February 15, 2024
Technical Report

RESULTS OF YEARS 2022 AND 2023 EXPLORATION ACTIVITIES
SALAR DE RIO GRANDE PROJECT
SALTA PROVINCE, ARGENTINA

Prepared for:

NOA Lithium Brines Inc.

Prepared by:

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1 SUMMARY

This Technical Report has been prepared by Michael Rosko of Montgomery & Associates (M&A) Consultores Limitada for NOA Lithium Brines Inc. (NOA). The purpose of this report is to provide an initial geological assessment of NOA's Rio Grande Project (the Project or Rio Grande Project) which NOA currently holds a significant interest in, as further described in this Technical Report, to support its advancement with respect to future characterization and development of the lithium brine contained within the salar. The Project is located in the Salar de Rio Grande basin (the salar) in the Salta provincial boundaries, within the Puna Region of northwest Argentina. The report was written by Michael Rosko, an independent qualified person (QP) as defined by National Instrument 43-101, and currently employed by E. L. Montgomery & Associates, Inc. (Montgomery, or M&A) based in Tucson, Arizona, United States.

The salar is an evaporite basin with demonstrated brine in the subsurface that is enriched with lithium. The Project is still in an early phase of exploration. Salar de Rio Grande is in the Central Andes of Argentina and within the "Lithium Triangle" of Argentina, Bolivia, and Chile.

This report focuses on the recent exploration activities conducted during years 2022 and 2023. Text from previous work conducted by third parties on adjacent properties is included (Hains, 2018). The focus of this report is on updating the following:

- Exploration activities – mainly new drilling of exploration wells
- Brine sampling from exploration wells
- Maiden lithium in-site project resource estimate
- Recommendations for future activities based on the completed exploration activities.

Reliance on Other Experts

The QP relied on the work of Hains (2018) for results from the exploration activities on adjacent properties included in this report. The QP also relied on Sebastian Virgili of Pérez Alsina Consultores Mineros for the title opinion, "Due diligence and mining properties report – Río Grande Project", dated February 1, 2024, for information regarding ownership and legal standing of the mining concessions. Regarding that document, some modifications of the Project mining concessions were informed by NOA to be considered within this technical report, and the QP relied on that information. Information on adjacent properties was also provided by NOA.

Property Description

The Project is located in the Rio Grande salt lake, or “salar” in the Salta province, in northwest Argentina, about 500 kilometers (km) from Salta, and approximately 220 km south of the town of Estación Salar de Pocitos. The Project is in the Argentinean Puna, at an elevation of approximately 3,660 meters above sea level (masl). The majority of the land controlled for the Salar de Rio Grande project has been secured under an agreement with existing owners and claimants. The Rio Grande Project currently consists of 22 Exploitation Project Concessions (minas) totaling 37,263.5 hectares (ha) registered in the Province of Salta.

Accessibility, Physiography, Climate, Local Resources and Infrastructure

The nearest town with services (such as a hospital, lodging facilities, and a school) is San Antonio de Los Cobres, which is approximately 340 km to the northeast. The nearest large city is Salta, located about 500 km to the northeast of the Project area. The most common access to the Project is from the city of Salta, along national route RN-51 to San Antonio de Los Cobres, then a provincial route RP-27 to the abandoned Mina La Casualidad. Finally, secondary roads lead to the areas where concessions are located. Local resources in the area are very basic. Most supplies are brought from Salta or San Antonio de Los Cobres. Main infrastructure in the zone consist in an electrical power line (375 kV), a natural gas pipeline (Gasoducto de la Puna) between Salta (Argentina) and Mejillones (Chile) and a railway between Antofagasta (Chile) and Salta (Argentina). NOA possess a camp with capacity for 50 to 60 people available for the development of exploration works. Facilities are located on the eastern edge of the Salar de Rio Grande.

The physiography of the region is characterized by extensive depressions and basins separated by mountain ranges, with marginal canyons cutting through the Western and Eastern Cordilleras and numerous volcanic centers, particularly in the Western Cordillera. Locally, the project is located at Salar de Rio Grande. The elevation at the surface of the salar is approximately between 3,660 and 3,670 masl and in the concession areas of the project, elevation ranges between 3,600 and 4,800 masl.

The climate in the Project area is characterized as a cold, high altitude desert. The main rainy season is between December through March. Average annual rainfall at zone stations varies from 37 to 77 millimeters (mm). Solar radiation is intense, leading to extremely high evaporation rates. Strong winds are frequent in the Puna, reaching speeds of up to 80 kilometers per hour (km/hour) during the dry season.

History

There has been no past exploration or mining for lithium brines on the NOA tenements in Salar de Río Grande, which has a rich history as a source of sodium sulfate in the region since the 1940s. Historically, small companies exploited the salar for sodium sulfate.

Geological Setting

The Salar de Rio Grande is located in the Puna Geological Province (Turner, 1972) and within the Puna Austral Geological Sub-province (Alonso et al., 1984a). One of the most important characteristics that defines the Geological Province of Puna is the presence of evaporitic basins, or "salars," where important deposits of borates, sodium sulfate, and lithium can concentrate.

The oldest rocks that outcrop in the area are of Upper Permian age and correspond to La Tabla Formation/Llullaillaco Plutonic Complex, which is located in the northeast section of the area. The Tabla Formation is composed of porphyries, breccias, ignimbrites, and lavas of dacitic-rhyodacitic-rhyolitic composition with fine-grained dykes intrusions of dacitic to andesitic composition.

The Tabla Formation/Llullaillaco Plutonic Complex is covered by the Vizcachera Formation which is divided into a lower member composed of sandstone, pellites, and red conglomerates, and an upper member composed of medium to coarse conglomerates with intercalations of fine silt beds and sandy layers. The Vizcachera Formation outcrops in the east side of the basin and lies unconformably above the Geste Formation (which is not exposed in the immediate area) and unconformably with overlying formations.

The Permian and Miocene units are intruded by Lower and Upper Miocene stratovolcanoes that include dacitic-andesitic lava flows and intrusions of dacitic and rhyodacitic domes integrated by the Quebrada del Agua, Cori, and Cave complexes located in the north of the geologic map.

In some areas Lower Miocene vulcanites are covered by Sijes Formation of Upper Miocene age, which is composed of fine to medium-grained sandstone and sandstone conglomerates. Outcrops of the Sijes Formation are distributed along the edges of the Rio Grande Salar and interrupted by pyroclastic flows and ignimbrites in the south border of the salar.

Lower and Upper Pliocene age volcanic rocks including Archibarca ignimbrite are distributed in the southeast, south, and southwestern area of Rio Grande. The volcanics are represented by a set of eroded stratovolcanoes, porphyry lavas, dykes, domes, and pyroclastic deposits of andesitic and rhyodacitic composition.

Pleistocene Los Caletones ignimbrite is present in the form of an extended subhorizontal mantle in the surroundings of the La Casualidad mine and it lays with unconformity on lower Pliocene lavas.

Pleistocene age basalts are present on the upper margins of the basin on the west side of Rio Grande. These are often associated with ignimbrites of similar age and unconformably overlie almost all the units that make up the regional stratigraphic column.

Quaternary sediments are abundant in the vicinity of the salar evaporitic crust. These sediments are forms of alluvial-colluvial deposits represented by alluvial fans, wind-blown sands, and stream and valley fillings.

Deposit Types and Dimensions

The deposit type is a brine aquifer within a salar basin. Based on the available information, Salar de Rio Grande appears to be a mature salar according to classification developed by Houston (2011). Based on results of exploration conducted by third parties (Hains, 2018), the lithology recognized in the salar is dominated by highly fractured gypsum-filled, sandy halite. There are some indications of the presence of karstic structures (caverns) within the evaporite sequences. These have presumably formed due to freshwater inflow dissolving sodium-sulphate and/or mirabilite. The overall impact of these conditions is a highly porous matrix, at least until 100 meters (m) of depth, with some heterogeneity across the salar, leading to potentially very high pumping rates in some areas.

Recent exploration works described later in this report also confirm that lithium-enriched brine in the sedimentary sequences on the edges of the basin, in addition to the interbedded halite aquifer found within the salar boundaries.

Prior Exploration Works

Several exploration activities conducted by third parties have occurred on adjacent properties within salar boundaries since 1998. These have included surface brine sample and shallow auger drilling in 1998, shallow surface sampling, borehole samples, and borehole drilling and testing in 2011, surface geophysical survey and borehole drilling and testing in 2017. Lithium concentrations obtained by ADY Resources (ADY) in borehole samples in 2011 ranged from 220 to 420 milligrams per liter (mg/L), showing a trend to increasing lithium values with depth. Surface sampling results indicated an average lithium concentration of 380 mg/L (Hains, 2018).

In 2011, an exploration drilling, sampling, and testing program was designed by ADY, to evaluate potential of the Salar de Rio Grande for sodium sulphate (Hains, 2018). The drilling program included 1,653.45 m of drilling in 35 HQ-diameter diamond drill holes. Coreholes covered the majority of the salar surface with a spacing of 1 to 2 km between each hole. Most of the coreholes were drilled to about 50 m with 2 holes drilled to 75 m and 100 m. Packer sampling of brine was conducted every 6 m down hole. Samples were assayed for all major elements and parameters, including lithium (Hains, 2018). Eight pumping wells, two piezometric monitoring wells, and two exploration wells were drilled in support of redeveloping Salar de Rio Grande as a sodium sulphate producer. The wells were drilled using rotary methods to 15-inch (") diameter and constructed with 8" diameter PVC casing; the boreholes were logged for Spontaneous Potential (SP) and Short Normal and Long Normal resistivity prior to installing casing. Results of pumping tests for the wells indicated highly variable transmissivities depending on location, with values ranging from 354 meters squared per day (m^2/day), to 30,454 m^2/day (Hains, 2018).

A closed source audio magnetotelluric (CSAMT) surface geophysical survey was conducted in 2017 by LSC Lithium (LSC) to obtain a preliminary understanding of the underlying stratigraphy of the basin, to identify potential geologic structures, and to identify future potential locations for exploration wells (Hains, 2018).

In 2017, an exploration drilling program was conducted by LSC. A total of eight coreholes were drilled to verify the historic ADY drill hole and sampling data in support of an initial resource estimate. Holes were drilled to depths of 100 m and provided sufficient drill hole density for classification of the resource at the Inferred Resource level (Hains, 2018).

Exploration in Year 2022

Initial exploration carried out by NOA has been concentrated in concessions that are located within salar surface and those that are located close to the borders of the evaporitic deposit. Geophysical surveys using the Vertical Electrical Soundings (VES) method were done by AMINCO during April 2022 at the Project concession. Goals of the surveys were to obtain a preliminary understanding of the underlying stratigraphy of the Project property, identify potential geologic structures, identify fresh water/brine interfaces (if present), and to be able to identify future locations for exploration wells. Interpretation of the results of the geophysical surveys indicate that shallow groundwater might be present on the edges of the salar toward colluvium fan within the first 10 to 20 m of depth. Also, interpretation of these VES surveys indicates that as much as 300 mm of brine saturated sediments occur in the salar. Basement rock was not detected.

Also, a surface water and shallow brine sampling campaign was conducted by AMINCO and M&A in April 2022. Laboratory chemical results for the April samples indicate that a lithium-enriched brine occurs in the Project concessions located in the west-central part of the basin. Samples obtained closer to the edge of the salar indicate that some mixing with fresh water is occurring in the upper part of the aquifer. However, geophysical results support the conceptualization that dense brine, likely enriched with lithium, occurs below the brackish water that occurs in the upper part of the aquifer.

Exploration in Year 2023

Four previously-unreported exploration wells have been drilled in 2023 using the Diamond Drill Hole (DDH) method with core recovery, including DDH-RG23-001, DDH-RG23-002, DDH-RG23-003, and DDH-RG23-004 with depths of 613, 641.5, 676 and 551 m, respectively. At the time this report is written, well DDH-RG23-005 has been completed although lab assays results are still pending. During drilling operations, brine samples were obtained at different depths using a double packer system, and core samples were selected and sent to the laboratory for drainable porosity analysis. Wells DDH-RG23-001, DDH-RG23-003 and DDH-RG23-004 were cased with 2” PVC. Well DDH-RG23-002 was abandoned because the drill rods became stuck inside the borehole during drilling, and could not be pulled out. A new well has been drilled at the same location, but has not been completed at the time of this report..

These exploration wells confirmed initial interpretations from VES, showing significantly depths to bedrock. Drilling have gone as deep as 676 meters within the salar area, and bedrock has not been found.

Sample Collection, Preparation, Analysis and Security

Sample collection, preparation, analysis, and security applies for initial surface sampling programs and for samples obtained during exploration drilling. Samples were bottled on site; paperwork was completed in the field. Field parameters including temperature, electrical conductivity, and pH were obtained for the samples and recorded. All samples were labeled with permanent marker, sealed with tape, and stored at a secure site, both in the field and in Salta. NOA personnel delivered the samples to SGS Laboratory and to Alex Stewart or Induser Group laboratories.

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Resource Estimate

The method employed to estimate lithium resources corresponded to the industry-accepted polygon method. The overall process consists of constructing concentric circles around the exploration wells. Indicated and inferred initial polygons were traced within the salar based on guidelines by Houston et al. (2011) for mature salar systems; for Measured, Indicated and Inferred resources, the range between exploration wells is given as 4, 7 and 10 km, respectively, which means radius of 2, 3.5 and 5 km for the respective category. After intersecting with project concessions and limiting them by geologic conditions, polygons and assigned resource categories were determined. The polygon construction process resulted in a total area of approximately 19 km^2.

Significant lithium concentrations have been found in all drilled exploration wells. In general, lithium grade values showed an increasing trend with depth, which has been observed in other similar lithium-rich aquifer systems in the region. Lithium grade in depth was characterized by intervals to use representative values for estimating resources. Resulting weighted average lithium concentration values per well were 687, 462, 511 and 620 mg/L for wells, DDH-RG23-001, 002, 003 and 004, respectively.

Considering the significant exploration depths of the wells (there may be different degrees of compaction and cementation), the important distance between wells and concessions, local analyses and discretization were conducted to define, for each well, estimation units or packages were drainable porosity values, interbedding level and lithologic predominance have some consistency. Resulting weighted average drainable porosity values per well were 8.9, 7.9, 3.7 and 9.4% for wells, DDH-RG23-001, 002, 003 and 004, respectively.

The same lithium concentration and drainable porosity are assumed laterally continuous for different estimation layers within a given polygon. Due to different vertical discretization established for lithium grade, a 1-meter interval was defined as numerical composite for calculations, in order to account for depth-specific changes of either parameter based on the exploration results. Resource estimates were calculated by multiplying the polygon area by the unit thickness by the drainable porosity by the lithium grade calculated for corresponding intervals.

The following table summarizes the current Salar de Río Grande resource estimate for lithium. (the reader is cautioned that mineral resources are not mineral reserves and do not have demonstrated economic viability):

Summary of Estimated Measured, Indicated, and Inferred Resources

Total Summary	Brine volume (m^3)	Avg. Li (mg/L)	In Situ Li (tonnes)	Li_2CO_3 Equivalent (tonnes)
Measured	4.5E+08	621	278,000	1,478,000
Indicated	1.4E+08	585	83,000	441,000
Measured + Indicate	**5.9E+08**	**612**	**361,000**	**1,919,000**
Inferred	1.1E+08	610	70,000	371,000

Notes:
Mineral Resources that are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that any or all of the Mineral Resources can be converted into Mineral Reserve after application of the modifying factors.
The conversion factor used to calculate the equivalents from their metal ions is simple and based on the molar weight for the elements added to generate the equivalent. The equations are as follows: Li x 5.3228 = lithium carbonate equivalent (Li_2CO_3).
Tonnages are rounded to the nearest thousand and grades are rounded to the nearest whole number, comparison of values may not add due to rounding.

Adjacent Properties

Adjoining or nearby properties to the Rio Grande Project on salar surface include the following:

- Lithium S Corporation S.A. (LSC), a company currently owned by Lítica Resources, a Pluspetrol company who acquired lithium mining properties and rights from LSC, as explained below, holds large tenements in both Salta and Catamarca provinces. These areas are mainly in the salar surface and surround the Project properties.
- Pursuit Minerals Limited holds the Isabel Segunda and SALRIO01 concessions.
- The Rio Grande I and Demasia Rio Grande I concessions are currently believed to be registered as vacant.
- Anglogold Argentina Exploraciones S.A. holds tenements on west side of the salar next to western Project properties.
- Martin Guillermo Novara contests that he holds the Nahuel 19 concession, but it is being challenged.
- Minas Argentinas S.A. holds the Arizaro I concession.
- Minera El Toro S.A. holds the El Camino concession
- Pursuit Minerals Limited holds a cateo concession

Originally, many of the concessions in the Rio Grande salar belonged to LSC (through Lithium S Corporation S.A.); at the end of 2018, LSC was purchased by Litica Resources under a commercial agreement, becoming the current owner of concessions in Rio Grande. However, the acquired concessions continue to be registered in the name of LSC on the mining registry of the Salta province.

Adjacent properties to the Rio Grande Project outside the salar surface include the following:

- A B Minerales Argentina holds a cateo concession
- Anglogold Argentina Exploraciones S.A. holds tenements in west side of the salar next to west Project properties
- Astrali S.A. with Marcopolo I concession
- LSC controls the Guadalupe Norte concession

Conclusions

The Rio Grande Lithium Project is at an early stage of exploration, but has advanced its on-site exploration, sampling, and testing in support of estimating Measured, Indicated and Inferred resources. The work in the last year has substantially increased the understanding of the conceptual model of the basin and has allowed the estimation of a maiden lithium resource. Results of 2023 exploration program has confirmed the concept of brine enriched in lithium occurs in the basin, beneath NOA concessions even in surroundings alluvial fan areas located north of the salar boundary (well DDH-RG23-001 location). Abundant brine samples from the concession areas have been obtained and analyzed, and demonstrate relatively large lithium concentrations on par with few other similar projects in the region (most of them already in operation or under construction).

In general, lithium grade values show an increasing trend with depth, which has been observed in other similar lithium-rich aquifer systems in the region. Estimated Measured, Indicated and Inferred resources contain 1,478,000 tonnes Measured, 441,000 Indicated LCE, and 371,000 Inferred LCE.

The QP has extensive experience in salar hydrogeology. Techniques to evaluate the resource incorporate the best available technology and practice. The resource calculation includes information of acceptable quality and has been validated. The consistency and quality of the data on the Project support the conclusion that a portion of the brine resource could be extracted commercially for the production of lithium products; additional investigation regarding process methods and economic grades should be investigated.

Recommendations

Based on the initial results of exploration to date, additional exploration activities are justified to better characterize the subsurface brine in the concessions. To date, four exploration wells have been drilled and sampled. We recommend additional drilling and testing that will allow for development of an initial resource for the Project concessions.

The second phase of this program also includes the drilling of two exploration wells, located in the same location as wells DDH-RG23-001 and DDH-RG23-003. Those new wells will be drilled to the same depths as the nearby coreholes; pumping test would be conducted determine hydraulic parameters for the aquifer and to determine composite brine chemistry that would be helpful in determining processing methods.

After completion of the ongoing drilling exploration, we recommend the development of a conceptual model, followed by construction of a 3-D block model capable of estimating an initial resource for the Project.

Recommended future exploration may include conducting a gravimetry survey to interpret depth-to-basement, as a technical or hydrogeologic basement has not been defined yet. As other similar lithium-rich aquifer systems in the region have shown an increasing lithium concentration in depth tendency, depth-to-basement information could positively impact the resources estimate and future exploration goals.

Transient Electromagnetic (TEM) surface geophysical surveys are suggested to preliminary understand the underlying stratigraphy outside of the salar, identify potential geologic structures, and confirm presence of potential zones of conductive saline fluids at depth (Hanson, 2019). This could have special focus on: Indicated alluvial areas related to DDH-RG23-001; Indicated and Inferred areas located west of DDH-RG23-003, specially under lava flows currently classified as Inferred; and Inferred resources estimated further than 300 meter east from salar boundary, related to DDH-RG23-004.

We also recommend as many as four additional pumping wells designed to provide information to allow construction and calibration of a groundwater flow model capable of estimating a lithium Reserve. The locations for these wells would be determined following completion of the initially-proposed exploration activities.

Finally, we recommend preparation of an updated NI 43-101 report following the proposed new exploration and modeling activities.

2 INTRODUCTION

This Technical Report has been prepared by Michael Rosko of Montgomery & Associates (M&A) Consultores Limitada for NOA. The purpose of this report is to provide an initial geological assessment of NOA's Rio Grande Project (the Project) which NOA currently holds a significant interest in, as further described in this Technical Report, to support its advancement with respect to future characterization and development of the lithium brine contained within the salar. The report was written by Michael Rosko, an independent Qualified Person (QP) as defined by National Instrument 43-101.

The Project area is located in the Salar de Rio Grande basin (the salar) in the Salta provincial boundaries, within the Puna Region of northwest Argentina. The salar is an evaporite basin comprising enriched lithium brine concentrations and within the Central Andes of Argentina and the "Lithium Triangle" of Argentina, Bolivia, and Chile. The mining concessions of the Project total 37,263.5 ha. The Project is located southwest from Salar de Arizaro and northwest from Salar de Archibarca and Salar de Antofalla.

The Author prepared this technical report of the exploration activities carried out in years 2022 and 2023. Exploration activities are ongoing as of the writing of this report in 2024.

2.1 Authorship and Terms of Reference

The Author is responsible for compiling, editing, and verifying the Report for regulatory compliance and assumes responsibility for all sections of the report. Mr. Rosko is a Registered member of Society for Mining, Metallurgy, and Exploration (SME), and has more than 10 years of experience designing and evaluating lithium brine projects and is an independent QP as defined by NI 43-101 guidelines. Mr. Rosko is independent of NOA.

Mr. Rosko and associated staff of M&A prepared the Report using the format NI 43-101 Technical Report – Standards of Disclosure for Mineral Projects including Form 43-101F1 – Technical Report and Companion Policy 43-101CP.

Mr. Rosko visited the Rio Grande Project on April 8, 2022, and independently obtained brine samples from shallow auger holes and surface water; the samples were submitted to SGS Laboratory at Salta, Argentina for analysis.

Mr. Rosko has managed projects in The United States, Bolivia, Chile, Colombia, Argentina, Perú, and Mexico and served as General Manager for M&A's Santiago de Chile office until late 2023. During his 38-year career at M&A, he has developed new water supplies and assessed aquifer conditions for mining operations in arid environments, both in the southwestern U.S. and in the desert "salar" regions of South America. Mr. Rosko's responsibilities have included designing wells and wellfields, characterizing regional hydrogeologic systems, analyzing groundwater chemistry, designing and implementing monitoring programs, and integrating satellite image analysis into water supply. Mr. Rosko has been characterizing lithium brines in salar-type environments in Argentina and Chile since 2009.

2.2 Sources of Information

Aside from the direct information obtained during the 2022 and 2023 exploration program on the Project, the following sources were used to prepare this Report:

- Hains Engineering Company Limited, 2018. Technical Report on the Salar de Rio Grande Project, Salta Province, Argentina, Report for NI 43-101 prepared on behalf of LSC Lithium, Corp.
- Data, reports, and other information supplied by NOA Lithium and other third-party sources.

Some of what is in the report has been modified or copied directly in this report (referenced) from Hains (2018), because the LSC Lithium (Currently owned by Litica) Project area is adjacent and many of the conclusions from the report are relevant to the current Project.

2.3 Statement for Brine Mineral Prospects & Related Terms

Brine Mineral Resource and Reserve estimates are not "solid mineral deposits" as defined under the Canada Institute of Mining (CIM) (2003, 2010, and 2012) standards, and Ontario Securities Commission (2011) published staff notice 43-704 for mineral brine projects. However, there are sufficient similarities to mineral deposits that the guidelines published by the CIM are followed for this 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. 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 life of mine.

3 RELIANCE ON OTHER EXPERTS

In the previous NI 43-101 document, the QP relied on Sebastian Virgili of Pérez Alsina Consultores Mineros for the title opinion, titled "Due diligence and mining properties report – Río Grande Project", and dated February 1st, 2024, for information regarding ownership and legal standing of the mining concessions. Some modifications of the Project mining concessions were informed by NOA to be considered within this technical report, and the QP relied on that information. Information on adjacent properties was also provided by NOA.

4 PROPERTY LOCATION AND DESCRIPTION

4.1 Location

The Project is located in the Rio Grande salt lake or "salar" in the Salta province, in northwest Argentina, about 500 km from Salta, and approximately 220 km south of the town of Estación Salar de Pocitos. The Project is in the Argentinean Puna, at an elevation of approximately 3,660 masl. Project location is shown on **Figure 4-1** and **Figure 4-2.**

To access the project area, travel 275 km from Salta on the national route No. 51, crossing the town of San Antonio de Los Cobres to the town of Pocitos. Afterwards, continue along Provincial Route No. 27 (RP-27), approximately 84 km, until Tolar Grande village. Finally, travel along RP-27 road for 140 km to reach the north part of the salar, where there are secondary roads that leads to the concessions on the salar and surroundings.

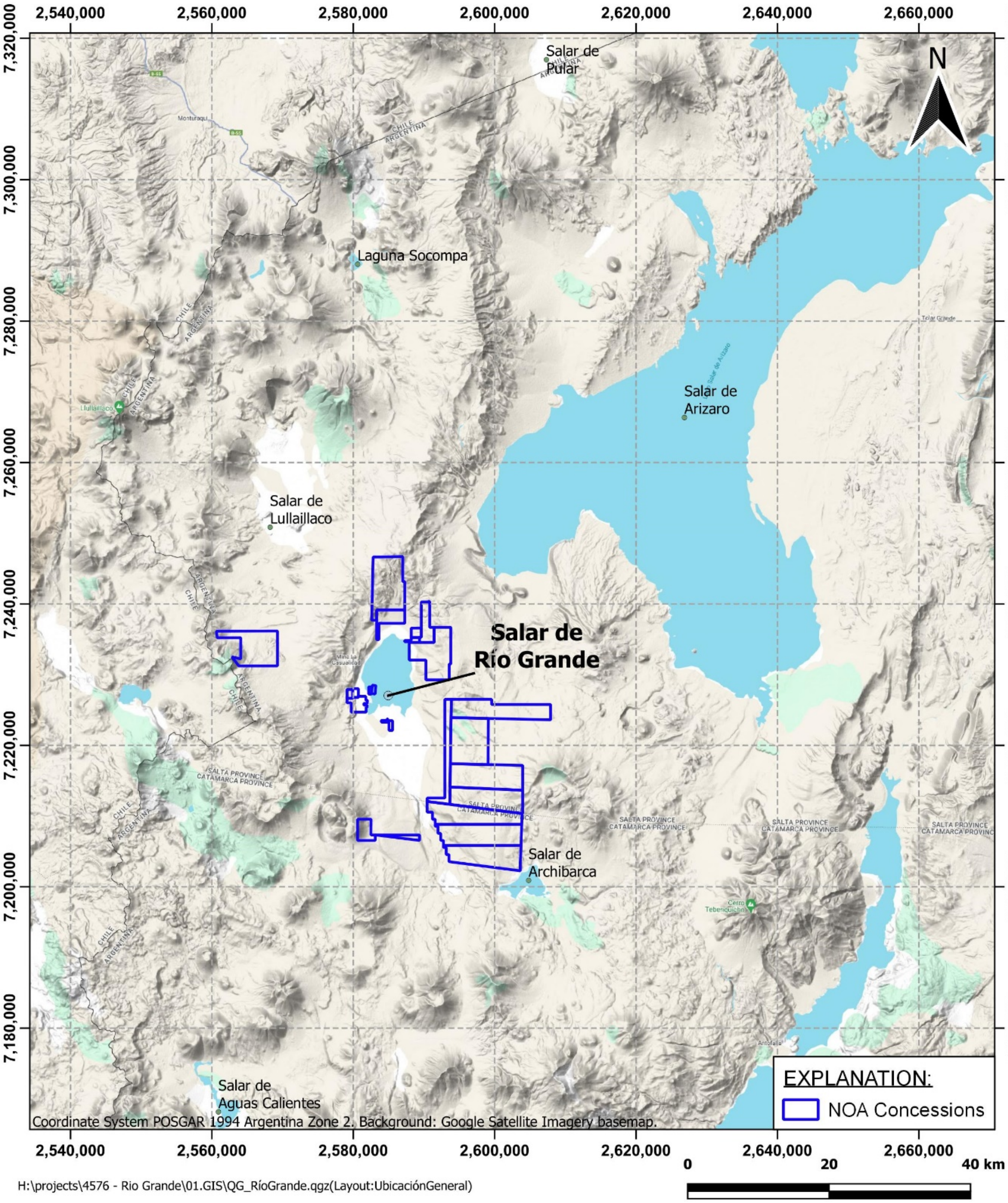


Figure 4-1. Regional Location Map of the Project Concession Areas

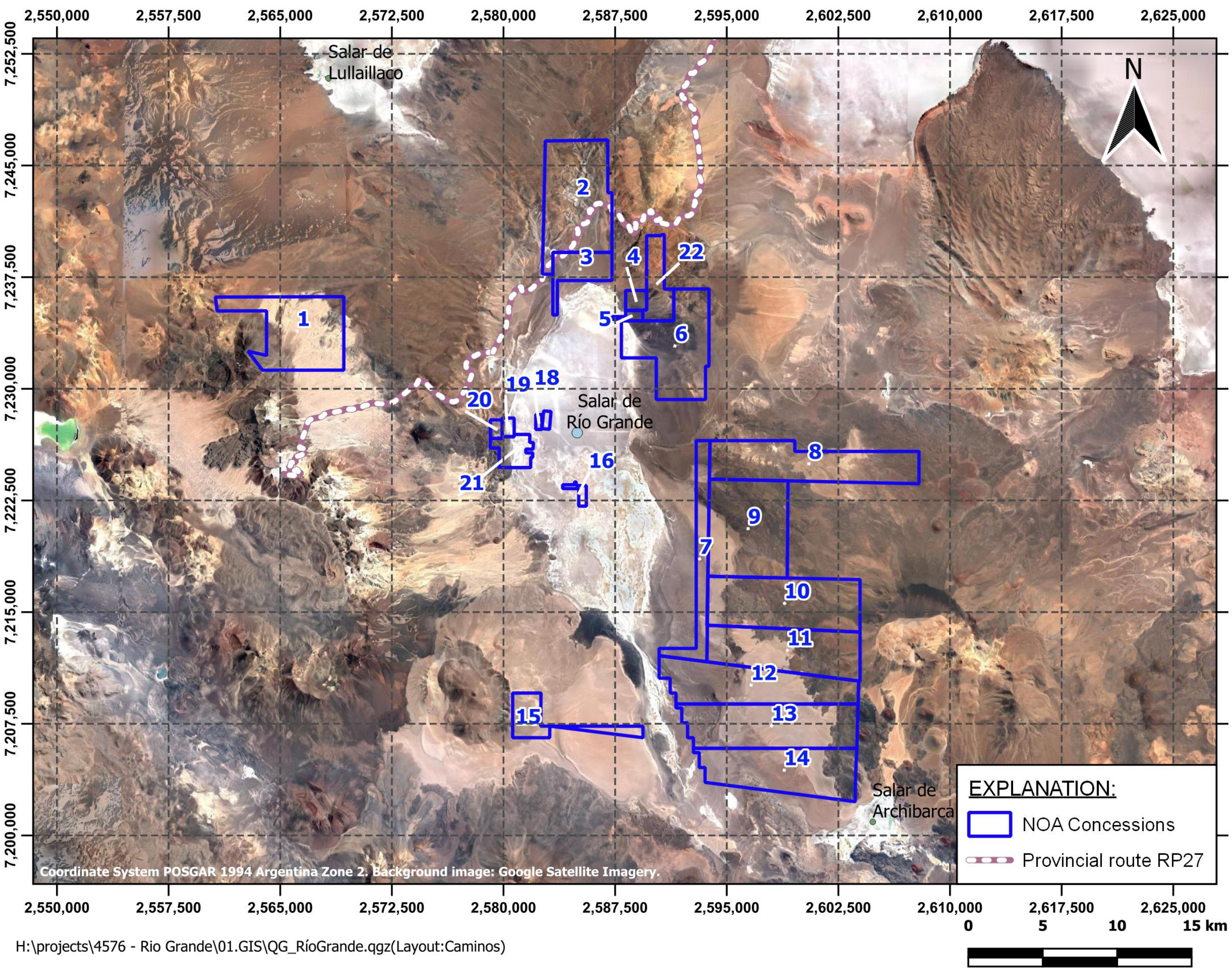


Figure 4-2. Location and Access to the Project, Argentina

4.2 Description of Property

The Rio Grande Project currently consists of 22 Exploitation Concessions (minas) totaling 37,263.5 ha registered in the Province of Salta (the "Project Concessions" or "Mining Rights"). The Rio Grande project is located in what is called the Lithium triangle, formed by the provinces of Jujuy, Salta, and Catamarca in the Puna Argentina, the demand for the mineral has led to the commencement of exploration activities in the Salar. The locations for the concessions are shown on **Figure 4-3**.

Pursuant to Section 18 of the Argentine Mining Code, the term of duration of mines is perpetual, provided that the owner complies with the requirements to keep title in good standing. The entire process towards concession of a mine, and the subsequent procedure to maintain the concession valid and in force, is performed in a judicial title file at the Mining Court of Salta. Once a title to a mine is granted through said concession, the holder must comply with certain obligations in order to keep such title in good standing, and conduct mining activities. Some of these obligations are:

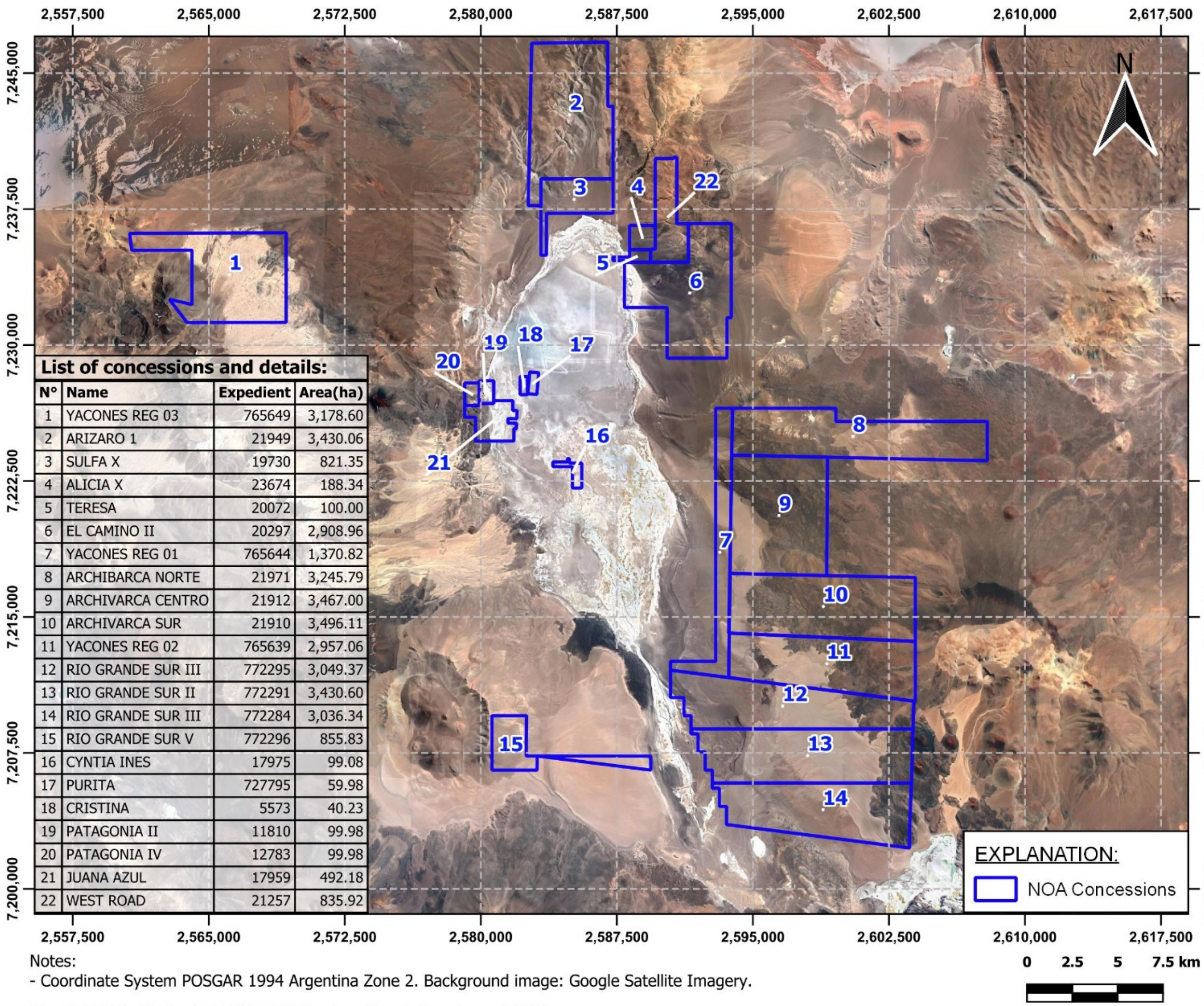
i. Pay an annual canon in two installments due the day prior to the beginning of each calendar semester. Payment of canon is only due as from 3 years after the concession of a mine is granted and therefore some of the Mining Rights are not yet subject to this canon payment obligation (this is the situation of the Mining Rights in Chart 1 where it says "Does not pay yet").

ii. Performance of mandatory works ("labor legal") to be conducted on the mine site in order to determine its potential and characteristics for exploitation. Evidence of this labor legal must be filed with the Mining Court.

iii. A measurement or survey request defining the boundaries of the mine requested by the concessionaire, followed by some procedural steps that end up with the demarcation of said boundaries on the site.

iv. File a mining investment plan in each mine´s file. Once approved by the Mining Court, the holder of the mine must file annual affidavits during the following 5 years, reporting compliance with such plan.

In addition to the aforementioned obligations to keep the mine in good standing, prior to any mining activity, the title holder (concessionaire) must submit the respective environmental impact report (EIR), which extension and complexity depends on whether the activities to be carried out in the mine will involve prospection, exploration or construction and exploitation. The EIR must be evaluated and further approved by the Mining and Energy Secretariat with a *Declaración de Impacto Ambiental* (DIA) and must be renewed, at a maximum, every 2 years.



N°	Name	Expedient	Area(ha)
1	YACONES REG 03	765649	3,178.60
2	ARIZARO 1	21949	3,430.06
3	SULFA X	19730	821.35
4	ALICIA X	23674	188.34
5	TERESA	20072	100.00
6	EL CAMINO II	20297	2,908.96
7	YACONES REG 01	765644	1,370.82
8	ARCHIBARCA NORTE	21971	3,245.79
9	ARCHIVARCA CENTRO	21912	3,467.00
10	ARCHIVARCA SUR	21910	3,496.11
11	YACONES REG 02	765639	2,957.06
12	RIO GRANDE SUR III	772295	3,049.37
13	RIO GRANDE SUR II	772291	3,430.60
14	RIO GRANDE SUR III	772284	3,036.34
15	RIO GRANDE SUR V	772296	855.83
16	CYNTIA INES	17975	99.08
17	PURITA	727795	59.98
18	CRISTINA	5573	40.23
19	PATAGONIA II	11810	99.98
20	PATAGONIA IV	12783	99.98
21	JUANA AZUL	17959	492.18
22	WEST ROAD	21257	835.92

Notes:
- Coordinate System POSGAR 1994 Argentina Zone 2. Background image: Google Satellite Imagery.

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Figure 4-3. Location Map of the Project Concession Areas

If requirements (ii), (iii) and (iv) are not met in a timely manner, the Mining Court shall notify the concessionaire and give a deadline for its remediation.

Failure to do so by the concessionaire allows the Mining Court to cancel the mining concession and declare the vacancy of the mine.

In case of non-compliance with requirement (i), 2 months after the one annual period non-compliance with the payment, the concession will be cancelled ipso facto and the concessionaire may recover the mine if, within a non-renewable term of 45 days after being notified thereof, concessionaire pays the canon due plus a 20% penalty.

The Argentine Mining Code provides that mining claims once granted as concessions also grant the concessionaire legal access and occupation rights over the surface, by way of an easement on the area of said concessions.

All the Project Concessions controlled by NOA for the Salar de Rio Grande project (37,263.5 ha) lie on fiscal (public) surface lands of the Province of Salta and therefore no agreement is needed, nor any indemnity is due to the Province, owner of said lands. This free use of fiscal lands for mining activities is provided for in Section 158 of the Argentine Mining Code, which states that, if the surface land corresponding to a concession belongs to the State or Municipality, its use will be free of charge for the concessionaire.

All of NOA Project Concessions include the right to take possession and perform exploration and evaluation works, and further construction and exploitation activities, in the properties. No royalties, back-in rights or similar agreements are included, unless expressly stated otherwise.

The Rio Grande Project Concessions were acquired by NOA by means of: 1. Direct applications made before the Mining Court of Salta for new mining concessions; and 2. Exploration with Purchase Option agreements executed with third parties, owners of the respective mining concessions, according to the following agreements:

i) Agreement for the exploration and option to purchase a 100% interest in a mineral property known as the El Camino II located in the Los Andes Department in the Province of Salta, Argentina. To earn the interest the following must be completed:

   Pay US$75,000 by May 13, 2022;
   Pay US$100,000 by November 13, 2022;
   Pay US$150,000 by May 13, 2023;
   Pay US$350,000 by November 13, 2023; and

Pay US$525,000 by May 13, 2024.

Additionally, if the option is exercised in full the purchaser must issue the vendor a 1% Net Smelter Royalty ("NSR") only over gold, silver, zinc, copper and lead (does not include lithium or any other minerals). The purchaser must also pay an additional $1,000,000 to the vendor if the property is included in a definitive feasibility study within 30 days from the announcement of a construction decision or the beginning of commercial production at any scale, whichever happens earlier.

ii) Agreement for the exploration and option to purchase a 100% intertest in mineral properties known as Juana Azul, Cristina, and Cyntia Ines, located in the Los Andes Department in the Province of Salta, Argentina. To earn the interest the following must be completed:

Pay US$10,000 by February 18, 2022;
Pay US$252,400 by March 30, 2022;
Pay US$252,400 by August 29, 2022;
Pay US$252,400 by February 28, 2023; and
Pay US$494,800 by August 28, 2023.

iii) Agreement for the exploration and option to purchase a 100% intertest in mineral properties known as Sulfa X and Alicia X, located in the Los Andes Department in the Province of Salta, Argentina. To earn the interest the following must be completed:

Pay US$7,000;
Pay US$80,000 by March 30, 2022;
Pay US$300,000 by September 30, 2022; and
Pay US$460,000 by March 30, 2023.

iv) Agreement for the exploration and option to purchase a 100% intertest in a mineral property known as Teresa, located in the Los Andes Department in the Province of Salta, Argentina. To earn the interest the following must be completed:

Pay US$5,000 March 18, 2022;
Pay US$10,000 by May 27, 2022;
Pay US$25,000 by August 27, 2022;
Pay US$25,000 by November 27, 2022; and
Pay US$20,000 by April 27, 2023.

v) Agreement for the exploration and option to purchase a 100% intertest in mineral properties known as Patagonia II and Patagonia IV, located in the Los Andes Department in the Province of Salta, Argentina. To earn the interest the following must be completed:

Pay US$10,000;
Pay US$10,000 by April 30, 2022;
Pay US$6,666 by October 27, 2022;
Pay US$6,666 by April 30, 2023; and
Pay US$41,668 by October 22, 2023.

vi) Agreement for the assignment and transfer of mining rights in exchange for one single payment, in mineral properties known as Yacones RG 01, Yacones RG 02, Yacones RG 03, Yacones RG 04, Archivarca Sur and Archivarca Center, located in the Los Andes Department in the Province of Salta, Argentina. To earn the interest NOA has completed a payment of US$500,000.

All payments due under the agreements mentioned in paragraphs i) to vi) have been already made by NOA, with the only exception of the last payment mentioned in paragraph i) related to the purchase option of El Camino II, in the amount of US$525,000, that will be due by May 13, 2024. Therefore, with the exception of El Camino II, all the other Project Concessions under the aforementioned agreements have been transferred or are in the process of being transferred to NOA.

Details of Project concessions including status, type of concession, and terms of agreement are given in **Table 4-1**. Georeferenced information of the area covered by current tenements are given in **Table 4-2**.

Table 4-1. File Information for the Project Property Areas

Property name	File number	Year	Area (Ha)	Type	Mineral	Registration date	Environmental Impact Report Resolution	Environmental Impact Report Expiry	Last Canon payment	Type of agreement
Cristina	5,573	1966	40	Mine	Sodium sulfate, lithium and borates	Granted to Minera Rio Grande SA. Later transferred to NLB and registered on its behalf in February 6th 2023	Advanced Exploration (brine lithium drilling) approved by Resolution 005/23 dated February 2nd 2023.	Expiry: February 3rd 2025	1st Sem 2024	Acquired by NLB through exploration contract with purchase option of mining properties dated February 18th 2022. NLB exercised the purchase option and was transferred to it.
Patagonia II	11,810	1983	100	Mine	Sodium sulfate and chloride, lithium and borates	Registered in the name of Surnatrons SA in 1984. Later was transferred to Grupo Cesan S.A., and from it to Aminco SRL. Now was transferred to NLB in November 3rd 2023	Advanced Exploration (brine lithium drilling) approved by Resolution 128/23 dated November 11th 2023.	Expiry: December 14th 2025	1st Sem 2024	Acquired by NLB through exploration contract with purchase option of mining properties dated March 23rd 2022. NLB exercised the purchase option and was transferred to it.
Patagonia IV	12,783	1986	100	Mine	Salt, lithium and borates	Granted to Surnatrons SA on 24/02/84. Transferred to Grupo Cesan S.A. on 12/06/15. Granted to Surnatrons SA inFebruary 24th 1984. In June 12th 2015 was transferred to Grupo Cesan S.A., and from it to Aminco SRL. In November 3rd 2023 was transferred to NLB	Advanced Exploration (brine lithium drilling) approved by Resolution 128/23 dated November 11th 2023.	Expiry: December 14th 2025	1st Sem 2024	Acquired by NLB through exploration contract with purchase option of mining properties dated March 23rd 2022. NLB exercised the purchase option and was transferred to it.
Cyntia Ines	17,975	2004	99	Mine	Sodium sulfate, lithium and borates	Granted to Juan Manuel Medina in 2006. Later transferred to NLB and registered on its behalf in February 6th 2023	Advanced Exploration (brine lithium drilling) approved by Resolution 006/23 dated February 2nd 2023.	Expiry: February 3rd 2025	1st Sem 2024	Acquired by NLB through exploration contract with option to purchase mining properties dated February 18th 2022. NLB exercised the purchase option and was transferred to it.
Juana Azul	17,959	2004	492	Mine	Sodium sulfate, lithium and borates	Granted to Minera Rio Grande SA. in July 12th 2006. Later transferred to NLB and registered on its behalf in February 6th 2023.	Advanced Exploration (brine lithium drilling) approved by Resolution 005/23 dated February 2nd 2023.	Expiry: February 3rd 2025	1st Sem 2024	Acquired by NLB through exploration contract with purchase option of mining properties dated February 18th 2022. NLB exercised the purchase option and was transferred to it.
Sulfa X	19,730	2009	821	Mine	Lithium, Borate,	Requested by Silvia Rodriguez on December 12th 2009. It was declared vacant, and Sergio	Advanced Exploration (lithium brine drilling)	Expiry: February 3rd	1st Sem 2024	Acquired by NLB through exploration contract with option to purchase

Property name	File number	Year	Area (Ha)	Type	Mineral	Registration date	Environmental Impact Report Resolution	Expiry	Last Canon payment	Type of agreement
					alkaline salts	Ignacio Aguilar and Luis Adrián Espinosa requested it. It was granted in November 26th 2018. Transferred to NLB in June 9th 2023.	approved by Resolution 008/23 dated February 2nd 2023.	2025		mining properties dated February 18th 2022. NLB exercised the purchase option and was transferred to it.
Teresa	20,072	2009	100	Mine	Sodium sulfate, lithium and borates	Registered in the name of Marcelo Fleming Patron Costas. Transferred to NLB in June 12th 2023.	Advanced Exploration (lithium brine drilling) approved by Resolution 007/23 dated February 2nd 2023.	Expiry: February 3rd 2025	1st Sem 2024	Acquired by NLB through exploration contract with option to purchase mining properties dated March 18th 2022. NLB exercised the purchase option and was transferred to it.
Archivarca Sur	21,910	2013	3,496	Mine	Gold, silver and copper	Requested by Minas Argentinas SA. Registered in October 9th 2013. Vacant. Requested by Yacones SRL in February 23rd 2022. Waiting concession.	An EIR was filed for surface exploration for gold, silver and copper in September 28th 2022. Pending approval.	Expiration not available yet. Waiting for approval.	Does not pay yet*	Acquired by NLB pursuant to a mining properties exploration and purchase option agreement, signed in March 22nd 2022
Archivarca Centro	21,912	2013	3,467	Mine	Gold, silver	Requested by Minas Argentinas SA. Registered in October 9th 2013. Vacant. Requested by Yacones SRL in February 23rd 2022. Waiting concession.	An EIR was filed for surface exploration for gold, silver and copper in September 28th 2022. Pending approval.	Expiration not available yet. Waiting for approval.	Does not pay yet*	Acquired by NLB pursuant to a mining properties exploration and purchase option agreement, signed in March 22nd 2022
Archivarca Norte	21,971	2013	3,247	Mine	Gold and silver	Requested by Minas Argentinas SA. Registered in August 26th 2013. Vacant. Requested by Yacones SRL in February 23rd 2022. Waiting concession.	An EIR was filed for surface exploration for gold, silver and copper in September 28th 2022. Pending approval.	Expiration not available yet. Waiting for approval.	Does not pay yet*	Acquired by NLB pursuant to a mining properties exploration and purchase option agreement, signed in March 22nd 2022
El Camino II	20,297/10	2010	2,909	Mine	Copper, gold, silver, zinc	Requested by Minera El Toro SA in April 26th 2010. Registered in November 6th 2013.	Advanced Exploration (lithium brine drilling) approved by Resolution 091/23 dated July 14th 2023.	Expiry: July 14th 2025	1st Sem 2024	Acquired by NLB pursuant to a mining properties exploration and purchase option agreement, signed in May 13th 2022
Alicia X	23,674	2018	188	Mine	Lithium, Sodium sulfate	Claimed as mine Discovery by Sergio Ignacio Aguilar and Luis Adrian Espinosa. Waiting concession.	Advanced Exploration (lithium brine drilling) approved by Resolution 008/23 dated February 2nd 2023.	Expiry: February 3rd 2025	Does not pay yet*	Acquired by NLB pursuant to a mining properties exploration and purchase option agreement, dated February 18th 2022. NLB exercised the purchase option and was transferred to it.
Yacones RG 01	765,644/22	2022	1,371	Mine	Copper, gold, lithium	Claimed as mine discovery by Yacones SRL in February 2022. Waiting provisory registry.	Advanced Exploration with drilling filed in August 19th	Expiration not available yet.	Does not pay yet*	Acquired by NLB pursuant to a mining properties transference

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Property name	File number	Year	Area (Ha)	Type	Mineral	Registration date	Environmental Impact Report Resolution	Expiry	Last Canon payment	Type of agreement
							2022. Pending approval.	Waiting for approval.		agreement, signed in March 22nd 2022
Arizaro 1	21,949	2013	3,430	Mine	Gold, Silver, Lihium	Requested by Minas Argentinas SA. Registered in October 4th 2013. Vacant. Requested by Yacones SRL in March 19th 2022. Waiting concession.	In August 19th 2022 an EIR was filed for advanced exploration with drilling. Pending approval.	Expiration not available yet. Waiting for approval.	Does not pay yet*	Acquired by NLB pursuant to a mining properties transference agreement, signed in March 22nd 2022
Yacones RG 02	765,639/22	2022	2,957	Mine	Copper, gold	Claimed as mine discovery by Yacones SRL in February 2022. Waiting provisory registry.	Pending**	Expiration not available yet.	Does not pay yet*	Acquired by NLB pursuant to a mining properties transference agreement, signed in March 22nd 2022
Yacones RG 03	765,649/22	2022	3,178	Mine	Copper, gold	Claimed as mine discovery by Yacones SRL in February 2022. Waiting provisory registry	Pending**	Expiration not available yet.	Does not pay yet*	Acquired by NLB pursuant to a mining properties transference agreement, signed in March 22nd 2022
Rio Grande Sur I	772,295	2022	3,050	Mine	Lithium, Borates	Claimed as mine discovery by NLB SRL in April 27th 2022. Provisionally registered.Pending concession.	In August 31st 2023 and advanced exploration EIR was filed. Pending approval.	Expiration not available yet. Waiting for approval.	Does not pay yet*	Claimed as a mine Discovery by NLB
Rio Grande Sur II	772,291	2022	3,431	Mine	Lithium, Borates	Claimed as mine discovery by NLB SRL in April 27th 2022. Provisionally registered. Pending concession.	In August 31st 2023 and advanced exploration EIR was filed. Pending approval.	Expiration not available yet. Waiting for approval.	Does not pay yet*	Claimed as a mine Discovery by NLB
Rio Grande Sur III	772,284	2022	3,037	Mine	Lithium, Borates	Claimed as mine discovery by NLB SRL in April 27th 2022. Provisionally registered. Pending concession.	In August 31st 2023 and advanced exploration EIR was filed. Pending approval.	Expiration not available yet. Waiting for approval.	Does not pay yet*	Claimed as a mine Discovery by NLB
Rio Grande Sur IV	809,168	2022	1,141	Mine	Lithium, Borates	Claimed as mine discovery by NLB SRL in April 18th 2022. Provisionally registered. Pending concession.	In August 31st 2023 and advanced exploration EIR was filed. Pending approval.	Expiration not available yet. Waiting for approval.	Does not pay yet*	Claimed as a mine Discovery by NLB
Rio Grande	772,296	2022	856	Mine	Lithium,	Claimed as mine discovery by NLB SRL in	In August 31st 2023 and	Expiration not	Does not	Claimed as a mine Discovery by

Property name	File number	Year	Area (Ha)	Type	Mineral	Registration date	Environmental Impact Report Resolution	Environmental Impact Report Expiry	Last Canon payment	Type of agreement
Sur V					Borates	April 27th 2022. Provisionally registered. Pending concession.	advanced exploration EIR was filed. Pending approval.	available yet. Waiting for approval.	pay yet*	NLB
Rio Grande Sur VI	809,170	2022	224	Mine	Lithium, Borates	Claimed as mine discovery by NLB SRL in April 18th 2022. Provisionally registered. Pending concession.	In August 31st 2023 and advanced exploration EIR was filed. Pending approval.	Expiration not available yet. Waiting for approval.	Does not pay yet*	Claimed as a mine Discovery by NLB
West Road	21,257	2011	836	Mine	Gold, copper	Had been declared as vacant. It was requested by NLB in 2022. Pending concession.	Pending**	Expiration not available yet.	Does not pay yet*	Requested by NOA as a vacant mine
Purita	4,204	1962	60	Mine	Sodium, sulfite	Vacant. Requested by REMSA	Pending approval. Presented in March 15th 2023	Expiration not available yet. Waiting for approval	Does not pay yet*	Acquired by NLB in a public bidding performed by REMSA, requested then as vacant mine.

* Payment of canon is only due as from 3 years after the concession of a mine is granted and therefore these Mining Rights are not yet subject to this canon payment obligation.

Table 4-2. Gauss Kruger – Posgar Coordinates for the Project

N°	Name	File #	Area (has)	Property Coordinates X	Property Coordinates Y
1	YACONES RG 03	765,649	2,948.3	2,560,635.59	7,236,158.97
				2,569,711.18	7,236,191.71
				2,569,711.56	7,231,245.46
				2,563,800.00	7,231,245.00
				2,562,820.68	7,232,521.94
				2,564,072.00	7,232,238.00
				2,564,072.00	7,235,234.00
				2,560,747.70	7,235,228.86
2	ARIZARO 1	21,949	3,430.7	2,586,996.93	7,246,709.26
				2,587,000.01	7,243,168.62
				2,587,284.68	7,243,168.62
				2,587,284.65	7,239,161.32
				2,583,310.00	7,239,161.32
				2,583,310.02	7,237,686.07
				2,582,605.86	7,237,701.65
				2,582,803.27	7,246,645.76
3	SULFA X	19,730	821.5	2,587,284.68	7,239,161.32
				2,587,284.68	7,237,270.44
				2,583,611.83	7,237,270.44
				2,583,611.83	7,234,953.55
				2,583,310.00	7,234,953.55
				2,583,310.00	7,239,161.32
4	ALICIA X	23674	188.4	2,588,199.33	7,236,598.00
				2,589,610.13	7,236,598.08
				2,589,610.13	7,235,289.99
				2,589,354.58	7,235,289.99
				2,589,354.58	7,235,256.84
				2,588,199.33	7,235,256.84
5	TERESA	20072	100.0	2,587,276.78	7,234,848.42
				2,588,199.33	7,234,848.42
				2,588,199.33	7,235,256.84
				2,589,354.58	7,235,256.84
				2,589,354.58	7,234,566.00
				2,587,914.04	7,234,565.97
				2,587,914.04	7,234,657.79
				2,587,276.78	7,234,657.79
6	EL CAMINO II	20297	2,909.6	2,591,434.06	7,236,700.00
				2,593,800.00	7,236,700.00
				2,593,800.00	7,231,515.26
				2,593,566.50	7,231,515.26
				2,593,566.50	7,229,276.33
				2,590,260.78	7,229,276.33
				2,590,260.78	7,232,073.95
				2,587,914.04	7,232,073.95
				2,587,914.04	7,234,566.00
				2,591,434.06	7,234,566.00
7	YACONES RG 01	765644	1,370.8	2,592,942.70	7,226,515.26
				2,593,860.00	7,226,515.26
				2,593,658.79	7,211,661.18
				2,590,451.31	7,212,068.78
				2,590,451.31	7,212,557.32
				2,592,942.70	7,212,557.95

N°	Name	File #	Area (has)	Property Coordinates	
				X	Y
8	ARCHIVARCA NORTE	21971	3,246.6	2,599,566.50	7,226,515.26
				2,599,566.50	7,225,790.00
				2,607,910.00	7,225,790.00
				2,607,910.03	7,223,618.81
				2,593,831.27	7,223,931.72
				2,593,876.49	7,226,515.26
9	ARCHIVARCA CENTRO	21,972	3,467.8	2,593,831.28	7,223,931.72
				2,599,110.62	7,223,814.38
				2,599,060.59	7,217,286.65
				2,593,716.72	7,217,405.68
10	ARCHIVARCA SUR	21,910	3,497.0	2,593,716.72	7,217,405.68
				2,603,950.21	7,217,177.74
				2,603,950.35	7,213,655.30
				2,593,658.79	7,214,115.05
11	YACONES RG 02	765,639	2,957.1	2,593,692.01	7,214,113.57
				2,603,950.35	7,213,655.30
				2,603,950.50	7,210,353.31
				2,593,658.79	7,211,661.18
12	RIO GRANDE SUR I	772,295	3,050.1	2,603,870.80	7,210,363.44
				2,603,817.30	7,208,823.21
				2,591,581.88	7,208,823.21
				2,591,581.88	7,209,557.48
				2,591,190.72	7,209,557.64
				2,591,190.72	7,210,557.48
				2,590,451.31	7,210,557.59
				2,590,451.31	7,212,068.78
13	RIO GRANDE SUR II	772,291	3,431.4	2,603,817.30	7,208,823.21
				2,603,736.80	7,205,844.64
				2,592,755.34	7,205,844.64
				2,592,755.34	7,206,557.48
				2,592,364.18	7,206,557.64
				2,592,364.18	7,207,557.48
				2,591,973.03	7,207,557.64
				2,591,973.03	7,208,557.48
				2,591,581.88	7,208,557.64
				2,591,581.88	7,208,823.21
14	RIO GRANDE SUR III	772,284	3,037.1	2,603,736.80	7,205,844.64
				2,603,630.52	7,203,445.95
				2,603,630.52	7,202,260.66
				2,593,537.65	7,203,557.64
				2,593,537.65	7,204,557.48
				2,593,146.49	7,204,557.64
				2,593,146.49	7,205,557.48
				2,592,755.34	7,205,557.64
				2,592,755.34	7,205,844.64
15	RIO GRANDE SUR V	772,296	856.0	2,589,364.18	7,207,328.84
				2,589,364.18	7,206,557.96
				2,583,103.65	7,207,335.78
				2,580,609.41	7,209,557.96
				2,582,510.93	7,209,557.96
				2,582,495.97	7,207,336.46
				2,583,103.57	7,207,335.78
				2,583,097.51	7,206,557.96
				2,580,609.41	7,206,557.96
16	CYNTIA INES	17,975	99.1	7,223,489.80	2,585,557.62

N°	Name	File #	Area (has)	Property Coordinates	
				X	Y
				7,222,116.37	2,585,557.62
				7,222,116.37	2,585,047.62
				7,223,289.19	2,585,047.62
				7,223,295.80	2,583,967.31
				7,223,549.49	2,583,969.11
				7,223,552.27	2,584,767.15
				7,223,740.05	2,584,768.11
				7,223,739.45	2,584,877.53
				7,223,494.14	2,584,876.15
17	PURITA	4204	60.0	2,583,084.44	7,227,275.49
				2,582,583.23	7,227,320.18
				2,582,689.48	7,228,513.01
				2,583,185.46	7,228,471.05
18	CRISTINA	5573	40.2	7,227,267.72	2,582,160.75
				7,228,267.73	2,582,166.28
				7,228,267.72	2,582,565.92
				7,227,267.72	2,582,565.92
19	PATAGONIA II	11810	100.0	7,228,031.93	2,579,908.62
				7,228,031.93	2,580,708.62
				7,226,781.93	2,580,708.62
				7,226,781.93	2,579,908.62
20	PATAGONIA IV	12,783	100.0	7,227,908.91	2,579,108.71
				7,227,908.91	2,579,908.71
				7,226,658.91	2,579,908.71
				7,226,658.91	2,579,108.71
21	JUANA AZUL	17,959	492.2609	7,226,658.91	2,579,108.71
				7,226,658.91	2,579,908.71
				7,226,781.93	2,579,908.71
				7,226,781.93	2,580,708.62
				7,226,932.35	2,580,708.62
				7,226,932.35	2,581,758.60
				7,226,390.53	2,581,755.03
				7,226,389.87	2,581,854.98
				7,226,385.54	2,582,001.64
				7,225,940.46	2,581,976.05
				7,225,943.66	2,581,494.52
				7,225,695.24	2,581,492.87
				7,225,691.97	2,581,955.69
				7,225,391.27	2,581,953.78
				7,225,392.11	2,581,823.17
				7,224,703.59	2,581,818.12
				7,224,703.59	2,579,703.15
				7,226,019.59	2,579,703.15
22	WEST ROAD	21,257	836.1	2,590,610.13	7,240,289.99
				2,590,610.13	7,240,353.11
				2,590,800.00	7,240,353.11
				2,590,800.00	7,236,700.00
				2,591,434.06	7,236,700.00
				2,591,434.06	7,234,566.00
				2,589,354.58	7,234,566.00
				2,589,354.58	7,235,289.99
				2,589,610.13	7,235,289.99
				2,589,610.13	7,240,289.99

4.3 Exploration and Mining Permitting

Provinces in Argentina own and control property mineral resources, have authority to grant mining rights to private applicant individuals or entities and to implement the National Mining Code, to regulate its procedural aspects, and to organize each enforcement authority within its territory. There are mainly two types of mineral tenure granted by provinces according to Argentina mining laws: Exploitation Concessions and Exploration Permits.

- Exploitation concessions sometimes referred to as "Minas" or "Mining Permits" are licenses that allow the property holder to exploit the mineral resources of the property, providing environmental approval is obtained. These permits have no time limit as long as obligations in the National Mining Code are abided. All Rio Grande Project Concessions are exploitation concessions.
- Exploration Permits referred to as "Cateos" have time limits that allow the property holder to explore the property for a period of time that is related to the size of the property. Exploration Permits also require environmental permitting.

Depending on the province, Exploitation Concessions are granted by either a judicial or administrative decision (in Salta they are granted by the Mining Court). An Exploration Permit can be transformed into an Exploitation Concession any time before its expiration period by filing a report and paying a canon fee. The condition under which Exploitation Concessions are held is indefinite providing those annual payments are made.

Neither exploitation nor exploration can start mining activities without obtaining first the Environmental Impact Assessment (EIA) permit. Permitting for drilling in areas of both types of mineral tenure must specify the type of mineral the holder is seeking to explore and exploit. Claims cannot be over-staked by new claims specifying different minerals.

There are no private owners of the surface rights in area of the project, and the surface area is therefore owned by the province, in which each concession is located.

4.4 Environmental Studies, Permitting and Social or Community Impact

On March 2022, NOA submitted an EIA for some of the Project Concessions to the provincial mining authorities for its exploration activities on the Project. The report includes all the activities related with drilling exploration program. The EIA for each of the remaining Project Concessions was submitted afterwards or is under preparation, as detailed below.

According to the title opinion for the mining concessions, the following is concluded:

- There are no environmental liabilities arising from said files.
- As mentioned in **Table 4-1**, some of the Mining Rights have obtained a DIA (EIA approval) for superficial exploration. In April 2022, a new EIA was filed for additional exploration (drilling) in the core Mining Rights of Río Grande, which are the subject of the exploration program to be performed in this project ("Drilling Program").
- For the rest of the Mining Rights in **Table 4-1**, as they are not yet part of the Drilling Program, their respective EIAs are in the process of being prepared.

4.4.1 Project Permitting

Exploration and mining activities on cateos and minas are subject to a mining judge's approval of an EIA. Mining claims (of both types) must be specified for the type of mineral the holder is seeking to explore and exploit: claims cannot be overstaked by new claims specifying different minerals and adding mineral species to a claim file is relatively straightforward. The owner of the claims can add other minerals (i.e. in borates claims, the owners usually add lithium and potassium). Drilling permits require: (1) authorization from Mining Judge and, (2) an EIA. Drilling can be authorized on cateos or minas.

The surface exploration program that was completed and the ongoing drilling program on the Project concessions had/have all the necessary permits to operate.

Subject to those items disclosed in Section 25.1 herein, no significant factors or risks are known that may affect access, title, or right or ability to perform work on the property.

4.4.2 Social And Community Requirements

The Project is included within the area of direct influence of the village of Tolar Grande which implies the presentation of additional studies comply with the legislation for the development of the project. In order to comply with the national and provincial regulations, NOA presented a social baseline study of the locality of Tolar Grande, which is considered an area of direct influence, and also for San Antonio de Los Cobres, an area which is considered of indirect influence by the future exploration activities carried out by the company. The study included socioeconomic research with data collected in the nearby community located in the area of influence together with a sensorial study of the population, and the communication plan with communities that is planned to be developed in the Project area.

5 ACCESSIBILITY, PHYSIOGRAPHY, CLIMATE, LOCAL RESOURCES AND INFRASTRUCTURE

5.1 Accessibility and Local Resources

The Project area is located in the Salta province. The operating season for the area is year-round, with no times of the year where access is restricted except for occasional brief periods when extreme weather events occur (mostly rains or snow). The nearest town with services is Tolar Grande, which is about 140 km north along Salta provincial road RP-27. According to 2010 census data, Tolar Grande has a population of 236 inhabitants and it has basic services such as lodging and a school. Salar de Pocitos Railway Station is about 216 km northeast of the project. It has a police station, first aid station, public telephone, restaurant and lodging. San Antonio de Los Cobres is located about 110 km east from Salar de Pocitos and is the main town in the Andes Department (Salta). The town has a hospital, a police station, gendarmerie, a telephone office, convenience stores, gas station, inns, schools, workshops, etc.

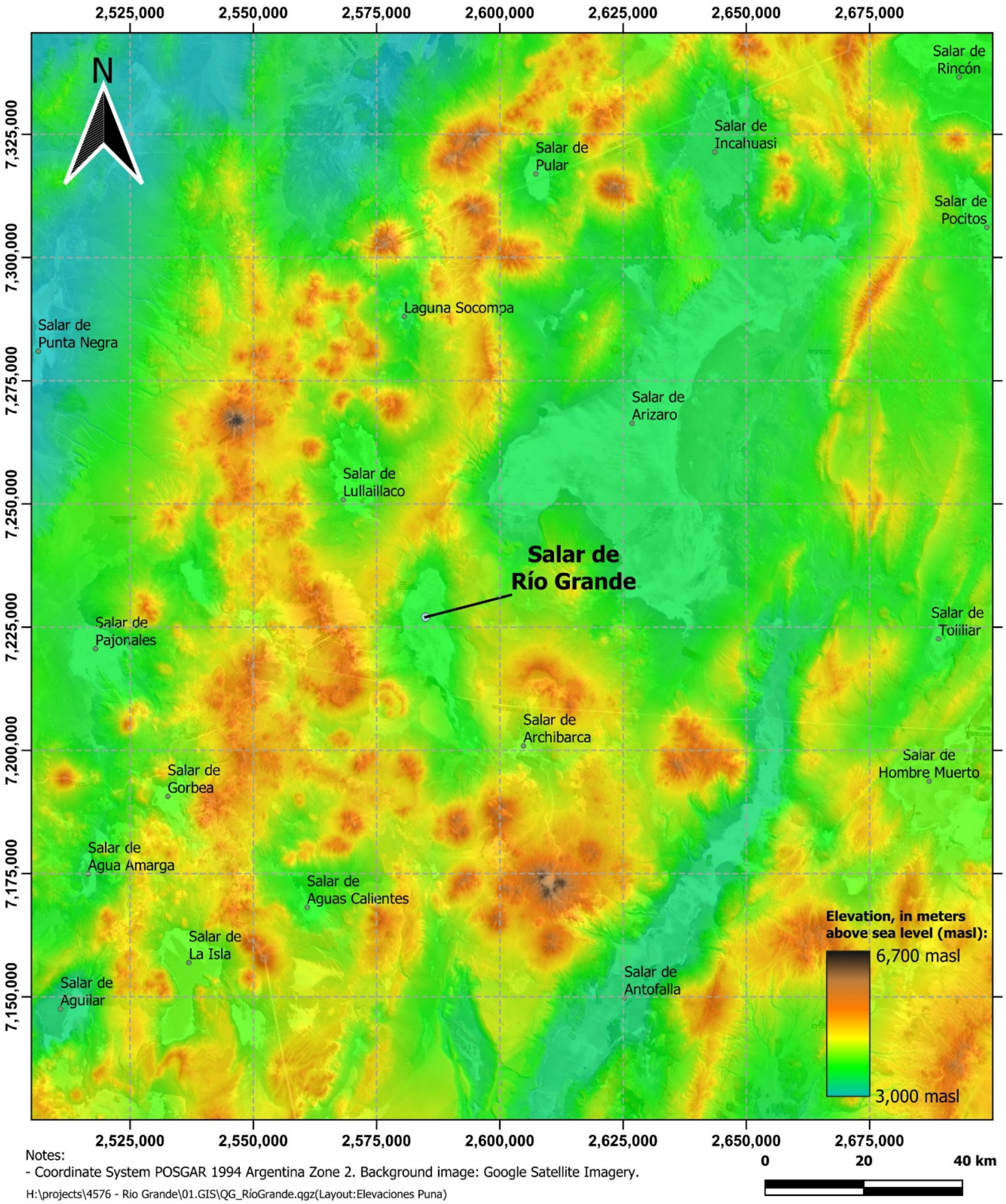
The nearest large city is Salta, located about 500 km to the northeast of the Project area. Local resources in the area are very basic. Most supplies are brought from Salta or San Antonio de Los Cobres. Several mine camps occur in the area and are powered locally. There are no people living in the vicinity of the Project. The most common access to the Project is from the city of Salta, along national route RN-51 passing through the towns of Campo Quijano and San Antonio de Los Cobres. About 70% of Route 51 is paved and the remainder is in fairly good condition.

As part of the current surface exploration campaign, camp facilities were acquired and set up with a capacity of 50 to 60 people to cover tasks related to this stage. The camp is owned by NOA and located on the western edge of the Rio Grande salar. Footprint and/or location of future processing facilities have yet to be determined.

5.2 Physiography

The Project is located in a Puna environment corresponding to a high elevated plateau within the Central Andes that covers parts of the Argentinean provinces of Jujuy, Salta, and Catamarca. It is characterized as a high Andean desert with elevations that ranges between 3,600 masl in the basins to about 6,000 masl in the high mountains of the volcanic arc. The physiography of the region is characterized by extensive depressions and basins separated by mountain ranges, with marginal canyons cutting through the Western and Eastern Cordilleras and numerous volcanic centers, particularly in the Western Cordillera. The Altiplano-Puna magmatic volcanic arc complex (commonly referred to as "APVC" in literature) is located between the Altiplano and Puna. It is associated with numerous stratovolcanoes and calderas. Recent studies have shown that the APVC is underlain by an extensive magma chamber at 4 to 8 km deep (de Silva, 1989) and potentially the ultimate source of anomalously high values of lithium in the region. Abundant dry salt lakes (salars) fill many basins (**Figure 5-1.**). In general terms, it is a zone with low humidity and limited soil development.

Locally, the project is in the Salar de Rio Grande basin. The elevation at the surface of the salar is approximately between 3,660 and 3,670 masl and in the concession areas of the Project, elevation ranges between 3,600 and 4,800 masl (**Figure 5-2**). The salar is located within a closed, endorheic basin filled by evaporitic and clastic sediments. Surface water inflow to the salar is marked by seasonal precipitation events, mainly in the period between December and March.



Notes:
- Coordinate System POSGAR 1994 Argentina Zone 2. Background image: Google Satellite Imagery.

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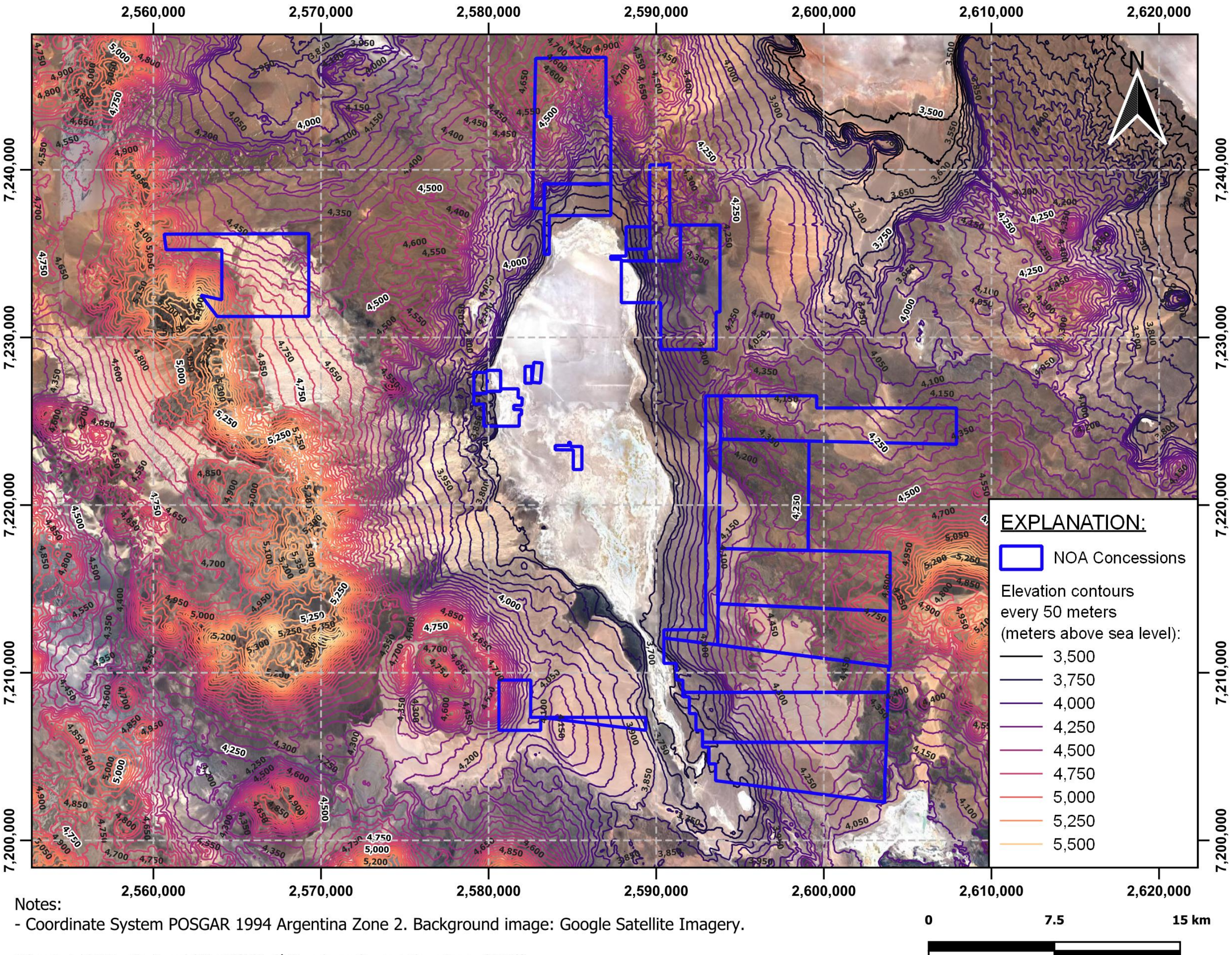
Figure 5-1. Digital Elevation Model of the Puna Showing Several Salars

MONTGOMERY
& ASSOCIATES



Notes:
- Coordinate System POSGAR 1994 Argentina Zone 2. Background image: Google Satellite Imagery.

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Figure 5-2. Elevation Contours for the Salar de Rio Grande Project Area

5.3 Climate

The climate in the Project area is characterized as a cold, high altitude desert. The main rainy season is between December through March. The period between April and November is typically dry but precipitation may occur as snow or hail. Monthly precipitation data were obtained from a database published by Instituto Nacional de Tecnología Agropecuaria (Bianchi and others, 2005), public NI 43-101 technical reports for other projects in the vicinity, and historic information from nearby meteorological stations including Mina La Casualidad, Salar de Pocitos, Tincalayu, and El Fenix. Average annual rainfall at these stations is given in **Table 5-1**.

Table 5-1. Meteorological Stations Near the Project Area

Station	Elevation (m asl) [a]	Register length	Annual rainfall (millimeters)
Salar de Pocitos[b]	3,600	1950-1990	44
El Fenix Camp[c]	4,000	1992-2016	77.4
La Casualidad[d]	4,000	1963-1972	37
Tincalayu[e]	4,000	1979-2003	64

[a] m asl = meters above mean sea level
[b] Bianchi and others (2005)
[c,e] Houston & Jaacks (2010)
[d] Hains (2018)

Solar radiation is intense, particularly during the summer months of October through March, leading to extremely high evaporation rates. Strong winds are frequent in the Puna, reaching speeds of up to 80-90 kilometers per hour (km/hour) during the dry season. During summer, warm to cool winds are generally pronounced after midday and winds are usually calm during the night. Conditions mentioned above are favorable to develop lithium brine projects related with the use of evaporation ponds to obtain concentrated brines. With exception of minor delays that may occur due to heavy snow, which happens on average one or two times per year for as long as several days per event, the length of the operating period in the salar is effectively all year.

5.4 Vegetation

Due the extreme weather conditions in the region, the predominant vegetation is high-altitude, xerophytic type plants, dominated by woody herbs, grasses, and cushion plants. Due to the high salinity on the salar surface, the core area of the salar is devoid of vegetation. In the Project area, two phytogeographic provinces exist and have been described by Cabrera (1994): the Puneña Province and the Altoandina Province. Both are included in the more general Andean-

Patagonian domain. The division into provinces within the Andean-Patagonian domain is based on the differences of some genera and species:

- Puneña Province: With a predominance of bushes of the Fabiana genera, *Parastrephia, Acantholippia, Senecio, Nardophyllum, Baccharis, Junellia*, and others. Vegetation of this domain presents a simple structure.
- Altoandina Province: With predominance of xerophilous grasses of the genera Festuca, *Deyeuxia, Deyeuxia*, *Stipa, Poa*, and endemisms of *Werneria, Nototriche; Barneoudia, Hexaptera, Pycnophyllum*, and others.

In the region there exists a flora adapted to unfavorable climatic conditions, such as the almost complete lack of large trees and shrubs, the development of low, creeping, shrubby plants, and perennial bushes (Cabrera, 1958).

5.4.1 Puneña Province

The Puneña Province occupies the largest area in the study area, between 3,400 and 4,400 masl although in vast sectors of the area it rises only up to about 3,900 masl. Above this altitude is a gradual transition and the coexistence of floristic elements of this Province and the Altoandina Province. The dominant vegetation is that of "Estepa Arbustiva." Toward the north and the east, the greater humidity favors the increase of the diversity. Toward the south and the west, the aridity increases, and is the reason why the plant communities are less abundant and why sometimes the vegetation disappears completely.

5.4.2 Altoandina Province

The Altoandina Province typically includes the higher altitude areas, above 4,400 masl, although in the study area it is also presented at lower altitudes (4,000 masl) in transition with the Puneña Province. The dominant vegetation is the Steppe Herbaceous or Graminosa type. All the plants have adapted to living in extreme cold, dry, and windy conditions.

5.5 Wildlife

Despite the challenging climate of the region, several species occupy the Puna region. Cabrera and Willink (1980) describe the animal species in the Puna region. In the Salar de Rio Grande region, camelids exist such as vicuña (*Vicugna vicugna*). A less common camelid in the area is the guanaco (*Lama guanicoe*). Domesticated llamas (*Lama glama*) also occur in the region as well as the donkey (*Equus asinus*) which was introduced by inhabitants of the area, but not necessarily in the Project basin.

Smaller animals and rodents include the South American gray fox (*Lycalopex griseus*), puna fox (*Lycalopex culpaeus*) which represents a carnivorous species present in the area, a mole (the Oculto) (*Ctenomys opimus)*, and the Puna mouse (*Abrothrix andina*).

Birds found in the region include several species of Flamingo (*Phoenicopterus andinus*), which lives in moist and saline lagoons along with the Andean Goose, Guayata or Huallata (*Chloephaga melanoptera*), pitotoy (*Tringa spp*.), playeritos (*Calidris spp*.), palomita dorada *(Metriopelia aymara)*, caminera puneña *(Geositta punensis)*, jilguero cara gris *(Sicalis spp.)*, matamico andino *(Phalcoboenus megalopterus)* and several species of duck and avocets. The keu or queú (*Tinamotis pentlandi*) inhabits the highlands and is similar to a large partridge. Darwin's Rhea (ñandú or suri) (*Pterocnemia pennata)* is similar to the ostrich, and inhabits the lower plains of the region. Other small parrots, canasteros, goldfinches, Andean gulls, doves, and owls exist as sporadic inhabitants.

Lizards are known to occur in the area, including (*Liolaemus ornatus Koslowsky*), (*Liolaemus irregularis Laurent*), (*Liolaemus bitaeniatus*), (*Liolaemus dorbigni Koslowsky*), and (*Liolaemus multicolor and Liolaemus andinus poecilochromus*). Two amphibians occur in the region, including the Andean toad (*Bufo spinulosus*) and frogs from the genus (*Telmatobius*).

5.6 Infrastructure

5.6.1 Electrical Power

A 600-megawatt (Mw), 375 kilovolt power line between Salta and Mejillones in Chile passes about 180 km northeast of the Property. The line reportedly transmits 110 Mw from Mejillones to the Argentinean Interconnected System. Also, 2 photovoltaic plants, La Puna Solar and Altiplano, are located near the town of Olacapato, in the department of Los Andes. Since October 2021, both plants are connected to the Argentina Interconnection System.

5.6.2 Natural Gas Pipeline

A natural gas line (Gasoducto de la Puna) passes along provincial highway RP-17 south from Salar de Pocitos until Salar del Hombre Muerto with an extension of 130 km. The gas line begins at the junction with the Atacama gas pipeline and extends for 184 km from the provincial border with Jujuy, to the Salar de Pocitos.

5.6.3 Railway Antofagasta-Salta

The nearest rail line in the region is an existing narrow-gauge railway between Salta, Argentina and Antofagasta, Chile. Section between Güemes and Socompa it's called "Ramal C-14" and is part of the national railways line. A railway station called Caipe is located about 70 km north of the salar. **Figure 5-3.** shows the location of the track. Two companies administer it: the Chilean *Ferrocarril Antofagasta – Bolivia* (Chilean Luksic Group) and the Argentinean state owned *Ferrocarril General Belgrano*. Currently, the track from La Polvorilla to Salta is operated by the Tren de las Nubes and is not currently in use east from San Antonio de Los Cobres.

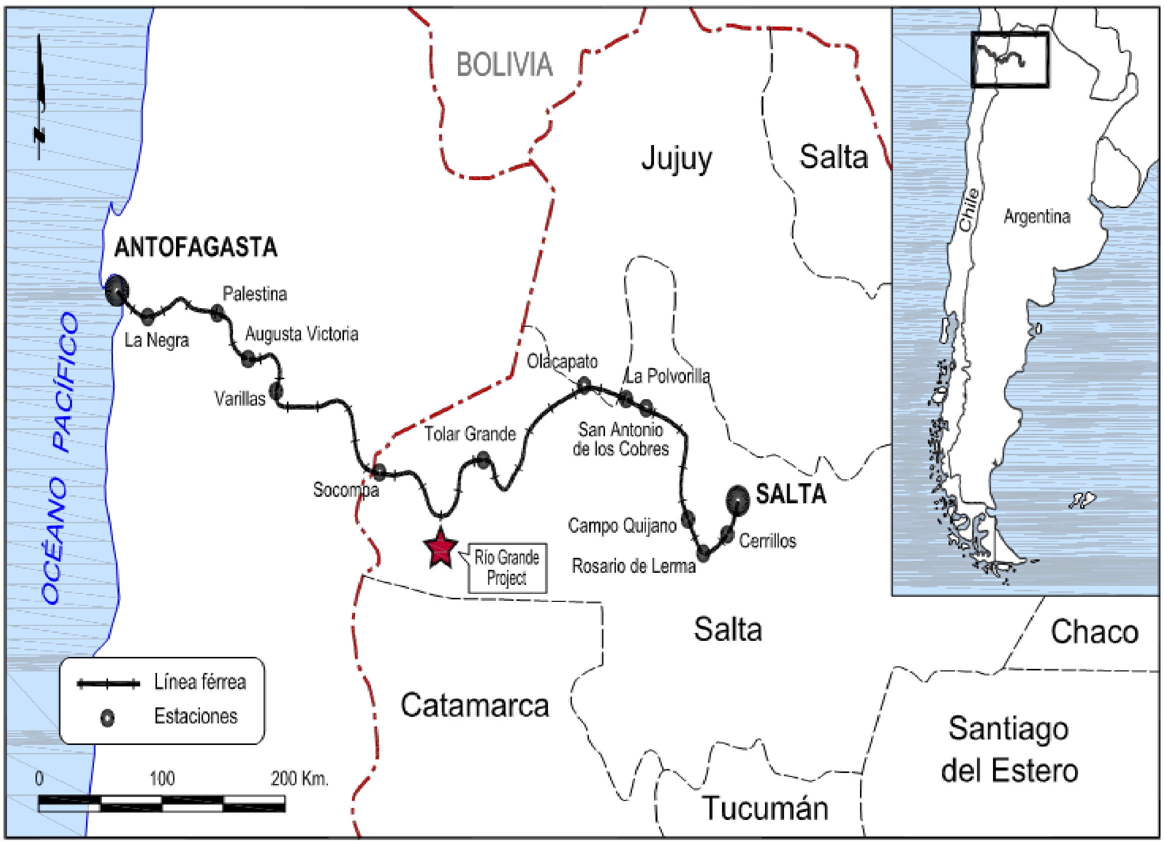


Figure 5-3. Railroad Line from Mejillones to Salta

5.6.4 Road Connections

The Project is connected to Salta, Salar de Pocitos, and San Antonio de Los Cobres by the way of a well maintained, paved, and unpaved road network that includes National Route 51 and Provincial Route 27, which is a gravel and dirt road. Provincial Route 27 connects with secondary gravel and dirt roads that leads to the concessions of the Project in the Salar de Rio Grande area.

5.6.5 General Services

Communities: The nearest community with basic services is the town of Tolar Grande, located northeast from the project along RP-27. The town of Pocitos is located northeast from the project, also on provincial road RP-27 at the north end of Salar de Pocitos about 250 km distance from site but has very limited services. The nearest town with full services, including fuel and medical services, is San Antonio de Los Cobres, located about 4-5 hours drive from the site, and Salta, located about 7-8 hours from the site. Mining personnel are available in the Salta, Catamarca, and Jujuy Provinces; limited local labor is available at the towns of Olacapato and Tolar Grande.

Water Supply: Fresh water is believed to occur mostly as groundwater in the area. An initial freshwater exploration program is currently ongoing. Freshwater demand for the potential future project is not yet known, and sources of industrial amounts of freshwater have yet to be identified.

Camp: There is currently an exploration camp with facilities in the basin to support the ongoing exploration activities. The camp is owned by NOA. **Photo 5-1**, **Photo 5-2** and **Photo 5-3** show the NOA camp facilities on the Salar de Rio Grande.

Communications: Currently, only satellite phone communication is available at the Project location, and limited WiFi at the NOA camp.

Photo 5-1. NOA Camp Facilities, Salar de Rio Grande

Photo 5-2. NOA Camp Facilities, Salar de Rio Grande

Photo 5-3. NOA Camp Facilities, Salar de Rio Grande

6 HISTORY

The Salar de Río Grande has a rich history as a source of sodium sulfate in the region since the 1940s. Small companies exploited the resource between 1952 and 1975, producing a total volume of close to 60,000 tons of sodium sulfate. Sulfo Argentina and Minera Altas Cumbres operated different properties between 1976 and 1991, reaching a production volume of 76,000 tons, between shallow wells and surface material located in the southern part of the Salar de Rio Grande. During 1998 the Altas Cumbres property was acquired by SurNAtron S.A., operating sporadically between 1998 and 2008. Subsequently, ADY Resources acquired the properties in 2008, carrying out an exploration program that included surface sampling along with a drilling and pumping test program during 2011. The information obtained was used to estimate sodium sulfate resources (Hains, 2018).

By 2013, sodium sulfate production ended, due to the development of a new technology that eliminated the use of sodium sulfate for the process of obtaining lithium carbonate. During the period 2009 to 2013, ADY extracted a volume of 49,700 tons of brine and 34,000 tons of surface material Hains, 2018).

Several exploration activities have occurred on the salar area since 1998. Exploration programs related to lithium-rich brine included surface brine sample, drilling and testing campaign developed in 2011 and carried out by ADY Resources. Additional exploration using surface geophysical methods such as CSAMT and was conducted on 2017 by LSC Lithium in concessions acquired to ADY Resources. Drilling and testing, and confirmation sampling by LSC as part of a due diligence process were conducted in 2017 in the Salar area and documented by Hains (2018).

6.1 Historic Surface Exploration

Exploration in the Rio Grande basin has occurred in various forms during the last decade or so in the Salar de Rio Grande Basin on adjacent concessions. This section includes a brief summary of these historic activities by:

- SurNAtron S.A.
- ADY Resources
- LSC Lithium

These studies were not specifically conducted in the Project area controlled by NOA, but are relevant to the geological and hydrogeological understanding of the salar basin and aquifer system due to their proximity to the Project.

6.1.1 Previous Third-Party Exploration for Non-Lithium Elements

Previous studies related to the exploration and development of non-metallic minerals such as sodium sulphate, on the Salar de Rio Grande includes:

- Surface sampling and shallow auger drilling and sodium sulphate resource estimate prepared in 1998 for SurNatron S.A., and
- Report on geology and brine chemistry prepared by Mercoaguas for SurNAtron in 2010.

6.1.2 Year 2011 Surface Sampling

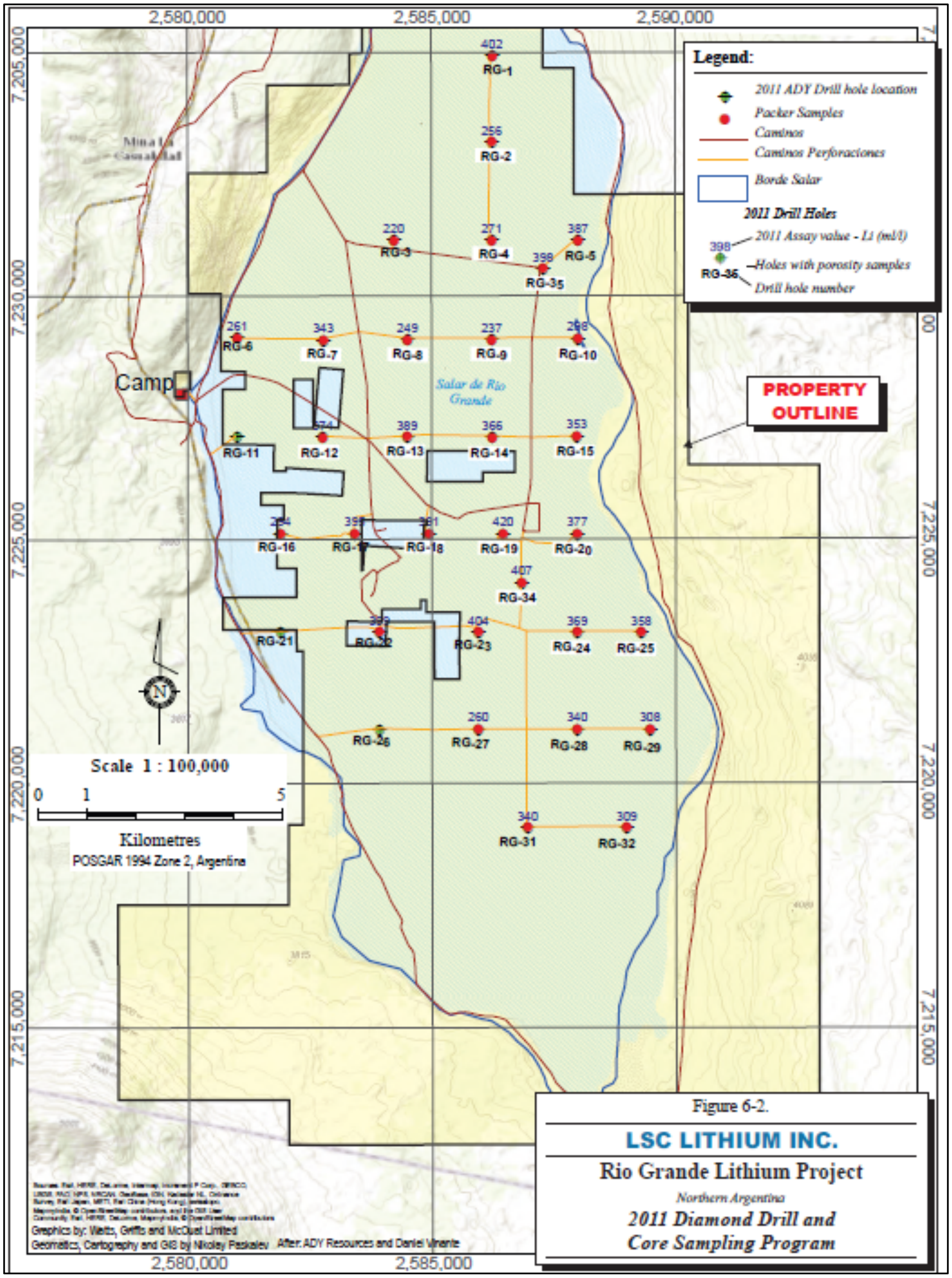
ADY Resources completed a program of surface sampling across its tenements at Rio Grande in 2011. The program involved shallow pit sampling using manual methods. 164 samples were collected, including 8 duplicates and 7 samples collected in the Vega Rio Grande and Rio Grande area south of the actual salar. Samples were assayed for major chemical constituents including lithium, with summary values reported for percentage sodium sulphate and lithium. The results of the historic surface sampling demonstrated widespread distribution of lithium-rich brine across the salar and were used to guide the 2011 diamond drilling program (Hains, 2018).

Surface sampling results for Lithium (Li) and packer pump test results to 50 m depth from the 2011 exploration program; locations for the 2011 sampling program are shown on **Figure 6-2**. Locations for the 2012 sampling program are shown on **Figure 6-3**. Average assay values for the surface sampling were 42 grams per liter (g/L) for sodium sulphate and 380 mg/L for Li. Assay values for samples from packer tests were 44 g/L for sodium sulphate and a showed a range from 220 to 420 mg/L for Li. Average Mg/Li ratios for the packer samples were in the range of 12:1to 13:1, Mg:Li; with SO_4:Li ratios typically in the 100:1 range (Hains, 2018).

Based on the analysis of core hole drilling, estimated porosity was 13.5% for ADY concessions. This porosity value was assigned from surface down to 50 m depth (Hains, 2018).

Source – (Hains, 2018)

Figure 6-1. 2011 Surface Sampling Results for Li – Salar Rio de Rio Grande



Source – (Hains, 2018)

Figure 6-2. Locations for the 2012 Sampling Program

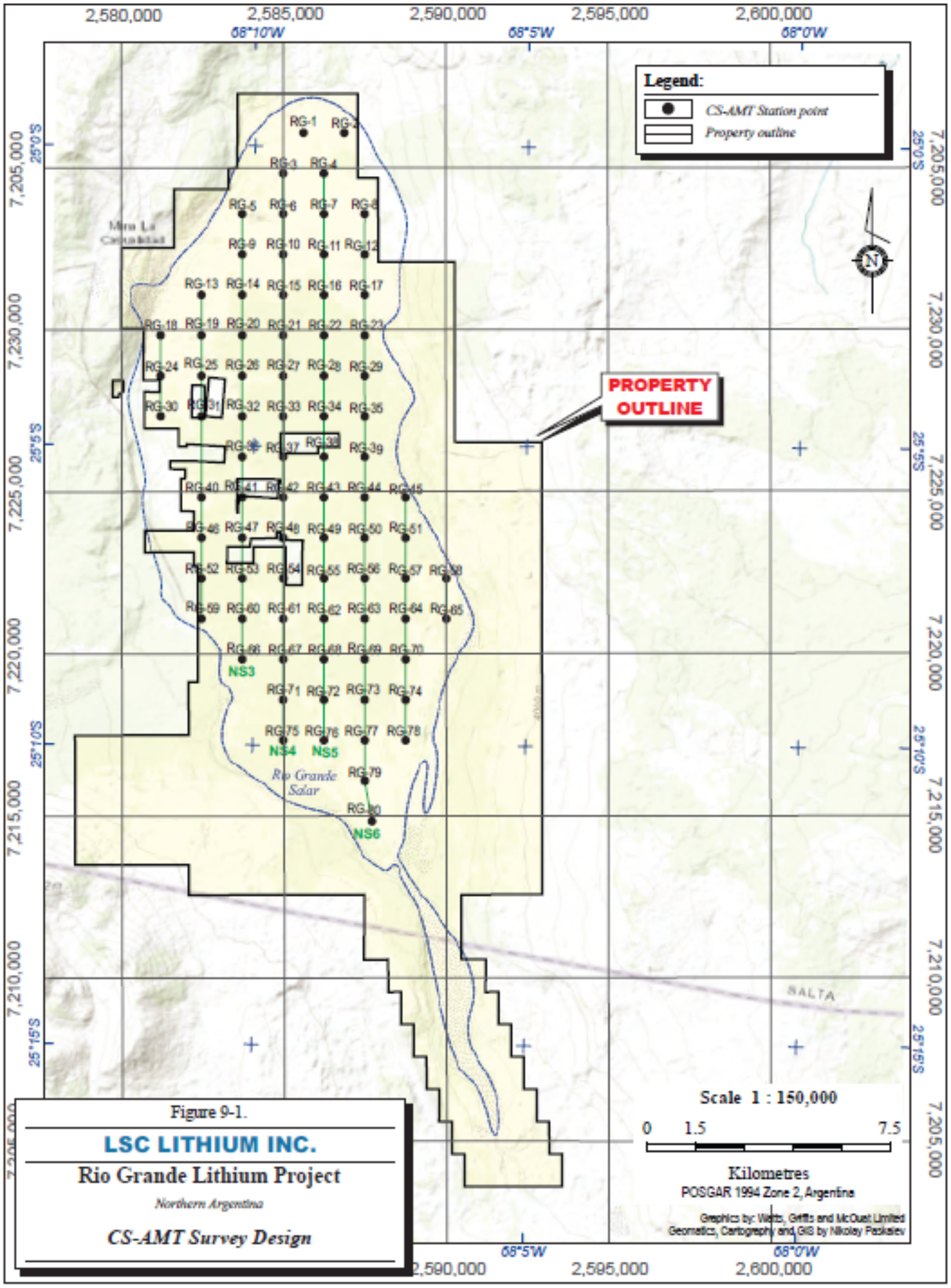
6.1.3 Year 2017 Exploration by LSC Lithium Corporation

A CSAMT survey was conducted as part of the 2017 lithium brine exploration program on adjacent concessions. LSC Lithium commissioned to GEC-Geophysical Exploration and Consulting S.A. (GEC) of Mendoza, Argentina to carry out the CSAMT survey on the tenements of Salar de Rio Grande.

GEC established an 80 station CSAMT survey program using the Strategem EH-4 data acquisition system. CSAMT stations were set up on 20 or 250 m intervals for the receiver and transmitter on 7 N-S oriented lines covering essentially all of the surface area of the salar (Hains, 2018). **Figure 6-4** shows distribution of stations and survey lines deployed by GEC.

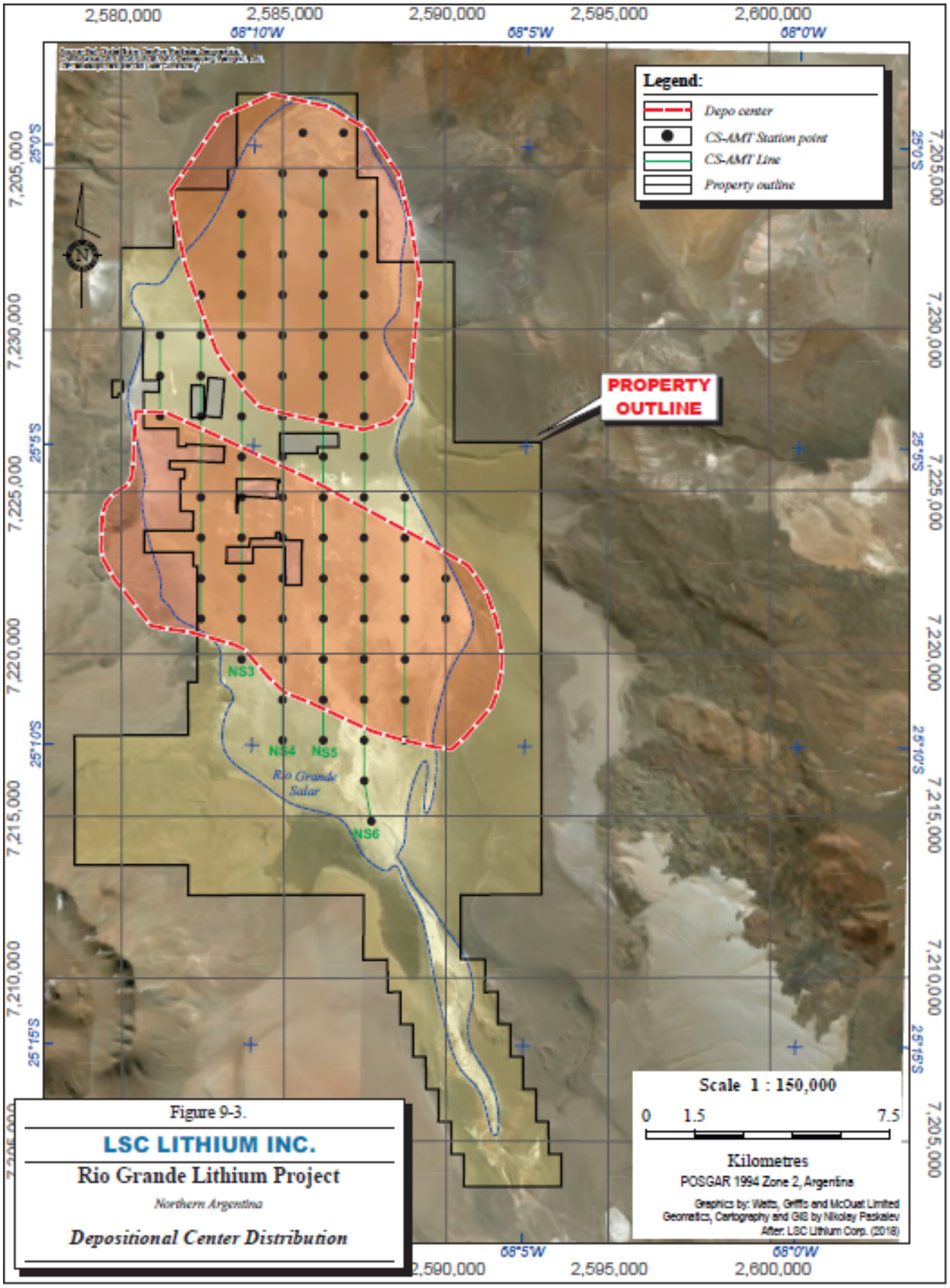
The results of the CSAMT survey are shown on **Figure 6-5**. Interpretation of the results by Hains (2018) indicates the following:

- Potential for lithium bearing formations to depths in excess of 500 m,
- Presence of 2 deep depositional centers; the first is well developed in the northern end of the salar and open ended at depth deeper than 500 m and latterly to the south; the second depocenter more centrally located and to the west.



Source - Hains (2018)

Figure 6-3. CSAMT Survey Design



Source - Hains (2018)

Figure 6-4. Depositional Center Distribution Map

6.2 Historic Drilling

Drilling on adjacent concessions to the Project area occurred previously by both ADY Resources in year 2011, and by LSC Lithium in year 2017 (Hains, 2018).

6.2.1 Ady Resources Exploration Activities – 2011

Previous drilling activities performed by ADY as part of the diamond drilling, core and brine sampling in 2011 are listed below:

- Drilling of 35 coreholes (HQ) to a final depth of 50 m, including 1 corehole to 75 m and another corehole to 101 m depth,
- Brine sampling at specific depth using packer system for chemical analysis, and
- Core samples sampling for determination of drainable porosity using the RBRC method.

Locations and total depths drilled for exploration wells are given in **Table 6-1**. Examination of the drill logs and drill core photos indicates the following general lithological features (Hains, 2018):

- Highly fractured halite with large crystals and open pores from 0 m to approximately 15 m; often mixed with gypsiferous sand,
- Gradually more competent halite with intercalated gypsiferous sand and some clay/silt from 15 m to approximately 30 m, minor mirabilite on occasion,
- Progressively more competent but still porous halite/gypsiferous sand and sandy clay from 30 m to 50 m, minor mirabilite on occasion,
- Transition to more competent halite from 50 m to 101 m in the deeper holes with intervals of porous halite and intercalated gypsiferous sands and clays and minor mirabilite, and
- In all intervals, significant variations in halite competency within more broadly defined intervals can be noted.

Only relatively competent samples were collected for RBRC analysis due to the presence of highly fractured zones and intervals. Drainable porosity results indicated an average porosity of 13.5% (Hains, 2018).

Table 6-1. ADY 2011 Drilling Program Well Coordinates

Borehole Identifier	UTM Easting (meters, POSGAR 94)	UTM Northing (meters, POSGAR 94)	Total Depth (meters)	Recovery (%)
RG-2011-1	2,586,170	7,234,917	50.20	85.5
RG-2011-2	2,586,165	7,233,163	50.20	97.5
RG-2011-3	2,584,157	7,231,146	50.20	96.7
RG-2011-4	2,586,158	7,231,153	50.47	98.2
RG-2011-5	2,587,930	7,231,139	50.20	67.0
RG-2011-6	2,580,961	7,229,147	50.20	66.3
RG-2011-7	2,582,718	7,229,102	50.20	95.5
RG-2011-8	2,584,439	7,229,107	50.20	91.7
RG-2011-9	2,586,160	7,229,123	50.20	95.1
RG-2011-10	2,587,918	7,229,134	51.40	57.6
RG-2011-11	2,580,963	7,227,137	8.20	33.2
RG-2011-12	2,582,702	7,227,122	50.00	92.0
RG-2011-13	2,584,432	7,227,124	50.90	90.5
RG-2011-14	2,586,177	7,227,122	50.90	94.1
RG-2011-15	2,587,908	7,227,141	50.88	88.8
RG-2011-16	2,581,848	7,225,137	50.90	83.5
RG-2011-17	2,583,364	7,225,137	50.90	82.0
RG-2011-18	2,584,880	7,225,137	50.90	90.8
RG-2011-19	2,586,396	7,225,137	50.85	75.2
RG-2011-20	2,587,912	7,225,137	50.90	80.0
RG-2011-21	2,581,849	7,223,137	20.20	22.0
RG-2011-22	2,583,870	7,223,137	50.85	79.3
RG-2011-23	2,585,891	7,223,137	50.85	87.9
RG-2011-24	2,587,912	7,223,137	50.90	84.6
RG-2011-25	2,589,222	7,223,137	50.50	89.5
RG-2011-26	2,583,870	7,221,137	36.70	48.6
RG-2011-27	2,585,891	7,221,137	50.20	69.3
RG-2011-28	2,587,912	7,221,137	45.70	58.3
RG-2011-29	2,589,403	7,221,137	50.85	89.6
RG-2011-31	2,586,902	7,219,137	50.80	87.4
RG-2011-32	2,588,923	7,219,137	50.85	82.2
RG-2011-34	2,586,779	7,224,139	75.25	89.1
RG-2011-35	2,587,211	7,230,569	101.0	93.8

Source: Hains, 2018
UTM – Universal Transverse Mercator
Total drilled was 1,653.45 m.

The exploration program completed during 2011 by ADY, included drilling and aquifer testing of eight production wells, two exploration wells, and two piezometers. The drilling contractor was Andina Perforaciones SRL under the direction of Conhidro SRL, consulting hydrogeologists to ADY Resources.

Table 6-2 presents detailed location data for all wells drilled. Location map for wells constructed during 2011 drilling program are shown on **Figure 6-1**.

Table 6-2: 2011 Locations for Pumped Exploration Wells

Well Identifier	UTM Easting (meters, POSGAR 94)	UTM Northing (meters, POSGAR 94)
RGP1	2,586,766.17	7,225,087.24
RGP2	2,586,768.20	7,225,407.29
RGP3	2,586,763.53	7,225,561.20
RGP4	2,586,913.60	7,225,363.26
RG4XP	2,586,764.08	7,225,647.28
RGP5	2,586,916.92	7,225,440.13
RGP6	2,586,914.80	7,225,550.93
TW1	2,587,011.88	7,228,907.81
TW2	2,587,433.84	7,229,135.88
TW3	2,587,932.76	7,229,135.78
PZTW2	2,587,509.50	7,229,132.29
PZTW3	2,588,008.44	7,229,135.29

Source: Conhidro, 2012 – Hains, 2018

The wells were rotary drilled to 15” diameter and finished at 8” diameter with PVC casing equipped with 0.75 mm slotted screen opening and logged for SP and Short Normal and Long Normal resistivity (Hains, 2018).

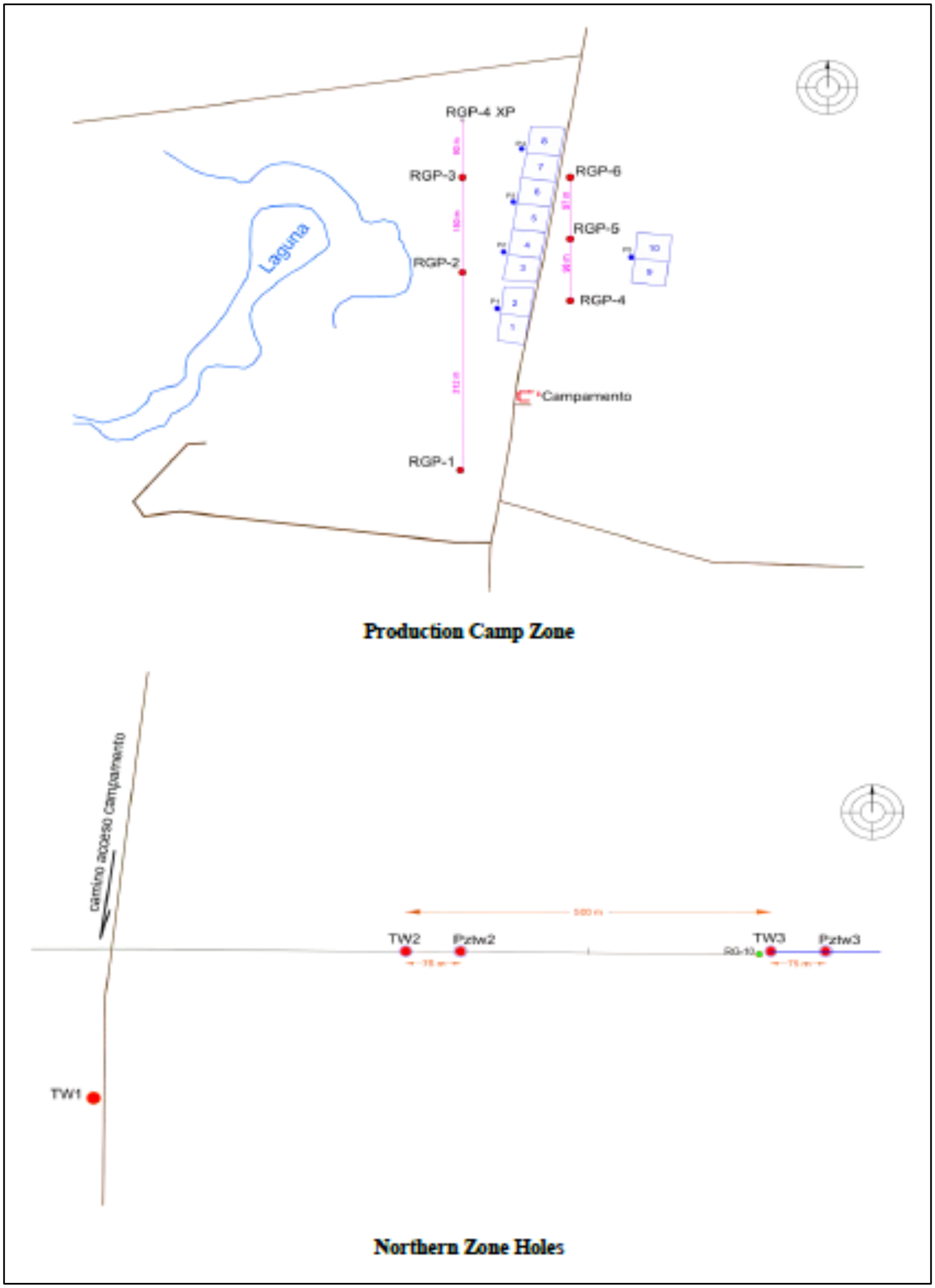
Analysis of pumping data performed by Hains (2018) indicated highly variable transmissivities with values ranging from a low of 354 m^2/day for RGP1 to a high of 30,454 m^2/day for RGP2 with drawdowns at 150 cubic meters per hour (m^3/hr) pumping rates ranging from 0.42 m for RGP3 to 24.17 m for well TW3. Summary of pumping test results are given in **Table 6-3**.

Table 6-3. 2011 Pumping Test Results

Well Identifier	Transmissivity (m^2/d)
RGP1	354
RGP2	30,454
RGP3	29,760
RGP4	1,170
RGP5	888
RGP6	3,240
TW2	441
TW3	483

Source: Conhidro, 2012 – Hains, 2018

The overall conclusions from the pumping tests work that Salar de Rio Grande is comprised of a multilayer system with porous clastic zones and evaporite zones composed of halite (Hains, 2018).



Source – Hains (2018)

Figure 6-5. Map of 2011 Pumping Wells

6.2.2 LSC Exploration – 2017 Twin Hole Drill and Sampling Program

During 2017 a twin hole drilling program was carried out by LSC as part of a due diligence campaign to verify previous results obtained by ADY. The program included drilling and construction of 8 brine exploration wells to a target depth of 100 m. Two holes, 22T and 18T, were stopped short due to presence of unconsolidated volcanic sands which prevented the drill holes from reaching the planned depth of 100 m (Hains, 2018). All the corehole wells were drilled using a CS14 Atlas Copco drill rig with diamond drill hole method and HQ core bit.

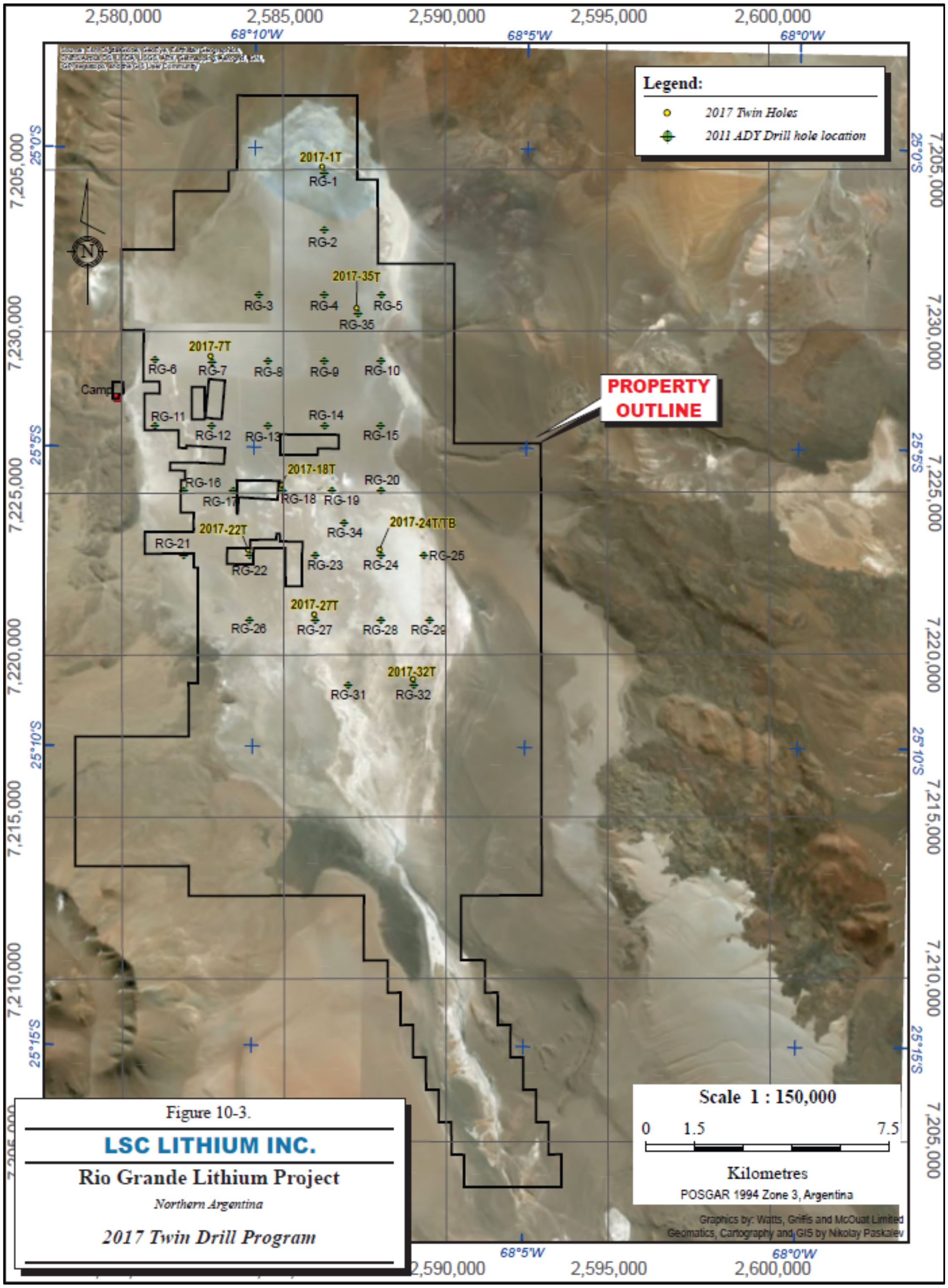
The twin holes were selected to cover the salar surface and provide sufficient drill hole density for classification of the resource at the Inferred Resource level in accordance with the recommendations in Houston et al. (2011) and the CIM best Practice Guidelines for Estimation of Lithium Brine Resources and Reserves (CIM, 2015). Locations and depths for twin hole drill program are given in **Table 6-4**. Locations for the twin holes are shown on **Figure 6-6**.

Table 6-4. Locations for LSC Lithium 2017 Twin Drill Program

Borehole Identifier	UTM Easting (meters, POSGAR 94)	UTM Northing (meters, POSGAR 94)	Total Depth (meters)
SRG-2017-35T	2,587,211.00	7,230,569.00	3,701.89
SRG-2017-07T	2,582,718.00	7,229,102.00	3,701.57
SRG-2017-01T	2,586,170.00	7,234,917.00	3,701.92
SRG-2017-22T	2,583,870.00	7,223,137.00	3,704.78
SRG-2017-22TB	2,583,868.22	7,223,164.75	3,704.99
SRG-2017-27T	2,585,891.00	7,221,137.00	3,705.00
SRG-2017-24T	2,587,912.00	7,223,137.00	3,705.20
SRG-2017-32T	2,588,923.00	7,219,137.00	3,705.65
SRG-2017-18T	2,584,880.00	7,225,137.00	3,702.99

Source -_Hains (2018)

Lithologic logs show highly-fractured gypsiferous sandy halite extending to typical depths of approximately 50 m, with occasional short intervals of somewhat more competent halite. Below approximately 50 m depth the lithology gradually changes to more competent but still porous crystalline halite. In some holes, volcanic tuffs are observed over relatively short intervals (Hains, 2018).



Source – Hains (2018)

Figure 6-6. Location Map for 2017 Twin Drilling Program

6.2.3 Historic Resource Estimate and Production

Small companies exploited the resource between 1952 and 1975, producing a total volume of close to 60,000 tons of sodium sulfate. Sulfo Argentina and Minera Altas Cumbres operated different properties between 1976 and 1991, reaching a production volume of 76,000 tons, between shallow wells and surface material located in the southern part of the Salar de Rio Grande. By 2013, sodium sulfate production ended, due to the development of a new technology that eliminated the use of sodium sulfate for the process of obtaining lithium carbonate. During the period 2009 to 2013, ADY reportedly extracted a volume of 49,700 tons of brine and 34,000 tons of surface material (Hains, 2018). There has been no historic lithium resource or reserve estimate for the Project, nor has there been any historic production of the lithium at the Project.

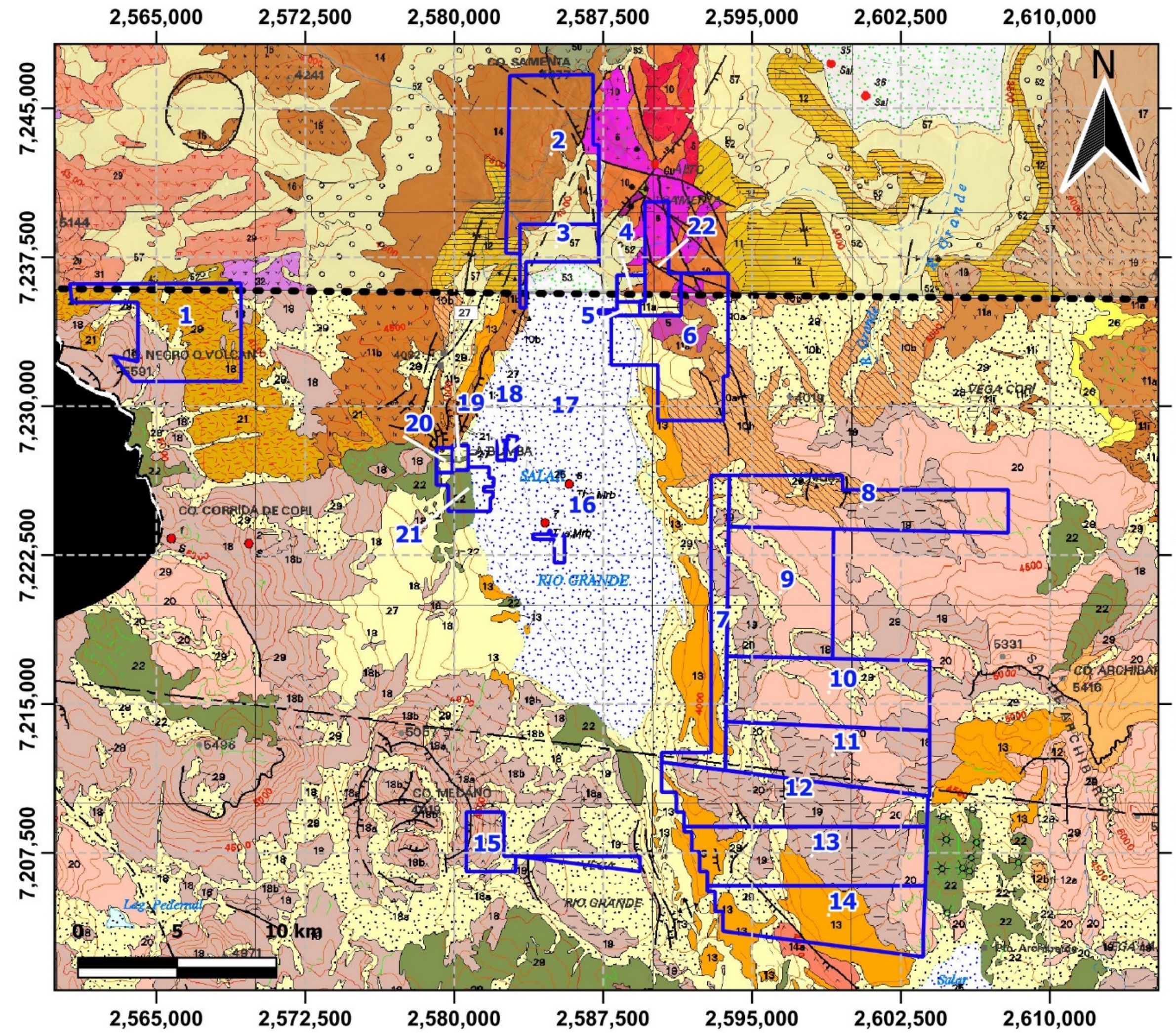
7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Salar de Rio Grande is located in the Puna Geological Province (Turner, 1972) and within the Puna Austral Geological Sub-province (Alonso *et al.*, 1984a). The Puna Geological Province (Turner, 1972) is characterized by having a structure that controls the compartmentalization of many Andean basins. North-South aligned thrust faults, grabens and semi-grabens frequently create accommodation space, while strike-slip faults can help with basin closure (Salfity et al., 1984). Volcanism also plays an important role, both in the filling of basins and in the closure of basins (Viramonte et al., 1984; Alonso, 1986; Houston et al., 2011).

A wide range of rock types are found within the Puna Geological Province, unconformably overlying the basement rock. In most of the Chile and Argentina - Chile border zone of the region, the basement rock is covered by Tertiary-Quaternary volcanic rocks, including ignimbritic tuffs covered by andesites aged between 10 and 3 million years (Ma) and recent basaltic flows (0.8 - 0.1 Ma) with several tens of m thick. In some areas, the basement rock is covered by Cretaceous-Tertiary continental and marine sedimentary rocks, the latter as conglomerates, sandstones, siltstones, tuffs, and oolitic limestones.

One of the main characteristics of the Puna is the presence of structurally formed closed basins, in which extensive salt flats are developed which covers the floors of the basins, which are normally surrounded by expansive alluvial systems. They generally represent the product of a basin-filling process that begins with the erosion of the surrounding relief, initially depositing colluvial slopes and fan-shaped gravels, which grade upwards into sands and silts, clays, and evaporites. There are many variants of this model and the tectonic and sedimentary processes that led to the formation of such basins. In general, the waters run off towards these closed basins, thus forming salt flats, so the only way to return to the hydrological cycle is through evaporation, leaving brines enriched in various metals and salts, sometimes including anomalous levels of Lithium (Li), Boron (B) and Potassium (K). **Figure 7-1** shows the geologic map for the area and the associated stratigraphic explanations for the units. **Figure 7-2** and **Figure 7-3** show stratigraphic information for the geological map.



EXPLANATION:
NOA Concessions
Socompa geologic map southern boundary Antofalla geologic map northern boundary [1]

Notes:
1. Background:
- North of dashed line: "SEGEMAR Sheet 2569-II (Socompa)".
- South of dashed line:"SEGEMAR Sheet 2566-IV (Antofalla)".
2. Coordinate System POSGAR 1994 Argentina Zone 2.

H:\projects\4576 - Rio Grande\01.GIS\QG_RíoGrande.qgz(Layout:Geología dec2023)

Source: Segemar (2008b) Sheet 2569-II, 2569-IV

Figure 7-1. Geologic Map of the Project Area

Lithologic descriptions and symbology based on "SEGEMAR Sheet 2569-II (Socompa)":

NUMBER	DESCRIPTION	SYMBOLOGY
57	HOLOCENE. DETRITICS, ALUVIAL, AND COLUVIAL DEPOSITS. Boulders, sands and clays.	57
53	HOLOCENE. EVAPORITIC DEPOSITS. Halites, borates, sufates with interbedded clays.	53
52	PLEISTOCENE. OLD PIEDMONT DEPOSITS. Medium to coarse fanglomerates.	52
43	PLEISTOCENE, LA CSAUALIDAD IGNIMBRITE, Dacitic ignimbrite	43
32	PLIOCENE, INCA, TECAR, SUR BAYO, MELLADO AND EQUIVALENT STRATOVOLCANO, Andesites	32
31	UPPER MIOCENE, SOCOMPA CAIPE, LA CARPA, ROADO AND EQUIVALENT VOLCANIC COMPLEX. Pyroclastites Pular basalt and olivinic basalts	31
29	UPPER MIOCENE, SOCOMPA CAIPE, LA CARPA, RODADO AND EQUIVALENT VOLCANIC COMPLEX. Andesites and dacites	29
27	UPPER MIOCENE ARIZARO VOLCANIC COMPLEX. rhyodacitic domes	27
19	OLIGOCENE-LOWER MIOCENE. CORI VOLCANIC COMPLEX. Andesites	19
14	MIDDLE OLIGOCENE-LOWER MIOCENE VOLCANO-SEDIMENTARY COMPLEX QUEBRADA DEL AGUA. Pyroclastites, conglomerates, andesites, and dacitic - rhyodacitic domes	14
12	OLIGOCENE-LOWER MIOCENE. SEDIMENTARY VIZCACHERA. Sandstones, volcanic sandstones, siltstones, pelites, tuffs, gypsums, halites.	12
11	EOCENE-MIDDLE OLIGOCENE, GESTE FORMATION, polimictic conglomerates with interbedded sandstones	11
10	EOCENE. SANTA INÉS VOLCANIC COMPLEX. Dacites, ignimbrites, dacitic tuffs. 10a, Rhyodacitic and Rhyophysical dikes and porphyries.	10
6	PERMIC LLULLAILLACO PLUTONIC COMPLEX. Granites and granitic porphyries.	6

Source: Segemar (2008a) Sheet 2569-II

Figure 7-2. Stratigraphic Explanation for Geologic Map

Lithologic descriptions and symbology based on "SEGEMAR Sheet 2569-IV (Antofalla)":

NUMBER	DESCRIPTION	SYMBOLOGY
29	HOLOCENE. COLUVIAL DEPOSITS. Deposits of silt, sand and conglomerates with little transport, not connected, on slopes of hills and piedmont flats.	29
27	HOLOCENE Moderns alluvial deposits silts, sands and gravels	27
25	HOLOCENE. EVAPORITIC DEPOSITS: Saline and chloride deposits and minor proportion of sulphates and borates.	25
22	PLEISTOCENE BASALTS. Olivines basalts with xenocryst of quartz and plagioclases located in lavaflows of small extensions produced by eruptions of monogenic volcanic apparatus and by eruptions through fissures.	22
21	PLEISTOCENE CALETONES IGNIMBRITE. Dacitic ignimbrites	21
20	UPPER PLIOCENE VULCANITES. Andesites, rhyolites and dacites	20
19	PLIOCENE ARCHIBARCA IGNIMBRITE. Ignimbrites	19
18b	LOWER PLIOCENE VULCANITES. Dacites	18b
18a	LOWER PLIOCENE VULCANITES. Rhyolites	18a
18	LOWER PLIOCENE VULCANITES. Rhyolites, dacites, andesites and basalts Riolitas, dacitas, andesitas y basaltos	18
13	MIOCENE SIJES FORMATION, Sandstones, conglomeradic sandstones, conglomerates, tuffs, ignimbrites. Evaporites	13
11	LOWER MIOCENE VOLCANICS. Deeply eroded volcanoes, porphyritic lavas, dykes and volcanic necks, participation of tuffs, agglomerates, ignimbrites and dacitic porphyries. It is included olivine basalts from Cerro Leon Muerto and located to the west of Cerro Plegado.	11
11b	LOWER MIOCENE VULCANITES. Lava flows, subvolcanic bodies, deposits of acidic to basic pyroclastics flows, and pyroclastites. Quebrada del agua complex.	11b
11a	LOWER MIOCENE VOLCANICS. Deeply eroded volcanoes, porphyritic lavas, dykes and volcanic necks, participation of tuffs, agglomerates, ignimbrites and dacitic porphyries. It is included olivine basalts from Cerro Leon Muerto and located to the west of Cerro Plegado. 11a: Lower member: Complexes of Santa Ines, Cori and Cavi.	11a
10a	MID MIOCENE VIZCACHERA FORMATION. 10a Lower member. Conglomerate sandstones and fine to medium conglomerates of reddish to grayish colors arranged in medium stratification.	10a
10b	MID MIOCENE VIZCACHERA FORMATION. 10b Upper member, Pellites, sandstones and red conglomerates with interlayers of gypsum. Pellites show biodisturbances and cracks from dehydration. Sandy banks show erosion at its base and asymmetric waves of water flow.	10b
5	UPPER PALEOZOIC. LA TABLA FORMATION. Porphyries, breccias and dacitic lavas with abundant content of plagioclases phenocrysts, amphiboles and boitites, glassy matrix intruded by fine grain dacitic to andesitic dykes.	5

Source: Segemar Sheet 2569-IV

Figure 7-3. Stratigraphic Explanation for Geologic Map

Soils

According to the taxonomic classification of the Food and Agriculture Organization of the United Nations (F.A.O., 1976), the following soil types are found in the study area: Lithosols, Fluvisols, and Solonchaks. The Lithosols are associated with rocky outcrops, have poor soil development, and consist mostly of unweathered or partly weathered rock material. The Fluvisols occupy the low areas of the closed salar basins in the region, including salar de Rio Grande basin. Fluvisols tend to be moderately alkaline to neutral have clear evidence of stratification, with weakly developed, but with a possible topsoil horizon. The Solonchak soils (Russian for "salt marsh") develop in the peripheries of the saline bodies and in alluvial fan material where it meets the salar. They are immature, moderately alkaline soils, with the presence of white saline crusts at land surface.

7.2 Local Geology

One of the most important characteristics that define the Geological Province of Puna is the presence of evaporitic basins, where important deposits of borates, sodium sulfate, and brines with high lithium concentrations. The Rio Grande Salar occupies one of these endorheic (internally drained) basins. The oldest rocks that outcrops in the area are of Upper Permian age and correspond to La Tabla Formation/Llullaillaco Plutonic Complex, which is located in the northeast section of the area. The Tabla Formation/Llullaillaco Plutonic Complex is composed of porphyries, breccias, ignimbrites, and lavas of dacitic to rhyolitic composition with fine-grained dikes intrusions of dacitic to andesitic composition.

The Tabla Formation/Llullaillaco Plutonic Complex is covered by the Vizcachera Formation which is divided into a lower member composed of sandstone, pellites and red conglomerates, and upper member composed of medium to coarse conglomerates with intercalations of fine silt beds and sandy layers. The Vizcachera Formation outcrops in the east side of the basin and lies unconformably above the Geste Formation (which is not exposed in the immediate area) and unconformably with overlying formations.

The Permian and Miocene units are intruded by Lower and Upper Miocene stratovolcanoes that include dacitic-andesitic lava flows and intrusions of dacitic and rhyodacitic domes integrated by the Quebrada del Agua, Cori and Cave complexes located in the north of the geologic map.

In some areas Lower Miocene volcanic rocks are covered by Sijes Formation of Upper Miocene age, which is composed of fine to medium-grained sandstone and sandstone conglomerates. Outcrops of the Sijes Formation are distributed along the edges of the Rio

Grande Salar and interrupted by pyroclastic flows and ignimbrites in the south border of the salar.

Lower and Upper Pliocene age volcanic rocks, including Archibarca ignimbrite are distributed in the southeast, south, and southwestern area of Rio Grande. The volcanics are represented by a set of eroded stratovolcanoes, porphyry lavas, dykes, domes, and pyroclastic deposits of andesitic and rhyodacitic composition.

Pleistocene Los Caletones ignimbrite is present in the form of an extended subhorizontal mantle, in the surroundings of the La Casualidad mine and it lays with unconformity on Lower Pliocene lavas. Pleistocene age basalts are present on the upper margins of the basin on the west side of Rio Grande. These are often associated with ignimbrites of similar age and overlay uncomformably on almost all the units that make up the regional stratigraphic column.

Quaternary sediments are abundant in the vicinity of the salar evaporitic crust. These sediments are forms alluvial-colluvial deposits represented by alluvial fans, wind-blown sands, and stream and valley sediments.

7.2.1 Permian-Triassic

7.2.1.1 La Tabla Formation (Upper Permian-Triassic)

The Tabla Formation (Naranjo and Puig, 1984) is composed of porphyries, breccias, ignimbrites, and lavas of dacitic-rhyodacitic-rhyolitic composition intruded by fine-grained dykes of dacitic to andesitic composition. On the border with Chile, Coira (1971), and Naranjo and Cornejo (1992) mapped small outcrops of tuffs and rhyolitic porphyries assigned to La Tabla Formation (Naranjo and Puig, 1984). Locally, outcrops of La Tabla formation are in the northeast edge of the Salar de Rio Grande.

7.2.1.2 Llullaillaco Plutonic Complex (Upper Permian-Triassic)

The complex is composed of granitic and granodioritic rocks, with a porphyry to grainy texture and by microdiorites. The various rocks assigned to this complex were previously described as being part of the Taca Taca Formations (Méndez, 1975), Llullaillaco (Méndez, 1975), and La Casualidad (Méndez, 1975) as well as the Chachas Formation (Koukharsky, 1988). Given that they are linked to the same intrusive cycle, which can be correlated, all equivalent outcrops have been grouped into a single unit, which is designated as complex (Zappettini and Blasco, 2001).

7.2.2 Miocene

7.2.2.1 Vizcachera Formation

The Vizcachera Formation (Seggiaro, 2006) is a stratigraphic sequence composed of sandstones and conglomerates. Volcanics are interbedded in the upper units but are absent in the lower units. Outcrops of this unit are recognized in the west border of the Salar de Rio Grande towards to Vega Cori.

7.2.2.1.1 Lower Member (Lower Miocene)

The lower member consists of medium to thick sandstones and conglomerates of grayish to pinkish and reddish colors. The sandy strata present moderately sorted bimodal granulometry with medium to thick stratification. Lenticular conglomerates, 1 to 2 m wide, are less common than sandstones; the coarse fraction is exclusively made up of Ordovician sedimentary clasts.

7.2.2.1.2 Upper Member (Middle Miocene)

Composed of medium to coarse conglomeratic facies at the base, formed by subrounded clasts of Ordovician sedimentary rocks, granites and rounded quartz. The matrix is made up of brownish-red, silty sandstones. In the middle part of the sequence, fine silt beds are interbedded with sandy layers. Near the top of this sequence, red to brown and light green pyroclastic deposits are interbedded. This member is assigned to the Middle Miocene on the basis of an Argon-Argon ratio dating of biotites from pyroclastic rocks interbedded in sandstones, which resulted in an age of about 14.8 Ma.

7.2.2.2 Lower Miocene Volcanic Rocks

This unit is composed with a set of deeply eroded stratovolcanoes, porphyry lavas, necks, dikes, domes, and pyroclastic deposits.

The Lower Miocene volcanic rocks are integrated by the Quebrada del Agua, Cori, and Cave complexes located in the north of the geologic map. This unit is composed of tuffs, agglomerates, ignimbrites, dacitic porphyries and dacitic lavas, andesitic, belonging to the afore mentioned volcanic complexes and by an extensive olivine basaltic volcanic apparatus located to the west of the Plegado hill. Ignimbrites at the base of the Cori Volcanic Complex contain slightly stretched pumice, mafic minerals, and plagioclase; they have abundant cognate lava fragments, red sediments, and fine reddish sandstones.

Other lava layers correspond to rhyodacite and dacites, with phenocrysts of plagioclase, hornblende, clinopyroxene, and scarce quartz. The outcrops to the west of the Salar del Río Grande, in the northwest of the chart, are made up of powerful deposits of lahar-type volcanic agglomerates, with blocks of dacitic ignimbrites and lithic basalts and andesites. These large volume deposits continue in the Socompa chart and were described by Zappettini and Blasco (2001) as the Quebrada del Agua Formation. Exposures near the eastern edge of the Salar del Río Grande are dark gray, heavily silicified dacitic lavas and rhyodacitic porphyries. On the eastern edge of the Río Grande salar, the lavas overlay Lower Permian rhyodacitic porphyries.

7.2.2.3 Upper Miocene Volcanic Rocks

This unit is made up of dacitic, andesitic, and basaltic-andesitic lavas that make up stratovolcanoes, domes, and less eroded small volcanic cones. The dacites are porphyry, with phenocrysts of more than 1 cm in diameter of quartz, feldspars, and biotite. Andesitic basalts have olivine and pyroxene phenocrysts. The andesites are composed of zoned plagioclase phenocrysts (intermediates), biotite, hornblende, and minor pyroxenes as microphenocrysts.

7.2.2.4 Sijes Formation (Upper Miocene)

Defined by Turner (1961), the Sijes Formation is restricted to outcrops on the edges of the salar de Rio Grande and is composed of fine to medium-grained sandstone, fine to medium-grained sandstone conglomerates and medium conglomerates. Falling pyroclastic banks are interbedded, made up of greenish lapilli, tuffs, and ignimbrites. In the south end of the salar the outcrops of the Sijes Formation are interrupted by pyroclastic flows and ignimbrites.

7.2.3 Pliocene

7.2.3.1 Lower Pliocene Volcanic Rocks

The lavas and domes corresponding to this unit are widely distributed around the Antofalla geological chart. Outcrops are continuous and very extensive on eastern edge of the Salar de Antofalla and toward southwest of Salar del Río Grande. In some areas, rhyolites and dacites have been mapped separately (SEGEMAR, 2008). They are made up of dacites, rhyolites, andesites, and basalts. They are lavas and domes associated with stratovolcanoes and collapsed calderas.

7.2.3.2 Archibarca Ignimbrite (Upper Pliocene- Lower Pliocene)

Galliski et al. (1999) incorporated this ignimbrite as an Upper Member of the La Torre Formation. It crops out in the surroundings of Cerro Archibarca. Possibly the deposits of pyroclastic flows that integrate this unit come from an emission center located around the mentioned hill. The ignimbrites are massive with scarce biotite and abundant lithic fragments of highly porphyric dacitic lavas. There are also fragments of red sandstone and granite.

7.2.3.3 Upper Pliocene Volcanic Rocks

This unit was integrated together with other volcanic rocks, such as andesites and rhyolites, within the Archibarca Complex by Galliski et al. (1987). Andesitic lavas are distributed on the northern slope of Cerro Archibarca and to the west of the Río Grande salt mine on the border with Chile. To the south of Cerro Archibarca, a group of rhyolitic and dacitic domes and lavadomes outcrops associated with the rim of the Archibarca caldera. Andesitic and dacitic lavas have pyroxenes, biotites, and occasional hornblendes. In general, they are moderately porphyric and well preserved, which constitute less eroded volcanic rocks.

7.2.4 Pleistocene

7.2.4.1 Caletones Ignimbrite (Lower Pleistocene)

This unit was named by Naranjo and Cornejo (1992) and it is made up of dacitic ignimbrites with pink and grayish coating colors in fresh rock. They present abundant pumice rich in well-developed phenocrysts, plagioclases, biotites, and green amphiboles. The texture of the ignimbrites is porphyritic with a glassy matrix, fluidal eutaxitic. It is composed of plagioclase, sanidine, hornblende, and biotite as phenocrysts. Lithoclasts from andesitic lavas and ignimbritic fragments are common, they also contain accidental components of fine-grained sedimentary units. The matrix in parts is devitrified. It is arranged in the form of an extended subhorizontal mantle, in the surroundings of the La Casualidad mine and it lies unconformably on lower Pliocene lavas.

7.2.4.2 Pleistocene Basalts (Upper Pleistocene)

Pleistocene age basalts are present on the upper margins of the basin on the west side of Rio Grande. These are often associated with ignimbrites of similar age. The morphology of the basaltic lavas varies from very fluid flows to the type of lavas in blocks, they are of little areal extension. The volcanic centers are well preserved. In some cases, the lavas have xenocrysts of quartz and plagioclase. These basalts lie uncomformably on almost all the units that make up the regional stratigraphic column.

7.2.5 Holocene

7.2.5.1 Evaporitic Deposits

These deposits are essentially made up of chloride minerals, and to a lesser extent by sulfates and borates. Sodium sulfate was exploited in the Rio Grande salt flat in the 1970s.

7.2.5.2 Modern Alluvial Deposits

This unit includes unconsolidated deposits of silt, sand and gravel, associated with drainage systems that constitute alluvial fans, riverbeds and valley fill, which are located throughout the area of on the geological map. They tend to be poorly sorted and weakly stratified.

7.2.5.3 Colluvial Deposits

These are unconsolidated deposits of silt, sand, and gravel which are located on the slopes of the hills and in foothills plains.

7.3 Mineralization

The mineralization for the project consists of a lithium-enriched brine that is contained within the pore spaces of the sedimentary strata formed by evaporitic processes within the salar basin (**Figure 7-1**). The boundaries of the mineralization are suspected to be the basin boundary, although some lithium-enriched brine may be contained in the fractures and/or pores of the older rocks that form the basin boundary. Distribution and chemical composition of the brine in the salar sediments is not currently known. The actual length, width, depth, and continuity of the brine-bearing aquifer is currently not accurately known; however, with exception of freshwater areas on the edges of the salar, we anticipate lithium-rich brine to occur in most of the aquifer in the basin to effectively land surface.

8 DEPOSIT TYPE AND CONCEPTUAL MODEL

The deposit type is a brine aquifer within a salar basin. Lithium is enriched in the aquifer brine as a result of evapoconcentration of small concentrations of lithium that enter the salar in fresh or brackish water – commonly associated with geothermal activity. Because lithium does not precipitate into a solid form while hydrated (unlike halite and other evaporite minerals), the brine becomes enriched in lithium over time.

8.1 Conceptual Model of Salar Basins

The conceptual model for salar basins, and associated brine aquifer, is based on exploration and studies of similar salar basins in Chile, Argentina, and Bolivia. Salar basin locations and basin depths are typically structurally controlled but may be influenced by volcanism that may alter drainage patterns. Basin-fill deposits within salar basins typically contain bedded evaporite deposits in the deeper, low-energy portion of the basin, together with thin to thickly bedded low-permeability lacustrine clays. Coarser-grained, higher permeability deposits associated with active alluvial fans can typically be observed along the edges of the salar. Similar alluvial fan deposits, associated with ancient drainages, may occur buried within the basin-fill deposits.

Salar basins are characterized by closed topography and interior drainage. Typically, no significant amount of groundwater discharges from these basins as underflow. Effectively, all groundwater discharge that occurs within the basin is via evapotranspiration. All surface water that flows into the basin is either evaporated directly or enters the groundwater circulation system and is evaporated at a later time. Water levels tend to be relatively shallow in the flat part of the salar.

8.2 Conceptual Model of Salar de Rio Grande

Based on the available information, Salar de Rio Grande appears to be a relatively mature salar. Basin margins are interpreted to be fault controlled. The margin of the basin is dominated by Volcanic units. Volcanic units are not known to occur in the basin. Depth to bedrock was interpreted to be more than 300 meters below land surface (mbls) based on VES geophysical surveys (AMINCO, 2022a) but additional studies are required to define basement depth.

Evaporitic sediments saturated with brine were interpreted with variable thickness in the central and western areas of the salar. Fine-grained sediments also saturated with brine were recognized based on data obtained from the VES survey. In northern area of the salar evaporitic sediments saturated with brine are covered by coarse and fine grain sediments. In the northeastern area, coarse and fine grain sediments were recognized as likely alluvial deposits with a freshwater/saltwater interface.

The principal sources of water entering the Project area are from surface water coming into the basin from the basin margins. To date, surface water flow has not been formally measured. Some groundwater inflow from natural recharge along the mountain fronts via alluvial fans is also believed to exist. In both cases, there appears to be limited mixing of the fresh water and brine in the basin due to density differences and is likely to be in the upper part of the aquifer. As a result, the fresh water entering the Project tends to stay in the upper part of the aquifer system on the edges of the basin, without moving to the center part of the salar. These freshwater discharge areas tend to support altiplanic vegetation. Evaporation of fresh water in the basin over time results in concentration of the dissolved minerals and ultimately results in brine generation.

Exploration activities conducted during 2023 confirmed initial interpretations from VES, but showing significantly depths to bedrock. Drilling have gone as deep as 676 meters within the salar area, and bedrock has not been found.

In terms of fresh groundwater inflow, a freshwater thickness of about 13 meters was identified in the alluvial at north of the salar boundary (Sulfa X property). As conceptually expected, the fresh water was found in the upper part of the aquifer, on top a deep brine column.

9 EXPLORATION

In year 2022, NOA conducted a surface exploration program in their Rio Grande concessions consisting of surface geophysics survey with VES method, and near-surface brine sampling. The field works were carried out by AMINCO, a geophysical consulting company based in the city of Salta, Argentina. The Author took several samples in the field during the AMINCO sampling program which is documented in Chapter 12.

9.1 Year 2022 Geophysical Survey

A VES survey was conducted during April 2022 by AMINCO, for the concessions owned by NOA in the north, northeast, central and south areas of the Salar de Rio Grande. A total of 36 VES point were surveyed within the total mining Project concessions. Location maps of the VES survey points are shown on **Figure 9-1**, **Figure 9-2**, and **Figure 9-3**. Goals of the surveys were to obtain a preliminary understanding of the underlying stratigraphy of the Project property, identify potential geologic structures, identify freshwater/brine interfaces (if present), and to be able to identify future locations for exploration wells.

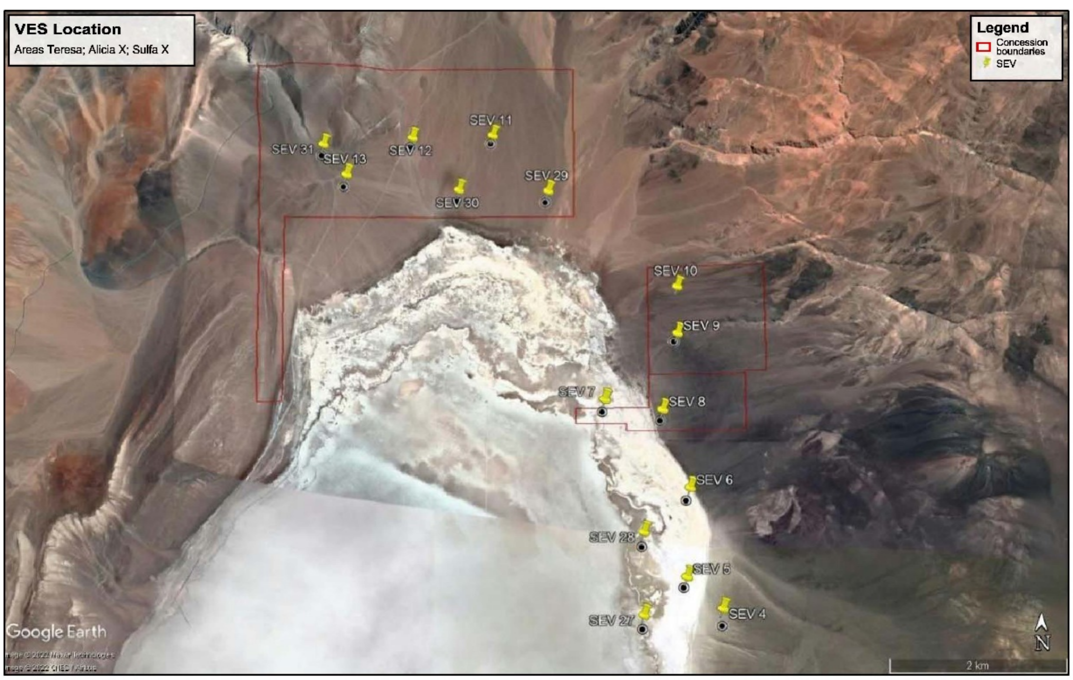


Figure 9-1. Location Map of VES Survey Points in the Northern Area

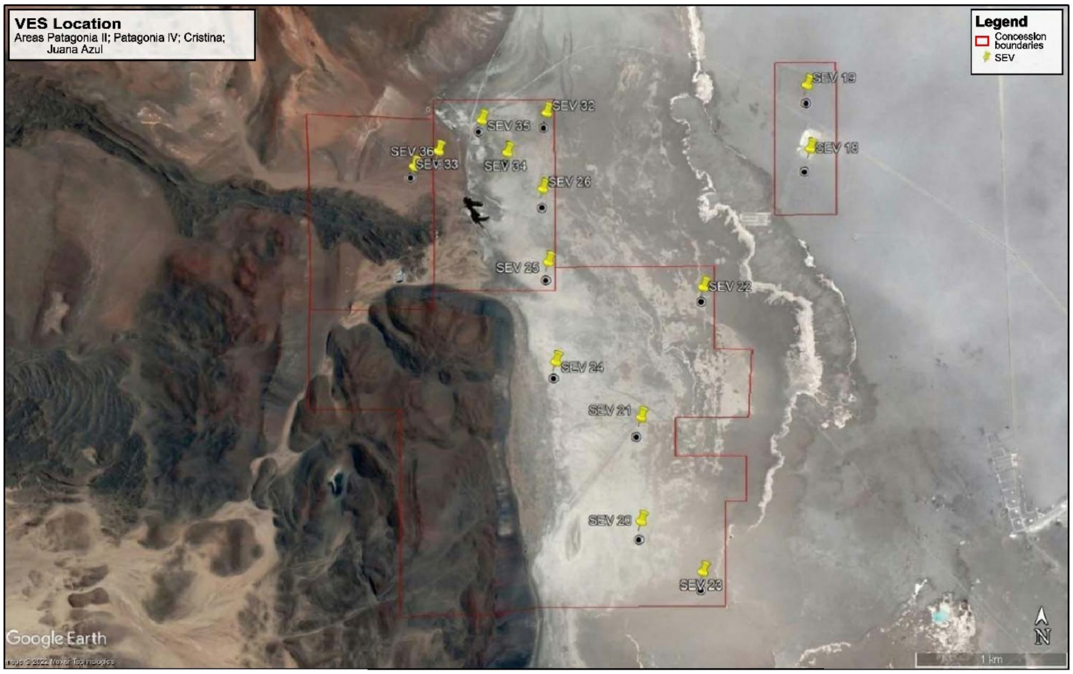


Figure 9-2. Location Map of VES Survey Points in the West-Central Area

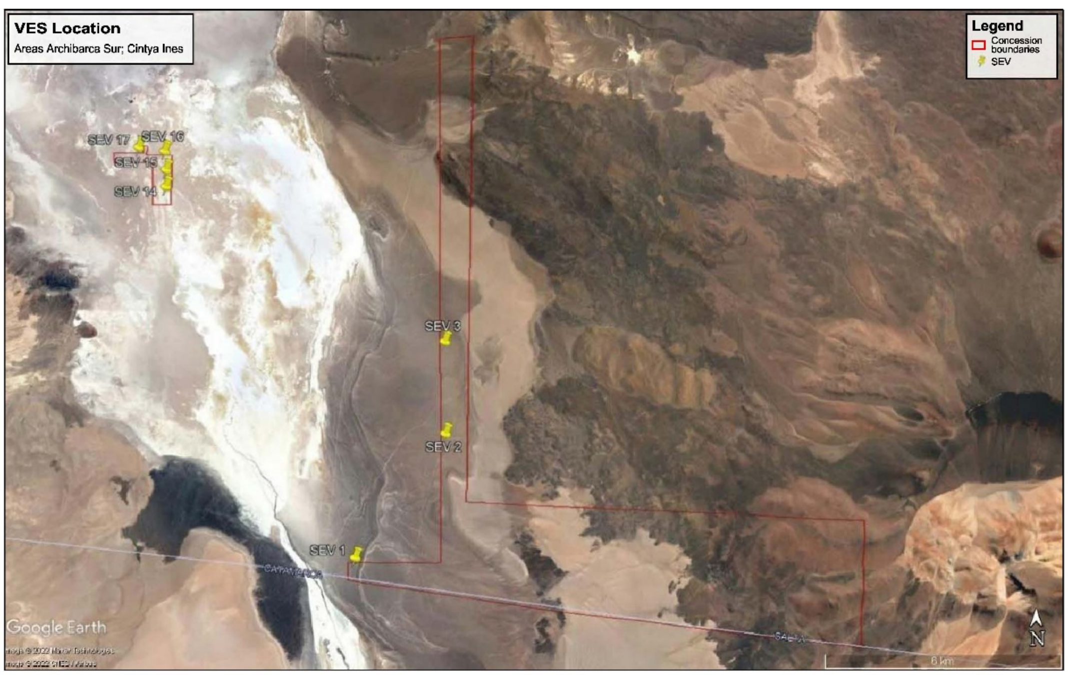


Figure 9-3. Location Map of VES Survey Points in the Southern Area

9.1.1 Interpretation of VES Survey Cross Sections

According to AMINCO (2022a), surveyed points were grouped into lines for correlation of results at each point, and cross sections were constructed to perform a better interpretation of the data obtained. Cross section interpretations are summarized along this report section, where original VES location figures and corresponding interpreted schemes, developed by AMINCO (2022a), are also presented.

VES CROSS SECTION 1

Figure 9-4 and **Figure 9-5** show location and interpretation of VES cross section 1. Cross section 1 is located on the Yacones RG 01 property, in the southern area of the salar. It has a length of 2.4 km approximately, with a N-S orientation, and it reaches a total depth of approximately 300 m. Most of the resistivity values suggest unsaturated conditions. Depth to bedrock was not recognized according to the resistivity data.

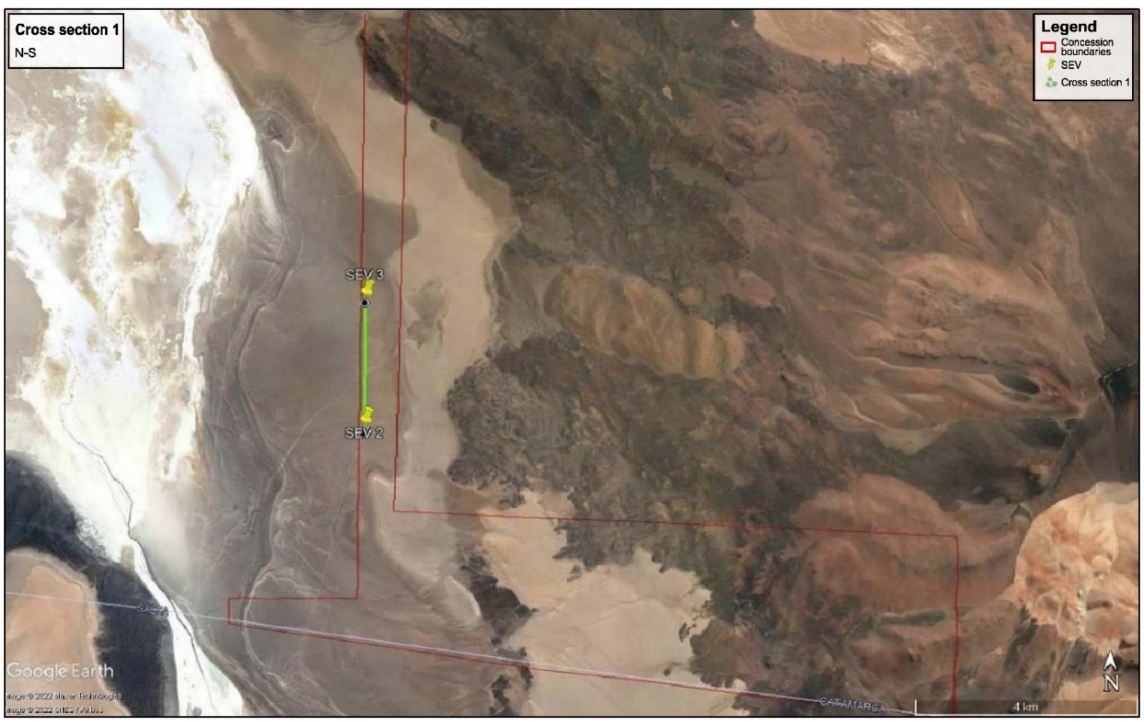


Figure 9-4. Location Map of VES Cross Section 1

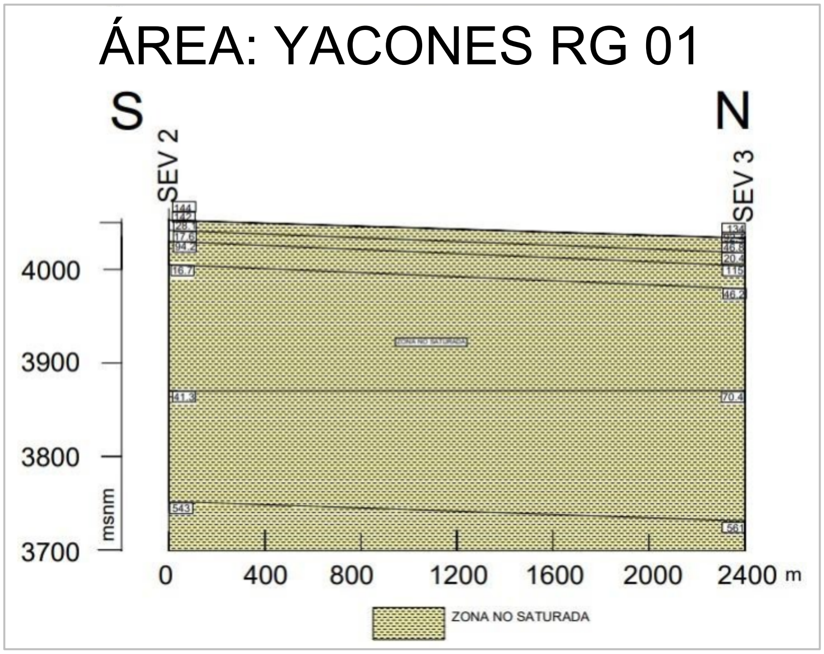


Figure 9-5. Interpretation of VES Cross Section 1

VES CROSS SECTION 2

Cross section location map and interpretation of surveyed VES points are shown on **Figure 9-6** and **Figure 9-7**. Cross section 2 is located on the Teresa property, northern area of the salar. It has a length of 2.7 km approximately, with a N-S orientation, and it reaches a total depth of approximately 320 m. Resistivity values suggest a thickness of between 78 to 108 m of brine saturated sediments. Higher values of resistivity at depth suggest the presence of saline water. Basement depth was not recognized at this location.

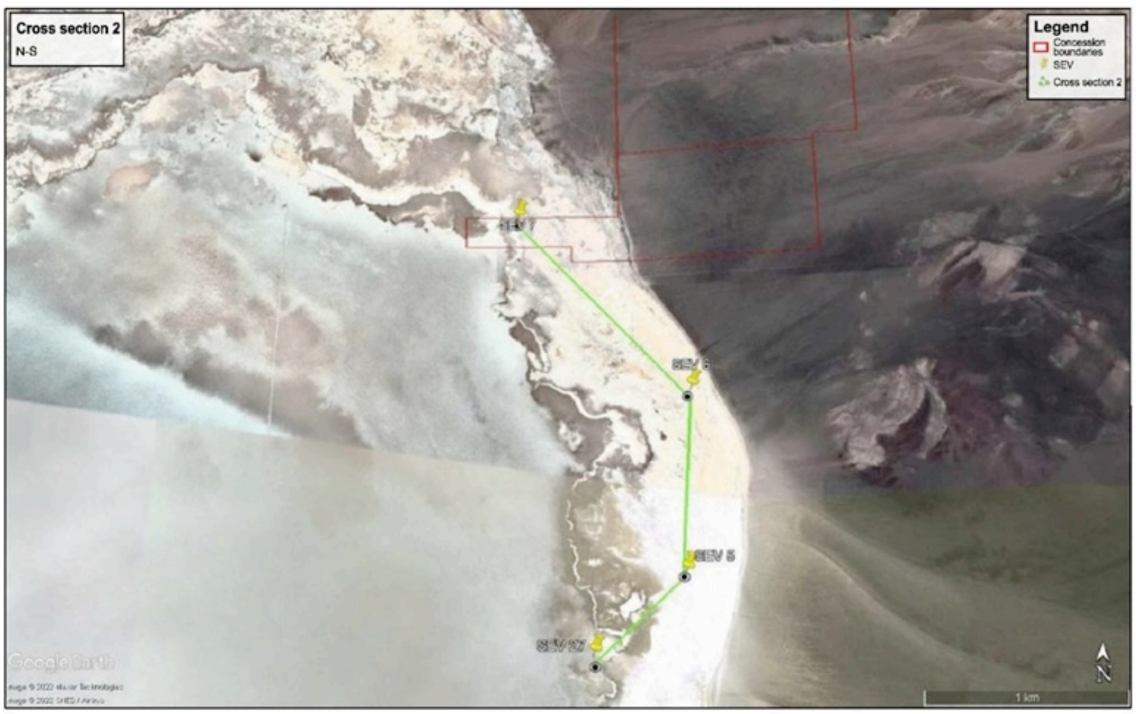


Figure 9-6. Location Map of VES Cross Section 2

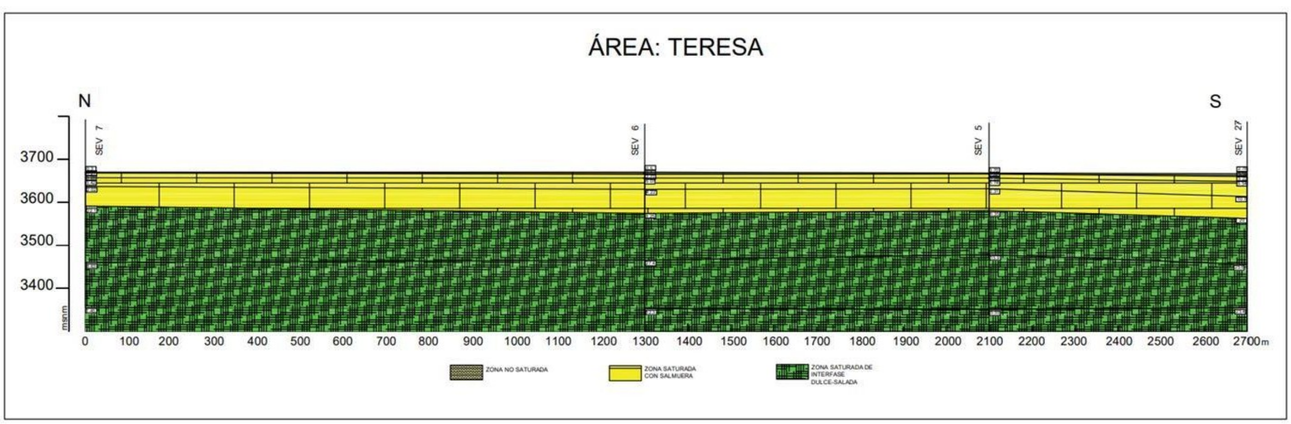


Figure 9-7. Interpretation of VES Cross Section 2

VES CROSS SECTION 3

Cross section location map and interpretation of surveyed VES points are shown on **Figure 9-8** and **Figure 9-9**. Cross section 3 is located on the SulfaX property, in the northern area of the salar. It has a length of 2.1 km approximately, with a W-E orientation, and it reaches a total depth of approximately 350 m. Resistivity values suggest sediments saturated with salty water at ~120 m of depth. Higher values of resistivity on top might indicate the presence of fresh water. Basement depth was not recognized at this location.

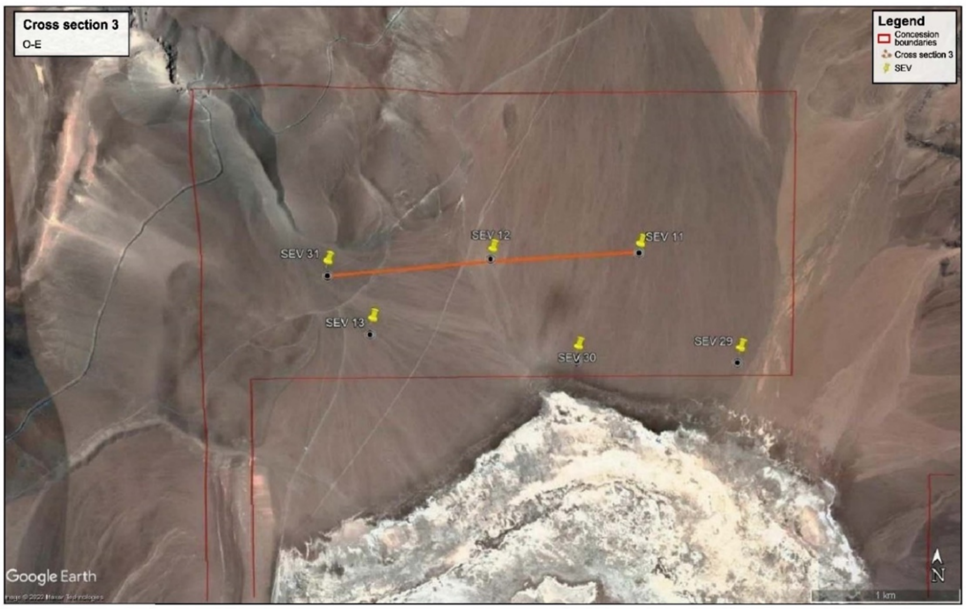


Figure 9-8. Location Map of VES Cross Section 3

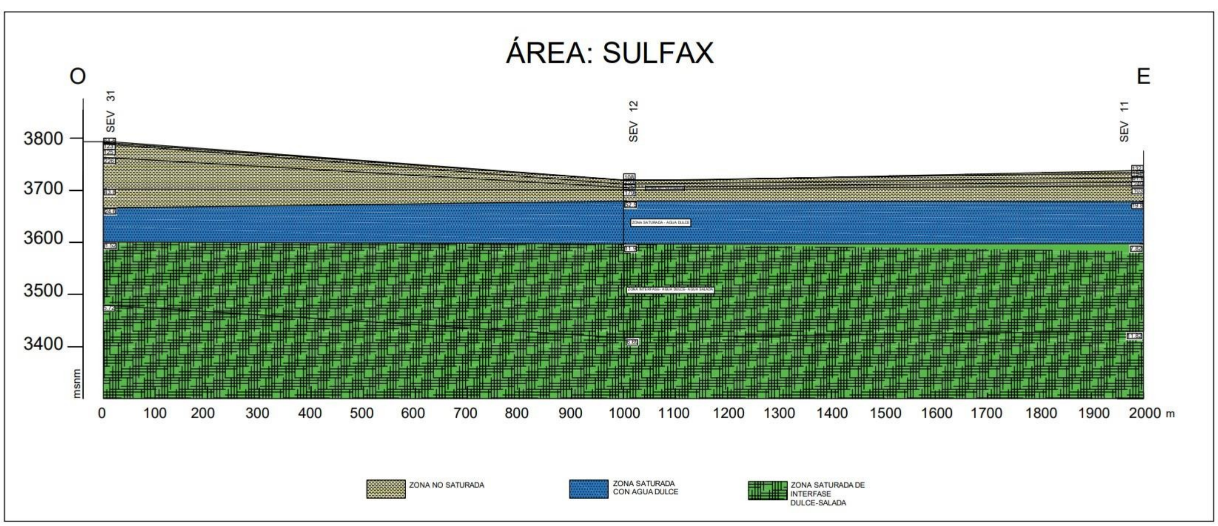


Figure 9-9. Interpretation of VES Cross Section 3

VES CROSS SECTION 4

Cross section location map and interpretation of surveyed VES points are shown on **Figure 9-10** and **Figure 9-11**.Cross section 4 is also located on the SulfaX property, in the northern area of the salar. It has a length of approximately 0.6 km, with a N-S orientation, and it reaches a total depth of approximately 450 m. Resistivity values suggest contact with sediments saturated with salty-water at ~100 m depth. Higher values of resistivity on top might indicate presence of fresh water within colluvium fan at about 20 m from surface. Depth to bedrock was not recognized according to the resistivity data.

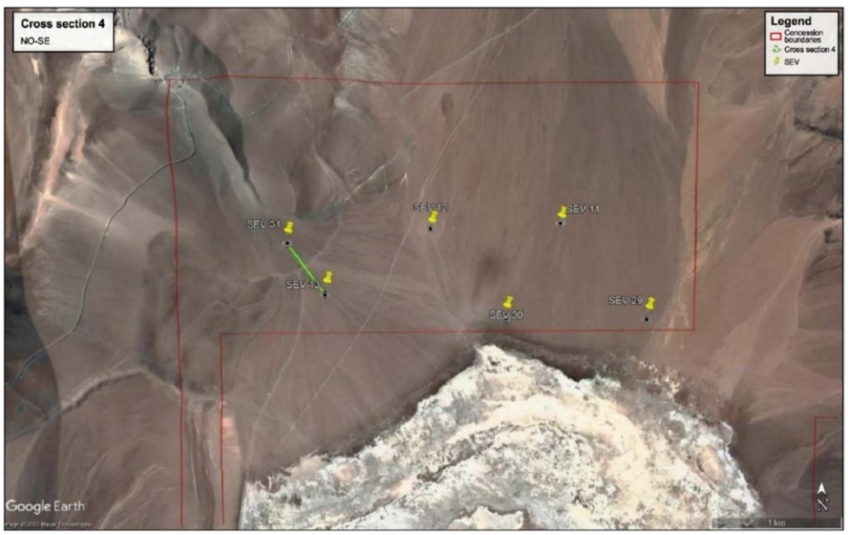


Figure 9-10. Location Map of VES Cross Section 4

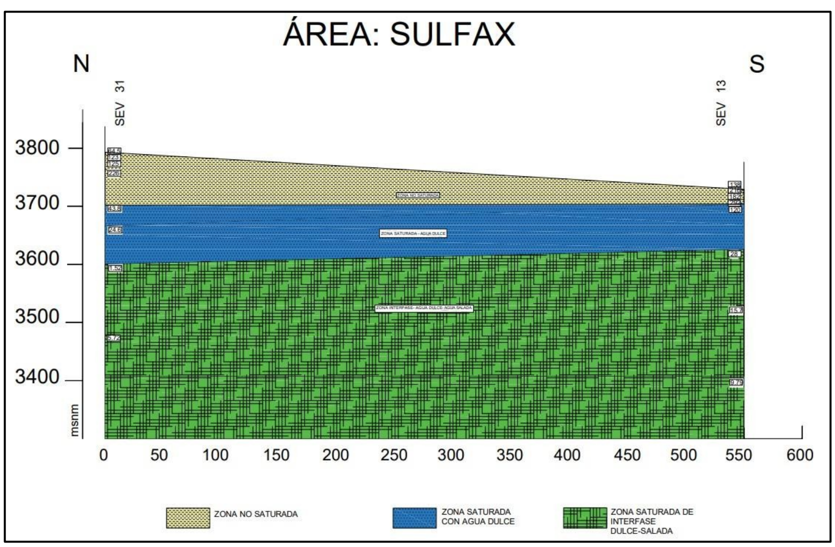


Figure 9-11. Interpretation of VES Cross Section 4

VES CROSS SECTION 5

Location map and interpretation are shown on **Figure 9-12** and **Figure 9-13**. Cross section 5 is located on the SulfaX property, in the northern area of the salar. It has a length of approximately 2.2 km, with a W-E orientation, and it reaches a total depth of approximately 400 m. Resistivity values show contact with sediments saturated with salty-water at ~120 m depth at SEV-29 and SEV-30 towards the eastern side of the cross section. Higher values of resistivity on top might indicate presence of fresh water within the salar from ~25 m depth. Toward the eastern side of this cross section at SEV-13, brine-saturated sediments might be encountered below 300 m. Bedrock was not recognized according to the resistivity data.

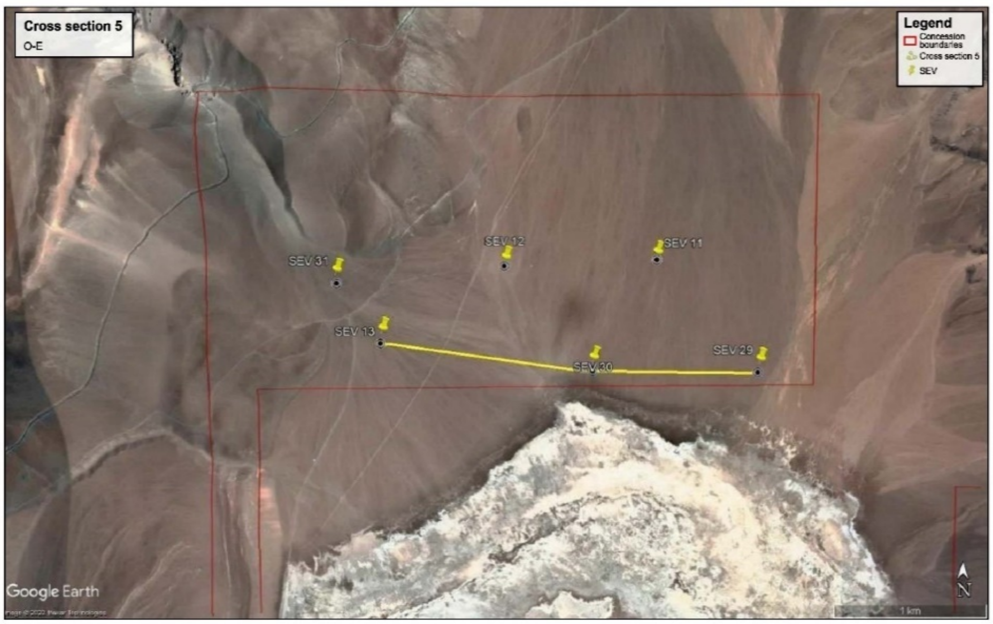


Figure 9-12. Location Map of VES Cross Section 5

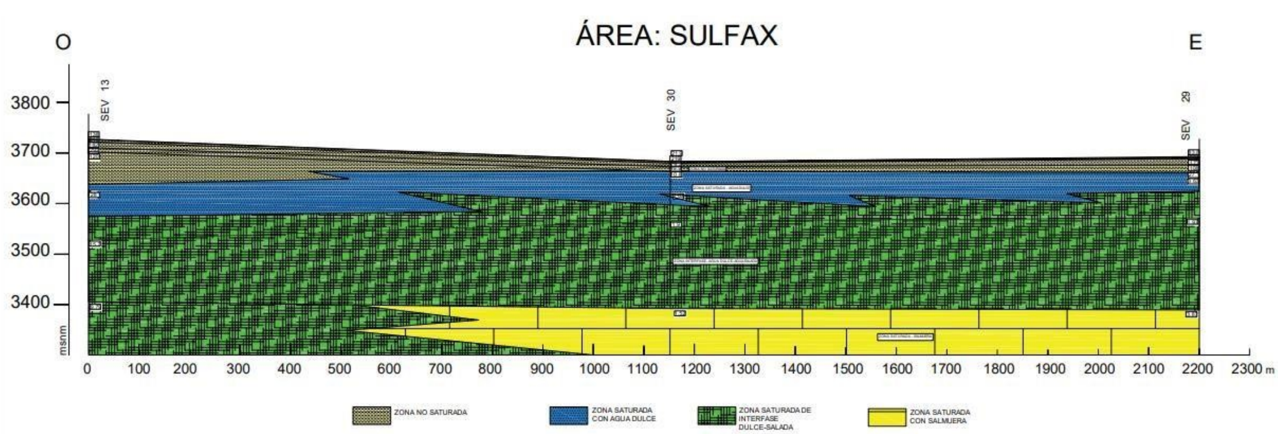


Figure 9-13. Interpretation of VES Cross Section 5VES CROSS SECTION 6

Location map and interpretation are shown on **Figure 9-14** and **Figure 9-15**. **C**ross section 6 is located on the Cristina concession, in the Central area of the salar. It has a length of approximately 0.46 km, with an N-S orientation, and it reaches a total depth of approximately 310 m. Resistivity values show sediments saturated with salty-water at 2 to 12 m depth. Higher values of resistivity below might indicate presence of sediments saturated with freshwater – most likely compact halite – or coarser material saturated with salty-water. Bedrock was not recognized according to the resistivity data.

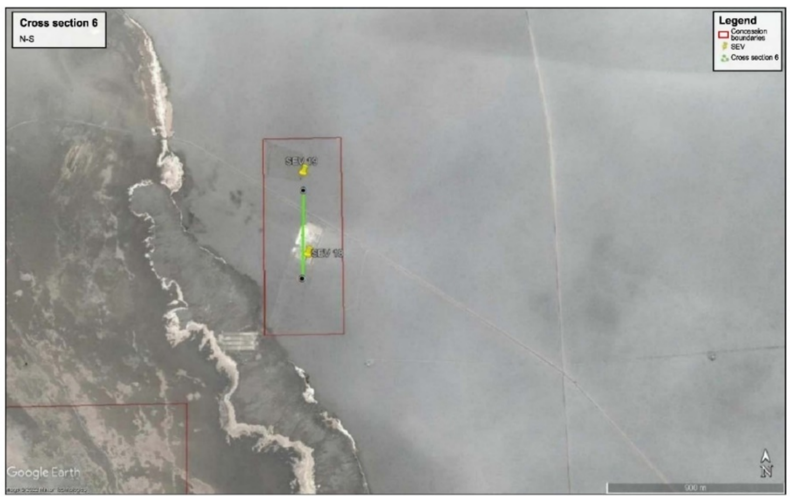


Figure 9-14. Location Map of VES Cross Section 6

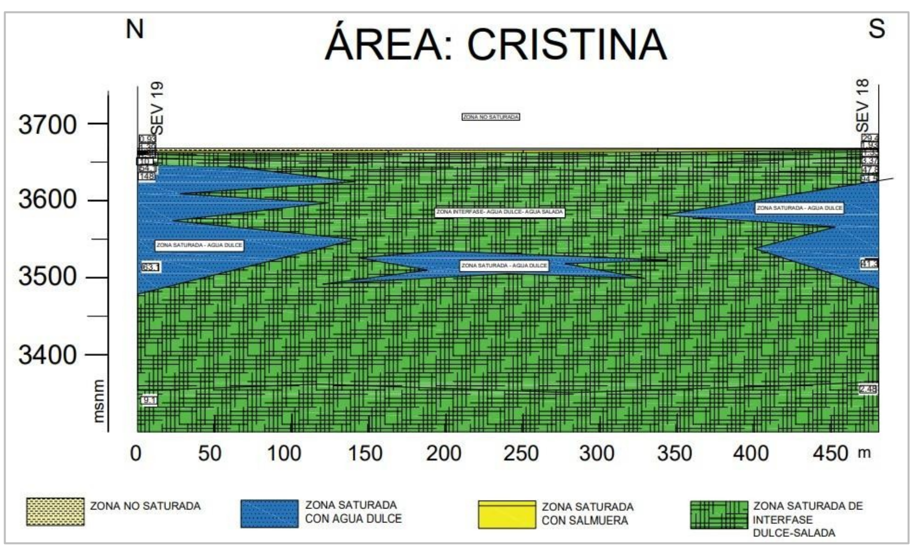


Figure 9-15. Interpretation of VES Cross Section 6

VES CROSS SECTION 7

Location map and interpretation are shown on **Figure 9-16** and **Figure 9-17**. Cross section 7 is located on the Juana Azul property, western edge of Salar Rio Grande. It has a length of approximately 2.2 km, with a N-S orientation, and it reaches a total depth of approximately 320 m. Resistivity values show contact with saturated brine sediments almost from surface to 320 m depth. Bedrock was not recognized according to the resistivity data.

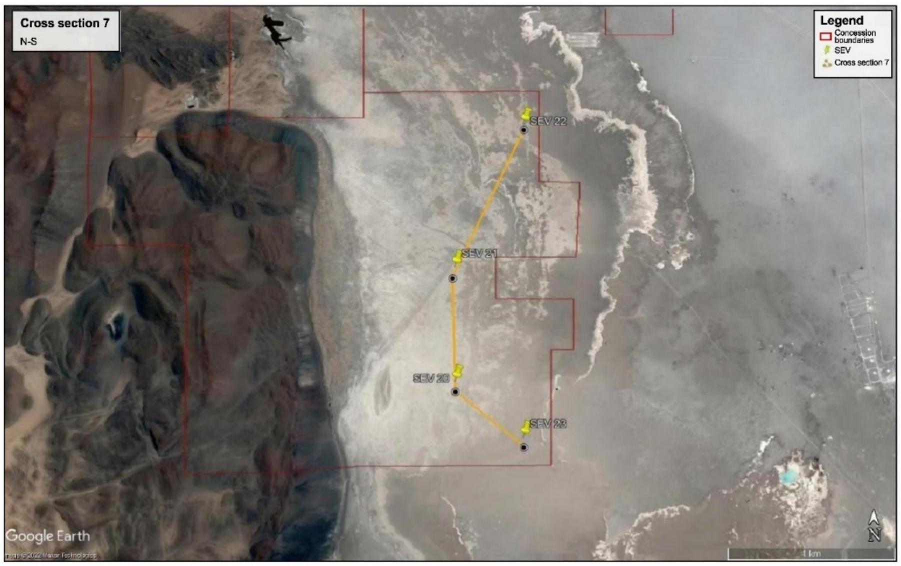


Figure 9-16. Location Map of VES Cross Section 7

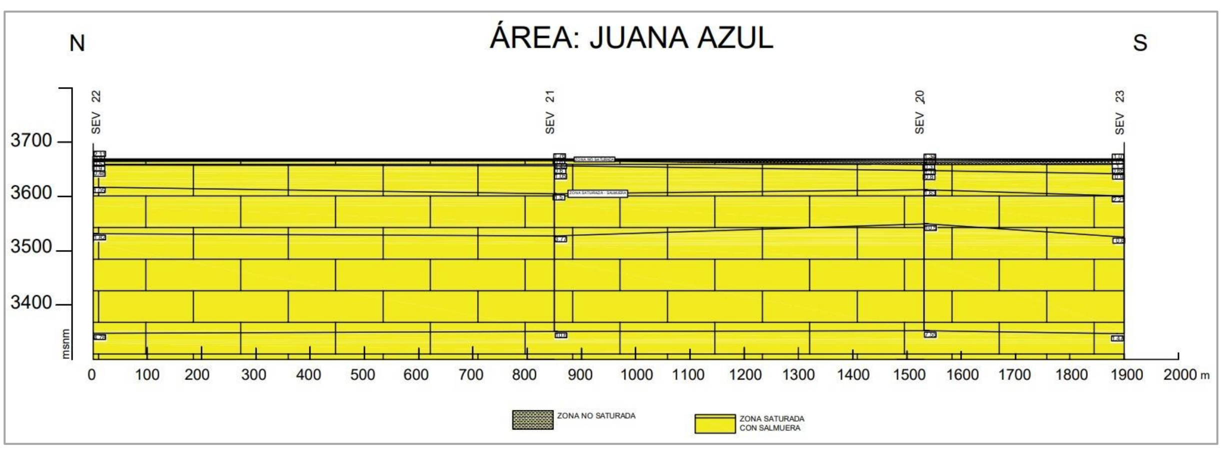


Figure 9-17. Interpretation of VES Cross Section 7

VES CROSS SECTION 8

Figure 9-18 and **Figure 9-19** show location and interpretation of VES cross section 8. Cross section 8 is located on the Juana Azul property, in the western edge of Salar Rio Grande. It has a length of approximately 0.65 km, with a NW-SE orientation, and it reaches a total depth of approximately 320 m. Resistivity values suggest brine-saturated sediments almost from land surface to 322 m depth. Basement depth was not recognized according to the resistivity data.

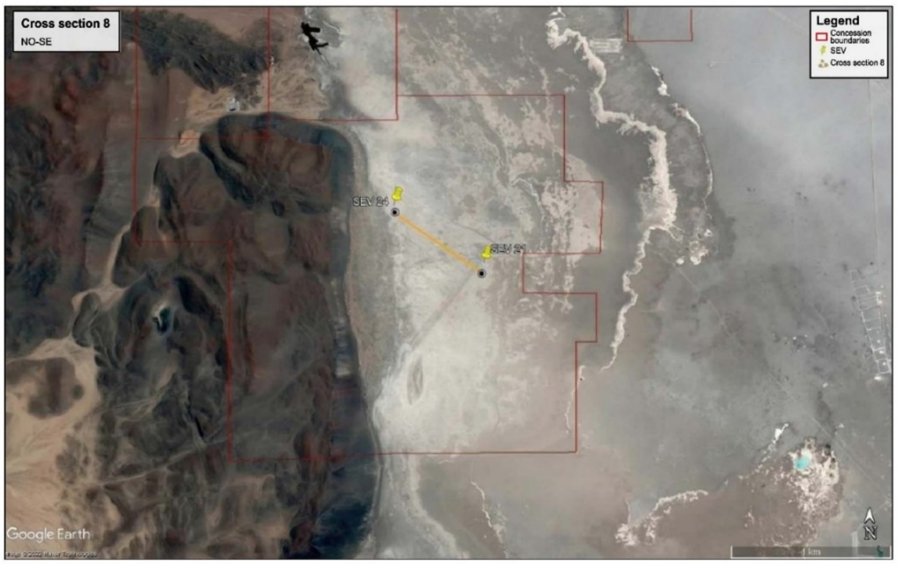


Figure 9-18. Location Map of VES Cross Section 8

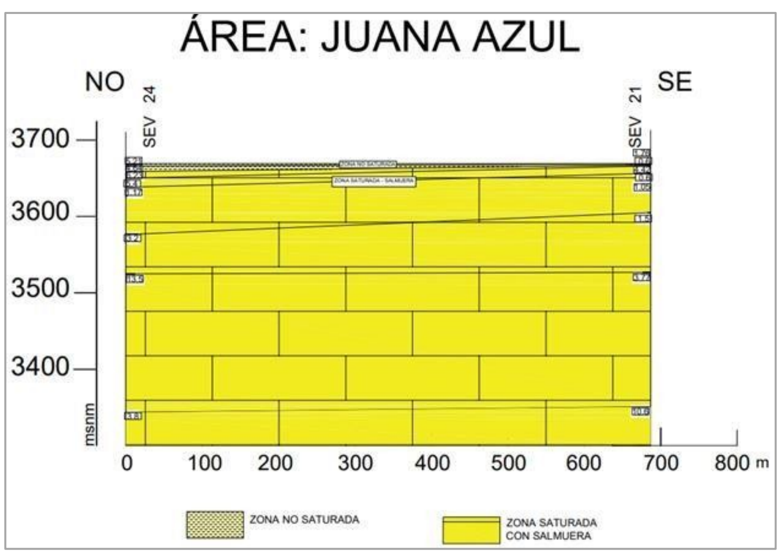


Figure 9-19. Interpretation of VES Cross Section 8

VES CROSS SECTION 9

Figure 9-20 and **Figure 9-21** show location and interpretation of VES cross section 9. Cross section 9 is located on the Patagonia II property, in the northwestern edge of Salar Rio Grande. It has a length of approximately 1.0 km, with an N-S orientation, and it reaches a total depth of approximately 310 m. Resistivity values suggest brine-saturated sediments almost from surface to ~130 m depth, underlain by sediments saturated with salty-water. Basement depth was not recognized according to the resistivity data.

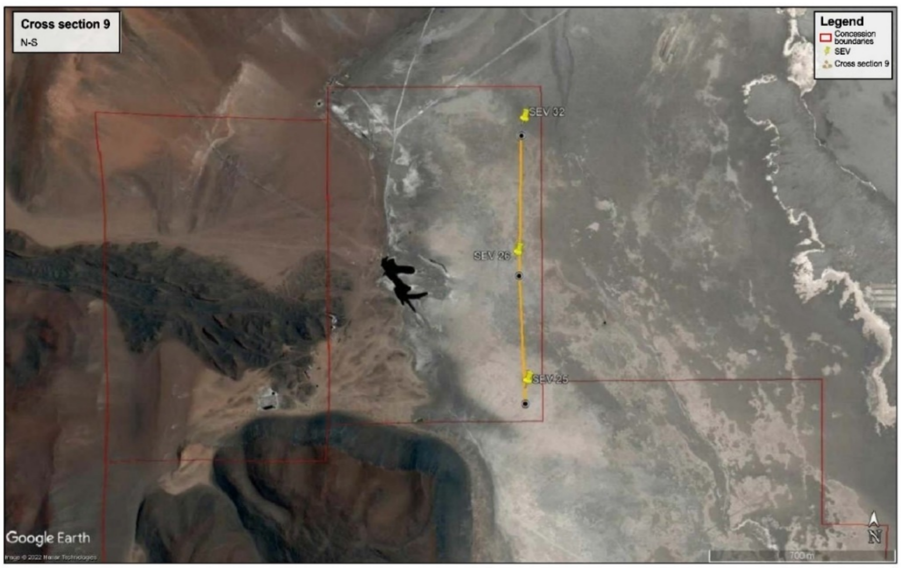


Figure 9-20. Location Map of VES Cross Section 9

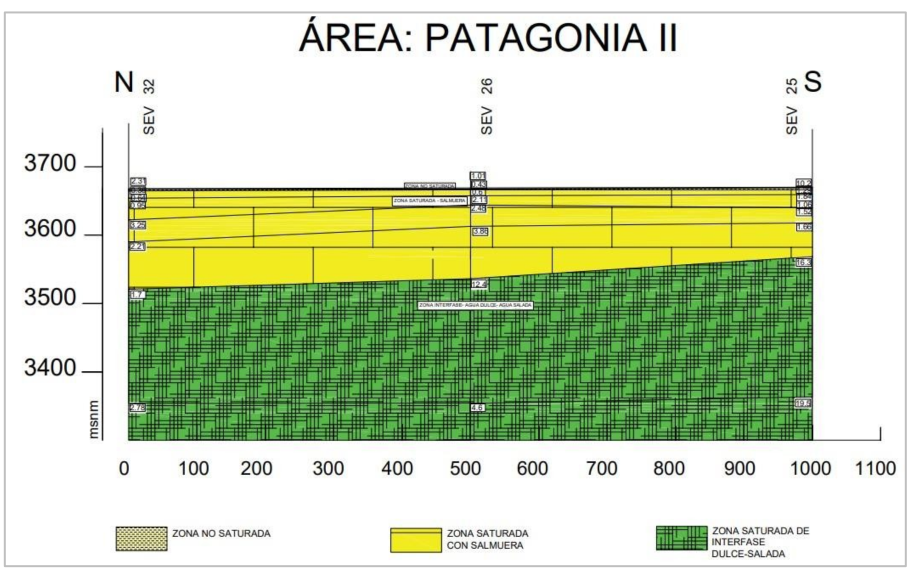


Figure 9-21. Interpretation of VES Cross Section 9

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& ASSOCIATES

VES CROSS SECTION 10

Figure 9-22 and **Figure 9-23** show location and interpretation of VES cross section 10. This cross section is located on the Patagonia II property, in the northwestern edge of Salar Rio Grande. It has a length of approximately 0.3 km, with a NW-SE orientation. It reaches a total depth of approximately 320 m. Resistivity values suggest brine-saturated sediments almost from surface to ~130 m depth, underlain by sediments saturated with salty-water. Basement depth was not recognized according to the resistivity data.

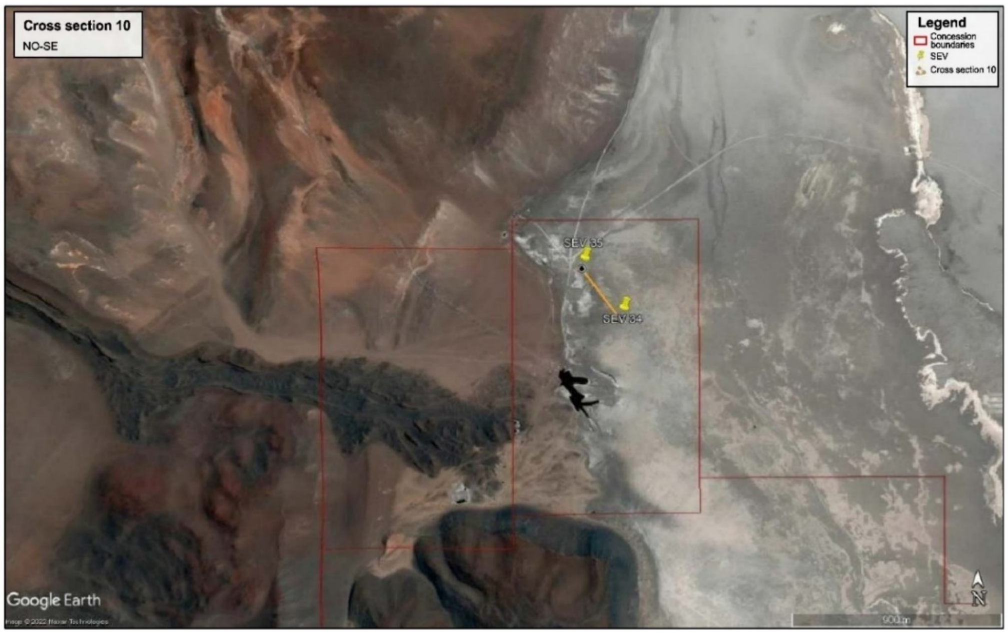


Figure 9-22. Location Map of VES Cross Section 10

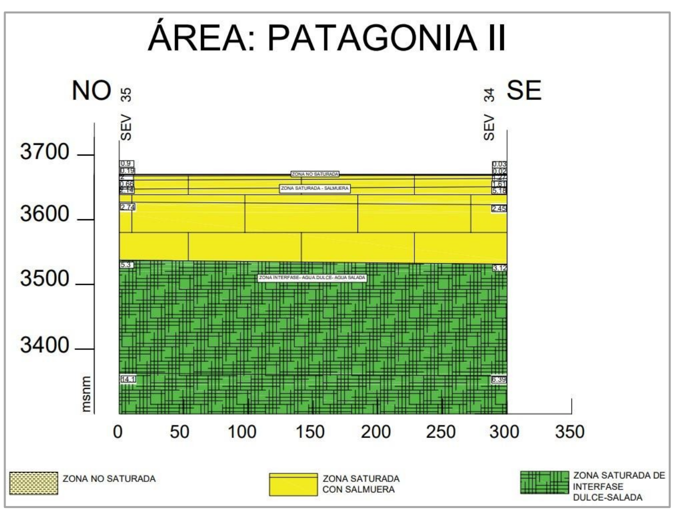


Figure 9-23. Interpretation of VES Cross Section 10

VES CROSS SECTION 11

Figure 9-24 and **Figure 9-25** show location and interpretation of VES cross section 11. This cross section is located on the Patagonia II and Patagonia IV properties, Central area, northwestern edge of Salar Rio Grande. It has a length of approximately 0.20 km, with a W-E orientation. It reaches a total depth of approximately 310. Resistivity values suggest an unsaturated zone from land surface to ~30 m depth, underlain by freshwater down to ~50 m depth. Below freshwater, there are sediments saturated with salty water. Basement depth was not recognized according to the resistivity data.

Figure 9-24. Location Map of VES Cross Section 11

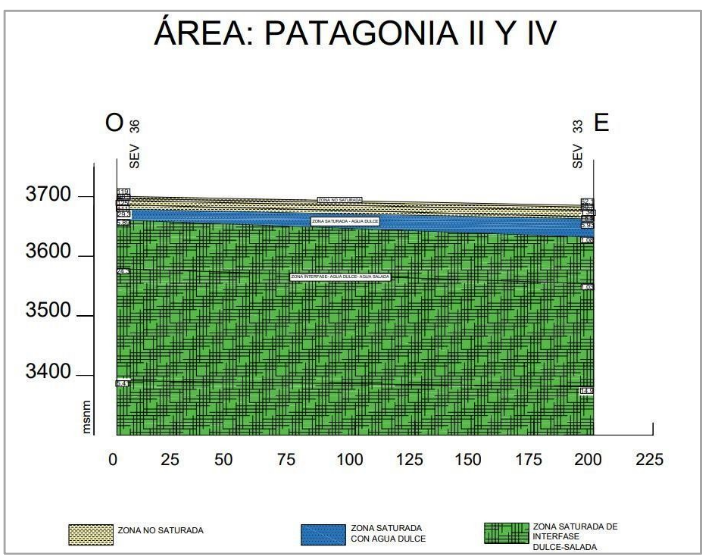


Figure 9-25. Interpretation of VES Cross Section 11

VES CROSS SECTION 12

Figure 9-26 and **Figure 9-27** show location and interpretation of VES cross section 12. This cross section is located on the Cintya Ines Property, in the South area. It has a length of approximately 1.0 km, with a N-S orientation. It reaches a total depth of approximately 330 m. Resistivity values suggest brine-saturated sediments almost from land surface to ~70 m depth at SEV-14, thinning towards SEV-16 to 46 m depth. Below, there are sediments saturated with salty water, which contain lenses of freshwater, that can also be interpreted as coarser material saturated with brine. Basement depth was not recognized according to the resistivity data.

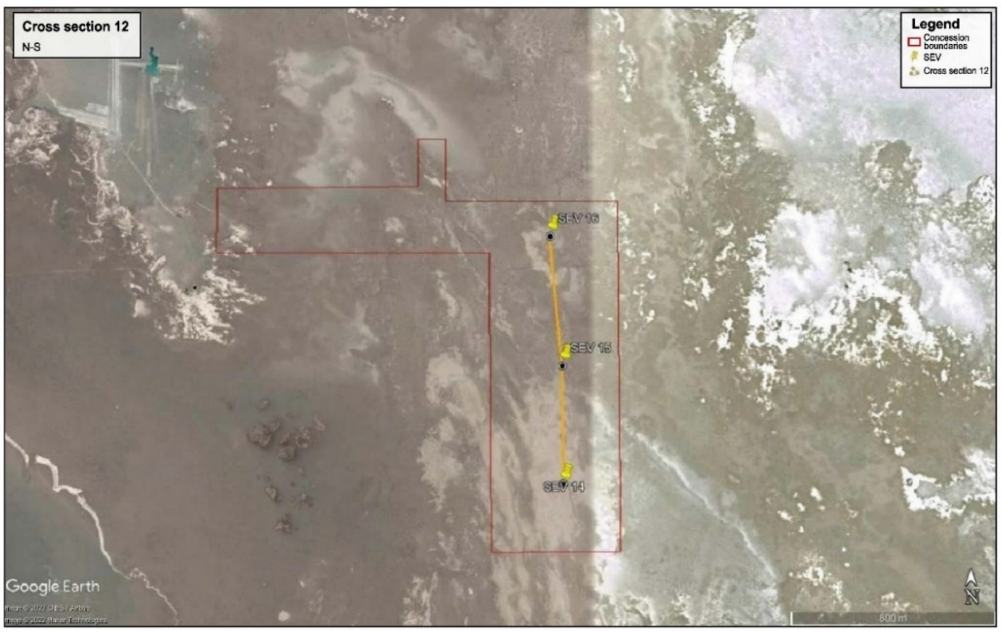


Figure 9-26. Location Map of VES Cross Section 12

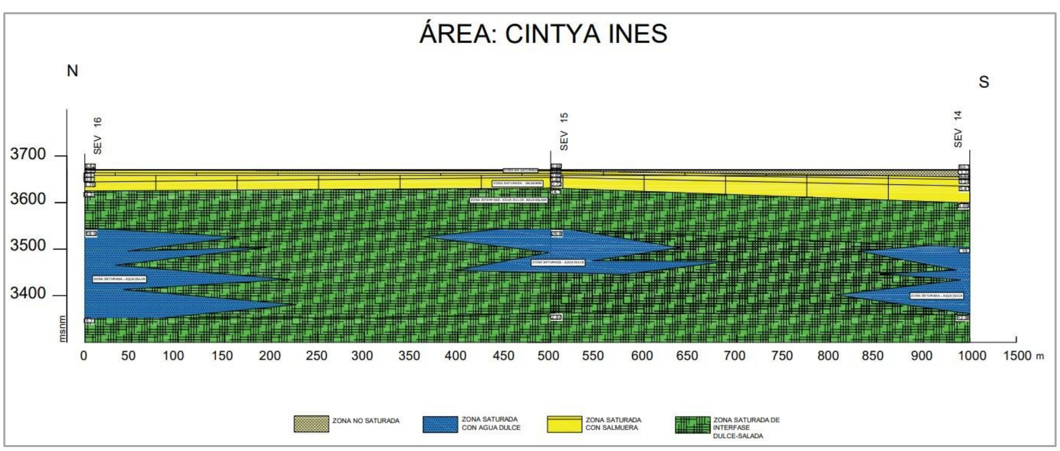


Figure 9-27. Interpretation of VES Cross Section 12

VES CROSS SECTION 13

Figure 9-28 and **Figure 9-29** show location and interpretation of VES cross section 13. This cross section is located on the Cintya Ines Property, in the south area of the salar. It has a length of approximately 0.7 km with a W-E orientation. It reaches a total depth of approximately 330 m. Resistivity values suggest brine-saturated sediments almost from land surface to 50 m depth at SEV-16, decreasing in thickness towards SEV-17 to about 20 m depth. Basement depth was not recognized according to the resistivity data.

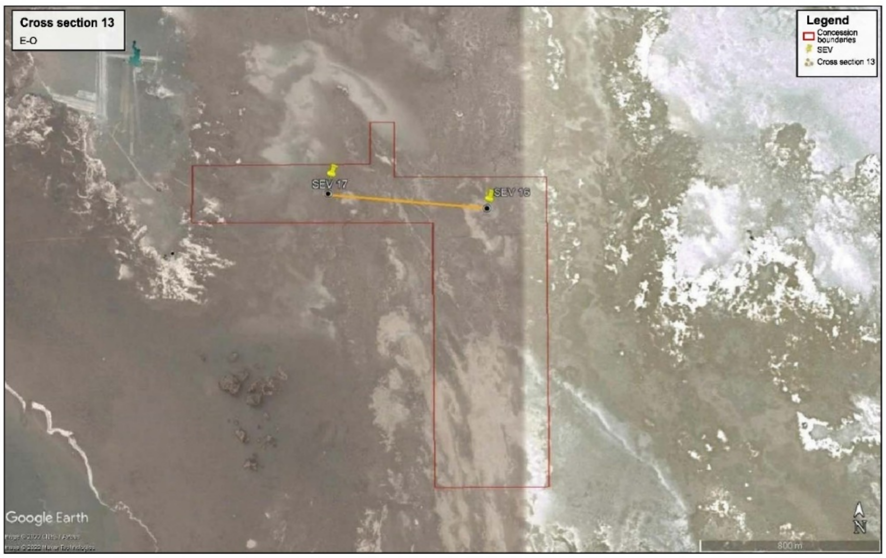


Figure 9-28. Location Map of VES Cross Section 13

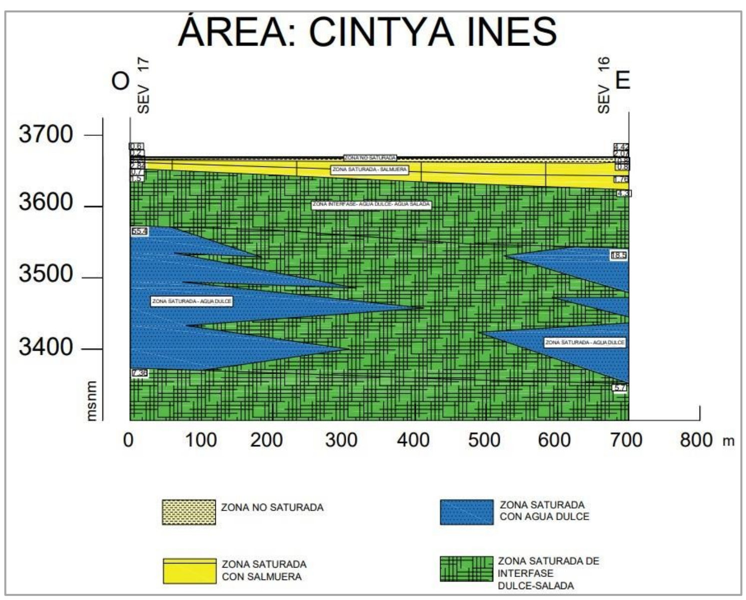


Figure 9-29. Interpretation of VES Cross Section 13

9.1.2 Summary of VES Survey Cross Sections

Based on the results presented by AMINCO (2022a), we have assumed that the salar is likely uniformly saturated with brine, with possible fresh or brackish water areas along the margins where freshwater recharge occurs. Based on the results of the survey, AMINCO interprets the following:

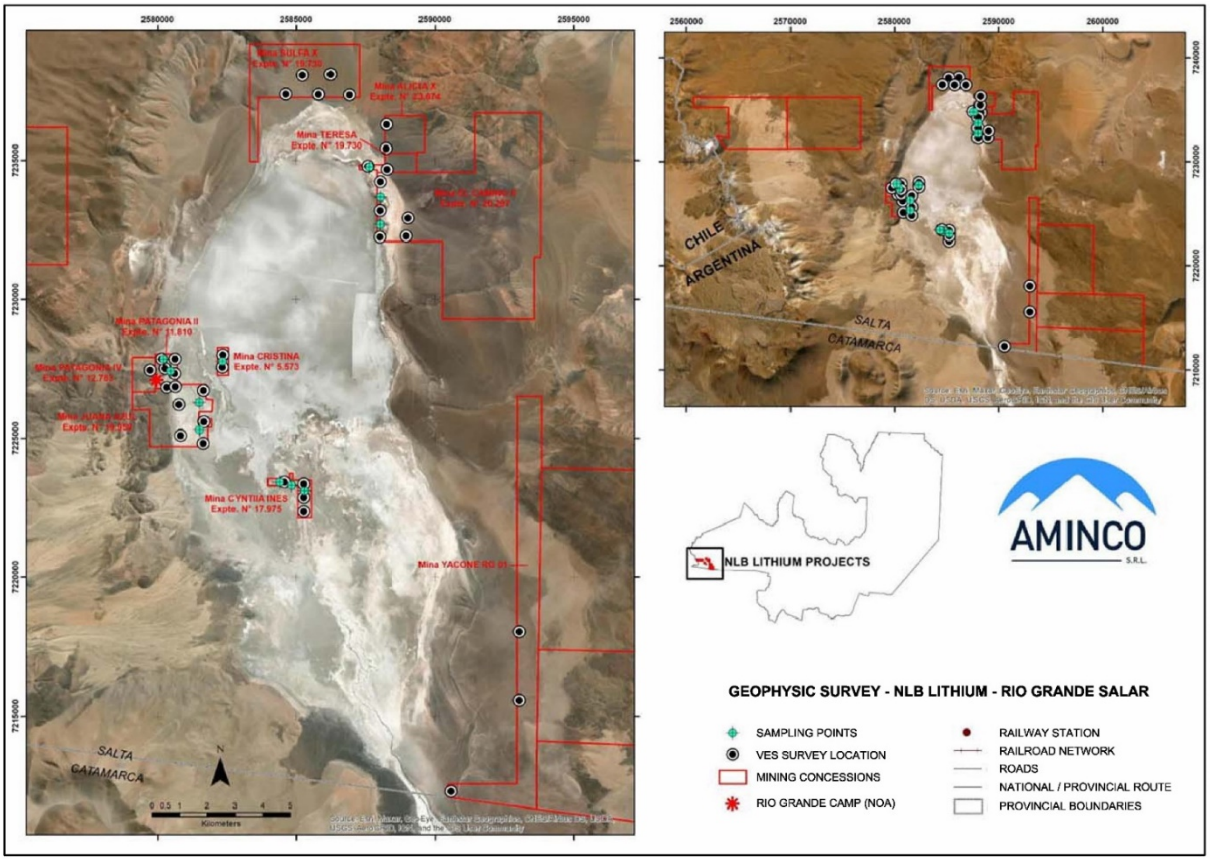
- Brine saturated sediments occur within the main salar, in concessions located in the west, central and northeast areas of the salar
- Fresh/brackish water areas are present near the margins of the salar, and in areas where clastic sediments dominate outside the salar boundaries
- Surveyed VES points in northern concession and near to the edge of the salar indicate the presence of brine saturated sediments to at least approximately 300 m depth
- Basin basement was not recognized from data obtained

It is important to mention that deployment of VES points along the salar does not allow to get an ideal distribution for data interpretation. Some areas of the salar were not covered by any VES, making interpretations related to continuity of geologic conditions less reliable. However, prior exploration works reported by Hains (2018) included surface geophysical surveys that could be useful to complement with the information obtained by studies carried out by AMINCO on behalf of NOA.

VES survey carried out by AMINCO (2022a) and conclusions outlined from it are considered as good initial information to have a general idea of the aquifer system in the Salar de Río Grande. However, following drilling process and laboratory results of lithium concentration, which show the presence of brine down to 650 m depth and an increasing lithium grade with depth, we decided not to use this VES geophysics survey as their interpretations show the opposite tendency in terms of the brine concentration.

9.2 2022 Surface Sampling

A surface water and brine sampling campaign were carried out during April through May, 2022 by AMINCO (2022b). A total of 11 brine samples were obtained and analyzed by SGS laboratory. All brine samples were obtained by hand or bailed at depths less than 1 meter below land surface. Locations and field parameters for the samples are given in **Table 9-1** and shown on **Figure 9-30**.



Source - AMINCO (2022b)

Figure 9-30. Location Map of Surface Brine Samples Collected by AMINCO for Salar de Rio Grande Project

Table 9-1. Sample Location Coordinates and Field Parameters

SAMPLE ID	SAMPLES COORDINATES				WATER LEVEL (mbls)	TEMPERATURE (°C)[3]	pH	ELECTRICAL CONDUCTIVITY (mS)[4]	DENSITY mg/ml
	LATITUDE[1]	LONGITUDE[1]	UTM Easting[2] (meters, POSGAR 94)	UTM Northing[2] (meters, POSGAR 94)					
SALMUERA 5407	25°06'41.22"S	68°09'31.35"W	2,584,853.7	7,223,301.4	0.8	9.8	-	102	1,075
SALMUERA 5408	25°06'47.93"S	68°09'14.57"W	2,585,319.7	7,223,092.0	0.7	12.1	7.9	99.1	1,065
SALMUERA 5409	25°06'37.58"S	68°09'46.99"W	2,584,416.2	7,223,416.2	0.8	12.9	7.73	110.9	1,105
SALMUERA 5410	25°05'36.84"S	68°11'30.35"W	2,581,531.4	7,225,303.0	0.6	9	8	65.5	1,035
SALMUERA 5411	25°05'05.20"S	68°11'30.94"W	2,581,520.6	7,226,276.7	0.45	6.8	7.61	63.9	1,040
SALMUERA 5412	25°04'28.26"S	68°12'08.19"W	2,580,483.5	7,227,419.6	0.6	8.5	7.45	105.5	1,080
SALMUERA 5413	25°04'14.22"S	68°12'17.74"W	2,580,218.3	7,227,853.3	1.10	9.8	8	55	1,030
SALMUERA 5414	25°04'16.55"S	68°11'01.05"W	2,582,367.3	7,227,768.7	0.7	10	7.45	52	1,225
SALMUERA 5415	25°01'35.62"S	68°07'39.81"W	2,588,039.5	7,232,685.8	0.65	11.7	7.45	129.2	1,160
SALMUERA 5416	25°01'03.37"S	68°07'39.76"W	2,588,047.3	7,233,678.2	0.75	12	9.10	129.2	1,060
SALMUERA 5417	25°00'28.16"S	68°07'54.17"W	2,587,650.2	7,234,764.3	0.7	11.1	7.8	131.3	1,150

[1] Geographic coordinates WGS 84.
[2] UTM Easting and Northing from handheld portable GPS.
[3] °C = Celsius degrees
[4] mS = millisiemens

The following represents a summary of the methodology utilized by AMINCO field personnel during surface sampling:

- At each sampling point, a shallow excavation was dug until water was encountered. Then, the excavation was allowed to rest for fine sediments decantation (**Photo 9-1**)
- Once the manual excavation was completed, static water level was measured (**Photo 9-1**)
- Before sampling each point every equipment was cleaned with freshwater and distilled water
- Plastic bottles and containers were labeled before to filling them and were also rinsed with the same source of the sample collected 3 times according to the protocol
- Plastic bottles were filled with the brine samples collected at each point and then sealed

using bottle caps and tape (**Photo 9-2**)

- After each sample was collected, field parameters (pH, T°, electrical conductivity, density, total dissolved solids) were measured and registered (**Photo 9-2**)
- Finally, all equipment utilized was cleaned and washed following the same steps mentioned above

Photo 9-1: Left: Pit Excavation, Right: Water Level Measurement

Photo 9-2: Left: Field Parameter Measurement, Right: Sealed Sample Bottle

9.3 Laboratory Results for April 2022 Water Samples

Table 9-2 shows a summary of laboratory analysis results from samples taken during the April 2022 campaign.

Table 9-2. Summary of Laboratory Analysis Results for AMINCO Sampling Campaign

SAMPLE ID	Date-Time	Li (mg/L)	Mg (mg/L)	K (mg/L)	B (mg/L)	SO_4 (mg/L)	Mg/Li	Density (g/cm^3)
SALMUERA 5407	05-05-2022 17:30	129	1,733.10	2,429.60	136.8	12,048	13.4	1.08
SALMUERA 5408	05-05-2022 15:30	135.6	1,880.00	2,563.00	150.9	12,665	13.9	1.08
SALMUERA 5409	05-05-2022 16:50	173.2	2,226.10	2,421.80	191.6	14,517	12.9	1.1
SALMUERA 5410	08-04-2022 9:50	45.9	1,213.30	1,371.40	23.3	8,154	26.4	1.04
SALMUERA 5411	08-04-2022 9:00	51.4	1,156.00	1,365.80	30.2	7,388	22.5	1.04
SALMUERA 5412	08-04-2022 19:00	99.9	2,201.20	2,674.90	31.8	13,270	22	1.08
SALMUERA 5413	08-04-2022 11:30	30.1	672.6	912.1	<10	2,494	22.3	1.02
SALMUERA 5414	08-04-2022 18:30	294	4,247.70	5,599.90	173.2	19,390	14.4	1.22
SALMUERA 5415	05-05-2022 15:00	274.4	2,970.60	4,382.10	134.9	18,036	10.8	1.16
SALMUERA 5416	05-05-2022 13:00	290.1	3,059.30	4,518.90	113.9	18,818	10.5	1.16
SALMUERA 5417	05-05-2022 11:00	301.9	3,389.00	4,862.20	123	20,230	11.2	1.15

SO_4 - Sulphate
g/cm3 - Grams per cubic centimeter

Sample SALMUERA 5413 was obtained closer to the edge of the basin, and it seems to be brackish water, commonly associated with freshwater / brine mixing zones at the edges of the salar. Similar situations occur with samples SALMUERA 5410 and 5411 that apparently are brackish water, but this condition is not demonstrated by VES survey performed in the vicinity of the locations sampled. Although samples SALMUERA 5410, 5411, and 5413 do not have concentrated brine at the surface, it is possible that concentrated brine may occur with depth at these locations. Samples SAL-004 and SAL-002; SAL-003 were taken at the same location as samples SALMUERA 5412 and SALMUERA 5414, respectively. However, chemistry results presented in **Table 9-2** shows slight differences in chemistry - possibly because these near-surface samples were affected by evaporation.

Based on review of the methods as described in the report, and observed in the field, the Author believes that the laboratory results from the AMINCO (2022b) surface sampling program are reliable and reasonably represent the brine near the surface in the Project area. No sampling biases are known to exist.

10 DRILLING

The current exploration well program is designed to characterize the subsurface lithology and determine the potential for a lithium resource within the mining concessions. Locations for the exploration wells currently drilled are shown on **Figure 10-1**, and location coordinates and depths for wells drilled in 2023 exploration program are given in **Table 10-1**.

Wells were drilled using the diamond drill hole (DDH) method by Hidrotec Perforaciones S.R.L., based in Salta. All boreholes are vertical, and depths drilled represent true thicknesses. During drilling, core samples were obtained for laboratory analysis and brine samples for chemical analysis. Core samples were stored in wooden boxes and labeled with the borehole name and depth. Lithological descriptions were done by geologists of NOA and reviewed by M&A.

Table 10-1. Location and Depth Drilled for Year 2023 Exploration Wells

Well	Northing[1] (meters, POSGAR 94, zone 2)	Easting[1] (meters, POSGAR 94, zone 2)	Total Depth Drilled (meters)
DDH-RG23-001	7,237,553.02	2,586,300.37	613
DDH-RG23-002	7,223,294.66	2,585,218.84	641.5
DDH-RG-002a	7,223,294.89	2,585,209.51	-
DDH-RG23-003	7,228,159.63	2,582,468.58	676
DDH-RG23-04	7,234,034.30	2,588,529.90	551

Detailed well schematics are shown among **Sections** and **10.1** and **10.4**, where different type of information related to well construction, lithologic percentual distribution, brine chemistry samples (density, and potassium and Lithium concentration), drainable porosity samples, and downhole geophysics are illustrated. Using all the drillhole data and considering the basin conceptual model, an initial definition of hydrogeological units is proposed (**Section 10.5**) and vertically represented in each of the schematics.

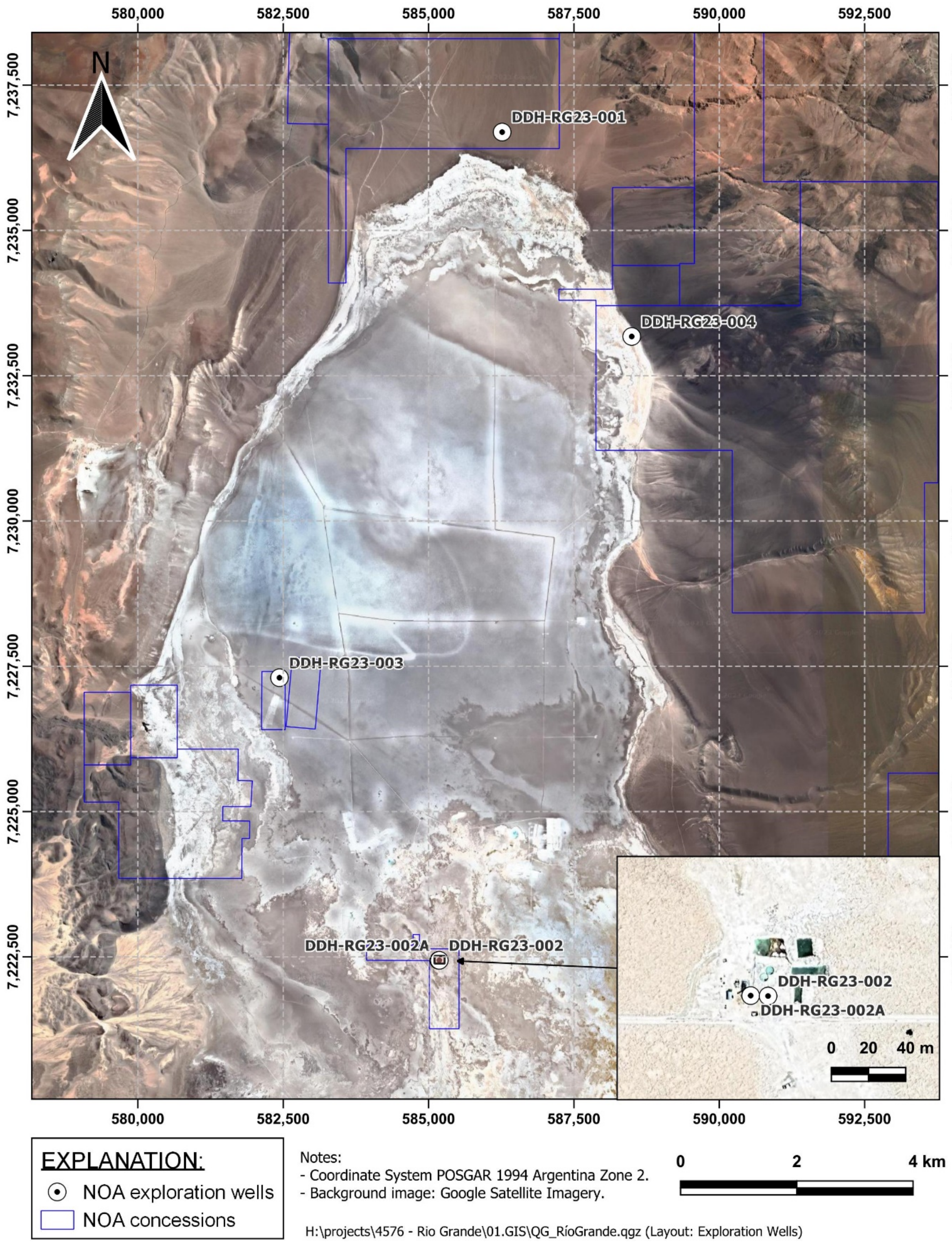
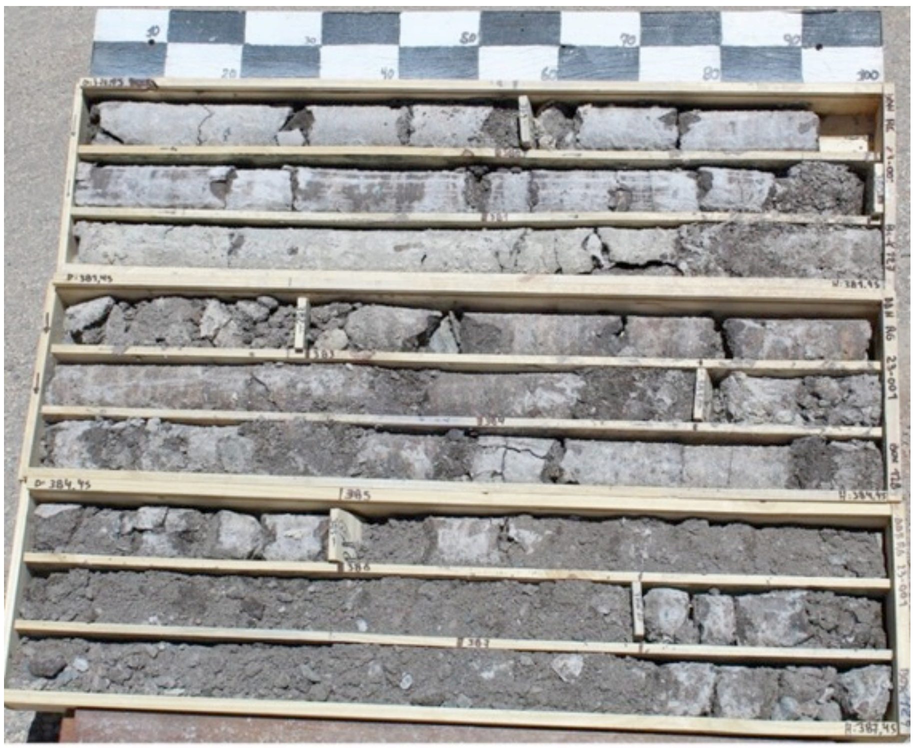


Figure 10-1. Exploration Well Location Map

10.1 DDH-RG23-001

Drilling activities for exploration borehole DDH-RG23-001 started on March 06, 2023, reaching the final depth of 613 m below land surface on April 17, 2023. This well was drilled with HQ diameter to total depth. HWT casing was installed to 198 m to avoid well collapse. **Photo 10-1** shows some of the drill core obtained; **Table 10-2** is the summary log for this borehole and **Figure 10-2** shows the construction schematic.



RIO GRANDE DDH-RG23-001 D:378.45 H:387.45 BOX 127-129

Photo 10-1. Core samples Obtained from Borehole DDH-RG23-001

Table 10-2. Summary of Lithological Description of Borehole DDH-RG23-001

From (m)	To (m)	Summary log
0	55	Gravel with fine to medium sand
55	64	Medium to coarse sand with minor fine gravel
64	159	Gray to black fine sand, in parts presence of halite
159	178.5	Massive halite with scarce sand in matrix with layers of fine sand up to 30 cm
178.5	201.9	Massive to granular halite, in part disaggregated and with layers of fine sand up to 2 m
201.9	239.5	Fine to medium sand with layers of crystalline halite
239.5	335	Fine to medium sand with layers of halite or conglomerates
335	343.5	Calcareous gray clay
343.5	406	Fine to medium sand with layers of halite or conglomerates
406	443.5	Conglomerates with matrix of silt or clay
443.5	494.1	Fine to medium sand with minor coarse sand
494.1	613	Conglomerate with layers of fine sand up to 1.5 m

A borehole geophysical survey was conducted after the borehole was drilled. The survey were performed by EM Explora Mining. Geophysical logs included SP, SPR and short and large normal. Results are shown on **Figure 10-2**.

Once drilling was completed, 2-inch blank and screened PVC was installed (slot size 0.75 mm) from land surface to 613 m. A well construction diagram for this well is shown on **Figure 10-2**.

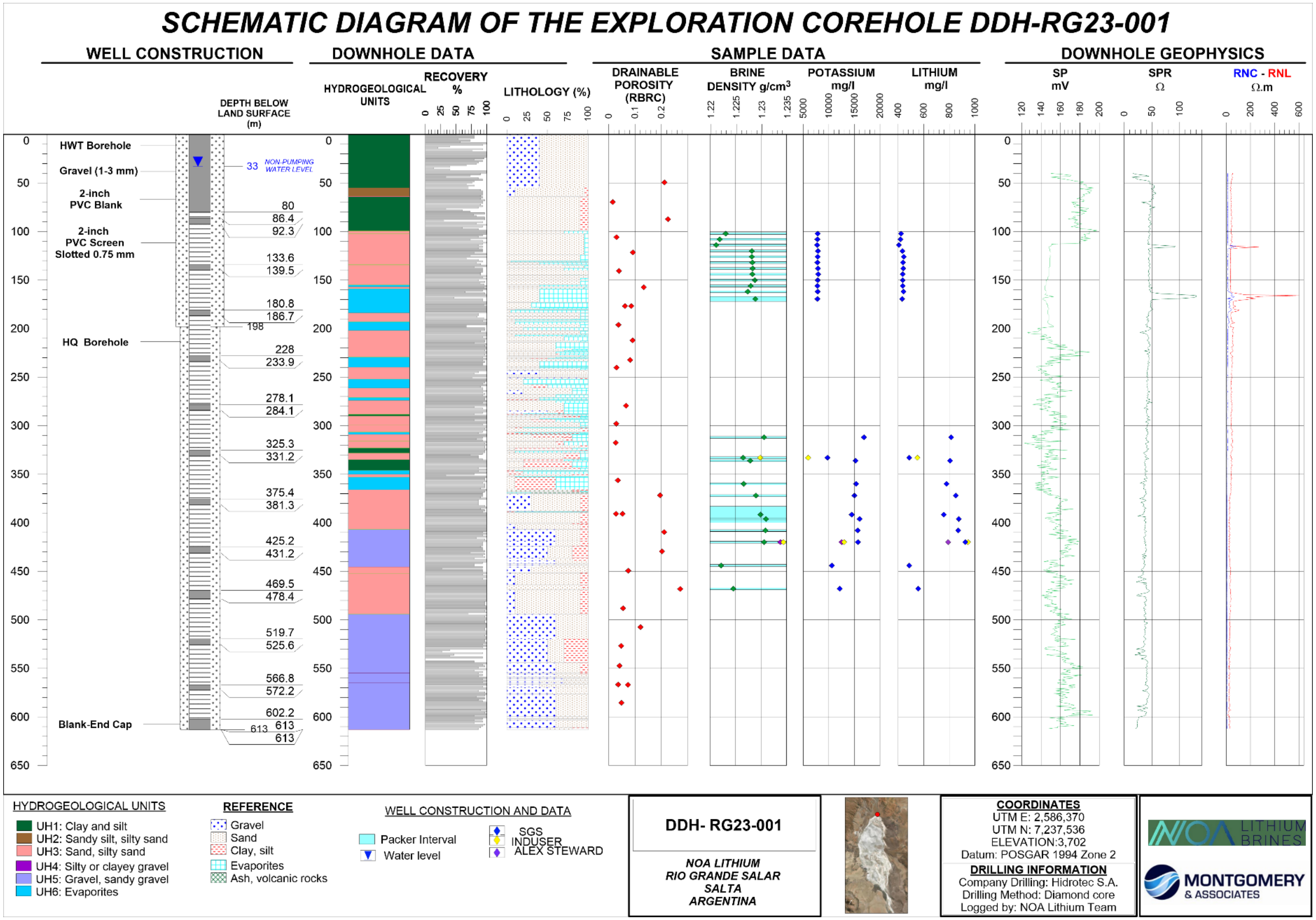


Figure 10-2. Construction Schematic for Borehole DDH-RG23-001

10.1.1 Brine Sampling for DDH-RG23-001

During drilling, 23 original brine samples were obtained using a packer system, which allow samples to be obtained for a 2 m interval. Each sample was filled in 500 ml plastic bottle, labeled and sealed for avoid any interference than can affect the results. Those samples were analyzed is SGS laboratories in Salta, Argentina. In some cases, and as part of the QA/QC control, duplicates samples were analyzed in Alex Stewart or Induser laboratories (samples labeled as 'check' when analyzed in laboratory). Temperature, pH, electrical conductivity and density were measured in the field. **Table 10-3** summarizes field parameters and depth interval of the samples obtained.

Table 10-3. Field Parameters Measured During Brine Sampling at DDH-RG23-001

Sample ID	Interval	Type	Date	T (°C)[a]	pH	CE (mS/cm)[b]	Density (mg/mL)[c]
00002	101 – 103	Brine	15-03-23	14.0	6.76	219.9	1.23
00003	101 – 103	Duplicate	15-03-23				
00004	107 – 109	Brine	15-03-23	14.9	6.73	221.2	1.22
00005	113 – 115	Brine	15-03-23	10.3	6.74	223.1	1.22
00006	119 – 121	Brine	14-03-23	11.8	7.00	221.2	1.23
00007	125 – 127	Brine	14-03-23	14.1	6.90	215.3	1.23
00008	131 – 133	Brine	14-03-23	15.0	6.90	212.8	1.23
00009	137 – 139	Brine	14-03-23	15.0	7.01	217.0	1.23
00010	143 – 145	Brine	14-03-23	14.8	6.86	218.6	1.23
00011	143 – 145	Duplicate	14-03-23				
00012	149 – 151	Brine	14-03-23	15.1	6.88	219.5	1.23
00013	155 – 157	Brine	14-03-23	10.5	6.87	217.8	1.23
00014	161 – 163	Brine	13-03-23	12.1	6.91	218.0	1.23
00016	167 – 172	Brine	13-03-23	15.5	6.91	217.2	1.23
00017	167 – 172	Duplicate					
00018	332 – 334	Brine	28-03-23	18.2	6.70	228.9	1.20
00068	332 – 334	Duplicate					
00069	332 – 334	Duplicate					
00019	383 – 400	Brine	26-03-23	16.0	6.36	220.0	1.20
00021	311 – 313	Brine	28-04-23	14.0	6.20	223.9	1.24
00023	335 – 337	Brine	27-04-23	16.0	7.00	227.0	1.23
00024	359 – 361	Brine	26-04-23	17.2	6.37	226.0	1.20
00025	371 – 373	Brine	26-04-23	11.4	6.13	222.2	1.20
00026	371 – 373	Duplicate					
00027	395 – 397	Brine	25-04-23	15.0	6.19	227.3	1.20
00028	407 – 409	Brine	24-04-23	13.9	6.11	220.5	1.20
00029	419 – 421	Brine	23-04-23	12.0	6.06	216.5	1.20
00030	419 – 421	Duplicate					
00031	419 – 421	Duplicate					
00071	419 – 421	Duplicate					
00034	443 – 445	Brine	22-04-23	11.0	6.86	227.0	1.20
00035	467 – 469	Brine	21-04-23	11.0	6.62	222.7	1.20

a: Temperature, in °C

b: Electrical conductivity, in milliSiemens per centimeter

c: Density, in milligrams per milliliters

NOA collected and received laboratory results for depth-specific brine samples collected from well DDH-RG23-001 obtained with a packer system. **Table 10-4** is a summary table for the laboratory results from brine samples obtained.

Table 10-4. Summary of Laboratory Chemical Results. Brine Samples from Borehole DDH-RG23-001

Sample ID	Date	Laboratory	Interval	Type	Li (mg/L)	Mg (mg/L)	K (mg/L)	B (mg/L)
00001	15-03-23	SGS	101 – 103	Blank	<10	<10	<10	<10
00002	15-03-23	SGS	101 – 103	Brine	423	5,341	7,867	213
00003	15-03-23	SGS	101 – 103	Duplicate	434	5,318	7,811	219
00004	15-03-23	SGS	107 – 109	Brine	420	5,316	7,765	220
00005	15-03-23	SGS	113 – 115	Brine	406	5,315	7,734	228
00006	14-03-23	SGS	119 – 121	Brine	435	5,205	7,872	202
00007	14-03-23	SGS	125 – 127	Brine	445	5,193	7,853	205
00008	14-03-23	SGS	131 – 133	Brine	439	5,210	7,814	205
00009	14-03-23	SGS	137 – 139	Brine	440	5,225	7,893	207
00010	14-03-23	SGS	143 – 145	Brine	436	5,226	7,930	205
00011	14-03-23	Alex Stewart	143 – 145	Check	407	4,898	6,957	175
00012	14-03-23	SGS	149 – 151	Brine	436	5,182	7,839	204
00013	14-03-23	SGS	155 – 157	Brine	436	5,166	7,781	208
00014	13-03-23	SGS	161 – 163	Brine	443	5,165	7,831	209
00015	13-03-23	SGS	161 – 163	Blank	<10	<10	116	<10
00016	13-03-23	SGS	167 – 172	Brine	432	5,178	7,802	206
00017	13-03-23	SGS	167 – 172	Duplicate	439	5,208	7,829	212
00018	28-03-23	SGS	332 – 334	Brine	487	6,090	9,733	273
00019	26-03-23	SGS	383 – 400	Brine	757	9,198	14,481	492
00021	28-04-23	SGS	311 – 313	Brine	815	8,805	16,887	386
00022	28-04-23	SGS	311 – 313	STD E-3003	818	1,338	6,204	510
00023	27-04-23	SGS	335 – 337	Brine	807	9,191	15,240	397
00024	26-04-23	SGS	359 – 361	Brine	778	9,176	15,363	392
00025	26-04-23	SGS	371 – 373	Brine	850	8,649	14,998	428
00026	26-04-23	SGS	371 – 373	Duplicate	853	9,305	16,431	432
00027	25-04-23	SGS	395 – 397	Brine	874	9,660	16,022	442
00028	24-04-23	SGS	407 – 409	Brine	871	9,822	15,671	439
00029	23-04-23	SGS	419 – 421	Brine	925	11,265	15,725	455
00030	23-04-23	Alex Stewart	419 – 421	Check	765	---	12,266	438
00031	23-04-23	Alex Stewart	419 – 421	Duplicate	769	---	12,309	442
00032	23-04-23	Alex Stewart	419 – 421	STD E-3003	678	1,468	5,866	486
00033	23-04-23	Alex Stewart	419 – 421	Blank	<1	<1	2	<1
00034	22-04-23	SGS	443 – 445	Brine	488	6,994	10,583	267
00035	21-04-23	SGS	467 – 469	Brine	557	7,971	12,133	306
00036	21-04-23	SGS	467 – 469	Blank	<10	48	<10	<10
00065	---	Induser	173 – 175	STD A-3002	108	1,044	2,320	509
00066	---	Induser	173 – 175	STD C-3001	474	1,367	2,880	521
00067	---	Induser	173 – 175	STD E-3003	824	1,340	5,410	531
00068	28-03-23	Induser	332 – 334	Check	541	5,258	8,130	250
00069	28-03-23	Induser	332 – 334	Duplicate	566	5,180	8,140	269
00070	28-03-23	Induser	332 – 334	Blank	<1	2	<1	<1
00071	23-04-23	Induser	419 – 421	Check	911	9,252	12,570	463

10.1.2 Hydrasleeve Brine Sample Results for DDH-RG23-001

After the well was drilled and cased, four brine samples were obtained by NOA and M&A using a Hydrasleeve bailer, which allow samples to be obtained for a 1 m depth-specific interval. The samples were filled in 500 ml plastic bottle, labeled and sealed. The samples were analyzed at SGS laboratories in Salta, Argentina and in ALS laboratories, in Antofagasta, Chile. Temperature, pH and electrical conductivity were measured in the field. **Table 10-5** summarizes field parameters measured and depth interval of the samples obtained.

Table 10-5. Field Parameters Measured During Brine Sampling at DDH-RG23-001

Sample ID	Interval (m bls)[a]	Date	T (°C)[b]	pH	CE (mS/cm)[c]
00169	150 – 151	03-08-23	15.8	6.16	203
00171	250 – 251	03-08-23	14.7	6.27	197
00172	350 – 351	03-08-23	16.4	6.06	194
00174	450 – 451	03-08-23	15.6	5.90	190

a: meters below land surface
b: Temperature, in °C
c: Electrical conductivity, in milliSiemens per centimeter

Table 10-6 is a summary table for the laboratory results from the brine samples.

Table 10-6. Summary of Laboratory Chemical Results. Brine Samples from Borehole DDH-RG23-001

Sample ID	Date	Laboratory	Interval	Type	Li (mg/L)	Mg (mg/L)	K (mg/L)	B (mg/L)
00169	03-08-23	SGS	150 – 151	Brine	429	4,639	7,135	157
00170	03-08-23	SGS	150 – 151	Blank	23	<10	<10	<10
00171	03-08-23	SGS	250 – 251	Brine	618	7,649	10,650	285
00172	03-08-23	SGS	350 – 351	Brine	626	7,758	10,700	285
00173	03-08-23	SGS	350 – 351	STD E-3003	841	1,585	6,855	496
00174	03-08-23	SGS	450 – 451	Brine	768	9,903	12,986	372

10.1.3 Porosity Sampling for DDH-RG23-001

Core were collected and described by NOA personnel. According to the different lithologic units recognized, 33 core samples were collected for porosity (total and drainable) analysis. For each sample, 15 to 20 cm of unaltered core was selected and stored in a plastic tube, with the same diameter as the core, which was subsequently labeled and sealed. **Table 10-7** summarizes depth intervals of the samples obtained for analysis as well as the laboratory results from GSA laboratory.

Table 10-7. Core Samples Obtained for Porosity Analysis from DDH-RG23-001

Sample ID	Interval (m bls)		Total porosity	Specific yield	General lithology
	From	To			
00502	49.40	49.53	0.339	0.212	Sand with gravel
00503	69.45	69.60	0.333	0.016	Fine black sand
00504	87.15	87.30	0.378	0.225	Fine black sand
00505	105.75	105.90	0.093	0.030	Fine black sand with halite
00506	121.42	121.57	0.211	0.092	Fine black sand with halite
00507	140.50	140.65	0.188	0.040	Black sand
00508	157.32	157.47	0.263	0.133	Fine to medium sand with halite
00509	176.65	176.80	0.116	0.086	Massive halite
00510	196.15	196.30	0.083	0.038	Unconsolidated sand
00511	212.10	212.25	0.264	0.091	Grayish sand
00512	232.35	232.50	0.342	0.082	Fine black sand
00513	240.00	240.15	0.055	0.030	Sand
00514	259.65	259.80	0.071	0.000	Clayey sand
00515	176.80	176.95	0.101	0.062	Massive halite
00516	279.25	279.40	0.165	0.066	Fine sand with carbonates
00517	297.87	298.00	0.111	0.030	Fine sand
00518	317.50	317.63	0.079	0.027	Fine black sand
00519	336.00	336.15	0.008	0.000	Fine sand
00520	356.27	356.45	0.058	0.036	Fine sand
00521	371.60	371.75	0.417	0.195	Fine sand
00522	390.65	390.80	0.308	0.053	Fine black sand
00523	409.56	409.70	0.323	0.211	Fine conglomerate
00524	429.43	429.55	0.369	0.203	Conglomerate
00525	449.20	449.35	0.212	0.074	Medium to fine sand
00526	468.00	468.15	0.388	0.271	Fine black sand
00527	488.00	488.14	0.284	0.055	Compact fine sand
00528	390.80	390.95	0.351	0.028	Fine black sand
00529	507.50	507.65	0.369	0.121	Pink conglomerate
00530	526.82	527.00	0.153	0.048	Gray conglomerate
00531	547.25	547.39	0.096	0.041	Dark conglomerate
00532	566.60	566.74	0.204	0.036	Fine conglomerate
00533	585.25	585.40	0.136	0.049	Conglomerate
00535	566.74	566.89	0.218	0.074	Fine conglomerate

10.1.4 Conclusions and Recommendations for DDH-RG23-001

The lithology in this well is mostly clastic sediments, with minor crystalline halite. In the upper part, the lithology is mostly sand and in the lower part it is mostly conglomerates. Lithium concentration varies from 407 to 925 mg/L, with the higher grades below 350 m. Reported total porosity varies from 0.8% to 41.7%. Reported drainable porosity (specific yield) varies from 0% to 27.1%; high values are found in fine sands in the first 100 m depth, and also in conglomerates and fine sands of the 400-470 m interval, while values equal to zero correspond to clayey and fine sands, at 260 and 340 m depth, respectively. It is suggested to drill an exploration well and conduct a pumping test to determine aquifer hydraulic parameters at this apparently favorable location.

MONTGOMERY & ASSOCIATES

10.2 DDH-RG23-002

Drilling activities for exploration borehole DDH-RG23-002 started on May 15, 2023, reaching the final depth of 641.5 m bls on July 11, 2023. At this depth the rods uncoupled, and could not be retrieved. For that reason, this well was not cased and a new one was drilled. This well was drilled with HQ diameter to 505 m and then in NQ diameter from 505 to final depth. HWT casing was not installed. **Photo 10-2** shows some of the drill core obtained; **Table 10-8** is the summary log for this borehole and **Figure 10-2** shows the construction schematic. During the process of gravelling this well, Hidrotec had some problems, resulting in losing the well. A new well was drilled but had the same problem.

RIO GRANDE DDH-RG23-002 D:192.20 H:200.90 BOX 58-60

Photo 10-2. Core Samples Obtained from Borehole DDH-RG23-002

Table 10-8. Summary of Lithological Description of Borehole DDH-RG23-002

From (m)	To (m)	Summary log
0	50.8	Fine black sand with minor halite
50.8	61	Interlayered fine sand and halite
61	169.8	Fine black sand some halite and clay
169.8	275.2	Interlayered fine black sand and halite
275.2	407.8	Crystalline halite with layers of fine sand
407.8	415.2	Fine black sand with minor conglomerates
415.2	463.2	Compact to crystalline halite
463.2	479.5	Fine black sand
479.5	541.9	Crystalline halite with minor sand
541.9	554.9	Fine black sand, with clay in the upper part of the interval
554.9	641.5	Massive and crystalline halite with interlayers of fine sand

A borehole geophysical survey was conducted by EM Explora Mining after the borehole was drilled. Geophysical logs included SP, SPR and short and large normal electrical resistivity. Results are shown on **Figure 10-3**.

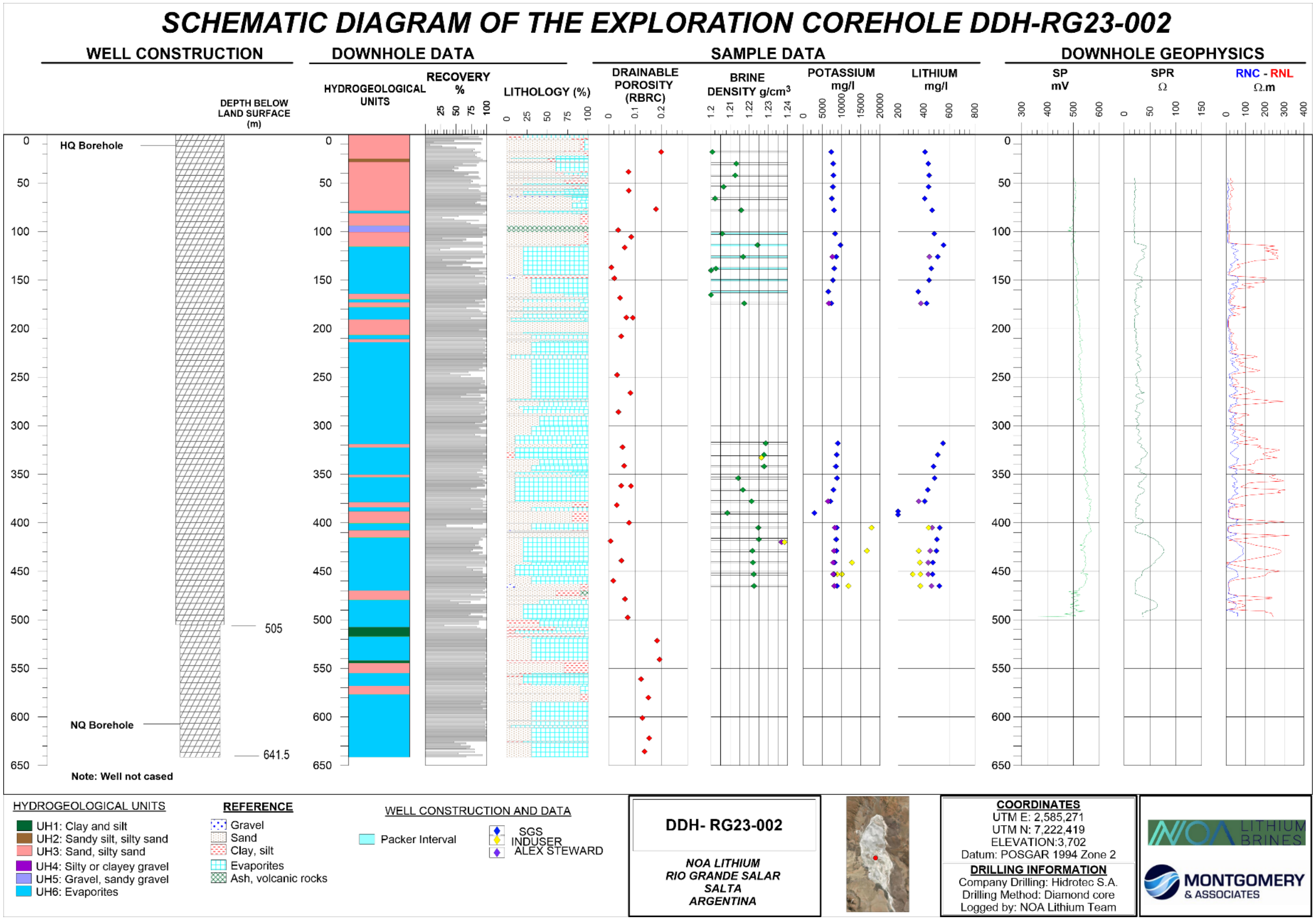


Figure 10-3 . Construction Schematic for Borehole DDH-RG23-002

10.2.1 Brine Sampling for DDH-RG23-002

During drilling, 29 original brine samples were obtained using a depth-specific packer system. Each sample was filled in 500 ml plastic bottle, labeled and sealed for avoid any interference than can affect the results. The samples were analyzed by SGS laboratories in Salta, Argentina. In some cases, and as part of the QA/QC control, duplicates samples were analyzed by Alex Stewart or Induser laboratories (samples labeled as 'check' when analyzed in laboratory). Temperature, pH, electrical conductivity and density were measured in the field. **Table 10-9** summarizes field parameters and depth interval of the samples obtained. **Table 10-10** is a summary table for the laboratory results from brine samples obtained.

Table 10-9. Field Parameters Measured During Brine Sampling at DDH-RG23-002

Sample ID	Interval	Type	Date	T (°C)[a]	pH	CE (mS/cm)[b]	Density (mg/mL)[c]
00037	17 – 19	Brine	20-05-23	11.9	6.81	230.2	1.204
00039	29 – 31	Brine	20-05-23	11.9	6.71	234.2	1.210
00040	41 – 43	Brine	20-05-23	11.8	6.70	236.3	1.209
00041	53 – 55	Brine	19-05-23	12.7	6.78	236.5	1.204
00043	65 – 67	Brine	19-05-23	14.6	6.80	224.4	1.212
00044	65 – 67	Duplicate					
00045	77 – 79	Brine	18-05-23	14.7	6.74	227.2	1.223
00047	101 – 103	Brine	25-05-23	14.0	7.00	220.1	1.210
00049	113 - 115	Brine	25-05-23	16.0	7.00	222.6	1.230
00050	125 – 127	Brine	25-05-23	14.0	7.40	220.0	1.230
00053	125 – 127	Duplicate					
00054	137 – 139	Brine	25-05-23	14.0	7.10	218.3	1.230
00056	149 - 151	Brine	24-05-23	14.0	7.10	218.2	1.210
00057	161 – 163	Brine	24-05-23	9.3	6.85	228.1	1.200
00058	173 – 175	Brine	24-05-23	13.8	6.75	223.6	1.214
00059	173 – 175	Duplicate					
00060	173 – 175	Duplicate					
00072	317 – 319	Brine	05-06-23	14.8	6.53	226.5	1.225
00074	329 – 331	Brine	05-06-23	13.0	6.48	224.7	1.225
00075	329 – 331	Duplicate					
00076	341 – 343	Brine	04-06-23	12.8	6.60	220.8	1.225
00078	353 – 355	Brine	04-06-23	10.4	6.62	227.3	1.215
00080	365 – 367	Brine	04-06-23	17.2	6.62	225.7	1.235
00081	377 – 379	Brine	04-06-23	15.0	6.80	229.1	1.210
00082	377 – 379	Duplicate					
00084	377 – 379	Duplicate					
00085	389 – 391	Brine	03-06-23	10.5	6.80	240.4	1.230
00087	404 – 406	Brine	20-06-23	18.0	6.70	220.0	1.231
00088	404 – 406	Duplicate					
00106	404 – 406	Duplicate					
00116	404 – 406	Duplicate					
00091	416 – 418	Brine	20-06-23	18.0	6.70	217.3	1.230
00092	418 – 418	Duplicate					
00095	428 – 430	Brine	19-06-23	14.0	6.78	215.9	1.232

Sample ID	Interval	Type	Date	T (°C)[a]	pH	CE (mS/cm)[b]	Density (mg/mL)[c]
00096	428 – 430	Duplicate					
00109	428 – 430	Duplicate					
00099	440 – 442	Brine	19-06-23	13.6	6.74	216.4	1.231
00100	440 – 442	Duplicate					
00111	440 – 442	Duplicate					
00102	452 – 454	Brine	18-06-23	14.0	6.90	217.0	1.230
00103	452 – 454	Duplicate					
00113	452 – 454	Duplicate					
00105	464 – 466	Brine	18-06-23	13.0	6.80	217.8	1.230
00114	464 – 466	Duplicate					
00115	464 – 466	Duplicate					

a: Temperature, in °C

b: Electrical conductivity, in milliSiemens per centimeter

c: Density, in milligrams per milliliters

Table 10-10. Summary of Laboratory Chemical Results for Brine Samples from DDH-RG23-002

Sample ID	Date	Laboratory	Interval	Type	Li (mg/L)	Mg (mg/L)	K (mg/L)	B (mg/L)
00037	20-05-23	SGS	17 – 19	Brine	411	5,028	7,327	372
00038	20-05-23	SGS	17 – 19	Blank	<10	32	24	<10
00039	20-05-23	SGS	29 – 31	Brine	436	5,409	7,821	380
00040	20-05-23	SGS	41 – 43	Brine	443	5,381	7,899	385
00041	19-05-23	SGS	53 – 55	Brine	438	5,305	7,767	387
00042	19-05-23	SGS	53 – 55	STD A-3002	115	1,314	2,947	524
00043	19-05-23	SGS	65 – 67	Brine	408	5,209	7,449	361
00044	19-05-23	SGS	65 – 67	Duplicate	424	5,137	7,473	375
00045	18-05-23	SGS	77 – 79	Brine	466	5,654	8,020	402
00046	18-05-23	SGS	77 – 79	Blank	<10	41	58	<10
00047	25-05-23	SGS	101 – 103	Brine	483	5,970	8,357	425
00048	25-05-23	SGS	101 – 103	STD C-3001	455	1,670	3,543	524
00049	25-05-23	SGS	113 – 115	Brine	556	6,891	9,725	492
00050	25-05-23	Alex Stewart	125 – 127	Brine	444	5,724	7,600	405
00051	25-05-23	Alex Stewart	125 – 127	Duplicate	436	5,600	7,415	401
00052	25-05-23	Alex Stewart	125 – 127	STD C-3001	399	1,498	3,262	489
00053	25-05-23	Alex Stewart	125 – 127	Duplicate	443	5,692	7,598	405
00054	25-05-23	SGS	137 – 139	Brine	460	5,700	8,116	409
00055	25-05-23	SGS	137 – 139	Blank	<10	37	63	<10
00056	24-05-23	SGS	149 – 151	Brine	442	5,518	7,788	388
00057	24-05-23	SGS	161 – 163	Brine	358	4,513	6,521	323
00058	24-05-23	Alex Stewart	173 – 175	Check	378	4,875	6,690	353
00059	24-05-23	Alex Stewart	173 – 175	Duplicate	380	4,865	6,771	350
00060	24-05-23	SGS	173 – 175	Brine	414	5,302	7,419	365
00061	24-05-23	SGS	173 – 175	STD E-3003	783	1,651	6,516	529
00062	---	SGS	Cyntia Ines	Superficial	128	1,576	2,461	132
00063	24-05-23	SGS	173 – 175	Blank	<10	32	35	<10
00072	05-06-23	SGS	317 – 319	Brine	552	6,425	9,004	504
00073	05-06-23	SGS	317 – 319	STD A-3002	128	1,318	3,013	557
00074	05-06-23	SGS	329 – 331	Brine	510	6,258	8,778	477
00075	05-06-23	SGS	329 – 331	Duplicate	502	6,373	8,918	470
00076	04-06-23	SGS	341 – 343	Brine	477	6,034	8,548	449
00077	04-06-23	SGS	341 – 343	Blank	<10	14	50	<10

Sample ID	Date	Laboratory	Interval	Type	Li (mg/L)	Mg (mg/L)	K (mg/L)	B (mg/L)
00078	04-06-23	SGS	353 – 355	Brine	485	6,239	8,788	466
00079	04-06-23	SGS	353 – 355	STD C-3001	436	1,669	3,565	549
00080	04-06-23	SGS	365 – 367	Brine	433	5,621	7,884	418
00081	04-06-23	Alex Stewart	377 – 379	Brine	362	4,703	6,469	336
00082	04-06-23	Alex Stewart	377 – 379	Duplicate	366	4,712	6,460	342
00083	04-06-23	Alex Stewart	377 – 379	STD A-3002	102	1,195	2,772	482
00084	04-06-23	Alex Stewart	377 – 379	Duplicate	356	4,669	6,278	337
00085	03-06-23	SGS	389 – 391	Brine	163	2,476	2,967	161
00086	03-06-23	SGS	389 – 391	Blank	<10	11	44	<10
00087	20-06-23	SGS	404 – 406	Brine	525	6,549	8,775	464
00088	20-06-23	SGS	404 – 406	Duplicate	513	6,448	8,757	454
00089	20-06-23	SGS	404 – 406	Blank	<10	12	63	<10
00090	20-06-23	SGS	404 – 406	STD A-3002	114	1,368	2,848	536
00091	20-06-23	SGS	416 – 418	Brine	504	6,365	8,575	457
00092	20-06-23	SGS	416 – 418	Duplicate	514	6,459	8,666	456
00093	20-06-23	SGS	416 – 418	Blank	<10	13	61	<10
00094	20-06-23	SGS	416 – 418	STD C-3001	430	1,620	3,377	523
00095	19-06-23	SGS	428 – 430	Brine	499	6,319	8,674	448
00096	19-06-23	SGS	428 – 430	Duplicate	511	6,458	8,621	450
00097	19-06-23	SGS	428 – 430	Blank	<10	29	88	<10
00098	19-06-23	SGS	428 – 430	STD E-3003	761	1,648	6,366	526
00099	19-06-23	SGS	440 – 442	Brine	473	6,068	8,182	421
00100	19-06-23	SGS	440 – 442	Duplicate	479	6,145	8,340	426
00101	19-06-23	SGS	440 – 442	Blank	<10	<10	56	<10
00102	18-06-23	SGS	452 – 454	Brine	471	6,058	8,019	416
00103	18-06-23	SGS	452 – 454	Duplicate	471	6,047	8,123	421
00104	18-06-23	SGS	452 – 454	Blank	<10	<10	53	<10
00105	18-06-23	SGS	464 – 466	Brine	524	6,765	8,816	477
00106	20-06-23	Alex Stewart	404 – 406	Check	466	6,073	8,284	425
00107	20-06-23	Alex Stewart	404 – 406	Blank	<1	21	2	<1
00108	20-06-23	Alex Stewart	404 – 406	STD A-3002	105	1,177	2,748	484
00109	19-06-23	Alex Stewart	428 – 430	Check	452	5,920	8,074	406
00110	19-06-23	Alex Stewart	428 – 430	STD C-3001	394	1,482	3,187	492
00111	19-06-23	Alex Stewart	440 – 442	Check	436	5,754	7,851	392
00112	19-06-23	Alex Stewart	440 – 442	STD E-3003	681	1,441	5,808	483
00113	18-06-23	Alex Stewart	452 – 454	Check	437	5,711	7,849	385
00114	18-06-23	Alex Stewart	464 – 466	Check	461	6,160	8,095	420
00115	18-06-23	Alex Stewart	464 – 466	Check	482	6,293	8,318	431
00116	20-06-23	Induser	404 – 406	Check	438	6,270	15,980	380
00117	20-06-23	Induser	404 – 406	Blank	<1	5.4	1.1	<1
00118	20-06-23	Induser	404 – 406	STD A-3002	86.8	1,160	5,114	430
00119	19-06-23	Induser	428 – 430	Check	362	6,050	15,400	331
00120	19-06-23	Induser	428 – 430	STD C-3001	338	1,420	5,860	424
00121	19-06-23	Induser	440 – 442	Check	370	5,350	13,530	335
00122	19-06-23	Induser	440 – 442	STD E-3003	556	1,330	9,360	404
00123	18-06-23	Induser	452 – 454	Check	315	4,590	11,710	329
00124	18-06-23	Induser	464 – 466	Check	376	5,260	13,100	360
00125	18-06-23	Induser	464 – 466	Check	375	4,770	12,300	350
00126	25-07-23	SGS	125 – 127	Brine	510	5,462	8,576	362
00127	25-07-23	SGS	173 – 175	Brine	423	4,710	7,351	322
00128	25-07-23	SGS	377 – 379	Brine	409	4,662	7,112	326

10.2.2 Porosity Sampling for DDH-RG23-002

31 core samples were collected for total and drainable porosity analysis. For each sample, 13 to 19 cm of unaltered core was selected and stored in a plastic tube, with the same diameter of the core, which was subsequently labeled and sealed. **Table 10-11** summarizes depth intervals of the samples obtained for analysis as well as the laboratory results from GSA laboratory.

Table 10-11. Core Samples Obtained for Porosity Analysis from DDH-RG23-002

Sample ID	Interval (meters)		Total porosity	Specific yield	General lithology
	From	To			
00536	17.84	18.00	0.326	0.200	Clayey sand
00537	38.50	38.64	0.191	0.076	Well sorted black sand
00538	57.60	57.78	0.155	0.077	Sand with halite
00539	76.75	76.89	0.293	0.180	Well sorted black sand
00540	98.32	98.50	0.382	0.036	Unconsolidated pink ignimbrite
00541	105.35	105.50	0.287	0.086	Well sorted black sand
00542	116.37	116.50	0.076	0.061	Fractured halite
00543	136.85	137.00	0.051	0.011	Fractured halite
00544	148.00	148.18	0.238	0.022	Sandy clay
00545	168.33	168.47	0.097	0.044	Fractured halite
00546	188.50	188.69	0.103	0.067	Fractured halite
00547	207.75	207.90	0.149	0.048	Crystalline halite
00548	227.50	227.63	0.034	0.015	Crystalline halite
00549	247.52	247.66	0.057	0.032	Fractured halite
00550	266.05	266.20	0.087	0.083	Fractured halite
00551	188.69	188.82	0.171	0.092	Well sorted black sand
00552	285.85	286.00	0.083	0.038	Well sorted black sand
00553	305.15	305.30	0.021	0.006	Crystalline halite
00554	322.00	322.13	0.164	0.053	Fractured halite
00555	341.25	341.44	0.080	0.059	Fractured halite
00556	361.72	361.90	0.068	0.048	Halite with fine black sand
00557	381.86	382.00	0.017	0.031	Fine to medium gray sand
00558	399.85	400.00	0.112	0.078	Fine to medium gray sand
00559	361.95	362.11	0.106	0.085	Halite with fine black sand
00560	418.80	418.93	0.050	0.008	Halite with fine sand
00561	439.00	439.16	0.057	0.049	Crystalline halite
00562	459.82	460.00	0.052	0.018	Compact halite
00563	478.55	478.70	0.109	0.062	Fine black sand
00564	497.50	497.65	0.122	0.073	Compact halite
00565	521.5	521.65	0.206	0.184	Compact halite
00566	540.84	541.00	0.232	0.194	Compact halite
00567	561.09	561.24	0.127	0.123	Crystalline halite
00568	580.00	580.12	0.201	0.151	Black fine sand
00569	601.00	601.18	0.169	0.128	Compact halite
00570	621.86	622.00	0.157	0.154	Crystalline halite
00571	635.50	635.66	0.146	0.137	Compact halite

10.2.3 Conclusions and Recommendations for DDH-RG23-002

The lithology in this well is mostly clastic sediments, with layers of crystalline halite. Lithium concentration varies from 356 to 552 mg/L, with no obvious correlation to depth. One of the samples obtained has a value of 163 mg/L at a depth of 380 m. However, in our opinion this value is not reliable. It is suggested to drill a pumping well at the same location. This new well can be drilled using a 4½" tricone to help ensure adequate completion for the new well. Reported total porosity varies from 1.7% to 38.2%. Reported drainable porosity (specific yield) varies from 0.6% to 20.0%; high values are found in the first 100 m depth, and from about 500 m depth to the bottom of the well, which corresponds to crystalline or compact halite.

10.3 DDH-RG23-003

Drilling activities for exploration borehole DDH-RG23-003 started on July 26, 2023, reaching the final depth of 676 m bls on September 11, 2023. This well was drilled with HQ diameter to total depth. HWT casing was installed from 0 to 18 m bls. **Photo 10-3** shows some of the drill core obtained;
Table 10-12 is the summary log for this borehole.

RIO GRANDE DDH-RG23-003 D:256.80 H:265.35 BOX 79-81

Photo 10-3. Core Samples Obtained from Borehole DDH-RG23-003

Table 10-12. Summary of Lithological Description of Borehole DDH-RG23-003

From (m)	To (m)	Summary log
0	122.4	Crystalline halite with layers of black fine sand
122.4	132	Fine black sand with some halite
132	165	Crystalline halite with presence of gypsum and sand
165	201.1	Interlayers of fine black sand and halite
201.1	312.0	Fine to medium black sand with interlayers of crystalline halite
312.0	356.4	Conglomerate with interlayers of fine sand
356.4	520.6	Fine to medium sand with minor halite and clay and silt
520.6	665.0	Crystalline halite with layers of sand
665.0	676	Fine to medium sand

A borehole geophysical survey was conducted by EM Explora Mining after the borehole was drilled. Geophysical logs included SP, SPR and short and large normal electrical resistivity. Results are shown on **Figure 10-4**.

Once drilling was completed, 2-inch blank and screened PVC was installed. The well schematic is shown on **Figure 10-4**.

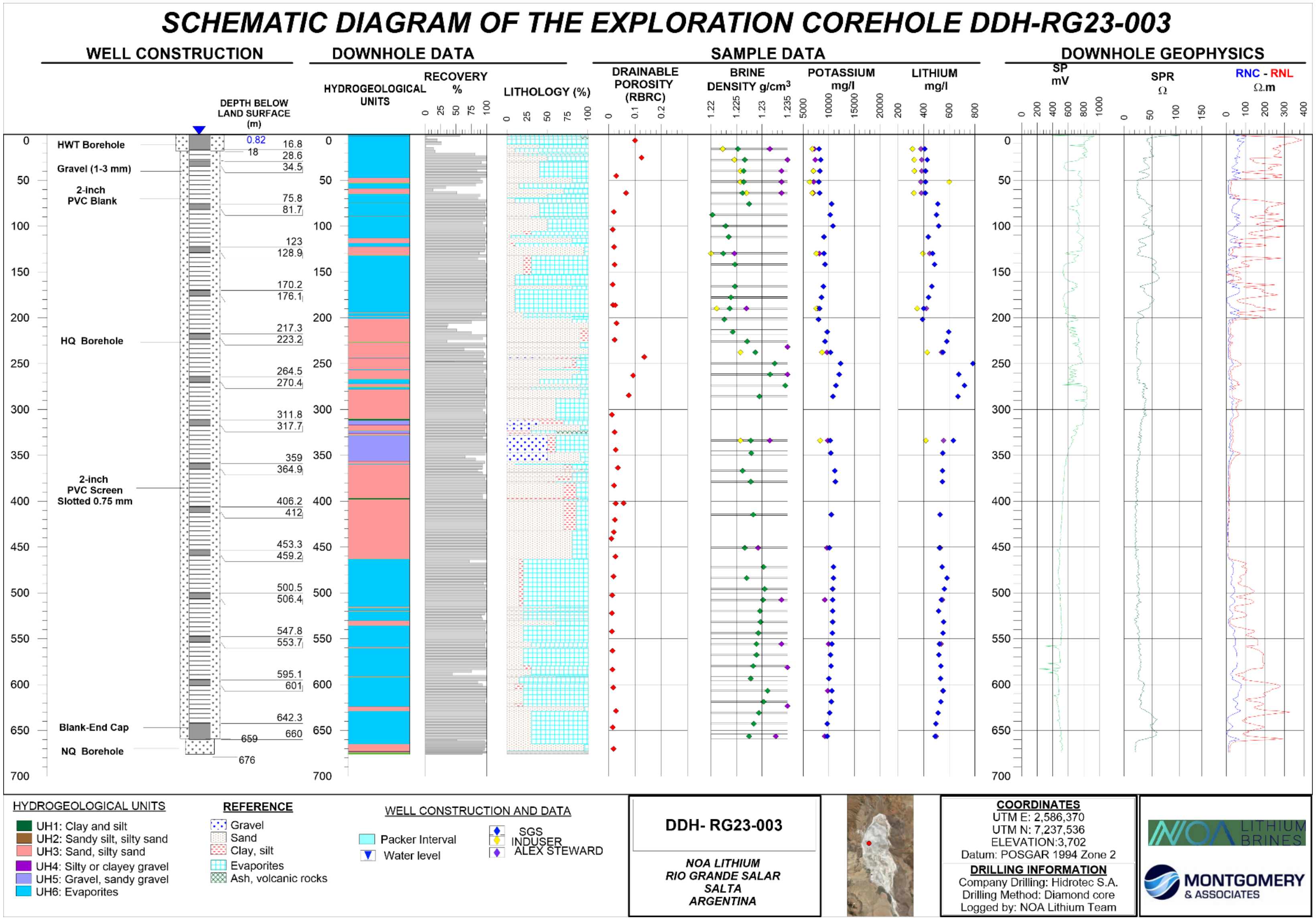


Figure 10-4 . Construction Schematic for Borehole DDH-RG23-003

10.3.1 Brine Sampling for DDH-RG23-003

During drilling, 46 original brine samples were obtained using a depth-specific packer system. Each sample was filled in 500 ml plastic bottle, labeled and sealed. The samples were analyzed at SGS laboratories in Salta, Argentina. Duplicates samples were analyzed at Alex Stewart or Induser laboratories (samples labeled as 'check' when analyzed in laboratory). Temperature, pH, electrical conductivity and density were measured in the field. **Table 10-13** summarizes field parameters and depth interval of the samples obtained.

Table 10-13. Field Parameters Measured During Brine Sampling at DDH-RG23-003

Sample ID	Interval	Type	Date	T (°C)[a]	pH	CE (mS/cm)[b]	Density (mg/mL)[c]
00129	15 – 16.5	Brine	29-07-23	14.3	7.00	196.5	1.230
00130	15 – 16.5	Duplicate					
00151	15 – 16.5	Duplicate					
00160	15 – 16.5	Duplicate					
00132	27 – 28.5	Brine	29-07-23	11.9	6.75	202.1	1.231
00133	27 – 28.5	Duplicate					
00153	27 – 28.5	Duplicate					
00162	27 – 28.5	Duplicate					
00134	39 – 40.5	Brine	29-07-23	10.2	6.74	199.7	1.231
00135	39 – 40.5	Duplicate					
00155	39 – 40.5	Duplicate					
00164	39 – 40.5	Duplicate					
00137	51 – 52.5	Brine	29-07-23	9.7	6.90	205	1.230
00138	51 – 52.5	Duplicate					
00157	51 – 52.5	Duplicate					
00166	51 – 52.5	Duplicate					
00139	63 – 64.5	Brine	29-07-23	10.1	7.30	197.6	1.233
00140	63 – 64.5	Duplicate					
00159	63 – 64.5	Duplicate					
00168	63 – 64.5	Duplicate					
00141	75 – 76.5	Brine	29-07-23	9.7	6.84	197.8	1.233
00144	87 – 88.5	Brine	29-07-23	13.1	7.10	198.1	1.228
00147	99 – 100.5	Brine	28-07-23	9.9	6.68	198.1	1.235
00149	111 – 116	Brine	28-07-23	8.9	7.30	191.5	1.230
00175	129 – 130.5	Brine	03-08-23	12.1	5.90	199.7	1.237
00189	129 – 130.5	Duplicate					
00176	129 – 130.5	Duplicate					
00193	129 – 130.5	Duplicate					
00178	141 – 142.5	Brine	03-08-23	10.8	6.10	202.1	1.231
00180	165 – 166.5	Brine	02-08-23	12.6	7.05	203.7	1.230
00182	177 – 178.5	Brine	02-08-23	13.8	6.25	206.0	1.230
00184	189 – 190.5	Brine	02-08-23	11.7	6.55	205.7	1.230
00185	189 – 190.5	Duplicate					
00191	189 – 190.5	Duplicate					
00195	189 – 1960.5	Duplicate					
00186	201 – 202.5	Brine	02-08-23	11.5	6.40	206.5	1.231
00188	213 – 218	Brine	01-08-23	5.3	6.40	193.2	1.231

MONTGOMERY & ASSOCIATES

Sample ID	Interval	Type	Date	T (°C)[a]	pH	CE (mS/cm)[b]	Density (mg/mL)[c]
00197	225 – 226.5	Brine	11-08-23	16.1	6.17	196.7	1.230
00199	237 – 238.5	Brine	11-08-23	14.1	6.12	198.1	1.232
00200	237 – 238.5	Duplicate					
00212	237 – 238.5	Duplicate					
00216	237 – 238.5	Duplicate					
00201	249 – 250.5	Brine	11-08-23	10.3	6.30	185.9	1.237
00203	261 – 262.5	Brine	11-08-23	15.0	6.44	182.8	1.235
00205	273 – 274.5	Brine	10-08-23	16.0	6.60	172.3	1.237
00207	285 – 286.5	Brine	10-08-23	16.0	6.62	183.5	1.232
00209	333 – 334.5	Brine	08-08-23	12.0	6.48	200.1	1.234
00210	333 -334.5	Duplicate					
00214	333 – 334.5	Duplicate					
00218	333 – 334.5	Duplicate					
00211	345 – 346.5	Brine	08-08-23	14.5	6.62	192.0	1.231
00221	366 – 367.5	Brine	19-08-23	16.1	6.40	184.8	1.235
00222	378 – 379.5	Brine	18-08-23	16.0	6.48	182.3	1.235
00224	414 – 415.5	Brine	17-08-23	13.2	6.90	190.3	1.234
00225	450 – 451.5	Brine	16-08-23	15.0	6.53	184.6	1.234
00226	450 – 451.5	Duplicate					
00253	450 – 451.5	Duplicate					
00227	471 – 472.5	Brine	30-08-23	13.7	6.42	187.8	1.235
00228	483 – 484.5	Brine	30-08-23	14.6	6.33	195.5	1.234
00230	495 – 496.5	Brine	30-08-23	14.5	6.98	193.6	1.236
00231	507 – 508.5	Brine	29-08-23	11.6	6.93	201.5	1.234
00232	507 – 508.5	Duplicate					
00255	507 – 508.5	Duplicate					
00233	519 – 520.5	Brine	29-08-23	15.0	6.36	192.2	1.236
00234	531 – 532.5	Brine	28-08-23	14.7	6.71	189.5	1.235
00236	543 – 544.5	Brine	27-08-23	14.9	7.10	189.3	1.234
00237	555 – 556.5	Brine	27-08-23	14.5	7.00	189.4	1.233
00238	555 – 556.5	Duplicate					
00257	555 – 556.5	Duplicate					
00240	567 – 568.5	Brine	27-08-23	14.5	6.39	192.0	1.233
00241	579 – 580.5	Brine	26-08-23	12.4	7.18	194.8	1.234
00243	591 – 596	Brine	25-08-23	12.7	6.75	199.9	1.233
00244	606 – 607.5	Brine	08-09-23	13.2	6.40	185.1	1.237
00245	606 – 607.5	Duplicate					
00259	606 – 607.5	Duplicate					
00246	618 – 619.5	Brine	08-09-23	13.5	6.35	187.1	1.234
00247	630 – 631.5	Brine	07-09-23	13.9	6.63	187.7	1.235
00249	642 – 643.5	Brine	06-09-23	13.1	6.40	184.5	1.234
00250	654 – 659	Brine	08-09-23	11.5	6.37	186.5	1.233
00251	654 – 659	Duplicate					
00260	654 – 659	Duplicate					

a: Temperature, in °C

b: Electrical conductivity, in milliSiemens per centimeter

c: Density, in milligrams per milliliters

Table 10-14 is a summary table for the laboratory results from brine samples obtained.

Table 10-14. Summary of Laboratory Chemical Results. Brine Samples from Borehole DDH-RG23-003

Sample ID	Date	Laboratory	Interval (m)	Type	Li mg/L	Mg mg/L	K mg/L	B mg/L
00129	29-07-23	SGS	15 – 16.5	Brine	409	5,182	8,133	322
00130	29-07-23	SGS	15 – 16.5	Duplicate	408	5,236	8,224	318
00131	29-07-23	SGS	15 – 16.5	Blank	<10	22	<10	<10
00132	29-07-23	SGS	27 – 28.5	Brine	428	5,410	8,450	342
00133	29-07-23	SGS	27 – 28.5	Duplicate	439	5,514	8,620	349
00134	29-07-23	SGS	39 – 40.5	Brine	414	5,286	8,256	332
00135	29-07-23	SGS	39 – 40.5	Duplicate	410	5,187	8,100	324
00136	29-07-23	SGS	39 – 40.5	Blank	<10	25	12	<10
00137	29-07-23	SGS	51 – 52.5	Brine	415	5,221	8,053	331
00138	29-07-23	SGS	51 – 52.5	Duplicate	422	5,309	8,199	337
00139	29-07-23	SGS	63 – 64.5	Brine	412	5,195	8,201	320
00140	29-07-23	SGS	63 – 64.5	Duplicate	431	5,414	8,480	332
00141	29-07-23	SGS	75 – 76.5	Brine	510	6,615	10,575	454
00142	29-07-23	SGS	75 – 76.5	Blank	<10	25	16	<10
00143	29-07-23	SGS	75 – 76.5	STD A-3002	97	1,218	3,019	496
00144	29-07-23	SGS	87 – 88.5	Brine	500	6,473	10,300	428
00145	29-07-23	SGS	87 – 88.5	Blank	<10	25	16	<10
00146	29-07-23	SGS	87 – 88.5	STD C-3001	457	1,566	3,766	511
00147	28-07-23	SGS	99 – 100.5	Brine	516	6,719	10,808	463
00148	28-07-23	SGS	99 – 100.5	Blank	<10	24	17	<10
00149	28-07-23	SGS	111 – 116	Brine	437	5,691	9,084	349
00150	28-07-23	SGS	111 – 116	STD E-3003	758	1,473	6,778	480
00151	29-07-23	Alex Stewart	15 – 16.5	Check	379	5,364	7,173	311
00152	29-07-23	Alex Stewart	15 – 16.5	STD A-3002	104	1,200	2,660	486
00153	29-07-23	Alex Stewart	27 – 28.5	Check	386	5,414	7,371	336
00154	29-07-23	Alex Stewart	27 – 28.5	Blank	<1	19	4	<2
00155	29-07-23	Alex Stewart	39 – 40.5	Check	385	5,402	6,966	331
00156	29-07-23	Alex Stewart	39 – 40.5	STD C-3001	399	1,510	3,178	493
00157	29-07-23	Alex Stewart	51 – 52.5	Check	379	5,288	7,022	328
00158	29-07-23	Alex Stewart	51 – 52.5	STD E-3003	689	1,485	5,903	482
00159	29-07-23	Alex Stewart	63 – 64.5	Check	382	5,317	6,929	319
00160	29-07-23	Induser	15 – 16.5	Check	313	5,025	6,756	255
00161	29-07-23	Induser	15 – 16.5	STD A-3002	74	1,112	2,269	397
00162	29-07-23	Induser	27 – 28.5	Check	325	5,255	768	296
00163	29-07-23	Induser	27 – 28.5	STD C-3001	333	1,473	2,894	425
00164	29-07-23	Induser	39 – 40.5	Check	328	5,193	6,994	280
00165	29-07-23	Induser	39 – 40.5	Blank	<1	21.2	2.5	<1
00166	29-07-23	Induser	51 – 52.5	Check	600	4,780	6,322	261
00167	29-07-23	Induser	51 – 52.5	STD E-3003	594	1,507	5,806	434
00168	29-07-23	Induser	63 – 64.5	Check	324	5,048	6,786	261
00175	03-08-23	SGS	129 – 130.5	Brine	471	7,136	9,068	374
00176	03-08-23	SGS	129 – 130.5	Duplicate	463	7,016	8,936	368
00177	03-08-23	SGS	129 – 130.5	Blank	<10	12	32	<10
00178	03-08-23	SGS	141 – 142.5	Brine	485	7,633	9,286	377
00179	03-08-23	SGS	141 – 142.5	STD A-3002	89	1,206	2,868	496
00180	02-08-23	SGS	165 – 166.5	Brine	464	7,097	8,970	358
00181	02-08-23	SGS	165 – 166.5	STD C-3001	437	1,491	3,394	492
00182	02-08-23	SGS	177 – 178.5	Brine	439	6,539	8,567	335
00183	02-08-23	SGS	177 – 178.5	STD C-3001	443	1,498	3,444	500

Sample ID	Date	Laboratory	Interval (m)	Type	Li mg/L	Mg mg/L	K mg/L	B mg/L
00184	02-08-23	SGS	189 – 190.5	Brine	401	6,243	8,190	319
00185	02-08-23	SGS	189 – 190.5	Duplicate	436	6,545	8,594	334
00186	02-08-23	SGS	201 – 202.5	Brine	392	5,833	7,995	291
00187	02-08-23	SGS	201 – 202.5	Blank	<10	13	42	<10
00188	01-08-23	SGS	213 – 218	Brine	595	7,931	9,686	383
00189	03-08-23	Alex Stewart	129 – 130.5	Check	447	6,990	8,186	380
00190	03-08-23	Alex Stewart	129 – 130.5	Blank	<1	13	<2	<1
00191	02-08-23	Alex Stewart	189 – 190.5	Check	421	6,504	7,828	342
00192	02-08-23	Alex Stewart	189 – 190.5	STD A-3002	111	1,211	2,653	499
00193	03-08-23	Induser	129 – 130.5	Check	395	5,911	7,551	347
00194	03-08-23	Induser	129 – 130.5	Blank	<1	10.5	2.1	<1
00195	02-08-23	Induser	189 – 1960.5	Check	349	5,475	7,550	273
00196	02-08-23	Induser	189 – 1960.5	STD A-3002	74.1	942	2,068	374
00197	11-08-23	SGS	225 – 226.5	Brine	580	7,756	9,273	383
00198	11-08-23	SGS	225 – 226.5	Blank	<10	11	40	<10
00199	11-08-23	SGS	237 – 238.5	Brine	552	9,135	10,330	441
00200	11-08-23	SGS	237 – 238.5	Duplicate	640	9,202	10,415	444
00201	11-08-23	SGS	249 – 250.5	Brine	785	11,805	12,298	548
00202	11-08-23	SGS	249 – 250.5	STD A-3002	85	1,213	2,919	506
00203	11-08-23	SGS	261 – 262.5	Brine	675	11,447	12,053	533
00204	11-08-23	SGS	261 – 262.5	STD C-3001	364	1,272	2,895	424
00205	10-08-23	SGS	273 – 274.5	Brine	720	11,251	11,427	519
00206	10-08-23	SGS	273 – 274.5	STD E-3003	736	1,291	5,673	433
00207	10-08-23	SGS	285 – 286.5	Brine	667	9,789	10,831	466
00208	10-08-23	SGS	285 – 286.5	Blank	<10	12	48	<10
00209	08-08-23	SGS	333 – 334.5	Brine	632	9,078	10,269	435
00210	08-08-23	SGS	333 – 334.5	Duplicate	648	9,358	10,557	447
00211	08-08-23	SGS	345 – 346.5	Brine	549	9,112	10,384	431
00212	11-08-23	Alex Stewart	237 – 238.5	Check	540	9,040	9,653	455
00213	11-08-23	Alex Stewart	237 – 238.5	Blank	<1	13	<2	<1
00214	08-08-23	Alex Stewart	333 – 334.5	Check	555	9,254	9,826	459
00215	08-08-23	Alex Stewart	333 – 334.5	STD E-3003	709	1,494	5,828	497
00216	11-08-23	Induser	237 – 238.5	Check	428	6,996	8,716	354
00217	11-08-23	Induser	237 – 238.5	Blank	<1	10.1	1.9	<1
00218	08-08-23	Induser	333 – 334.5	Check	417	6,823	8,340	342
00219	08-08-23	Induser	333 – 334.5	STD C-3001	332	1,221	2,619	390
00253	16-08-23	Alex Stewart	450 – 451.5	Check	529	9,084	9,460	440
00254	16-08-23	Alex Stewart	450 – 451.5	STD A-3002	104	1,173	2,752	499
00255	29-08-23	Alex Stewart	507 – 508.5	Check	546	9,215	9,769	451
00256	29-08-23	Alex Stewart	507 – 508.5	Blank	<1	13	2	<1
00257	27-08-23	Alex Stewart	555 – 556.5	Check	537	9,084	9,630	436
00258	27-08-23	Alex Stewart	555 – 556.5	STD C-3001	413	1,460	3,190	496
00259	08-09-23	Alex Stewart	606 – 607.5	Check	548	9,278	9,732	461
00260	08-09-23	Alex Stewart	654 – 659	Check	497	8,276	8,946	400
00261	08-09-23	Alex Stewart	654 – 659	STD E-3003	706	1,461	5,812	498
00220	19-08-23	SGS	366 – 367.5	STD A-3002	105	1,282	2,778	523
00221	19-08-23	SGS	366 – 367.5	Brine	547	9,168	11,212	495
00222	18-08-23	SGS	378 – 379.5	Brine	547	9,262	11,307	500
00223	18-08-23	SGS	378 – 379.5	Blank	<10	10	28	<10
00224	17-08-23	SGS	414 – 415.5	Brine	527	8,471	10,526	440
00225	16-08-23	SGS	450 – 451.5	Brine	523	8,126	10,142	422
00226	16-08-23	SGS	450 – 451.5	Duplicate	552	8,495	10,467	455
00227	30-08-23	SGS	471 – 472.5	Brine	544	8,931	10,944	478
00228	30-08-23	SGS	483 – 484.5	Brine	582	8,927	10,942	475

Sample ID	Date	Laboratory	Interval (m)	Type	Li mg/L	Mg mg/L	K mg/L	B mg/L
00229	30-08-23	SGS	483 – 484.5	Blank	<10	68	80	<10
00230	30-08-23	SGS	495 – 496.5	Brine	562	8,595	10,744	446
00231	29-08-23	SGS	507 – 508.5	Brine	538	8,812	10,790	467
00232	29-08-23	SGS	507 – 508.5	Duplicate	533	8,804	10,820	467
00233	29-08-23	SGS	519 – 520.5	Brine	518	8,739	10,756	463
00234	28-08-23	SGS	531 – 532.5	Brine	555	8,702	10,741	463
00235	28-08-23	SGS	531 – 532.5	Blank	<10	21	40	<10
00236	27-08-23	SGS	543 – 544.5	Brine	550	8,733	10,728	464
00237	27-08-23	SGS	555 – 556.5	Brine	523	8,405	10,628	437
00238	27-08-23	SGS	555 – 556.5	Duplicate	556	8,393	10,377	442
00239	27-08-23	SGS	555 – 556.5	STD C-3001	453	1,592	3,327	521
00240	27-08-23	SGS	567 – 568.5	Brine	519	8,293	10,329	436
00241	26-08-23	SGS	579 – 580.5	Brine	534	8,496	10,467	446
00242	26-08-23	SGS	579 – 580.5	Blank	<10	23	26	<10
00243	25-08-23	SGS	591 – 596	Brine	532	8,117	10,034	424
00244	08-09-23	SGS	606 – 607.5	Brine	554	8,670	10,626	468
00245	08-09-23	SGS	606 – 607.5	Duplicate	547	8,505	10,595	452
00246	08-09-23	SGS	618 – 619.5	Brine	535	8,531	10,519	464
00247	07-09-23	SGS	630 – 631.5	Brine	513	8,009	10,200	429
00248	07-09-23	SGS	630 – 631.5	Blank	<10	18	18	<10
00249	06-09-23	SGS	642 – 643.5	Brine	496	7,829	9,709	422
00250	08-09-23	SGS	654 – 659	Brine	489	7,619	9,681	399
00251	08-09-23	SGS	654 – 659	Duplicate	518	7,519	9,350	395
00252	08-09-23	SGS	654 – 659	STD E-3003	722	1,606	6,651	529

10.3.2 Porosity Sampling for DDH-RG23-003

Core were collected and described by NOA personnel. 37 core samples were collected for total and drainable porosity analysis. For each sample, 11 to 23 cm of unaltered core was selected and stored in a plastic tube with the same diameter as the core, and was subsequently labeled and sealed. **Table 10-15** summarizes depth intervals of the samples obtained for analysis. For this well, core samples were analyzed in LCV laboratories, in Buenos Aires, Argentina.

Table 10-15. Core Samples Obtained for Porosity Analysis from DDH-RG23-003

Sample ID	Interval (meters)		Total porosity	Specific yield	General lithology
	From	To			
00572	6.50	6.62	0.176	0.100	Crystalline halite with minor presence of gypsum
00573	25.28	25.42	0.289	0.125	Cemented fine grained sand
00574	45.05	45.22	0.046	0.029	Crystalline halite
00575	63.87	64.00	0.207	0.066	Black sand
00576	84.15	84.35	0.034	0.020	Crystalline halite with presence of blackish sand
00577	103.70	103.85	0.055	0.016	Crystalline halite
00578	122.60	122.77	0.102	0.021	Black sand
00579	142.00	142.16	0.077	0.023	Massive halite
00580	163.55	163.75	0.064	0.016	Crystalline halite
00581	185.84	186.04	0.066	0.017	Crystalline halite

Sample ID	Interval (meters)		Total porosity	Specific yield	General lithology
	From	To			
00582	205.80	206.00	0.175	0.030	Black sand
00583	223.80	224.00	0.099	0.023	Crystalline halite
00584	242.60	242.76	0.255	0.136	Grayish sand
00585	262.80	263.00	0.349	0.093	Black sand
00586	186.10	186.25	0.054	0.025	Crystalline halite
00587	284.35	284.50	0.185	0.077	Black sand
00588	305.60	305.76	0.116	0.013	Black sand
00589	324.50	324.65	0.143	0.023	Black sand
00590	344.00	344.16	0.186	0.027	Conglomerate
00591	363.37	363.51	0.066	0.035	Fine sand
00592	382.73	382.91	0.133	0.021	Black fine sand with presence of silt
00593	402.33	402.50	0.107	0.027	Black sand
00594	420.06	420.23	0.143	0.024	Black sand
00595	440.56	440.74	0.112	0.011	Fine to medium grained sand
00596	460.32	460.50	0.251	0.026	Fine to medium grained sand
00597	482.00	482.17	0.064	0.019	Halite with presence of sand
00598	402.19	402.33	0.124	0.057	Black sand
00599	502.43	402.62	0.042	0.014	Halite with presence of sand
00600	522.22	522.39	0.023	0.013	Halite with presence of fine sand
00601	542.00	542.13	0.040	0.013	Halite with black sand
00602	563.00	563.19	0.044	0.015	Halite with black sand
00603	583.71	583.83	0.037	0.015	Halite with black sand
00604	603.19	603.31	0.043	0.018	Crystalline halite
00605	628.76	628.92	0.056	0.028	Black sand
00606	646.50	646.65	0.053	0.016	Crystalline halite
00607	670.04	670.27	0.116	0.019	Black sand
00608	583.60	583.71	0.033	0.020	Halite with black sand

10.3.3 Conclusions for DDH-RG23-003

The lithology at this location is composed mostly of sand with some conglomerates and halite. Lithium concentration varies from 313 to 785, having the higher concentrations below 90 m. Reported total porosity varies from 2.3% to 34.9%. Reported drainable porosity (specific yield) varies from 1.1% to 13.6%; three (3) samples, two within the first 25 m depth and one at 242 m, showed values higher than 10%.

10.4 DDH-RG23-004

Drilling activities for exploration borehole DDH-RG23-04 started on October 12, 2023, reaching the final depth of 551 m bls on November 30, 2023. This well was drilled with HQ diameter to total depth. No HWT casing was installed in this well. **Photo 10-4** shows some of the drill core obtained; **Table 10-16** is the summary log for this borehole.

RIO GRANDE DDH-RG23-004 D:468.40 H:476.90 BOX 148-150

Photo 10-4. Core Samples Obtained from Borehole DDH-RG23-004

Table 10-16. Summary of Lithological Description of Borehole DDH-RG23-004

From (m)	To (m)	Summary log
0	20.5	Crystalline halite with layers and disseminated fine to medium sand
20.5	29	Grayish clay with presence of sand and halite
29	127.3	Fine sand to silty sand with presence of fine gravel and minor halite
127.3	203.5	Medium to coarse sand with presence of silt and gravel
203.5	213.7	Interlayers of blackish sand and breccia
213.7	251.9	Sedimentary breccia with a matrix of fine sand
251.9	259.5	Fine sand
259.5	332	Sedimentary breccia with a matrix of fine sand and minor presence of clay
332	386.2	Interlayers of breccia and conglomeratic sand
386.2	404.2	Clayey sand
404.2	425	Clay with minor presence of crystals of gypsum
425	501.5	Interlayers of silty sand to gravelly sand

A borehole geophysical survey was conducted by EM Explora Mining after the borehole was drilled. Geophysical logs included SP, SPR and short and large normal electrical resistivity. Results are shown on **Figure 10-5**.

Once drilling was completed, 2-inch blank and screened PVC was installed. The well construction schematic is shown on **Figure 10-5**.

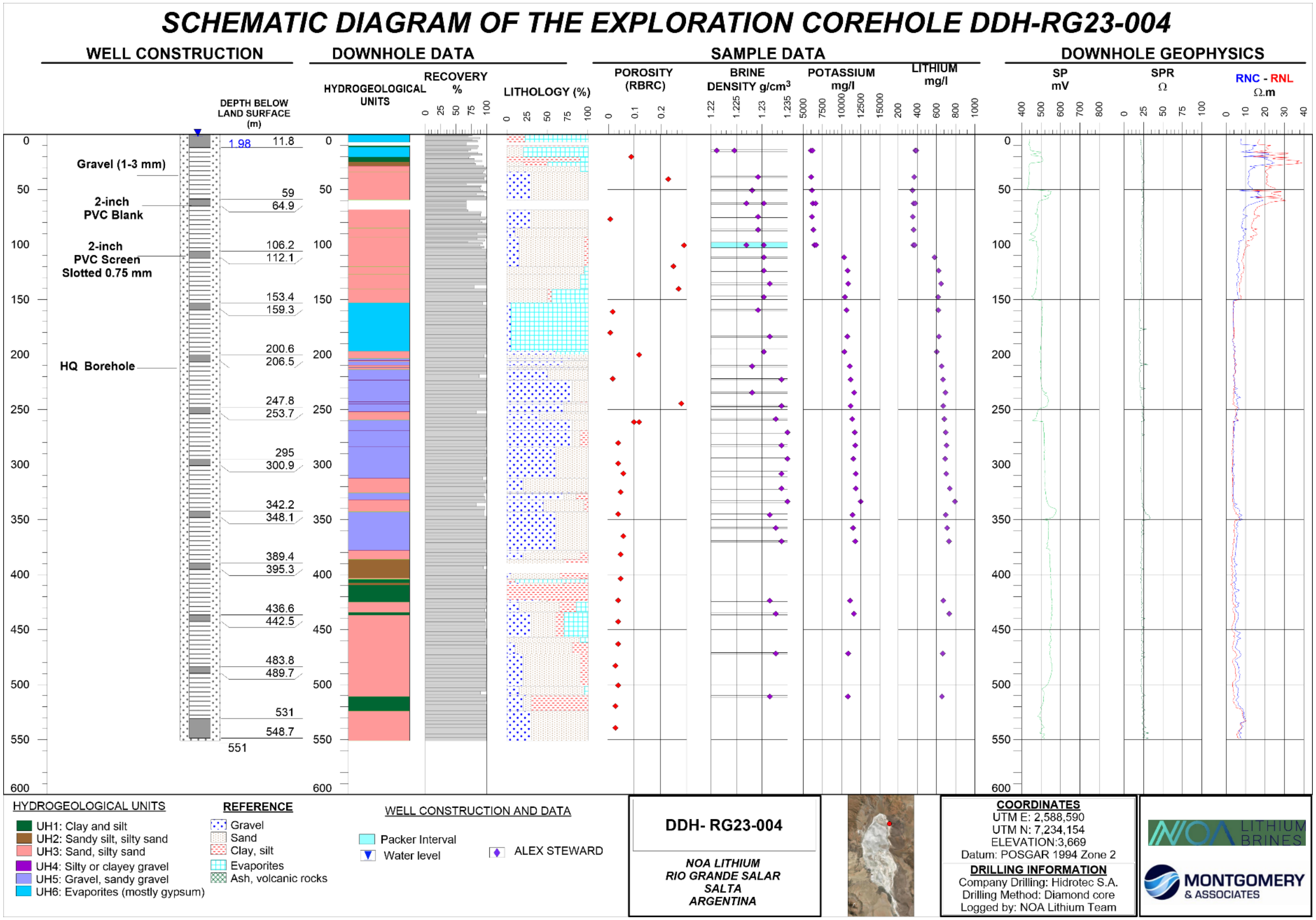


Figure 10-5. Construction Schematic for Borehole DDH-RG23-004

10.4.1 Brine Sampling for DDH-RG23-004

During drilling, 32 original brine samples were obtained using a depth-specific packer system. Each sample was filled in 500 ml plastic bottle, labeled and sealed. The samples were analyzed at Alex Stewart, laboratories in Salta, Argentina. Due to problems with SGS equipment, no samples were sent to this lab. Temperature, pH, electrical conductivity and density were measured in the field. **Table 10-17** summarizes field parameters and depth interval of the samples obtained.

Table 10-17. Field Parameters Measured During Brine Sampling at DDH-RG23-004

Sample ID	Interval	Type	Date	T (°C)[a]	pH	CE (mS/cm)[b]	Density (mg/mL)[c]
00266	14 – 15.5	Brine	18-10-23	11.6	6.7	168.3	1.25
00268	38 – 39.5	Brine	18-10-23	10.2	6.68	162.9	1.228
00270	50 – 51.5	Brine	18-10-23	21.0	6.84	178.3	1.224
00272	62 – 63.5	Brine	17-10-23	16.2	6.8	169.4	1.230
00274	74 – 75.5	Brine	17-10-23	15.7	6.76	168.3	1.230
00276	86 – 87.5	Brine	19-10-23	16.6	6.81	168.1	1.229
00278	98 – 103	Brine	17-10-23	17.3	6.75	163.4	1.230
00289	111 – 112.5	Brine	23-10-23	11.6	6.39	171.5	1.229
00291	123 – 124.5	Brine	23-10-23	19.2	6.33	170.1	1.226
00293	135 – 136.5	Brine	23-10-23	14.1	6.27	168.2	1.230
00294	147 – 148.5	Brine	22-10-23	17.4	6.36	169.1	1.229
00297	159 – 160.5	Brine	22-10-23	17.4	6.39	170.0	1.230
00298	183 – 184.5	Brine	22-10-23	25.9	6.38	176.0	1.230
00300	195 – 200	Brine	21-10-23	11.9	6.40	164.6	1.230
00302	210 – 211.5	Brine	21-10-23	16.6	6.24	169.2	1.233
00305	222 – 223.5	Brine	30-10-23	24.6	6.23	177.4	1.230
00306	234 – 235.5	Brine	30-10-23	17.1	6.19	172.5	1.231
00308	246 – 247.5	Brine	29-10-23	13.1	6.44	175.1	1.230
00309	258 - 259.5	Brine	29-10-23	12.6	6.26	166.7	1.234
00311	270 – 271.5	Brine	28-10-23	14.3	6.05	166.0	1.232
00313	282 – 283.5	Brine	28-10-23	21.1	6.32	172.5	1.230
00316	294 – 295.5	Brine	28-10-23	15.2	6.85	173.2	1.233
00317	306 – 311	Brine	27-10-23	15.8	6.31	167.7	1.229
00319	321 – 322.5	Brine	28-10-23	14.5	6.15	162.1	1.235
00321	333 – 334.5	Brine	08-11-23	19.3	6.22	166.9	1.234
00323	345 – 346.5	Brine	07-11-23	18.5	6.20	163.4	1.232
00325	357 – 358.5	Brine	06-11-23	20.2	6.18	164.2	1.233
00327	369 – 370.5	Brine	05-11-23	21.9	6.23	167.5	1.234
00333	471 – 472.5	Brine	15-11-23	17.7	6.33	167.1	1.232
00331	435 – 436.5	Brine	17-11-23	13.1	6.37	160.5	1.235
00329	423 – 424.5	Brine	26-11-23	17.2	6.28	161.8	1.227
00335	510 – 511.5	Brine	25-11-23	13.8	6.37	163.3	1.230

a: Temperature, in °C

b: Electrical conductivity, in milliSiemens per centimeter

c: Density, in milligrams per milliliters

Table 10-18 is a summary table for the laboratory results from brine samples obtained.

Table 10-18. Summary of Laboratory Chemical Results. Brine Samples from Borehole DDH-RG23-004

Sample ID	Date	Laboratory	Interval (m)	Type	Li mg/L	Mg mg/L	K mg/L	B mg/L
00266	18-10-23	Alex Stewart	14 – 15.5	Brine	379	4,422	6,020	186
00267		Alex Stewart	14 – 15.5	Duplicate	377	4,381	6,040	186
00268	18-10-23	Alex Stewart	38 – 39.5	Brine	366	4,291	6,060	187
00269		Alex Stewart		Blank	<1	13	6	<1
00270	18-10-23	Alex Stewart	50 – 51.5	Brine	349	4,324	6,134	207
00271		Alex Stewart		STD A-3002	105	1,169	2,652	485
00272	17-10-23	Alex Stewart	62 – 63.5	Brine	362	4,172	6,260	250
00273			62 – 63.5	Duplicate	362	4,146	6,205	249
00274	17-10-23	Alex Stewart	74 – 75.5	Brine	353	4,146	6,146	249
00275		Alex Stewart		Blank	<1	14	<2	<1
00276	19-10-23	Alex Stewart	86 – 87.5	Brine	361	4,240	6,320	259
00277		Alex Stewart		STD E-3003	692	1,427	5,698	494
00278	17-10-23	Alex Stewart	98 – 103	Brine	358	4,260	6,465	262
00279		Alex Stewart		STD C-3001	403	1,427	3,125	491
00280		Alex Stewart	98 – 103	Duplicate	349	4,277	6,310	254
00281		Alex Stewart	14 – 15.5	Duplicate	389	4,432	6,205	190
00282		Alex Stewart		Blank	<1	12	<2	<1
00283		Alex Stewart	62 – 63.5	Duplicate	380	4,273	6,614	257
00284		Alex Stewart		STD A-3002	107	1,150	2,609	499
00285		Alex Stewart	98 – 103	Duplicate	372	4,356	6,670	270
00288		Alex Stewart		Blank	<1	11	<2	<1
00289	23-10-23	Alex Stewart	111 – 112.5	Brine	581	6,495	10,320	328
00290		Alex Stewart		STD A-3002	105	1,169	2,661	485
00291	23-10-23	Alex Stewart	123 – 124.5	Brine	623	6,979	10,784	343
00292		Alex Stewart	123 – 124.5	Duplicate	620	6,922	10,689	339
00293	23-10-23	Alex Stewart	135 – 136.5	Brine	649	7,298	10,852	349
00294	22-10-23	Alex Stewart	147 – 148.5	Brine	616	6,918	10,435	338
00295		Alex Stewart		Blank	<1	13	2	<1
00296		Alex Stewart	147 – 148.5	Duplicate	627	6,962	10,750	352
00297	22-10-23	Alex Stewart	159 – 160.5	Brine	620	6,959	10,657	352
00298	22-10-23	Alex Stewart	183 – 184.5	Brine	627	7,030	10,749	356
00299		Alex Stewart	183 – 184.5	Duplicate	618	6,930	10,587	350
00300	21-10-23	Alex Stewart	195 – 200	Brine	603	6,721	10,386	346
00301		Alex Stewart		STD E-3003	693	1,443	5,859	494
00302	21-10-23	Alex Stewart	210 – 211.5	Brine	653	7,790	11,077	380
00303		Alex Stewart	210 – 211.5	Duplicate	660	7,805	11,119	383
00304		Alex Stewart		Blank	<1	11	<2	<1
00305	30-10-23	Alex Stewart	222 – 223.5	Brine	667	7,961	11,191	389
00306	30-10-23	Alex Stewart	234 – 235.5	Brine	693	8,338	11,660	405
00307		Alex Stewart	234 – 235.5	Duplicate	684	8,213	11,410	398
00308	29-10-23	Alex Stewart	246 – 247.5	Brine	672	8,009	11,175	392
00309	29-10-23	Alex Stewart	258 - 259.5	Brine	681	8,141	11,402	394
00310		Alex Stewart		Blank	<1	11	<2	<1
00311	28-10-23	Alex Stewart	270 – 271.5	Brine	698	8,578	11,713	408
00312		Alex Stewart		STD C-3001	409	1,456	3,220	503
00313	28-10-23	Alex Stewart	282 – 283.5	Brine	704	8,440	11,794	411
00314		Alex Stewart	282 – 283.5	Duplicate	702	8,421	11,740	402
00315		Alex Stewart		Blank	<1	11	<2	<1
00316	28-10-23	Alex Stewart	294 – 295.5	Brine	690	8,524	11,552	402
00317	27-10-23	Alex Stewart	306 – 311	Brine	702	8,531	11,855	427
00318		Alex Stewart	306 – 311	Duplicate	697	8,507	11,684	412

Sample ID	Date	Laboratory	Interval (m)	Type	Li mg/L	Mg mg/L	K mg/L	B mg/L
00319	28-10-23	Alex Stewart	321 – 322.5	Brine	738	9,113	11,865	431
00320		Alex Stewart		STD A-3002	102	1,174	2,631	490
00321	08-11-23	Alex Stewart	333 – 334.5	Brine	794	10,168	12,486	470
00322		Alex Stewart		Blank	<1	22	3	<1
00323	07-11-23	Alex Stewart	345 – 346.5	Brine	696	8,421	11,442	403
00324		Alex Stewart	345 – 346.5	Duplicate	693	8,417	11,424	399
00325	06-11-23	Alex Stewart	357 – 358.5	Brine	711	8,792	11,493	411
00326		Alex Stewart		Blank	<1	22	3	<1
00327	05-11-23	Alex Stewart	369 – 370.5	Brine	732	9,183	11,792	421
00328		Alex Stewart	369 – 370.5	Duplicate	743	9,269	11,960	429
00329	26-11-23	Alex Stewart	423 – 424.5	Brine	670	7,919	11,104	386
00330		Alex Stewart		Blank	<1	22	3	<1
00331	17-11-23	Alex Stewart	435 – 436.5	Brine	733	9,098	11,599	420
00332		Alex Stewart	435 – 436.5	Duplicate	752	8,777	11,440	423
00333	15-11-23	Alex Stewart	471 – 472.5	Brine	664	7,940	10,876	386
00334		Alex Stewart		STD C-3001	383	1,448	3,110	483
00335	25-11-23	Alex Stewart	510 – 511.5	Brine	656	7,761	10,829	376
00336		Alex Stewart		Blank	<1	22	3	<1

10.4.2 Porosity Sampling for DDH-RG23-004

Core were collected and described by NOA personnel. 15 core samples were collected for total and drainable porosity analysis. For each sample, 11 to 21 cm of unaltered core was selected and stored in a plastic tube with the same diameter as the core, and was subsequently labeled and sealed. **Table 10-15** summarizes depth intervals of the samples obtained for analysis. For this well, core samples were analyzed in LCV laboratories, in Buenos Aires, Argentina.

Table 10-19. Core Samples Obtained for Porosity Analysis from DDH-RG23-004

Sample ID	Interval (meters)		Total porosity	Specific yield	General lithology
	From	To			
00609	20.37	20.50	0.14	0.09	Crystalline halite
00610	40.55	40.66	0.26	0.23	Brownish coarse sand with minor presence of gravel
00611	76.90	77.04	0.12	0.01	Reddish brown coarse sand
00612	100.60	100.76	0.33	0.29	Fine sand with silt and minor presence of fine gravel
00613	119.64	119.77	0.37	0.25	Fine sand with silt and minor presence of fen gravel
00614	140.22	140.40	0.43	0.27	Sand with disseminated crystals of gypsum
00615	161.04	161.19	0.11	0.02	Gypsum sand
00616	180.27	180.40	0.11	0.01	Gypsum sand
00617	200.20	200.35	0.42	0.12	Black fine sand
00618	222.07	222.23	0.11	0.02	Sedimentary breccia
00619	244.52	244.71	0.32	0.28	Sedimentary breccia
00620	261.44	261.56	0.30	0.10	Sedimentary breccia
00621	280.44	280.64	0.16	0.04	Sedimentary breccia
00622	298.80	299.00	0.17	0.04	Sedimentary breccia
00623	308.00	308.18	0.17	0.06	Sedimentary breccia
00624	324.85	325.05	0.26	0.05	Sedimentary breccia
00625	261.30	261.44	0.25	0.12	Sedimentary breccia

Sample ID	Interval (meters)		Total porosity	Specific yield	General lithology
	From	To			
00626	344.91	345.12	0.17	0.04	Sedimentary breccia
00627	362.00	362.15	0.28	0.06	Sedimentary breccia
00628	381.55	381.73	0.24	0.05	Sandy conglomerate
00629	403.70	403.90	0.26	0.05	Fine volcanic sand with minor presence of silt
00630	423.32	423.48	0.08	0.04	Reddish clay with less presence of fine gravel
00631	442.86	443.00	0.10	0.04	Gravelly sand
00632	462.90	463.30	0.10	0.04	Clayey fine grained sand
00633	482.85	483.00	0.16	0.03	Gravelly sand
00634	500.76	500.90	0.16	0.04	Gravelly sand
00635	519.55	519.70	0.15	0.03	Clay with presence of graveland sand
00636	539.38	539.48	0.10	0.03	Sandy gravel

10.4.3 Conclusions for DDH-RG23-004

The lithology at this location is composed mostly of sand with some conglomerates and halite. Lithium concentration varies from 313 to 780, having the higher concentrations below 90 m. Reported total porosity varies from 8% to 43%. Reported drainable porosity (specific yield) varies from 1% to 29%; high values are mostly within the first 140 m depth; from 280 m depth to the bottom sample at 539 m depth, drainable porosity values are below 6%.

10.5 Assignment of Hydrogeologic Units

Based current drilling program results, including all the different type of collected information (lithologic percentual distribution, brine chemistry samples (density, and potassium and lithium concentration), drainable porosity samples, and downhole geophysics), VES geophysical, we have tentatively identified six hydrogeologic units:

- Hydrogeological Unit 1: Clay and silt
- Hydrogeological Unit 2: Sandy silt and silty sand
- Hydrogeological Unit 3: Sand, silty sand
- Hydrogeological Unit 4: Silty gravel, clayey gravel
- Hydrogeological Unit 5: Gravel, conglomerates, breccia
- Hydrogeological Unit 6: Evaporites, mostly halite

11 SAMPLE COLLECTION, PREPARATION, ANALYSES AND SECURITY

The following section applies to the 2022 surface sampling program and 2023 drilling exploration program, and not necessarily to the previous exploration drilling and testing programs conducted by others.

11.1 Sampling Methodology

During the 2022 surface sampling program, samples were obtained manually from shallow hand-dug pits, trenches, and shallow boreholes, located within the concessions. A total of four brine samples (no duplicate samples were obtained) were collected by means of plastic bottles and bailers. Samples were poured into clean, 1-liter bottles, sealed, and sent to SGS Laboratory, Salta, Argentina.

Collection of brine samples from the 2023 drilling program included packer and Hydrasleeve methods. Brine chemistry samples were analyzed by SGS Argentina, S.A., Alex Stewart and Induser, Argentina. The Alex Stewart and SGS Laboratories are accredited to ISO 9001 and all the laboratories operate according to standards consistent with ISO 17025 methods at other laboratories. Selected duplicate samples were obtained by M&A.

Porosity analyses were conducted by GeoSystems Analysis, Inc. (GSA) of Tucson, Arizona for wells DDH-RG23-001 and DDH-RG23-002 and by LCV Laboratories (LCV) in Buenos Aires, Argentina for wells DDH-RG23-003 and DDH-RG23-004. Both laboratories provide analysis and interpretation of core samples from rock and have demonstrated that their quality management system is in compliance with ISO 9001:2015 Certificate of Registration. Selected representative samples were submitted for laboratory analyses.

11.2 Sample Preparation

Brine samples used to understand the 3-dimensional chemical distribution of lithium in the basin included the following sources:

- Depth-specific packer sampling during drilling
- Brine samples obtained with Hydrasleeve bailer after well is cased

In addition to brine samples, core samples were also obtained during the program and submitted for total and drainable porosity testing. Preliminary analytical results of drainable porosity samples are also shown on schematic diagrams (**Figure 10-2** to **Figure 10-5**).

Neither chemistry samples (brine) nor porosity samples (core) were subjected to any further preparation prior to shipment to participating laboratories. After the samples were sealed and labeled on site, they were stored in a cool location, then shipped in sealed containers to the laboratories for analysis.

11.2.1 Brine Samples from the Depth-Specific packer Sampling

Brine samples obtained during the 2023 drilling program were obtained from depth-specific packer sampling during core drilling. Packer samples were obtained during drilling, and sometimes after drilling was completed. Samples were considered acceptable and representative of the interval being sampled when minimal to no traces of drilling mud from the corehole were observed in the sample obtained from the packer. Packer samples were sent, depending on each case, to: SGS Laboratory, Alex Stewart Laboratory, or/and Induser Laboratory.

11.2.2 Brine Samples from Hydrasleeve bailer

Brine samples were obtained from well DDH-RG23-001 after PVC was installed and the well has no traces of drilling mud. Samples were obtained at specific depths and were considered acceptable. The samples were sent to SGS in sealed 500-millimeter plastic bottles with sample numbers clearly identified. Field parameters were recorded on internal field sheets.

11.2.3 Drainable Porosity Sampling Methodology

Porosity samples were collected from intact HQ and NQ core. After core retrieval using a wireline system, the core was inspected, and relatively undisturbed samples were selected for porosity analysis. Full diameter core with no visible fractures was selected and submitted for laboratory analyses. The selected sleeved core samples were capped with plastic caps, sealed with tape, weighted, and stored from shipment. Typical length of samples is 15 to 25 centimeters (cm). Porosity samples were shipped to GSA and LCV Laboratories.

11.3 Brine Analysis

11.3.1 Analytical Quality Assurance and Quality Control (QA/QC)

The QA/QC documented here addresses brine samples collected during the 2023 drilling program, and its conclusions can be extended to the 2022 sampling as these samples were sent to SGS, considered here as the main laboratory.

Part of the duplicate samples were used for QA/QC procedures, and the remaining duplicate samples properly stored for future reference. The quality control program included random insertion of field blanks, duplicates, and standard, and different laboratories checking. About 72 percent of the samples sent to SGS laboratory analyses were quality control samples. The data was compiled by NOA staff for confirmation of the accuracy and precision of the analysis and reviewed by M&A.

11.3.2 Field Blanks

To date, a total of 52 blank samples consisting of drinking water have been submitted to the laboratories for chemical analyses. A total of 29 samples were submitted to SGS, 18 samples to Alex Stewart, and 5 samples to Induser laboratory. Except for sample 00170 in well DDH-RG23-001 showing a high lithium concentration of 23 mg/L, samples showed lithium values below the quantification limit (10 mg/L in SGS laboratory, 1 mg/L in Alex Stewart and Induser laboratories). Most components were not detected, and for those constituents detected, quantities very close to the quantification limits were reported.

11.3.3 Standard Sampling

Three types of standards were used in the 2023 drilling program. All the standards consisted of a synthetic standard that was commissioned by Alex Stewart laboratories. The values for the synthetic samples are reported in **Table 11-1**.

Table 11-1. Synthetic Standard Chemical Analysis

STANDARD	SO_4 (mg/L)	Cl (mg/l)	B (mg/L)	Ca (mg/L)	K (mg/L)	Li (mg/L)	Mg (mg/L)	Sr (mg/L)	Na (mg/L)
A-3002	8,500	153,703	500	500	2,500	100	1,200	18	100,000
C-3001	9,200	169,936	500	500	3,000	400	1,500	13	110,000
E-3003	11,000	171,328	500	550	6,000	700	1,500	13	110,000

Source: Geoanalytic (2023)

In total, 56 samples were sent to the laboratories. From the total of samples submitted, 22 of them were analyzed in SGS Laboratory, 23 in Alex Stewart Laboratory, and 11 in Induser Laboratory. **Table 11-2** provides results for standard solution for standard solution A-3002, **Table 11-3** for standard solution C-3001, and **Table 11-4** for E-3003Error! Reference source not found.Error! Reference source not found..

Table 11-2. Summary of Comparison Laboratory Analyses Against Standard A-3002

ID Sample	LAB	SO_4 (mg/L)	Cl (mg/L)	B (mg/L)	Ca (mg/L)	K (mg/L)	Li (mg/L)	Mg (mg/L)	Sr (mg/L)	Na (mg/L)
00042	SGS	9,356	157,054	524	528	2,947	115	1,314	24	107,367
00073	SGS	9,315	157,007	557	513	3,013	128	1,318	21	109,215
00090	SGS	9,183	152,989	536	964	2,848	114	1,368	27	103,161
00143	SGS	9,607	160,069	496	476	3,019	97	1,218	17	93,129
00179	SGS	9,245	164,396	496	497	2,868	89	1,206	16	127,841
00202	SGS	9,434	168,456	506	501	2,919	85	1,213	16	116,224
00220	SGS	9,327	156,312	523	530	2,778	105	1,282	21	100,638
Average		9,352	159,469	520	573	2,913	105	1,274	20	108,225
Median		9,327	157,054	523	513	2,919	105	1,282	19	107,367
Std. deviation		127	4,917	21	161	82	14	58	4	10,431
Error of the average (%)		**10.0**	**3.8**	**3.9**	**14.5**	**16.5**	**4.7**	**6.2**	**9.3**	**8.2**
Error of the median (%)		**9.7**	**2.2**	**4.6**	**2.6**	**16.8**	**5.0**	**6.8**	**5.6**	**7.4**
00083	Alex S.	8,890	152,579	482	496	2,772	102	1,195	18	98,171
00108	Alex S.	8,698	150,196	484	500	2,748	105	1,177	18	97,253
00152	Alex S.	8,698	150,998	486	496	2,660	104	1,200	18	99,157
00192	Alex S.	8,794	151,956	499	504	2,653	111	1,211	18	100,826
00254	Alex S.	8,781	154,350	499	514	2,752	104	1,173	19	98,315
00271	Alex S.	8,973	152,696	485	490	2,652	105	1,169	19	101,600
00284	Alex S.	8,863	151,778	499	493	2,609	107	1,150	17	96,803
00290	Alex S.	9,192	152,080	485	505	2,661	105	1,169	18	102,012
00320	Alex S.	8,643	149,970	490	483	2,631	102	1,174	18	98,947
Average		8,837	151,845	490	498	2,682	105	1,180	18	99,232
Median		8,794	151,956	486	496	2,660	105	1,174	18	98,947
Std. deviation		160	1,272	7	9	56	3	18	0	1,756
Error of the average (%)		**4.0**	**-1.2**	**-2.0**	**-0.4**	**7.3**	**5.0**	**-1.7**	**0.9**	**-0.8**
Error of the median (%)		**3.5**	**-1.1**	**-2.8**	**-0.8**	**6.4**	**5.0**	**-2.2**	**0.0**	**-1.1**
00065	Induser	21,400	137,450	509	248	2,320	108	1,044	22	94,300
00118	Induser	28,600	163,400	430	400	5,114	87	1,160	19	108,800
00161	Induser	15,180	146,610	397	427	2,269	74	1,112	<10	102,500
00196	Induser	15,980	153,700	374	403	2,068	74	942	<10	109,500
Average		20,290	150,290	428	370	2,943	86	1,065	21	103,775
Median		18,690	150,155	414	402	2,295	81	1,078	21	105,650
Std. deviation		5,361	9,512	51	71	1,257	14	82	2	6,112
Error of the average (%)		**138.7**	**-2.2**	**-14.5**	**-26.1**	**17.7**	**-14.2**	**-11.3**	**13.9**	**3.8**
Error of the median (%)		**119.9**	**-2.3**	**-17.3**	**-19.7**	**-8.2**	**-19.5**	**-10.2**	**13.9**	**5.7**

Notes:
Errors are relative to the standard values shown on **Table 11-1**
Alex S. = Alex Stewart Laboratory

The comparison of the reported lithium values with the certified standard solution of Alex Stewart (Li 100 mg/L) indicates an error of 4.7% for SGS Laboratory and 14.2% for Induser Laboratory. As expected, errors for Alex Stewart Laboratory are the smallest between laboratories (below 10% for all constituents).

Regarding other elements, SGS Laboratory shows errors greater than 10% for calcium (strongly influenced by sample 00090) and potassium; Induser Laboratory shows errors greater than 10% for considerable constituents, and greater than 100% for sulphate.

Table 11-3. Summary of Comparison Laboratory Analyses Against Standard C-3001

ID Sample	LAB	SO_4 (mg/L)	Cl (mg/L)	B (mg/L)	Ca (mg/L)	K (mg/L)	Li (mg/L)	Mg (mg/L)	Sr (mg/L)	Na (mg/L)
00048	SGS	9,936	171,664	524	534	3,543	455	1,670	21	120,330
00079	SGS	10,718	171,752	549	549	3,565	436	1,669	17	122,089
00094	SGS	10,092	171,736	523	507	3,377	430	1,620	21	113,544
00146	SGS	10,372	175,392	511	491	3,766	457	1,566	14	105,303
00181	SGS	9,952	182,720	519	546	3,662	484	1,672	14	105,081
00183	SGS	9,915	174,640	523	559	3,709	484	1,693	15	105,441
00204	SGS	10,129	178,381	462	465	3,191	398	1,464	13	91,154
00239	SGS	10,500	170,521	521	508	3,327	453	1,592	15	108,949
Average		10,202	174,601	517	520	3,518	450	1,618	16	108,986
Median		10,111	173,196	522	521	3,554	454	1,645	15	107,195
Std. deviation		278	3,912	23	30	189	27	72	3	9,223
Error of the average (%)		**10.9**	**2.7**	**3.3**	**4.0**	**17.3**	**12.4**	**7.9**	**25.0**	**-0.9**
Error of the median (%)		**9.9**	**1.9**	**4.4**	**4.2**	**18.5**	**13.5**	**9.6**	**15.4**	**-2.6**
00052	Alex S.	9,782	169,651	489	507	3,262	399	1,498	15	108,325
00110	Alex S.	9,521	166,041	492	503	3,187	394	1,482	14	107,514
00156	Alex S.	9,425	168,549	493	500	3,178	399	1,510	14	108,836
00258	Alex S.	9,851	171,303	496	513	3,190	413	1,460	14	107,596
00279	Alex S.	9,755	170,319	491	505	3,125	403	1,427	14	109,619
00312	Alex S.	9,851	169,884	503	509	3,220	409	1,456	14	106,534
00334	Alex S.	9,178	163,960	483	485	3,110	383	1,448	13	104,219
Average		9,623	168,530	492	503	3,182	400	1,469	14	107,520
Median		9,755	169,651	492	505	3,187	399	1,460	14	107,596
Std. deviation		237	2,422	6	8	48	9	27	1	1,633
Error of the average (%)		**4.6**	**-0.8**	**-1.5**	**0.6**	**6.1**	**0.0**	**-2.1**	**6.8**	**-2.3**
Error of the median (%)		**6.0**	**-0.2**	**-1.6**	**1.0**	**6.2**	**-0.3**	**-2.7**	**7.7**	**-2.2**
00066	Induser	32,540	151,130	521	344	2,880	474	1,367	19	105,600
00120	Induser	42,160	182,400	424	393	5,860	338	1,420	15	118,200
00163	Induser	30,400	166,840	425	454	2,894	333	1,473	<10	118,800
00219	Induser	9,472	179,200	390	406	2,619	332	1,221	<10	106,500
Average		28,643	169,893	440	399	3,563	369	1,370	17	112,275
Median		31,470	173,020	425	400	2,887	336	1,394	17	112,350
Std. deviation		11,922	12,292	49	39	1,331	61	94	2	6,237
Error of the average (%)		**211.3**	**0.0**	**-12.0**	**-20.2**	**18.8**	**-7.7**	**-8.7**	**30.8**	**2.1**
Error of the median (%)		**242.1**	**1.8**	**-15.1**	**-20.1**	**-3.8**	**-16.1**	**-7.1**	**30.8**	**2.1**

Notes:

Errors are relative to the standard values shown on **Table 11-1**

Alex S. = Alex Stewart Laboratory

The comparison of the reported lithium values with the certified standard solution of Alex Stewart (Li 400 mg/L) indicates an error of 12.4% for SGS Laboratory and 7.7% for Induser Laboratory. As expected, errors for Alex Stewart Laboratory are the smallest between laboratories (below 10% for all constituents). Regarding other elements, SGS Laboratory shows an error greater than 10% for sulphate, and greater than 15% for potassium and strontium; Induser Laboratory shows errors greater than 10% for boron, greater than 15% for calcium, potassium and strontium, and greater than 200% for sulphate.

Table 11-4. Summary of Comparison Laboratory Analyses Against Standard E-3003

ID Sample	LAB	SO_4 (mg/L)	Cl (mg/L)	B (mg/L)	Ca (mg/L)	K (mg/L)	Li (mg/L)	Mg (mg/L)	Sr (mg/L)	Na (mg/L)
00022	SGS	11,998	171,793	510	630	6,204	818	1,338	<10	111,021
00061	SGS	12,200	171,999	529	584	6,516	783	1,651	19	114,884
00098	SGS	11,718	169,811	526	564	6,366	761	1,648	19	113,085
00150	SGS	11,994	170,101	480	510	6,778	758	1,473	11	97,322
00173*	SGS	11,821	171,504	496	538	6,855	841	1,585	14	101,436
00206	SGS	12,196	173,554	474	503	6,317	749	1,477	13	91,786
00252	SGS	12,068	172,938	529	548	6,651	885	1,606	15	109,016
Average		11,999	171,671	506	554	6,527	799	1,540	15	105,507
Median		11,998	171,793	510	548	6,516	783	1,585	15	109,016
Std. deviation		167	1,266	22	41	227	47	107	3	8,106
Error of the average (%)		**9.1**	**0.2**	**1.3**	**0.7**	**8.8**	**14.2**	**2.6**	**16.7**	**-4.1**
Error of the median (%)		**9.1**	**0.3**	**2.0**	**-0.4**	**8.6**	**11.9**	**5.7**	**11.5**	**-0.9**
00032	Alex S.	11,264	168,334	486	543	5,866	678	1,468	13	108,558
00112	Alex S.	11,236	168,312	483	541	5,808	681	1,441	12	107,227
00158	Alex S.	11,099	165,066	482	544	5,903	689	1,485	12	106,259
00215	Alex S.	11,373	166,806	497	540	5,828	709	1,494	13	108,929
00261	Alex S.	11,373	169,144	498	555	5,812	706	1,461	13	110,134
00277	Alex S.	11,428	167,543	494	536	5,698	692	1,427	13.8	109,238
00301	Alex S.	11,483	167,853	494	541	5,859	693	1,443	13.6	107,090
Average		11,322	167,580	491	543	5,825	693	1,460	13	108,205
Median		11,373	167,853	494	541	5,828	692	1,461	13	108,558
Std. deviation		121	1227	6	5	60	11	23	1	1277
Error of the average (%)		**2.9**	**-2.2**	**-1.9**	**-1.3**	**-2.9**	**-1.1**	**-2.7**	**0.1**	**-1.6**
Error of the median (%)		**3.4**	**-2.0**	**-1.2**	**-1.6**	**-2.9**	**-1.1**	**-2.6**	**-0.8**	**-1.3**
00067	Induser	37,940	147,320	531	409	5,410	824	1,340	18	101,300
00122	Induser	45,400	180,500	404	411	9,360	556	1,330	13	117,100
00167	Induser	14,780	172,780	434	504	5,806	594	1,507	<10	100,100
Average		32,707	166,867	456	441	6,859	658	1,392	16	106,167
Median		30,090	176,640	419	458	7,583	575	1,419	13	108,600
Std. deviation		13,037	14,176	54	44	1,776	118	81	2.3	7,747
Error of the average (%)		**197.3**	**-2.6**	**-8.7**	**-19.8**	**14.3**	**-6.0**	**-7.2**	**19.2**	**-3.5**
Error of the median (%)		**173.5**	**3.1**	**-16.2**	**-16.8**	**26.4**	**-17.9**	**-5.4**	**1.5**	**-1.3**

Notes: Errors are relative to the standard values shown on **Table 11-1;** Alex S. = Alex Stewart Laboratory *Sample 00173 corresponds to a batch of samples taken using hydrasleeve method

The comparison of the reported lithium values with the certified standard solution of Alex Stewart (Li 700 mg/L) indicates an error of 14.2% for SGS Laboratory and 6.0% for Induser Laboratory. As expected, errors for Alex Stewart Laboratory are the smallest between laboratories (below 3% for all constituents).

Regarding other elements, SGS Laboratory shows an error greater than 15% for strontium; Induser Laboratory shows errors greater than 10% for potassium, greater than 15% for strontium and calcium, and greater than 100% for sulphate.

11.3.4 Laboratory Check Samples

Samples were randomly selected and split for analysis in three different laboratories. Duplicate samples sent to more than one laboratory were included in this analysis, regardless of whether they were originally labeled as *duplicates* or *check*. 23 samples originally analyzed by SGS were also analyzed by Alex Stewart Laboratory in Jujuy, Argentina, and 17 samples were analyzed by Induser Laboratory. These checking procedures exclude samples from well DDH-RG23-004 as they were sent only to Alex Stewart Laboratory by the date of this analysis. Laboratory results for lithium, potassium, magnesium and sulphate on **Figure 11-1, 11-2, 11-3,** and **11-4**.

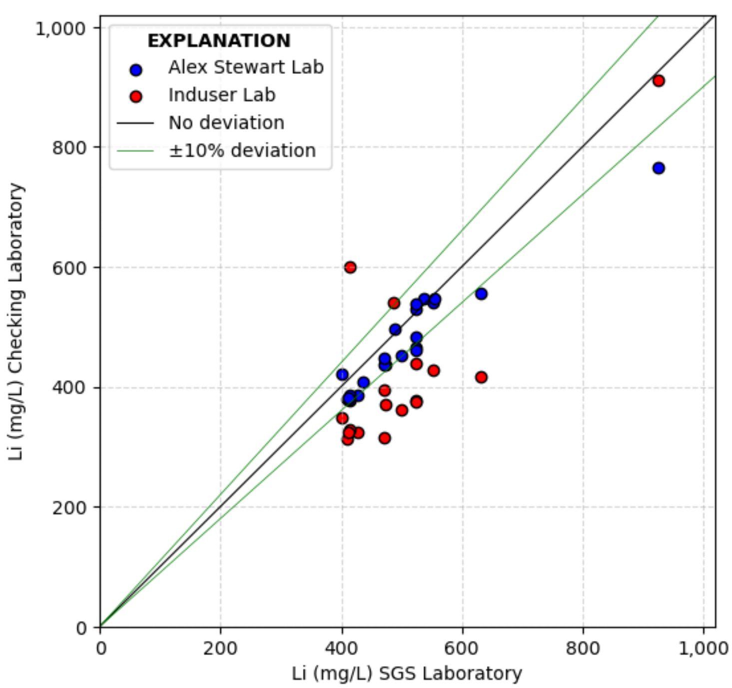


Figure 11-1. Check Sample Graph for Lithium

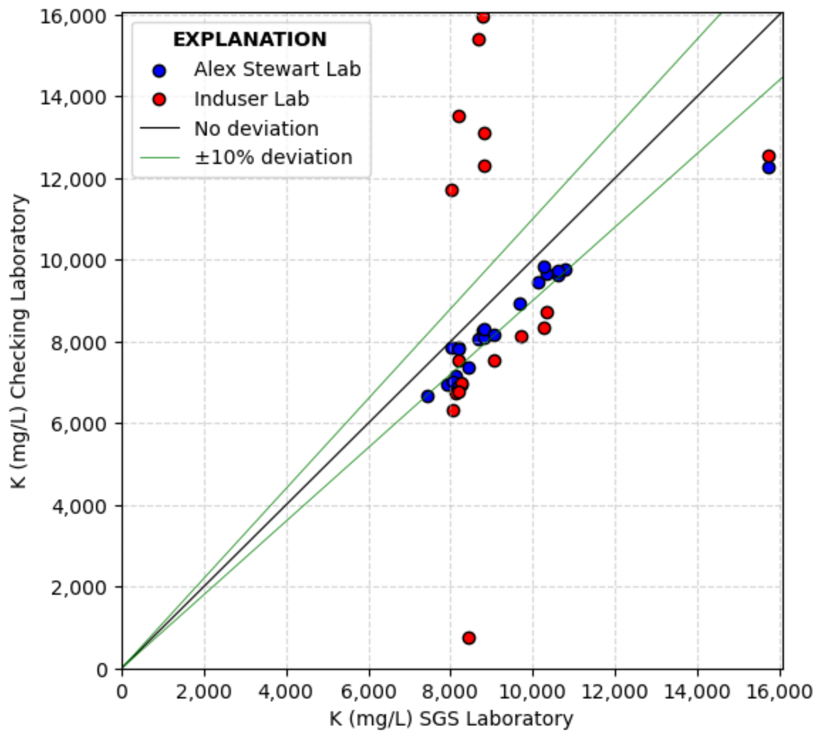


Figure 11-2. Check Sample Graph for Potassium

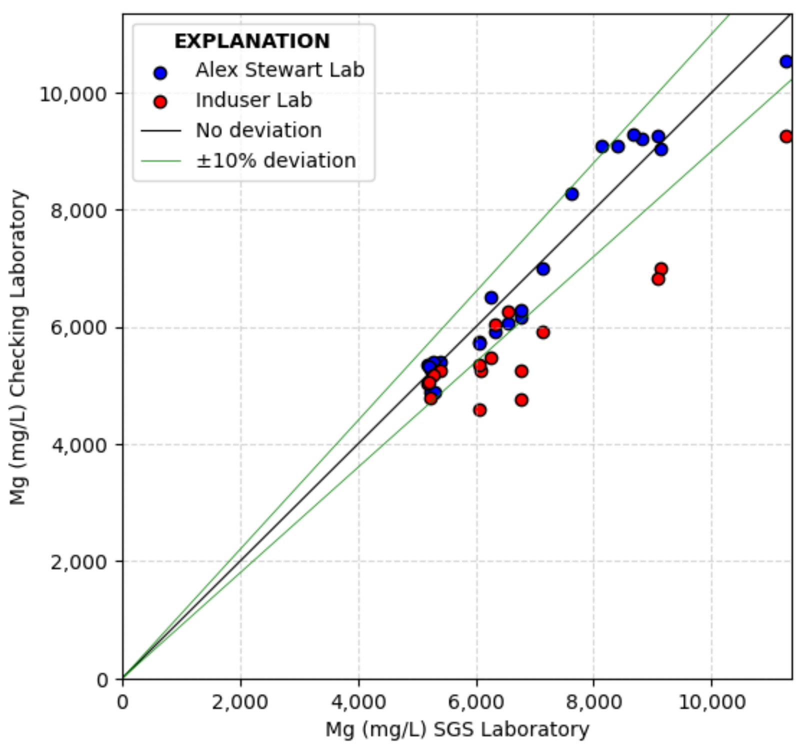


Figure 11-3. Check Sample Graph for Magnesium

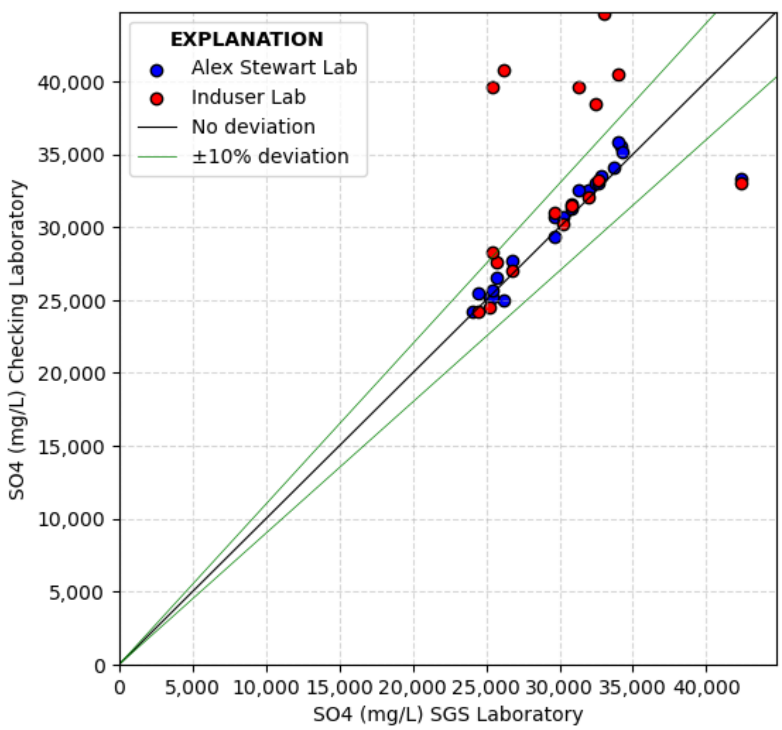


Figure 11-4. Check Sample Graph for Sulphate

When plotting the results, it is observed that practically all the samples analyzed in Alex Stewart Laboratory were reported within a 20% difference from SGS laboratories. At this stage of the Rio Grande Project, we consider this to be acceptable for these samples. In the case of the samples analyzed in Induser Laboratory, for lithium and potassium practically the totality of the samples is outside of the range of 20%, for magnesium most of them are outside the range, and for sulphate almost half of the samples are outside the range. In our opinion, Induser Laboratory results are not considered to be reliable.

11.3.5 Duplicate Brine Samples

Duplicate brine samples were submitted to the same laboratory to confirm laboratory repeatability. To date, a total of 47 samples were submitted during the current drilling program; 24 samples and their duplicates were submitted to SGS, 22 samples were duplicated for Alex Stewart laboratory, and one sample was duplicated for Induser Laboratory. This analysis excludes samples already considered in the laboratory check analysis. Comparison of the results for lithium, potassium, magnesium and sulphate are shown graphically on Error! Reference source not found.**Figures 11-5, 11-6, 11-7** and **11-8**. Lines of no-deviation and ±10% deviation are plotted with the data points; as different laboratories deviation-lines show negligible differences, the plotted lines are useful for the three laboratories.

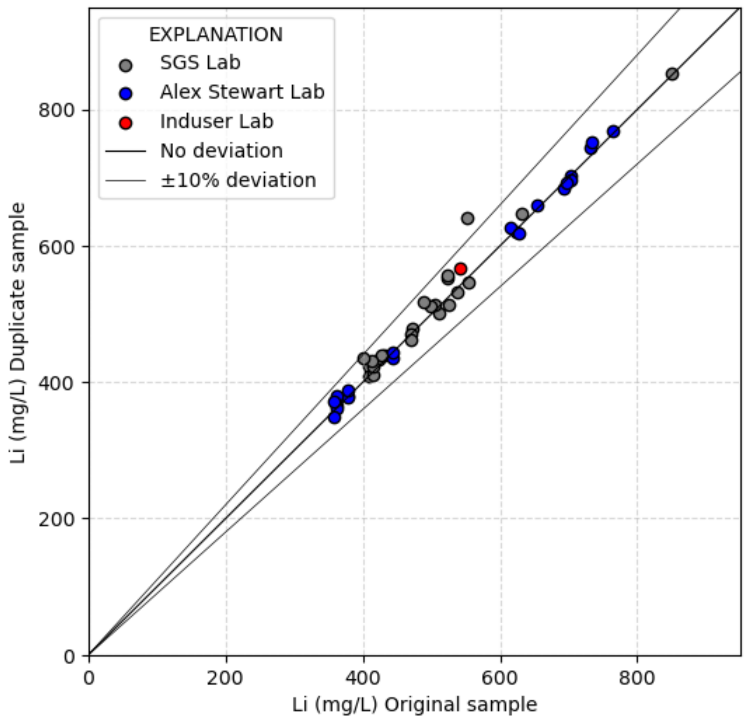


Figure 11-5. Sample Duplicate Analyses for Lithium

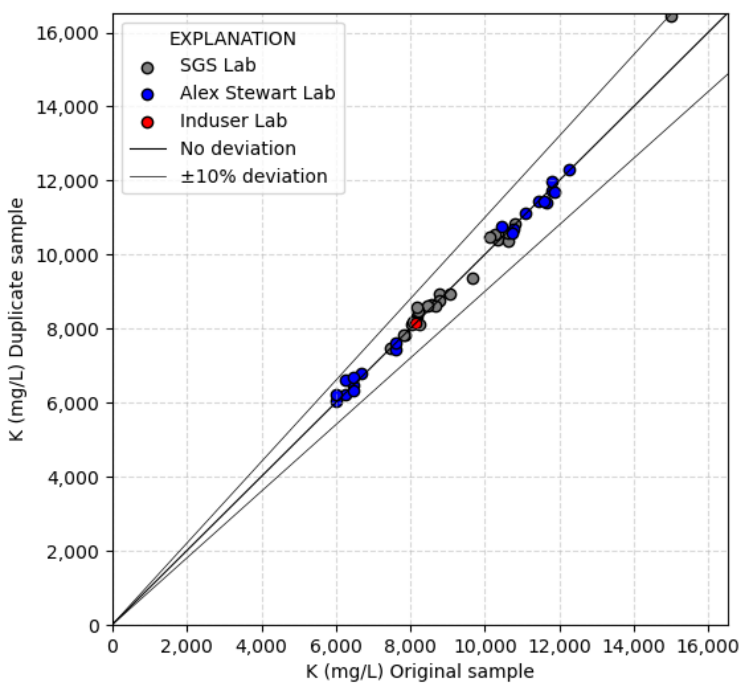


Figure 11-6. Sample Duplicate Analyses for Potassium

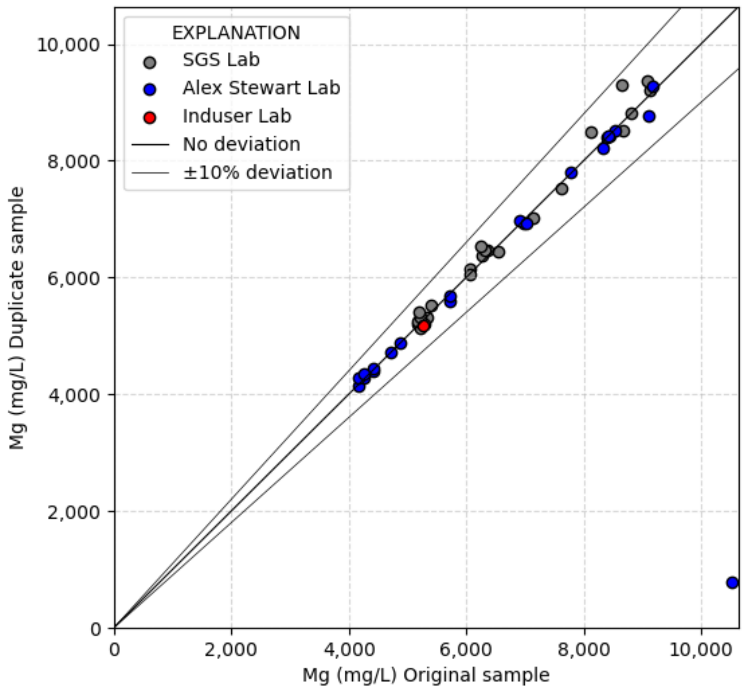


Figure 11-7. Sample Duplicate Analyses for Magnesium

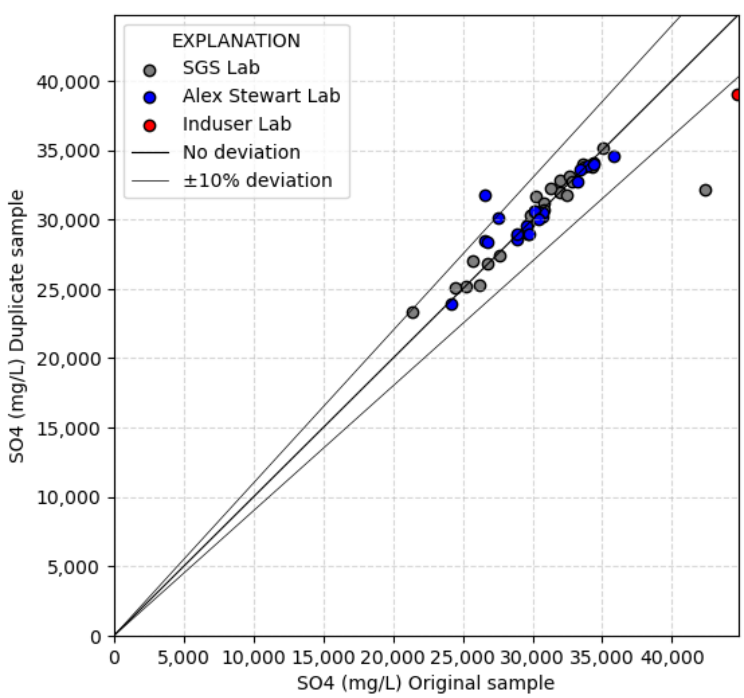


Figure 11-8. Sample Duplicate Analyses for Sulphate

Results from the duplicate samples confirm that the samples are being analyzed similarly, and that a large difference between the results does not exist.

11.3.6 Brine Analysis Conclusions and Recommendations

The field sampling of brines from the drilling program was done in accordance with generally accepted industry standards. The quality control based upon the insertion of standards, field blank and field duplicates indicate that the analytical data in cases of SGS and Alex Stewart laboratories are accurate, and the samples being analyzed are representative of the brine chemistry within the aquifer. It is the opinion of this author that laboratory results of Induser are not considered reliable to be used for resources estimate.

SGS has been the main laboratory in case of wells DDH-RG23-001, 002 and 003, showing consistent results compared to Alex Stewart for checked samples. In order to consider a single result for representing the brine chemistry in a particular well elevation, just SGS Laboratory results are proposed to be used for resources estimates in those wells. On the other hand, the main laboratory in case of well DDH-RG23-004 has been Alex Stewart, which results are proposed to be used for representing brine chemistry when estimating resources related to that well.

It is the opinion of the QP, that the information developed in the field operations for all stages of work at Rio Grande Project is adequate, accurate and reliable.

11.4 Drainable Porosity Analysis

Laboratory analytical procedure for drainable porosity by centrifuge as described by GSA consisted of the following steps:

1. Undisturbed cores are prepared and fit into the HQ brass liners at 1-inch length soil cores are carefully trimmed to the same height as the liners.
2. Pre-wetted micro pore membrane (rated 600 mbar air entry) is placed onto the bottom PVC cap. A bottom gasket is then placed on top of the membrane.
3. The sample with the 1-inch brass liner is then assembled and scaled air-tight with the gasket and hardware between both PVC caps.
4. The core assembly is saturated with a prepared brine solution or the same of the Project and a vacuum is applied from the top of the core to assist the saturation.

Drainable porosity is given as a fraction of the total rock volume and it is unitless. For example, if a rock has a volume of 100 milliliters and 10 milliliters of fluid can drain from the rock, the drainable porosity is 10/100, or 0.10. Although determined by laboratory methods, the drainable porosity is essentially the same as specific yield as defined in classical aquifer mechanics. Porosity analyses were conducted by GeoSystems Analysis, Inc. (GSA) of Tucson, Arizona for wells DDH-RG23-001 and DDH-RG23-002 and by LCV Laboratories (LCV) in Buenos Aires, Argentina for wells DDH-RG23-003 and DDH-RG23-004.

11.5 Sample Security

All samples were labeled with permanent marker, sealed with tape and stored at a secure site, both in the field, and in Salta. All field samples obtained are currently being stored in the M&A offices in Salta pending future submittal to a laboratory.

11.6 QA/QC Conclusions and Recommendations

In the opinion of the Author, sample preparation, security, and analytical procedures were adequate and adhere to best industry practice.

Based on the QA/QC analyses, brine sample results from Induser Laboratory are not considered reliable for resources estimate. Brine samples from SGS Laboratory and Alex Stewart showed adequate consistency at representing the brine chemistry. SGS Laboratory results are proposed to be used for resources estimates in wells DDH-RG23-001, 002 and 003, and Alex Stewart results in case of well DDH-RG23-004.

12 DATA VERIFICATION

As part of the due diligence process, the QP visited the Project site on April 8, 2022. The QP was accompanied by M&A senior geologist Jose Ferretti. The purpose of the site inspection was to obtain independent near-surface brine samples to obtain initial chemistry for the Project concessions. Locations for the samples are shown on **Figure 12-1**. A summary of the sample locations and field parameters is given in **Table 12-1**.

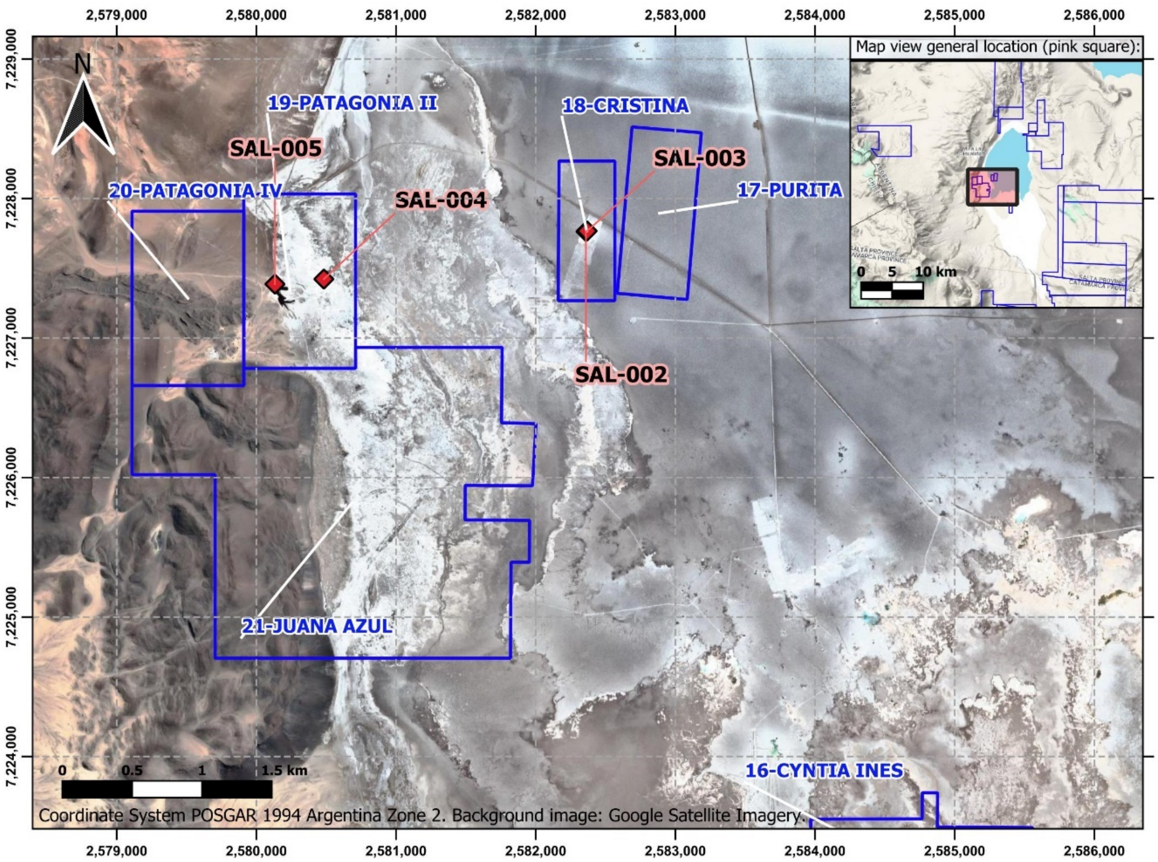
Table 12-1. Sample Location Coordinates and Field Parameters

SAMPLE ID	SAMPLES COORDINATES		TEMPERATURE (°C)[2]	pH	ELECTRICAL CONDUCTIVITY (mS)[3]	OBSERVATIONS
	UTM Easting[1] (meters, POSGAR 94)	UTM Northing[1] (meters, POSGAR 94)				
SAL-002	2,582,359	7,227,763	8.6	5.9	210.6 mS	Halite 0.7m depth. Muddy water. New hole in massive halite
SAL-003	2,582,368	7,227,767	9.6	6.6	211.4 mS	Halite 1.5 m depth; Very clear water. Older existing hole
SAL-004	2,580,482	7,227,422	9.5	6.2	132 mS	Sandy silt. Depth 0.6m. Muddy water. New auger hole
SAL-005	2,580,132	7,227,386	10.1	8.3	45.1 mS	Surface water. Clear water

[1] UTM Easting and Northing from handheld portable GPS.

[2] °C = Celsius degrees

[3] mS = milliSiemens



EXPLANATION:
NOA Concessions
Chemistry samples

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Chemistry samples:

Name	East (m)	North (m)	Temp (m)	pH (m)	E. conduct (m S)
SAL-002	2,582,359	7,227,763	8.6	5.9	210.6 mS
SAL-003	2,582,368	7,227,767	9.6	6.6	211.4 mS
SAL-004	2,580,482	7,227,422	9.5	6.2	132 mS
SAL-005	2,580,132	7,227,386	10.1	8.3	45.1 mS

Figure 12-1. Location Map of Brine Samples Collected During QP Field Inspection

The logistics of the trip summary and observations are as follows:

- 16:02 M. Rosko and J. Ferretti arrive at the Rio Grande AMINCO camp.
- 16:33 Leave camp with AMINCO geophysicists to obtain brine samples.
- 16:45 Arrive at location in the central part of the salar to obtain samples from a hole dug earlier in the day (Sample SAL-002 – 16:56) and an older, shallow hole (Sample SAL-003 – 17:08). Both samples were brine. **Photo 12-1** shows taking sample SAL-003 with a bailer.

Photo 12-1: Obtaining sample SAL-003 using a bailer

- 17:23 Leave central salar concessions and travel to obtain next simple
- 17:39 Arrive at next sample location. **Photo 12-2** shows the AMINCO team augering the hole through silt. Obtain sample SAL-004 – 17:48. Water is brackish.
- 17:56 Leave to obtain next sample of surface water.
- 18:00 Arrive at freshwater trench area. Obtain sample SAL-005 – 18:10. Mostly fresh water.
- 18:22 Leave site for camp.

During sampling activities, a total of four bottles were filled. Samples were sealed, temporary stored, and submitted to SGS Laboratories in Salta, Argentina.

Photo 12-2. Using a Power Auger to Drill Down to Groundwater Level

Laboratory analytical results for the April 8, 2022, independent samples are given below. Inspection of **Table 12-2** indicates that the near-surface samples in the center of the salar (samples SAL-002 and SAL-003) are concentrated brine.

Table 12-2. Summary of Laboratory Analysis Results for April 8, 2022 Samples

SAMPLE ID	Time	Li (mg/L)	Mg (mg/L)	K (mg/L)	B (mg/L)	SO_4 (mg/L)	Mg/Li ratio	Density (g/cm^3)
SAL-002	16:56	346.2	4,237.80	5,905.80	224.4	19,444.00	12.2	1.215
SAL-003	17:08	352.4	4,328.00	5,874.10	198.4	19,028.00	12.3	1.214
SAL-004	17:48	124	2,167.50	2,647.40	47	13,105.00	17.5	1.079
SAL-005	18:10	34.9	626.5	864.3	31.9	5,960.00	17.9	1.022

Sample SAL-004 was obtained in the clastic sediments closer to the edge of the basin is brackish water, commonly associated with fresh water/brine mixing zones at the edges of the salar. Sample SAL-005 is mostly fresh and is associated with freshwater recharge that occurs at the edges of the basin. Although samples SAL-004 and SAL-005 do not have concentrated brine at the surface, it is possible that concentrated brine may occur with depth at these locations.

During his visit, Mr. Rosko verified and obtained shallow brine samples at 2 locations that were also sampled later by AMINCO for laboratory analysis. Sampled were collected from the Cristina and Patagonia II tenements, both located in the west-central area of the salar. Samples collected in Cristina and Patagonia II tenement by QP were sampled at same location of AMINCO's sample SALMUERA 5414 (QP samples SAL-002 and SAL-003) and 5412 (QP sample SAL-004). Samples were stored and sent by the QP to SGS laboratory in Salta. AMINCO also used SGS laboratory. A comparison of the results from the AMINCO sampling program and the confirmatory samples obtained by the QP are given in **Table 12-3**.

Table 12-3. Summary of Laboratory Analysis Results for 2022 Sampling Campaign

ORIGINAL SAMPLE ID	CHECK SAMPLE ID	QP ASSAY VALUES					AMINCO ASSAY VALUES				
		Li (mg/L)	Mg (mg/L)	K (mg/L)	B (mg/L)	SO_4 (mg/L)	Li (mg/L)	Mg (mg/L)	K (mg/L)	B (mg/L)	SO_4 (mg/L)
SAL-002	SALMUERA 5414	346.2	4,237.80	5,905.80	224.4	19,444	294	4,247.70	5,599.90	173.2	19,390
SAL-003	SALMUERA 5414	352.4	4,328.00	5,874.10	198.4	19,028	294	4,247.70	5,599.90	173.2	19,390
SAL-004	SALMUERA 5412	124	2,167.50	2,647.40	47	13,105	99.9	2,201.20	2,674.90	31.8	13,270

Analytical results provided by SGS indicate that samples collected in the same location, SAL-002 and SALMUERA-5414 generally have similar assays values, confirming that a lithium-rich brine is present. Surface water sample SAL-004 and sample SALMUERA-5412 were collected at the same location and shows similar values; results also confirm that some freshwater mixing has occurred with the salar brine, resulting in brackish water.

Results obtained from near-surface brine sampling performed by AMINCO and the QP are similar, but not within an acceptable range for lithium. It is recommended that in the future duplicate samples be obtained at the same time to avoid the introduction of variables that could affect the chemistry.

12.1 Data Management During Sampling, Drilling, and Testing Program

- Field notes: The field geologists and hydrogeologists record field notes concurrently with the recorded observation
- Physical parameters: At the time of sampling, field physical parameters are measured and recorded for all fluid samples
- All data is logged into a database maintained by M&A

12.2 Adequacy of the Data

For the purposes of obtaining an initial evaluation of the potential to encounter lithium-rich brine in the Project area, and to continue with additional exploration, the QP believes that the data obtained to data are adequate. Sampling and laboratory methods are consistent with industry standards.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

Mineral processing and metallurgical testing has not been done at this early stage of the Project.

14 MINERAL RESOURCE ESTIMATE

This maiden resource estimate for the Rio Grande Project consists of Measured, Indicated and Inferred categories. The essential elements for estimation of a lithium brine resource include drainable porosity and brine concentration values assigned to the defined hydrogeologic units. During the resource estimation process, the QP considered the Canadian Institute of Mining (CIM, 2012) Best Practice for Reporting of Lithium Brine Resources and Reserves and Houston et al. (2011) guidelines.

14.1 Methodology

The method employed to estimate the resource corresponds to the industry-acceptable polygon method. The overall process consisted of constructing concentric circles around the exploration wells and dividing them into horizontal layers as hydrogeologic or estimation units, with each layer assigned an aerial extent, lithium concentration, and drainable porosity value. Thus, while the same lithium concentration and drainable porosity were assumed laterally within a given polygon, distinct intervals were defined to account for depth-specific changes of either parameter based on the exploration results. Each polygon block contains one well, and boundaries between polygon blocks are generally equidistant between the wells (when close enough).

Apart from lithologic descriptions, depth-specific data for chemistry and drainable porosity were obtained during drilling. Drainable porosity values were assigned largely based on laboratory specific yield results; these results were cross-checked with field lithologic descriptions and core photos to verify reasonableness of the assigned values.

14.2 Lithium Grade

Lithium brine concentration results obtained from sampling were utilized as an input for the resource estimate; original laboratory results from brine samples obtained via downhole, depth-specific packer sampling were used for all of the wells; results from Hydrasleeve sampling method were also used at well DDH-RG23-001. Based on the QA/QC analyses, SGS Laboratory results were considered in wells DDH-RG23-001, 002 and 003, and Alex Stewart results in case of well DDH-RG23-004. Additionally, SGS laboratory results of surface samples were included in the estimate process in cases where they are located inside a measured area. However, as the lithium content in shallow depths is influenced by the dilution effect from seasonal rains, these results were limited to the first 2 meters from surface level for estimate purposes.

Lithium grade in depth is shown on **Figure 14-1**. Median values were calculated for each interval to obtain a representative lithium content for that interval to be used to calculate the resource estimate.

In general, lithium grade values show an increasing trend with depth, which has been observed in other similar lithium-rich aquifer systems in the region. Resulting weighted average lithium concentration values per well were 687, 462, 511 and 620 mg/L for wells, DDH-RG23-001, 002, 003 and 004, respectively.

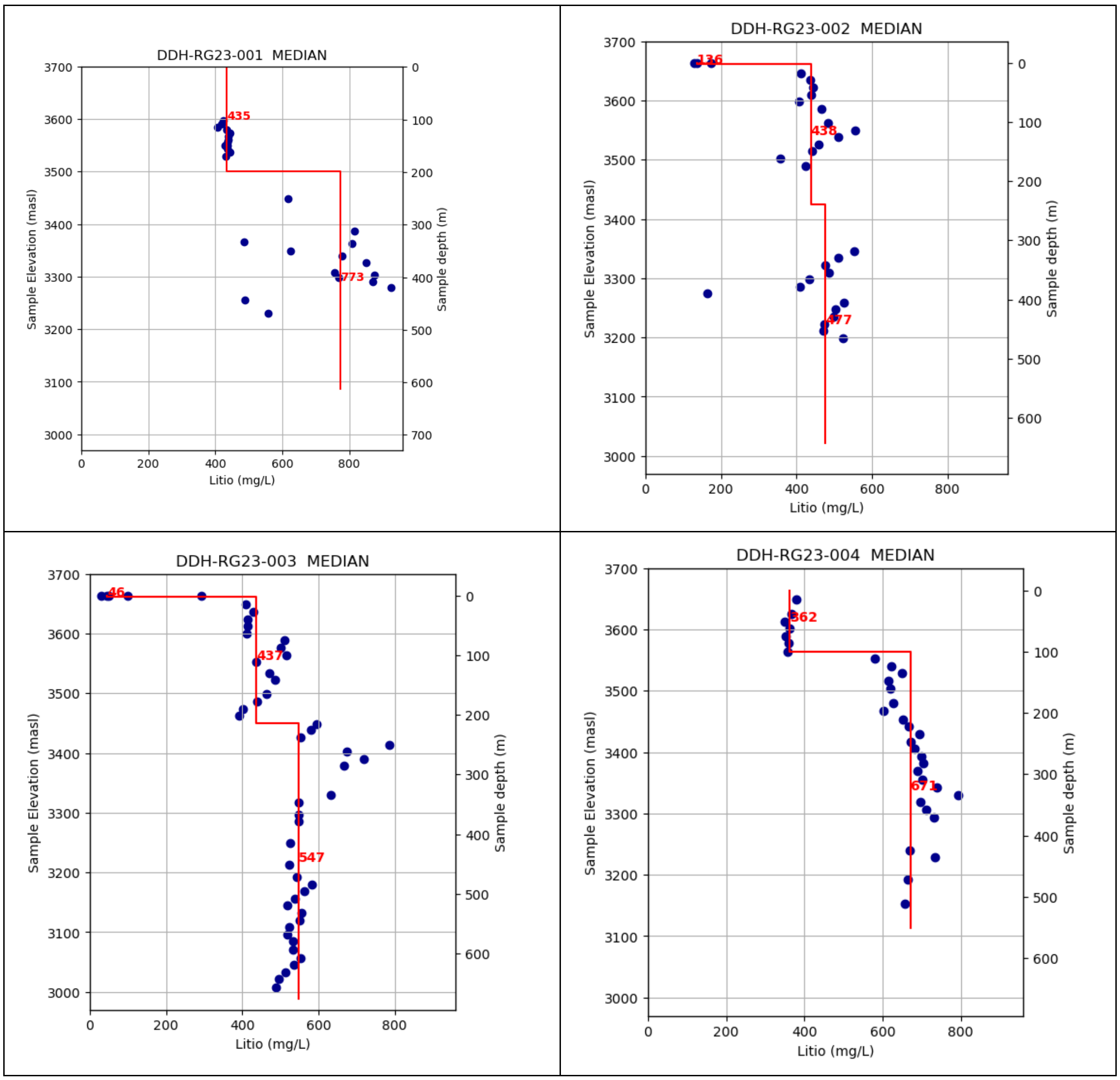


Figure 14-1: Lithium Grade in Depth and Median Values of Selected Intervals from Hydrasleeve (DDH-RG23-001) and Packer Samples

14.3 Drainable Porosity

Drainable porosity values are reported as a fraction of the total rock volume and are unitless. For example, if a rock has a volume of 100 milliliters (mL), and 10 mL of fluid can drain from the rock, the drainable porosity is 10/100, or 0.10. Although often determined by laboratory methods, the drainable porosity is essentially the same as specific yield as defined in classical aquifer mechanics.

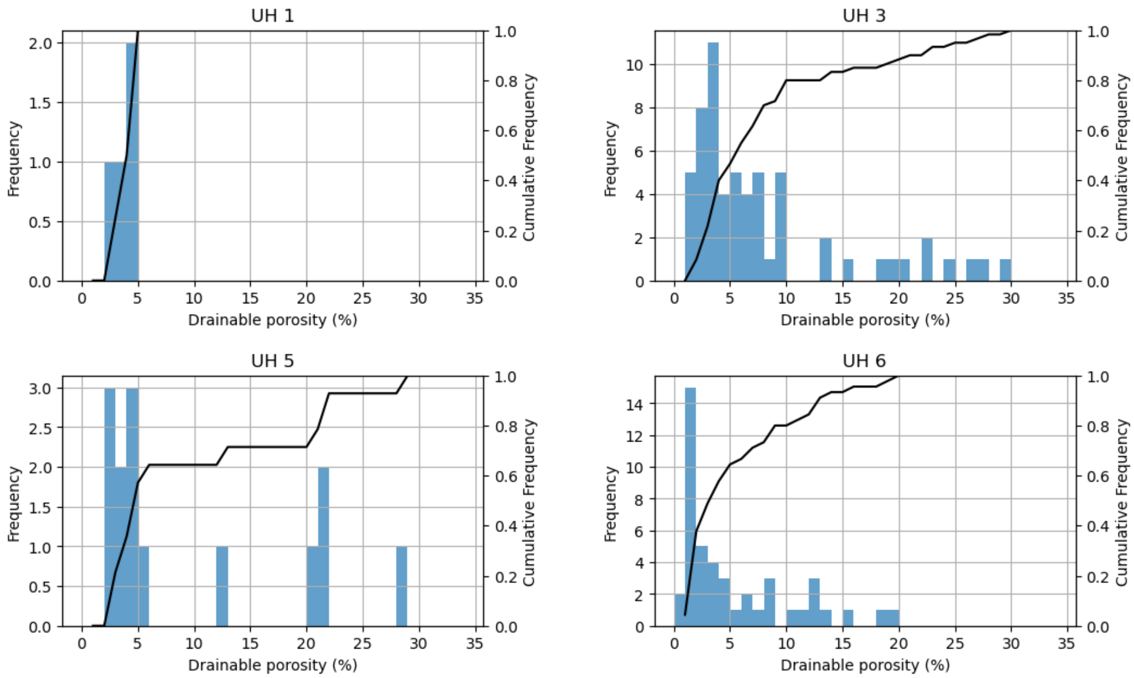
Drainable porosity values in Salar de Río Grande were analyzed based on results of GSA (wells DDH-RG23-001 and DDH-RG23-002) and LCV (wells DDH-RG23-003 and DDH-RG23-004) laboratory testing. Laboratory values for drainable porosity were obtained from 132 successfully analyzed core samples; 31 of them correspond to DDH-RG23-001, 36 to DDH-RG23-002, 37 to DDH-RG23-003 and 28 to DDH-RG23-004. Drainable porosity values equal to zero (two samples in DDH-RG23-001) nor "Duplicated" samples (totaling 9), were not included in the analyses.

Hydrogeologic units were initially defined using lithologic descriptions, and then using laboratory drainable porosity values, as defined in Chapter 10; these are summarized in **Table 14-1**. These initially-defined units were not specific to location or depth of the samples. **Figure 14-2** shows the resulting histograms and cumulative empirical distributions of drainable porosity grouped by hydrogeological unit, and a corresponding descriptive statistics table. **Figure 14-3** shows box-plots for the same data.

At least half of the drainable porosity samples had values lower than 6% in all the hydrogeological units, which is considered by the author to be relatively low compared to other basin aquifers in the region. However, drainable porosity seems to be much better in North and Northeast area of the salar (DDH-RG23-001 and DDH-RG23-004) where most of the area considered in the resource estimate is located.

Table 14-1: Hydrogeologic Units Assigned by Visual Inspection of Corehole Samples

Hydrogeological Unit	Description
HU1 (UH1)	Clay and silt
HU2 (UH2)	Sandy silt and silty sand
HU3 (UH3)	Sand, silty sand
HU4 (UH4)	Silty gravel, clayey gravel
HU5 (UH5)	Gravel, conglomerates, breccia
HU6 (UH6)	Evaporites, mostly halite



UH	Count	Mean	Std	Min	25%	50%	75%	Max
UH 1	4	3.6	1.2	2.2	2.9	3.6	4.2	4.9
UH 3	60	8.0	7.3	1.1	3.0	5.3	9.2	29.0
UH 5	14	9.8	9.0	2.3	3.6	4.9	18.2	28.3
UH 6	45	5.4	5.0	0.6	1.6	3.2	8.2	19.4

Note: The cumulative frequency is normalized

Figure 14-2: Histograms and Cumulative Distributions of Drainable Porosity

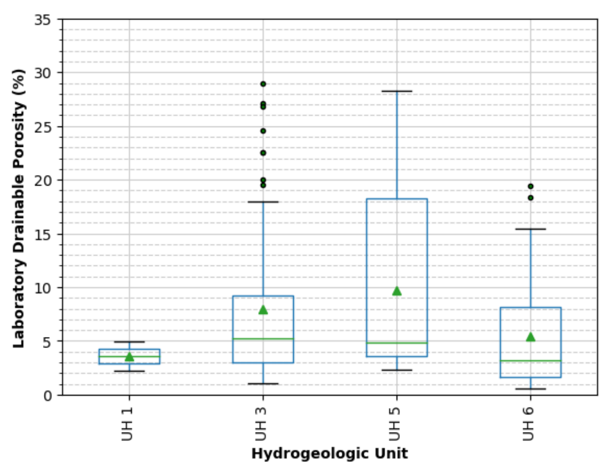


Figure 14-3: Box-plots of Drainable Porosity Values Grouped by Hydrogeological Unit

Because the Project concessions are not all next to each other (**Figure 10-1**), they are each located in slightly different geological and sedimentary environments. DDH-RG23-001 is located in the nothern alluvial fan where coarser sediments are present, and conceptually expected to be found; DDH-RG23-004, even though relatively close to the last, it is located in the northeast margin of the salar. DDH-RG23-003 is located in the salar nucleus and presents comparatively more cemented lithologies respect to what is shown by core samples from DDH-RG23-002. These differences were considered when defining appropriate drainable porosity values to estimate the lithium resource.

Drainable porosity values for the various depths below land surface are shown, by well, on **Figure 14-4**. Values differ for individual HGUs, depending on depth and corresponding well. For example, DDH-RG23-003 consistently shows lower values for the same HGUs (3 and 6) as compared with nearby DDH-RG23-002 for similar depths. On the other hand, core samples taken above 3,550 masl tend to show comparatively higher Sy values for all the present units and wells. In general, rather than selecting uniform values based on assigned HGU, values reflect differences in drainable porosity due to location and depth differences, likely related to changes in cementation, compaction, or in clay content.

Representative Sy values were adopted by averaging sample results located within each interval, regardless of values from other HGUs at other wells and from other depths. Average values are summarized in **Table 14-2**, which are considered as the representative by interval when estimating resources. Resulting weighted average drainable porosity values per well were 8.9, 7.9, 3.7 and 9.4% for wells, DDH-RG23-001, 002, 003 and 004, respectively.

Table 14-2: Representative Drainable Porosity Values for Different Wells and Intervals

Well	Topography (masl)	Elevation (masl)		Depth (m)		Assigned Drainable Porosity (%)
		From	To	From	To	
DDH-RG23-001	3,699	0	159	3,699	3,540	10.7
		159	359	3,540	3,340	5.4
		359	519	3,340	3,180	14.8
		519	699	3,180	3,000	4.4
DDH-RG23-002	3,664	0	84	3,664	3,580	13.3
		84	504	3,580	3,160	4.5
		504	664	3,160	3,000	15.3
DDH-RG23-003	3,664	0	84	3,664	3,580	8.0
		84	224	3,580	3,440	2.1
		224	304	3,440	3,360	10.2
		304	464	3,360	3,200	2.3
		464	679	3,200	2,985	1.7
DDH-RG23-004	3,664	0	154	3,664	3,510	18.9
		154	264	3,510	3,400	9.3
		264	664	3,400	3,000	4.3

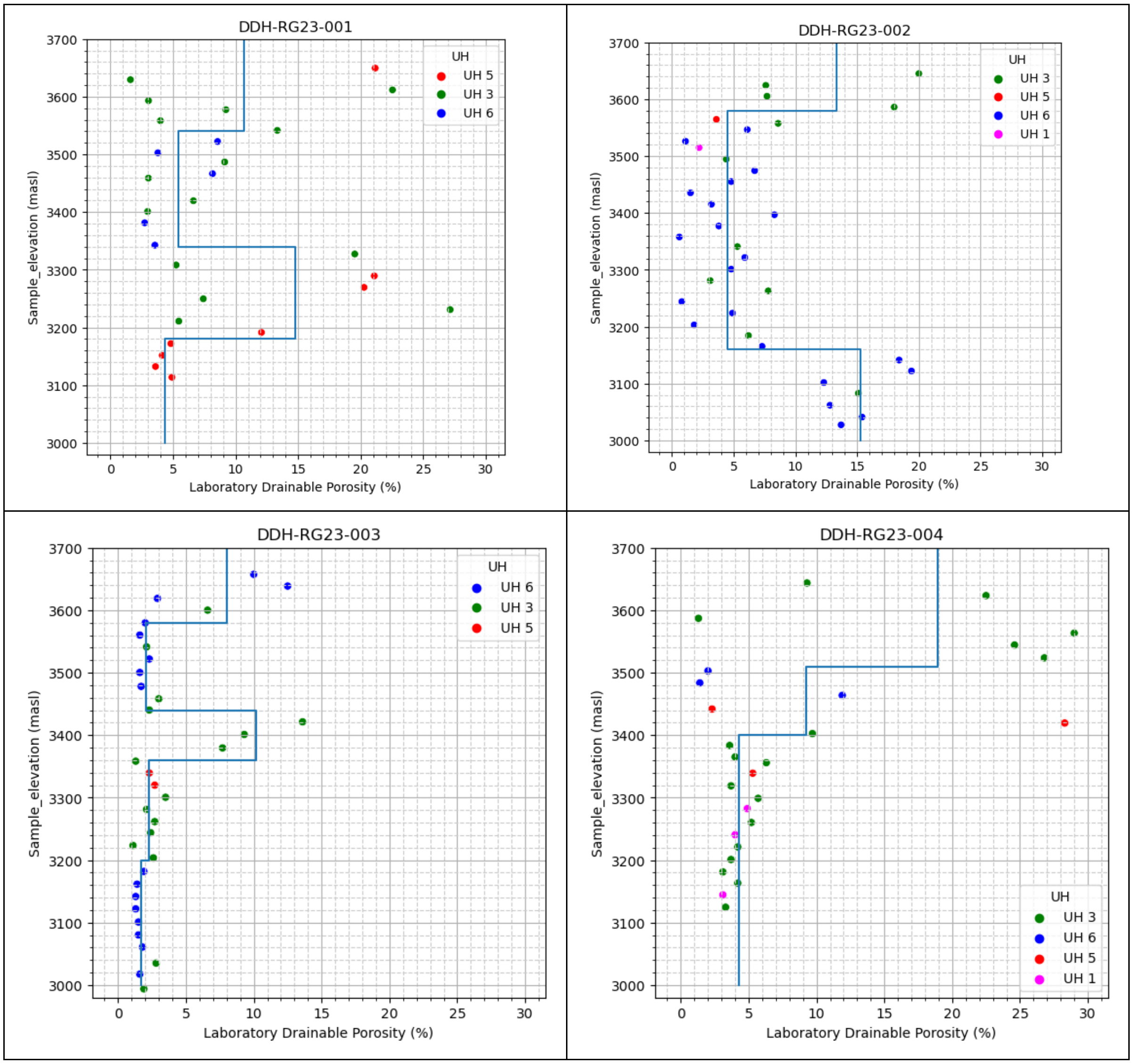


Figure 14-4: Drainable Porosity and Mean Values of Delimited Intervals from Core Samples

14.4 Resource Estimate Process and Categorization

The method employed to estimate lithium resources corresponds to the industry-accepted polygon method. The overall process consists of constructing concentric circles around the exploration wells. The same lithium concentration and drainable porosity are assumed laterally continuous for each unit within a given polygon. Due to different vertical discretization established for lithium grade (**Figure 14-1**) and drainable porosities (**Figure 14-4**), a 1-meter interval was defined as numerical composite for calculations, in order to account for depth-specific changes of parameter values based on the exploration results.

The polygon construction process, that included a total area of approximately 19 km^2, was based on locations of exploration wells, project concessions, and horizontal geological estimation domains:

- Circles (areal buffers) of different radius, related to different resource categories (to be detailed), were traced from well locations. Corresponding exploration well features are later considered as an estimation reference within each buffer.
- Only areas controlled by NOA Lithium were included in the resource estimate.
- A surface geological boundary, based on regional map and satellite image observations, was defined to limit the estimation domains so as not to include hard-rock outcrops where low permeabilities occur.

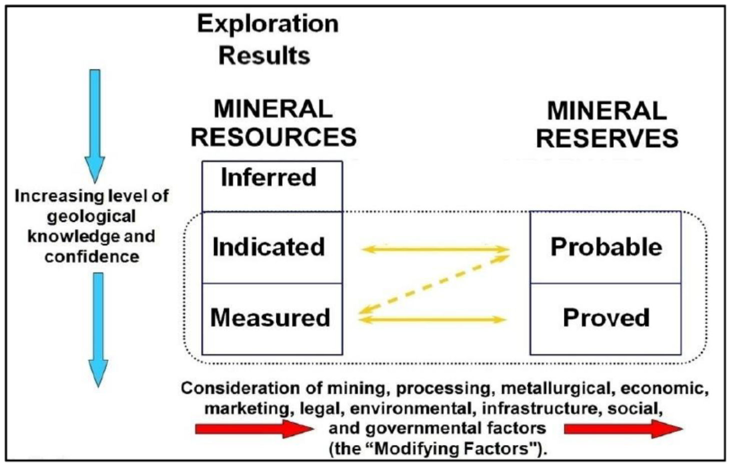
In terms of resource categorization, the International Reporting Template for the Public Reporting of Exploration Targets, Exploration Results, Mineral Resources and Mineral Reserves (CRIRSCO, 2019) provides the following definitions for Measured, Indicated and Inferred Resources, regardless of the deposit type:

- An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

- An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation.

- A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing, and is sufficient to confirm geological and grade or quality continuity between points of observation.

Figure 14-5 shows the relationship between Mineral Resources and Mineral Reserves as it pertains to lithium brine deposits. While additional aquifer parameters are needed to estimate a reserve, the overall feasibility to pump brine is related to the theoretical volume which can be drained from the reservoir and thus pumping tests can also be considered when assigning resource categories.



Source: CRIRSO, 2019

Figure 14-5: Methodology for Evaluating Brine Mineral Resources and Mineral Reserves

For the current resource estimate, Measured, Indicated and Inferred initial polygons were developed based on guidelines by Houston et al. (2011) for mature salar systems. For Measured, Indicated and Inferred resources, the distances between exploration wells are suggested to be 4, 7 and 10 km, respectively, which means radius of 2, 3.5 and 5 km for the respective category. After intersecting with project concessions and limiting them by geologic conditions, polygons and assigned resource categories were determined (**Figure 14-6)**.

Once polygons were delimited, general criteria applied when estimating resources, were as follows:

- Exploration depths on each well define the bottom of the estimated volumes in categories Measured and Indicated (just one exception in this second case, explained further).
- Inferred areas located outside of the salar boundary were in general considered to partially cover the brine aquifer identified in the corresponding well.
- Presence of brine (or at least brackish water) was set to 1-meter depth in the salar zone.

Particular criteria applied in the differente exploration wells when tracing and categorizing polygons, as well as when estimating resources, were the following:

DDH-RG23-001:

- Based on the surface sampling campaign conducted by Aminco (2022b) and the geophysical logging results (Explora Mining 2023), a brine level (or brine piezometric level) was estimated. From this, the top of the brine aquifer was set to 49 meters below land surface.
- Measured: located in an alluvial fan area, a 1.5 km radius was considered for this category (2 km used within the salar). The smaller radius avoids older geological units and higher terrain slopes, where the brine aquifer may have less thickness.
- Indicated: Aminco's SEV 13 and 31 interpretations (Aminco, 2022a) do not show hydrogeological basement; however, additional geophysics (TEM ideally) could be used to categorize those areas differently. Given the uncertainty related to proximity of older geological units and higher slopes, 60% of the well brine aquifer thickness was considered in this area, as a conservative criteria to accommodate assumed reduced sedimentary unit thicknesses that typically occur when nearing basin boundaries.
- Inferred: 30% of the well brine aquifer thickness was considered in this area (reasons of uncertainty mentioned above).

DDH-RG23-002:

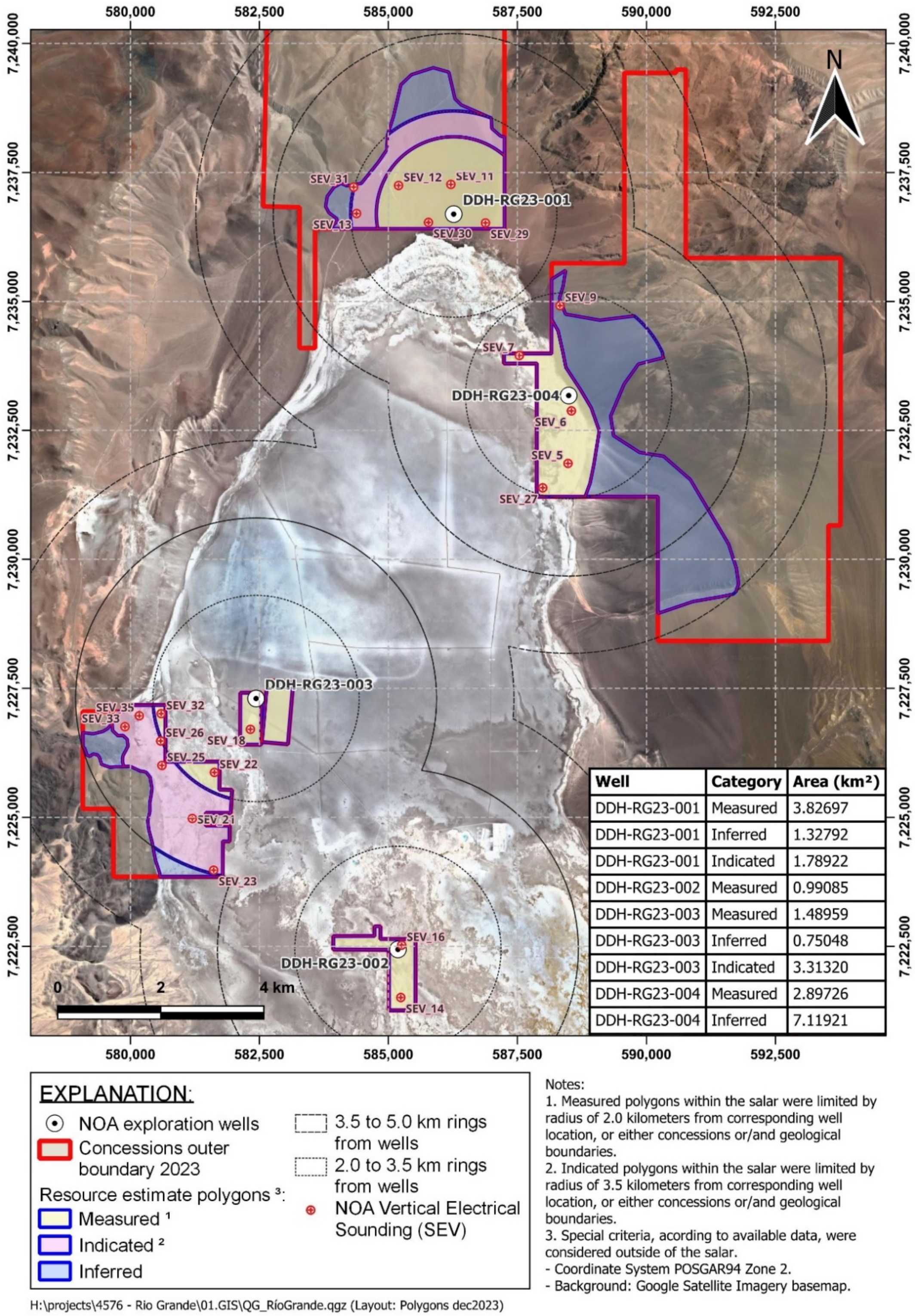
- Measured: 2 km radius from well.
- Indicated: 3.5 km radius from well limited by concessions and by Pleistocene basalts and andesites located west of salar boundary.
- Inferred: Inside the salar, a 5 km radius was used for this category. Potential resources (within 3.5 km radius used for Indicated within the salar) located underneath a lava flow were also considered as Inferred.

DDH-RG23-003:

- Measured: all areas within owned concession are located within a 2 km radius from the well.

DDH-RG23-004:

- Measured: Area inside 2.0 km radius within the salar was entirely included, but the area located east from the well (and covered by young volcanic flows) was categorized as Inferred because hydrogeologic basement was not found during well drilling.
- Indicated: No indicated areas were considered due to their location outside of salar margins. No geophysics occur in that area and cannot provide additional support.
- Inferred: Areas further than 300 meter east from salar boundary were considered Inferred. In absence of exploratory data, a conservative 20% of the brine aquifer thickness identified at well location was proposed to be considered in this area.



Well	Category	Area (km²)
DDH-RG23-001	Measured	3.82697
DDH-RG23-001	Inferred	1.32792
DDH-RG23-001	Indicated	1.78922
DDH-RG23-002	Measured	0.99085
DDH-RG23-003	Measured	1.48959
DDH-RG23-003	Inferred	0.75048
DDH-RG23-003	Indicated	3.31320
DDH-RG23-004	Measured	2.89726
DDH-RG23-004	Inferred	7.11921

Figure 14-6: Polygons of Measured, Indicated and Inferred Resource

14.5 Resource Statement

Resource estimates were calculated by multiplying the polygon area by the unit thickness by the drainable porosity by the lithium grade calculated for corresponding intervals. Subsequently, the resulting value was summed within each polygon, for each assigned resource category.

A lithium cut-off grade is typically assigned as 200 mg/L based on the QP's experience with other projects in the region, assuming use of a direct lithium extraction (DLE) technology (as of the writing of this report, a process technology has not been selected). However, given though nearly 100% of chemistry samples show concentration values significantly higher than that threshold (just minor exceptions at the very highest part of the brine aquifer, due local dilution effect), the effect of applying the mentioned cut-off grade was not relevant.

Table 14-3 summarizes the current Salar de Río Grande resource estimate for lithium. The reader is cautioned that mineral resources are not mineral reserves and do not have demonstrated economic viability.

Table 14-3: Summary of Measured, Indicated, and Inferred Resources

Total Summary	Brine volume (m^3)	Avg Li (mg/L)	In Situ Li (tonnes)	Li_2CO_3 Equivalent (tonnes)
Measured	4.5E+08	621	278,000	1,478,000
Indicated	1.4E+08	585	83,000	441,000
Measured + Indicated	**5.9E+08**	**612**	**361,000**	**1,919,000**
Inferred	1.1E+08	610	70,000	371,000

Notes:

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. There is no certainty that any or all of the Mineral Resources can be converted into Mineral Reserve after application of the modifying factors.

The conversion factor used to calculate the equivalents from their metal ions is simple and based on the molar weight for the elements added to generate the equivalent. The equations are as follows: Li x 5.3228 = lithium carbonate equivalent (Li_2CO_3).

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

14.6 Potential Upside

The Measured, Indicated and Inferred resources estimated will likely change as more information becomes available. The work in the last year has substantially increased the understanding of the conceptual model of the basin and has allowed the estimation of a maiden lithium resource. Recommended activities in this report are designed to improve the conceptual hydrogeologic model, increase the resource, and/or improve the resource categories.

Recommended future exploration may include conducting a gravimetry survey to interpret depth-to-basement, as a technical or hydrogeologic basement has not been defined yet. As other similar lithium-rich aquifer systems in the region have shown an increasing lithium concentration in depth tendency, depth-to-basement information could positively impact the resources estimate.

Transient Electromagnetic (TEM) surface geophysical survey are suggested to preliminary understand the underlying stratigraphy outside of the salar, identify potential geologic structures, and confirm presence of potential zones of conductive saline fluids at depth (Hanson, 2019). The Indicated and Inferred resource estimates will likely change as more information becomes available, which could have special focus on: Indicated alluvial areas related to DDH-RG23-001; Indicated and Inferred areas located west of DDH-RG23-003, specially under lava flows curretly classified as Inferred; and Inferred resources estimated further than 300 meter east from salar boundary, related to DDH-RG23-001.

Abundant brine samples from the concession areas have been obtained and analyzed, and demonstrate relatively large lithium concentrations on par with other similar projects in the region. That said, additional work is needed, in particular groundwater flow and transport modeling to better understand the long-term sustainable potential for the Project.

At present, the QP is not aware of any legal, political, environmental, or other risk that could materially impact the potential development of the mineral resources.

15 MINERAL RESERVE ESTIMATES

A mineral reserve has not been established at this early stage of the Project.

16 MINING METHODS

Mining methods have not been established at this early stage of the Project.

17 RECOVERY METHODS

Recovery methods have not been established at this early stage of the Project.

18 PROJECT INFRASTRUCTURE

Project infrastructure has not been designed at this early stage of the Project.

19 MARKET STUDIES AND CONTRACTS

Market studies and contracts have not yet been realized at this early stage of the Project.

20 NEARBY COMMUNITIES

The closest population group is Tolar Grande town, of 236 people. It is located about 140 km to the northeast of the salar; and it can be reached by provincial route 27 (RP-27). Salar de Pocitos Railway Station is about 216 km northeast of the project. It has a police station, first aid station, public telephone, restaurant and lodging. San Antonio de Los Cobres is located about 110 km east from Salar de Pocitos and is the main town in the Andes Department (Salta). The town has a hospital, a police station, gendarmerie, a telephone office, convenience stores, gas station, inns, schools, workshops, etc.

21 CAPITAL AND OPERATING COSTS

No capital costs or operating costs have been established at this stage of the Project.

22 ECONOMIC ANALYSIS

No economic analyses have been realized at this stage of the Project.

23 ADJACENT PROPERTIES

Adjoining or nearby properties to the Rio Grande Project on salar surface include the following:

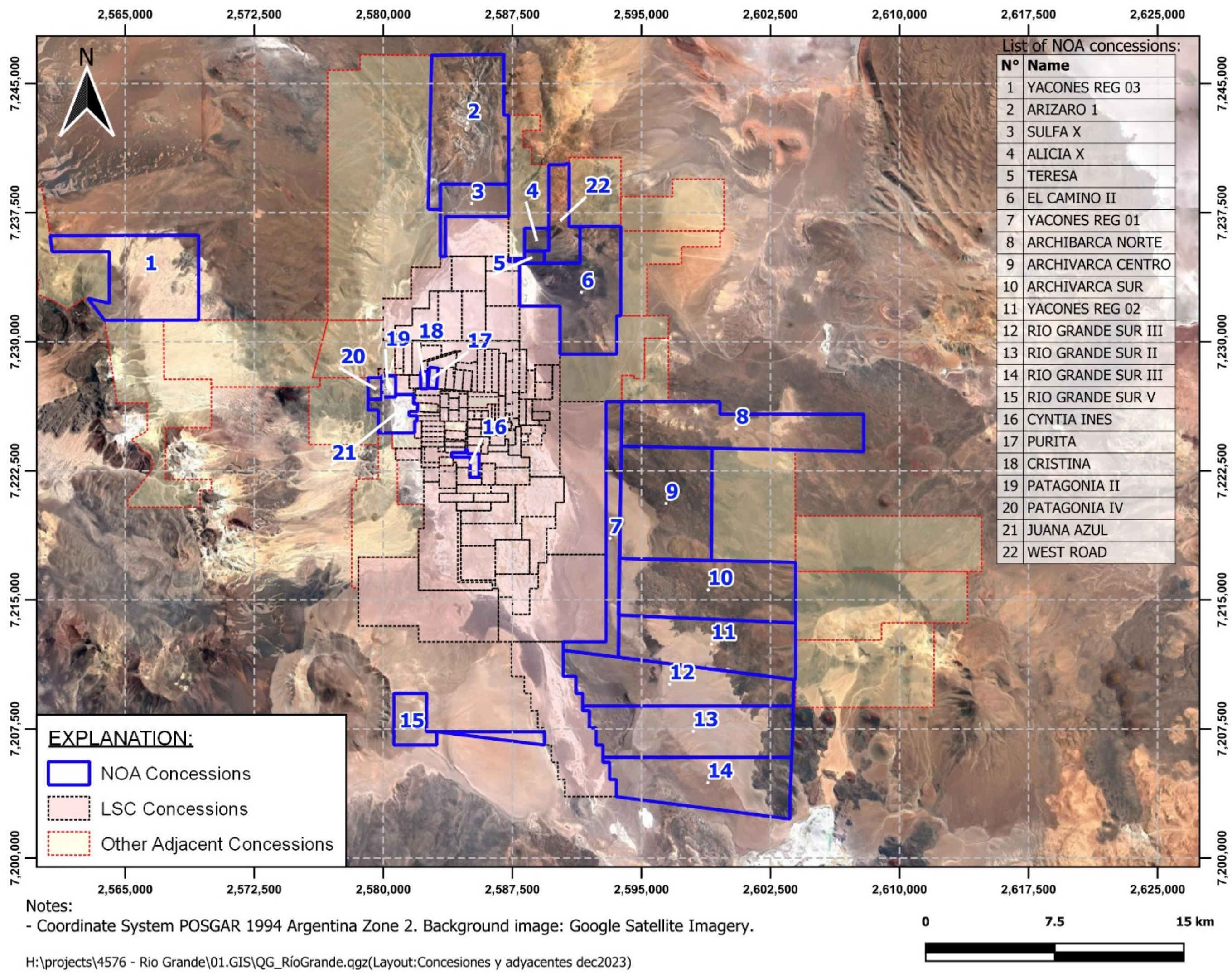
- Lithium S Corporation S.A. (LSC), a company currently owned by Lítica Resources, a Pluspetrol company who acquired lithium mining properties and rights from LSC, as explained below, holds large tenements in both Salta and Catamarca provinces. These areas are mainly in the salar surface and surround the Project properties.
- Pursuit Minerals Limited holds the Isabel Segunda and SALRIO01 concessions.
- The Rio Grande I and Demasia Rio Grande I concessions are currently believed to be registered as vacant.
- Anglogold Argentina Exploraciones S.A. holds tenements on west side of the salar next to western Project properties.
- Martin Guillermo Novara contests that he holds the Nahuel 19 concession, but it is being challenged.
- Minas Argentinas S.A. holds the Arizaro I concession.
- Minera El Toro S.A. holds the El Camino concession
- Pursuit Minerals Limited holds a cateo concession

Originally, many of the concessions in the Rio Grande salar belonged to LSC (through Lithium S Corporation S.A.); at the end of 2018, LSC was purchased by Litica Resources under a commercial agreement, becoming the current owner of concessions in Rio Grande. However, the acquired concessions continue to be registered in the name of LSC on the mining registry of the Salta province.

Adjacent properties to the Rio Grande Project outside the salar surface include the following:

- A B Minerales Argentina holds a cateo concession
- Anglogold Argentina Exploraciones S.A. holds tenements in west side of the salar next to west Project properties
- Astrali S.A. with Marcopolo I concession
- LSC controls the Guadalupe Norte concession

Figure 23-1 shows a general map with concessions owned by NOA and adjacent concessions owned by third parties registered in the mining cadastral of Salta province.



Notes:
- Coordinate System POSGAR 1994 Argentina Zone 2. Background image: Google Satellite Imagery.

H:\projects\4576 - Rio Grande\01.GIS\QG_RíoGrande.qgz(Layout:Concesiones y adyacentes dec2023)

Figure 23-1. General Map of Mining Concessions in Salar de Rio Grande

24 OTHER RELEVANT DATA AND INFORMATION

No other relevant data are known to exist.

25 INTERPRETATION AND CONCLUSIONS

The Rio Grande Lithium Project is at an early stage of exploration. The initial results (before 2023 exploration program) for lithium concentrations from surface sampling supported the concept that brine enriched in lithium occurs in the basin and might be favorable for future production. Geophysical surveys suggested the presence of evaporitic sediments saturated with brine in the main salar area. In addition, initial surface brine chemistry sampling results indicated elevated values of lithium. Also, composite brine samples obtained during the pumping tests conducted by LSC at exploration wells drilled on adjacent concessions, demonstrated that subsurface brine in the salar has enriched lithium concentrations. Pumping test results from these wells suggest that the aquifer has favorable hydraulic properties and may also be favorable at the Project concessions. Previous NOA exploration campaigns agreed with and support the findings made by Hains (2018) in adjacent tenements. Prior to the 2023 exploration program, it was the opinion of the QP that the elevated concentrations of lithium observed in the Project area justified continued exploration activities.

The year 2023 exploration work has substantially increased the understanding of the conceptual model of the basin and has allowed the estimation of a maiden lithium resource. Results of 2023 exploration program have confirmed the concept that brine enriched in lithium occurs in the salar and surrounding alluvial fan areas located north of the salar boundary (well DDH-RG23-001 location). Abundant brine samples from the concession areas have been obtained and analyzed, and demonstrate relatively large lithium concentrations on par with few other similar projects in the region.

Specific results of this investigation are summarized as follows:

- In general, lithium grade values show an increasing trend with depth, which has been observed in other similar lithium-rich aquifer systems in the region. Resulting weighted average lithium concentration values in wells ranged from 462 to 687 mg/L, showing significantly higher values than surface samples surveys in previous studies in the basin.

- Resulting weighted average drainable porosity values per well ranged from 3.7 to 9.4%. Drainable porosity seems to be much better in North and Northeast area of the salar (DDH-RG23-001 and DDH-RG23-004) where most of the area considered in the resource estimate is located.

- Among the drilled wells, the well that showed the best lithium grades combined with higher drainable porosity values was DDH-RG23-001, located on the northmost alluvial fan.

- For the polygonal areas shown on **Figure 14-6**, the Measured, Indicated and Inferred resources contain 1,478,000 tonnes Measured, 441,000 Indicated LCE, and 371,000 Inferred LCE.

The QP has extensive experience in salar hydrogeology. Techniques to evaluate the resource incorporate the best available technology and practice. The resource calculation was based on information of acceptable quality and has been validated.

The consistency and quality of the data on the Project support the conclusion that a portion of the brine resource could be extracted commercially for the production of lithium products; additional investigation regarding process methods and economic grades should be investigated.

26 RECOMMENDATIONS

Based on the new results of exploration to date, additional activities can be justified to better characterize the subsurface brine in different part of the concessions.

Our initial recommendation in 2022 was to locate two exploration coreholes in west concessions areas within the salar limits (Juana Azul), two additional coreholes in the center concessions area (Cintya Ines), and two coreholes in the northern-northeastern concessions area (Sulfa X, El Camino II, Teresa). The coreholes would include depth-specific brine sampling using an inflatable packer, and laboratory analysis of core for drainable porosity values and preferably should be spaced no more than 3 km apart from each other. Also, downhole surveys were recommended to be considered as support to the information collected during corehole drilling.

The exploration drilling campaign was proposed in two phases. The initial stage included the drilling of coreholes in the central and western concessions, and the second phase would include the drilling of two coreholes in the northern and northeastern concessions, and one additional corehole in any of the western or central concessions. Even though wells are being drilled and tested, results from the first and second phase have shown to be favorable. Abundant brine samples from the concession areas have been obtained and analyzed, and demonstrate relatively large lithium concentrations on par with other similar projects in the region. That said, additional work is still needed, in particular for development of a groundwater flow and transport modeling to better understand the long-term sustainable potential for the Project.

The second phase of this program also includes the drilling of two exploration wells, located in the same location as wells DDH-RG23-001 and DDH-RG23-003. Those new wells will be drilled to the same depths as the nearby coreholes; pumping test would be conducted to determine hydraulic parameters for the aquifer and to determine composite brine chemistry that would be helpful in determining processing methods.

After completion of the ongoing drilling exploration, we recommend the development of a conceptual model, followed by construction of a 3-D block model capable of confirming and enhancing the initial resource for the Project.

The Measured, Indicated and Inferred resources estimated will likely change as more information becomes available. Therefore, we also recommend that future exploration include conducting a gravimetry survey to interpret depth-to-basement, as a technical or hydrogeologic basement has not been defined yet. As other similar lithium-rich aquifer systems in the region have shown an increasing lithium concentration in depth tendency, depth-to-basement information could positively impact the resources estimate and future exploration goals.

Transient Electromagnetic (TEM) surface geophysical surveys are suggested to better understand the underlying stratigraphy outside of the salar, identify potential geologic structures, and confirm presence of potential zones of conductive saline fluids at depth (Hanson, 2019). The Indicated and Inferred resource estimates will likely change as more information becomes available, which could have special focus on: Indicated alluvial areas related to DDH-RG23-001; Indicated and Inferred areas located west of DDH-RG23-003, specially under lava flows currently classified as Inferred; and Inferred resources estimated further than 300 meter east from salar boundary, related to DDH-RG23-004.

We also recommend as many as four additional pumping wells designed to provide information to allow construction and calibration of a groundwater flow model capable of estimating a lithium Reserve. The locations for these wells would be determined following completion of the initially-proposed exploration activities.

Finally, we recommend preparation of an updated NI 43-101 report following the proposed new exploration and modeling activities.

27 REFERENCES

Alonso, R. N., 1986. Ocurrencia, Posición Estratigráfica y Génesis de los Depósitos de Boratos de la Puna Argentina. Facultad de Ciencias Naturales, Universidad Nacional de Salta. Tesis doctoral, 197 pp., inédita.

Alonso, R.N., Gutíerrez, R. y Viramonte, J., 1984a. Puna Austral bases para el subprovincialismo geológico de la Puna Argentina. Actas IX Congreso Geológico Argentino, Actas1: 43-63, Bariloche.

_____, 1984b. Megacuerpos salinos Cenozoicos en La Puna Argentina. IX Congreso Geológico Argentino, Actas 1: 25-42, Bariloche. Alonso, R.N., Jordan, T.E., Tabbutt, K.T. and Vandevoort, D.S. 1991, Giant evaporite belts of the Neogene central Andes. Geology, 19: 401-404.

AMINCO, 2022a. Proyecto Salar de Río Grande – Salta, Informe de Prospección Geoeléctrica. Technical report prepared for NOA Lithium, 80 p., May 2022.

_____, 2022b. Proyecto Salar de Río Grande – Salta, Informe de Muestreo de Salmueras. Technical report prepared for NOA Lithium, 16 p., May 2022.

Bianchi, A.R., Yáñez, C.E., Acuña, L.R., 2005, *Base de datos mensuales de precipitaciones del noroeste Argentino*: report prepared by Instituto Nacional de Tecnología Agropecuaria, Centro Regional Salta-Jujuy, Argentina.

Cabrera, L. A. 1958. Fitogeografía en: Argentina, suma de Geografía, 123 -130.

Cabrera, L. A. 1994. Regiones fitogeográficas argentinas. Fascículo 1. Enciclopedia Argentina de Agricultura y Jardinería. Tomo II. Primera Reimpresión. Editorial ACME S.A.C.I. Buenos Aires. 85 pp.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2003. Estimation of Mineral Resources and Mineral Reserves, Best Practice Guidelines: Canadian Institute of Mining, Metallurgy and Petroleum, 23 November 2003.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2010. Definition Standards on Mineral Resources and Mineral Reserves, Resources and Reserves Definitions: Canadian Institute of Mining, Metallurgy and Petroleum, 27 November 2010.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2012. Best Practice Guidelines for Resource and Reserve Estimation for Lithium Brines. November 1, 2012.

Coira, B., 1971. Informe Geológico de los Mosaicos 14C1, 14D1, 13C2, 13C3, 13C4, 13D3, 13D4. Trabajo inédito, 17 pp. Tucumán.

CRIRSCO, 2019. International Reporting Template for the Public Reporting of Exploration Targets, Exploration Results, Mineral Resources and Mineral Reserves. November 2019.

de Silva, S.L., 1989, Altiplano-Puna volcanic complex of the Central Andes: Geology, v. 17, pp. 1102-1106

Explora Mining, 2023, to be described.

F.A.O. y UNESCO, 1976. Mapa mundial de suelos 1:5,000,000, Volumen l, Publicado por la Organización de las Naciones Unidas para la Educación, la Ciencia y la Cultura

Galliski, M., J.E. Arias, B. Coira y A. Fuertes, 1987. Reconocimiento Geotérmico del Área Socompa, Provincia de Salta, República Argentina. Revista del Instituto de Geología y Minería, Universidad Nacional de Jujuy, 7: 37-53. Jujuy.

Galliski, M., J. Viramonte, A. Aparicio Yagüe y F. Márquez Zavalía, 1999. Caracterización del vulcanismo cenozoico de Archibarca, Puna de Salta y Catamarca. República Argentina. 14° Congreso Geológico Argentino, 2: 232-234. Salta.

Geoanalytic, 2023. Protocolo de Control de Calidad. Draft report prepared for NOA Lithium Brines.

Hains Engineering Company Limited, 2018. Technical Report on the Salar de Rio Grande Project, Salta province, Argentina, Report for NI 43-101 prepared on behalf of LSC Lithium, Corp., 143 p.

Houston, J., Butcher, A., Ehren, P., Evans, K., and Godfrey, L., 2011, The Evaluation of Brine Prospects. Economic Geology.

Houston, J., and Jaacks, J., 2010, Technical report on the Sal de Vida lithium project, Salar del Hombre Muerto, Catamarca, Argentina: Report for NI 43-101 prepared on behalf of Lithium One, Inc. 62 p.

Koukharsky, M., 1988. Geología de la puna en la región que media entre el cerro Socompa y el cerro Tul Tul, provincia de Salta. Tesis doctoral N° 2166. Universidad de Buenos Aires. Facultad de Ciencias Exactas y Naturales, 87 p. Buenos Aires.

Méndez, V., 1975. Estructuras de las provincias de Jujuy y salta a partir del meridiano 65 30' oeste hasta el límite con las Repúblicas de Bolivia y Chile. Revista de la Asociación Geológica Argentina, 29 (4): 391-424. Buenos Aires.

Naranjo, J.A. y P. Cornejo, 1992. Hoja Salar de La Isla, Carta Geológica de Chile (1: 250000). Servicio Nacional Geológico Minero, Boletín 72. Chile.

Naranjo, J.A. y A. Puig, 1984. Hojas Taltal y Chañaral, Carta Geológica de Chile (1:250000). Servicio Nacional Geológico Minero, Boletines 62-63. Chile.

Ontario Securities Commission, (OSC) 2011, OSC Staff Notice 43-704 – Mineral brine projects and National Instrument 43-101 Standards of Disclosure for Mineral Projects. July 22, 2011.

Salfity, J. A., S. A. Gorustovich, M. C. Moya y R. Amengual, 1984. Marco tectónico de la sedimentación y efusividad cenozoicos en la Puna Argentina. 9º Congreso Geológico Argentino, 1: 539-554. Buenos Aires.

Segemar, 2008a. Hoja Geologica 2569-II Socompa, Salta. Scale 1:250,000

Segemar, 2008b. Hoja Geologica 2569-IV Antofalla, Salta y Catamarca. Scale 1:250,000

Seggiaro, R.E., F.D. Hongn, A. Castillo, F. Pereyra, D. Villegas y L. Martínez, 2006. Hoja Geológica 2769-II, Paso San Francisco. (1:250.000). Programa Nacional de Cartas Geológicas. Instituto de Geología y Recursos Minerales, SEGEMAR. Boletín 294, 54 pp. Buenos Aires.

Turner, J.C., 1961. Estratigrafía del Nevado de Cachi y adyacencias. Acta Geológica Lilloana, 3:191-226. Tucumán.

Turner, J.C. 1972. Puna. En Leanza, A.F. (ed.) Academia Nacional de Ciencias, Primer Simposio de Geología Regional Argentina: 91-116, Córdoba.

Viramonte, J. G., M. A. Galliski, V. Araña Saavedra, A. Aparicio, L. García Cacho y C. Martín Escorza, 1984. El finivulcanismo básico de la depresión de Arizaro, provincia de Salta. 9o Congreso Geológico Argentino, 3: 234-251. Buenos Aires.

Zappettini, E. O. y G. Blasco, 2001. Hoja Geológica 2569-II, Socompa. Provincia de Salta. Instituto de Geología y Recursos Minerales, Servicio Geológico Minero Argentino. Boletín 260, 62 p. Buenos Aires.

28 ACRONYMS & ABBREVIATIONS

ADY .... ADY Resources
APVC .... Altiplano-Puna magmatic volcanic arc complex
B .... Boron
CIM................ Canadian Institute of Mining
CSAMT .... Controlled Source Audio-frequency Magnetotelluric
DIA .... Declaración de Impacto Ambiental
EIA .... Environmental Impact Assessment
EIR................. Environmental Impact Report
F.A.O. .... Organización de las Naciones Unidas para la alimentación y la agricultura
g/cm3 .... Grams per cubic centimeter
GEC .... Geophysical Exploration and Consulting S.A
HQ .... Drilling tool size-diameter
ha .... Hectares
ISO................. International Standardization Organization
K .... Potassium
km .... Kilometers
km/hr.............. Kilometers per hour
Li.................... Lithium
LSC................ Lithium S Corporation
Ma.................. Million years (annum)
mbls .... meters below land surface
Mg.................. Magnesium
Mg/Li .... Magnesium to lithium ratio
M&A.............. Montgomery and Associates
Mw................. Megawatt
m .... Meters
m^2/d................ Square meters per day
masl................ Meters above sea level
mg/L .... Milligrams per liter
mS.................. Millisiemens
NOA .... NOA Lithium Brines S.A.
QA/QC........... Quality Assurance/Quality Control
QP .... Qualified Person
SME............... Society for Mining, Metallurgy, and Exploration
SO_4................. Sulphate

SP...................Spontaneous Potential
UTM ....Universal Transverse Mercator
VES................Vertical Electrical Sounding

CERTIFICATE OF AUTHOR

Certificate of Qualified Person: Michael J. Rosko

As an author and reviewer of the Technical Report titled "Results of year 2022 and 2023 exploration activities, Salar de Rio Grande Project, Salta Province, Argentina", dated February 15, 2024, with an effective date February 15, 2024, I, Michael J. Rosko, MS, PG, do hereby certify that:

- I am a principal hydrogeologist and vice president with Montgomery & Associates, Inc., 1550 E. Prince Road, Tucson, Arizona, United States.
- I graduated with a Bachelor of Science degree in Geology from University of Illinois in 1983.
- I graduated with a Master of Science in Geology (Sedimentary Petrology focus) from University of Arizona in 1986.
- I am a registered professional geologist in the states of Arizona (25065), California (5236), and Texas (6359).
- I am a registered member of Society for Mining, Metallurgy, and Exploration (#4064687), and a member of the National Ground Water Association, Arizona Hydrological Society, and International Association of Hydrogeologists.
- I have practiced hydrogeology for more than 38 years, with much of this time working in salar basins in Chile and Argentina similar to the Project.
- I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- I have previously visited the Salar de Rio Grande project area on April 8, 2022.
- As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
- I assume responsibility for all Sections of the report.
- I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101. I am independent of NOA Lithium Brines S.A. and independent of

any current or past groups associated with the Property. I am independent of the Project property, with no prior involvement with any aspect of the Project.

- I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 15th day of February, 2024.

Signature of Qualified Person

Michael J. Rosko, MS PG

Print name of Qualified Person