

Recharge Resources Limited

# NI 43-101 Technical Report

Pocitos I and II, Salta Province, Argentina

Effective Date: 18 December 2023

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# Question today *Imagine tomorrow* Create for the future

NI 43-101 Technical Report

Pocitos I and II, Salta Province, Argentina

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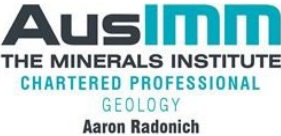


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## Date and Signature Page

This Technical Report on Pocitos I, and II is submitted to Recharge Resources Limited and is effective as of 18 December 2023.

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- (b) This certificate applies to the technical report titled NI 43-101 Technical Report Pocitos I and II, Salta Province, Argentina with an effective date of: 18 December 2023 (the “Technical Report”).
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- (d) The requirement for a site visit is not applicable to me.
- (e) I am responsible for Item(s) 1.1, 1.2, 1.3, 1.5, 1.6, 2.1, 2.3, 2.4, 2.5, 2.6, 2.7, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25.1, 25.3, 26, and 27 of the Technical Report.
- (f) I am independent of the issuer as described in section 1.5 of NI 43-101.
- (g) I have not had prior involvement with the property that is the subject of the Technical Report.
- (h) I have read NI 43-101 and the parts of the Technical Report for which I am responsible has been prepared in compliance with NI 43-101; and
- (i) 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.

Dated at Newcastle, New South Wales, Australia this 18<sup>th</sup> of December, 2023.

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- (c) I am a “qualified person” for the purposes of National Instrument 43-101 (“NI 43-101”). My qualifications as a qualified person are as follows. I am a graduate of Flinders University with a Masters degree in Science, and a Bachelor Degree in Science with I am a Member in good standing of the Australasian Institute of Mining and Metallurgy (AusIMM). My relevant experience after graduation and over 22 years for the purpose of the Technical Report includes hydrogeology, mine geology and hydrogeology, hydrogeological modelling and consulting experience covering base metals, coal, and lithium, across a wide variety of projects both in Australia and internationally.
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Dated at Brisbane, New South Wales, Australia this 18th of December, 2023.

Ian Unsworth CGeol

# Table of contents

<b>1</b>	<b>Summary .....</b>	<b>1-1</b>
1.1	Executive summary .....	1-1
1.2	Property description, location, history, and ownership.....	1-1
1.2.1	History .....	1-2
1.2.2	Ownership .....	1-2
1.3	Geology, exploration, and mineralisation.....	1-2
1.3.1	Geology .....	1-2
1.3.2	Exploration.....	1-3
1.3.3	Mineralisation .....	1-4
1.4	Mineral Resources.....	1-5
1.4.1	Risks to MRE.....	1-6
1.5	Mineral processing, and metallurgical testing .....	1-6
1.6	Recommendations .....	1-7
<b>2</b>	<b>Introduction .....</b>	<b>2-1</b>
2.1	Sources of information and data .....	2-2
2.2	Site inspection by Qualified Person .....	2-3
2.3	WSP declaration .....	2-3
2.4	Forward-looking information.....	2-4
2.5	Abbreviations.....	2-4
2.6	Language currency and measurement standards .....	2-7
2.7	Statement for brine mineral prospects and related terms.....	2-7
<b>3</b>	<b>Reliance on other experts.....</b>	<b>3-1</b>
<b>4</b>	<b>Property description and location .....</b>	<b>4-1</b>
4.1	Location.....	4-1
4.2	Mineral title and land ownership.....	4-2
4.2.1	Pocitos I.....	4-2
4.2.2	Pocitos II.....	4-2
4.3	Surface rights .....	4-3
4.4	Agreements and encumbrances.....	4-3
4.5	Mining royalties and taxes.....	4-3
4.6	Environmental liabilities .....	4-4

4.7	Permitting .....	4-4
4.8	Additional significant factors .....	4-5
<b>5</b>	<b>Accessibility, climate, local resources, infrastructure, and physiography .....</b>	<b>5-1</b>
5.1	Access .....	5-1
5.2	Local resources .....	5-2
5.3	Site infrastructure.....	5-2
5.4	Climate.....	5-2
5.5	Physiography .....	5-4
<b>6</b>	<b>History .....</b>	<b>6-1</b>
6.1	Prior ownership .....	6-1
6.2	Previous exploration and development .....	6-1
6.2.1	Surface samples.....	6-2
6.2.2	Diamond core exploration wells.....	6-3
6.2.3	TEM survey .....	6-8
6.3	Historical Mineral Resource and Mineral Reserve estimates .....	6-10
6.4	Historical production .....	6-10
<b>7</b>	<b>Geological setting and mineralisation.....</b>	<b>7-11</b>
7.1	Geological setting .....	7-11
7.1.1	Ordovician .....	7-13
7.1.2	Late Palaeocene-Early Oligocene .....	7-13
7.1.3	Late Oligocene-Late Miocene.....	7-13
7.1.4	Miocene-Pliocene .....	7-13
7.1.5	Pleistocene-Holocene.....	7-13
7.2	Local and project geology .....	7-14
7.2.1	Lithology .....	7-14
7.3	Mineralisation .....	7-15
<b>8</b>	<b>Deposit type.....</b>	<b>8-1</b>
<b>9</b>	<b>Exploration.....</b>	<b>9-2</b>
9.1	MT survey .....	9-2
9.2	Porosity samples .....	9-7
9.3	Exploration by others.....	9-8





9.3.1	Argentine Government.....	9-8
9.3.2	Li3 Energy Inc.....	9-8
9.3.3	Lacus Minerals S.A.....	9-8
9.3.4	Millennial Lithium Corp. ....	9-8
9.3.5	PepinNini Lithium Limited .....	9-8
9.3.6	Pure Energy Minerals Ltd .....	9-9
<b>10</b>	<b>Drilling .....</b>	<b>10-1</b>
10.1	Exploration well PCT-22-01 .....	10-2
<b>11</b>	<b>Sample preparation, analyses, and security ....</b>	<b>11-1</b>
11.1	Sample preparation methods, and quality control measures employed .....	11-1
11.2	Brine chemistry laboratory procedures and analyses.....	11-3
11.3	Security.....	11-6
11.4	Analytical Quality Assurance and Quality Control .....	11-6
11.5	Conclusions .....	11-7
<b>12</b>	<b>Data verification .....</b>	<b>12-1</b>
12.1	Review of data available for resource modelling .....	12-1
12.1.1	Drill hole validation.....	12-1
12.1.2	Survey data .....	12-1
12.1.3	Assay drill hole data.....	12-1
12.1.4	Topographic surface .....	12-1
12.2	Analytical QAQC .....	12-1
12.3	Conclusions .....	12-2
<b>13</b>	<b>Mineral processing, and metallurgical testing.....</b>	<b>13-1</b>
13.1	Sampling and mineralogical analysis .....	13-1
<b>14</b>	<b>Mineral Resource estimates .....</b>	<b>14-3</b>
14.1	Key assumptions and data used in the estimate .....	14-3
14.1.1	Drill hole data.....	14-3
14.2	Geological interpretation .....	14-3
14.2.1	Geological model.....	14-3
14.2.2	Brine geochemistry .....	14-4
14.3	Compositing.....	14-4



14.4	EDA .....	14-4
14.5	Density.....	14-7
14.6	Variography.....	14-7
14.7	Block model interpolation .....	14-7
14.8	Block model validation .....	14-9
14.9	Mineral Resource classification.....	14-12
14.10	Reasonable prospects of eventual economic extraction.....	14-12
14.10.1	Specific yield.....	14-12
14.10.2	Project economics .....	14-13
14.11	Mineral Resource estimate .....	14-14
14.12	Change from previous Mineral Resource estimate .....	14-15
15	Mineral Reserve estimates .....	15-1
16	Mining methods.....	16-2
17	Recovery methods .....	17-1
18	Project infrastructure.....	18-1
19	Market studies and contracts.....	19-1
20	Environmental studies, permitting, and social or community impact.....	20-1
21	Capital and operating costs .....	21-1
22	Economic analysis .....	22-1
23	Adjacent properties.....	23-1
24	Other relevant data and information.....	24-1
24.1	Environmental studies in Argentina and Salta.....	24-1
24.2	Environmental studies .....	24-1
24.3	Environmental baseline studies .....	24-1
24.3.1	Social.....	24-2
24.4	Total impact and management plan .....	24-2

<b>25</b>	<b>Interpretation and conclusions .....</b>	<b>25-1</b>
25.1	Property and title .....	25-1
25.2	Mineral Resources.....	25-1
25.3	Caution to readers .....	25-1
<b>26</b>	<b>Recommendations .....</b>	<b>26-1</b>
<b>27</b>	<b>References .....</b>	<b>27-1</b>

### List of tables

Table 2.1	Abbreviations and acronyms .....	2-4
Table 4.1	Pocitos I concession boundary co-ordinates (POSGAR 2007 Argentina 3).....	4-2
Table 4.2	Pocitos II concession boundary co-ordinates (POSGAR 2007 Argentina 3).....	4-2
Table 6.1	Results from surface trench samples (depth 4.0-4.5 m).....	6-2
Table 6.2	Co-ordinates and total depth of diamond core exploration wells .....	6-3
Table 6.3	Sample results for PCT-18-01 .....	6-4
Table 6.4	Sample results for PCT-18-02 .....	6-4
Table 6.5	Bulk density and porosity for PCT-18-01, and PCT-18-02 Core analysis results from GeoSystems Analysis, Inc. 20 samples of each core were taken for bulk density testing and porosity tests .....	6-7
Table 6.6	TEM sounding co-ordinates in the original UTM WGS84 Zone 19S co-ordinates and converted POSGAR 2007 Argentina 3 co-ordinates .....	6-8
Table 7.1	Geological units translated from Segmar (2008) .....	7-12
Table 9.1	MT survey specifications .....	9-2
Table 9.2	Pocitos I porosity, permeability, and grain density results from Core Laboratories.....	9-7
Table 10.1	PCT-22-01 collar co-ordinates and total depth details.....	10-2
Table 10.2	Assay results from the two packer tests conducted at 342 and 363 m, a duplicate of 363 m, a control standard and a blank of distilled water .....	10-2
Table 11.1	Summary of depths and field parameters for brine samples obtained during drilling .....	11-3
Table 11.2	Summary of duplicate sample chemistry results conducted in January and February 2023 .....	11-7
Table 13.1	Pocitos I brine sample lithium concentrations.....	13-1
Table 13.2	Pocitos I brine sample other cation concentrations .....	13-1

Table 13.3	Lithium extracted in each pass .....	13-2
Table 14.1	Summary of Project drill hole database (updated in 2023) .....	14-3
Table 14.2	Brine sample univariate statistics .....	14-4
Table 14.3	Block model extents and parameters .....	14-8
Table 14.4	Block model variables.....	14-8
Table 14.5	ID2 estimation parameters used for estimation .....	14-9
Table 14.6	Comparison of input and model grade means for Domain 1 .....	14-9
Table 14.7	Comparison of input and model grade means for Domain 2 .....	14-9
Table 14.8	Project MRE with no lithium COG applied.....	14-14
Table 14.9	Project MRE with a 100 ppm lithium COG applied .....	14-14

## List of figures

Figure 2.1	Map of Puna Region, Argentina (Panopus, 2023) .....	2-1
Figure 2.2	Satellite image showing the Pocitos I and II concessions (Posgar 2007 Argentina 3) .....	2-2
Figure 4.1	Pocitos I and II concession boundaries and MT lines (Posgar 2007, Argentina 3) .....	4-1
Figure 5.1	Project location and road access from Salta .....	5-1
Figure 5.2	View of the Mining Road to exploration well PCT-22-01 (Pocitos I) [Panopus, 2023] .....	5-2
Figure 5.3	Mean monthly weather conditions for Pocitos Salar (Panopus, 2023).....	5-3
Figure 5.4	Historical Pocitos Salar rainfall June 2010 to June 2023 (Panopus, 2023).....	5-3
Figure 5.5	Sunshine hours per quarter and day (Panopus, 2023).....	5-4
Figure 5.6	Rincon volcano, the road across the Pocitos Salar, and a disused railway line (Panopus, 2023).....	5-5
Figure 5.7	Pocitos Salar from the west, showing the Tul Tul (far left), Medio, and Pocitos volcanic cones (Panopus, 2023) .....	5-5
Figure 5.8	DEM of the Calama-Olacapato-El Toro Lineament with mapped volcanoes discriminated by age (Chimpa (Ch), Rincón (Rn), Tuzgle (Tz), Tul-Tul (TT), Chivinar (Chv), Del Medio (Md), and Pocitos (Po) [Panopus, 2023].....	5-6
Figure 6.1	Exploration locations of surface trenches, drill holes, TEM sounding locations, and TEM profile lines.....	6-2
Figure 6.2	Pit (Trench) 1 with brine approximately 1 m from the surface (Panopus, 2023) .....	6-3
Figure 6.3	Brine surge from exploration well PCT-18-01 at approximately 355 m depth (Panopus, 2023).....	6-5

Figure 6.4	Brine surge from exploration well PCT-18-01 at approximately 355 m depth (Panopus, 2023).....	6-6
Figure 6.5	Soil particle size distribution taken with hydrometer .....	6-7
Figure 6.6	TEM survey Profile 1, orientated east-west across the Project (Unger 2018) .....	6-9
Figure 6.7	TEM survey Profile 2, orientated north-south in the Pocitos I concession (Unger 2018).....	6-9
Figure 6.8	TEM survey Profile 3, orientated north-south in the Pocitos II concession (Unger 2018).....	6-10
Figure 7.1	Geological map of the Pocitos Salar.....	7-12
Figure 7.2	East-west cross-section along the line of drilling on the Project showing the geomorphology of the Pocitos Salar.....	7-14
Figure 7.3	MT survey data with basement contact polylines (isometric view).....	7-15
Figure 8.1	Generic model of a salar with an enriched lithium brine (Bradley et al. 2013) .....	8-1
Figure 9.1	Pocitos I and II MT survey with MT survey stations and 200 m E- field dipoles (Ex as red, and Ey in green) [WGS84 UTM Z19S] (Panopus, 2023) .....	9-2
Figure 9.2	Pocitos I and II MT survey 1D inversion model resistivity (interpolated to 2D sections) draped beneath the topographic surface, and viewed from above looking northeast (Panopus, 2023).....	9-4
Figure 9.3	Pocitos I and II, MT survey 2D inversion model resistivity section draped beneath topographic surface, viewed from above looking northeast (Panopus, 2023).....	9-5
Figure 9.4	Phase tensor ellipses over the satellite image for half-decades of the bandwidth of the survey centred on 100Hz (Panopus, 2023).....	9-6
Figure 9.5	Phase tensor ellipses over the satellite image for half-decades of the bandwidth of the survey centred on 1Hz (Panopus, 2023).....	9-7
Figure 10.1	Exploration well PCT-22-01 and the two wells previously drilled by A.I.S.R. MT survey lines are presented in blue, with Line 3 marking the boundary between the Pocitos I and II concessions.....	10-1
Figure 10.2	Phillip Thomas working at the drill rig at Pocitos I (Panopus, 2023).....	10-3
Figure 10.3	Schematic for exploration well PCT 22-01 with lithologies (Panopus, 2023) .....	10-4
Figure 11.1	SGS Argentina assay report for sample 22 at 363 m, showing 161 ppm Li ( duplicate test) [Panopus, 2023] .....	11-2
Figure 11.2	Phillip Thomas examining clay core recovered from exploration well PCT-22-01 at a depth of 200.05 m depth (Panopus, 2023).....	11-4

Figure 11.3	Gas coming out of exploration well PCT-22-02 on 12 December 2022 (right), and with mud and brine on 20 January 2023 (left) [Panopus, 2023].....	11-5
Figure 11.4	Recharge geologists examining brine, and mud flow over the concrete platform on 30 June 2023 (seven months after the exploration well was drilled) [Panopus, 2023] .....	11-6
Figure 13.1	Schematic of the pilot plant of ten cycles to complete lithium extraction using Ekosolve™ process of solvent extraction (Panopus, 2023) .....	13-2
Figure 14.1	Orthogonal view of 2023 geological model showing drill hole collars (white).....	14-4
Figure 14.2	Mg/Li ratios.....	14-5
Figure 14.3	Li/depth correlation.....	14-6
Figure 14.4	Cumulative frequency plot of Li .....	14-6
Figure 14.5	Cross-section showing the split between high-grade, and low-grade lithium domains.....	14-7
Figure 14.6	Visual long-section comparing input composites and block model estimates for Li.....	14-11
Figure 14.7	Visual long-section comparing composites and block model estimates for Mg .....	14-11
Figure 23.1	Adjacent concessions to Pocitos I (19457), and II (19458) in Posgar 2007, Argentina 3 [Panopus, 2023].....	23-2

# 1 Summary

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## 1.1 Executive summary

WSP Australia Pty Limited (WSP) was retained by Recharge Resources Limited (Recharge) to prepare an independent Technical Report on the Pocitos I, and II concessions (the Project), which is a lithium brine exploration project located in the Puna Region of Argentina.

Ekeko S.A. (Ekeko) [the Vendor] acquired the Pocitos I, and II concessions in 2008, and had not developed the Project until 2016, when they collected surface brine samples. The Vendor entered into an option agreement with A.I.S.R. Resources Ltd (A.I.S.R.) on 10 November 2017, which was extended by six months on 1 May 2018.

A.I.S.R. entered into an option agreement with Spey Resources Corp. (Spey) on 3 June 2021, granting Spey an option to acquire 100% interest in the Pocitos I, and Pocitos II concessions.

In March 2022, Spey entered an option agreement with Recharge, granting Recharge the option to acquire up to 100% undivided interest in Pocitos I.

The option agreement with the Vendor, and the sub-optioners expired on 30 June 2023. Recharge has advised that it has provided notice to Spey that it wishes to exercise its option, and Spey advised that notice has been provided to A.I.S.R. A.I.S.R. was unable to exercise the option by 30 June 2023.

In August 2023, Recharge entered into a Purchase Agreement with the Vendor to acquire a 100% interest in the Pocitos I project for an agreed price of United States Dollars (USD) \$1.2 million (approximately Canadian Dollars (CAD) \$1.64 million).

On 12 December 2023, Recharge entered into an Option Agreement with the Vendor to acquire a 100% interest in the Pocitos II project for an agreed price of USD\$1.04 million (approximately CAD\$1.4 million).

The purpose of this report is to support the public disclosure of the MRE of the Project. This Technical Report was prepared in accordance with National Instrument (NI) 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

The MRE for the Project, effective 18 December 2023, is summarised in Table 1.1.

The Qualified Person considers that the MRE is classified and reported in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves, dated 10 May 2014 (CIM Definitions), CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines, dated 29 November 2019 (CIM Guidelines), and NI 43-101 guidelines.

The Qualified Persons are not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the MRE.

Some technical reports and references have been written in Spanish and translated to English. Currencies used are United States Dollars (USD), and Canadian Dollars (CAD). Measurements used are metric.

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## 1.2 Property description, location, history, and ownership

### 1.2.1 *Property description, and location*

The Project is a lithium brine exploration project located on the Pocitos Salar, in the Puna Region of Argentina (Figure 2.1), which sits at approximately 3,660 metres above sea level (masl), approximately 100 kilometres (km) west of the township of San Antonio de los Cobres, and 270 km west of the capital city of Salta.

Figure 2.2 shows the location of the Pocitos Salar.

The Pocitos I concession covers approximately 800 hectares (ha), or 8 square kilometres (km<sup>2</sup>), being approximately 2.97 km long, and 2.7 km wide, and the Pocitos II concession covers approximately 532 ha, or 5.32 km<sup>2</sup>, being approximately 1.97 km long, and 2.7 km wide. The combined Project area covers approximately 1,332 ha, or 13.32 km<sup>2</sup>. Figure 4.1 shows the location of the Project.

The Project is covered under two License for Exploration of lithium, and borates (Claim Number Expediente No. 19457-2008 for Pocitos I, and Claim Number Expediente No. 19458-2008 for Pocitos II). The Project is located in the Los Andes department of Salta Province, Argentina. The concessions are described in File No. 19457-2008 and No. 19458-2008. Table 4.1, and Table 4.2 summarise the Gauss Kruger co-ordinates (POSGAR 2007 Argentina 3).

## 1.2.2 History

Ekeko [the Vendor] acquired the Pocitos I, and II concessions in 2008, and had not developed the Project until 2016, when they collected surface brine samples. The Vendor entered into an option agreement with A.I.S.R. on 10 November 2017, which was extended by six months on 1 May 2018.

A.I.S.R. entered into an option agreement with Spey on 3 June 2021, granting Spey an option to acquire 100% interest in the Pocitos I, and Pocitos II concessions.

In March 2022, Spey entered an option agreement with Recharge, granting Recharge the option to acquire up to 100% undivided interest in Pocitos I.

In February 2023, Recharge accepted an option from Spey to acquire the concession identified as File No. 19458, Pocitos II.

On 12 December 2023, Recharge entered into an Option Agreement with the Vendor to acquire a 100% interest in the Pocitos II project for an agreed price of USD\$1.04 million (approximately CAD\$1.4 million).

The option agreement with the Vendor, and the sub-optioners expired on 30 June 2023. Recharge has advised that it has provided notice to Spey that it wishes to exercise its option, and Spey advises that notice has been provided to A.I.S.R. A.I.S.R. was unable to exercise the option by 30 June 2023.

There are no historical published Mineral Resource, or Mineral Reserve statements.

There has been no lithium production at the Project to date.

## 1.2.3 Ownership

### 1.2.3.1 Pocitos I

In August 2023, Recharge entered into a Purchase Agreement with the Vendor to acquire a 100% interest in the Pocitos I project for an agreed price of USD \$1.2 million (approximately CAD \$1.64 million).

### 1.2.3.2 Pocitos II

On 12 December 2023, Recharge entered into an Option Agreement with the Vendor to acquire a 100% interest in the Pocitos II project for an agreed price of USD\$1.04 million (approximately CAD\$1.4 million).

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## 1.3 Geology, exploration, and mineralisation

### 1.3.1 Geology

The Pocitos Salar is located in the geological province of La Puna (Turner, 1979), and within the Puna Austral Geological Sub-province (Alonso et al., 1984). Characterising the geological province of La Puna is evaporite basins or



salars, where concentrations of borates, sodium sulphate and lithium are deposited. Residing in one of these endorheic (internal drainage) basins is the Pocitos Salar.

The oldest rocks in the Project area outcrop to the east of the Pocitos Salar, forming the Cordón de Pozuelos, corresponding to the Coquena Formation (Ordovician age), and comprised primarily of sediments and metasediments with minor metapetroclastics, and metovolcanics.

Outcrops to the west are comprised of sandstones and perlites of the Upper Pozuelos, and Sijes formations (Middle Miocene 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 salt flats in the central areas of the salars.

The Pocitos Salar is an endorheic basin, similar to several other salars in the region of La Puna. Two features are well defined in the basin. The first being a saline crust mainly comprising sodium chloride (mineral halite), occurring in the central part of the basin. The second being deposits of fine-grained materials around the edge of the saline crust, corresponding to lacustrine sediments bordering the former lake, and more recent heavy rains as occurred in 2018. These sediments predominately comprise silts and clays, with a saline coating (efflorescence). Small gypsum crystals are commonly observed scattered along the surface of the salar, to the south in particular, and in some areas, forming a crust of evaporitic minerals, and small accumulations of crystals outcropping in silt clay sediments. Clastic sediment deposits overlay basin fill sediments, forming coalescent alluvial fans. Alluvial fans divide the basin into two zones. The Project area is located predominantly on lacustrine sediment deposits on the western side of the salar.

Surface reddish- brown silt and clays with abundant small crystals of halite scattered nearly to the salar border occur within the Project area. North of the Project area, and close to the salar border, are surficial green-grey clays. It is theorised that the clays correspond to shallow groundwater, relating to reductive environmental conditions (Panopus, 2023).

Figure 7.1 shows a geological map of the area, descriptions of the geological units are presented in Table 7.1.

### 1.3.2 Exploration

In May 2023, Recharge commissioned SouthernRock Geophysics S.A. (SRG) to conduct a Magneto-Telluric (MT) survey. Three lines were surveyed, two oriented east-west, and one oriented north-south. The lines covered both the Pocitos I and II concessions, with the north-south oriented line traversing the border of the two concessions (Figure 9.1).

The principal objective of the MT survey was to image the distribution of resistivity beneath the survey lines (within the project area) from near-surface to depths of up to 2 km, constrained by the inherent limitations of the survey method and extent of the surveyed area. The survey was comprised of the acquisition of remote referenced broadband MT data, with contiguous along-line 200 metres (m) E-field dipoles (EMAP-style array) incorporating sparse tensor sites every 600 m. Data was acquired at 64 sites distributed along the three survey lines, for a total survey length of 12.8 km. Results are outlined in Section 9.1.

Core samples were collected from the Pocitos I exploration wells, and measured for porosity, permeability, and grain density. A total of seven samples were collected, three from PCT-22-01, two from PCT-18-01, and two from PCT-18-02. The samples were sent to Core Laboratories Australia Pty Ltd (Core Laboratories), in Perth, Western Australia. Results are presented in Table 9.2.

#### 1.3.2.1 Argentine Government

The Argentine government agency, the Direccion General de Fabricaciones Militares (DGFM) completed extensive exploration in the Argentinian salars in this region during the 1970's. In 1979, the DGFM reported a reconnaissance sampling campaign at Pocitos that comprised 12 shallow auger holes, and one surface sample. Of the 12 auger holes, two reported anomalous values of 155 parts per million (ppm) lithium (Li) (Hole P12), and 417 ppm Li (Hole P8). The results of these holes, and the sampling conducted are historical in nature and cannot be confirmed by Recharge under NI 43-101 standards applicable today (Panorama Minero, 2017).

### 1.3.2.2 Li3 Energy Inc.

In 2010 and 2011, the company Li3 Energy, Inc. (Li3E) [acquired by Wealth Minerals Ltd. (Wealth Minerals) in 2016] released preliminary results of a near surface brine sampling campaign, and a geophysical survey completed in the northern portion of the Pocitos Salar. A total of 46 brine samples were collected from just below the surface of the salar, with brine assays ranging from 300 to 600 ppm Li. These samples were collected immediately east of the Pocitos West property. Based on the reported results, Li3E defined the presence of two near-surface anomalies, approximately 6 km x 2 km each. The eastern anomaly had reported lithium concentrations ranging from 100 to 300 ppm, and a potassium concentration ranging from 1,000 to 7,000 ppm. The western anomaly had reported lithium concentrations ranging from 100 to 200 ppm, and potassium concentrations ranging from 1,000 to 5,000 ppm. (Li3E, 2010). A resistivity survey over the Li3E prospect area reportedly identified three target areas, including one highly conductive zone of 0.2 Ohm metre ( $\Omega\cdot\text{m}$ ) at 250 m depth, and other possible mixed brine zones of 0.4 to 0.75  $\Omega\cdot\text{m}$  that encased the high conductivity layer from near surface to 450 m (Li3E, 2010).

### 1.3.2.3 Lacus Minerals S.A.

Lacus Minerals S.A. (Lacus) also reported in 2010 on their sampling, and geophysical exploration conducted in the same area, which was later optioned to Li3E. While Lacus did not report assay values, they included in their report distribution maps for 95 samples collected at 6.8 m and below, indicating values up to 255 ppm Li. Their geophysical survey consisted of 42 soundings, from which the interpretation indicated a possible 140 m thick conductive brine layer with the top at an approximate depth of 150 m. According to Lacus, the brine-bearing horizon could be projected to the surface at the western margin of the basin, comprising the western limit of the Millennial Lithium Corp. (Millennial) concessions, and likely consisted of conglomerate, and sandstone (Rojas, 2017).

### 1.3.2.4 Millennial Lithium Corp.

In 2017, Millennial, in partnership with Southern Lithium Corp. (Southern Lithium) conducted a TEM survey in the Cruz property, located in the northern end of the Pocitos Salar. A continuous north-south trending conductive unit was identified. On behalf of Liberty One Lithium Corp. (Liberty One), Millennial commissioned a Vertical Electronic Sounding (VES) survey to be conducted by Tecnología y Recursos (Technology and Resources) [Rojas, 2017].

### 1.3.2.5 PepinNini Lithium Limited

PepinNini Lithium Limited (PepinNini) [now Power Minerals Limited ASX:PNN] reported exploration activity on Pocitos included two VES surveys, 2 exploration wells (for a total of 539 m), and a collection of 36 brine samples (PepinNini, 2018).

### 1.3.2.6 Pure Energy Minerals Ltd

Pure Energy Minerals Ltd (Pure Energy) explored their Terra Cotta project on the Pocitos Salar in August 2017 (in the south of the salar), and had adjacent concessions Pocitos 4, and Pocitos AO1, however they did not conduct any exploration drilling.

## 1.3.3 Mineralisation

The two main mechanisms of lithium extraction from source rock are believed to be surface or near surface chemical weathering, and leaching in hydrothermal systems originating from active arc magmatism. Compositions of lithium and strontium isotopes of conventional salar deposits provide insight into the formation processes and methods of lithium brine deposits in Andean evaporites. Salar de Pozuelos data indicates the main process of lithium mobilisation to be near-surface chemical weathering in a cold and dry climate, with enrichment by evaporation. Suggested lithium source rock is the Cenozoic ignimbrites, with lesser additions from the Palaeozoic basement. Identification of source rocks is supported by salar deposit radiogenic Neodymium (Nd) and Lead (Pb), and stable Boron (B) isotope data. In comparison with other lithium brine and salt deposits in the Altiplano-Puna Plateau and its western foothills, Salar de Pozuelos is recognised as

an end member of lithium solubilisation by chemical weathering, with only minor hydrothermal lithium mobilisation (Meixner et al. 2022).

## 1.4 Mineral Resources

The Mineral Resource Estimate (MRE) for the Project is classified and reported in accordance with Canada Institute of Mining (CIM) Definitions, CIM Guidelines, and NI 43-101. The Effective Date of the MRE is 18 December 2023.

The lithology model developed by WSP was split into four major components, these being the Clay, Sand-Halite, Sand-Gravel, and Basement domains. These domains were interpreted by snapping to drill hole contacts, with contacts further interpreted from MT survey data where applicable.

Mean specific yield values outlined in Section 14.10.1 were applied to the total metal tonnages to obtain the yield from the available brine. The Lithium Carbonate Equivalent (LCE) is calculated from the ratio of lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) to Li (5.32). The calculations assume no process losses.

The specific processing methodology to be employed at the Project is yet to be determined, as is the minimum cut-off grade (COG). The processing methodology likely to be utilised by Recharge at the Project requires a 100 ppm feed grade (1 ppm is equivalent to 1 milligram per litre (mg/L)).

Of the total MRE, 37.6% of the brine volume is above a 100 ppm lithium COG, of which the low-grade lithium clay domain is 0%, the high-grade lithium clay domain is 87.9%, and the sand-gravel domain is 57.4%.

Additional cost and pricing assumptions supporting Reasonable Prospects of Eventual Economic Extraction (RPEEE) are presented in Item 14 of this Technical Report.

No COG has been applied to the MRE.

Table 1.1 presents the MRE with no lithium COG applied for the Project.

Table 1.1 Project MRE with no lithium COG applied

Category	Domain	Sediment Volume (m <sup>3</sup> )	Specific Yield (%)	Brine Volume (m <sup>3</sup> )	Li Grade (mg/L) <sup>1</sup>	Li Metal (kt) <sup>2</sup>	Li Yield (kt)	LCE (t) <sup>3</sup>	Mg Grade (mg/L) <sup>1</sup>	Mg Metal (kt)	Mg Yield (kt)
Inferred	Sand-Gravel	464,425,000	14.9	69,199,325	107.7	50	7	40	1,602.7	744	111
	Clay High Li	392,500,000	6.1	23,942,500	131.4	52	3	17	1,448.8	569	35
	Clay Low Li	768,387,500	6.1	46,871,638	53.6	41	3	13	762.5	586	36
<b>Total Inferred</b>		<b>1,625,312,500</b>		<b>140,031,463</b>	<b>100.7</b>	<b>143</b>	<b>13</b>	<b>70</b>	<b>1,297.4</b>	<b>1,899</b>	<b>181</b>

**Notes:** (1) Grade values are the average estimated value for the domain in the Vulcan™ Block Model, (2) Total in-situ contained lithium metal, (3) Extractable LCE, (4) No recovery, dilution or other similar mining parameters have been applied, (5) Although the Mineral Resources presented in this Technical 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.

The Mineral Resources presented in this Item are not Mineral Reserves, and do not reflect demonstrated economic viability. The reported Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that

all or any part of this Mineral Resource will be converted into Mineral Reserve. All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

Based on the geological results presented in this Technical Report, supported by the assumptions made by Recharge (presented in Section 14.10), it is the Qualified Person's opinion that the Mineral Resources have RPEEE. Further exploration, and technical studies are required to confirm the economic feasibility of the project and to allow the estimation and reporting of a Mineral Reserve.

#### 1.4.1 Risks to MRE

Risks associated with the MRE are:

- Minor risks associated with modelled contacts.
- The current spatial distribution of brine samples is insufficient for statistical analysis of the hydrochemistry, hence variography was not conducted.
- Future application of more advanced, project specific extraction, processing, recovery, economic, and other factors in developing a more robust RPEEE assessment may affect MRE tonnages, and grades.

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## 1.5 Mineral processing, and metallurgical testing

Recharge collected a 200-litre brine sample, which was sent to the Ekosolve™ Ltd (Ekosolve) laboratory at the University of Melbourne, Australia for testing lithium extraction. The brines are currently being processed to produce lithium chloride at the date of this Technical Report.

A 20-litre sub-sample was prepared and placed into a drum, which was first shaken to ensure a homogeneous distribution. It had been spiked with 5 millimetre (mm) nitric acid to arrest crystallisation. Following this, samples were collected three times individually from the bottom, the middle, and the top sections of the drum. These nine samples were diluted at three ratios (50, 500, and 2,500-times dilution) for all cations except lithium, and anions, including chloride and sulphate. The lithium concentration in the salt lake brine samples were analysed by the lithium spike method previously developed and disclosed. Specifically, 0, 10, 25, 50, and 100 ppm Li, sourced from a 1,000 mg/L Li Inductively Coupled Plasma (ICP) standard solution supplied by Merck was spiked into the brine samples, and the resulting solution diluted to a 50-times dilution. The diluted samples were analysed Inductively Coupled Plasma-Optical Emission Spectroscopy (ICP-OES) for cations, and three samples for each of the bottom, middle, and top were analysed for anion concentrations using ion chromatography.

Table 13.1, and Table 13.2 present the Pocitos I brine sample concentrations of lithium, and other cations.

Figure 13.1 presents a schematic of the pilot plant, showing the ten cycles used to complete lithium extraction using Ekosolve™ process of solvent extraction.

The Ekosolve™ extraction process extracted 94.92% of the lithium from Pocitos I brine. Table 13.3 shows the quantity of lithium extracted during each extraction cycle.

Further cycles would likely marginally increase extraction efficiency.

Mumford and Li (2023) stated that *“The lithium extraction from Recharge Resources brine is proven to be efficient especially at low A/O ratios (added - solvent to brine) with extractions of 94.92% obtained. Next step includes conducting washing and crystallisation”*.

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## 1.6 Recommendations

Based on the initial results of drilling and geophysical surveying conducted to date, additional exploration activities are justified to better characterise the sub-surface brine within the concession. Additional drilling and testing will allow for expansion of the resource laterally, throughout the concession area.

It is recommended that additional diamond cored exploration wells with depth-specific sampling at regular intervals be completed to better define the brine chemistry in those areas identified by the MT survey as possessing resistivities of just 0.4  $\Omega$ .m. Additional drilling and testing will allow for estimation of an initial MRE and will support future estimation and reporting of a Mineral Reserve.

It is recommended that an additional drilling phase consisting of a single diamond cored exploration well (drilled to a maximum of approximately 500 metres below land surface [mbls]), and a single pumpable well drilled and constructed to depths to be determined based on the results of the diamond cored exploration well. Drilling of the diamond cored exploration well should include depth-specific brine sampling using an inflatable packer, and laboratory analysis of core for drainable porosity values (specific yield), hydraulic conductivity, and particle size distribution. Additionally, downhole Borehole Magnetic Resonance (BMR) surveys should be conducted in the proposed diamond cored exploration well to obtain vertical profiles of specific yield.

For the proposed two well program, costs (excluding tax, in USD) can be summarised as follows:

- Roads and drilling platforms: \$10,000.
- Environmental studies: \$40,000 (includes baseline study for production).
- Drilling HQ diamond cored exploration well: \$275,000.
- Drilling 8 inch pumpable well: \$400,000.
- Field monitoring and supervision: \$40,000.
- Development and reporting of a maiden MRE: \$100,000.
- Geophysical surveying and reporting: \$70,000.

Total estimated cost of approximately USD\$935,000 (plus taxes), or CAD \$1,300,00 (plus taxes) for the proposed two well program.

If the results of the proposed exploration program are favourable and support feasibility of a lithium extraction project, additional studies should include the following:

- Drilling and establishment of a second production well.
- Further development of the existing hydrogeological model, including additional refinement of hydrogeological units critical to aquifer definition.
- Additional studies in support of the development of a PEA study.
- Additional studies in support of a PFS, or Feasibility Study (FS) to support the estimation and reporting of an initial Mineral Reserve for the Project.

## 2 Introduction

The Project is located in the Puna region of Argentina (Figure 2.1), approximately 10 km from the township of Pocitos, on the middle west side of the Pocitos Salar at approximately 3,660 masl. It is approximately 108 km to San Antonio de los Cobres, and 254 km to City of Salta.

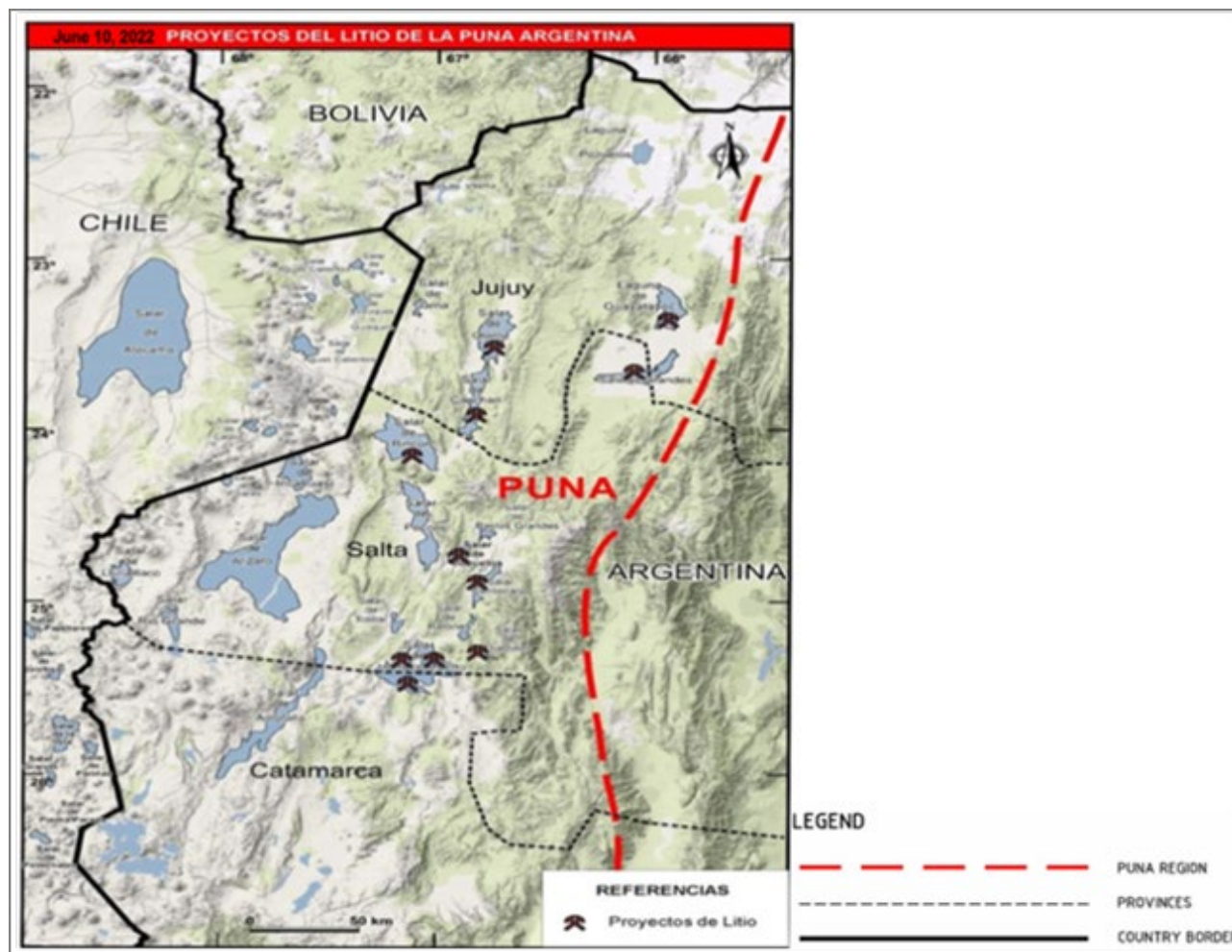


Figure 2.1 Map of Puna Region, Argentina (Panopus, 2023)

Figure 2.2 shows the Pocitos I, and II concessions in the Posgar 2007 Argentina 3 co-ordinate system.

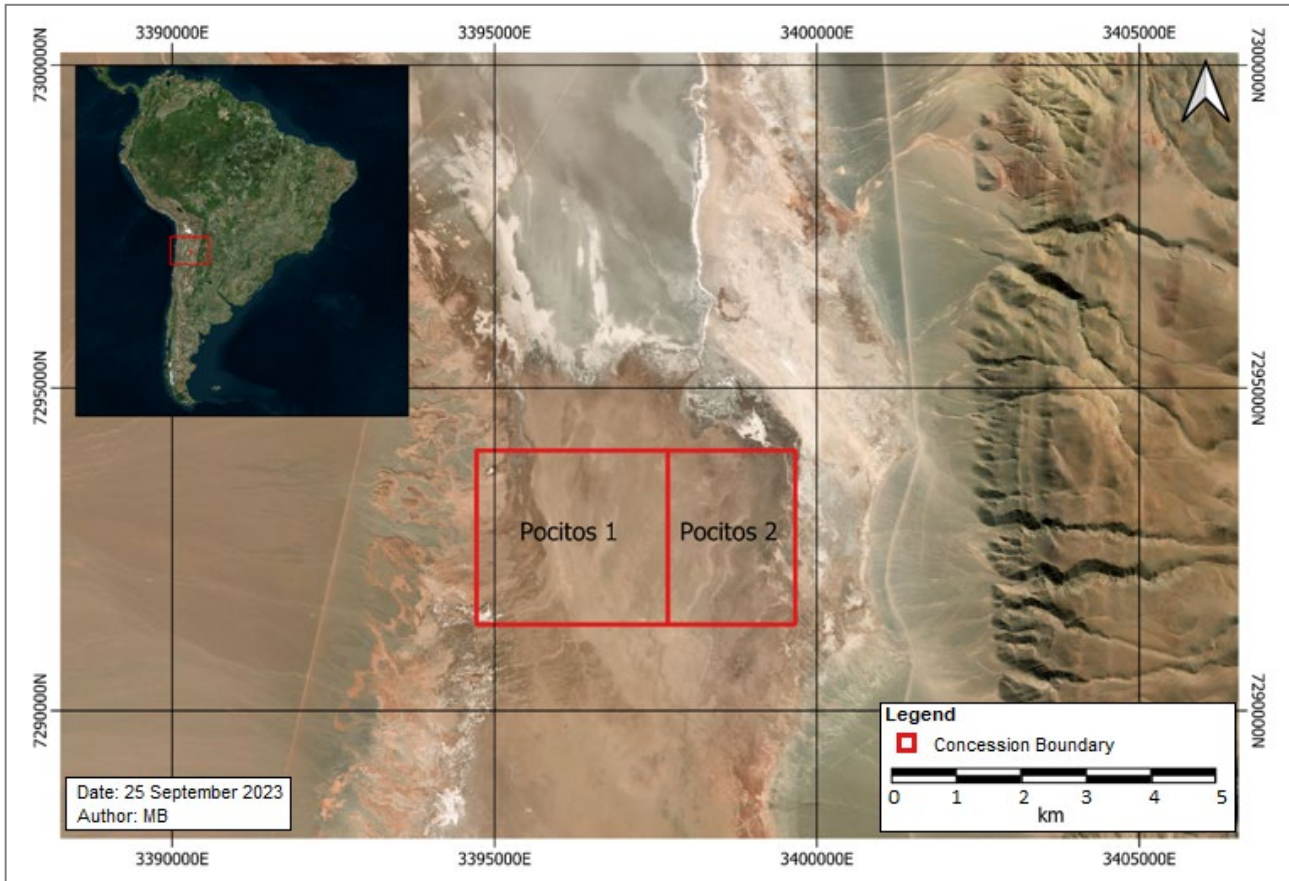


Figure 2.2 Satellite image showing the Pocitos I and II concessions (Posgar 2007 Argentina 3)

## 2.1 Sources of information and data

This Technical Report is based on information and data made available to WSP by Recharge in a Virtual Data Room (VDR), and on information and data collected during a site inspection.

The Qualified Persons have no reason to doubt the reliability of the information provided by Recharge. Other information was obtained from the public domain. The Qualified Persons have used all means necessary in their professional judgment to fulfill their responsibilities and do not disclaim any responsibility for the information contained herein.

This Technical Report is based on the following sources of information:

- Information provided by Recharge.
- A site inspection conducted by the Qualified Person for Mineral Resources listed in Table 2.1 during September 2022.
- Nigel Unger, a geophysicist employed by Quantec Geoscience Argentina S.A. (Quantec) provided the TEM survey, and initial interpretation. The report provided by Quantec is dated 26 January 2018. Interpretation forming part of this work was relied on for Item 9 (Exploration).
- Jeremy Barrett, General Manager/Geophysicist, employed by SRG provided the MT survey results (completed 23 June 2023). The report provided by SRG is dated 26 June 2023. Interpretation forming part of this work was relied on for Item 9 (Exploration).
- David Carabanti, a geologist employed by A.I.S. Resources Ltd (A.I.S.R.) in Salta, Argentina arranged for sampling on site, and for delivery of the samples to SGS Argentina. David Carabanti, and Anabel Molas (a geologist employed

by A.I.S.R. in Salta, Argentina) were on site with Phillip Thomas, a Senior Consulting Geologist employed by Panopus in Singapore during drilling and packer testing in November 2022, during the exploration drilling program for exploration well PCT-22-01. Interpretation forming part of this work was relied on for Item 10 (Drilling).

- Carlos Enrique Ganam, a registered Argentine geologist, prepared and signed the Environmental Impact Report (Ganam 2021). This report was originally dated 17 May 2017, and was subsequently updated on 5 June 2021, and 11 August 2022. This work was relied upon for Item 24 (Other Relevant Data and Information).
- Discussions with Recharge personnel.
- Additional information from public domain sources.

The Qualified Persons have reviewed the supplied information and data, and have no reasons to doubt its reliability, and therefore have determined it to be adequate for the purposes of this Technical Report. The Qualified Persons do not disclaim any responsibility for this information. The documentation reviewed, and other sources of information, are listed at the end of this Technical Report in Item 27 (References).

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## 2.2 Site inspection by Qualified Person

Ian Unsworth, a Principal Hydrogeologist, and Chartered Geologist (formerly a member of the WSP Mine Water Group) inspected the site on 19 May 2023, accompanied by Natalie Cabanillas (Senior Geologist), and Anabel Molas (Geologist). Ian's experience includes the conducting of hydrogeological and geophysical (both surface and borehole) studies for the groundwater, oilfield, engineering, environmental and minerals sectors. Ian has experience working in Australia, Western Europe, North America, and the Middle East.

Ian is considered a Competent Person (CP) for the reporting of Mineral Resources according to the JORC Code 2012, and the SAMREC Code 2016 for lithium brine projects. Ian is also considered a Qualified Person (QP) for the preparation of Technical Reports according to NI-43-101, SEC S-K 1300, and other major reporting codes.

During the inspection, a well on the Pocitos I concession was observed to be blowing gas (thought to be CO<sub>2</sub>), although it is understood that no formal testing on the gas had been conducted prior to the site inspection. All other existing exploration wells were located, and inspected.

Ian's employment with WSP ceased on 26 May 2023.

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## 2.3 WSP declaration

The opinions of Qualified Persons in the employ of WSP contained herein and effective 18 December 2023, are based on information collected throughout the course of investigations by the Qualified Persons. The information in turn reflects various technical and economic conditions at the time of preparing the Technical Report. Given the nature of the mining business, these conditions can change significantly over relatively short periods of time. Consequently, actual results may be significantly more or less favourable.

This Technical Report may include technical information that requires subsequent calculations to derive sub-totals, totals, and weighted averages. Such calculations inherently involve a degree of rounding, and consequently introduce a margin of error. Where these occur, the Qualified Persons do not consider them to be material.

Neither WSP, nor the Qualified Persons responsible for this Technical Report, are insiders, associates, or affiliates of Recharge. The results of the technical review by the Qualified Persons are not dependent on any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings.



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## 2.4 Forward-looking information

This Technical Report contains “forward-looking information”, and “forward-looking statements” within the meaning of applicable securities legislation which involve a number of risks and uncertainties. Forward-looking information and forward-looking statements include, but are not limited to, statements with respect to the future prices of lithium, the estimation of Mineral Resources and Mineral Reserves, the realisation of mineral estimates, the timing and amount of estimated future production, costs of production, capital expenditures, costs (including capital costs, operating costs, and other costs) and timing of the Life of Mine (LOM), rates of production, annual revenues, requirements for additional capital, government regulation of mining operations, environmental risks, unanticipated reclamation expenses, title disputes or claims, and limitations on insurance coverage.

Often, but not always, forward-looking statements can be identified by the use of words such as “plans”, “expects”, or “does not expect”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates”, or “does not anticipate”, or “believes”, or variations of such words and phrases or state that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be achieved.

Forward-looking statements are based on the opinions, estimates, and assumptions of contributors to this Technical Report. Certain key assumptions are discussed in more detail. Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance, or achievements of Recharge to be materially different from any other future results, performance or achievements expressed or implied by the forward-looking statements.

Such factors include, among others: the actual results of current development activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of lithium; possible variations in grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accidents, labour disputes and other risks of the mining industry, delays in obtaining governmental approvals or financing, or in the completion of development or construction activities; shortages of labour and materials, the impact on the supply chain and other complications associated with pandemics, including the COVID-19 (coronavirus) pandemic; as well as those risk factors discussed or referred to in this Technical Report and in Recharge’s documents filed from time to time with the securities regulatory authorities in Canada.

There may be other factors than those identified that could cause actual actions, events, or results to differ materially from those described in forward-looking statements, and there may be other factors that cause actions, events or results not to be anticipated, estimated, or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements.

Accordingly, readers are cautioned not to place undue reliance on forward-looking statements. Unless required by securities laws, the authors undertake no obligation to update the forward-looking statements, if circumstances or opinions should change.

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## 2.5 Abbreviations

Abbreviations and acronyms used in this Technical Report are included in Table 2.1.

Table 2.1 Abbreviations and acronyms

Abbreviation	Description
<b>1D</b>	one dimensional
<b>2D</b>	two dimensional
<b>°C</b>	degrees Celsius
<b>AGV Falcon</b>	AGV Falcon Drilling SRL
<b>A.I.S.R.</b>	A.I.S. Resources Ltd

<b>Abbreviation</b>	<b>Description</b>
<b>B</b>	Boron
<b>BMR</b>	Borehole Magnetic Resonance
<b>C29 Metals</b>	C29 Metals Ltd
<b>Ca</b>	Calcium
<b>CAD</b>	Canadian Dollars
<b>CIM</b>	Canada Institute of Mining
<b>Cl</b>	Chlorine
<b>cm</b>	centimetre
<b>CMS</b>	constant mean stress
<b>COC</b>	Chain of Custody
<b>COG</b>	Cut-off Grade
<b>Core Laboratories</b>	Core Laboratories Australia Pty Ltd
<b>CP</b>	Competent Person
<b>CSV</b>	Comma Separated Values
<b>CV</b>	Coefficient of Variation
<b>DEM</b>	Digital Elevation Model
<b>DGFM</b>	Direccion General de Fabricaciones Militares
<b>DGPS</b>	Differential Global Positioning System
<b>DLE</b>	Direct Lithium Extraction
<b>EID</b>	Environmental Impact Declaration
<b>EIS</b>	Environmental Impact Statement
<b>Ekeko</b>	Ekeko S.A.
<b>Ekosolve</b>	Ekosolve™ Ltd
<b>FOB</b>	Free on Board
<b>g/cm<sup>3</sup></b>	grams per cubic centimetre
<b>GPS</b>	Global Positioning System
<b>GeoSystems</b>	GeoSystems Analysis Inc.
<b>ha</b>	hectare
<b>Hidrotec</b>	Hidrotec S.A.
<b>Hz</b>	hertz
<b>ICP</b>	Inductively Coupled Plasma
<b>ICP-OES</b>	Inductively Coupled Plasma-Optical Emission Spectroscopy
<b>ID</b>	Inverse Distance
<b>ISO</b>	International Organization for Standardization
<b>k</b>	Permeability
<b>K</b>	Potassium
<b>km</b>	kilometres

<b>Abbreviation</b>	<b>Description</b>
<b>km/h</b>	kilometres per hour
<b>km<sup>2</sup></b>	Square kilometres
<b>kt</b>	kilotonne
<b>Lacus</b>	Lacus Minerals S.A.
<b>LCE</b>	Lithium Carbonate Equivalent
<b>Li</b>	Lithium
<b>Li<sub>2</sub>CO<sub>3</sub></b>	lithium carbonate
<b>Li3E</b>	Li3 Energy, Inc.
<b>Liberty One</b>	Liberty One Lithium Corp.
<b>LOM</b>	Life of Mine
<b>Ma</b>	Million years (Megaannus)
<b>masl</b>	metres above sea level
<b>mbls</b>	metres below land surface
<b>md</b>	millidarcy
<b>mg</b>	Magnesium
<b>µs</b>	microsecond
<b>Millennial</b>	Millennial Lithium Corp.
<b>mg/L</b>	milligram per litre
<b>mm</b>	millimetre
<b>Montgomery</b>	Montgomery & Associates, Inc.
<b>MRE</b>	Mineral Resource Estimate
<b>MT</b>	Magneto-Telluric
<b>Ω·m</b>	Ohm metre
<b>OPEX</b>	operating expenditure
<b>PEA</b>	Preliminary Economic Assessment
<b>PepinNini</b>	PepinNini Minerals Limited
<b>PFS</b>	Pre-feasibility Study
<b>PM</b>	Particulate Matter
<b>POSGAR</b>	Posiciones Geodésicas Argentinas
<b>Power Minerals</b>	Power Minerals Limited
<b>ppm</b>	parts per million
<b>psi</b>	pound per square inch
<b>Pure Energy</b>	Pure Energy Minerals Ltd
<b>PVC</b>	Polyvinyl Chloride
<b>QA/QC</b>	Quality Assurance/Quality Control
<b>QC</b>	Quality Control
<b>QP</b>	Qualified Person

<b>Abbreviation</b>	<b>Description</b>
<b>Quantec</b>	Quantec Geoscience Argentina S.A.
<b>Recharge</b>	Recharge Resources Limited
<b>RL</b>	Relative Level
<b>RPEEE</b>	Reasonable Prospects of Eventual Economic Extraction
<b>S</b>	Sulfur
<b>SD</b>	Standard Deviation
<b>SGS Argentina</b>	SGS Argentina S.A.
<b>Southern Lithium</b>	Southern Lithium Corp.
<b>Spey</b>	Spey Resources Corp.
<b>SRG</b>	SouthernRock Geophysics S.A.
<b>t</b>	tonne
<b>TD</b>	Total Depth
<b>TDS</b>	Total Dissolved Solids
<b>TEM</b>	Transient Electromagnetic
<b>tpa</b>	tonnes per annum
<b>USD</b>	United States Dollars
<b>UTM</b>	Universal Transverse Mercator
<b>VDR</b>	Virtual Data Room
<b>the Vendor</b>	Ekeko S.A.
<b>VES</b>	Vertical Electronic Sounding
<b>Wealth Minerals</b>	Wealth Minerals Ltd.
<b>WGS</b>	World Geodetic System
<b>WSP</b>	WSP Australia Pty Limited

## 2.6 Language currency and measurement standards

Some technical reports and references have been written in Spanish and been translated to English. The currencies used are United States dollars (USD) and Canadian dollars (CAD). The measurements used are the metric system.

## 2.7 Statement for brine mineral prospects and related terms

Brine Mineral Resource and Reserve estimates are not “solid mineral deposits” as defined under the CIM 2003, 2010, and 2012 standards. However, there are sufficient similarities to mineral deposits that the guidelines published by the CIM are followed for this Technical Report. Brine is a fluid and hosted in an aquifer and thus has the ability to move and mix with adjacent fluids once extraction starts using production wells as a mining method. Mineral Resource estimation of a brine is based on knowledge of the geometry of the aquifer, and the variation in drainable porosity and brine grade within the aquifer. In order to assess the potential reserve, further information on the permeability and flow regime in the aquifer, and its surroundings are necessary in order to predict how the resource will change over the LOM.

The CIM standards do not provide guidance on how to treat aquifers with gas or air pressure in them, nor do they comment on how to manage brine release calculations, which would be invalid under a high-pressure gas scenario. The

Qualified Persons believe that BMR and core porosity may provide a more accurate assessment of the transmissivity of the brines contained within the aquifers.

### 3 Reliance on other experts

The Qualified Persons have followed standard professional procedures in preparing the contents of this Technical Report. Information and data used in the preparation of this Technical Report have been verified, and the Qualified Persons have no reason to believe information has been withheld that would affect the conclusions made herein. The Qualified Persons' opinion contained herein is based on information provided to the qualified Persons by Recharge throughout the course of the investigations. The Qualified Persons have taken reasonable measures to confirm information provided by others and take responsibility for the information.

The Qualified Persons used their experience to determine if the information from previous reports was suitable for inclusion in this Technical Report, and adjusted information that required amending. The Qualified Persons do not disclaim any responsibility with respect to the inclusion of the information from the previous reports.

The Qualified Persons relied on Recharge for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from the Project. The Qualified Persons have not performed an independent verification of land title and tenure as summarised in Item 4 of this Technical Report. The Qualified Persons did not verify the legality of any underlying agreement(s) that may exist concerning the permits or other agreement(s) between third parties but have relied on information provided by Recharge, as of 24 July 2023 for land title issues.

The following have been relied on directly by the Qualified Persons for preparation of this Technical Report:

- Information provided by Recharge.
- A site inspection conducted by the Qualified Person for Mineral Resources listed in Table 2.1 during September 2022.
- Nigel Unger, a geophysicist employed by Quantec provided the TEM survey, and initial interpretation. The report provided by Quantec is dated 26 January 2018. Interpretation forming part of this work was relied on for Item 9 (Exploration).
- Jeremy Barrett, General Manager/Geophysicist, employed by SRG provided the MT survey results (completed 23 June 2023). The report provided by SRG is dated 26 June 2023. Interpretation forming part of this work was relied on for Item 9 (Exploration).
- David Carabanti, a geologist employed by A.I.S.R. in Salta, Argentina arranged for sampling on site, and for delivery of the samples to SGS Argentina. David Carabanti, and Anabel Molas (a geologist employed by A.I.S.R. in Salta, Argentina) were on site with Phillip Thomas, a Senior Consulting Geologist employed by Panopus in Singapore during drilling and packer testing in November 2022, during the exploration drilling program for exploration well PCT-22-01. Interpretation forming part of this work was relied on for Item 10 (Drilling).
- Carlos Enrique Ganam, a registered Argentine geologist, prepared and signed the Environmental Impact Report (Ganam 2021). This report was originally dated 17 May 2017, and was subsequently updated on 5 June 2021, and 11 August 2022. This work was relied upon for Item 24 (Other Relevant Data and Information).
- Discussions with Recharge personnel.
- Additional information from public domain sources.

# 4 Property description and location

## 4.1 Location

The Pocitos I concession covers approximately 800 hectares (ha), or 8 square kilometres (km<sup>2</sup>), being approximately 2.97 km long, and 2.7 km wide.

The Pocitos II concession covers approximately 532 ha, or 5.32 km<sup>2</sup>, being approximately 1.97 km long, and 2.7 km wide.

Figure 4.1 shows the location of the Project.

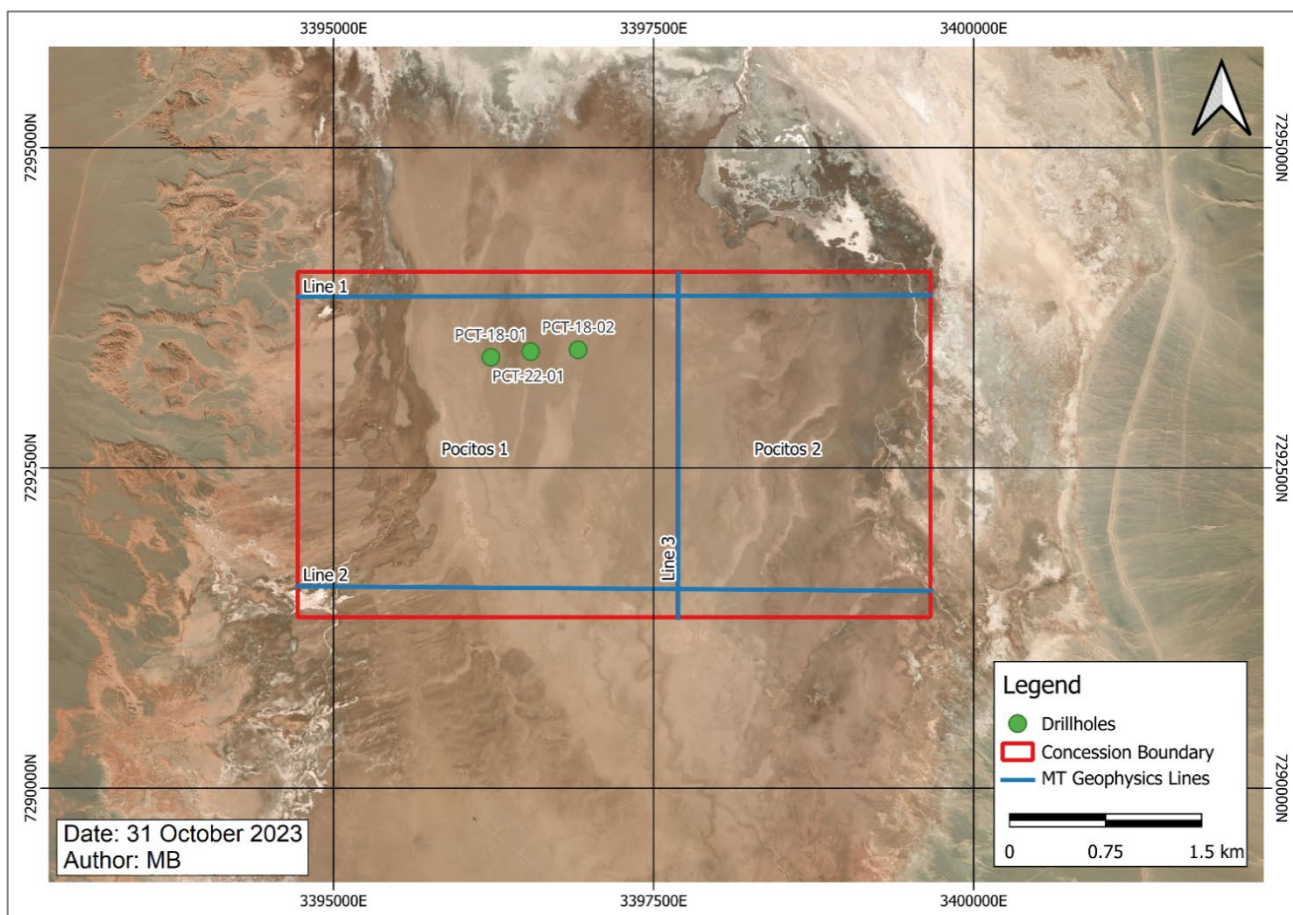


Figure 4.1 Pocitos I and II concessions and MT lines (Posgar 2007, Argentina 3)

The Project is a lithium brine project located on the Pocitos Salar, in the Los Andes Department of the Salta Province, Argentina, and is located approximately 100 km west of the township of San Antonio de los Cobres, and 270 km west of the capital city of Salta. The Project sits at approximately 3,660 masl.

The Pocitos I concession is a License for Exploration of lithium, and borates (Claim Number Expediente No. 19457-2008). Concession boundary co-ordinates are presented in Table 4.1 in the POSGAR 2007 Argentina 3 UTM system.

Table 4.1 Pocitos I concession boundary co-ordinates (POSGAR 2007 Argentina 3)

Corner	Easting (X)	Northing (Y)
1	3,394,720.55	7,294,029.59
2	3,397,688.75	7,294,029.59
3	3,397,688.75	7,291,334.36
4	3,394,720.55	7,291,334.36

The Pocitos II concession is a License for Exploration of lithium, and borates (Claim Number Expediente No. 19458-2008). Concession boundary co-ordinates are presented in Table 4.2 in the POSGAR 2007 Argentina 3 UTM system.

Table 4.2 Pocitos II concession boundary co-ordinates (POSGAR 2007 Argentina 3)

Corner	Easting (X)	Northing (Y)
1	3,397,688.75	7,294,029.59
2	3,399,662.90	7,294,029.59
3	3,399,662.90	7,291,334.36
4	3,397,688.75	7,291,334.36

The combined Project area covers approximately 1,332 ha, or 13.32 km<sup>2</sup>.

## 4.2 Mineral title and land ownership

### 4.2.1 Pocitos I

Prior to 30 June 2023, Spey provided an option to Recharge to acquire the Pocitos I project by making a payment of USD\$1.120 million (approximately CAD\$1.533 million). Both Spey and Recharge have contractual obligations to keep the Pocitos I project in good standing, including rehabilitation, and/or other requirements. Recharge has paid the required amounts to Spey, and Spey has confirmed that the required money and shares have been paid.

Argentine mining law provides for the granting of two types of mining rights i.e., exploration permits (“cateos”), which are limited in duration and allow for the exploration of a mineral property, and mining permits (“minas”), which allow for the exploitation of the minerals in the subject property. The designations of the permits in respect of the Project are mining permits. Mining permits are unlimited in duration and remain the holder’s property as long as the holder meets their obligations under the Argentine National Mining Code, including biennial canon payments, and minimum investment commitments.

The option agreement with the Vendor, and the sub-optioners expired on 30 June 2023. Recharge has advised that it has provided notice to Spey that it wishes to exercise its option, and Spey advises that notice has been provided to A.I.S.R. A.I.S.R. was unable to exercise the option by 30 June 2023

In August 2023, Recharge entered into a Purchase Agreement with the Vendor to acquire a 100% interest in the Pocitos I project for an agreed price of USD\$1.2 million (approximately CAD\$1.64 million).

### 4.2.2 Pocitos II

In February 2023, Recharge accepted an option from Spey to acquire the concession identified as File No. 19458, Pocitos II. The option agreement with the Vendor, and the sub-optioners expired on 30 June 2023.

On 12 December 2023, Recharge entered into a Purchase Agreement with the Vendor to acquire a 100% interest in the Pocitos II project for an agreed price of USD\$1.04 million (approximately CAD\$1.4 million).



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## 4.3 Surface rights

The surface rights belong to the concession holder, and activities on the concession are subject to permission being granted by the Mining Court of Salta.

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## 4.4 Agreements and encumbrances

An option agreement (the Agreement) for Pocitos I between Spey, and Recharge was signed on 22 March 2022.

Under the terms of the Agreement, Recharge could exercise the option, and earn an 80% undivided interest in the Pocitos I project, by paying Spey the sum of USD\$850,000 in cash payments, and by issuing USD\$900,000 in common shares over a 12-month period from the date of exchange approval of the Agreement, on the following basis:

- USD\$250,000 in exploration expenditure must be incurred over the initial 12-month period.
- An initial cash payment of USD\$350,000, and common share issuance having a value of USD\$400,000 are to be made within three business days.
- A further payment of USD\$500,000 in cash, and common share issuance having a value of US\$500,000 are to be made 12 months from the date of the first cash payment, and share issuances.

At s3.2 of the option agreement between Recharge, and Spey it states that the Optionee (Issuer) may exercise the option and earn an additional 20% undivided interest in the Pocitos I project for a total of 100% interest, subject only to the underlying royalty by paying to the Optionor (Spey) US\$6 million by the fifth anniversary of this agreement.

Recharge had a USD\$250,000 (approximately CAD\$312,500 in 2021) exploration expenditure commitment to explore the Pocitos I during the option. The exploration commitment work was completed and is documented in this Technical Report. To date, Recharge has expended more than USD\$600,000 on exploration since the commencement of the option agreement. This has been confirmed by the Qualified Person.

On 30 June 2023, all options for the Pocitos I project expired. A.I.S.R. failed to exercise their option and returned money to Spey who returned money to Recharge.

An option agreement was for Pocitos II between the Vendor and Recharge was signed on 12 December 2023.

Under the terms of the Agreement, Recharge could exercise the option, and earn an 100% undivided interest in the Pocitos II project, by paying the Option Payment Amount of USD\$25,000 (approximately CAD\$33,685), plus the income tax applicable to that transaction payable to the Vendor financial agent as advised. This payment is considered as mandatory and not refundable.

Payment details to acquire the Pocitos 2 at US\$1,450 per hectare or offer accepted by the Vendor which is USD\$771,400 to be paid when instructed by the Vendor. Income tax will be USD\$269,990, making a total consideration of USD\$1,041,390 (approximately CAD\$1,405,876) and will be paid direct to Argentinian tax authorities not to the Vendor as additional income.

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## 4.5 Mining royalties and taxes

The royalties imposed on lithium producers by the province of Salta and the federal government are 4.5% of the Free on Board (FOB) export value of the lithium sold. From a historical perspective, Law No. 27,541 (Economic Emergency Law), which was adopted by the National Congress in 2019 enabled the federal government to impose export duties on mining activities until 31 December 2021. These export duties could not exceed 8% of the dutiable value of the official FOB price.

Most provinces (including Salta) have their own Mining Procedural Codes, which generally follow the standards and guidelines of the national Mining Code. The provincial Mining Procedural Codes include the following elements:

- Relevant procedure for requests for the granting of mineral rights.
  - Available mechanisms to challenge decisions of mining enforcement authorities.
- 

## 4.6 Environmental liabilities

All persons or entities engaged in prospecting, exploration, and exploitation activities are responsible for any environmental damage that may occur due to non-compliance with rules of environmental protection that apply to mining activities, whether the damage is caused directly or by contractors or subcontractors (Section 248, Argentine Mining Code).

The titleholder (currently Spey) is jointly and severally liable for damage caused by persons or entities conducting surface activities with the consent of the titleholder. Environmental requirements are set out in the Environmental General Protection Act No. 25,675, which also applies to the mining industry, and Law No. 24,585, which has been incorporated into the Mining Code. Law No. 24,585 outlines the most important rules of environmental protection specific to mining activities, including the following:

- Individuals or entities seeking to conduct prospecting, exploration, or exploitation activities must first file an Environmental Impact Statement (EIS) with the enforcement authority.
- If the EIS meets the standards of Law No. 24,585 and its complementary rules, the enforcement authority issues an Environmental Impact Declaration (EID), that allows the applicant to conduct the proposed activities.
- The EID is issued for two years, with a set of conditions and requirements that the interested party must comply with to maintain the validity of the EID.
- Companies must submit updates of the EIS every two years from its initial approval.

The Federal Congress sets the minimum environmental standards, and the provincial and municipal governments can impose higher protections. Higher provincial and municipal requirements will apply if they are not manifestly incompatible with federal standards (this is the interjurisdictional co-ordination criteria established by the Federal Supreme Court) [Section 41, Constitution].

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## 4.7 Permitting

An application for an exploration concession application must include the following details:

- The geographic co-ordinates of the requested area;
- The purpose of the exploration;
- The name of the individual, or company requesting the concession;
- The name of the owner of the surface land;
- A description of the work to be conducted, including the estimated investment and equipment; and
- A sworn statement affirming that the request does not violate the Mining Code.

The exploration concession applicant must pay an exploration fee on filing of the application (approximately USD\$78/hectare [ha] or CAD\$105/ha). The fee is reimbursed (totally or partially) if the permit is denied or granted for a smaller area. The mining authority will automatically deny the request if the applicant does not submit evidence of payment of the fee.

To obtain an exploitation concession, the applicant must comply with the following requirements/steps:

- The discoverer must file a discovery claim with the mining enforcement authority. The discovery claim must be submitted together with a sample of the mineral.

- If the requested area is available, the mining authority must register the discovery claim. The registration request is published in the provincial Official Gazette.
  - Within 100 days following the registration of the discovery claim, the discoverer must perform and declare legal works over the area to prove the existence of the deposit.
  - The discoverer must file a petition requesting the measurement and demarcation of the units of exploitation corresponding to the area (pertenencia). The number of areas that an applicant can request varies, depending on the type of mineral deposit (lithium or secondary minerals such as borates) and on the type of applicant (for example, an entity or an individual).
  - The mining authority registers the measurement and grants a copy to the applicant as proof of title to the exploitation concession.
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## 4.8 Additional significant factors

When gas was discovered in PCT-22-01, a report on its composition was sent to the Mining Directorate of Salta.

The Qualified Persons have not identified any additional factors which may impact the continued property tenure of Recharge.

# 5 Accessibility, climate, local resources, infrastructure, and physiography

## 5.1 Access

Figure 5.1 shows the location of the Project, and the road access to the Project from Salta.

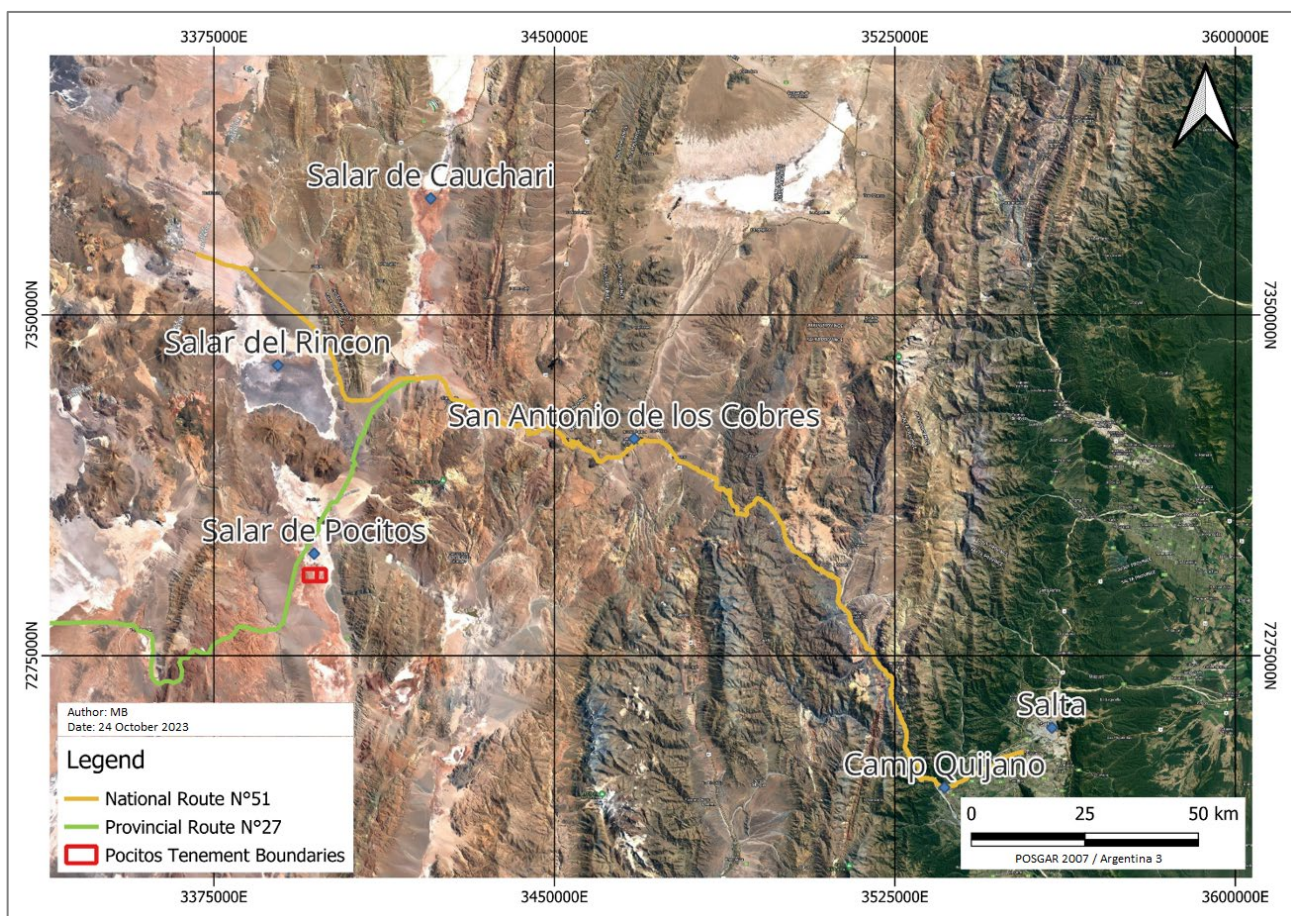


Figure 5.1 Project location and road access from Salta

The Project is located approximately 10 km southwest of the town of Pocitos, and can be accessed from Salta as follows:

- Taking the West Motorway, and travelling approximately 35 km along National Route N°51 to the town of Camp Quijano.
- From there continuing north approximately 129 km, going past the villages of Chorrillos, Ingeniero Mauri, Rosario de Lerma, and Santa Rosa de Tastil, before reaching the town of San Antonio de los Cobres.
- Continuing a further 61 km towards Cauchari Salar.
- Taking Provincial Route N° 27, and travelling approximately 50 km until reaching Pocitos Salar.
- The Project is located 10 km south of the township of Pocitos.

Figure 5.2 shows the condition of the Mining Road.



Figure 5.2 View of the Mining Road to exploration well PCT-22-01 (Pocitos I) [Panopus, 2023]

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## 5.2 Local resources

The nearest population centre is the village of Pocitos (estimated population 200), which has services such as lodging facilities (Hotel Planeta Puna), three restaurants, and a Community Centre. A rail line passes through Pocitos village. The town of Olacapato (fewer than 200 inhabitants) is located 60 km to the northeast. The largest populated community is the village of San Antonio de Los Cobres (population 5,500), which is located 120 km east-northeast of the Project. The nearest large city is Salta (population 719,000), which is located approximately 240 km east-southeast of the Project.

Resources in the local area are basic, with most supplies being brought from Salta, or San Antonio de Los Cobres.

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## 5.3 Site infrastructure

There is a major gas line near Pocitos Salar, that runs to Tolar Grande on the eastern side of the salar. Roads are unmaintained dirt, but generally in good condition due to low rainfall during the winter months, and are accessible year round. The sealed highway finishes at San Antonio de Los Cobres.

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## 5.4 Climate

The Pocitos Salar is located in the Atacama Plateau (Puna de Atacama), a high-altitude cold desert climate characterised by a cool dry winter, and a hot wet summer, with a large diurnal temperature variation. Extreme summer temperatures can exceed 40°C during the day, and fall close to 0°C at night. Winter can be harsh, with extreme temperatures of up to 30°C during the day, and down to -10°C at night. Mean precipitation is between 100 and 200 mm per year.

Figure 5.3 shows mean monthly weather conditions for Pocitos (located 10 km south of the Pocitos weather station) [Panopus, 2023].

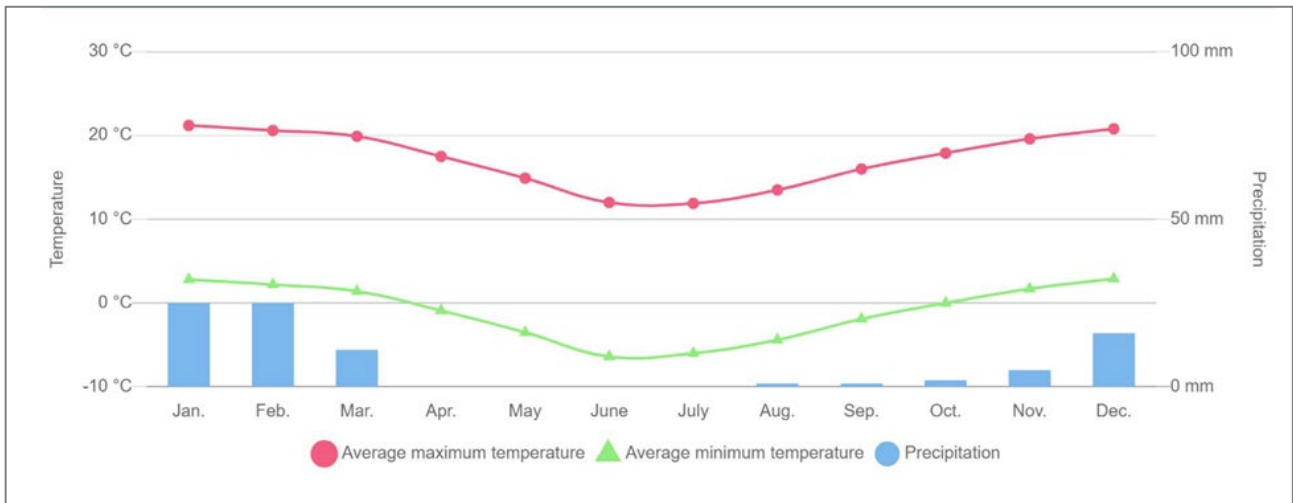


Figure 5.3 Mean monthly weather conditions for Pocitos Salar (Panopus, 2023)

Figure 5.4 shows historical Pocitos Salar rainfall between June 2010, and June 2023.

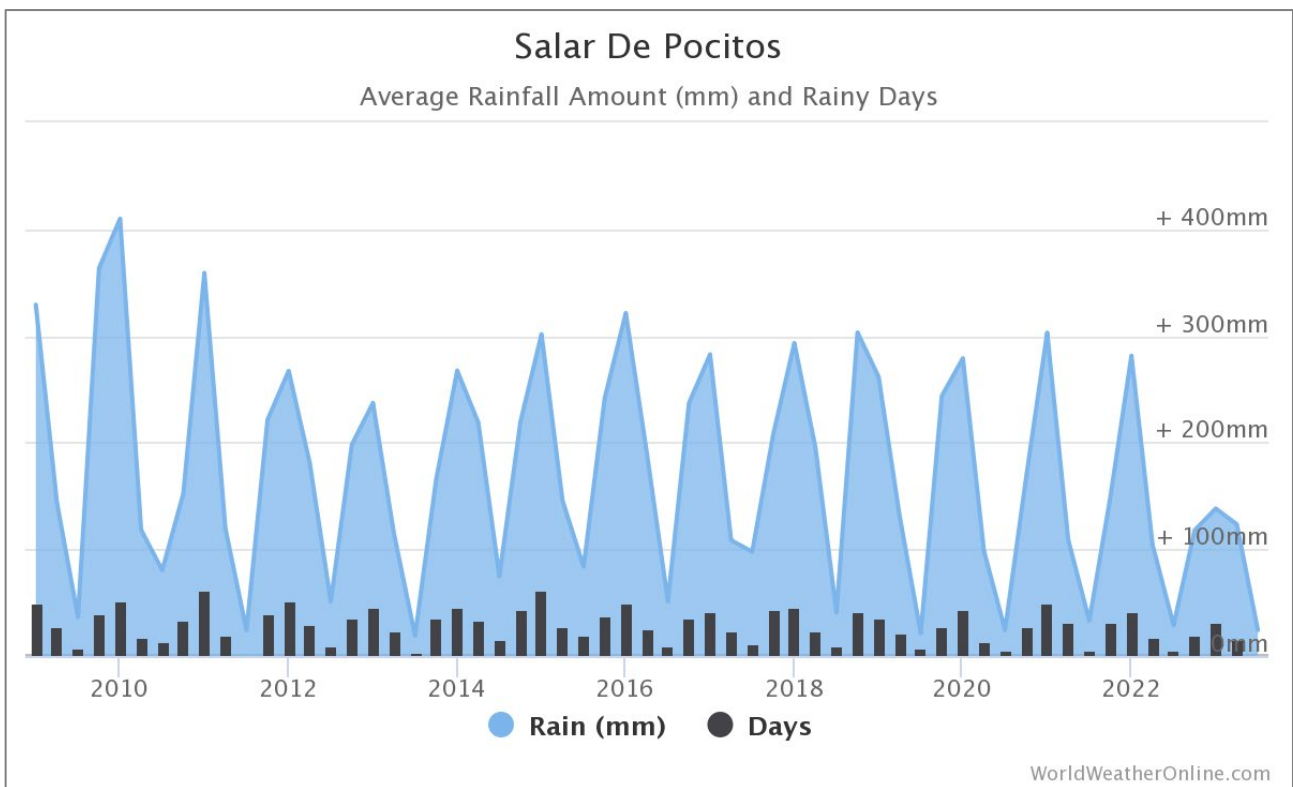


Figure 5.4 Historical Pocitos Salar rainfall June 2010 to June 2023 (Panopus, 2023)

According to the Köppen classification system of five main climate types, the climate is continental, arid Andean, with frequent frosts. The air is pure, and in some areas the lack of oxygen due to altitude is noticeable. Dust contamination observed is caused by strong winds.

Strong winds are common at the Project, as is common in many deserts, and the Puna regions. Wind speeds during winter commonly range from 15 to 40 kilometres per hour (km/h). Velocity is lower during the summer months, and much lower at night than during daylight hours.

Figure 5.5 shows Pocitos Salar sunshine hours per day, and quarter between June 2010, and June 2023.

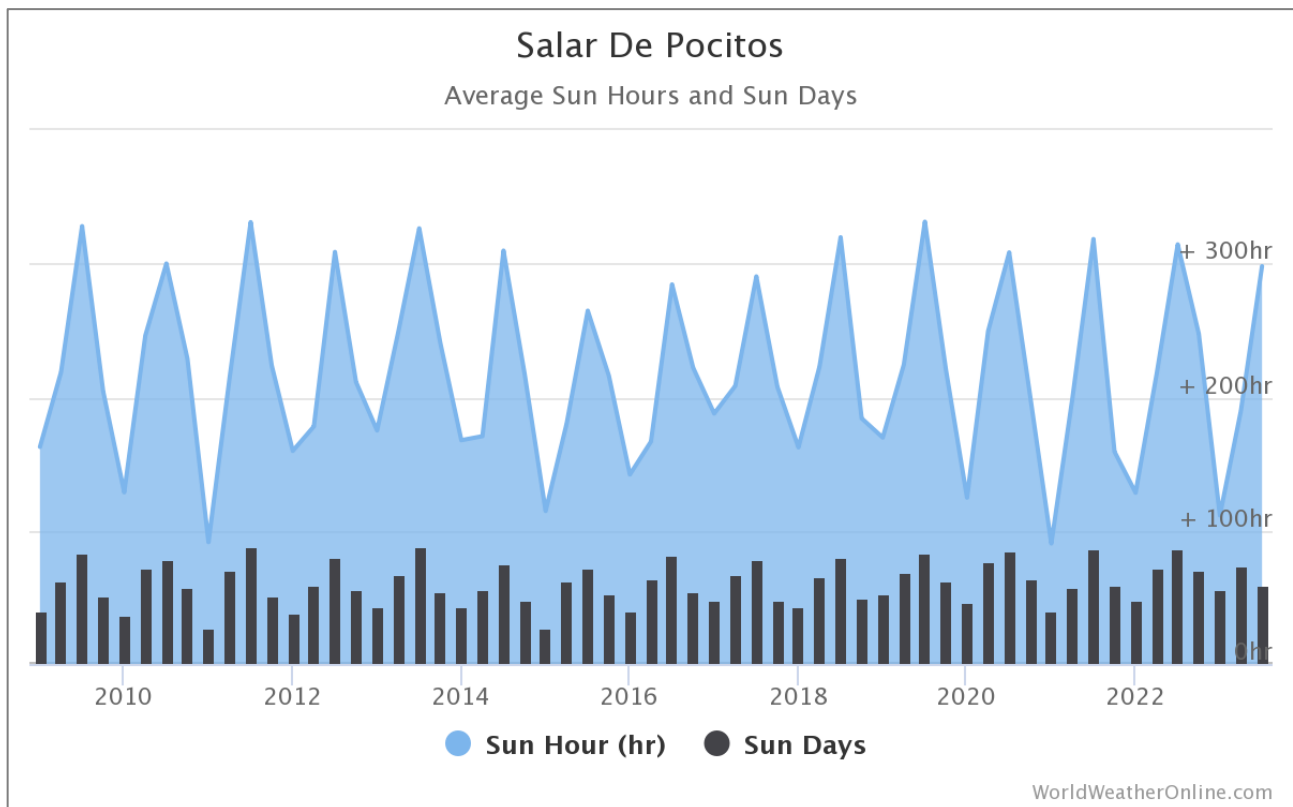


Figure 5.5 Sunshine hours per quarter and day (Panopus, 2023)

## 5.5 Physiography

The Project is located in the Puna (Altiplano) region of western Salta province, at an altitude of approximately 3,660 masl. The region is dominated by ancient volcanos. The Puna Plateau is an uplifted crustal block of the old crystalline basement raised by the Tertiary orogeny, and includes evaporite basins or salars such as Pocitos that may contain elevated lithium concentrations. The Pocitos Salar is a tectonic depression, delineated to the north by stratovolcanoes with andesitic composition (e.g., the Pocitos, Del Medio, and Tull Tull volcanoes). To the east, the Pocitos Salar is bordered by extensive alluvial fans, and alluvial deposits that comprise the western flank of the volcanic complex of the Quevar, Mamaturi, and Azufrero volcanoes. To the west, the Pocitos Salar is bordered by granitic intrusions that form the Macon Hills (Serranía Macon). The southern, and southeastern extremes of the Pocitos Salar comprise Ordovician sediments, which are unconformably overlain by Miocene sediments of the Pastos Grandes Group (Garcia, R.F., et al., 2006), along the Cordón de Pozuelos.

Figure 5.6 shows a photo of the Pocitos Salar, and surrounding hills. Volcanic complexes dominate the relief to the north.



Figure 5.6 Rincon volcano, the road across the Pocitos Salar, and a disused railway line (Panopus, 2023)



Figure 5.7 Pocitos Salar from the west, showing the Tul Tul (far left), Medio, and Pocitos volcanic cones (Panopus, 2023)

Figure 5.8 shows a Digital Elevation Model (DEM) of the Calama-Olacapato-El Toro Lineament, with mapped volcanoes discriminated by age.



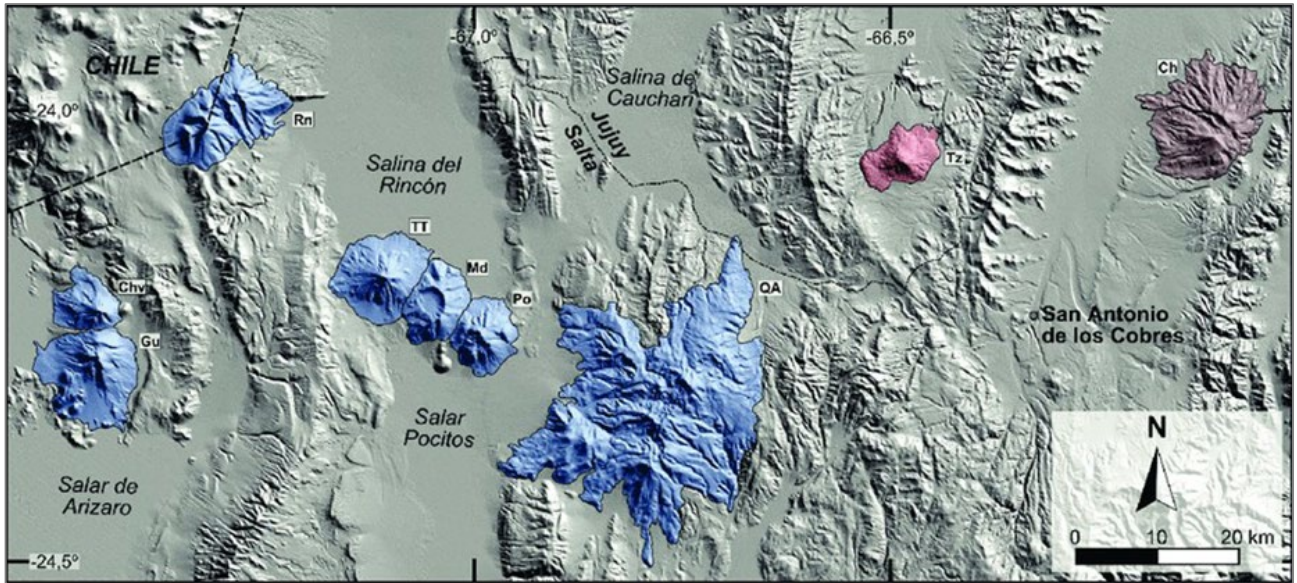


Figure 5.8 DEM of the Calama-Olacapato-El Toro Lineament with mapped volcanoes discriminated by age (Chimpa (Ch), Rincón (Rn), Tuzgle (Tz), Tul-Tul (TT), Chivinar (Chv), Del Medio (Md), and Pocitos (Po) [Panopus, 2023]

# 6 History

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## 6.1 Prior ownership

Ekeko (the Vendor) acquired the Pocitos I, and II concessions in 2008, but conducted no exploration until 2016, when they collected surface brine samples. The Vendor entered into an option agreement with A.I.S.R. on 10 November 2017, which was extended by 6 months on 1 May 2018.

A.I.S.R. entered into an Option Agreement with Spey on 3 June 2021, granting Spey an Option to acquire 100% interest in the Pocitos I and Pocitos II concessions.

In March 2022, Spey entered an option agreement with Recharge, granting Recharge the option to acquire up to 100% undivided interest in Pocitos I.

The option agreement with the Vendor, and the sub-optioners expired on 30 June 2023. Recharge has advised that it has provided notice to Spey that it wishes to exercise its option, and Spey advised that notice has been provided to A.I.S.R. A.I.S.R. was unable to exercise the option by 30 June 2023.

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## 6.2 Previous exploration and development

A.I.S.R. conducted deep trench surface sampling that included seven trenches on Pocitos I and five trenches on Pocitos II, commissioned Quantec conduct a TEM survey that included three TEM survey profiles, oriented east-west and north-south, through the middle of the Project concessions, and drilled two diamond core exploration drill holes on the Pocitos I concession.

Drill hole sample results indicated high magnesium values in the brine (1:20 Li/Mg). At the time there was no available technology to process the lithium in the brines at the magnesium grades encountered and A.I.S.R. made the decision to abandon the Project and relinquish the option.

Figure 6.1 shows the locations of the surface trenches, drill holes, TEM sounding locations and TEM profiles.

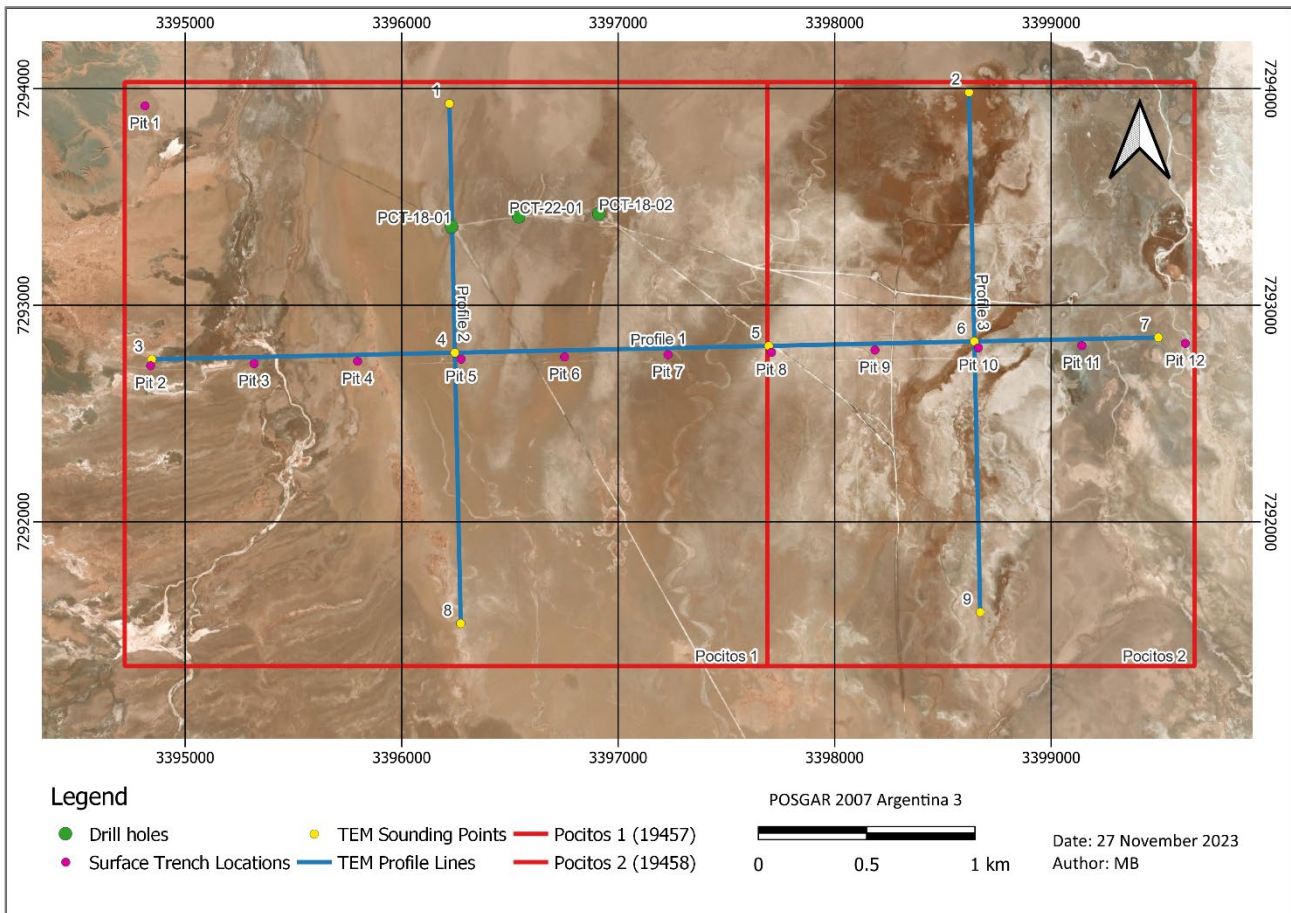


Figure 6.1 Exploration locations of surface trenches, drill holes, TEM sounding locations, and TEM profile lines

### 6.2.1 Surface samples

Samples were collected using a bailer that had been rinsed in the brine. Pit (trench) 1 is located in the northwest of the Pocitos I concession, the remaining Pits (trenches) were planned along WGS 84/UTM zone 19S northing of 7,290,820N. When converted to POSGAR 2007 Argentina 3, the 11 pits (trenches) start at Pit 2 (3,394,840E, 7,292,720N) and end at Pit 12 (3,399,619E, 7,292,824N). The sample collected was transferred to a rinsed and sealed plastic bottle and kept in a locked plastic container. Samples were then taken to the Alex Stewart International laboratory in Jujuy, Argentina for analysis. Sample results are presented in Table 6.1.

Figure 6.2 shows Pit (Trench) 1 with brine sitting approximately 1 mbsl.

Table 6.1 Results from surface trench samples (depth 4.0-4.5 m)

Concession	Pit No	Li (ppm)	Ca (ppm)	Mg (ppm)	B (ppm)	Na (ppm)	K (ppm)	Sr (ppm)	Mg:Li
Pocitos I	1	22	692	313	31	55,784	998	13.94	14.23
	2	No brine							
	3	65	307	322	209	121,722	3,201	5.58	4.95
	4	No brine							
	5	45	267	349	53	119,763	1,623	5.90	7.76
	6	No brine							
	7	72	494	1,131	141	116,172	2,467	9.79	15.71
Pocitos II	8	76	484	1,170	131	118,955	2,646	10.06	15.39
	9	78	572	1,207	132	116,594	2,469	10.08	15.47

Concession	Pit No	Li (ppm)	Ca (ppm)	Mg (ppm)	B (ppm)	Na (ppm)	K (ppm)	Sr (ppm)	Mg:Li
	10	179	310	482	316	116,856	6,375	10.01	2.69
	11	80	179	538	1251	116,746	2,558	10.03	6.73
	12	72	497	1,183	168	118,450	2,514	9.56	16.43



Figure 6.2 Pit (Trench) 1 with brine approximately 1 m from the surface (Panopus, 2023)

### 6.2.2 Diamond core exploration wells

Two HQ diamond core exploration wells have been drilled. PCT-18-01 by Hidrotec to a total depth of 355 m, and PCT-18-02 by AGV Falcon to a depth of 407.5 m.

Table 6.2 presents the co-ordinates, and total depth of the completed diamond core exploration wells.

Table 6.2 Co-ordinates and total depth of diamond core exploration wells

DHID	Original DHID	Total Depth (m)	WGS 84/UTM Zone 19S <sup>1</sup>		POSGAR 2007/ARGENTINA 3 <sup>2</sup>	
			Easting	Northing	Easting	Northing
PCT-18-01	DDHPO1	355	700,297	7,291,433	3,396,230.228	7,293,363.603
PCT-18-02	DDHPO2	407.5	700,979	7,291,477	3,396,911.071	7,293,422.48

**Notes:** <sup>1</sup> WGS 84 UTM co-ordinates from a hand-held portable Global Positioning System (GPS).

<sup>2</sup> POSGAR 2007 co-ordinates converted from WGS co-ordinate system.

The assay results from samples collected from PCT-18-01, and PCT-18-02 are presented in Table 6.3, and Table 6.4 respectively.

Table 6.3 Sample results for PCT-18-01

Sample No	From (m)	To (m)	Density	Li (ppm)	Ca (ppm)	Mg (ppm)	B (ppm)	Na (ppm)	K (ppm)	Sr (ppm)	Mg:Li Ratio
PCT-18-01-01	275	277	1.211	66	788	1,111	89	116,571	2,375	18.17	16.8:1
PCT-18-01-02	290	292		40	1,197	22	740	116,957	1,816	27.37	0.55:1
PCT-18-01-03	314	316		59	1,010	1,237	47	113,729	2,139	23.41	21.0:1
PCT-18-01-04	317	319		66	660	1,006	105	117,887	2,475	16.02	15.2:1
PCT-18-01-05	338	340		76	588	1,100	131	116,127	2,630	13.05	14.5:1

Table 6.4 Sample results for PCT-18-02

Sample No	From (m)	To (m)	Li (ppm)	Ca (ppm)	Mg (ppm)	B (ppm)	Na (ppm)	K (ppm)	Sr (ppm)	Mg:Li Ratio
PCT-18-02-01	297	299	39	1229	758	25	115,894	1,866	27.12	19.4:1
PCT-18-02-02	357	359	74	1,140	1,547	62	106,605	1,600	23.62	20.9
PCT-18-02-03	348	350	112	1,133	2,144	88	103,995	1,568	20.88	19.1:1
PCT-18-02-04	369	371	126	1,067	2,521	111	94,408	1,392	19.23	20.0:1
PCT-18-02-05	402	404	95	601	1,447	123	116,064	2,468	12.88	15.23

PCT-18-01 encountered significant brine surge at approximately 355 m depth, with the pressure of the water coming up the triple tube halting drilling. Figure 6.3 shows the pressure encountered by the height of the water going through an 83 mm diameter HQ drill rod. At the time, the brine pressure was attributed to the water pressure in the aquifer, however after drilling exploration well PCT-22-01, it was realised that gas pressure from depth may have contributed to the flow rate that was evidenced.



Figure 6.3 Brine surge from exploration well PCT-18-01 at approximately 355 m depth (Panopus, 2023)

Approximately one week later at the PCT-18-02 exploration well site, a similar significant brine surge was encountered, and also continued for approximately six hours, until the drill string could be capped to prevent the spray of water in the windy conditions encountered (Figure 6.4). Gamma was run in PCT-18-01, however the tool broke down at 215 m, so the interval recorded was between 215 and 337 m. Given the substantial brine flow at 337, and 407 m respectively in both PCT-18-01, and PCT-18-02, no detailed gamma logging and interpretation was undertaken.



Figure 6.4 Brine surge from exploration well PCT-18-01 at approximately 355 m depth (Panopus, 2023)

The Pocitos Salar was subjected to substantial rainfalls during December to March 2018, which impacted surface brine concentration. The highest lithium pit (trench) value obtained from sampling was 179 ppm Li in Pit (trench) 10 on the eastern most edge of the Pocitos II concession. No evaporation studies were undertaken, however anecdotal evidence suggests that 3-5 cm of water had evaporated over the 30-day drilling campaign duration.

Core from both exploration wells near where the surge occurred were sent to GeoSystems Analysis Inc. (GeoSystems) in Tucson Arizona for bulk density, and porosity analysis. Dr. Michael Yao supervised the analysis.

The results of this analysis are shown in Table 6.5, and Figure 6.5.

Table 6.5 Bulk density and porosity for PCT-18-01, and PCT-18-02 Core analysis results from GeoSystems Analysis, Inc. 20 samples of each core were taken for bulk density testing and porosity tests

	PCT-18-01 Core 1	PCT-18-01 Core 2
Post RBR Assumed Particle Density (g/cm <sup>3</sup> )	2.375	2.302
Bulk Density (g/cm <sup>3</sup> )	2.17	2.11
Core Diameter	HQ (63.5 mm)	HQ (63.5 mm)
Estimated Texture	Halite with minor cemented sediments	Halite with minor cemented sediments
Porosity (cm <sup>3</sup> /cm <sup>3</sup> )	0.085	0.082
Field Water Capacity (cm <sup>3</sup> /cm <sup>3</sup> )	0.07	0.036
Yield for 0-120 mbar (cm <sup>3</sup> /cm <sup>3</sup> )	0.011	0.022
Specific Yield (cm <sup>3</sup> /cm <sup>3</sup> )	0.015	0.047

Porosity values were very reasonable considering the particle size of the core. The specific yield was inconsistent and so the core has been sent away for retesting with the core from recent drilling (Table 6.5).

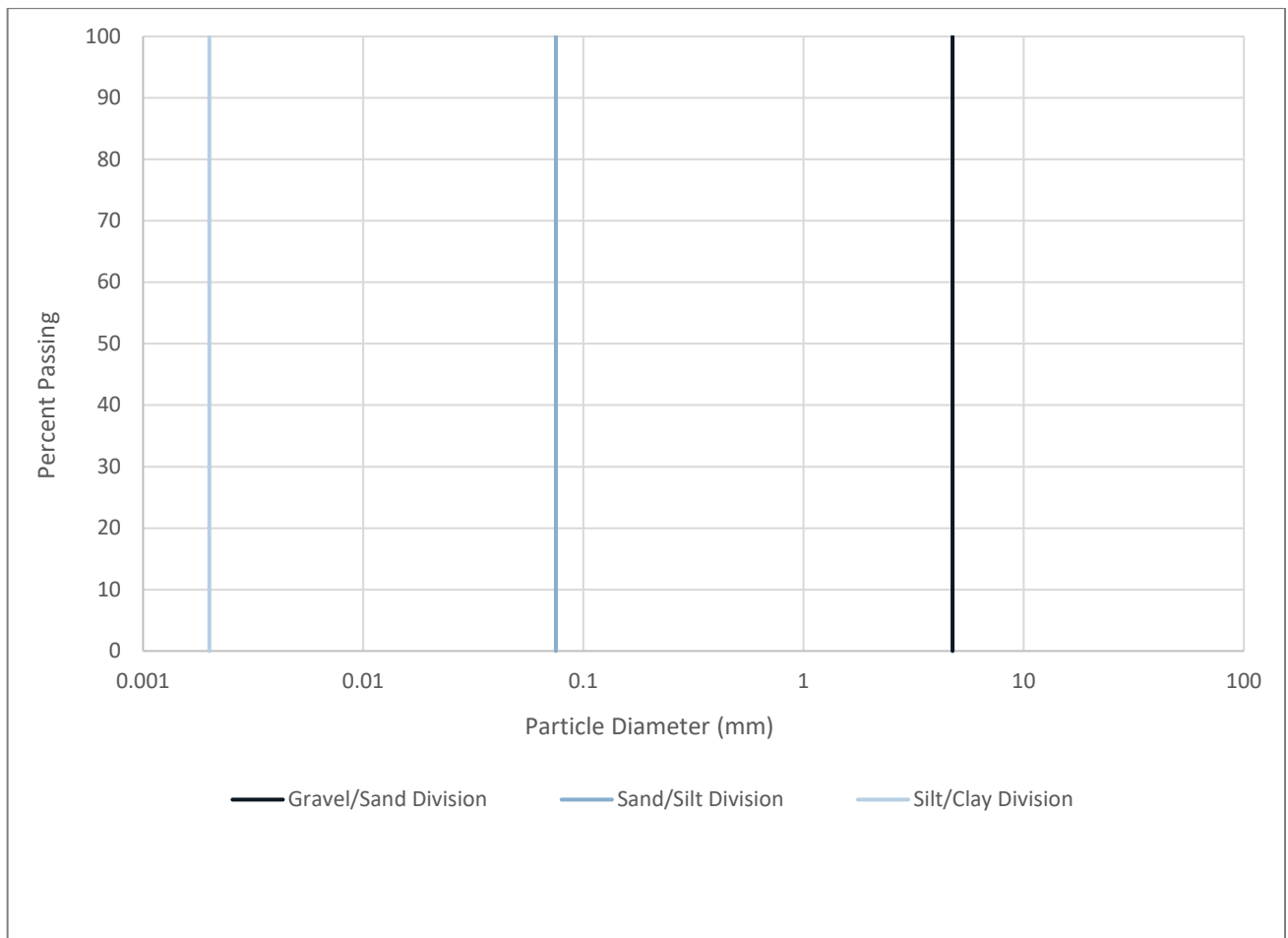


Figure 6.5 Soil particle size distribution taken with hydrometer



### 6.2.3 TEM survey

Quantec conducted a TEM survey for A.I.S.R. in 2018 that included three survey lines across Pocitos I, and II concessions (Figure 6.1), the sounding locations are presented in Table 6.6. The TEM data was processed and modelled using Interpex IX1Dv3.53 to create a one dimensional (1D) discrete-layer, resistivity to depth inversion model to depth of approximately 200 m. The 1D inversion profiles presented in Figure 6.6, Figure 6.7, and Figure 6.8.

The survey equipment specifications are provided below:

#### INSTRUMENTATION

- **Receiver:** Geonics Digital PROTEM – 20 channels
- **Transmitter:** Geonics EM-37 (2.8 kilowatt)
- **Antenna:** Geonics 3D-3 (200 m<sup>2</sup> effective coil area)

#### SURVEY PARAMETERS

- **Configuration:** TEM Sounding
- **Sounding Type:** Centre-loop
- **Transmit Loop:** 200 m x 200 m
- **Transmitted Frequencies:** 25 Hz & 2.5 Hz
- **Normalized Current:** 1 A
- **Transmit Turn-off Time:** 105 – 110  $\mu$ s

Table 6.6 TEM sounding co-ordinates in the original UTM WGS84 Zone 19S co-ordinates and converted POSGAR 2007 Argentina 3 co-ordinates

Point	UTM WGS 84 Zone 19S <sup>1</sup>		POSGAR 2007 Argentina 3 <sup>2</sup>	
	Easting	Northing	Easting	Northing
01	700,300	7,292,000	3,396,221.567	7,293,930.604
02	702,700	7,292,000	3,398,620.070	7,293,982.672
03	698,900	7,290,850	3,394,846.792	7,292,750.446
04	700,300	7,290,850	3,396,246.522	7,292,780.832
05	701,750	7,290,850	3,397,695.226	7,292,812.302
06	702,700	7,290,850	3,398,645.024	7,292,832.920
07	703,550	7,290,850	3,399,494.838	7,292,851.368
08	700,300	7,289,600	3,396,272.657	7,291,531.080
09	702,700	7,289,600	3,398,672.159	7,291,583.191

Notes: <sup>1</sup> WGS 84 UTM co-ordinates from a hand-held portable GPS.

<sup>2</sup> POSGAR 2007 co-ordinates converted from WGS.

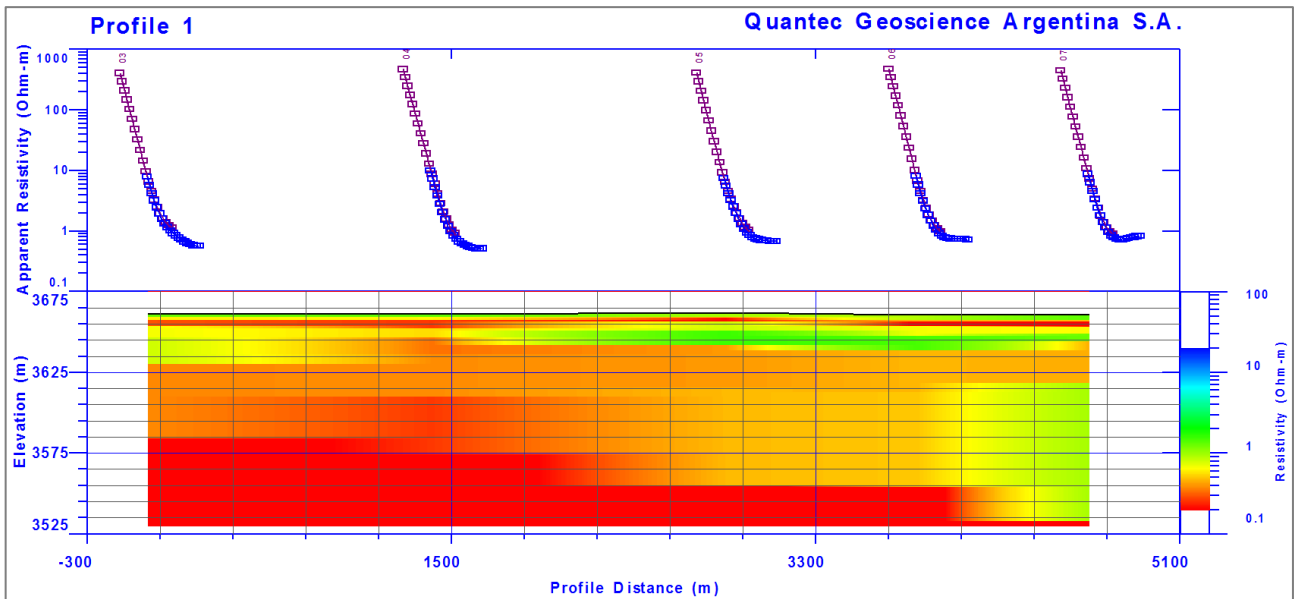


Figure 6.6 TEM survey Profile 1, orientated east-west across the Project (Unger, 2018)

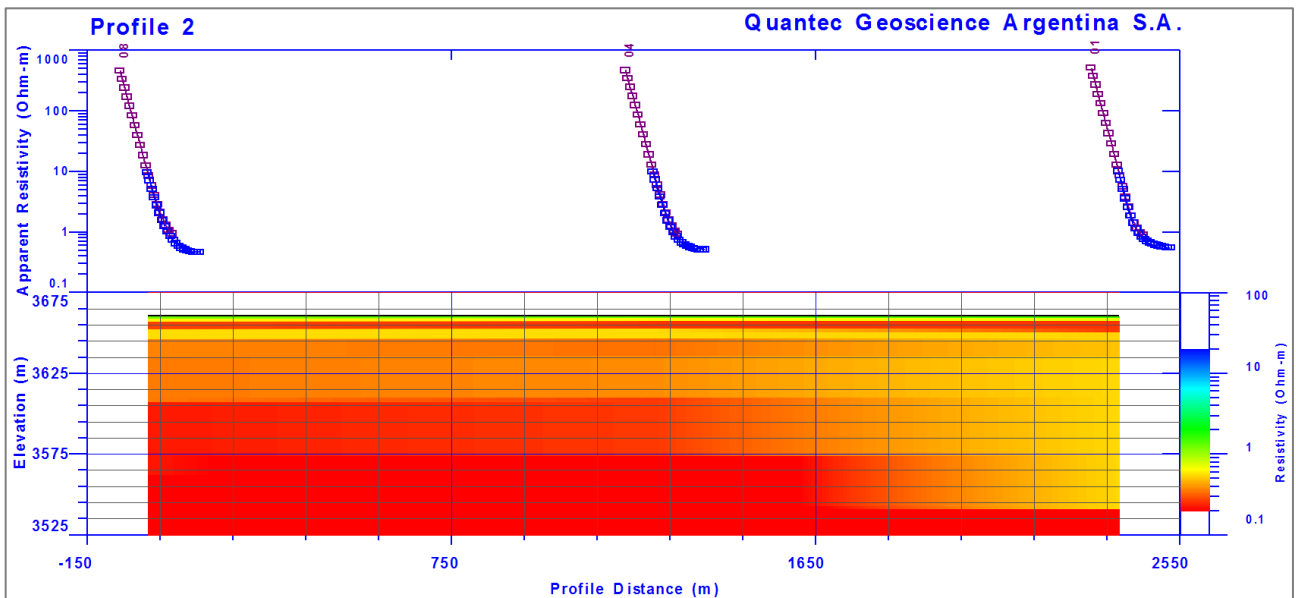


Figure 6.7 TEM survey Profile 2, orientated north-south in the Pocitos I concession (Unger, 2018)

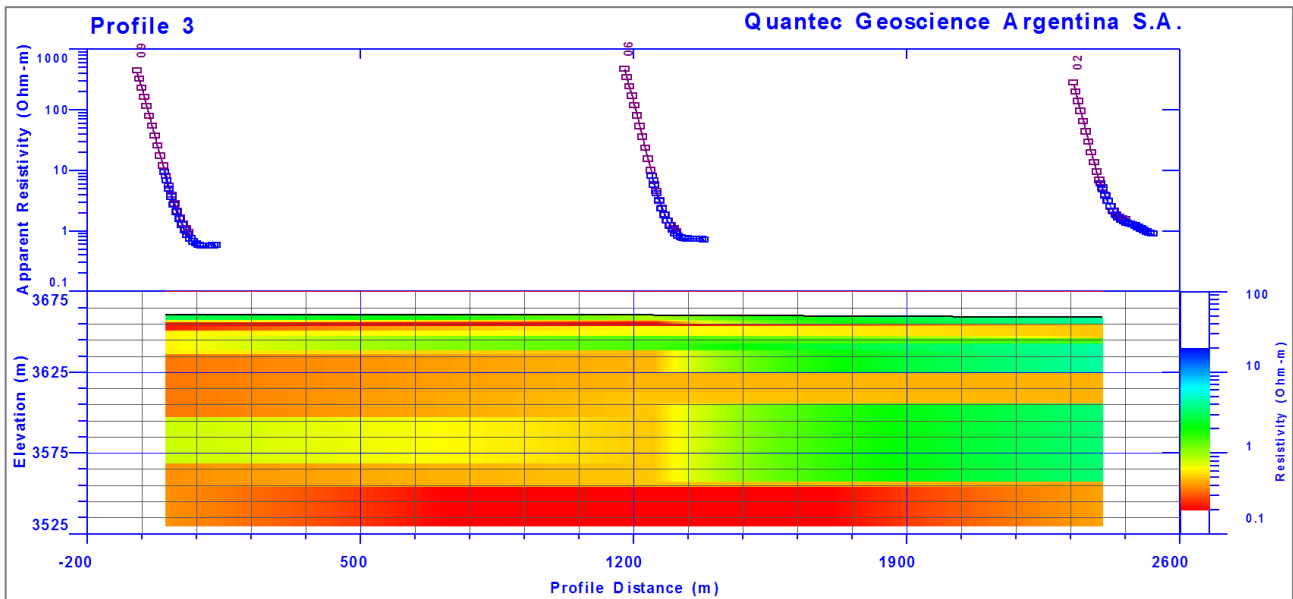


Figure 6.8 TEM survey Profile 3, orientated north-south in the Pocitos II concession (Unger 2018)

### 6.3 Historical Mineral Resource and Mineral Reserve estimates

There are no historical published Mineral Resource or Mineral Reserve statements.

### 6.4 Historical production

There has been no lithium production at the Project to date.

# 7 Geological setting and mineralisation

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## 7.1 Geological setting

The Pocitos Salar is located in the geological province of La Puna (Turner, 1979), and within the Puna Austral Geological Sub-province (Alonso et al., 1984). Characterising the geological province of La Puna is evaporite basins or salars, where concentrations of borates, sodium sulphate and lithium are deposited. Residing in one of these endorheic (internal drainage) basins is the Pocitos Salar.

The oldest rocks in the Project area outcrop to the east of the Pocitos Salar, forming the Cordón de Pozuelos, corresponding to the Coquena Formation (Ordovician age), and comprised primarily of sediments and metasediments with minor metaprocastics, and metavolcanics.

Outcrops to the west are comprised of sandstones and perlites of the Upper Pozuelos, and Sijes formations (Middle Miocene 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 salt flats in the central areas of the salars.

The Pocitos Salar is an endorheic basin, similar to several other salars in the region of La Puna. Two features are well defined in the basin. The first being a saline crust mainly comprising sodium chloride (mineral halite), occurring in the central part of the basin. The second being deposits of fine-grained materials around the edge of the saline crust, corresponding to lacustrine sediments bordering the former lake, and more recent heavy rains as occurred in 2018. These sediments predominately comprise silts and clays, with a saline coating (efflorescence). Small gypsum crystals are commonly observed scattered along the surface of the salar, to the south in particular, and in some areas, forming a crust of evaporitic minerals, and small accumulations of crystals outcropping in silt clay sediments. Clastic sediment deposits overlay basin fill sediments, forming coalescent alluvial fans. Alluvial fans divide the basin into two zones. The Project area is located predominantly on lacustrine sediment deposits on the western side of the salar.

Figure 7.1 shows a geological map of the area, descriptions of the geological units are presented in Table 7.1.

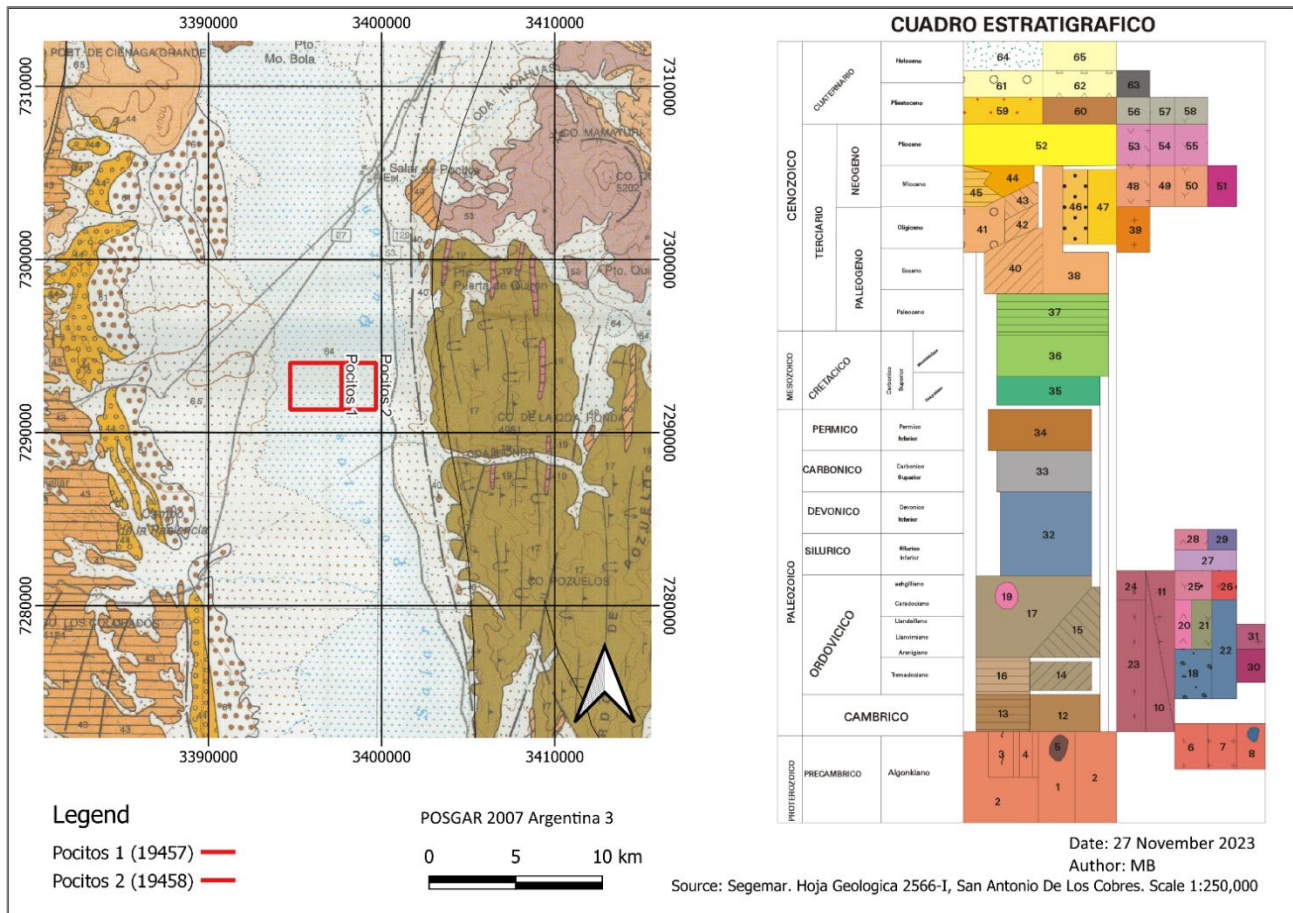


Figure 7.1 Geological map of the Pocitos Salar Segmar (2008)

Table 7.1 Geological units translated from Segmar (2008)

Number	Unit	Description
65	ALLUVIAL AND COLLUVIAL DEPOSITS	Rubble, sand, and clay; mudflats
64	EVAPORITE DEPOSITS	Halite, borates, carbonates, and sulphates
61	TERRACED DEPOSITS	Medium to thick conglomerates with intercalations of tuffaceous levels
53	RUMIBOLA FORMATION	Andesites and basalts. Locally includes rhyolites
50	TAJAMAR FORMATION	Tuffs and ignimbrites
44	SIJES FORMATION	Sandstones and pelites with intercalations of tuffs
43	POZUELOS FORMATION - UPPER MEMBER	Sandstones and pelites with intercalations of gypsum and halite
40	GESTE FORMATION	Fluvial and alluvial fan deposits. Medium to thick conglomerates
19	COQUENA FORMATION	Metapyroclastics and metavolcanics
17	COQUENA FORMATION	Metasediments and sediments

## 7.1.1 *Ordovician*

### 7.1.1.1 Coquena Formation

The Coquena Formation is a turbidite sedimentary deposit outcropping in the northwest Argentine Puna. The turbidite greywackes consist mainly of detritus of intermediate, and acidic magmatic rocks. The turbidites were deposited by northward directed paleocurrents in an at least 2,700 m thick submarine fan system. In the upper 2,000 m the fan system displays a marked fining upward trend from mid-fan channel environments to outer-fan depositional lobe associations, and basin plain pelites. Synsedimentary volcanism occurs only in the presumably oldest parts of the Coquena Formation (Bahlberg et al. 2008).

## 7.1.2 *Late Palaeocene-Early Oligocene*

### 7.1.2.1 Geste Formation

The Geste Formation is a fossil bearing formation reaching 1,500 m in thickness, comprised mainly of coarsening upward sandstones, conglomerates, and shales. The sedimentological features indicate a high-energy fluvial and alluvial fan environment, and a braided fluvial environment with minor flood plains (Caincio, 2016).

## 7.1.3 *Late Oligocene-Late Miocene*

### 7.1.3.1 Pozuelos Formation

The Pozuelos Formation is comprised of two distinct Members. The lower member is dominated by red coloured sandstone, and pelites, while the upper member is dominated by pinkish grey and yellow sandstones, and clays and pelites with intercalations of gypsum and halite (Filipovich et al. 2020).

### 7.1.3.2 Sijes Formation

The Sijes Formation can be divided into four Members, three of which are fine-grained siliciclastic, tuffaceous, and chemical-evaporitic, while the fourth is coarse grained siliciclastic in nature. There were significant borate pulses during deposition resulting in overlapping borate lenses. The Sijes Formation contains the largest known hydroboracite reserves in the world (Orti and Alonso, 2000).

## 7.1.4 *Miocene-Pliocene*

### 7.1.4.1 Tajamar Formation

The Tajamar Formation is one of two major dacitic ignimbrite deposits formed from eruption of the Cerro Aguas Calientes (Aguas Calientes Volcano), approximately 10.3 million years ago (Megaannus [Ma]). It is a strongly welded pumice-rich ignimbrite, that is pale pink, and ranges up to 570 m in thickness (Filipovich et al. 2020).

### 7.1.4.2 Rumibola Formation

The Rumibola Formation is an unconformity comprising a sequence of andesite flows, including the Azufre Andesite Member (Escuder-Viruet et al. 2022)

## 7.1.5 *Pleistocene-Holocene*

### 7.1.5.1 Evaporite deposits

Evaporite deposits occupy the central part of the Pocitos Salar, and are actively being deposited via evaporation. They are composed of chloride, sulphate, and borate minerals, interbedded with pelitic deposits. The Pocitos Salar has a characteristic crusty surface, with the development of polygonal surface structures up to 2-3 m in diameter, and up to 50 cm in thickness (Alonso, 1999).

### 7.1.5.2 Alluvial and colluvial deposits

Alluvial and colluvial deposits in the Project area consist of unconsolidated materials, occur widely, and have variable thicknesses that increase towards topographically lower areas. Alluvial fans form large sedimentary deposits, with poorly stratified layers of gravel and sand that grade to silt and evaporite towards the distal areas. The youngest alluvial fans in the salars are superimposed on older ones, and are actively being deposited. In the distal sectors they intercalate with each other, as they grow toward the lower parts of the basin floor (Filipovich et al. 2020).

## 7.2 Local and project geology

The Pocitos Salar is located south of Rincon Salar, and east of Arizaro Salar, Argentina. It has a north-south alignment, and is bound to the west by the volcanics of Cerro Macón O Icoman (approximately 5,350 masl), and to the east by Cerro de la Quebrada Honda (approximately 4,939 masl). The Project is located in the central area of the Pocitos Salar.

### 7.2.1 Lithology

The lithology model developed by WSP comprises two major components, these being the basement, and the sedimentary material containing the mineral enriched brine. The lithological facies were interpreted from drill core, and MT survey data.

Figure 7.2 shows the typical morphology of the Pocitos Salar in the Project area.

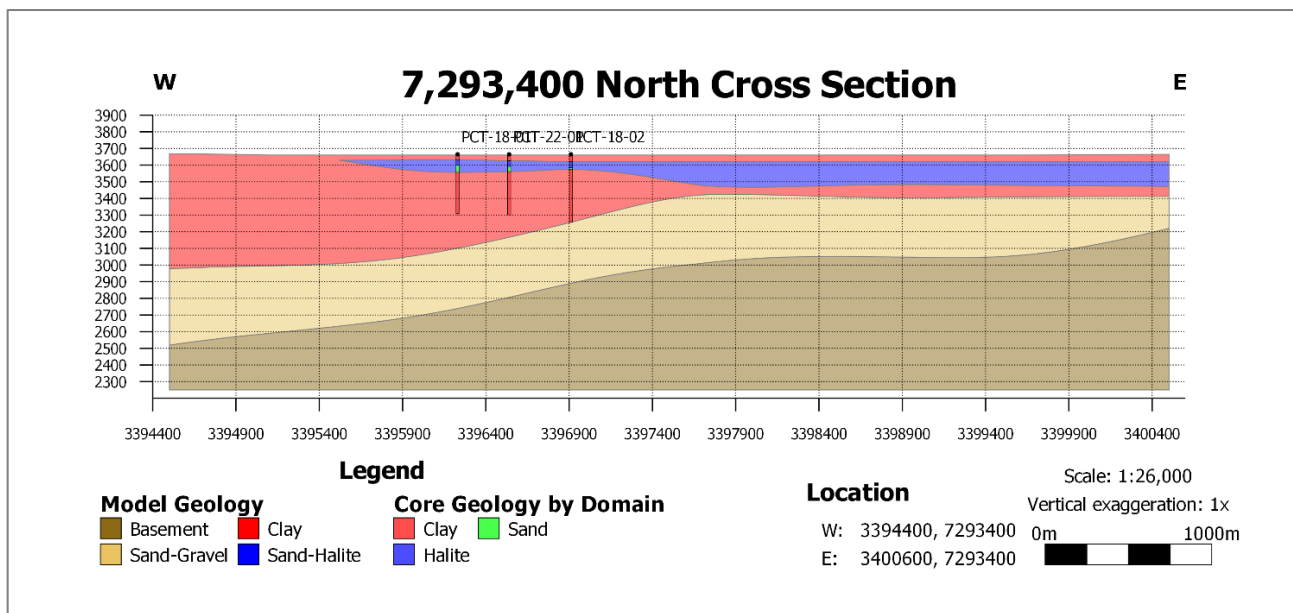


Figure 7.2 East-west cross-section along the line of drilling on the Project showing the geomorphology of the Pocitos Salar

#### 7.2.1.1 Clay

The predominant lithology logged in the completed exploration wells is clay, with minor banding of sand and halite nearer surface. No exploration well intersected the base of the clay. The contact was interpreted from MT survey data.

#### 7.2.1.2 Sand-Halite

Bands of sand and halite were identified in the exploration well core, and aligned with the yellow and green coloured material seen on the MT two dimensional (2D) inversion. These units were modelled as a single unit, with further contacts interpreted from the MT survey data.

### 7.2.1.3 Sand-Gravel

While no exploration well intersected a unit beneath the clay, MT survey data indicates similar resistivity to the Sand-Halite units, and clastic sedimentary deposits are a feature of salar geomorphology. Further drilling is required to confirm the nature of this unit.

### 7.2.1.4 Basement

The basement unit is assumed to be comprised of volcanics (granodiorite, and andesites) recorded on the west, and south of the salar. No drilling has intersected the basement unit. Polylines were digitised following an isoline on the MT 2D inversion to attempt to match the angle of the mountains to the east of the salar.

Figure 7.3 shows the MT survey data with basement contact polylines.

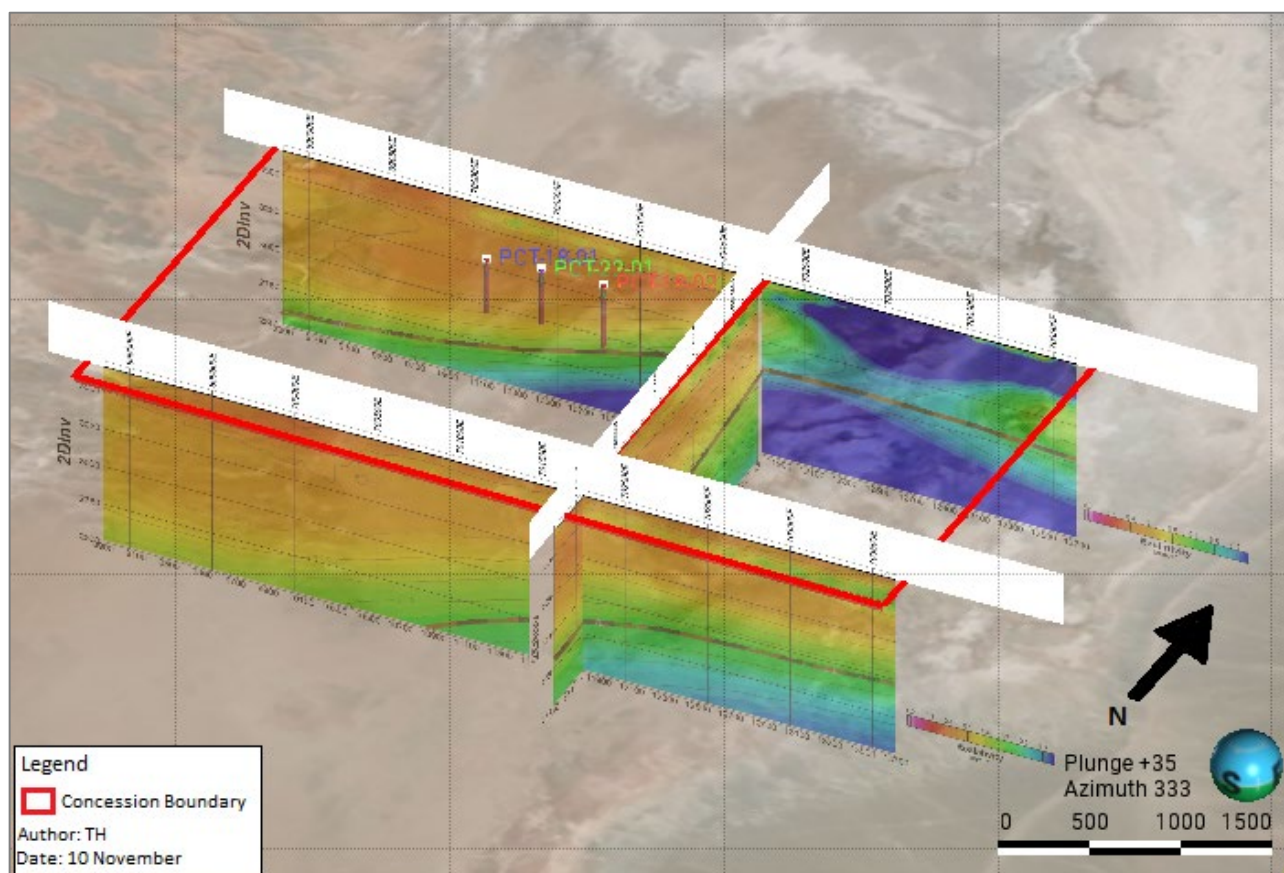


Figure 7.3 MT survey data with basement contact polylines (isometric view)

## 7.3 Mineralisation

Salar primary source deposits, and the mobilisation process of lithium are hypothesised thus far. The two main mechanisms of lithium extraction from source rock are believed to be surface or near surface chemical weathering, and leaching in hydrothermal systems originating from active arc magmatism. Compositions of lithium and strontium isotopes of conventional salar deposits provide insight into the formation processes and methods of lithium brine deposits in Andean evaporites. Salar de Pozuelos data indicates the main process of lithium mobilisation to be near-surface chemical weathering in a cold and dry climate, with enrichment by evaporation. Suggested lithium source rock is the Cenozoic ignimbrites, with lesser additions from the Palaeozoic basement. Identification of source rocks is supported by salar deposit radiogenic Nd and Pb, and stable B isotope data. In comparison with other lithium brine and salt deposits in the Altiplano-Puna Plateau and its western foothills, Salar de Pozuelos is recognised as an end member of lithium solubilisation by chemical weathering, with only minor hydrothermal lithium mobilisation (Meixner et al. 2022).



# 8 Deposit type

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) [Figure 8.1] 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 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.

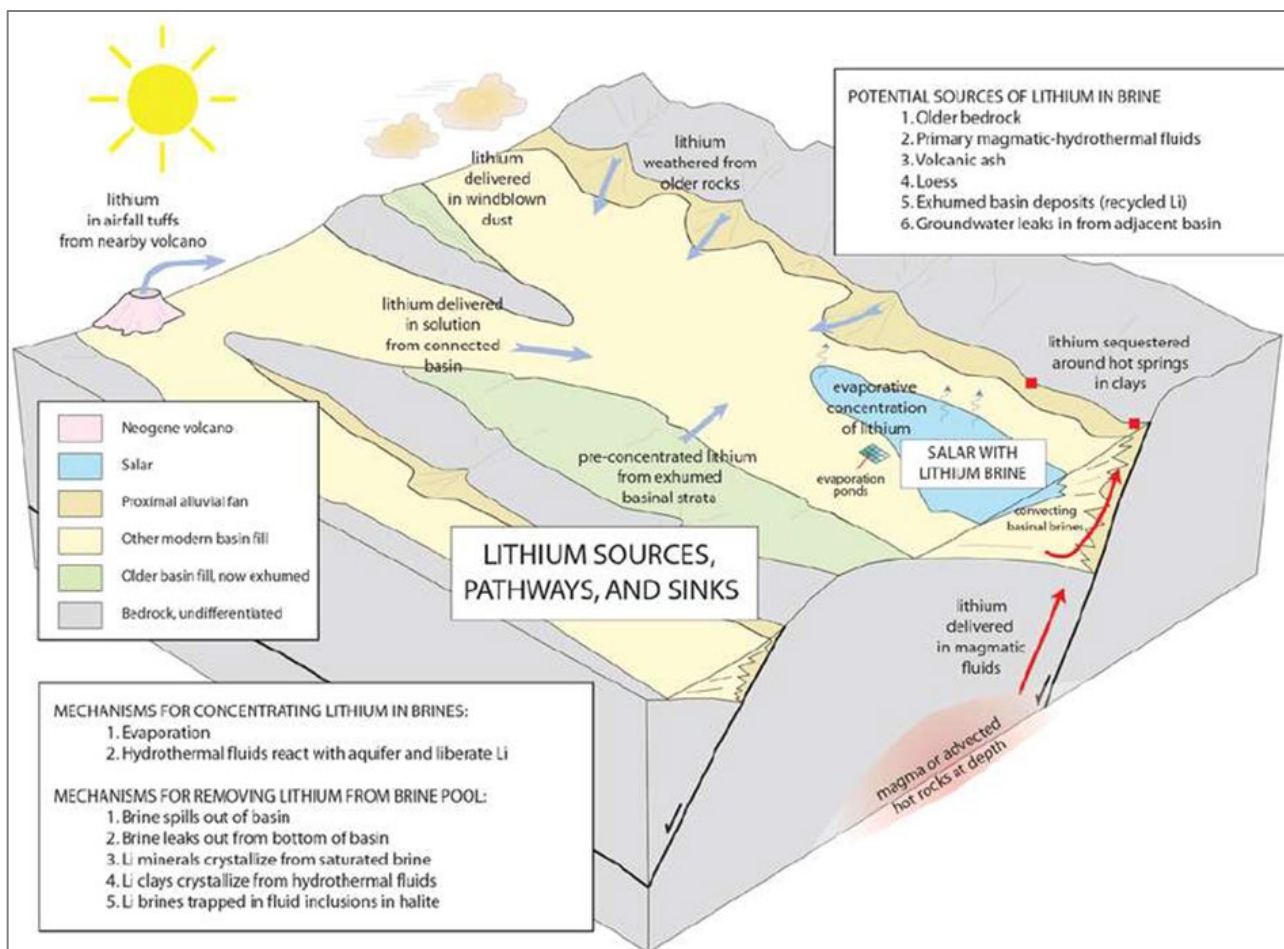


Figure 8.1 Generic model of a salar with an enriched lithium brine (Bradley et al. 2013)

The 2018, and 2022 exploration programs, 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.

# 9 Exploration

## 9.1 MT survey

In May 2023, Recharge commissioned SRG to conduct a MT survey. Three lines were surveyed, two oriented east-west, and one oriented north-south. The lines covered both the Pocitos I and II concessions, with the north-south oriented line traversing the border of the two concessions (Figure 9.1).

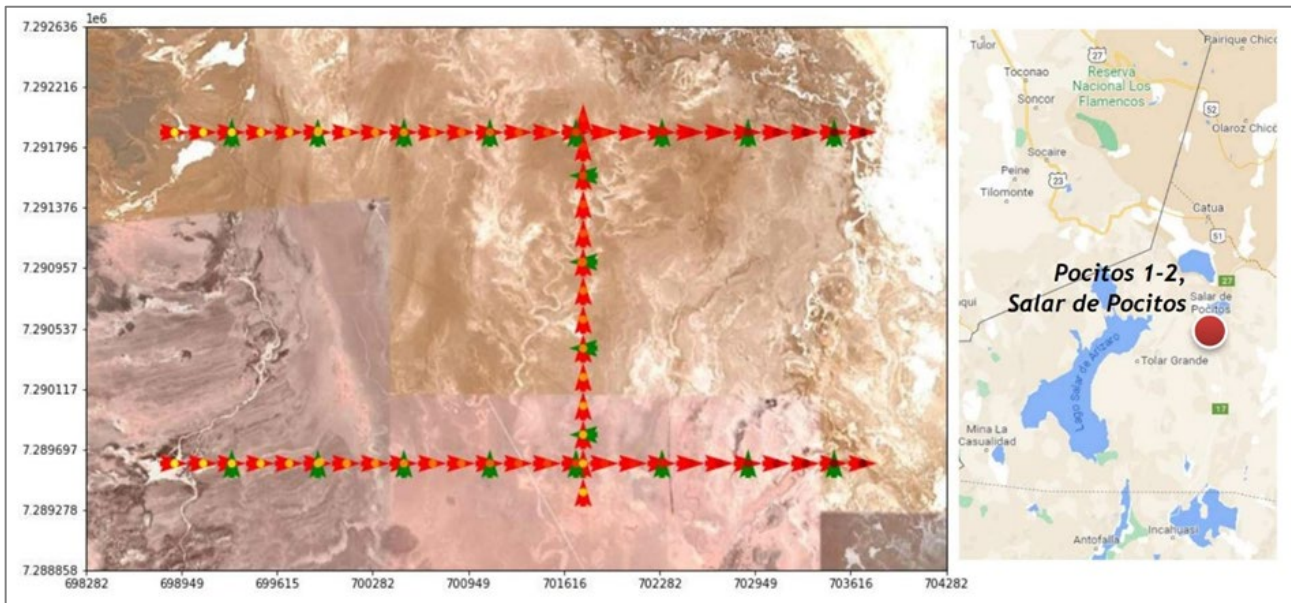


Figure 9.1 Pocitos I and II MT survey with MT survey stations and 200 m E- field dipoles (Ex as red, and Ey in green) [WGS84 UTM Z19S] (Panopus, 2023)

The principal objective of the MT survey was to image the distribution of resistivity beneath the survey lines (within the project area) from near-surface to depths of up to 2 km, constrained by the inherent limitations of the survey method and extent of the surveyed area. The survey was comprised of the acquisition of remote referenced broadband MT data, with contiguous along-line 200 m E-field dipoles (EMAP-style array) incorporating sparse tensor sites every 600 m. Data was acquired at 64 sites distributed along the three survey lines, for a total survey length of 12.8 km.

1D, and 2D inversion of the MT impedance dataset provided images of the likely distribution of the resistivity to depths of approximately 1-2 km, limited by the very conductive setting, and bandwidth of the dataset. The survey is located over a very conductive domain, with resistivity predominantly less than 1  $\Omega.m$ . A thin, upper conductive layer was modelled overlying a slightly less conductive layer of approximately 1  $\Omega.m$  that in turn overlies an extensive conductive interval of approximately 0.5  $\Omega.m$  that may extend to depths up to 1 km. Marginally higher resistivity was imaged beneath the eastern part of the northernmost survey line.

Table 9.1 presents the MT survey specifications.

Table 9.1 MT survey specifications

MT Survey Specifications	
Survey Mode	Natural source, remote referenced, broadband Magneto-Tellurics using an EMAP-style contiguous E-field array with sparse tensor sites.

<b>MT Survey Specifications</b>	
<b>Survey Configuration</b>	64 EMAP-style MT sites, including 20 tensor sites, distributed along two west-east oriented survey lines each of 5000 m length, and one south-north oriented survey line of 2.8 km length. Arrays of contiguous along-line 200 m-length E-field dipoles (Ex) were read with the incorporation of orthogonal 200 m-length E-field dipoles (Ey) every 600 m as indicated in the “Survey_Info” file (see digital archive). Sparse local Hx- and Hy- fields, comprising both high- and low-band induction coils, were located within the areas of active acquisition. A dedicated remote reference site (HxR- and HyR- fields) was maintained during the survey, located about 320 km west of the survey area. Note that in processing E- and H-field components are rotated to form a right-hand set for the X-azimuth with Z-downward according to standard MT conventions.
<b>Rx Contacts</b>	Stainless-steel electrodes in hand dug pits wetted with fresh water.
<b>Data Acquisition</b>	Time series data acquired with sampling rates (Fs) of 128Hz, 2kHz, and 32kHz. Multiple time series records of 222 samples for each Fs (except 128Hz). Timing provided by internal GPS. Data acquired over mainly nocturnal intervals of at least 12 hours.

For this survey, the median skew for the MT dataset is 0.12, with 91% of all data having a skew less than 0.2 and, of particular relevance to this discussion, none of the data exceeded a skew of 1, which may otherwise indicate poor quality estimates of the impedance.

2D inversion of this MT dataset utilised the two off diagonal ( $Z_{xy}$ , and  $Z_{yx}$ ) components of the tensor impedance (the principal diagonal components are assumed in the 2D case to be zero). The tensor data was not rotated, as it was assumed that the dominant strike direction was close to orthogonal to the line direction and as such, roughly orthogonal to the  $Z_{xy}$  component assigned as the TM-mode. The survey area’s model space was discretised into cells of 200 m width, and 2 m thickness, extending past the ends of the survey lines, becoming progressively thicker below, and above the topographically lowest and highest parts of the measured transects, and likewise increasing in lateral dimensions in distal padding which extended out to 50 km, and a maximum depth of just over 40 km. The inversion used a starting model of 1  $\Omega$ .m. The model was run without inversion for galvanic distortion, although as for the 1D inversion, static offsets may affect the modelling, as might 3D effects including the influence of topographic variation orthogonal to the survey line direction. 2D inversion provided RMS data misfits of 1.035, 1.107, and 2.117 for lines 7289600mN, 7291900mN, and 701750mE respectively which is considered inconsequential to the overall results.

Figure 9.2 shows the Pocitos I, and II MT survey 1D inversion model resistivity (interpolated to 2D sections) draped beneath the topographic surface, and viewed from above looking northeast

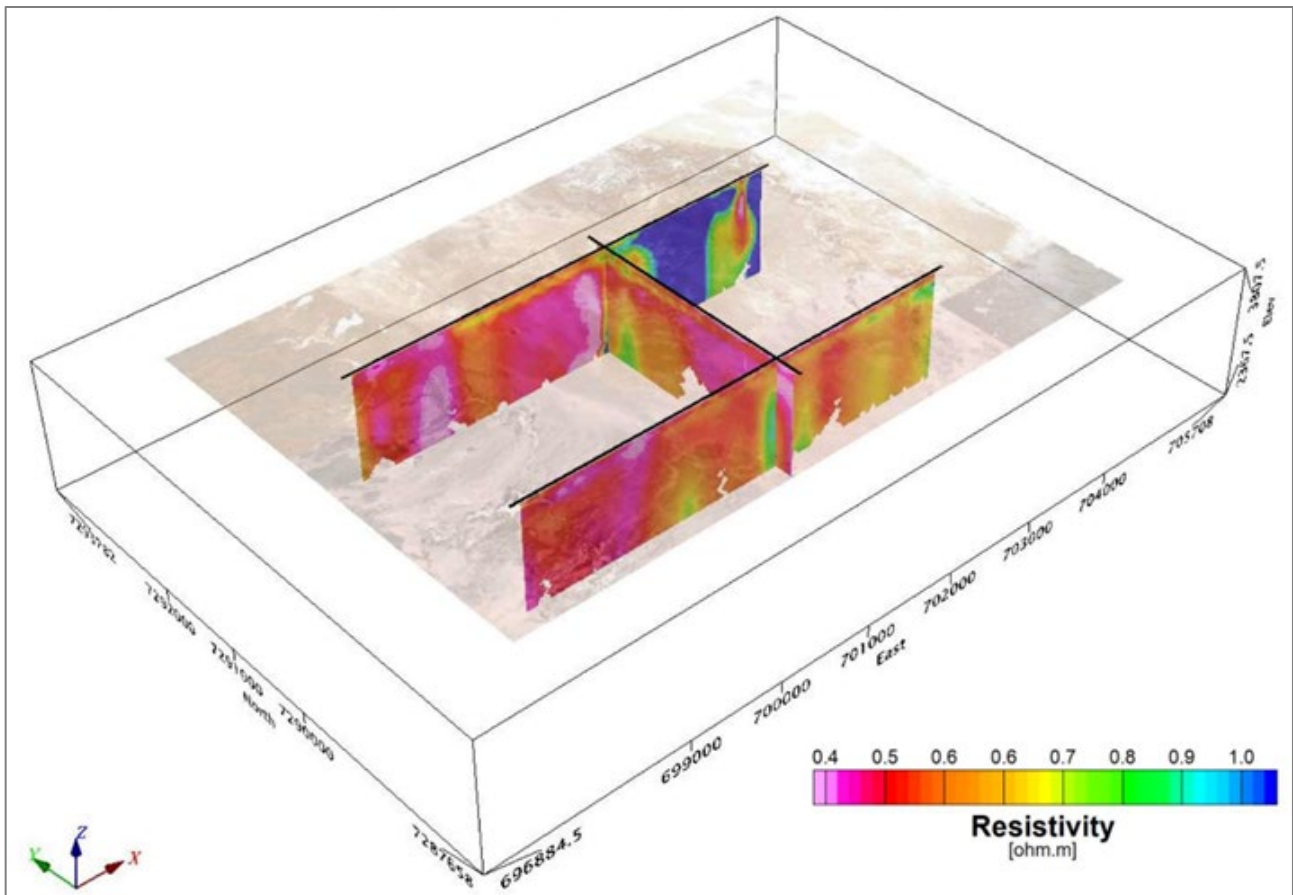


Figure 9.2 Pocitos I and II MT survey 1D inversion model resistivity (interpolated to 2D sections) draped beneath the topographic surface, and viewed from above looking northeast (Panopus, 2023)

The lowest resistivity units (pink) are evident on the western border and form a v to the north. The blue unit on Pocitos II has a low resistivity of  $1.0 \Omega$  which is considered prospective for brines but doesn't exist in the southern part of the concession. The depth of the lowest resistivity at  $0.4 \Omega.m$  on the northern most east west line expands to approximately 200 m wide and at a depth of 1,440 m deep (from 3,807.5 surface to 2,367.5 at bottom of survey).

Figure 9.3 shows the Pocitos I and II, MT survey 2D inversion model resistivity section draped beneath topographic surface, viewed from above looking northeast.

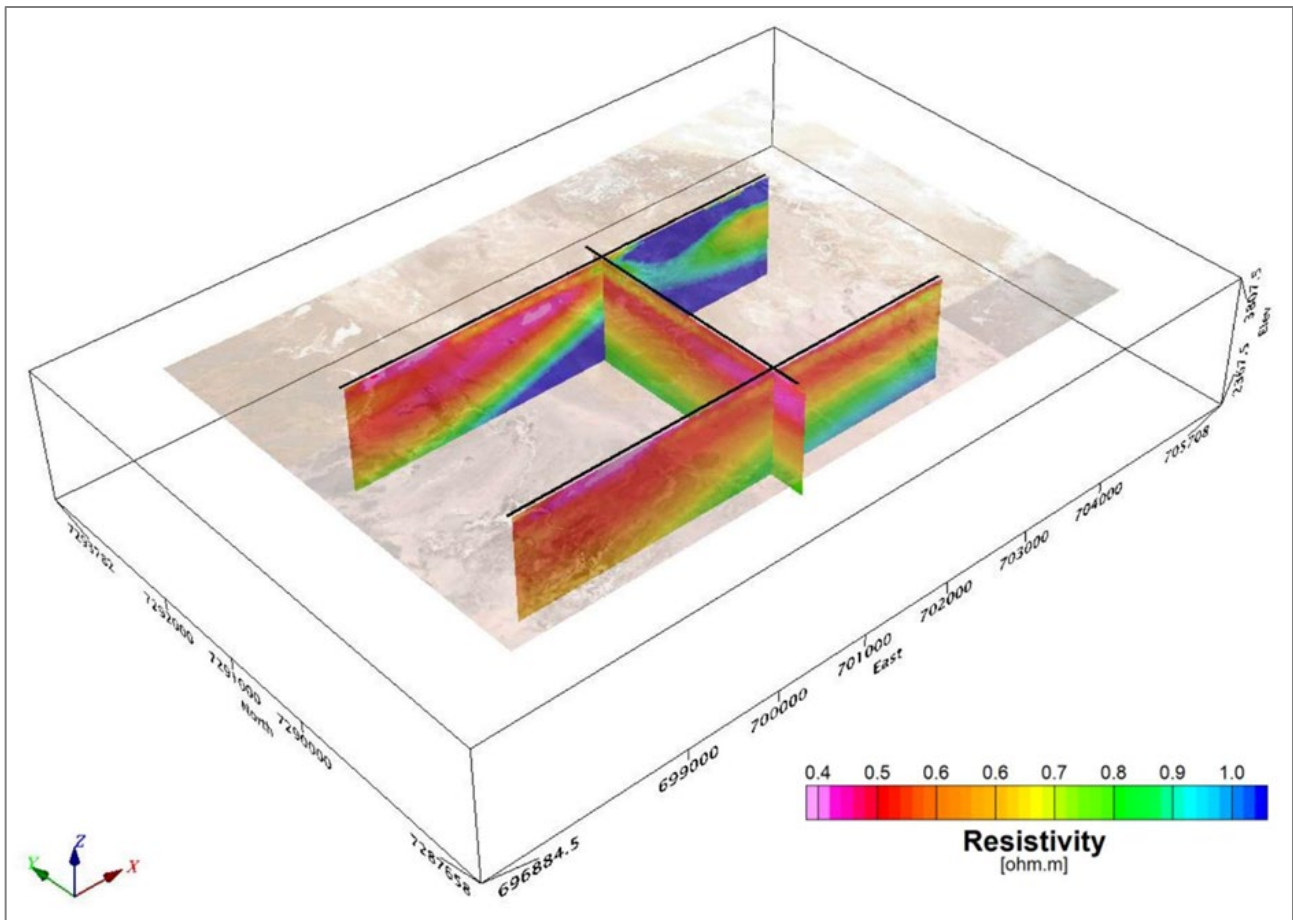


Figure 9.3 Pocitos I and II, MT survey 2D inversion model resistivity section draped beneath topographic surface, viewed from above looking northeast (Panopus, 2023)

The 1D and 2D inversion models for the MT data describe a very conductive setting throughout, although in detail it is generally comprised of an upper, sub-1  $\Omega$ .m layer overlying a slightly less conductive layer of approximately 1  $\Omega$ .m of variable thickness, that in turn overlies an extensive conductive interval of approximately 0.5  $\Omega$ .m extending indeterminately to potentially 1 km in depth. Marginally higher resistivities of up to 2 or 3  $\Omega$ .m in the eastern part of the northernmost survey line (Pocitos II concession) may represent a contrast in composition of the basin material or fluid salinity, in an otherwise reasonably homogenous conductive setting.

Figure 9.4 shows the phase tensor ellipses over the satellite image for half-decades of the bandwidth of the survey centred on 100Hz.

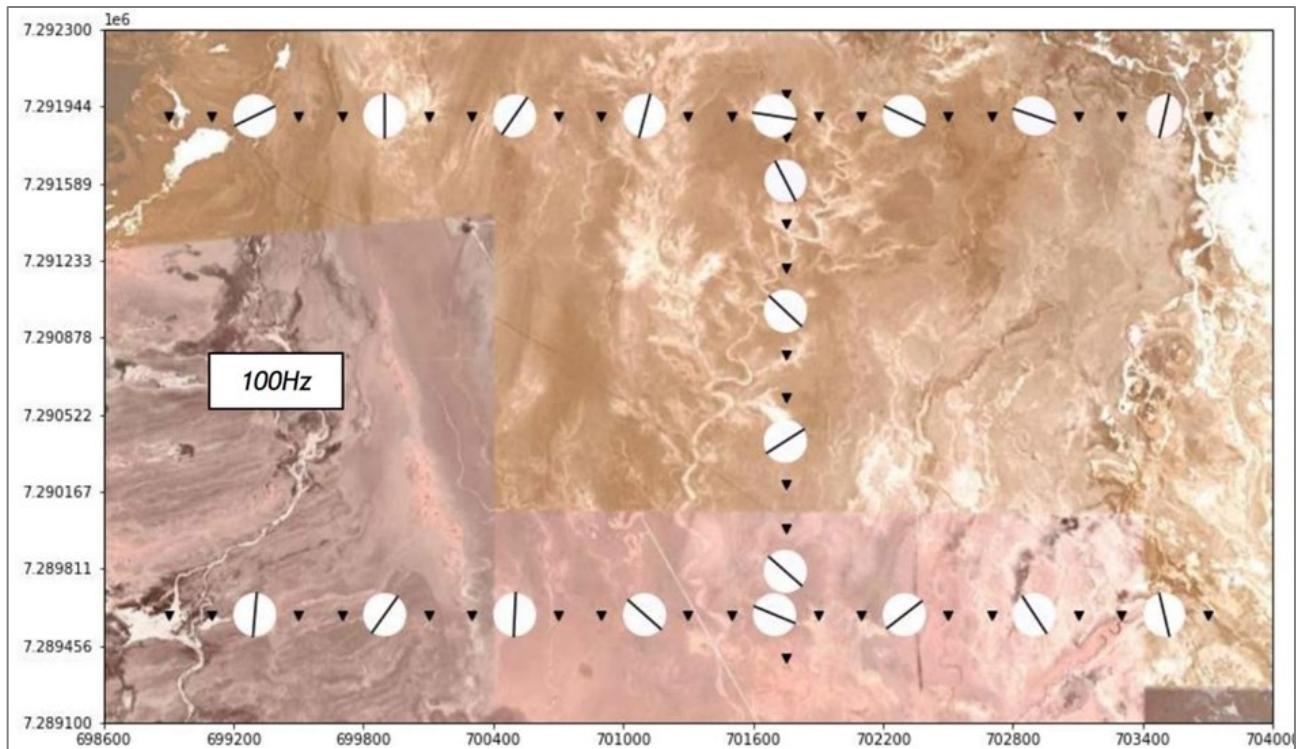


Figure 9.4 Phase tensor ellipses over the satellite image for half-decades of the bandwidth of the survey centred on 100Hz (Panopus, 2023)

Phase tensor ellipses often align themselves with current flow, such that their long axes will tend to align with structure, or point towards conductive zones. Although this inherent ambiguity as to their interpretation in the absence of supporting information should be considered, the evaluation of the phase tensors at different frequencies can provide information regarding structure at different, albeit imprecise depths. Brine flow appears to be in a general north-south direction, with the higher resistivity unit sending it easterly in the north-east section of the survey.

Figure 9.5 shows the phase tensor ellipses over the satellite image for half-decades of the bandwidth of the survey centred on 1Hz.

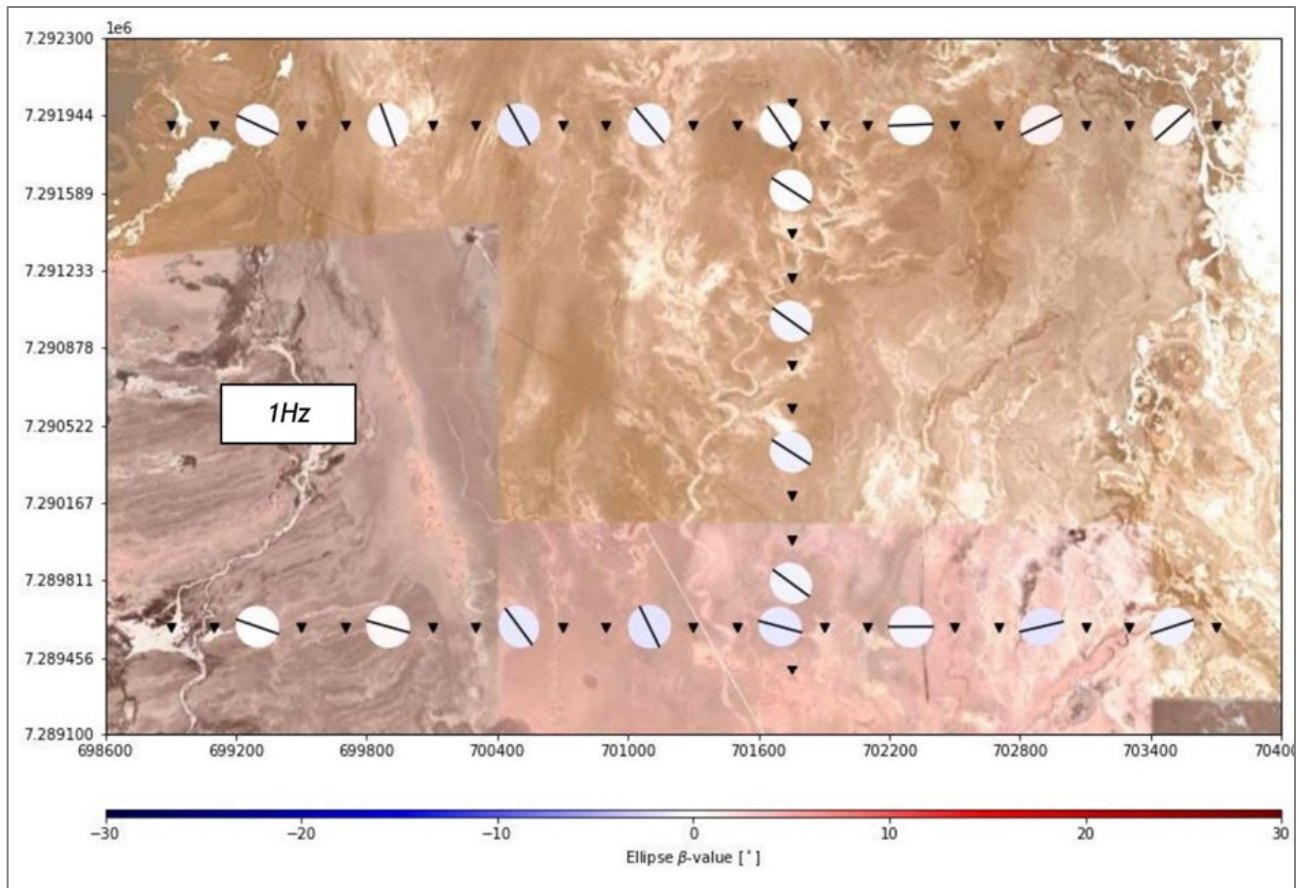


Figure 9.5 Phase tensor ellipses over the satellite image for half-decades of the bandwidth of the survey centred on 1Hz (Panopus, 2023)

## 9.2 Porosity samples

Core samples were collected from the Pocitos I exploration wells, and measured for porosity, permeability, and grain density. A total of seven samples were collected, three from PCT-22-01, two from PCT-18-01, and two from PCT-18-02. The samples were sent to Core Laboratories, in Perth, Western Australia. Results are presented in Table 9.2.

Table 9.2 Pocitos I porosity, permeability, and grain density results from Core Laboratories

Sample Name	Depth From (m)	Depth To (m)	Confining Stress (800 psi <sup>1</sup> )			Grain Density (g/cm <sup>3</sup> )	Effective Porosity (%)
			CMS <sup>2</sup> k <sub>inf</sub> <sup>3</sup> (md <sup>4</sup> )	CMS k <sub>air</sub> (md)	Porosity (%)		
PCT-18-02-C1	360.85	361.00	0.235	0.352	26.4	2.739	4.3
PCT-18-01-C2	328.30	328.44	0.062	0.128	21.6	2.621	6.1
PCT-18-01-C3	346.30	346.47	0.183	0.281	20.6	2.604	5.7
PCT-18-02-C4	400.78	401.95	3.110	4.230	31.4	2.658	14.9
PCT-22-01-C5	347.25	347.40	0.803	1.222	24.7	2.704	9.2
PCT-22-01-C6	358.73	358.86	2.500	2.840	28.1	2.683	6.3
PCT-22-01-C7	362.00	362.16	0.289	0.450	24.2	2.635	5.2

Notes: (1) pound per square inch (psi), (2) constant mean stress (cms), (3) permeability (k), (4) millidarcy (md)

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## 9.3 Exploration by others

Several other exploration campaigns have been completed in the basin since the 1970's on the salar and other mining concessions. While not specific to the Project, the results from these campaigns provide valuable information for the Project. Exploration is summarised in the following sections.

### 9.3.1 *Argentine Government*

The Argentine government agency, the DGFm, completed extensive exploration in the Argentinian salars in this region during the 1970's. In 1979, the DGFm reported a reconnaissance sampling campaign at Pocitos that comprised 12 shallow auger holes, and one surface sample. Of the 12 auger holes, two reported anomalous values of 155 ppm (Hole P12), and 417 ppm Li (Hole P8). The results of these holes, and the sampling conducted are historical in nature and cannot be confirmed by Recharge under NI 43-101 standards applicable today (Panorama Minero, 2017).

### 9.3.2 *Li3 Energy Inc.*

In 2010 and 2011, the company Li3E [acquired by Wealth Minerals in 2016] released preliminary results of a near surface brine sampling campaign, and a geophysical survey completed in the northern portion of the Pocitos Salar. A total of 46 brine samples were collected from just below the surface of the salar, with brine assays ranging from 300 to 600 ppm Li. These samples were collected immediately east of the Pocitos West property. Based on the reported results, Li3E defined the presence of two near-surface anomalies, approximately 6 km x 2 km each. The eastern anomaly had reported lithium concentrations ranging from 100 to 300 ppm, and a potassium concentration ranging from 1,000 to 7,000 ppm. The western anomaly had reported lithium concentrations ranging from 100 to 200 ppm, and potassium concentrations ranging from 1,000 to 5,000 ppm. (Li3E, 2010). A resistivity survey over the Li3E prospect area reportedly identified three target areas, including one highly conductive zone of 0.2  $\Omega\cdot\text{m}$  at 250 m depth, and other possible mixed brine zones of 0.4 to 0.75  $\Omega\cdot\text{m}$  that encased the high conductivity layer from near surface to 450 m (Li3E, 2010).

### 9.3.3 *Lacus Minerals S.A.*

Lacus also reported in 2010 on their sampling, and geophysical exploration conducted in the same area, which was later optioned to Li3E. While Lacus did not report assay values, they included in their report distribution maps for 95 samples collected at 6.8 m and below, indicating values up to 255 ppm Li. Their geophysical survey consisted of 42 soundings, from which the interpretation indicated a possible 140 m thick conductive brine layer with the top at an approximate depth of 150 m. According to Lacus, the brine-bearing horizon could be projected to the surface at the western margin of the basin, comprising the western limit of the Millennial concessions, and likely consisted of conglomerate, and sandstone (Rojas, 2017).

### 9.3.4 *Millennial Lithium Corp.*

In 2017, Millennial, in partnership with Southern Lithium, conducted a TEM survey in the Cruz property, located in the northern end of the Pocitos Salar. A continuous north-south trending conductive unit was identified. On behalf of Liberty One, Millennial commissioned a VES survey to be conducted by Technology and Resources [Rojas, 2017].

### 9.3.5 *PepinNini Lithium Limited*

PepinNini [now Power Minerals Limited ASX:PNN] reported exploration activity on Pocitos included two VES surveys, 2 exploration wells (for a total of 539 m), and a collection of 36 brine samples (PepinNini, 2018).



### 9.3.6 *Pure Energy Minerals Ltd*

Pure Energy explored their Terra Cotta project on the Pocitos Salar in August 2017 (in the south of the salar), and had adjacent concessions Pocitos 4, and Pocitos AO1, however they did not conduct any exploration drilling.

# 10 Drilling

Drilling activities were conducted within the Project area between 11 October, and 17 December 2022. One exploration well (PCT-22-01) was drilled using triple tube diamond coring. The location of the exploration well is shown in Figure 10.1, and the collar co-ordinates are presented in Table 10.1.

Two packer tests were conducted, one at 342 m, and the other at 363 m. Two samples were collected and sent to the SGS Argentina laboratory in Salta for assay.

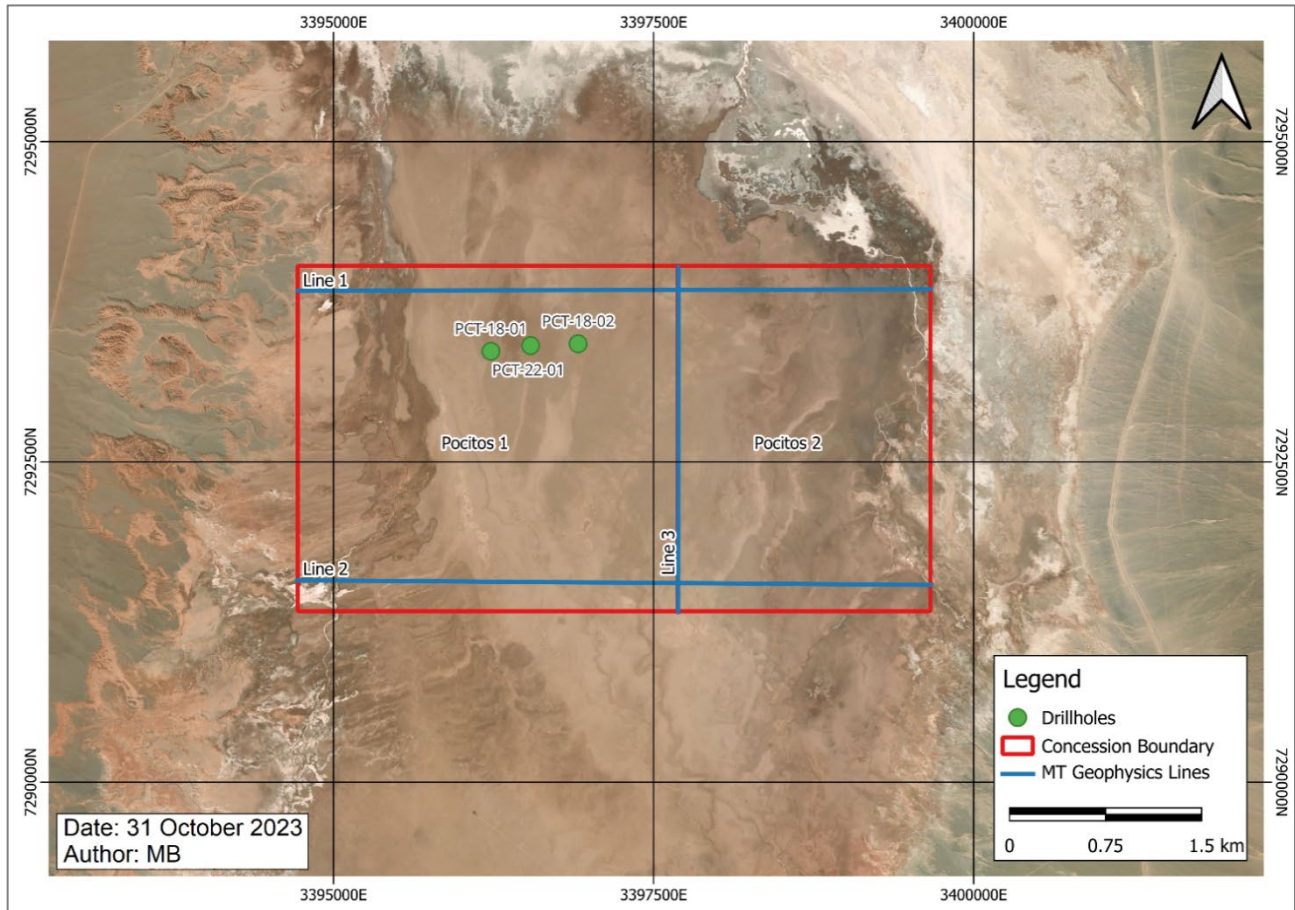


Figure 10.1 Exploration well PCT-22-01 and the two wells previously drilled by A.I.S.R. MT survey lines are presented in blue, with Line 3 marking the boundary between the Pocitos I and II concessions

The drilling contractor used for the program was CR Perforaciones, based in Santiago Chile. The drill rig used was a sled-mounted, Boart Longyear 700 LM75 series. The initial 116 m of the exploration well was drilled using HQ3 (61.1 mm core diameter) equipment, with the balance being completed using NQ (47.6 mm core diameter) equipment. A brine-based, polymer drilling mud was used. Vizcosan, Gettrol, and Poliget fluids were the drilling fluid additives used to condition the exploration well to prevent collapse. Brine was taken from a surface pond near the road that had been excavated (Panopus, 2023).

## 10.1 Exploration well PCT-22-01

Drilling activities for the exploration well commenced on 16 October 2022, reaching a depth of 363 mbls on 27 November 2022.

Table 10.1 presented the collar co-ordinates and total depth details for exploration well PCT-22-01.

Table 10.1 PCT-22-01 collar co-ordinates and total depth details

DHID	Total Depth (m)	WGS 84/UTM Zone 19S <sup>1</sup>		POSGAR 2007/ARGENTINA 3 <sup>2</sup>	
		Easting	Northing	Easting	Northing
PCT-22-01	363	7,00,608	7,291,463	3,396,539.984	7,293,408.392

Notes: <sup>1</sup> WGS 84 UTM co-ordinates from a hand-held portable GPS.

<sup>2</sup> POSGAR 2007 co-ordinates converted from WGS.

The following represents a brief summary of the equipment and methods utilised during construction of the well.

- The 3 1/4 -inch (83 mm) diameter exploration well was drilled from land surface to 363 mbls.
- Core was collected every 3 m, or less if recovery was restricted and core was logged and stored in labelled boxes.
- Water level was measured after construction, and was 5.5 m below surface level.
- Two brine samples were collected with a packer system between 342, and 363 mbls.
- An attempt was made to collect brine at 270 m but no brine was available.
- Two one litre bottles of brine were collected at 342 m, and three one litre bottles at 363 m.
- Drilling was halted at 363 m due to gas upwelling. Drilling was unable to continue.
- Gas was tested for methane, and hydrogen sulphides but was negative for both.
- A standard was provided by SGS Argentina for lithium, and it assayed 263 ppm Li against 265 ppm Li.

Table 10.2 presents assay results from material collected from the two packer tests conducted at 342 m and 363 m mbls.

Table 10.2 Assay results from the two packer tests conducted at 342 and 363 m, a duplicate of 363 m, a control standard and a blank of distilled water

	Density	B (mg/L)	Ca (mg/L)	Sr (mg/L)	Fe (mg/L)	Li (mg/L)	Mg (mg/L)	Mn (mg/L)	Na (mg/L)	K (mg/L)	Zn (mg/L)
RR1 – 342 m	1.206	35	1,305	21	17	36	587	<10	119,646	1,729	<10
RR2 – 363 m	1.203	81	585	<10	82	169	4,716	<10	102,530	1,529	<10
RR2 – 363 m Duplicate (RR5)	1.360	166	627	<10	<10	161	1,327	<10	133,287	3,512	<10
RR3 – Control Standard	1.211	548	492	<10	<10	268	1,045	<10	112,241	2,267	<10
RR4 – Blank Distilled Water	0.998	<10	<10	<10	<10	13	<10	<10	2,606	37	<10

Figure 10.2 shows Phillip Thomas working at the drill rig at Pocitos I.



Figure 10.2 Phillip Thomas working at the drill rig at Pocitos I (Panopus, 2023)

Figure 10.3 presents a schematic for exploration well PCT 22-01, with logged lithologies also presented.

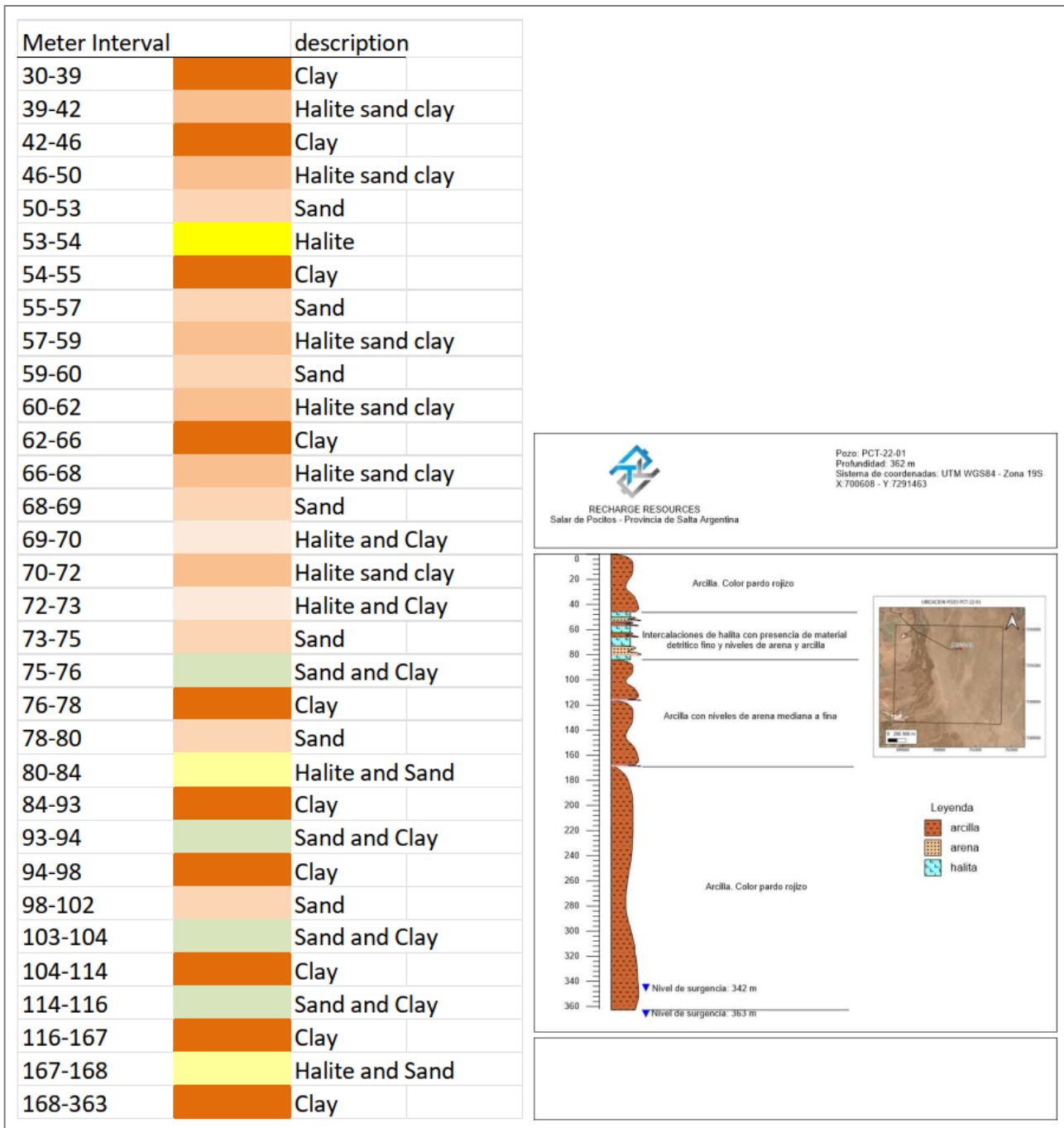


Figure 10.3 Schematic for exploration well PCT 22-01 with lithologies (Panopus, 2023)

# 11 Sample preparation, analyses, and security

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## 11.1 Sample preparation methods, and quality control measures employed

For brine samples collected, bottles were rinsed with the brine, and then filled to the top of the bottle, removing any airspace, and capped. Bottles were labelled with the exploration well number, and sample depth with a permanent marker pen, and labels were covered with transparent tape, to prevent labels being smudged or removed. For each packer sample, two bottles were collected for 342 m, and three bottles for 363 m (main sample, duplicate sample, and spare). Sample bottles were labelled with the drill hole number, sample or duplicate number and collection date and labels were protected by clear packaging tape. Field measurements of pH, density, electrical conductivity, temperature, and TDS were taken. All field data were recorded in a notebook and transcribed to the electronic database maintained by Anabel Molas (Recharge Field Geologist).

After transportation, brine samples were analysed by SGS Argentina in Salta. SGS Argentina is an independent laboratory, has significant experience in assaying lithium brines, and is certified to ISO 17025 standards for lithium brine assaying.

Figure 11.1 shows an example of the SGS Argentina laboratory reports obtained for each sample.

**INFORME DE ENSAYO**  
 SA23-00009

Salta, 16 de enero de 2023

Página 2 de 3

Identificación SGS: SA23-00009.0001      Producto cliente: Salmuera  
 Identificación cliente: RR5      Recibido: 11/01/2023      Muestreo cliente: 10/12/2022 15:17

Análisis	Método	LD	LC	Resultado	Unidad
Densidad a 20°C	ASTM D4052-18a	-	-	1.3597	G/ML
Densidad a 20°C	ASTM D4052-18a	-	-	1359.7	kg/m3
Acalinidad	Basado en SM 2320 B - 23rd Edition	-	1	882.9	mg CaCO3/l
Bicarbonatos	Basado en SM 2320B - 23rd Edition	-	1	883	mg CaCO3/l
Carbonatos	Basado en SM 2320B - 23rd Edition	-	1	<1	mg CaCO3/l
Cloruros	Basado en SM 4500Cl-D - 23rd Edition	-	2	209271	mg/L
Conductividad	Basado en SM 2510 B 23rd Edition	-	0.1	217000.0	uS/cm
Dureza (por cálculo)	Basado en SM 2340B - 23rd Edition	-	-	7030	mg/L
Bario	SGS.ME.342	-	10	<10	mg/L
Boro	SGS.ME.342	-	10	166	mg/L
Calcio	SGS.ME.342	-	10	627	mg/L
Estroncio	SGS.ME.342	-	10	<10	mg/L
Hierro	SGS.ME.342	-	10	<10	mg/L
Litio	SGS.ME.342	-	10	161	mg/L
Magnesio	SGS.ME.342	-	10	1327	mg/L
Manganeso	SGS.ME.342	-	10	<10	mg/L
Sodio	SGS.ME.342	-	10	133287	mg/L
Potasio	SGS.ME.342	-	10	3512	mg/L
Zinc	SGS.ME.342	-	10	<10	mg/L
pH	Basado en SM 4500 H B 23rd Edition	-	0.1	6.0	UpH
Sólidos Suspendedos Totales	Basado en SM 2540 D - 23rd Edition	-	10	237000	mg/L
Sólidos Totales Disueltos	Basado en SM 2540 C - 23rd Edition	-	10	341000	mg/L
Sulfatos	Basado en SM 4500 D - 23rd Edition	0.2	5	14793	mg/L

Francisco Orellana  
 Supervisor de Laboratorio  
 SGS Argentina

Daniel Tamayo  
 Gerente  
 SGS Argentina

Figure 11.1      SGS Argentina assay report for sample RR5 at 363 m, showing 161 ppm Li (duplicate test) [Panopus, 2023]

Brine samples were collected by packer sampling of brine, on a metre basis from the fluid extracted from within the packer device, as a representative sample following purging of brine from the packer equipment, and surrounding sediments.

Drilling has shown the basin to be unusual, in that it has a significant quantity of gas pushing the brines. Brine release tests, and pumping therefore will not reveal any factors of the aquifer, as the flow is potentially dominated by gas pressure. Exploration well PCT-22-01 was sealed with concrete around the drill pipe and was still flowing gas, brine and mud after a period of five months (10 May 2023). The main factor that could have potentially impacted the results of the brine samples obtained during drilling, would be if the packer did not adequately seal off the test interval from other aquifer zones during the sampling process. An inadequate seal could allow for brine from different zones to leak into the interval being sampled. The lower lithium concentration brine located in the upper part of the aquifer could impact the results by dilution and show a lower than actual lithium concentration. Packer inflation was not noted as being a problem during sampling, and is therefore not believed to be an issue of concern.

A flow rate of 89 litres per hour (l/h) was measured, however gas was preventing brine from flowing. Analysis of the results support the concept that the lithium content increases with depth, within the aquifer. The lowest lithium concentrations occur in samples taken above 340 mbls. This is likely due to a lower concentration of lithium occurring at the top of an amorphous aquifer body with no lithological boundary (e.g. a sand, or aggregate cap) with a lower lithium content, and lower density entering the basin and mixing with the older brine in the upper part of the aquifer. Sampling from the nearby A.I.S.R. exploration wells drilled in 2018 also recorded lower lithium values, and exceptionally high surge rates.

## 11.2 Brine chemistry laboratory procedures and analyses

Sampling of brine occurred during drilling and testing, and after the program was complete in the form of additional sample collection.

The following is a general summary of the sampling methods employed during each phase of sampling. Sampling methods, and quality control measures were similar during each phase.

In December 2022, Anabel Molas (Recharge Field Geologist), and her assistant arranged with the drillers to use a single packer sample airlift system at 342 m depth. Two samples were obtained using the airlift system, and assayed at SGS Argentina in Salta for a range of elements including Li, Mg, K, Ca, SO<sub>4</sub>, B, as well as alkalinity, TDS, density, electrical conductivity, and pH.

Daily static water level measurements were conducted inside the drill string at the start of each drilling shift, using a water level tape. Exploration wells were completed with steel surface casing, and a surface sanitary cement seal.

Brine samples remained in the possession of Anabel Molas until being delivered to the SGS Argentina in Salta. No other sample preparation was conducted prior to shipment of samples to the laboratory. The SGS Argentina laboratory in Salta is ISO 17025, and 9001 certified and is not affiliated in any way with Recharge.

Table 11.1 Summary of depths and field parameters for brine samples obtained during drilling

	Surge 1	Surge 2
<b>From (m)</b>	342	363
<b>To (m)</b>		
<b>Geologist</b>	HR	HR
<b>Date Collected</b>	1/12/2022	4/12/2022
<b>Flow (L/h)</b>		89
<b>Temperature (C)</b>		13.4
<b>Density (kg/m<sup>3</sup>)</b>		1.21
<b>pH</b>		3.8
<b>Conductivity (ms)</b>		302.6
<b>Observations</b>	First brine upwelling. Two litres of sample collected.	Second surge of brine and gas. High pressure gas makes it impossible to continue drilling. Brine with sporadic upwelling of low volume and flow. Three litres of sample collected. With portable multi-gas detectors for hydrogen sulphide, combustible gases, oxygen and carbon monoxide, it is a question of determining the type of kick gas. It is determined that none of these aforementioned gases correspond to the upwelling of the well.



Figure 11.2 shows Phillip Thomas examining clay core recovered from exploration well PCT-22-01 at a depth of 200.05 m.



Figure 11.2 Phillip Thomas examining clay core recovered from exploration well PCT-22-01 at a depth of 200.05 m depth (Panopus, 2023)

Figure 11.3 shows gas coming out of exploration well PCT-22-01 on 12 December 2022 (right), and along with mud and brine on 20 January 2023 (left).

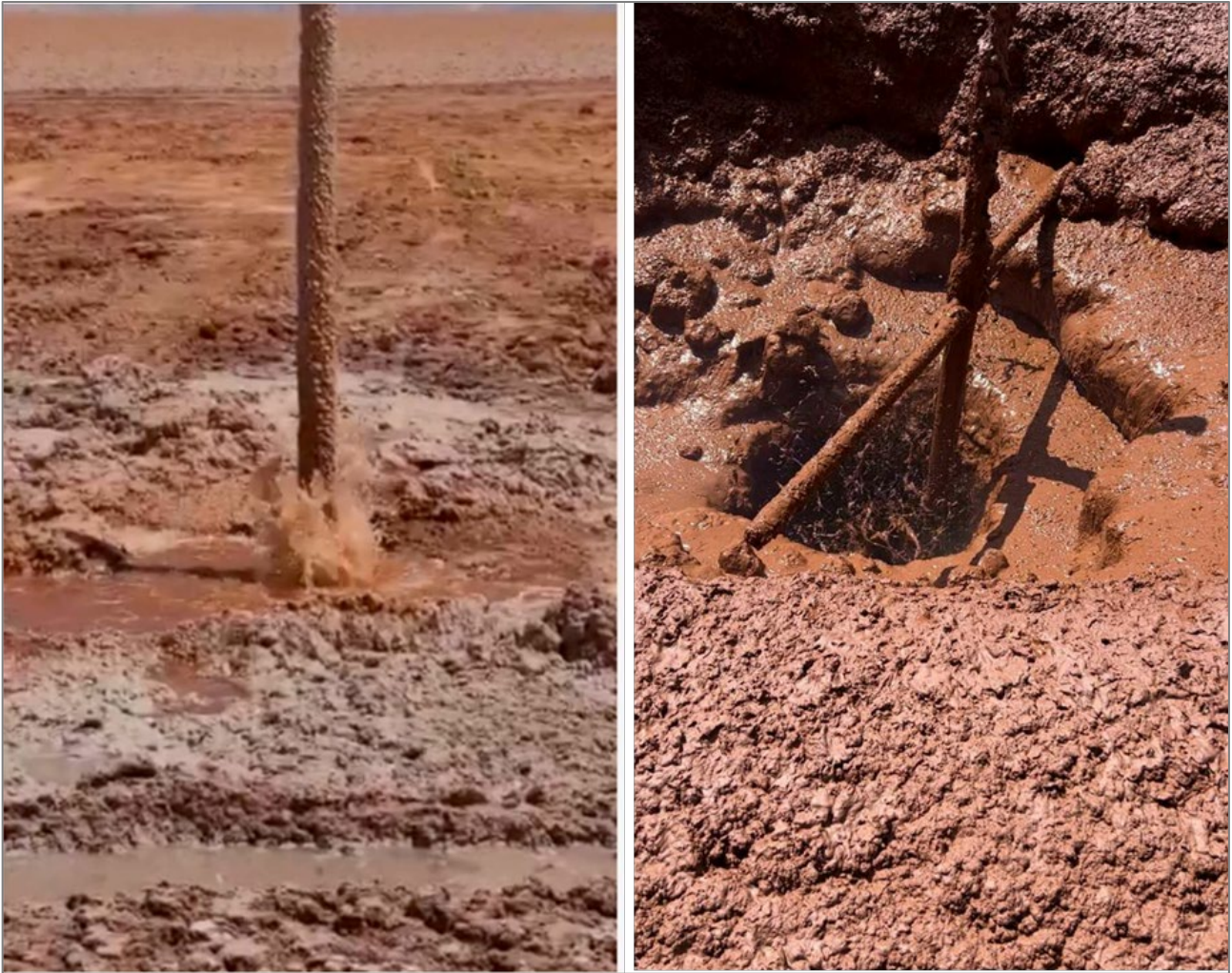


Figure 11.3 Gas coming out of exploration well PCT-22-02 on 12 December 2022 (right), and with mud and brine on 20 January 2023 (left) [Panopus, 2023]

Figure 11.4 shows Recharge geologists examining brine, and mud flow over the concrete platform on 30 June 2023 (seven months after the exploration well was drilled). At present, gas is still flowing from the exploration well.



Figure 11.4 Recharge geologists examining brine, and mud flow over the concrete platform on 30 June 2023 (seven months after the exploration well was drilled) [Panopus, 2023]

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## 11.3 Security

Anabel Molas (Recharge Field Geologist) closed and sealed the sample bottles and delivered them personally to SGS Argentina in Salta. The samples were collected using a packer, put into one litre sample bottles, labelled, and securely taped closed, and put into a secure box for transport to the laboratory. Chain of custody forms were used, and confirmation was issued by SGS Argentina on receipt of the sample bottles.

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## 11.4 Analytical Quality Assurance and Quality Control

Analytical Quality Assurance/Quality Control (QA/QC) was monitored using duplicate samples, blank samples, and standards. Accuracy, i.e., the closeness of measurements to the “true” or accepted value, was monitored by the insertion of standards, or reference samples. Distilled water blank samples were used to evaluate potential sample contamination and were inserted to measure any potential cross-contamination.

Initially, QA/QC analysis of the 14 December 2022 well brine samples collected included one duplicate sample assay. Further assay and QA/QC analysis was conducted in January and February 2023. Analysis of duplicate results shows reasonable correlation between primary, and duplicate sample results for the major elements of interest. Sample and duplicate comparison is presented in (Table 11.2).

Table 11.2 Summary of duplicate sample chemistry results conducted in January and February 2023

Assay Sample No.	Li (mg/L)	Mg (mg/L)	K (mg/L)	Ca (mg/L)	B (mg/L)	TDS (mg/L)	S (mg/L)	Cl (mg/L)	Density (g/mL)	pH
RR5	161	1,327	3,512	627	166	341,000	14,793	217,000	1.360	6.0
RR5 Duplicate	164	1,307	3,469	583	165	342,000	14,867	208,973	1.358	5.9
Difference (%)	1.9	-1.5	-1.2	-7.0	-0.6	0.3	0.5	-3.7	-0.1	-1.7
RR6	142	1,309	2,087	1,309	98	270,950	10,755	150,480	1.172	6.9
RR6 Duplicate	139	1,272	2,053	1,272	96	269,950	10,833	150,983	1.172	6.9
Difference (%)	-2.1	-2.8	-1.6	-2.8	-2.0	-0.4	0.7	0.3	0.0	0.0

## 11.5 Conclusions

In the opinion of the Qualified Person, sample preparation, analyses, and security procedures are deemed adequate, and adhere to industry best practice standards.

For subsequent exploration and aquifer characterisation programs, the Qualified Person recommends the development of a more robust QA/QC program, that includes insertion of more duplicate samples at the time of sample collection.

# 12 Data verification

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## 12.1 Review of data available for resource modelling

The MRE for the Project includes all data provided to WSP as of 22 July 2023. Further data was supplied on 15, and 20 September, 2, 5, 16, 25, and 31 October, and 11, and 13 November 2023. Data received included:

- Drill hole reports.
- Brine sample assay data.
- Porosity data.
- MT survey data, and supporting documentation.
- TEM survey data, and supporting documentation.
- Previous NI 43-101 Technical Report for the Project.
- Mining concession purchase agreement.
- Geographic Information System (GIS) data.

### 12.1.1 Drill hole validation

Drill hole logs were checked against drill core photographs for consistency in core logging. The location of porosity samples were checked against drill logs, and core photographs.

### 12.1.2 Survey data

All survey data was collected by handheld GPS. Guidelines for resource classification require accuracy of Differential GPS (DGPS) for Indicated Resource, and Measured Resource classifications. The MRE classification is therefore limited to Inferred Resources.

### 12.1.3 Assay drill hole data

Results reported in previous reports have been checked against available assay results. Assay results for PCT-18-02 are available in report NOA1811979. No assay reports have been provided for PCT-18-01 and PCT-22-01, however a spreadsheet for report SA22-00392 and duplicate SA22-00009 was provided. No errors have been found.

### 12.1.4 Topographic surface

No topographic surface was supplied by Recharge. A topographic surface was created by WSP from the NASADEM Global Digital Elevation Model accessed via OpenTopography.

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## 12.2 Analytical QA/QC

Analytical QA/QC was monitored using duplicate, blank, and standard samples. Accuracy was monitored by the insertion of a standard sample. Distilled water blank samples were used to evaluate potential sample contamination, and were inserted to measure any potential cross-contamination.

Initially, QA/QC analysis of the 14 December 2022 well brine samples collected included one duplicate sample assay. Analysis of duplicate results shows reasonable correlation between primary, and duplicate sample results for the major elements of interest e.g., lithium 161 ppm in duplicate (SA22-00009), compared to 169 ppm in the primary sample (SA22-00392).

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## 12.3 Conclusions

Field sampling of brines was conducted in accordance with industry best practice standards. The brine sampling program included standard QA/QC elements, such as obtaining duplicate laboratory samples, and submitting standard samples with known values, and blank samples to the laboratory/laboratories.

Formal traffic reports, and Chain of Custody (COC) documents were prepared for every sample collected and submitted for laboratory analysis. In the opinion of the Qualified Person, sample preparation, analyses, and security procedures are deemed adequate, and adhere to industry best practice standards, and results from the laboratory analyses, especially with respect to lithium, are considered adequate and acceptable. Verification was limited due to the fact that the Qualified Person was not physically present in the field during the exploration programs; however, the documentation of activities is comprehensive and complete, and laboratory results, including results of duplicate samples for the original samples, and the sample collected by Michael J. Rosco support the work completed, and the results obtained.

For subsequent exploration and aquifer characterisation programs, the Qualified Person recommends development of a more comprehensive QA/QC program that includes a greater number of samples, to obtain statistically significant results.

# 13 Mineral processing, and metallurgical testing

## 13.1 Sampling and mineralogical analysis

Recharge collected a 200-litre brine sample, which was sent to the Ekosolve laboratory at the University of Melbourne, Australia for testing lithium extraction. The brines are currently being processed to produce lithium chloride at the date of this Technical Report.

A 20-litre sub-sample was prepared and placed into a drum, which was first shaken to ensure a homogeneous distribution. It had been spiked with 5 mm nitric acid to arrest crystallisation. Following this, samples were collected three times individually from the bottom, the middle, and the top sections of the drum. These nine samples were diluted at three ratios (50, 500, and 2,500-times dilution) for all cations except lithium, and anions, including chloride and sulphate. The lithium concentration in the salt lake brine samples were analysed by the lithium spike method previously developed and disclosed. Specifically, 0, 10, 25, 50, and 100 ppm Li, sourced from a 1,000 mg/L Li ICP standard solution supplied by Merck was spiked into the brine samples, and the resulting solution diluted to a 50-times dilution. The diluted samples were analysed ICP-OES for cations, and three samples for each of the bottom, middle, and top were analysed for anion concentrations using ion chromatography.

Table 13.1, and Table 13.2 present the Pocitos I brine sample concentrations of lithium, and other cations.

Table 13.1 Pocitos I brine sample lithium concentrations

Sample Position		Dilution: 50 Times (mg/L or ppm)	
Brine from Recharge	Top #1	97.26	89.44
	Top #2	87.23	
	Top #3	83.83	
	Middle #1	83.07	83.39
	Middle #2	84.10	
	Middle #3	83.01	
	Bottom #1	85.87	85.03
	Bottom #2	84.10	
	Bottom #3	85.13	
<b>Mean Concentration</b>		<b>85.96</b>	

Table 13.2 Pocitos I brine sample other cation concentrations

Sample Position		Dilution: 500 or 250 Times, Depending on Concentration Range (g/L)									
		Na		Mg		Ca		K		B	
Brine from Recharge	Top #1	139.61	140.64	1.13	1.15	0.50	0.51	3.36	3.34	0.62	0.63
	Top #2	141.27		1.16		0.52		3.36		0.65	
	Top #3	141.04		1.16		0.51		3.30		0.62	
	Middle #1	141.65	141.76	1.16	1.16	0.52	0.52	3.34	3.33	0.60	0.59
	Middle #2	140.86		1.15		0.51		3.29		0.57	

Sample Position		Dilution: 500 or 250 Times, Depending on Concentration Range (g/L)									
		Na		Mg		Ca		K		B	
	Middle #3	142.79		1.16		0.52		3.35		0.60	
	Bottom #1	140.96		1.15		0.52		3.31		0.59	
	Bottom #2	142.32	143.03	1.14	1.15	0.52	0.52	3.27	3.29	0.58	0.59
	Bottom #3	145.83		1.15		0.52		3.28		0.60	
<b>Mean Concentration</b>		<b>141.81</b>		<b>1.15</b>		<b>0.52</b>		<b>3.32</b>		<b>0.60</b>	

Figure 13.1 presents a schematic of the pilot plant, showing the ten cycles used to complete lithium extraction using Ekosolve™ process of solvent extraction (Panopus, 2023).

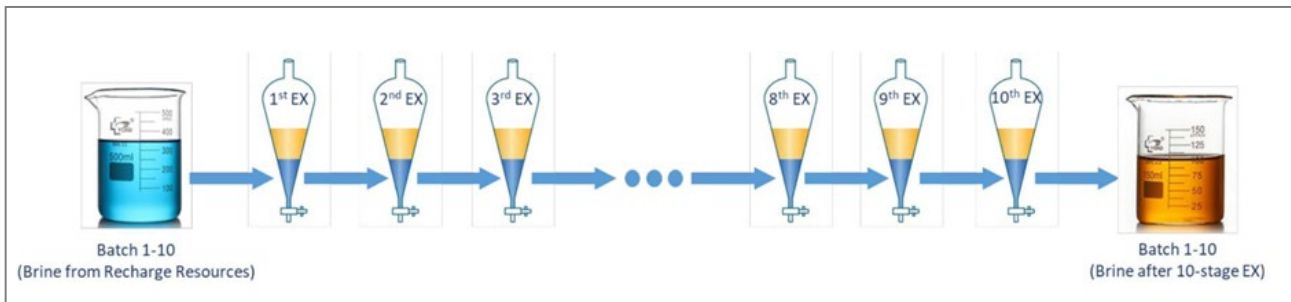


Figure 13.1 Schematic of the pilot plant of ten cycles to complete lithium extraction using Ekosolve™ process of solvent extraction (Panopus, 2023)

The Ekosolve™ extraction process extracted 94.92% of the lithium from Pocitos I brine. Table 13.3 shows the quantity of lithium extracted during each extraction cycle.

Table 13.3 Lithium extracted in each pass

	Li (mg/L)	Extraction Efficiency %	A/O Ratio
Original brine	85.08	29.22%	--
1 <sup>st</sup> batch after 1 <sup>st</sup> EX stage	60.22	46.83%	1/1
1 <sup>st</sup> batch after 2 <sup>nd</sup> EX stage	45.24	59.99%	1/2
1 <sup>st</sup> batch after 3 <sup>rd</sup> EX stage	34.04	69.42%	1/3
1 <sup>st</sup> batch after 4 <sup>th</sup> EX stage	26.02	76.26%	1/4
1 <sup>st</sup> batch after 5 <sup>th</sup> EX stage	20.20	82.06%	1/5
1 <sup>st</sup> batch after 6 <sup>th</sup> EX stage	15.27	86.02%	1/6
1 <sup>st</sup> batch after 7 <sup>th</sup> EX stage	11.90	89.88%	1/7
1 <sup>st</sup> batch after 8 <sup>th</sup> EX stage	8.61	92.78%	1/8
1 <sup>st</sup> batch after 9 <sup>th</sup> EX stage	6.14	92.78%	1/9
1 <sup>st</sup> batch after 10 <sup>th</sup> EX stage	4.32	94.92%	1/10

**Note:** Each cycle duration is approximately 30 seconds.

Further cycles would likely marginally increase extraction efficiency.

Mumford and Li (2023) stated that “The lithium extraction from Recharge Resources brine is proven to be efficient especially at low A/O ratios (added - solvent to brine) with extractions of 94.92% obtained. Next step includes conducting washing and crystallisation”.



# 14 Mineral Resource estimates

This Technical Report represents an update to the 30 June 2023 NI 43-101 Technical Report titled “*Technical Report for the Pocitos Salar Lithium Concession “Pocitos I”, Salta Province, Argentina*”, and provides a MRE for the Project.

The MRE for the Project has been prepared by WSP technical staff, using both historical, and recent drilling results, in accordance with NI 43-101, and following the requirements of Form 43-101F1. The MRE is classified and reported in accordance with the CIM Definitions, CIM Guidelines, and NI 43-101 Guidelines.

The Qualified Person for the MRE is Jason Van den Akker, Principal Hydrogeologist, an independent Qualified Person, as defined under NI 43-101, and an employee of WSP based in Adelaide, South Australia, Australia.

The Effective Date of this MRE is 18 December 2023.

The Project is located in the Pocitos Salar, and the geological interpretations and MRE outlined in the following sections were derived from drill hole data, TEM and MT surveys, and publicly available satellite imagery. WSP utilised both Seequent Leapfrog Geo™, and Maptek Vulcan™ software for geological modelling, and Mineral Resource estimation and reporting.

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## 14.1 Key assumptions and data used in the estimate

### 14.1.1 Drill hole data

The Project drill hole database that supports the MRE includes collar, downhole survey, assay, and lithology data. The elements included in the assay data are Barium (Ba), Boron (B), Calcium (Ca), Strontium (Sr), Iron (Fe), Lithium (Li), Magnesium (Mg), Manganese (Mn), Potassium (K), and Sodium (Na) as well as brine density. Only Li, and Mg were estimated in the MRE. Drill hole data was stored in Leapfrog Geo™ tables and were exported as Comma Separated Values (CSV) files for the purposes of this MRE.

Summary statistics of available drill holes contained within the Project drill hole database are provided in Table 14.1.

Table 14.1 Summary of Project drill hole database (updated in 2023)

Drilling Type	Number of Drill Holes	Total Meterage (m)	Number of Samples (Packer)	Number of Samples (Airlift)	Average Depth of Drill Holes (m)
Diamond core	3	1,130.50	10	2	376.83

The drill hole database was reviewed by WSP, and was found to be free from errors.

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## 14.2 Geological interpretation

Wireframe solids representing four domains (Clay, Sand-Halite, Sand-Gravel, and Basement) were constructed primarily in Leapfrog Geo™ software (version 2023.1.1). Wireframes were generated by snapping to drill hole contacts utilising the implicit modelling module, and refining the final solids using interpretive polylines (structural trends) based on MT survey data where applicable.

### 14.2.1 Geological model

The 3D lithological models defining the Pocitos Salar geometry and stratigraphy within the Pocitos I, and II concession boundaries using Leapfrog Geo™ software. Logging information, assays, the provided topographic surface, and TEM and MT surveys were used to determine salar morphology and features. The 2023 geological model is presented in Figure 14.1.

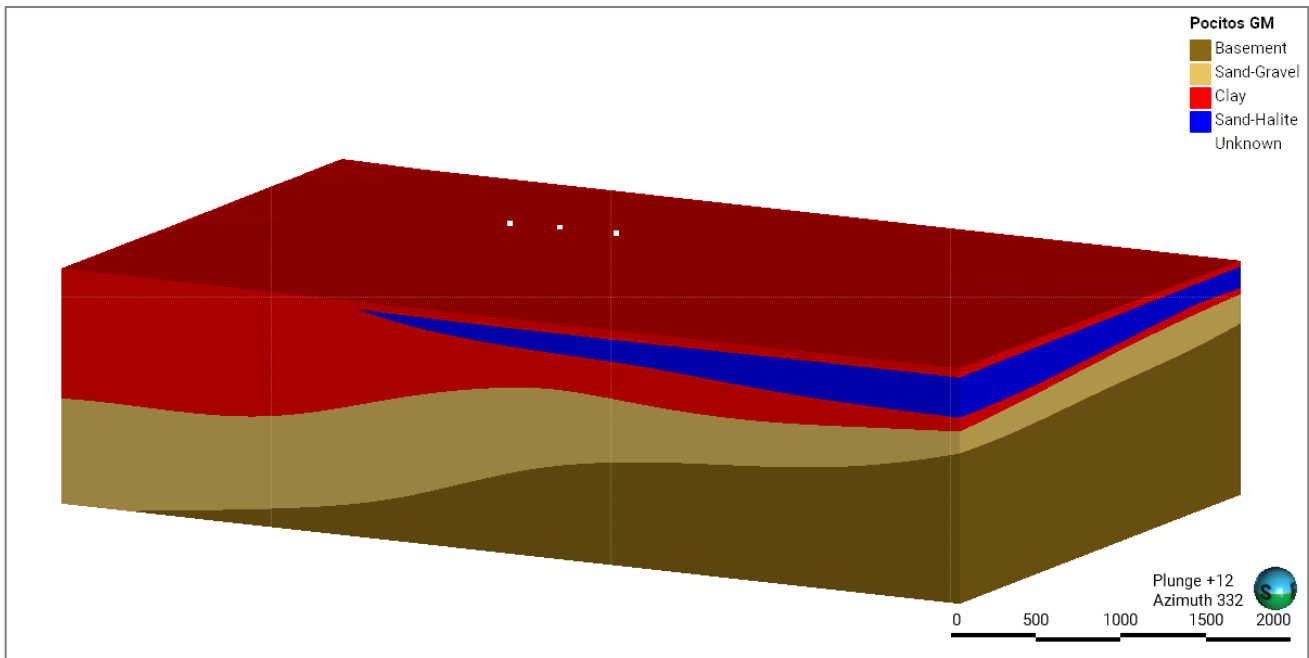


Figure 14.1 Orthogonal view of 2023 geological model showing drill hole collars (white)

The geological model volumes were exported to Maptek Vulcan™ triangulation (.00t) files.

#### 14.2.2 Brine geochemistry

Brine samples were collected using a packer system which isolates specific zones within the salar, and airlifted during pumping tests. As the airlifted samples represent the entire screened section of the drill hole, only the depth specific bailer samples, and packer samples were used for Mineral Resource estimation purposes.

### 14.3 Compositing

The predominant sampling interval is 2 m. Due to the limited quantity of sample data, straight composites were generated for Li, and Mg.

### 14.4 EDA

As the straight composites reflect the raw sample data, univariate statistics for brine samples were generated, and are presented in Table 14.2.

Table 14.2 Brine sample univariate statistics

	<b>B</b>	<b>Ca</b>	<b>Cl<sup>-</sup></b>	<b>K</b>	<b>Li</b>	<b>Mg</b>
<b>Count</b>	12	12	2	12	12	12
<b>Min</b>	25	588	150,480	1,392	39	22
<b>Max</b>	740	1,309	209,271	3,512	161	2,521
<b>Mean</b>	149	946	179,876	2,161	88	1,294
<b>Standard Deviation (SD)</b>	182	262	29,396	559	38	604
<b>Variance</b>	33,102	68,493	864,095,420	312,795	1,431	364,947

	B	Ca	Cl <sup>-</sup>	K	Li	Mg
<b>Coefficient of Variance (COV)</b>	1.22	0.28	0.16	0.26	0.43	0.47
<b>Lower Quartile</b>	75	644	150,480	1,708	63	1,053
<b>Median</b>	102	1,039	179,876	2,113	75	1,273
<b>Upper Quartile</b>	127	1,169	209,271	2,472	119	1,497

Figure 14.2 shows the positive correlation between Li and Mg.

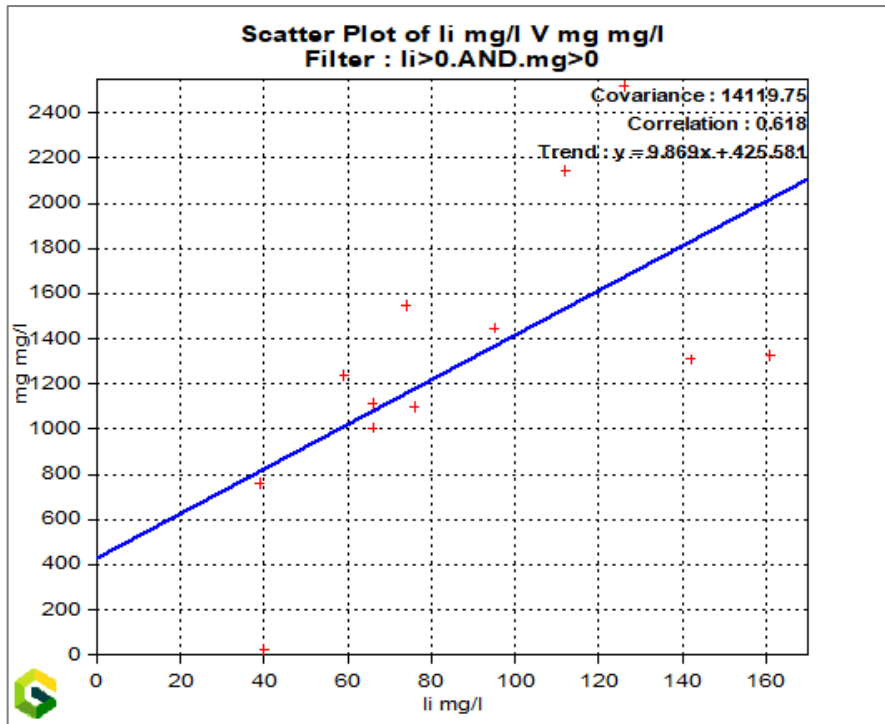


Figure 14.2 Mg/Li ratios

Solute concentrations in salar brines increase both towards the centre of the basin, and with depth. This trend is shown with the correlation between lithium concentration, and depth (Figure 14.3).

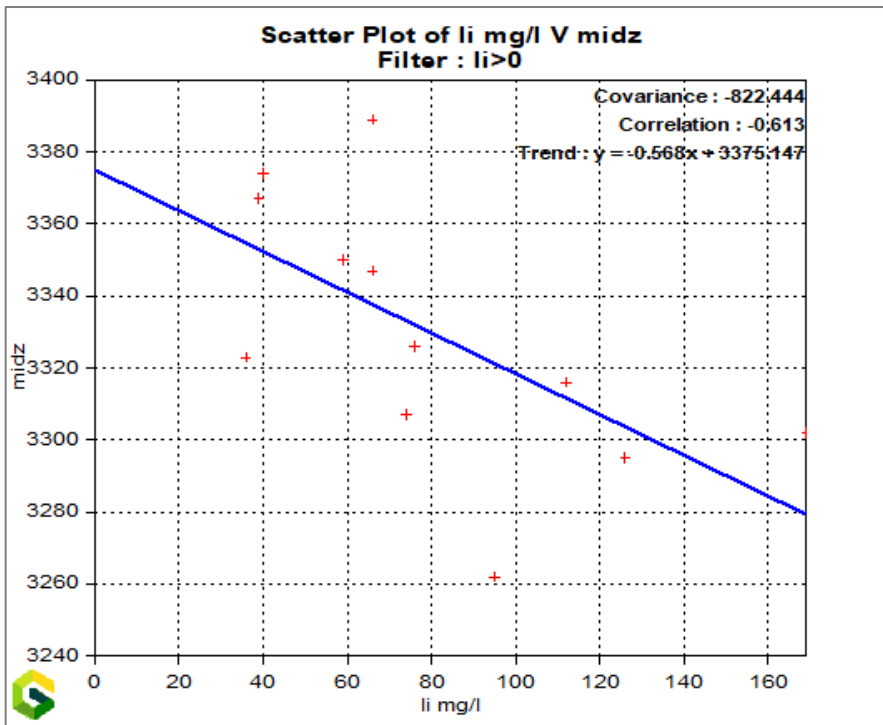


Figure 14.3 Li/depth correlation

Figure 14.4 shows the cumulative frequency of lithium for the Pocitos Salar. Due to the limited quantity of samples available, identifying outlying lithium values was difficult. Consequently, no grade capping was applied to assay results.

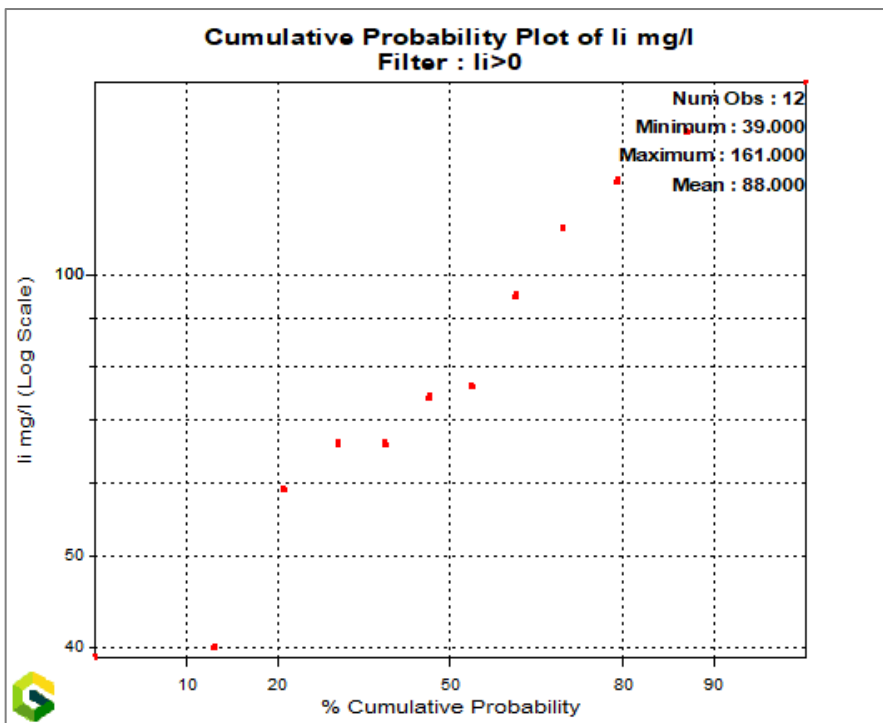


Figure 14.4 Cumulative frequency plot of Li

Figure 14.4 indicates that there are two distinct populations of lithium with a boundary of approximately 80 mg/L. Due to the limited quantity of samples available (13), it was initially thought that it would be optimum to run the estimation as a single domain. However, upon completing the first estimation run, it was statistically clear that this was not the best

approach, as the block model was overestimating sample values by approximately 60%. Therefore, WSP made the decision to run the estimation on two separate domains i.e., a high-grade domain (above 80 mg/L), and a low-grade domain (below 80 mg/L) [Figure 14.5].

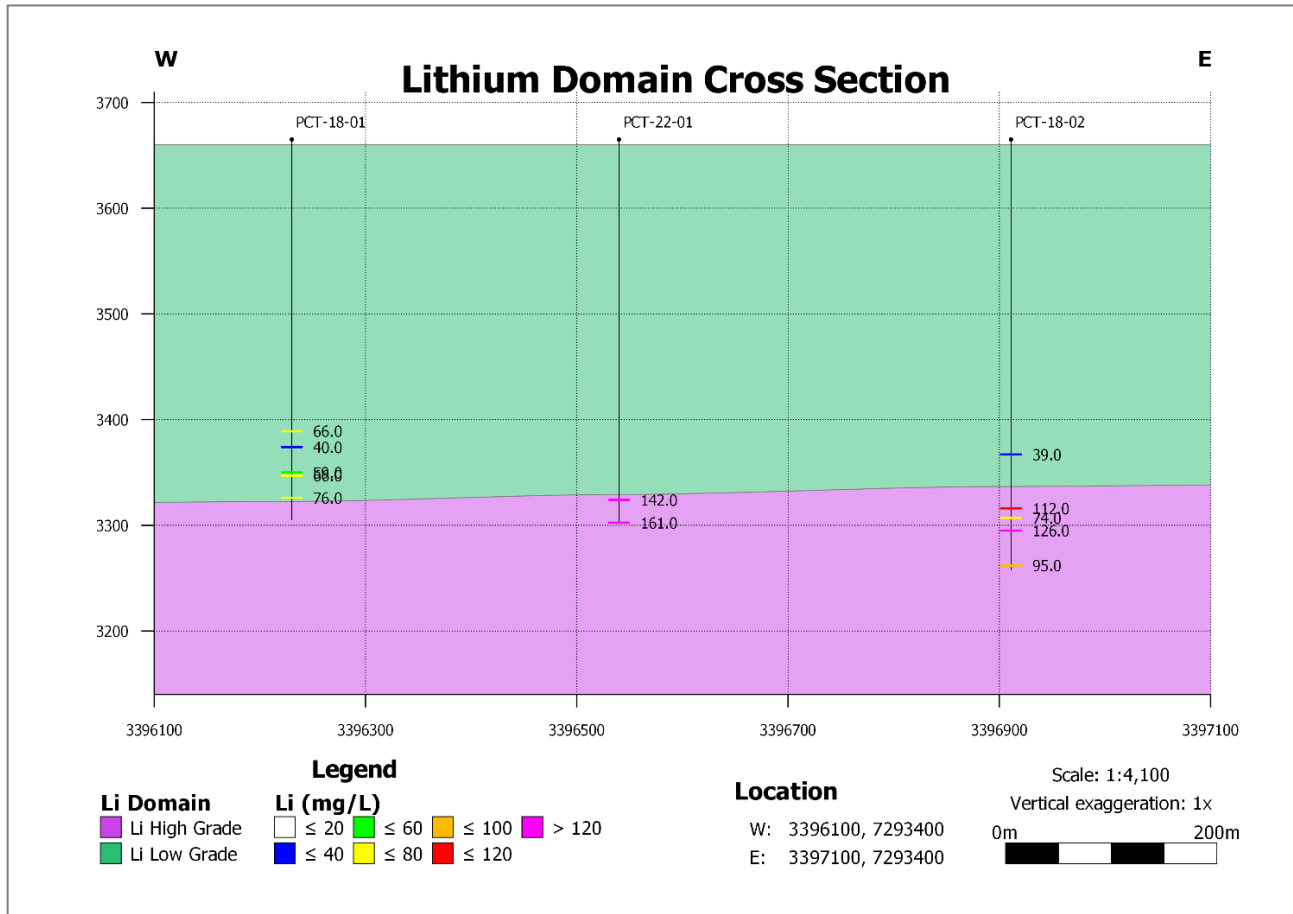


Figure 14.5 Cross-section showing the split between high-grade, and low-grade lithium domains

## 14.5 Density

Brine density was included in the SGS Argentina laboratory results, and ranges from 1.172 to 1.359 g/cm<sup>3</sup>. Results reside in the assay table of the Project drill hole database. Due to the consistency of results obtained, a default density value of 1.200 g/cm<sup>3</sup> was applied.

## 14.6 Variography

The current spatial distribution of brine samples is insufficient for statistical analysis of the hydrochemistry, hence variography was not conducted.

## 14.7 Block model interpolation

A geological block model was constructed using Maptek Vulcan™ software. The model is orientated north-south, and sub-blocked using the geological model volume wireframes exported from Leapfrog Geo™. The dimensions of the block model are summarised in Table 14.3.

Table 14.3 Block model extents and parameters

Direction	Origin (m)	Extents (m)	Parent Cell Block Size (m)	Sub-cell Block Size (m)
<b>Easting (X)</b>	3,394,720	4,950	150	50
<b>Northing (Y)</b>	7,291,330	2,700	150	50
<b>RL (Z)</b>	2,250	1,750	50	5

The parent and sub-block cell sizes were selected to provide adequate resolution of modelled domains, while providing an estimation cell of reasonable size with respect to the nominal drilling densities to ensure acceptable local estimation quality.

A parent block size of 150 m (X) by 150 m (Y) by 50 m (Z) was selected, which is compatible with the nominal drilling grid dimensions. Sub-blocks of size 50 m (X) by 50 m (Y) by 5 m (Z) were selected after validating the block model against geological model volume wireframes.

Block model variables are presented in Table 14.4.

Table 14.4 Block model variables

Variables	Description
<b>lith</b>	Lithology
<b>domain</b>	Hydrostratigraphic Domain
<b>li_domain</b>	Lithium Domain
<b>density</b>	Density
<b>li</b>	Estimated lithium mg/L
<b>li_id2_wt</b>	li ID weight
<b>li_nsamp</b>	li_nsamp
<b>li_nholes</b>	li_nholes
<b>li_dist</b>	li_dist
<b>li_xdist</b>	li_xdist
<b>li_min_wt</b>	li_min_wt
<b>li_max_wt</b>	li_max_wt
<b>li_pass</b>	li_pass
<b>mg</b>	Estimated magnesium mg/L
<b>mg_id2_wt</b>	mg ID weight
<b>mg_nsamp</b>	mg_nsamp
<b>mg_nholes</b>	mg_nholes
<b>mg_dist</b>	mg_dist
<b>mg_xdist</b>	mg_xdist
<b>mg_min_wt</b>	mg_min_wt
<b>mg_max_wt</b>	mg_max_wt
<b>mg_pass</b>	mg_pass
<b>specific_yield</b>	specific_yield
<b>rescat</b>	Resource Classification

Inverse Distance Squared (ID2) interpolation was used to estimate Li, and Mg block grades into the block model in a single pass. Grade estimation was conducted using Maptek Vulcan™ software.

The estimation parameters used are summarised in Table 14.5.

Table 14.5 ID2 estimation parameters used for estimation

Variable	Domain	Passes	Azimuth/ Plunge/ Rotation	X Search	Y Search	Z Search	Min. Samples	Max. Samples	Max. Per Hole	Anisotropic Radii (X/Y/Z)
Li, Mg	1 and 2	1	0/0/0	1,500	1,500	100	1	5	2	1/1/0.5

Notes: Discretisation 3,3,3

Mean estimated values of 107.71 mg/L for Li, and 1,602.67 mg/L for Mg for the sand-gravel domain, mean estimated values of 131.43mg/L for Li, and 1,448.80 mg/L for Mg for the high grade clay domain, and mean estimated values of 53.59 mg/L for Li, and 762.50 mg/L for the low grade domain were then applied as default values for any unestimated blocks.

## 14.8 Block model validation

A statistical and visual assessment of the block model was undertaken to:

- Assess successful application of the estimation.
- Ensure that as far as the data allowed, all blocks within the mineralised domains were estimated.
- Ensure that the estimates conducted were representative of the data, and performed as expected.

The grade model was validated using the following techniques:

- The global mean grades of the input data were compared with the global mean grades of the output block model. Table 14.6, and Table 14.7 provide the numerical validation reviewed.
- Visual validation by comparison of drill hole composite grades, with block model grades on vertical cross-sections and plans. Figure 14.6, and Figure 14.7 provides an example of the visual comparison performed.

Table 14.6 Comparison of input and model grade means for Domain 1

Element	Source	# of Samples	Min	Max	Mean	SD	Variance	CV
Li	Composite	6	74.00	161.00	118.33	28.84	831.56	0.24
	Block Model	1,437	95.00	161.00	118.27	16.87	248.74	0.14
Mg	Composite	6	1,309.00	2,521.00	1,715.83	456.27	208,183.47	0.27
	Block Model	1,437	1,309.00	2,144.00	1,533.93	215.81	46,572.21	0.14

Table 14.7 Comparison of input and model grade means for Domain 2

Element	Source	# of Samples	Min	Max	Mean	SD	Variance	CV
Li	Composite	6	39.00	76.00	57.67	13.77	189.56	0.24
	Block Model	1,437	39.00	76.00	49.12	13.09	171.27	0.27
Mg	Composite	6	22.00	1,237.00	872.33	407.39	165,963.56	0.47
	Block Model	1,437	22.00	1,111.00	771.92	285.53	81,525.10	0.37

Block grades were checked visually onscreen using Maptek Vulcan™ software and viewed in cross-sections and plans against the drill hole composites grades (Figure 14.6, and Figure 14.7). This comparison provided good correlation between the input data and estimated values. No obvious discrepancies were observed.



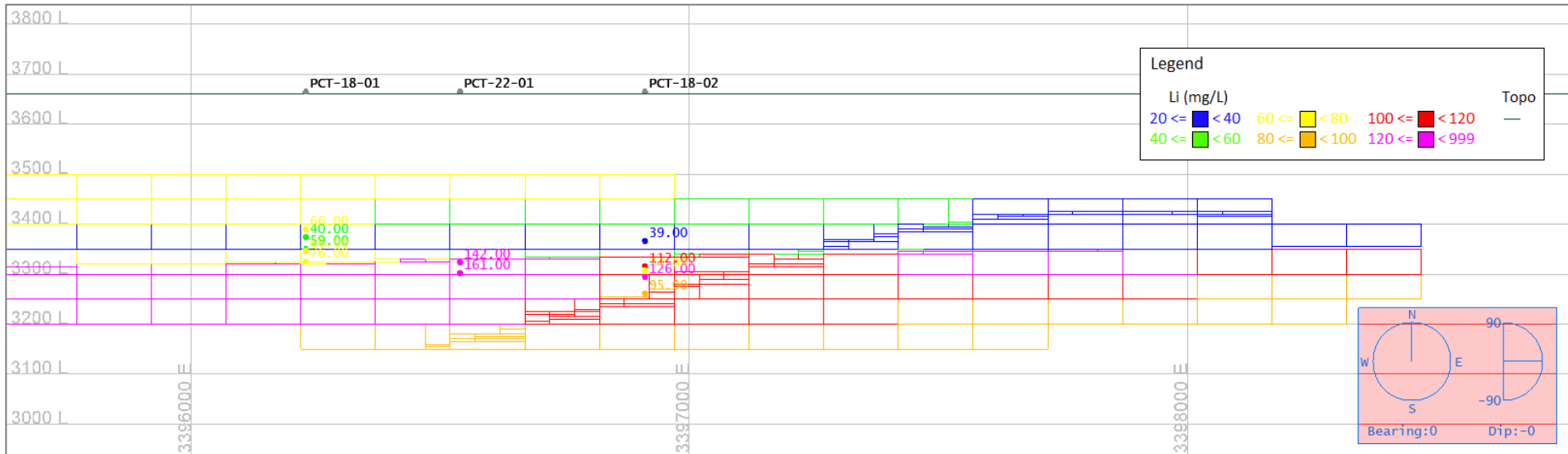


Figure 14.6 Visual long-section comparing input composites and block model estimates for Li

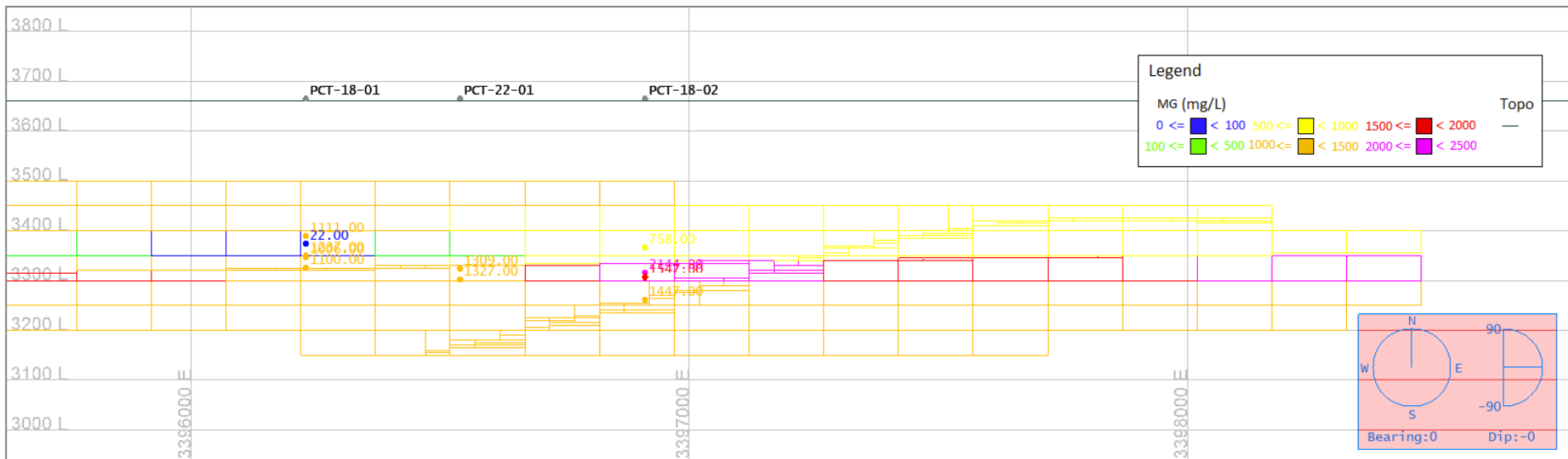


Figure 14.7 Visual long-section comparing composites and block model estimates for Mg

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## 14.9 Mineral Resource classification

Definitions for Mineral Resource categories used in this Technical Report are consistent with CIM Definition Standards for Mineral Resources and Mineral Reserves (2014). The classification of Mineral Resources at the Project incorporated confidence in the drill hole and survey data, geological interpretation, data distribution, statistical analysis, and grade estimation. 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 GPS survey data), the absence of confirmed basement contacts, and the small number of brine samples available.

Mineral Resources have only been classified for blocks estimated using the ID2 interpolation method (described in Section 14.7).

In the opinion of the Qualified Person, the Project is reasonably classified, and consistent with CIM Definition Standards for Mineral Resources and Mineral Reserves (2014).

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## 14.10 Reasonable prospects of eventual economic extraction

### 14.10.1 Specific yield

A geological model was developed for the Project for this MRE. At the MRE stage, the model supports an estimate of bulk in situ brine volume, with preliminary characterisation of brine recoverability, based on a porous media parameter known as specific yield. Porosity samples from each drill hole were tested at Core Laboratories. Results are presented in Section 9.2, and a cross-section plotting porosity data is presented in Figure 14.8.

The deepest porosity value in PCT-18-02 of 14.9% is significantly higher than the median value of 6.1%. The value is representative of a fine sand and given its close proximity to the inferred sand-gravel geological unit WSP have assigned 14.9% to the sand-gravel unit. The clay was assigned the average of the remaining values, 6.1%.

The effective porosity has been used as an approximation for specific yield. The values attributed to each geological unit are listed below:

- Sand-Gravel: 14.9%.
- Clay: 6.1%.

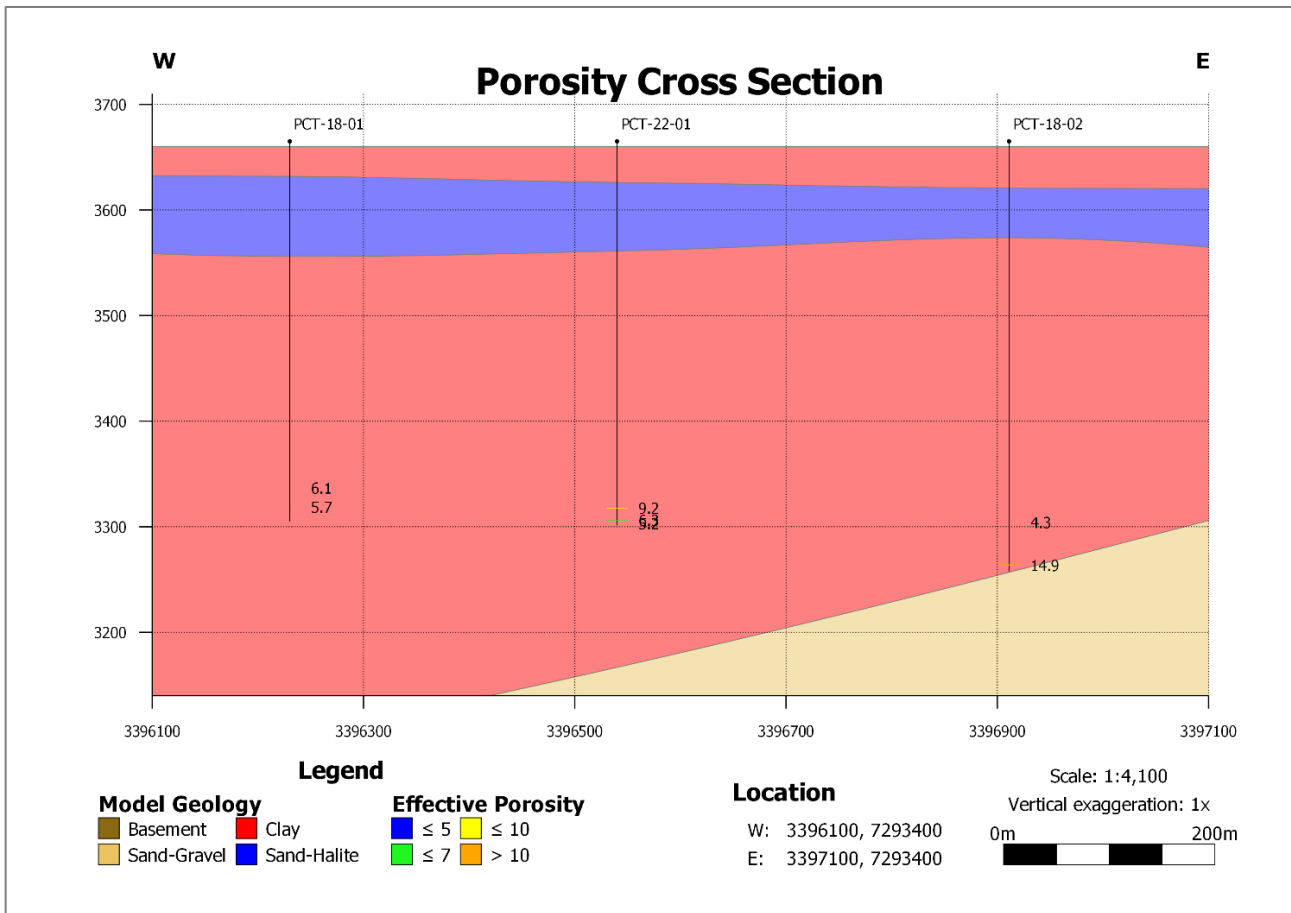


Figure 14.8 Cross-section showing the effective porosity data

### 14.10.2 Project economics

Recharge has made the following assumptions in consideration of RPEEE:

- An Ekosolve™ 20,000 tonnes per annum (tpa) lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) plant will be constructed. Recharge has executed a licence agreement for the plant.
- Ekosolve™ has indicated that subject to a number of factors, the estimated cost of the above plant would be USD\$200-245 million including a plant to produce hydrochloric acid (HCl), and  $\text{Li}_2\text{CO}_3$ .
- Operating expenditure (OPEX) is estimated at USD\$2,300 to \$2,750/tonne, plus Ekosolve™ licence fee costs of USD\$845/tonne, Argentina government royalty costs of USD\$760/tonne, for a total of USD\$4,355/tonne Free on Board (FOB).
- Estimated recovery from 600L of brine processed to date is 94%, having achieved 94.9% in pilot plant work, and 99.42% purity  $\text{Li}_2\text{CO}_3$ .
- Discussions held with potential off-take partners in November 2023 indicated a 99.5%  $\text{Li}_2\text{CO}_3$ , which will be the production grade produced.
- At the current (4 December 2023)  $\text{Li}_2\text{CO}_3$  price of US\$16,573/tonne, annual revenue is estimated at USD\$338 million.

## 14.11 Mineral Resource estimate

The MRE for the Project is classified and reported in accordance with the CIM Definitions, CIM Guidelines, and NI 43-101 guidelines. The effective date of the MRE is 18 December 2023.

Mean specific yield values outlined in Section 14.10.1 were applied to the total metal tonnages to obtain the yield from the available brine. The LCE is calculated from the ratio of lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) to Li (5.32). The calculations assume no process losses.

The specific processing methodology to be employed at the Project is yet to be determined, as is the minimum COG. The processing methodology likely to be utilised by Recharge at the Project requires a 100 ppm feed grade (1 ppm is equivalent to 1 mg/L).

Of the total MRE, 37.6% of the brine volume is above a 100 ppm lithium COG, of which the low-grade lithium clay domain is 0%, the high-grade lithium clay domain is 87.9%. and the sand-gravel domain is 57.4%.

Additional cost and pricing assumptions supporting RPEEE are presented in Item 14 of this Technical Report.

Table 14.8 presents the MRE for the Project. While a COG is not yet defined, Table 14.9 presents the MRE with a COG of 100 ppm to highlight the grade difference between the clay unit, and the sand-gravel unit below.

Table 14.8 Project MRE with no lithium COG applied

Category	Domain	Sediment Volume (m <sup>3</sup> )	Specific Yield (%)	Brine Volume (m <sup>3</sup> )	Li Grade (mg/L) <sup>1</sup>	Li Metal (kt) <sup>2</sup>	Li Yield (kt)	LCE (t) <sup>3</sup>	Mg Grade (mg/L) <sup>1</sup>	Mg Metal (kt)	Mg Yield (kt)
Inferred	Sand-Gravel	464,425,000	14.9	69,199,325	107.7	50	7	40	1,602.7	744	111
	Clay High Li	392,500,000	6.1	23,942,500	131.4	52	3	17	1,448.8	569	35
	Clay Low Li	768,387,500	6.1	46,871,638	53.6	41	3	13	762.5	586	36
<b>Total Inferred</b>		<b>1,625,312,500</b>		<b>140,031,463</b>	<b>100.7</b>	<b>143</b>	<b>13</b>	<b>70</b>	<b>1,297.4</b>	<b>1,899</b>	<b>181</b>

**Notes:** (1) Grade values are the average estimated value for the domain in the Vulcan™ Block Model, (2) Total in-situ contained lithium metal, (3) Extractable LCE, (4) No recovery, dilution or other similar mining parameters have been applied, (5) Although the Mineral Resources presented in this Technical 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.

Table 14.9 Project MRE with a 100 ppm lithium COG applied

Category	Domain	Sediment Volume (m <sup>3</sup> )	Specific Yield (%)	Brine Volume (m <sup>3</sup> )	Li Grade (mg/L) <sup>1</sup>	Li Metal (kt) <sup>2</sup>	Li Yield (kt)	LCE (t) <sup>3</sup>	Mg Grade (mg/L) <sup>1</sup>	Mg Metal (kt)	Mg Yield (kt)
Inferred	Sand-Gravel	266,762,500	14.9	39,747,613	117.1	31	5	25	1,718.0	458	68
	Clay High Li	344,912,500	6.1	21,039,663	136.4	47	3	15	1,449.1	500	30
	Clay Low Li	0	6.1	0	0.0	0	0	0	0.0	0	0

Category	Domain	Sediment Volume (m <sup>3</sup> )	Specific Yield (%)	Brine Volume (m <sup>3</sup> )	Li Grade (mg/L) <sup>1</sup>	Li Metal (kt) <sup>2</sup>	Li Yield (kt)	LCE (t) <sup>3</sup>	Mg Grade (mg/L) <sup>1</sup>	Mg Metal (kt)	Mg Yield (kt)
<b>Total Inferred</b>		<b>611,675,000</b>		<b>60,787,275</b>	<b>128.7</b>	<b>78</b>	<b>8</b>	<b>40.0</b>	<b>1,577.7</b>	<b>958</b>	<b>99</b>

**Notes:** (1) Grade values are the average estimated value for the domain in the Vulcan™ Block Model, (2) Total in-situ contained lithium metal, (3) Extractable LCE, (4) No recovery, dilution or other similar mining parameters have been applied, (5) Although the Mineral Resources presented in this Technical 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.

The Mineral Resources presented in this Item are not Mineral Reserves, and do not reflect demonstrated economic viability. The reported Inferred Mineral Resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. There is no certainty that all or any part of this Mineral Resource will be converted into Mineral Reserve. All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

Based on the geological results presented in this Technical Report, supported by the assumptions made by Recharge (presented in Section 14.10), it is the Qualified Person's opinion that the Mineral Resources have RPEEE. Further exploration, and technical studies are required to confirm the economic feasibility of the project, and to allow the estimation and reporting of a Mineral Reserve.

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## 14.12 Change from previous Mineral Resource estimate

No previous MRE has been prepared and reported.

# 15 Mineral Reserve estimates

Item 15 is not required, as the Project is not considered an advanced property.

# 16 Mining methods

Item 16 is not required, as the Project is not considered an advanced property.

# 17 Recovery methods

Item 17 is not required, as the Project is not considered an advanced property.



# 18 Project infrastructure

Item 18 is not required, as the Project is not considered an advanced property.

# 19 Market studies and contracts

Item 19 is not required, as the Project is not considered an advanced property.

## 20 Environmental studies, permitting, and social or community impact

Item 20 is not required, as the Project is not considered an advanced property.

# 21 Capital and operating costs

Item 21 is not required, as the Project is not considered an advanced property.

# 22 Economic analysis

Item 22 is not required, as the Project is not considered an advanced property.

## 23 Adjacent properties

Figure 23.1 shows the properties adjacent to the Project, and in the nearby area. Little information has been made public regarding the exploration efforts by adjacent owners. File No. 19465 optioned by C29 Metals Ltd (C29 Metals) from Ekeko achieved lithium assay values of 121 ppm, but was located approximately 25 km from the Pocitos I concession.

The Qualified Person has been unable to independently verify the information presented in this Item, and the information is not necessarily indicative of the mineralisation at the Project that is the subject of this report. The Qualified Person has not used the information from the adjacent properties in the preparation of the MRE presented in this report.

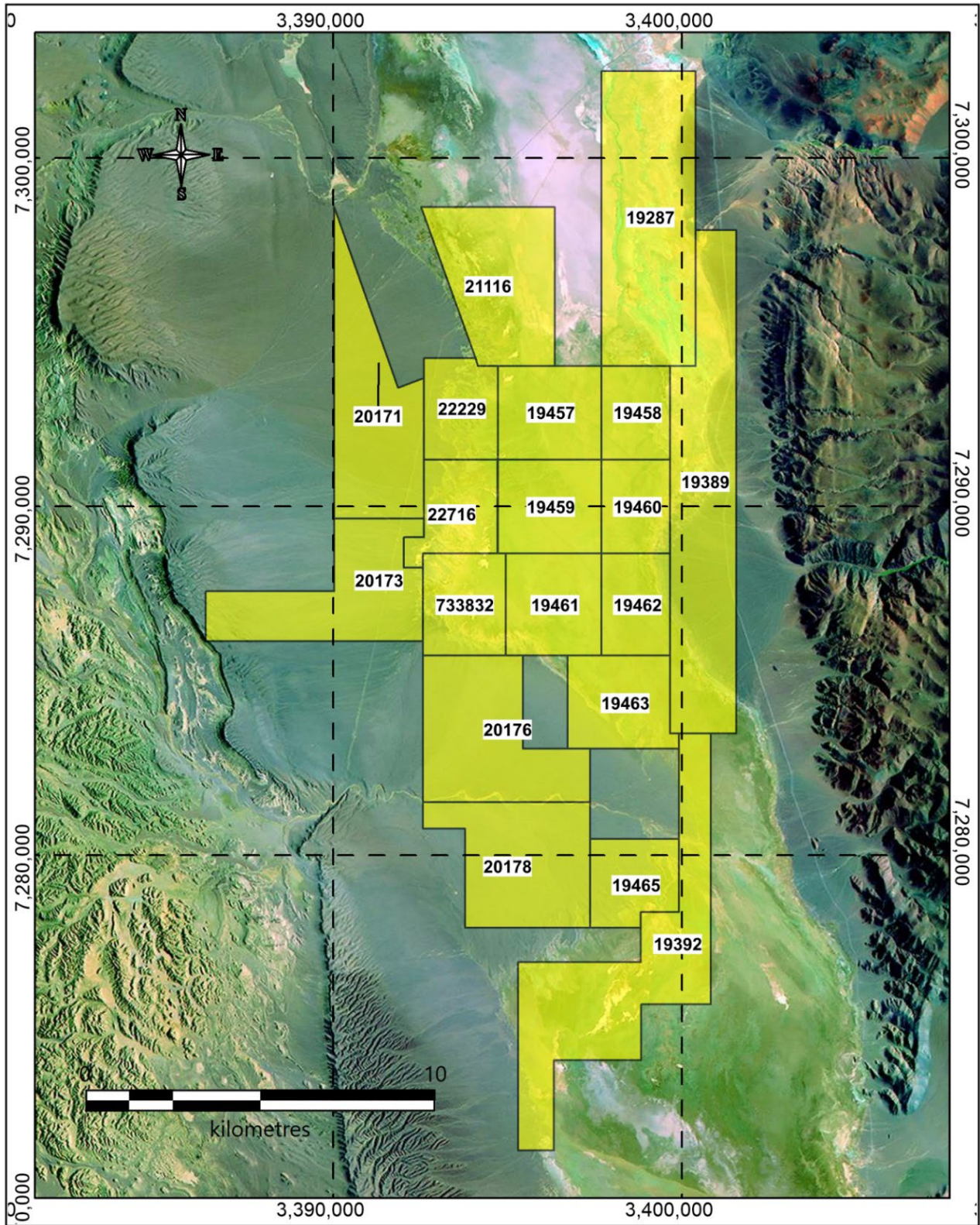


Figure 23.1 Adjacent concessions to Pocitos I (19457), and II (19458) in Posgar 2007, Argentina 3 [Panopus, 2023]

# 24 Other relevant data and information

The following information has been extracted from Ganam (2021). This preliminary study was prepared mainly for the purpose of obtaining exploration drilling permits. Aside from this information, there are no other relevant data to disclose that has not already been covered in this Technical Report.

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## 24.1 Environmental studies in Argentina and Salta

Mining operations in Argentina are regulated by the National Mining Code (National Law 24.196) and are enforced by the provinces. Argentina is a Federal Republic, and therefore the Provincial government is in charge of establishing the rules for mining activities and issuing environmental permits. The Mining and Energy Secretariat of the province of Salta is the enforcement authority for mining and environmental issues. Permits are granted by multiple ministries within the Salta Government, however, the engagement and permitting process is coordinated by the Provincial Mining Secretariat.

The EIS is the main permit required for mining operations and includes the conditions and rules for such operations and is compliant with the Law of Environmental Protection for the Mining Activity (Law 24.585) and complementary regulations. The EIS is normally prepared by an external environmental consultant based on detailed information for the project. The consultant updates the environmental baseline, analyses the potential alternatives for the project against current legislation, assesses the environmental impacts. Also, the EIS process defines several environmental management plans and a community engagement process. The EIS is then submitted to the Mining Secretariat, which in turn involves other provincial secretariats and groups (Environment, Water Resources, Industry, Energy, and others as applicable) in the review. After the review process with all these groups is completed, the Mining and Environmental Secretariats prepare a preliminary report for approval.

A Public Audience organized by Mining Secretariat with the involved communities is then held to discuss the results of the preliminary report. After the Public Audience, the Mining Secretariat provides final approval. The time for this approval is typically between 6 and 9 months, depending on the complexity of the project. It is important to note that results of the Public Audience are not binding.

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## 24.2 Environmental studies

At the beginning of 2021, the EIS was presented for the exploration stage of the Pocitos I concession (Ganam. 2021). In March of the same year, the EIS was approved by the environmental authorities of the Mining Secretariat in Salta Province. The EIS proposed the drilling of two diamond cored exploration wells to a maximum depth of 400 m. These wells were later executed. For the realisation of the wells, permanent facilities such as a camp and accessories were not built (only temporary), with a minimum of personnel for drilling and geological control tasks. In August 2022, this permit was updated with an addendum for specific conditions related to drilling. During drilling operations, brine from the salt flat was utilised, for which extraction pits were excavated in the vicinity of the wells. Water for human consumption was transferred from Pocitos township. It is noteworthy that biodegradable additives were used for drilling.

Given the scope of the operations, no significant environmental impacts were recorded on geomorphology, landscape, surface water, groundwater, air quality, flora, or fauna during exploration drilling.

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## 24.3 Environmental baseline studies

No specific environmental baseline studies have been conducted for the Project's area of influence. In this case, a bibliographic compilation in Ganam (2021) of the main disciplines of geology, geomorphology, soil and land uses, climate, hydrogeology, and flora and fauna was made. In the area of influence of the Pocitos I concession, there are no records of sites of cultural, archaeological, and/or paleontological value or importance; however, a field study is



recommended according to the activities conducted, and to be conducted in the future. As part of the baseline studies, protected natural areas and the social elements of the Project are discussed in the following sections.

### 24.3.1 Social

The town of Pocitos, which is the closest population centre, is approximately 10 km from the Pocitos I project. According to the 2010 census, Pocitos has a permanent population of approximately 200 inhabitants. It has lodging infrastructure, a primary school, no cell phone service, satellite television service, electricity supply, restaurants, and limited merchandise supply.

The San Antonio de Los Cobres Hospital is the closest complex center, and is located approximately 75 km from the town of Pocitos. This center has more than 30 inpatient beds, and professionals of differing specialties.

San Antonio de los Cobres has more urban characteristics than other communities due to having a larger population (approximately 2,000). These include additional public institutions, and more commercial activity. The main economic activities in San Antonio de los Cobres are employment in public administration, trade, craft industries, and since the last decade, small industries related to tourism and mining. Current mining-related employment includes direct employment, and indirect employment such as jobs in transportation, lodging, dining, grocery stores, vacation homes, and offices.

Companies with activities in the Puna Region co-ordinate their activities directly with the local communities.

Except for San Antonio de los Cobres, as the most important town-city of Los Andes Department, all communities share similar rural characteristics. The main activities in the area have been historically related to small-scale livestock (mainly camelid) production. Settlement patterns, and spatial dispersion vary with livestock pasturing movements.

Mining is considered to be one of the most important sources of work for the residents of these communities, only preceded by animal husbandry. Also, manual labour, and a growing tourism sector contribute to the local economy.

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## 24.4 Total impact and management plan

The impacts on geomorphology and landscape due to the construction of access roads, and slabs to exploration wells were considered negligible and reversible, therefore the affect was considered to be temporary after the application of corrective measures at the conclusion of works. Within the surface of the salar, there are no developed soils, therefore the impact of the operations is considered null in terms of its current and potential use. The volumes of water that will be used both for future drilling wells, and subsequent pumping tests are low compared to the natural recharge of the salt flat, so the impact is considered insignificant. In the same way, gas emissions from vehicles and machinery used in the operation, as well as the production of Particulate Matter (PM) are considered insignificant for the impact on air quality in the area. Since the surface of the salt flat is devoid of flora, there will be no impact. The Project is far from freshwater vegas, and from sites that can serve the fauna as a refuge and feeding areas. Even though the noise produced by the movement of the operations may affect the fauna, this impact is minor and reversible, given the temporary nature of exploration works.

Prior to initiation of exploration works, and as part of the communication plan, informative meetings are held with the community. Planned activities are explained in detail, as well as the potential for environmental impacts. Positive impacts include local employment, and the purchase and use of local goods and services.

An environmental contingency plan is created in view of the potential for accidental spills of fuel, lubricants, and other substances used in operations, as well as the prevention and mitigation of possible employee accidents. No environmental incidents have been reported since exploration works commenced.

# 25 Interpretation and conclusions

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## 25.1 Property and title

The Qualified Persons are not aware of any significant factors and risks that may affect access, title, or the right or ability to perform proposed work programs at the Project.

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## 25.2 Mineral Resources

The Qualified Person notes that the procedures for drilling, sampling, sample preparation, and analyses are appropriate for lithium brine projects, and estimation of Mineral Resources.

Inferred Mineral Resources total 143 kt at 100.7 mg/L lithium.

The classification of Mineral Resources conforms to CIM Definitions, and Mineral Resources are reported in accordance with NI 43-101.

The Mineral Resources were estimated as of 18 December 2023, constrained within conceptual mineralised domain wireframes. The estimate assumes no process loss, and RPEEE have been considered as follows:

- An Ekosolve™ 20,000 tpa  $\text{Li}_2\text{CO}_3$  plant will be constructed. Recharge has executed a licence agreement for the plant.
- Ekosolve™ has indicated that subject to a number of factors, the estimated cost of the above plant would be USD\$200-245 million including a plant to produce HCl, and  $\text{Li}_2\text{CO}_3$ .
- OPEX is estimated at USD\$2,300 to \$2,750/tonne, plus Ekosolve™ licence fee costs of USD\$845/tonne, Argentina government royalty costs of USD\$760/tonne, for a total of USD\$4,355/tonne FOB.
- Estimated recovery from 600L of brine processed to date is 94%, having achieved 94.9% in pilot plant work, and 99.42% purity  $\text{Li}_2\text{CO}_3$ .
- Discussions held with potential off-take partners in November 2023 indicated a 99.5%  $\text{Li}_2\text{CO}_3$ , which will be the production grade produced.
- At the current (4 December 2023)  $\text{Li}_2\text{CO}_3$  price of US\$16,573/tonne, annual revenue is estimated at USD\$338 million.

The Mineral Resources have been estimated in conformity with CIM Guidelines, and are reported in accordance with NI 43-101.

Risks associated with the MRE are:

- Minor risks associated with modelled contacts.
- The current spatial distribution of brine samples is insufficient for statistical analysis of the hydrochemistry, hence variography was not conducted.

Future application of more advanced, project specific extraction, processing, recovery, economic, and other factors in developing a more robust RPEEE assessment may affect the MRE tonnages, and grades.

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## 25.3 Caution to readers

This Technical Report contains forward looking information related to the Project. There are many factors that could cause actual results to differ materially from any conclusions set out in this Technical Report. Some of the material

factors include changes to regulatory framework development and issues with approval of exploitation licenses, differences from the assumptions made in this report regarding concentration assays, drilling results, pumping rates, porosity and transmissivity of aquifers, and other circumstances such that the project proceeds, as described in this Technical Report. Potential risks associated with the Project are typical for lithium projects, and may include, but are not limited to laboratory error, uncertainty in hydrogeologic conceptualisation, permitting and legal delays, and logistical issues associated with mining in remote areas. For this reason, readers should read this summary solely in the context of the full Technical Report and after reading all other items of this Technical Report. The purpose of this Technical Report is to describe the Project and the exploration work completed to date.

Based on recent results from exploration drilling and geophysical surveys, the aquifer underlying the Project is saturated with a concentrated lithium brine grading up to 169 ppm lithium. The aquifer is more than 350 m deep, and is mostly comprised of clastic clays. In the western portion of the concessions, close to the edges of the basin, the aquifer may be deeper, and brine chemistry may contain increased concentrations of lithium.

The geophysical surveys show that the aquifer thickens to the west and to the south, however drilling is yet to confirm this. It is important to note that, the geophysics surveying conducted to date supports the idea that relatively deep sediments contain very low resistivity lithologies, and gas may be confined to a certain portion of the aquifer and support the flow of brine from surrounds.

## 26 Recommendations

Based on the initial results of drilling, and geophysical surveying conducted to date, additional exploration activities are justified to better characterise the sub-surface brine within the concession. Additional drilling and testing will allow for expansion of the resource laterally, throughout the concession area.

It is recommended that additional diamond cored exploration wells with depth-specific sampling at regular intervals be completed to better define the brine chemistry in those areas identified by the MT survey as possessing resistivities of just 0.4  $\Omega$ .m. Additional drilling and testing will allow for estimation of an initial MRE and will support future estimation and reporting of a Mineral Reserve.

It is recommended that an additional drilling phase consisting of a single diamond cored exploration well (drilled to a maximum of approximately 500 mbls), and a single pumpable well drilled and constructed to depths to be determined based on the results of the diamond cored exploration well. Drilling of the diamond cored exploration well should include depth-specific brine sampling using an inflatable packer, and laboratory analysis of core for drainable porosity values (specific yield), hydraulic conductivity, and particle size distribution. Additionally, downhole BMR surveys should be conducted in the proposed diamond cored exploration well to obtain vertical profiles of specific yield.

For the proposed two well program, costs (excluding tax, in USD) can be summarised as follows:

- Roads and drilling platforms: \$10,000.
- Environmental studies: \$40,000 (includes baseline study for production).
- Drilling HQ diamond cored exploration well: \$275,000.
- Drilling 8 inch pumpable well: \$400,000.
- Field monitoring and supervision: \$40,000.
- Development and reporting of a maiden MRE: \$100,000.
- Geophysical surveying and reporting: \$70,000.

Total estimated cost of approximately USD\$935,000 (plus taxes), or CAD \$1,300,00 (plus taxes) for the proposed two well program.

If the results of the proposed exploration program are favourable and support feasibility of a lithium extraction project, additional studies should include the following:

- Drilling and establishment of a second production well.
- Further development of the existing hydrogeological model, including additional refinement of hydrogeological units critical to aquifer definition.
- Additional studies in support of the development of a PEA study.
- Additional studies in support of a PFS, or FS to support the estimation and reporting of an initial Mineral Reserve for the Project.

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