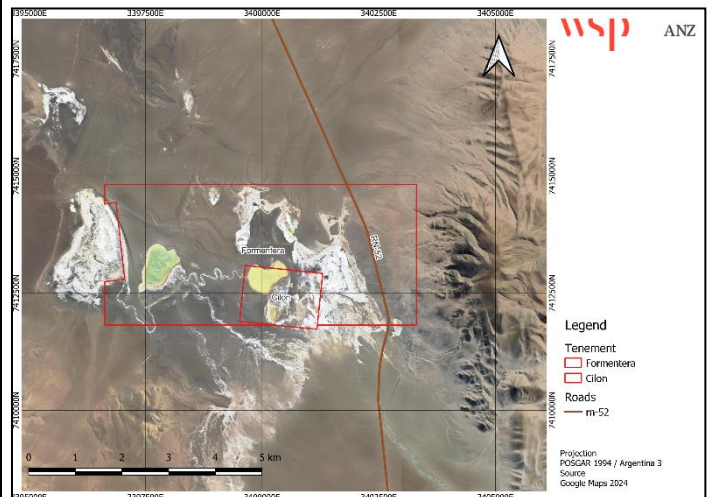
### Diagrams

Where possible, maps and sections (with scales) and tabulations of intercepts should be included for any material discovery being reported if such diagrams significantly clarify the report.

The Project location is shown below:

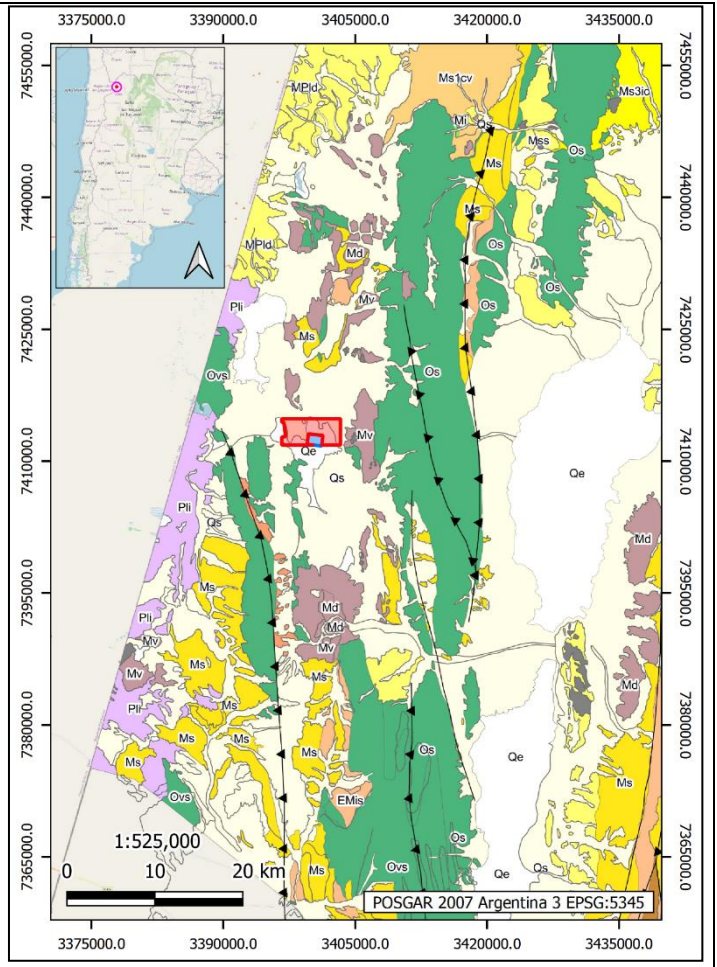


The location of the Project tenements is shown below:

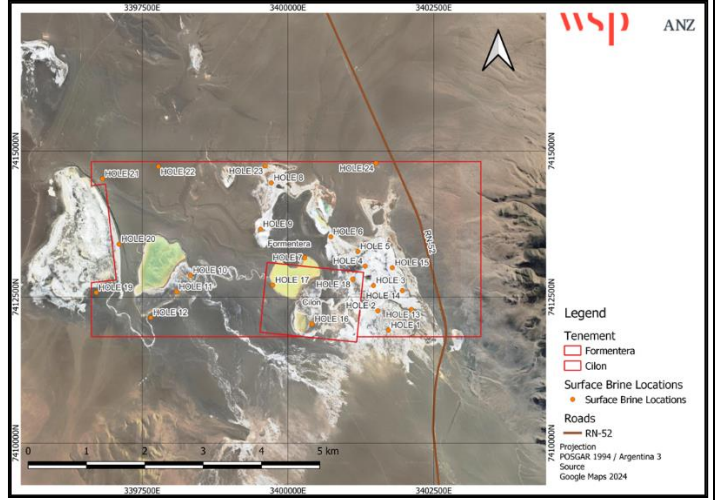


The geology of the Jujuy Province is shown below:

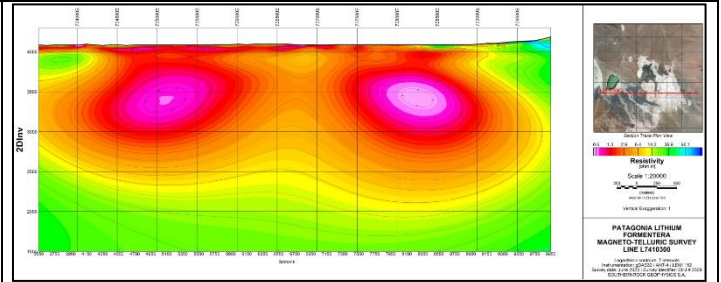




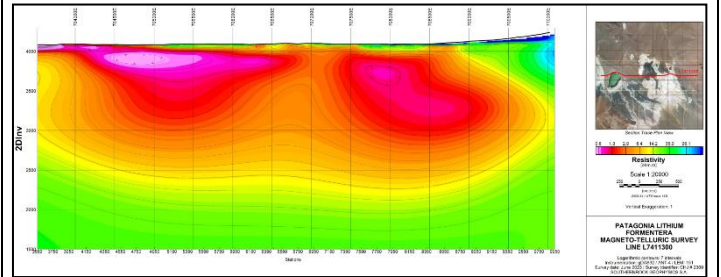
The surface brine sample locations are shown below:



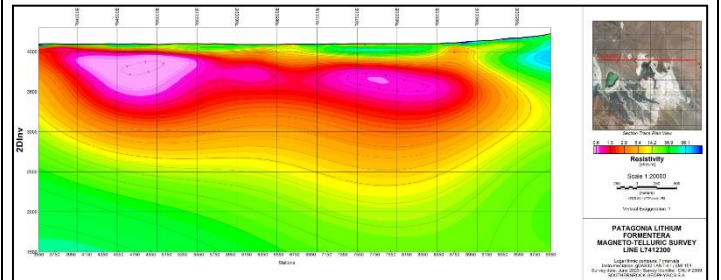
MT survey line L7410300 is shown below:



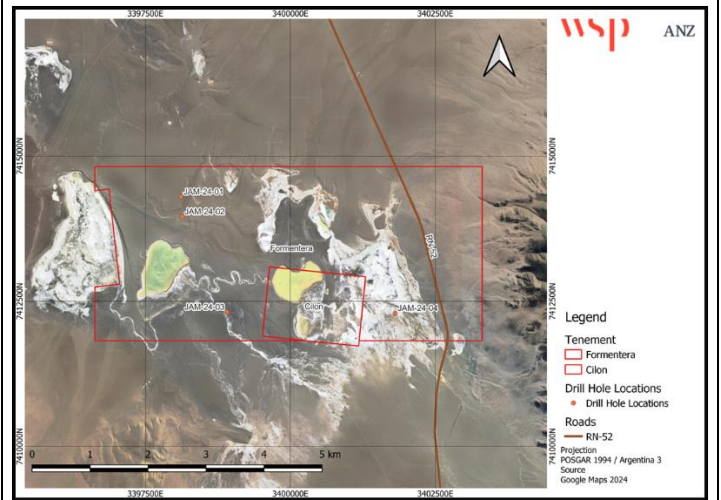
MT survey line L7411300 is shown below:



MT survey line L7412300 is shown below:



The HQ diamond drill hole locations are shown below:



**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

- All exploration results used for Mineral Resource estimation and reporting have been reported.

<p>misleading reporting of Exploration Results.</p>	
<p><b>Other Substantive Exploration Data</b></p> <p>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.</p>	<ul style="list-style-type: none"> <li>- <i>There is no other substantive exploration data available regarding for the Project at this time. Additional HQ diamond drilling, surface geophysical surveying, and technical studies are planned for the Project.</i></li> <li>- <i>An Ekosolve™ 1,000 tonnes per annum (tpa) Lithium Carbonate (Li<sub>2</sub>CO<sub>3</sub>) demonstration plant will be constructed during 2025, with waste brine being deposited into the lagoon at the western end of the Project. This demonstration plant will later be expanded to 10,000 tpa once Jujuy Mines Department approval is received. An application is currently in preparation for the 1,000 tpa Li<sub>2</sub>CO<sub>3</sub> demonstration plant, with several options for disposal of waste brine.</i></li> </ul>
<p><b>Further Work</b></p> <p>The nature and scale of planned further work (e.g. 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.</p>	<p>WSP recommends the following for future development of the Project:</p> <ul style="list-style-type: none"> <li>- <i>Undertake downhole geophysical surveys, specifically BMR on remaining drill holes to provide a better understanding of the effective porosity (Specific Yield [Sy]) of the salar.</i></li> <li>- <i>Additional diamond drilling be completed to increase geological confidence.</i></li> <li>- <i>Drilling deeper to cover the low resistivity zones identified by the MT survey, as these zones correlate with the higher lithium assays, and higher porosity identified using BMR surveying.</i></li> <li>- <i>Confirmation of the basement contact, either by intersecting the basement with diamond drilling close to the edge of the salar, or a 2D seismic survey.</i></li> </ul>

### Section 3 – Estimation and Reporting of Mineral Resources

<p><b>Database Integrity</b></p>	<ul style="list-style-type: none"> <li>- Geological and assay data was supplied by Patagonia in Microsoft Excel™ format. A Maptek Vulcan™ database was then constructed using the supplied data.</li> <li>- Once constructed, the Maptek Vulcan™ database was validated and compared to the geological and assay data provided to ensure the data was fit for the purposes of geological modelling and Mineral Resource estimation and reporting.</li> <li>- Drilling, brine sampling, HQ diamond core assay, geophysical, and tenement data was plotted in Leapfrog Geo™ software to allow checking of spatial locations.</li> <li>- Blanks, Standards, and Duplicates have been used in the assaying process.</li> <li>- Brine sample assays. HQ diamond core assays, core porosity, and BMR drainable porosity results were reviewed, analysed, and compared with other publicly available information for the purposes of establishing reasonableness.</li> <li>- Drainable porosity values from laboratory sampling were compared to the BMR drainable porosity (i.e., Specific Yield [Sy]) estimates.</li> </ul>
<p><b>Site Visits</b></p>	<ul style="list-style-type: none"> <li>- Jason van den Akker attended site on 20 March 2024 to observe exploration drilling activities. The site visit occurred during the early stages of the recently completed drilling program, which commenced on 27 February 2024. During the site visit, attendees witnessed ongoing drilling operations at drill hole JAM-24-01, the first of a total of four exploration drill holes drilled. The presence of Jason van den Akker (serving as Competent Person for Mineral Resources) at the drill site ensured adherence to required technical</li> </ul>



	<p>standards. Phil Thomas (representing Patagonia) fulfills the role of overseeing overall program progress, and co-ordinating the drilling team. Additional attendees on the site visit included geologists from the Patagonia exploration team, who are responsible for supervision of the drilling process, collecting core and brine samples, and logging recovered core.</p>
<p><b>Geological Interpretation</b></p> <p>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</p> <p>Nature of the data used and of any assumptions made.</p> <p>The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation.</p> <p>The factors affecting continuity both of grade and geology.</p>	<p>WSP developed a Leapfrog Geo™ conceptual domain model based on geophysical surveying results and satellite imagery.</p> <p>The following mineralisation domains comprised the conceptual domain model:</p> <ul style="list-style-type: none"> <li>- Basement.</li> <li>- Salar.</li> <li>- Surficial Silicates.</li> </ul> <p>A fourth domain, named the High Porosity Salar domain was developed using BMR survey data and lithology logs.</p> <ul style="list-style-type: none"> <li>- The Paso Salar basement contact was modelled using the 2D MT inversion model and topographic surface, however; to date no drilling has intersected the basement for confirmation. Surficial siliciclastics were modelled from satellite imagery, however; all drill holes had no return from surface to confirm the presence of shallow surface material. The lithology of drill holes JAM-24-01 and JAM-24-02 have some correlation due to their proximity, however; the drill holes are currently too sparsely spaced to refine the lithological interpretation across the salar. WSP utilised the 2D MT inversion and BMR conducted on JAM-24-02 to model a high porosity zone within the salar.</li> <li>- Recommendations for further work have been made that have the potential to</li> </ul>

	<p>increase geological and grade confidence.</p>
<p><b>Dimensions</b></p> <p>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</p>	<ul style="list-style-type: none"> <li>- The lateral extent of the resource has been defined by the boundary of Patagonia's tenements. The brine mineralisation currently covers approximately 15.5 km<sup>2</sup>.</li> <li>- The Project consists of two adjacent tenements, Mina Formentera (Expediente No 518-P-2006), and Mina Cilon (Expediente 121-I-1983) and covers approximately 19.5 square kilometres (km<sup>2</sup>).</li> <li>- The top of the model coincides with the topographic surface. The base of the resource sits at approximately 410 m below surface. The basement rocks underlying the salar have not yet been intersected by drilling.</li> </ul>
<p><b>Estimation and Modelling Techniques</b></p> <p>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of</p>	<ul style="list-style-type: none"> <li>- Inverse Distance Squared (ID2) grade interpolation was used to estimate the distribution of Li and Mg.</li> <li>- The resource was estimated using a single pass, with a search ellipse of 1,500 (X) x 4,000 m (Y) x 60 m (Z) respectively.</li> <li>- Three essentially horizontal hydrostratigraphic units were defined, based on geophysical surveying results and satellite imagery. A fourth unit (High Porosity Salar) was developed using BMR survey data and lithology logs.</li> <li>- The resource was estimated using hard boundaries and a horizontal search ellipse, to reflect the horizontal continuity of geological units.</li> <li>- No grade cutting or capping was applied.</li> <li>- A Nearest Neighbour (NN) check estimate was conducted and found to be very similar to the ID2 estimate reported.</li> </ul>

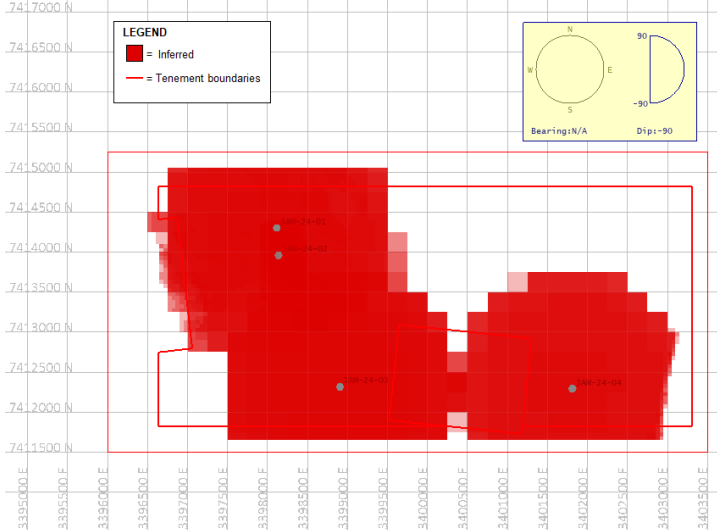


<p>economic significance (e.g. sulfur for acid mine drainage characterisation).</p> <p>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables.</p> <p>Description of how the geological interpretation was used to control the resource estimates.</p> <p>Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</p>	<ul style="list-style-type: none"> <li>- No assumptions were made about correlation between variables or recovery of by-products.</li> <li>- The brine contains other elements in addition to Li, such as Mg, which can be considered deleterious dependent on the proposed processing methodology. The Project is planning to extract Li by way of a DLE (Direct Lithium Extraction) process, where Li extraction is independent of other elements, which remain in the brine. Mg distribution has been included in this MRE.</li> <li>- Model blocks are defined as 250 by 250 m blocks in the east and north directions, and 25 m in the vertical direction.</li> <li>- Selective Mining Units (SMU's) have not been considered due to the proposed mining method.</li> <li>- Domain solids were used to control resource estimation.</li> <li>- The block model was validated using visual checks and global statistics of declustered length weighted composites against volume weighted block values.</li> </ul>
<p><b>Moisture</b></p> <p>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</p>	<ul style="list-style-type: none"> <li>- The measurement of the moisture content of HQ diamond core samples was not undertaken. Measurements of porosity, drainable porosity (<math>S_y</math>), and sediment density were undertaken. As brine is planned to be extracted by pumping of mineralised brine, mining moisture content (in regard to density) is not considered relevant to the MRE.</li> <li>- Tonnages are estimated as lithium metal dissolved in brine.</li> <li>- Tonnages are then converted to a Lithium Carbonate Equivalent (LCE) tonnage by multiplying by 5.323, which takes into consideration the presence of both</li> </ul>

	carbon and oxygen in $\text{Li}_2\text{CO}_3$ , compared to lithium metal.
<b>Cut-off Parameters</b>	<ul style="list-style-type: none"> <li>- Mineral Resources were reported using a Cut-off Grade (COG) of 100 ppm Li, which was applied on a block-by-block basis.</li> </ul>
The basis of the adopted cut-off grade(s) or quality parameters applied.	
<b>Mining Factors or Assumptions</b>	<ul style="list-style-type: none"> <li>- The Mineral Resource has been presented in terms of sediment volume, brine volume, concentrations of dissolved Li and Mg, contained lithium and LCE.</li> <li>- No mining or recovery factors have been applied (although Specific Yield (<math>S_y</math>) has been used to reflect Reasonable Prospects for Eventual Economic Extraction (RPEEE).</li> <li>- Dilution of brine concentrations may occur over time and typically there are lithium losses in the processing plant in brine mining operations. However, potential dilution will be estimated in the groundwater model simulating brine extraction.</li> <li>- The conceptual mining method is the recovery of mineralised brine from the salar by way of a network of production wells.</li> <li>- Further detailed studies of the salar will be required to define the natural recharge to the basin, the extractable resources, and potential extraction rates.</li> </ul>
<p>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution.</p> <p>It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</p>	
<b>Metallurgical Factors or Assumptions</b>	<ul style="list-style-type: none"> <li>- An Ekosolve™ 1,000 tpa <math>\text{Li}_2\text{CO}_3</math> demonstration plant will be constructed during 2025, with waste brine being deposited into the lagoon at the western end of the Project. This demonstration plant will later be expanded to 10,000 tpa once Jujuy Mines Department approval is received. An application is currently in preparation for the 1,000 tpa <math>\text{Li}_2\text{CO}_3</math> demonstration plant, with several options for disposal of waste brine. Patagonia</li> </ul>
The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment	

<p>processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</p>	<p><i>brines have been tested and Li<sub>2</sub>CO<sub>3</sub> has been produced at the Ekosolve™ pilot plant facilities. A licence agreement with Ekosolve™ has been executed for the 1,000 tpa demonstration, and 10,000 tpa Li<sub>2</sub>CO<sub>3</sub> plants.</i></p> <ul style="list-style-type: none"> <li>- <i>Estimated recovery from 20 Litres (l) of brine processed to date with a lithium concentration of 266 ppm was 91%, having achieved 92.6% in pilot plant work, and 99.82% purity Li<sub>2</sub>CO<sub>3</sub>. The highest recovery achieved by Ekosolve™ to date is 95.6%.</i></li> <li>- <i>It is anticipated that appropriate metallurgical factors or assumptions will be investigated in more detail during future technical studies completed on the Project.</i></li> </ul>
<p><b>Environmental Factors or Assumptions</b></p> <p>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</p>	<ul style="list-style-type: none"> <li>- <i>At this stage, no environmental factors have been applied or assumptions made. It is anticipated that these will be determined during future technical studies completed on the Project.</i></li> <li>- <i>Waste brine from the processing plant is proposed to be deposited into the lagoon at the western end of the Project.</i></li> </ul>

<p><b>Bulk Density</b></p> <p>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</p>	<ul style="list-style-type: none"> <li>- Brine density measurements were included in the laboratory assay results, and ranges from 1.001 to 1.190 grams per cubic centimetre (g/cm<sup>3</sup>).</li> <li>- No mining is to be conducted; hence density measurements are not directly relevant for the purposes of resource estimation. Mineralised brine is to be extracted by pumping.</li> <li>- A default density of 1.10 g/cm<sup>3</sup> was applied to the Mineral Resource estimates.</li> </ul>
<p><b>Classification</b></p> <p>The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors, i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data. Whether the result appropriately reflects the Competent Person(s)' view of the deposit.</p>	<p>The classification of Mineral Resources incorporated confidence in the drill hole and survey data, geological interpretation, data distribution, statistical analysis, and grade estimation.</p> <p>While all of the factors previously stated support confidence at the Project, the resource classification has been limited to Inferred Resources due to low confidence in drill hole collar locations (handheld Global Positioning System [GPS] survey data), the absence of confirmed basement contacts, and the small number of brine samples available.</p> <p>Search ellipses were based on a 1,500 m radius around brine samples, with the Z value set to 60 m. All estimation parameter values were restricted to a single pass of the full ellipsoid range within each domain.</p> <p>Mineral Resources were classified only for those blocks estimated using ID2 grade interpolation.</p>

	<p>WSP considers the Mineral Resource Estimate (MRE) an Inferred Mineral Resource. There is an acceptable level of confidence in modelled domain continuity, however, to improve resource classification in the future, the following should be addressed:</p> <ul style="list-style-type: none"> <li>- Lack of high resolution topography.</li> <li>- Lack of Differential Global Positioning System (DGPS) survey of drill hole collars.</li> <li>- Addition of infill drilling.</li> <li>- Confidence in the salar geometry, and basement contact.</li> </ul> <p>The plan view of the Inferred resource is shown below:</p> 
<p><b>Audits or Reviews</b></p>	<ul style="list-style-type: none"> <li>- Mineral Resource estimation was supervised by the Competent Person.</li> </ul>
<p>The results of any audits or reviews of Mineral Resource estimates.</p>	<ul style="list-style-type: none"> <li>- No audits have been completed.</li> </ul>
<p><b>Discussion of Relative Accuracy/Confidence</b></p>	<ul style="list-style-type: none"> <li>- The MRE and associated JORC Table 1 document have undergone internal WSP peer review, and client review prior to finalisation.</li> </ul>
<p>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent</p>	<ul style="list-style-type: none"> <li>- The relative accuracy is reflected in the resource classification discussed above, that is in line with industry acceptable standards.</li> <li>- The block model was validated using visual checks and global statistics of declustered length weighted composites against volume weighted block values.</li> </ul>



Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.

The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation.

Documentation should include assumptions made and the procedures used.

These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.

*Overall, the MRE is considered to adequately represent the composited data. Domains 2 and 3 were shown to be underestimating the resource by ~1% and 4% respectively on a global basis. It is expected that statistical analysis and the MRE itself will improve with further drilling.*

- *The estimate is a global estimate.*
- *The Formentera deposit has not yet been mined; hence no production data is available for reconciliation purposes.*