Suite 301,
68 Alfred Street,
Milsons Point NSW 2061
Australia

T 61 2 9929 6868
E info@geosmining.com
www.geosmining.com

EXPLORATION MANAGEMENT | MINING DATA MANAGEMENT | MINING TENEMENT MANAGEMENT
INDEPENDENT TECHNICAL REPORTS & VALUATIONS | RESOURCES ESTIMATION | DUE DILIGENCE

Update of Lithium Brine Mineral Resources

Mariana Project, Salar de Llullaillaco, Argentina
Mariana Lithium Corp.

Geos Job No. 2725-03

Report Date 12 January 2020

Prepared for:

Jason Luo

General Manager

Mariana Lithium Corp.

Prepared by:

Llyle Sawyer

M.App.Sc., MAIG

Senior Consultant

Prepared by:

Murray Hutton

BA (Hons, Geology), MAIG

Principal Consultant

Prepared by:

Greg Curnow

BSc. MAusIMM

Senior Consultant

Contents

Tables

Figures

Photos

1 Executive Summary

1.1 Property Location

The Mariana property covers the Salar de Llullaillaco in the Altiplano Puna plateau of western Salta Province, Argentina (latitude 24°48’30”S / longitude 68°17’45”W).

1.2 Ownership

The mineral development and mining permits, known as “minas”, are held in the name of Litio Minera Argentina SA (LMA). LMA is the project operator on behalf of Mariana Lithium Corp. (MLC), a subsidiary of Jiangxi Ganfeng Lithium Co. Ltd. (Ganfeng).

1.3 Geology & Mineralization

The project consists of a salar brine deposit in which minerals of potential economic value (mainly lithium, potassium and boron) are contained within stratified permeable sediments throughout the property. This style of deposit typically shows broad lateral continuity but limited vertical extents.

The salar constitutes a typical evaporite depositional environment emplaced within an isolated depression bound by Pre-Paleozoic, Paleozoic and Cenozoic crystalline volcanic basement rocks. The salar has a salt crystallised crust of between 0.5m to 50m thick. Locally, around the perimeter, this crust is expanding and covering recent colluvium and alluvium that occur as irregular and discontinuous talus fans and sheet wash.

1.4 Exploration Concept

The Mariana Project is a typical salar brine, containing lithium, potassium and boron within permeable aquifers. Brine deposits are found throughout the Andes region in closed basins (salars) where inflowing waters containing low concentrations of metal are concentrated over time due to evaporation.

The exploration rationale is to characterize the aquifer’s potential to host brine deposits that could be processed by pumping the brine from the permeable aquifers into storage ponds on the surface to further concentrate the brine through evaporation. This concentrated brine is then processed to selectively extract the potentially economic elements, such as lithium, potassium and boron, into saleable products.

Water inflow from springs surrounding the salar can replenish the brines over time. However, the water inflow may also result in dilution of the brines, so determination of sustainable pumping rates is required to maintain the balance between production and replenishment.

1.5 Status of Exploration

Exploration completed on the Mariana project has included:

- Near-surface brine sampling from a grid of shallow pits
- 45 drillholes (including pump testing and monitoring drillholes) and brine sampling
- Surface geophysics traverses (TEM, gravity, seismic) to define the salar stratigraphy and characterize the infill sediments
- Hydrogeological pump testing
- Metallurgical testwork
- Mineral Resource estimation

1.6 Drilling

A total of 46 drillholes (totaling 7,672.5m) have been completed on the Mariana project. The initial seven drillholes were drilled using reverse circulation method, the proceeding 18 eighteen resource drillholes were drilled using diamond core drilling technique. Drilling completed to conduct hydrogeological studies consisted one drillhole, MA15-09PW, being reamed out using rotary drilling method with a tricone bit. Three further hydrogeological pump test wells, to simulate production, were constructed using rotary drill methods and enlarged to production well dimensions using tricone bits. The remaining 19 monitoring wells were drilled using rotary method with a tricone bit.

1.7 Sampling

Sampling of the surface pits was undertaken by bailing the brines after a period of time to allow for settlement of suspended sediments.

During 2010, sampling of the drillholes was by means of a submersible pump at defined intervals, usually 6m, by construction of packed perforated PVC casing. During the 2012 and 2015 programs, samples were collected by airlifting while drilling. From 2016, packer sampling was used and samples were collected by cleaning the well using airlifting.

Field data recorded included temperature, pH, brine density, electrical conductivity, brine coloration and absence of flow or brine recovery times.

1.8 Sample Preparation & Analysis

Because the samples were already in liquid form, sample preparation at the analytical laboratory was not required, except for some sub-sampling and dilution, to enable accurate readings of brine contents and chemical characteristics.

1.9 Pump Testing

Several phases of hydraulic testing of production wells have been conducted since 2015. The pumping tests evaluated hydraulic response between wells and provided data from which primary hydraulic parameters were estimated.

The testing completed to date demonstrates that the salar deposits can sustain high yield wells for periods of long duration without measurably exhausting aquifer capacity.

1.10 Mineral Resource Estimation

Eight lithological units have been interpreted from the drillhole logging and geophysics data. Within these geological units, broad-scale hydrogeological (classified as aquifers, aquitards or aquicludes) were defined and correlated between drillholes.

Aquifer porosities were measured for 405 drill core samples. Modelling of the available porosity data, specifically the effective and specific yield porosities, were domained by lithological units.

The units were modelled using Leapfrog 3D modelling software and geological unit volumes were estimated. Geological and hydrogeological unit modelling indicates that aquifer materials account for 72.7% of the northern basin salar sequence.

Block model dimensions were set at 300mE x 300mN x 5mRL and the dominant geological unit was interpreted for each block. Brine chemistry parameters were interpolated for each geological unit. Classification of the Mineral Resources was determined from long-term pumping tests, aquifer hydraulic properties, location of monitoring bores, density of drillhole spacing, confirmation of geological continuity by interpretation of geophysics data, precision of the hydrogeological model, number of brine samples, understanding of analytical laboratory techniques, distance to data points.

1.11 Conclusions

Mineral Resources estimated for the Mariana project as at August 23, 2019 are:

Resource Category	Aquifer Volume (Mm^3)	Brine Volume (GL)	Brine Density (g/mL)	Li (mg/L)	K (mg/L)	Li (kt)	LCE# (kt)	K (kt)	KCl# kt
Measured	11,200	1,680	1.219	314	9,710	528	2,810	16,300	31,200
Indicated	6,400	960	1.216	316	10,100	303	1,600	9,730	18,500
Inferred	3,140	470	1.218	328	10,340	154	786	4,860	9,260
Measured + Indicated		**2,640**	**1.218**	**315**	**9,860**	**831**	**4,410**	**26,030**	**49,700**

The resources hold reasonable prospects for eventual economic extraction commencing in the medium to longer term (5 to 10 years). Measured Resources, qualifying factors being discounted, has potential to support extraction of up to 20,000t of lithium per year in excess of 20 years minimum.

2 Introduction

2.1 Terms of Reference

Mariana Lithium Corp. (MLC), a subsidiary of Jiangxi Ganfeng Lithium Co. Ltd. (Ganfeng), through their project operator Litio Minera Argentina SA (LMA), commissioned Geos Mining to prepare an independent Mineral Resource Estimation (MRE) on the Mariana Lithium Brine Project, located in the Los Andes Department, western Salta Province, Argentina (Figure 1). The current work provides an update of the initial MRE prepared by Geos Mining for the then owners, International Lithium Corp. (ILC) in January 2017 (Sawyer & Willetts, 2017).

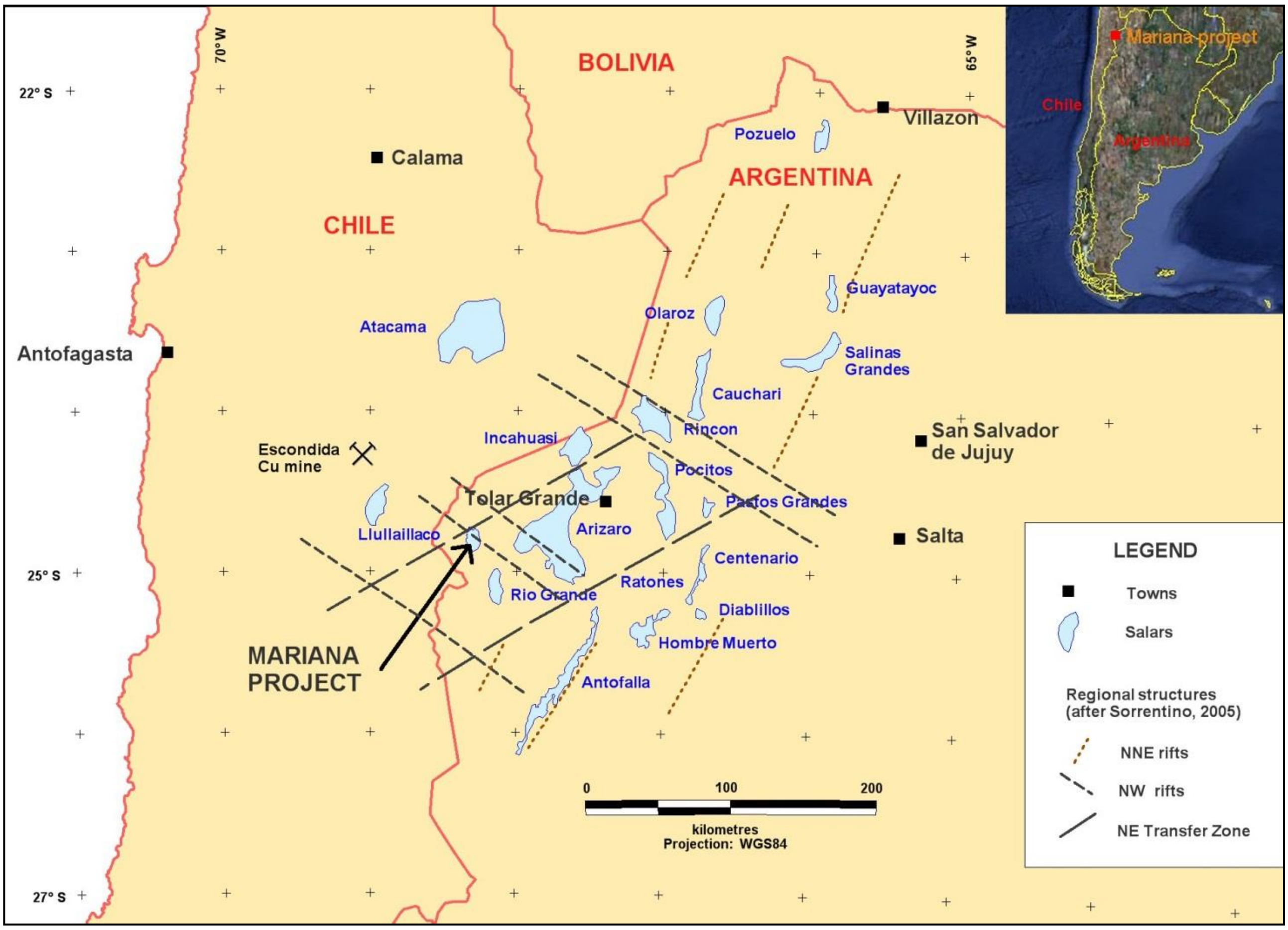

Figure 1: Location of Mariana Project

2.2 Purpose of Report

The purpose of the report is to update the estimation of mineral resources completed by Geos Mining in January 2017.

2.3 SOURCES OF INFORMATION

This report has relied on previous publicly-available NI43-101 reports on the Mariana Lithium project, including:

- "Mariana Lithium Project, Salar de Llullaillaco, Salta, Argentina, Technical Report" (ILC, Harrop, 2011)
- "Mariana Project Pumping Test Program, Final Report, 27/07/2015", (IMExbiz, 2015), an internal report of hydrogeological pump test
- "Preliminary Brine Resource Estimate Technical Report" completed by Geos Mining in 2017
- Exploration results from drilling programs, geophysics and hydrogeological pump tests undertaken by MLC since the 2017 MRE report
- Mineral rights and land ownership information provided by MLC

Geos Mining acknowledges that Sections 3 to 7 of this Report are based mainly on the Harrop (2011) report and a draft Feasibility Study compiled by Litio Minera Argentina (with revisions by Golder Associates (2019)), with some modifications and additions by Geos.

Other sources of information, acknowledged and referenced in the text of this Report, are listed in the References section.

2.4 QUALIFIED PERSON

The Qualified Person (QP) responsible for conclusions in this report is Llyle Sawyer, Senior Consultant, Geos Mining. Mr Sawyer has over 30 years' experience in geology, mineral exploration, hydrogeology, mineral resource estimation and mineral project assessment. He is a Member of the Australia Institute of Geoscientists (member number 3512). Llyle Sawyer is an independent technical consultant contracted by Geos Mining and has worked on similar lithium brine salar deposits in Argentina and other brine style deposits within Australia. He has the required level of experience and expertise to qualify as a Qualified Person (QP) as defined in the National Instrument 43-101, *Standards of Disclosure for Mineral Projects, Form 43-101F1 Technical Report and Related Consequential Amendments* for the style of mineralization and development status of the subject project.

Other persons who helped in the preparation of this report are:

- Murray Hutton, Principal Consultant, Geos Mining
- Greg Curnow, Senior Consultant, Geos Mining

Murray Hutton has over 40 years' experience in mineral exploration covering a broad range of commodities, including lithium brine deposits in Argentina. He is a Member of the Australian Institute of Geoscientists (member number 3732).

Greg Curnow has over 30 years' experience in mineral exploration and mining covering a broad range of commodities and including the use of geological modelling software in the estimation of mineral resources. He is a Member of the Australasian Institute of Mining and Metallurgy (member number 112420).

Geos Mining is a geological consulting firm recognized for providing expertise in geological, mineral exploration, resource modelling and mining advice; as specialists in the fields of geology, exploration, mineral resource and mineral reserve estimation and classification, and project valuation. MLC and its predecessors have engaged Geos Mining to prepare technical reports and supervision of exploration programs for the Mariana Project over many years.

2.5 Site Inspection

Llyle Sawyer has made several visits to the Mariana Project since 2016, most recently during October-November 2018 to supervise pumping tests.

2.6 Units of Measure

Metric (SI System) units of measure are used in this report unless otherwise noted. Analytical results are reported as a percentage weight proportion of chemical element or as milligrams per liter (mg/L).

The national datum for Argentina is POSGAR 94; across the Project area POSGAR 94 Faja 2 co-ordinate system applies. However, locations are presented in WGS84 geodetic datum, UTM Zone 19 South co-ordinated system, for purposes of resource assessment. Any data presented in the POSGAR co-ordinate system have been converted to WGS84 datum for this report. Topographic data (SRTM) acquired freely from NASA satellite survey database is in WGS84 UTM datum and elevations are expressed in meters above mean sea level (masl).

Monetary values are expressed in American Dollars, US$ unless otherwise stated.

2.7 Effective date

The Effective Date of the brine resource estimate and this Report is 23 August 2019, which represents the date of the most recent data that supports the brine estimate and this report. As far as Geos Mining is aware, there has been no material change to the scientific and technical information on the Project between the effective date and the date of signature of the Report.

3 Reliance on Other Experts

The author of this Report is a qualified person (QP) for those areas as identified in the relevant section of this Report. The QP has relied on reports from other experts, which provided information regarding:

- Mineral tenure and rights to extract brine

- Surface access rights and property agreements
- Environmental status

Geos Mining has undertaken suitable checks, enquiries, analyses and verification procedures, considered as meeting the Reasonable Grounds Requirement for the soundness of the inputs that lead to the conclusions drawn in a Public Report (in accordance with the VALMIN Code 2015). Geos Mining take no responsibility if the conclusions of this report are based on incomplete or misleading data that may have been provided by MLC.

While Geos Mining has not independently verified the legal status of any of the above items, the QP believes that there is a reasonable basis for reliance on the information provided by MLC.

4 Property Description

4.1 Property Details

Minas, or development and mining permits, relating to the Mariana Project cover a total of 23,560 hectares, as listed in Table 1 and shown in Figure 2. Tenement boundaries are based on geographic co-ordinates using the POSGAR 94 Faja 2 datum.

4.2 Location of Property

The Mariana property covers the Salar de Llullaillaco within the Province of Salta in northwest Argentina (24°48’30”S / 68°17’45”W) (Figure 1). The property is located approximately 290km due west of the city of Salta (430km by road), 25km east of the border between the Chile and Argentina and 30km west of Salar de Arizaro, the nearest lithium-potash exploration project. The nearest village is Tolar Grande (population 200), which is located 95km east of the project along the Salta – Antofagasta railway route.

Concession Name	Registered Claim Number	Registered Area (ha)	Owner	Date Granted	Approved Survey	Status
Mariana 1	18519	1,500	LMA	27-Mar-07	17-Apr-08	Granted
Mariana 2	18520	1,500	LMA	28-Dec-06	23-May-08	Granted
Mariana 3	18521	1,500	LMA	12-Feb-07	16-Apr-08	Granted
Mariana 4	18522	1,473	LMA	27-Dec-06	27-May-08	Granted
Mariana 5	18719	436	LMA	23-Nov-07	5-Mar-08	Granted
Mariana 6	18749	1,500	LMA	23-Nov-07	4-Mar-09	Granted
Mariana 7	18748	1,500	LMA	3-Mar-08	2-Mar-09	Granted
Mariana 8	18747	1,500	LMA	23-Nov-07	4-Mar-09	Granted
Mariana 9	18746	1,500	LMA	21-Nov-07	12-Feb-09	Granted
Mariana 10	21056	2,000	LMA	11-Jul-13	28-Apr-15	Granted
Mariana 11	21057	2,000	LMA	24-Sep-13	24-Feb-15	Granted
Mariana 12	22257	2,800	LMA	4-Jun-15	3-Jun-16	Granted
Rosa IV	19729	2,926	LMA	3-Nov-16	Pending	Granted
Mariana 14	23287	1,425	LMA	17-Oct-17	Pending	Pending[1]
TOTAL AREA		**23,560**				

Table 1: Mariana mineral tenements

[1] According to the draft PEA

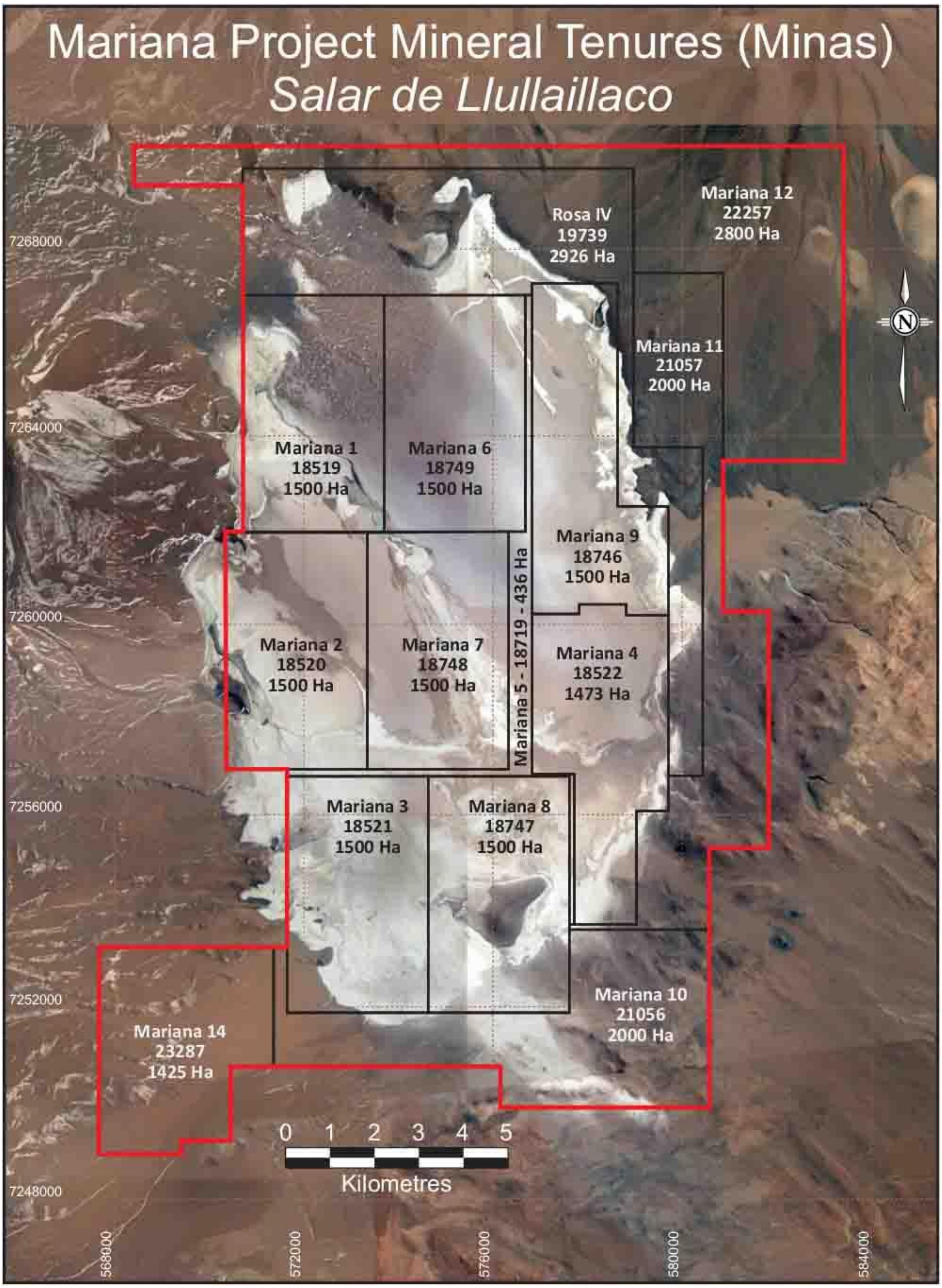

Figure 2: Mariana Project mineral tenements

Note: Grid coordinates are in WGS84 datum, UTM Zone 19S.

4.3 Surface Rights

The Minas provide the tenement holder with exclusive rights to explore for and develop mineral commodities. Tenure for Minas is indefinite, providing that annual payments ("Canon") are made in February and July each year. Annual reporting on work and investment on the property is required until such time as the commitment under the five-year investment plan are met, after which reporting is every two years with the Biennial Environmental Impact Report.

Based on legal opinion provided by ILC to Geos for the 2017 MRE report, the mining rights and assets transferred to LMA operatorship are valid. The opinion confirms that the mining canon (statutory required payments) had been duly paid and that no injunctions forbidding the assigners from disposing of or selling their property were registered. In addition, the opinion confirmed the registration of the agreements between LMA and the previous owners with the proper authorities.

Geos Mining has not independently verified the legal status, ownership of the property, underlying property agreements, joint ventures or permits. Geos has fully relied upon information provided by ILC, LMA, and recent confirmation from MLC. The authors are not aware of other known or recognized owners/operators with mining or exploration rights within the brine resource area and disclaim responsibility for information or advice received from MLC in relation to the tenure status of the Project.

4.4 Location of Mineralized Zones, Mineral Resources, Mine Workings

Brines containing minerals of potential economic value (mainly lithium, potassium and boron) are contained within stratified permeable sediments throughout the property. Mineral resources are based on the ability to extract the brines by pumping into surface evaporation ponds to produce concentrated brine that can be further processed at a chemical facility at- or off-site to produce saleable commodities.

There are currently no known mine workings within the property.

4.5 Royalties, Farm-In Rights, Payments & Agreements

The QP has not reviewed the property agreements, nor independently verified the legal status. The authors have fully relied upon, and disclaims responsibility for, information or advice received from MLC in relation to the property agreements relating to the Project. The author is aware that, as of a news release dated 22 January 2019 in relation to the Mariana Lithium project in Salta Province, Argentina, TNR Gold Corp (TNR) held a 1.8% Net Smelter Returns ("NSR") Royalty on the Mariana project. ILC has a right to repurchase 1.0% of the NSR royalty on the Mariana Lithium property, of which 0.9% relates to TNR's NSR interest.

4.6 Environmental Liabilities

A condition of the Minas is that an independent consultant completes an environmental report (Harrop & MacDonald, 2011), Biennial Environmental Impact Report, which is submitted every two years.

The QP has not reviewed the environmental status of the project, nor independently verified any environmental impacts. The authors have fully relied upon, and disclaim responsibility for, information or advice received from MLC in relation to the environmental status of the Project. MLC advised the authors that environmental impact assessments covering the 2010-2018 drilling campaigns were approved by the Secretary of Mining for the Province of Salta, Salta Provincial Government.

4.7 Permits Required to Undertake Work Programs

The QP is not aware of the need for special permits to undertake work programs.

5 Accessibility, Climate, Infrastructure & Physiography

5.1 Topography

The Mariana Project is situated within the Argentine Puna ("Puna Austral"), which is characterized by a large plateau at a general elevation of 3,500 masl (meters above sea level), surrounded by mountain ranges reaching heights that may exceed 6,000 masl. The average elevation of the Mariana Project salar surface is 3,754 masl with immediate bordering volcanic mountains extending over one thousand meters higher in elevation (Photo 1).

Photo 1: View across southern portion of Salar de Llullaillaco looking west

(Peak of Cerro Llullaillaco volcano in the distance)

Several shallow, low velocity springs enter the Salar from various directions. Two major springs flow on either side of Cerro de Rosado volcano into the northwest and west edges of the Salar and on to the central west portion of the Salar. Another major spring flows northeast from the southwest edge of the Salar. A lesser spring flows into the north margin of the Salar, flowing south to southeast. Minor springs/seepage occur on the east margin of the Salar, flowing west.

5.2 Accessibility, Proximity to Population Centres & Transport

The Mariana Project is accessible from the city of Salta, through the town of San Antonio de Los Cobres via paved National Highway 51, and then via Ruta Provincial 27 from Cauchari Station through Pocitos to Tolar Grande (Figure 3). Access from Tolar Grande can be gained via three alternative routes:

- Route 1: the shortest route follows the railway via unpaved road from Caipe Station to past Chuculaqui Station and then turns south to travel down to the eastern side of Salar de Llullaillaco past Cerro del la Carpa.
- Route 2: is via a paved stretch of road, built for Mina Julia (sulphur mine) and Mina la Casualidad (historic processing site for sulphur ore cabled in from Mina Julia), south from Caipe Junction and passing around the southwest edge of Salar de Arizaro toward the Casualidad mine. At the Semanta intersection there is an unpaved road northwest to the eastern side of Salar de Llullaillaco, in proximity to where the Mariana camp is situated. This route is only suitable for four-wheel drive vehicles.

- Route 3: the longest route is via a paved stretch of road that terminates at the Casualidad mine. Access is then via an unpaved road north to the southern end of Salar de Llullaillaco. This route has a shallower incline, paved sections and is open in a broader range of weather conditions, which makes it passable by a greater range of vehicles and therefore a primary route for haulage trucks.

Overall, the distance from Salta to the Mariana Project property is approximately 430 km by road, which is a driving time of eight to ten hours.

The nearest commercial airport to the Mariana Project is located in the city of Salta, which is serviced by regular commercial flights from major South American cities. The city of Salta has approximately 608,400 (census, 2015) inhabitants and offers the normal range of modern services.

The Salta-Antofagasta railway is a 1m gauge, non-electrified, 941 km, single track railway that connects the city of Salta, Argentina with the port city of Antofagasta, Chile. Service for freight now operate between Pocitos, Argentina, and Antofagasta, several times per month. The track distance from Antofagasta to the Chuculaqui Station is approximately 290 km. From Chuculaqui, access to the Project site is via a 59 km unpaved road.

It is anticipated that any future exploitation operations will be able to be conducted year-round. The only exceptions to this occur during late January to early February when summer rains may complicate access to certain portions of the salar.

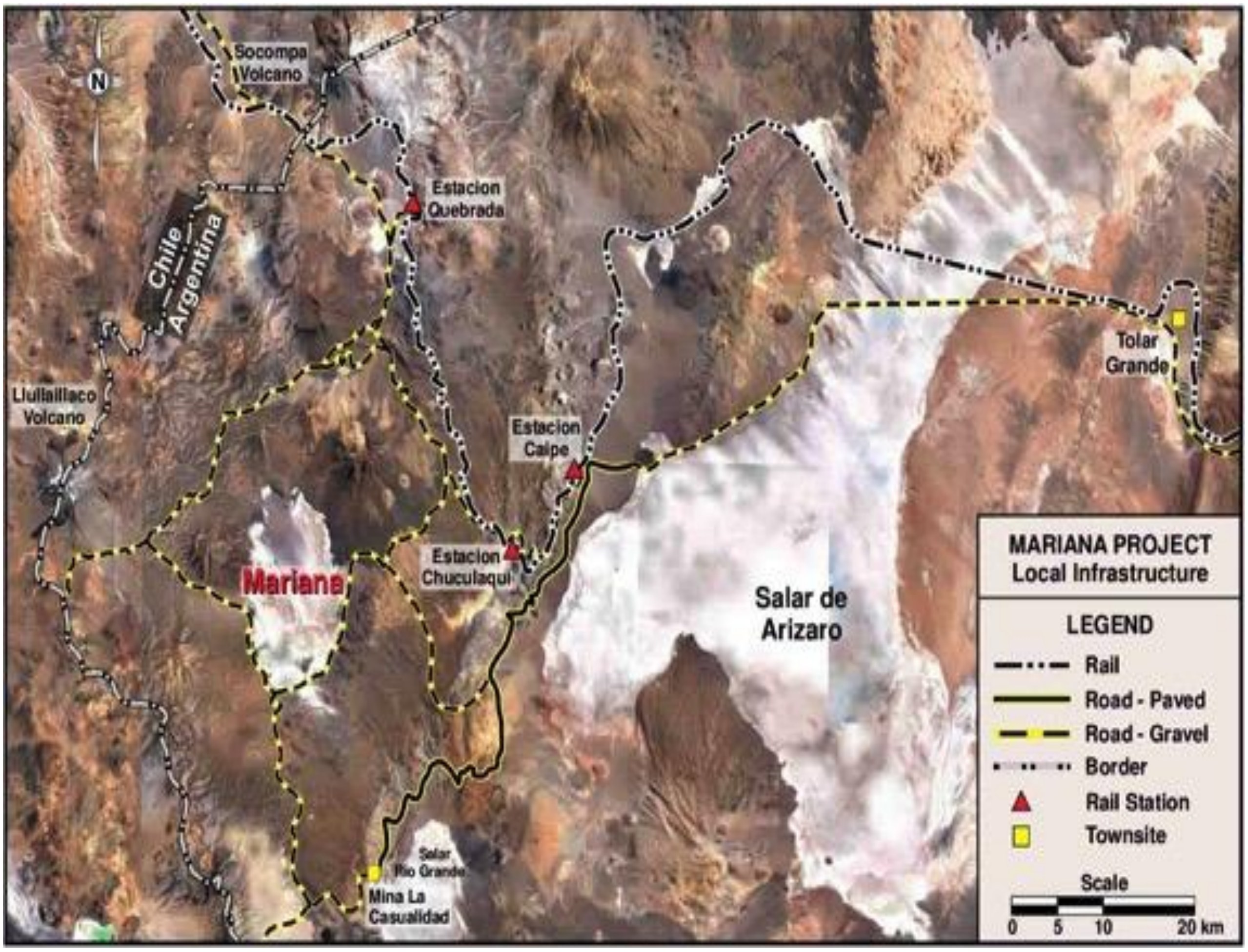

Figure 3: Access routes from Salta to Mariana Project (after Harrop & McDonald, 2011)

5.3 Flora & Fauna

Throughout the project area, vegetation is sparse, consisting of varieties of upland grasses and rarer small shrubs. Locally, vegetation is limited to varieties of upland grass species. Plant species that can be found on the margins or the surrounding areas of the salar are limited to añagua, *Parastrephia lepidophilla*, as well as a variety of grasses found on high altitude alluvial plains, where fresher water can be trapped in surficial materials / soils.

Fauna present in the region is just as scarce as the flora. Mammals observed in the Mariana Project area include vicuña, native foxes and common mouse. Species *Chinchilla brevicaudata* and llama are other potential inhabitants. A variety of lizards and birds can be observed, including flamingos, Andean terns and native grouse. The nucleus of the salar, away from marginal springs and water bodies, is generally free of fauna and flora.

5.4 CLIMATE

The Argentine Puna region has an extremely dry and arid climate, with little or no annual rainfall. Table 3 provides a summary of climate data for Salar de Diablillos, 160km to the east-southeast of Mariana, including temperature, precipitation, pan evaporation and the expected brine evaporation rate calculated from the pan evaporation rate. At Salar de Hombre Muerto, an operating brine extraction operation in Argentina 140km to the southeast of Mariana, rainfall is reported to average 60-80mm/year. This is consistent with the values observed at other salars within the Puna region (Salar de Olaroz) and the expected range of 50-70mm/year for the Mariana Project. The majority of the precipitation occurs during the months of January through to March.

Monthly precipitation and temperature data from a weather station installed in the central area of Salar de Llullaillaco during 2015, listed in Table 2. During the winter season (July and August), temperatures in the Project can exhibit large daily variations, commonly from -15°C to 16°C within 24 hours. During the summer months (December to February) temperatures would be expected to range between 20°C to 30°C during the daytime and around or less than freezing during the night.

Month	Precipitation (mm)					Average temperature (°C)				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
Jan	0.0	0.0	32.0	0.3	7.1	12.6	12.9	13.0	10.8	12.7
Feb	1.0	2.8	14.2	37.8	42.8	11.7	13.0	11.0	10.8	11.7
Mar	43.2	0.0	0.0	5.8	0.0	10.2	10.5	10.2	9.6	9.8
Apr	0.0	2.0	0.0	0.0	0.0	6.7	7.8	6.1	8.5	6.1
May	2.3	0.0	7.3	0.0	0.0	2.7	5.2	3.4	3.0	3.7
Jun	0.0	0.0	24.0	0.0	0.0	1.6	2.1	-1.8	1.1	2.7
Jul	0.0	0.3	0.0	0.0	0.5	1.0	1.6	-0.2	1.2	1.3
Aug	0.0	0.0	0.0	0.0	0.0	2.9	2.4	1.5	0.6	2.4
Sep	nd	0.0	0.0	0.0		nd	5.9	4.6	4.1	
Oct	nd	0.0	0.3	0.3		nd	6.9	6.8	6.8	
Nov	0.0	0.0	0.0	0.0		9.1	8.6	8.1	9.3	
Dec	0.0	0.0	0.0	0.0		10.6	11.0	10.8	9.9	
TOTALS	**46.5**	**5.1**	**77.8**	**43.9**						

Table 2: Climate data for Salar de Llullaillaco

Note: nd = no data recorded for September & October, 2015

Solar radiation monthly averages vary between 150 W/m^2 and 350 W/m^2 (Figure 4). This reflects the high altitude, very steep terrain and low angle of incidence of the sun in the Project area. The low level of solar radiation also indicates that this is not the only prime contributor to evaporation throughout the Project area. Wind velocity is a major contributor to evaporation throughout the region.

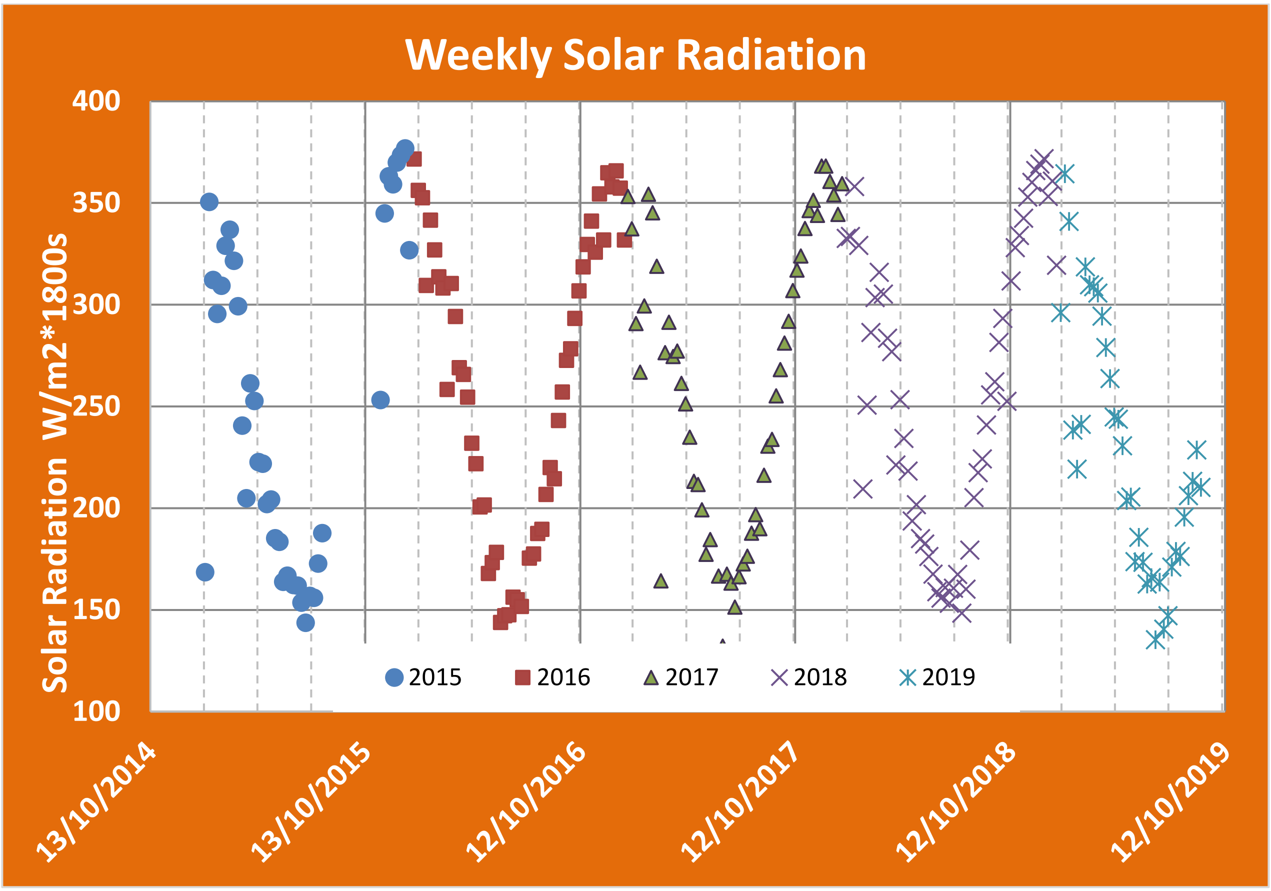

Figure 4: Weekly solar radiation at Salar de Llullaillaco, 2015-2019

Average wind speeds from 10 km/h to 25 km/h, predominantly from the northwest and west, have been recorded throughout the year. Gusts in excess of 60 km/h are common in the project area (Figure 5).

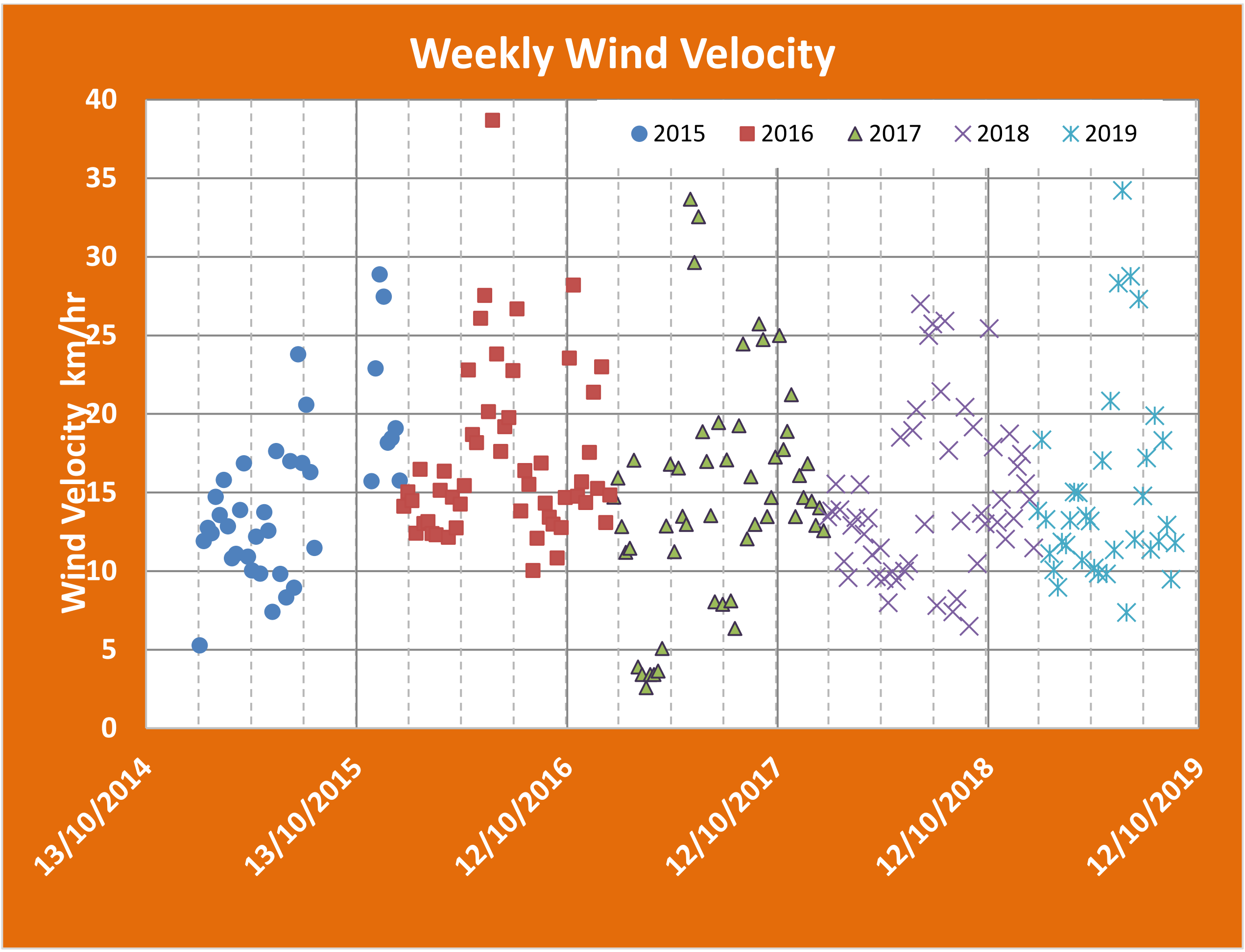

Figure 5: Average Weekly Wind Velocity at Salar de Llullaillaco, 2015-2019

The Pan Evaporation Rate shown in Table 3 was calculated for Salar de Diablillos (SRK, 2011) using the empirical relationship derived from several salars in the Atacama Desert presented by Houston (2006). Using this equation, Freshwater Pan Evaporation = 4,364 - (0.59*A), where A is altitude (4,000 m), giving a calculated Pan Evaporation Rate of 2,000 mm/year. Monthly values were then calculated using monthly fractional values of annual Pan Evaporation for sites in the Atacama Desert presented by Houston (2006).

Brine Pan Evaporation Rate is calculated using the relationship between fluid density and Pan Evaporation, where it is shown that for every 0.1 increase in fluid density, evaporation decreases by 700 mm/year. Finally, a Net Evaporation rate for ponds is calculated by multiplying the Brine Pan Evaporation Rate by 0.7, which is a factor commonly used to convert between Pan Evaporation and Pond Evaporation Rates.

Month	Precipitation (mm)	Temperature (Deg C)	Freshwater Pan Evaporation (mm)	Brine Pan Evaporation (mm)	Net Brine Pond Evaporation (mm)
January	35.6	11.6	230.2	149.8	79.9
February	20	10.9	214.3	139.4	83.6
March	7.8	9	204.4	133.0	87.6
April	1.1	5.5	158.7	103.3	71.5
May	0.7	1.6	123.0	80.1	55.5
June	1	-0.8	107.1	69.7	48.1
July	1.2	-1.6	105.2	68.4	47.1
August	0.8	0.3	125.0	81.3	56.4
September	1.6	2.7	144.8	94.3	64.9
October	0	5.4	186.5	121.4	85.0
November	0.4	7.4	192.5	125.2	87.4
December	7.1	9.6	212.3	138.2	91.7
Annual Total/Average:	**77.4**	**5.2**	**2004.0**	**1304.0**	**858.6**

Table 3: Climate data for Salar de Diablillos (after SRK, 2011)

In comparison, using the Freshwater Pan Evaporation formula of Houston (2006) for the Mariana Project calculates to a Freshwater Pan Evaporation Rate of 2,650 mm/year (Table 4). This is slightly higher than that calculated for Salar de Diablillos.

Month	Freshwater Pan Evaporation (mm)				Brine Pan Evaporation (mm)				Net Brine Evap (mm)	
	2015	**2016**	**2017**	**2018**	**2015**	**2016**	**2017**	**2018**	**2017**	**2018**
Jan	123	nd	310	318	58	nd	169	173	nd	184
Feb	211	nd	231	228	146	nd	126	124	nd	130
Mar	184	234	305	253	118	162	166	138	nd	148
Apr	154	169	241	173	88	117	131	94	147	120
May	135	156	234	168	70	108	128	91	148	101
Jun	110.	99	108	163	45	69	59	89	72	77
Jul	149	172	131	113	83	119	71	62	66	94
Aug	nd	145	187	136	nd	101	102	74	114	102
Sep	nd	199	259		nd	138	141		140	
Oct	nd	324	320		nd	225	175		107	
Nov	261	314	325		196	218	177		173	
Dec	292	330	352		227	229	192		180	
TOTALS	**2,337**	**2,615**	**3,001**	**1,551**	**1,559**	**1,837**	**1,638**	**846**	**1147**	**956**

Table 4: Evaporation data for Salar de Llullaillaco

The evaporation data in Table 4 was calculated using the same formula as used for Salar de Diablillos and a brine density of 1.22 g/mL, as indicated at Mariana Project (Sawyer & Willetts, 2017). The initial Freshwater Pan Evaporation from these calculations is lower than the calculated Freshwater Pan Evaporation Rate of 2,650 mm/yr. Subsequent Brine Evaporation Rates are considerably lower by this estimate, which is also biased by the high brine density indicated at Mariana Project. Due to the altitude, temperature ranges and high wind factor, evaporation would be expected to be similar to, or exceed, that at other salars within the region. Evaporation is highly important in the processing of brine materials and needs to be verified by systematic measurement at the Mariana Project.

Exploration activities can be conducted throughout the year and it is expected that future exploitation operations shall be conducted year-round. Exceptions may occur during late January and early February, when summer rains/snow may complicate access to certain portions of the project area. Access may be complicated by heavy snow falls sporadically from May to September. It should be noted that the weather data sighted by Geos does not record snowfall level / amounts or frost-ice occurrences. Snowmelt water is considered a major contributor to the fresh / brackish water inflow to the project.

Full climate details are described in 'Salar de Llullaillaco Water Balance', Montgomery and Associates, 2019.

5.5 Infrastructure

Project site infrastructure includes a permanent camp (Photo 2) with a maximum capacity of 40 people, a workshop, offices, mess hall/kitchen amenities, analytical laboratory, storage facilities, fuel dispensers and electricity generators.

Water management in a fragile environment, such as a high altitude, very arid, salar environment, is a challenge. A separate freshwater drilling program was conducted to identify viable fresh water source within the property boundary.

Photo 2: Mariana Project exploration camp looking southeast

Note: on-site analytical laboratory in foreground; pilot evaporation ponds in background

There is no power grid access to the project site. All electricity is generated on site by diesel-powered generators.

6 History

6.1 Prior Ownership of Property

In May 2009, TNR Gold Corp (TNR) signed an option agreement with the title holders of Mariana 1 – 9 to acquire 100% interest in Mariana property, through its wholly-owned subsidiary Minera Solitario Argentina S.A. (MSA), by way of payment of US$3M over 5 years, plus incur US$2.5M in exploration expenditure over four years. The Mariana Option Agreement also entitled TNR to grant to International Lithium Corp. (ILC), through its wholly-owned subsidiary Litio Minera Argentina S.A. (LMA), the option to acquire a 100% interest in the Mariana Project property in exchange of the reimbursement of TNR's acquisition, maintenance and exploration costs on the Mariana property. US$1M was paid through ILC shares (7M) and warrants (7M) issues. The cash balance payment was made at the time TNR delivered an NI43-101-compliant technical report for the Mariana property (Harrop & McDonald, 2011), whereupon ILC granted to TNR a 2% Net Smelter Returns Royalty. ILC held the right to purchase half (1%) of the royalty for payment of US$1M at any time within 240 days of commencement of commercial production.

On August 01 2011, MSA applied to the Department of Los Andes, Province of Salta, for registration of the Mariana 10 and Mariana 11 licences. The Mariana 10 licence was granted on July 11 2013, and the Mariana 11 licence was granted on September 24 2013. On November 26 2013, MSA applied for registration of the Mariana 12 licence, which was granted on June 04 2015.

On September 12 2014, the title of the Mariana licences 10, 11 and 12 were transferred from MSA to LMA. On October 06 2014, the title to the Mariana licences 1 to 9 were transferred from MSA to LMA.

During the three months ended December 31 2014, a formal joint venture agreement was executed between ILC and MLC over the Mariana Property, in accordance with the terms of the strategic partnership agreement with Ganfeng.

Mina Rosa IV was acquired directly by LMA on November 03 2016, through an application to the Provincial Government for a pre-existing concession that was cancelled. It was granted on the condition of paying taxes owed.

On October 17 2017, LMA, on behalf of the joint venture partners, requested registration of the Mariana 14 licence. The request is proceeding through the approval process.

The Mariana Lithium project is owned 82.754% by Ganfeng Lithium and 17.246% by ILC, as at January 28 2019.

6.2 Historical Exploration

There is no recorded exploration at Salar de Llullaillaco that pre-dates the establishment of the mineral claims, although there has been detailed geological mapping of the local area, presumably conducted by government survey geologists (Zappettini et al, 2001). Sampling of the salar brines or crust by these workers is not recorded.

References to borates in parts of Salar de Llullaillaco have identified small-scale mines in some localities. These references do not seem to be a good documentation of previous work.

Any records of this pre-existing work are not available to Geos. No evidence of earlier work other than that by ILC was observed in the field during site visits by Geos.

Due to the remoteness of the locality and the sparsity of inhabitants, it is unlikely that lithium-bearing brines would have been explored for and/or sampled extensively prior to ILC.

6.3 Historical Mineral Resources

There are no reported mineral resources in the Mariana Project area prior to the involvement of TNR.

6.4 Historical Mine Production

There has been no recorded mine production from the project area, apart from small-scale production of borates (data not available).

7 Geological Setting

7.1 Regional Setting

The Project is located in the Altiplano Puna plateau (Puna), the main lithium-bearing region of South America, which is approximately 2,000km long by 300km wide with an average elevation of 3,500masl.

A volcanic arc forms the western margin of the Puna. East of the volcanic arc, local volcanic edifices are present within the plateau. The volcanic arc and eastern volcanic centres have been active from Miocene times to the present day (Jordan, 1989) and are largely regarded as the origin of mineralizing fluids. Uplift of the plateau is the combined result of late Tertiary crustal shortening and magmatic addition.

The volcanic arc marks the limits of the Puna hydrologic basin to the west and a tectonic highland area to the east (Eastern Cordillera). In the southern Puna, combinations of east-trending volcanic chains and north trending, reverse fault-bounded structural blocks bound several hydrologic sub-basins. Extensive salars cover the basin floors, which are typically surrounded by expansive alluvial systems. Thick (up to 5km) sections of Neogene strata are present within the modern depositional basins containing evaporite (mainly halite, gypsum and borates) and alluvial clastic material with minor tuffaceous horizons. Exposed Neogene strata are present in reverse fault-bounded slices along various salar margins or as intra-basin uplifts within salars.

Runoff and ground flow drainage is towards these closed basins so that the only way of water returning to the hydrological cycle is by means of evaporation, leaving behind brines enriched in various metal ions and salts, sometimes including anomalous levels of lithium, boron, and potassium. Figure 6 shows the regional geology of the Puna Plateau within the regional location of the Mariana Project salar.

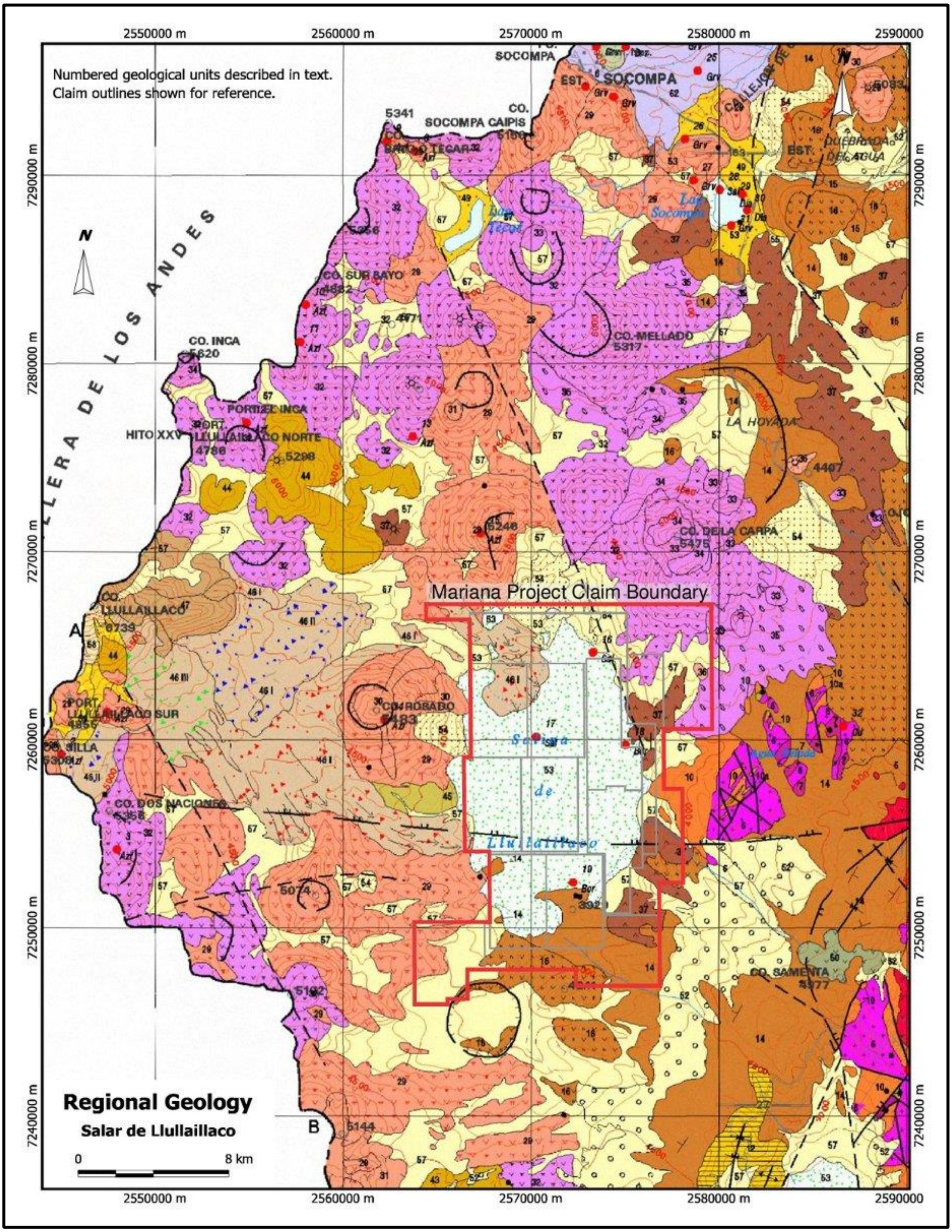

Figure 6: Regional geological setting (after ILC, 2011)

Note: Grid coordinates in POSGAR 94 F2 datum; numbers for rock units explained in Local Geology section

7.2 Local Geology

The salar constitutes a typical evaporite depositional environment emplaced within an isolated depression bound by Pre-Paleozoic, Paleozoic and Cenozoic crystalline volcanic basement rocks. The basement of the salar is postulated to correspond to a Miocene volcanic sequence. The salar has a salt crystallised crust of between 0.5m to 50m thick. Around the perimeter, this crust is covered by recent colluvium and alluvium in irregular and discontinuous talus fans and sheet wash.

Bedrock geology and Quaternary geology data are taken from government 1:250,000 scale mapping (Figure 6) with minor revisions and additions from company exploration activities. Numbers after the described rock units refer to areas on Figure 6.

Bedrock geology is often masked by alluvial and colluvial unconsolidated sediments as well as younger volcanic units. There are a few outcrops near the margins of the salar and in the islands that lie in the south and west portions of the salar. A very small outcrop of a lower Ordovician volcano-sedimentary unit [1] lies east of the salar. Porphyritic granite, granodiorite and microdiorite, belonging to the Permian to Triassic Llullaillaco Plutonic Complex [6, 7], outcrop east of the salar. These are unconformably overlain by ignimbrite, dacite and tuff of the lower Eocene Santa Ines Volcanics [10] and intruded by rhyolite - rhyodacite dykes [10a].

These in turn are overlain by the Oligocene to early Miocene volcano-sedimentary package of agglomerate, tuff, porphyritic rhyodacite and andesite of the Quebrada del Aqua sequence [14, 15, 16]. These form the basement to the early playa formation.

Regional geological information indicates that the salar began to form evaporite [53] deposits no later than Early Pliocene (~5Ma) and possibly as early as Late Miocene (~11Ma). Prior to isolation, the basin catchment appears to have drained to the north. There is no evidence that indicates drainage of the pre-salar basin draining to the south or east.

Post commencement of evaporite accumulation, a series of active volcanic centres have continued to cover the basin in volcanic and volcanogenic sediments from Miocene through to the Holocene, including recorded eruptions.

Late Miocene andesite, dacite, air fall pyroclastic sequences [29, 30, 31] from Cerro de la Carpa, Cerro de Rosado and others are mapped along the west and northern edges of the salar. These are considered to have been intersected in drill cores and have covered early evaporite deposits in the salar. Subsequent groundwater flow has not removed the underlying evaporite deposits, which are evidenced by halite-sulfate-arenaceous sequences below the volcanic units; hence these Late Miocene volcanic units are not the floor to the salar.

Minor fissure eruption Late Pliocene basalts and andesite [37] are associated with NNE structures associated with crustal weak zones.

Early Pleistocene Llullaillaco Volcanic Complex [44, 45, 46, 47] of potassic calc-alkaline volcanic arc dacite, ignimbrite and volcano-sedimentary debris flows contribute to the salar sediment sequence and have been intersected in drill core. Several piedmont debris fields [52] and mass wasting debris deposits [54] are mapped as late Pleistocene and Holocene associated with smaller volcanoes. Holocene cover composed of alluvial and colluvial material is present in much of the area surrounding the salar.

Evaporite [53] is stratigraphically presented as late Pleistocene to mid Holocene in government maps. This reflects the younger or surface evaporite deposition. Drillhole data indicate that there are buried deposits of evaporite beneath a tuff layer and even older evaporite (Pliocene?) beneath debris flow/ignimbrite. This is evidenced in drillholes MA12-07 to MA16-23, which, after passing through 22m to 30m of halite, intersected a widespread tuff layer of varying thickness, and then a further up to 40m of halite. Drilling has generally then intersected a thick 50m to 70m of volcano-sedimentary debris flow or breccia /ignimbrite and or andesite material before passing back into a sand and halite unit. An arenaceous sedimentary unit between the overlying halite and the underlying volcanic units has been encountered in several drillholes; this may represent riverine / drainage channel deposition.

Volcanic units of andesite-dacite and tuff were logged in various drillholes and correlated with similar intercepts in neighbouring drillholes by logging and geophysics survey transect modelling. However, the presence of specific volcanic lithologies at analogous depths is not consistently recorded in the drillhole logs, which means that the interpretation of continuous units between holes is tentative.

A broad categorization of the major geological units has been defined, as summarised in Table 5.

Class	Code	Dominant Lithologies
DEB	VOLdf	Debris flow – volcanogenic avalanche debris flow
TOP	HLT	Halite and halite-sulfate, minor sulfate-halite and sand sediments; a high degree of secondary porosity is noted
TUFF_1	VOLT	Tuff, pyroclastic flow, tuffaceous sediment (marker horizon)
HLT_1	HLT/SUL	Halite, Halite-Sulfate and sulfate-halite, minor sand sediments
SED_1	SED	Sand and gravel sediments, some halite and sulfate
VOL_1	VOL/VOLbx	Andesite, basalt, dacite, breccia and volcano-sedimentary breccia
HLT_2	HLT/SUL	Halite-Sulfate, Halite and sulfate-halite, some sand sediments
SED_2	SED	Sand and gravel sediments, some halite and sulfate, minor carbonate

Table 5: Interpreted lithology sequences (youngest at top)

7.3 Hydrogeological Setting

The hydrogeological setting for most of the Argentinean Puna is characterised by the strong closed-basin behaviour where saline depressions (salars) received relatively small discharges from fluvial tributaries (Figure 7). Temporal or permanent shallow closed lagoons may have formed in topographic low sections of these depressions.

Occasional but intense precipitation events occur during summer; this may occur in the form of snow or hail in the higher mountains of the surroundings. At lower altitudes, strong rains may occur. After short-duration surface run-off, the aridity of the area results in most of the water from the mountains to infiltrate rapidly in thick alluvial fans with high permeability as ground flow or to evaporate.

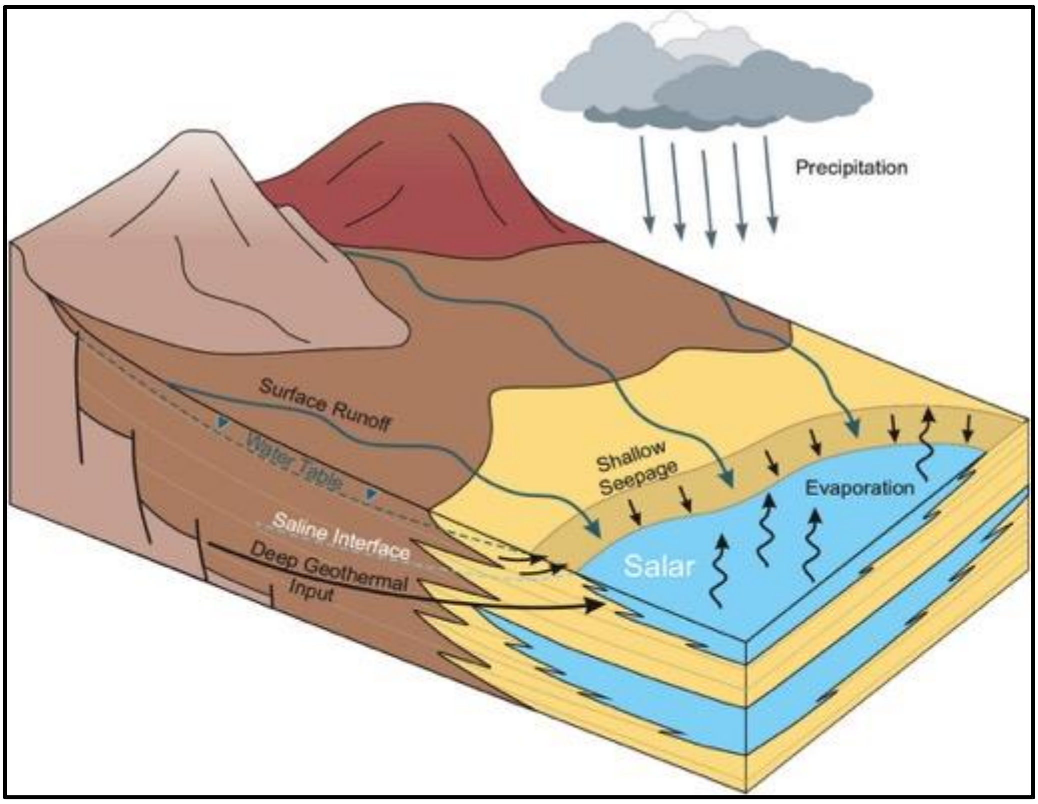

Figure 7: Typical salar water budget

Salar de Llullaillaco is located in the western edge of the Puna of Salta and forms a closed basin where run-off accumulates from the eastern slopes of the Cerro de Llullaillaco mountain chain. The basin is geographically isolated since it is completely enclosed by the surrounding mountains. The hydrographical basin of the Mariana Project is an elongated intermountain depression with a length of approximately 15km north to south and a width of approximately 9km east to west. The drainage basin covers a total area of ~1,600km^2, of which ~150km^2 corresponds to the evaporite salar environment, Salar de Llullaillaco.

Brackish water flows across the salar from a major spring / seep at the northern foot of Cerro de Rosado; forming a major stream inflow. This stream flows in a general southeast direction to the central west portion of the salar (Figure 8). Other major stream inflows of brackish water are from springs / seeps on the western margin, at the southern foot of Cerro Rosado. Apparent lesser stream / spring inflow from the northern margin flows south to southeast. Minor, though not insignificant, springs / seeps on the east margins also flow towards the centre of the salar, while those within the southwest and southeast margins tend to have shorter flow distances eastward and westward respectively.

Evaporation dome studies have been conducted continuously on Mariana since the end of 2017, with measurements being collected on average every 3 months. Using these measurements, Montgomery & Associates published a report in Feb 2019 (Montgomery & Associates, 2019) that estimated a range for recharge of 500-1,000 L/sec and an average evaporation rate of 900 L/sec.

Observation at 27 sites located around the perimeter of the salar (green icons Figure 8) indicate that brackish inflow varies in rate from approx. 0.1 L/min to 1,000 L/min. Several sites observed during site visits concur with these general observations. The major 1,000 L/min inflow occurs within a large geothermal seepage zone that wraps around north end of 1.2 km outcropping ridge within the western edge of salar; site 20N, 20a, 20b and 20S (Figure 8). Brackish waters can be up to ~30°C in temperature at this locality. Inflows here merge into a broad flat-bottomed shallow (1 m wide x ~7 cm deep) stream. Flow tests of the stream gave ingress of 20 – 21 L/s; rounded down to 1,000 L/min to account for edge and bottom drag factors.

The geologic depositional environment has created a complex arrangement of aquifers and aquitards across the basin. Three hydrostratigraphic units have been described, as follows:

Unit I: This unit is primarily evaporites with fine-crystalline sulphates overlain by halite, either massive or granular. The unit includes minor, aeolian-deposited volcanic sediments (generally well sorted sands) within a halite matrix and few tuffaceous beds. Secondary porosity is significant within this unit. This secondary porosity is potentially a significant volume of brine storage. The fine-crystalline sulphates to massive halite and the tuffaceous deposits can act as confining layers for underlying units. The depth of this unit extends from surface to 34m near the eastern edge of the salar (drillhole MA16-19) and is thickest in the northern (98m) and western parts of the salar (90 to 170m – drillhole MA17-24).

Unit II: This unit is primarily a volcanic unit, which includes multiple fractured volcanic andesitic flows, debris flows and breccias and marks a time of active volcanism around the salar. Interlayered among the volcanic layers are narrow lenses of halite and sulphates. The unit can be highly permeable due to the fractured nature of the flows and breccias. The depth of this unit extends from 34m (drillhole MA16-19) to over 160m below surface (drillhole MA16-23).

Unit III: This unit consists of the lower halite-sulphate sequence intersected in the lower portion of most of the resource drillholes. The true thickness of this unit has only been tested in three drillholes (MA16-18, MA16-23 and MA18-26) and was found to vary from 78m in drillhole MA18-26 in the south to 113m thick in drillhole MA16-23 in the north.

As noted above, both drillholes MA16-23 and MA18-26 intersected deeper volcanic and clastic sedimentary horizons below Unit III. These units are still under-explored and open up the possibility of extending the aquifers to greater depth.

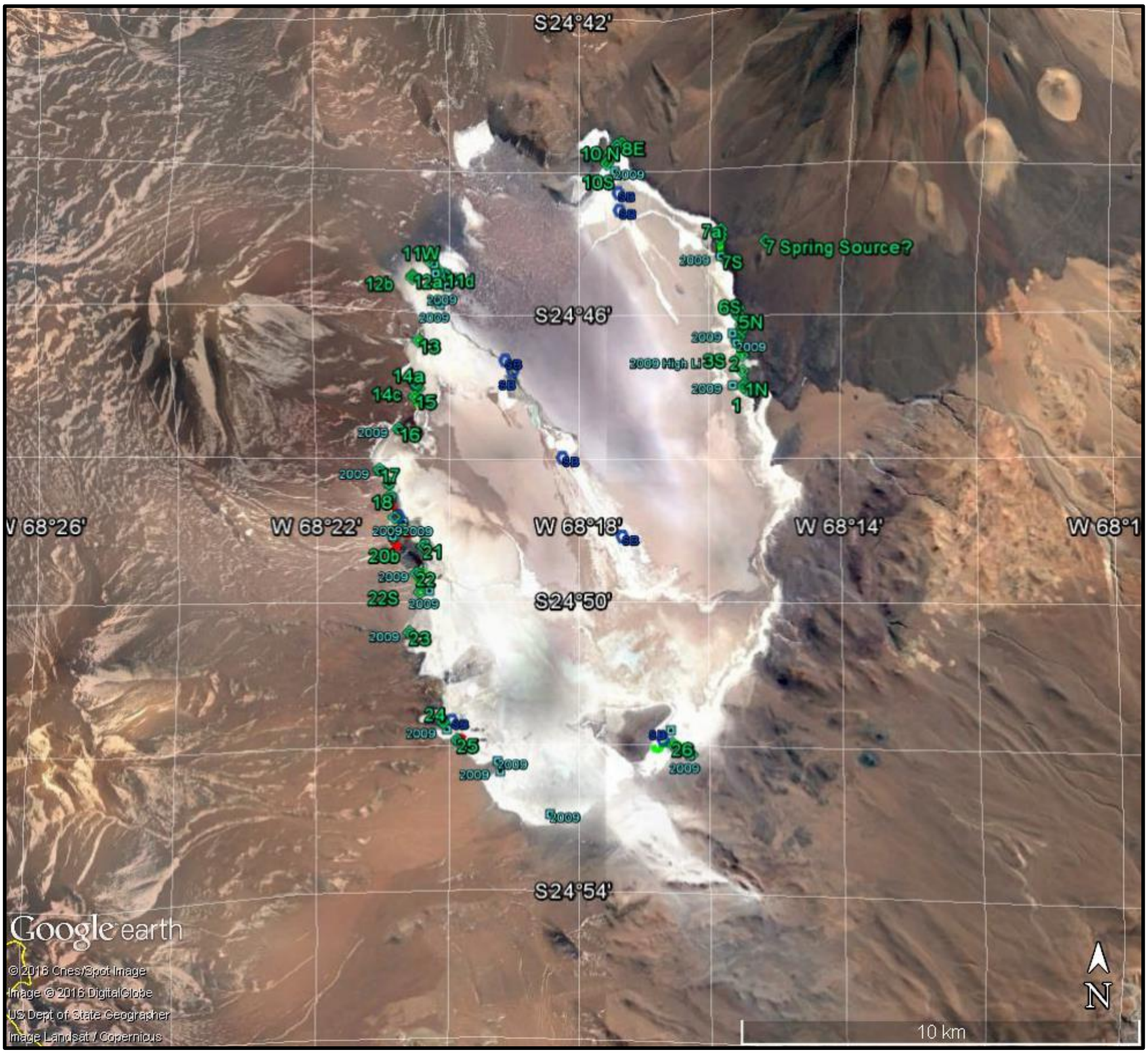

Figure 8: Water inflow site locations, 2016

7.4 Hydraulic Parameters

Specific yield, also known as the drainable (effective) porosity, is a ratio, less than or equal to the total porosity, indicating the volumetric fraction of the bulk aquifer volume that a given aquifer will yield when all the water is allowed to drain out of it under the force of gravity.

Specific yield also refers to the fraction of the total volume in which fluid flow is effectively taking place and includes catenaries and dead-end pores (pores that cannot be drained) but can cause fluid movement by release of pressure) and excludes non-connected pores.

The value for specific yield is less than the value for total porosity because some water will remain in the medium due to superficial tension even after drainage. The specific yield can be determined in the laboratory when samples are representative. Although it cannot be assessed directly through pumping tests in unconfined aquifers, it can be inferred by the pumping tests outcome and other parameters.

8 Deposit Types

Evaporites and brines form a group of industrial mineral deposits where the commercially valuable commodities are either in solution (brines) or are potentially soluble (evaporites) with the addition of water. This style of deposit typically shows broad lateral continuity, but narrow vertical extents.

Brines are found throughout the Andes region in closed basins (salars) where inflowing waters containing low concentrations of metal are concentrated over time due to evaporation, until they become saturated and begin to precipitate out to form evaporites. Various thermodynamic constraints determine the order in which minerals precipitate.

The Mariana Project is a typical salar brine, containing lithium, potassium and boron within permeable aquifers.

9 Mineralization

The mineral commodities sought at the Mariana Project are metal ions dissolved within brines. Lithium salts are much more soluble than potassium and sodium, which tend to precipitate forming halite units. The brines are subject to hydrogeological flow regimes allowing replenishment of brines that are extracted from the system.

The observation of brine within all drillholes across Salar de Llullaillaco basin suggests the existence of a connected unconfined brine-bearing system. The spatial distribution of lithology, lithological description and grain size distribution plus other associated elements, such as secondary porosity, were the most relevant aspects that led Geos to define a hydrogeological conceptual model that apportions the brine-bearing complex into, at least, eight lithology sequences within the interconnected unconfined aquifer. Determination of the dominant aquitards (semi-impermeable lithologies with very low hydraulic conductivity) within those units was then undertaken on a similar basis.

The following information was used for definition of the conceptual mineralization model:

- RC and DDH lithological logging, in particular lithology and grain size description
- Geophysical down hole electrical survey data
- TEM survey modelling for correlation with down hole geophysics and between drillholes
- Flow records profile for drillholes
- Geochemistry profiles from drillholes
- Effective porosity analyses of selected samples from 14 diamond drillholes

Mineralization of interest consists of lithium-enriched brines. Lithium (Li) and other potentially economic elements, potassium (K) and boron (B), are interpreted to be leached from volcanic rocks primarily by hydrothermal solutions emanating from deep-seated basin bounding faults and adjacent volcanoes. This also involves circulation of meteoric waters within proposed fault systems and through active stream and spring input flow into the salar.

Based on the drill information, the brines within the project area are interpreted to cover an area of about 135km^2, with an approximate length of 15km, width of 9km, and extend from depths from about 0.5m to at least 329m. Within the area drilled, host lithology sequences and brines show good continuity between drillholes. However, total porosity and the important specific yield porosity of the host sequence lithologies have not been confirmed sufficiently at the current drillhole sampling.

Brine sampling and pumping tests indicate that two connected primary aquifers are at play in the salar, a middle aquifer within the volcanoclastic lithological units and an upper secondary porosity aquifer in the overlying halite evaposedimentary sequence. A lower aquifer in the sulfate – halite evaporite sequence also is projected to occur. Limited information is available upon which to support a reliable characterization of this lower aquifer. However, this is anticipated to have much lower potential to be a productive aquifer.

10 Exploration

10.1 Exploration History

Reconnaissance near-surface brine sampling was conducted in 2009 by field services contracted to TNR from a 2km x 2km grid of shallow pits, with additional water and salt sampling to characterize inflow waters and other areas of hydrogeological interest. The central part of this grid was resampled periodically to determine seasonal or systematic variations (Harrop & MacDonald, 2011) and stream flow measurements have been collected in the same spot on several streams in quarterly samplings in 2018 and 2019.

Upon taking control over the Mariana Project, LMA conducted an extensive exploration and testing program, resulting in several technical papers and reports.

A preliminary drilling program of three Reverse Circulation (RC) drillholes, MA10-01 to MA10-03 (totaling 221 m), was conducted in 2010 by Hidroplus SRL, supervised by Conhidro SRL, to follow-up the surface water sampling program at Salar de Llullaillaco (Figure 9). The three sites selected for drilling were along an east-west line across the central part of the salar at approximate 2km spacing. The sites were also selected to target two sections of the salar and what appears to be a lineament dividing the two sections.

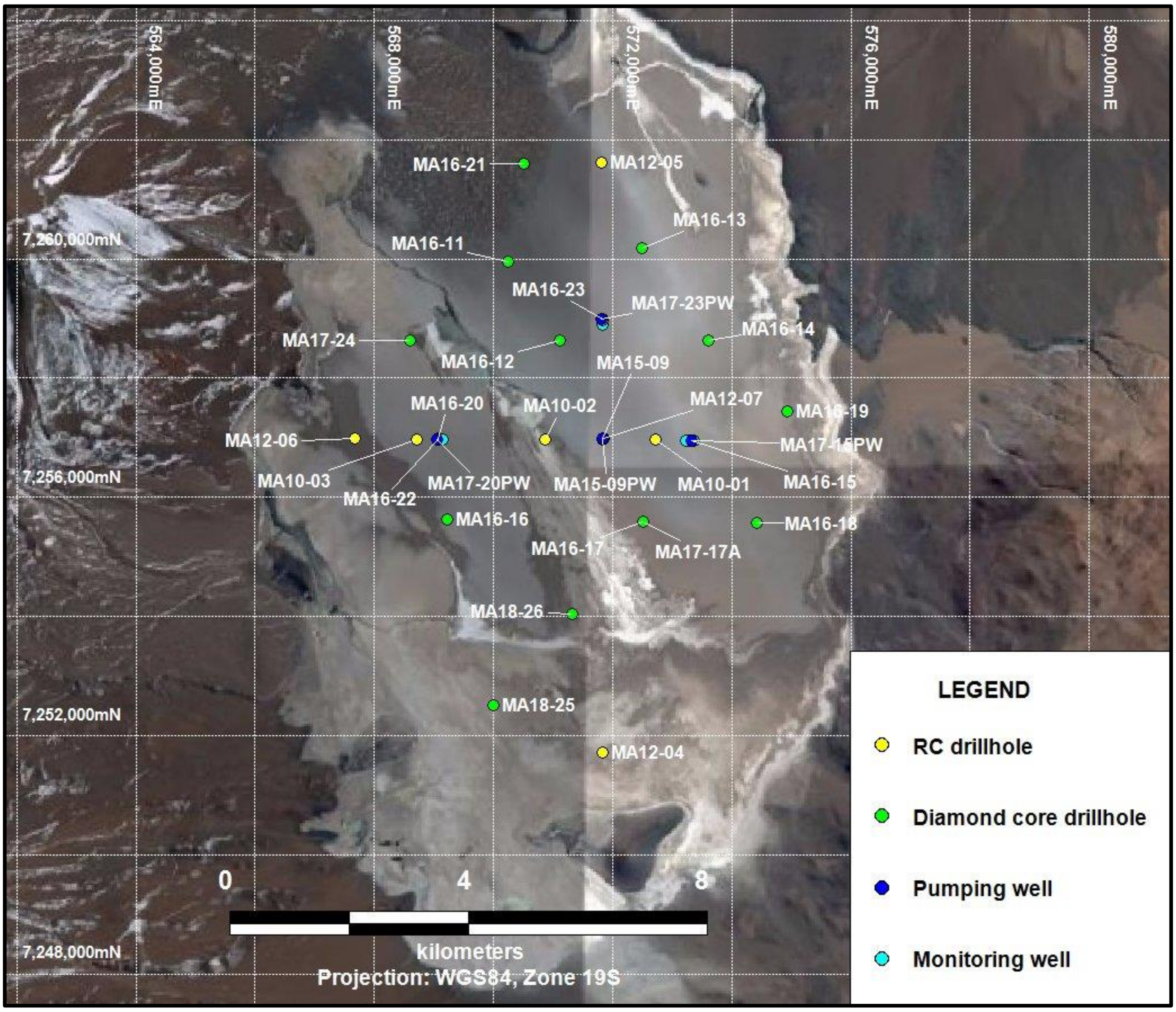

Figure 9: Location of drillhole collars

Note: Not all monitoring wells for pump tests are labelled

A further four RC drillholes, MA12-04 to MA12-07 (totaling 444m), were completed by LMA in 2012 (Figure 9). The four widely-spaced drillholes were positioned approximately 5km apart to characterize the subsurface strata and brine across several previously identified geological and geochemical regions within the 9km x 15km salar.

As part of a hydrogeology testing and bulk extraction program undertaken by LMA in 2015, a pumping well, MA15-09-PW, and two monitoring wells, MA15-08-MW and MA15-10-MW, were drilled and constructed. Drillhole MA12-07 was open to approximately 60m depth and was used as a third monitoring well.

Geophysics surveys completed during 2016 included seismic, gravity and TEM.

Thirteen diamond core drillholes, MA16-11 to MA16-23 (totaling 2,596 m), were completed by LMA in 2016 (Figure 9). Drillhole MA16-20 (135m depth) was abandoned in the volcaniclastic unit due to stuck drill rods. Drillhole MA16-22 (229m depth) was collared nearby and aimed to test below the volcanoclastic unit that MA16-20 ended in.

One drillhole, MA17-24 (223 m) was completed by LMA in 2017 as the last exploration campaign drillhole prior to the previous estimation of mineral resources.

Two drillholes, MA18-25 and MA18-26 (totaling 679m), were completed by LMA in 2018 to explore the extents of an interpreted gravity sub-basin in the southern half of the salar.

A Preliminary Economic Assessment was prepared by Advisian, a division of the Worley Parsons Group, for MLC in 2018 to assess the potential economic viability of developing the 14 minas for the purpose of extraction of lithium brine resources and processing of two products – Lithium Carbonate Equivalent (LCE) and Sulfate of Potash (SOP).

10.2 GRIDS & SURVEYING

Initially, location coordinates were provided using the POSGAR94, F2 datum. For the purposes of the resource estimation, these coordinates were converted to WGS94, UTM Zone 19S datum using MapInfo GIS software.

Drillholes collars were surveyed using a DGPS system (for drillholes MA10-01 to MA17-24) or hand-held GPS instruments (drillholes MA18-25 and MA18-26). The accuracy of the GPS instruments (+/- 5m) is satisfactory for determining Eastings and Northings of data points for the style of deposit at Mariana. Apart from the DGPS surveys, NASA satellite survey database data have been used for elevations, giving accuracies of +/- 6m.

10.3 GEOCHEMISTRY

Contractors conducted a limited program of surface water sampling, on a nominal 2km-spaced grid, during 2009. Samples were sent to both Grupo Induser SRL and Alex Stewart Argentina, both of which were ISO 9001 and ISO 17025 certified (Harrop & MacDonald, 2011).

Results indicated a general gradation of lithium, boron, magnesium and potassium from higher grades in the north-northwest decreasing across the salar to the south (Figure 10). Sulfate, as SO_4^{2-}, distribution showed that an additional source of SO_4^{2-} might be present. This has been attributed to active springs on the edge of the salar and stream inflow. Weak spatial correlation to lithium may indicate recycling of the lithium brines within the salar proximal to the springs and stream inflow; or more probably attenuation by dilution of the lithium content from lower concentration, lower density, brackish water.

Geochemical results of the initial three drillholes were ambiguous, with results generally indicating mixed brine samples. Subsequent drilling and sampling indicated homogenous or mixed brine throughout the salar. Although some vertical variation is observed, the general trend indicates north to south and west to east decrease in grade. Modelled data from the widely spaced drillholes has highlighted these geochemical characteristics of the salar and contained aquifer(s).

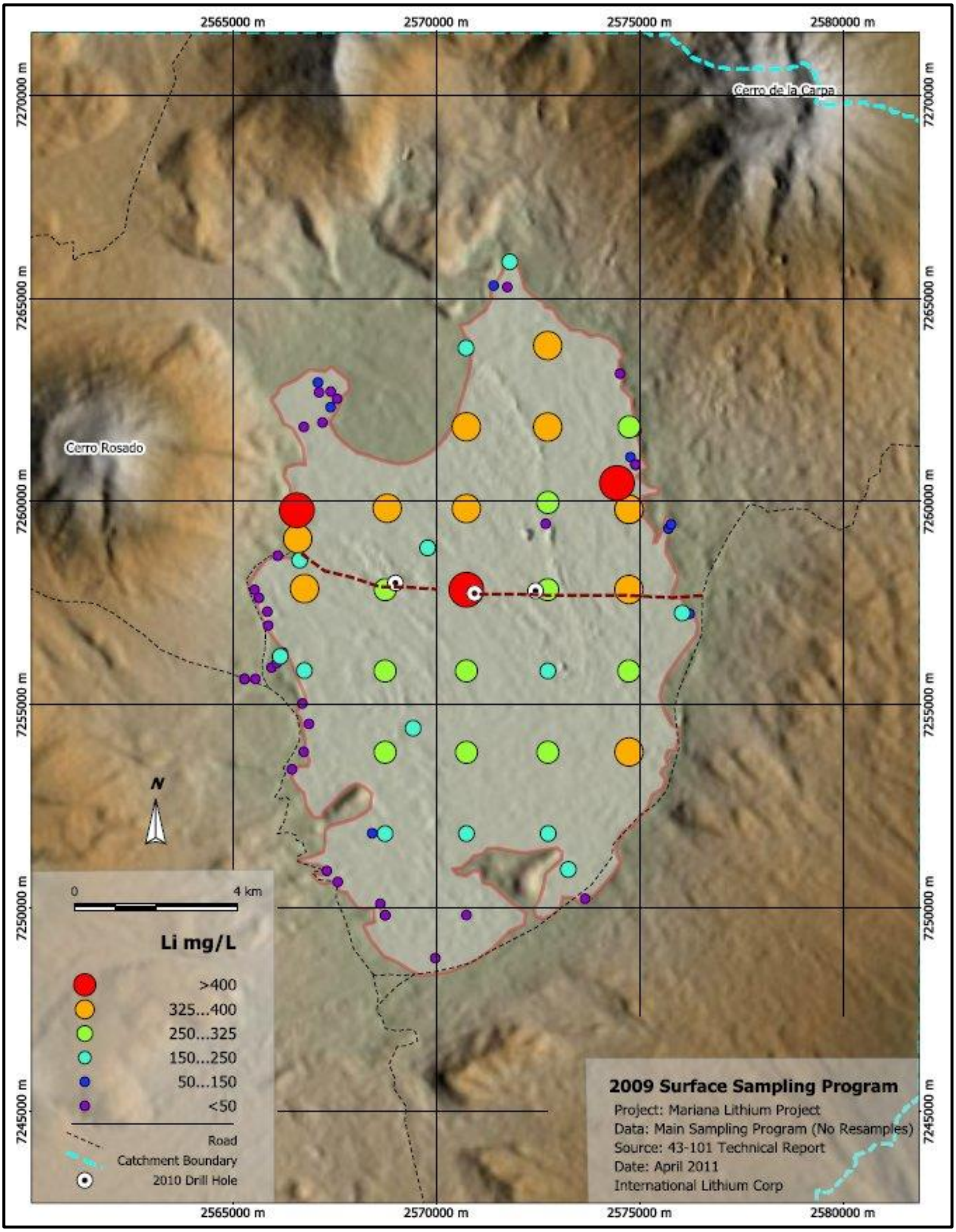

Figure 10: 2009 Surface Sampling – Li results

Source: (Harrop & MacDonald, 2011)

10.4 GEOPHYSICAL SURVEYS

A series of geophysical surveys, transient electromagnetic (TEM), and seismic refraction (Figure 11); plus gravity (gravimetric) surveys (Figure 12), were undertaken in 2016 with objectives to identify, define and map the different layers of stratigraphy within the salar down to depths of the rock basement (Ensinck & Unger, 2016). These surveys have greatly aided in defining and adding confidence to the interpretation of continuity for within basin sedimentary layers, aquifers and potential structures.

Inversion of the TEM data (Figure 13, Figure 14) was interpreted as a series of sub-horizontal layers (from top to bottom):

- Upper Aquifer – porous halite
- Leaky Aquitard – compact resistive halite
- Middle Aquifer – andesitic volcanics & coarse-grained volcanoclastic
- Leaky Aquitard – compact resistive halite (in centre of salar)
- Lower Aquifer
- Basement

Gridded gravity data demonstrated two deeper sections of the salar separated by a NW-trending structure (Figure 15).

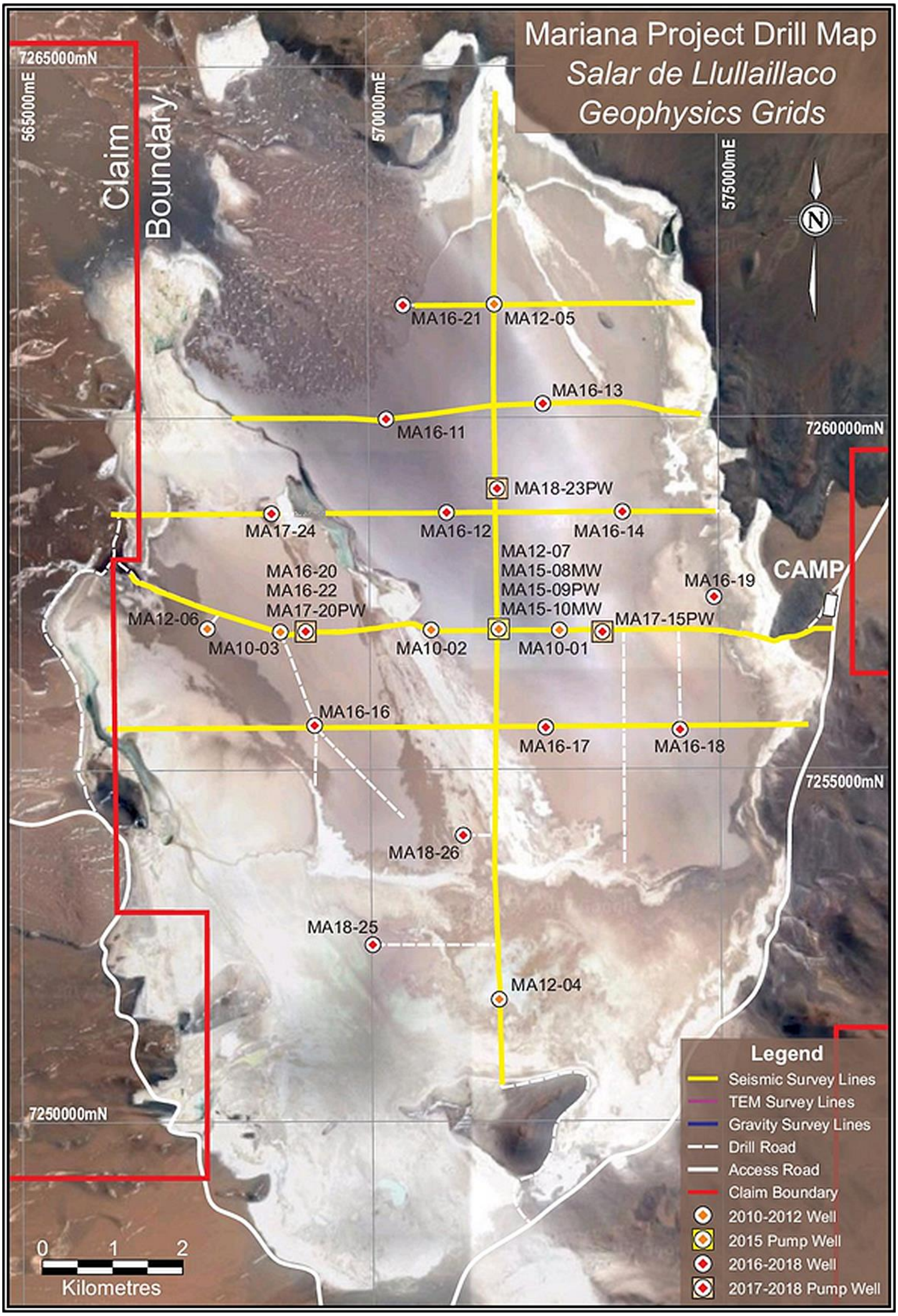

Figure 11: Location of geophysical survey transects

TEM and seismic survey lines are coincident, gravity survey lines are not shown. (after MLC, 2019).

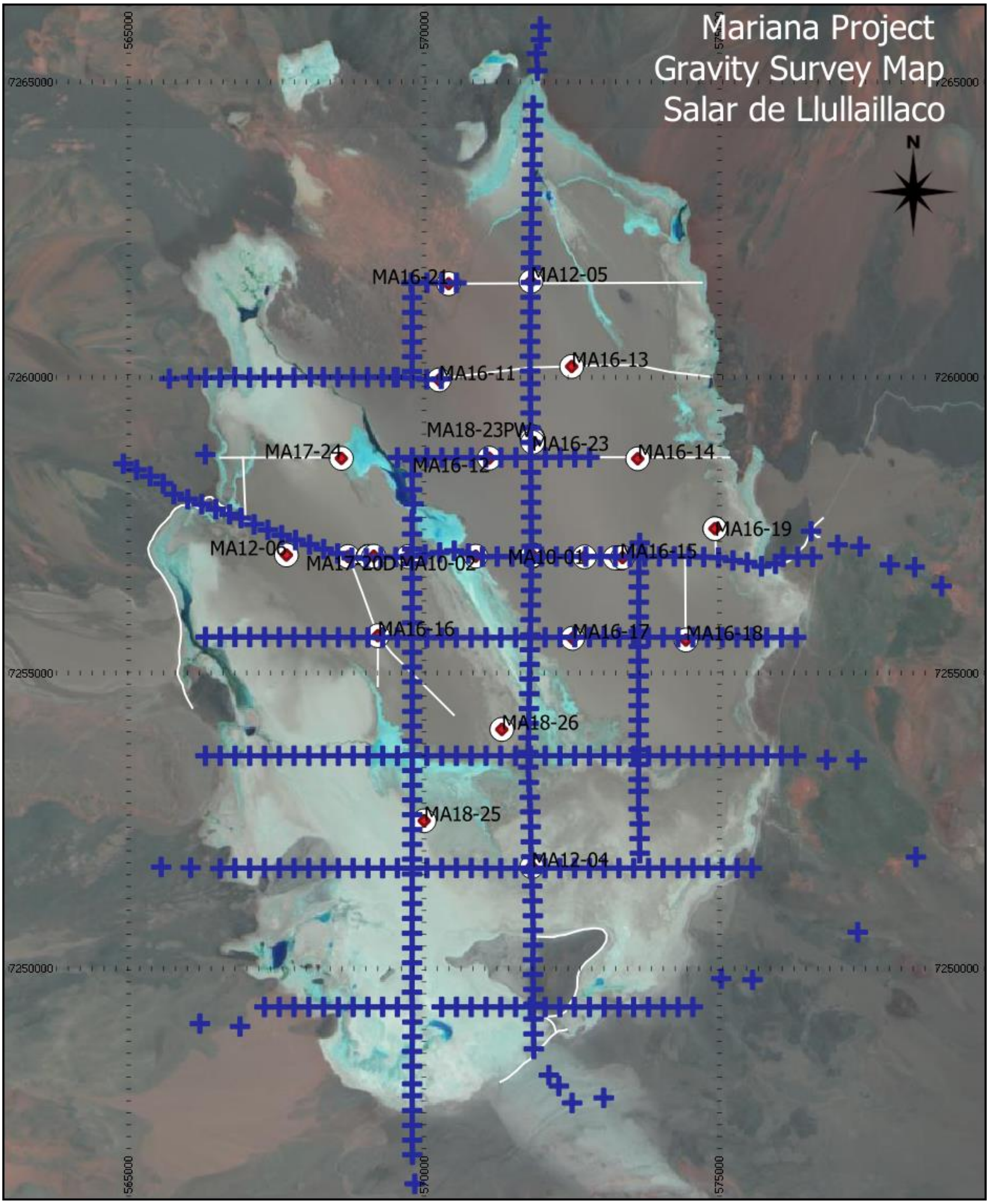

Figure 12: Gravity survey stations across Salar de Llullaillaco (2016)

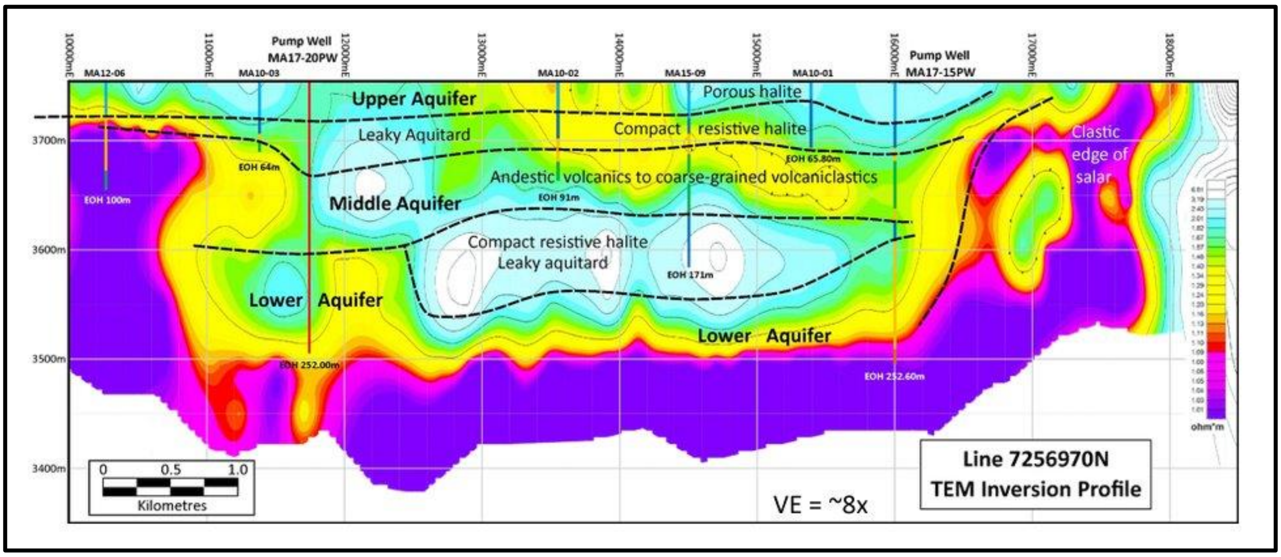

Figure 13: TEM Inversion Profile – Line 7256970mN

Note: Vertical exaggeration 8x

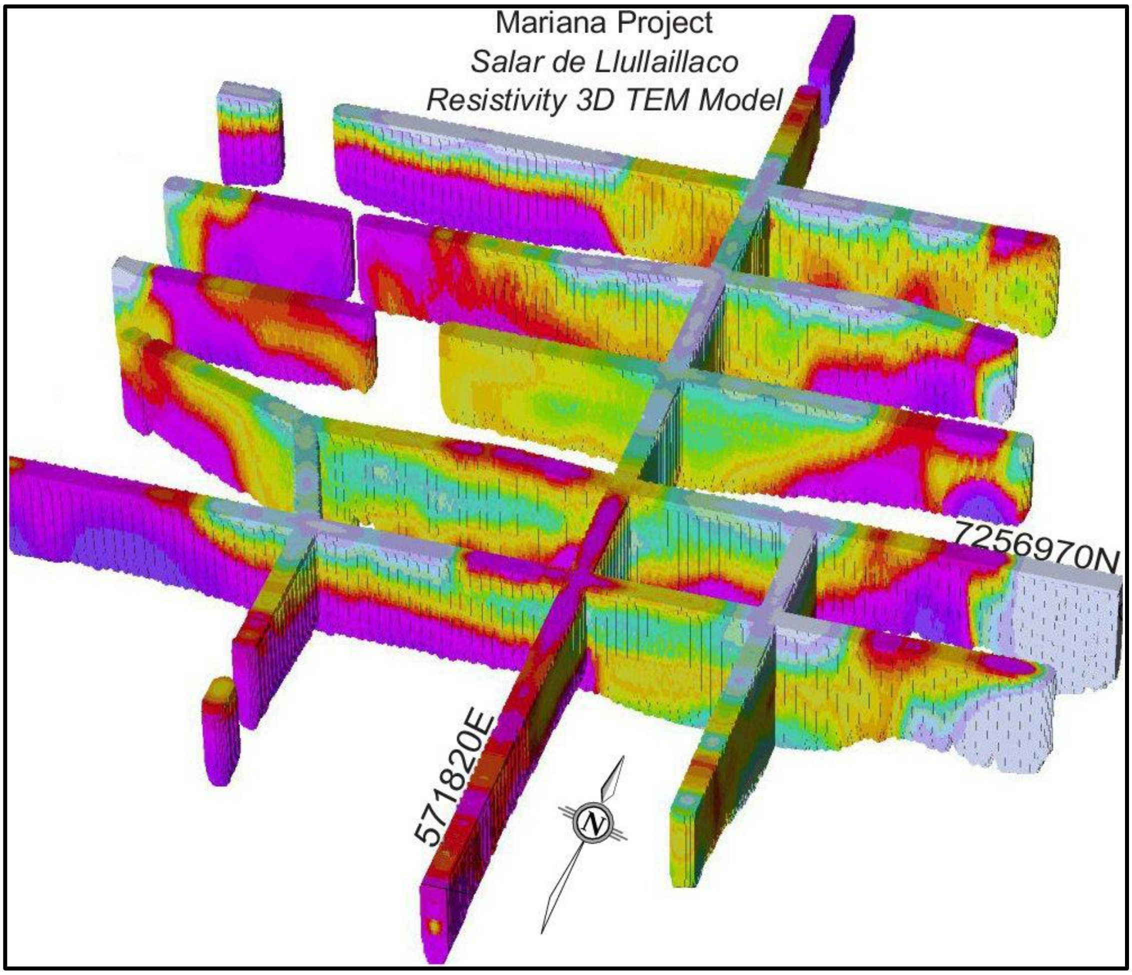

Figure 14: 3D TEM inversion model

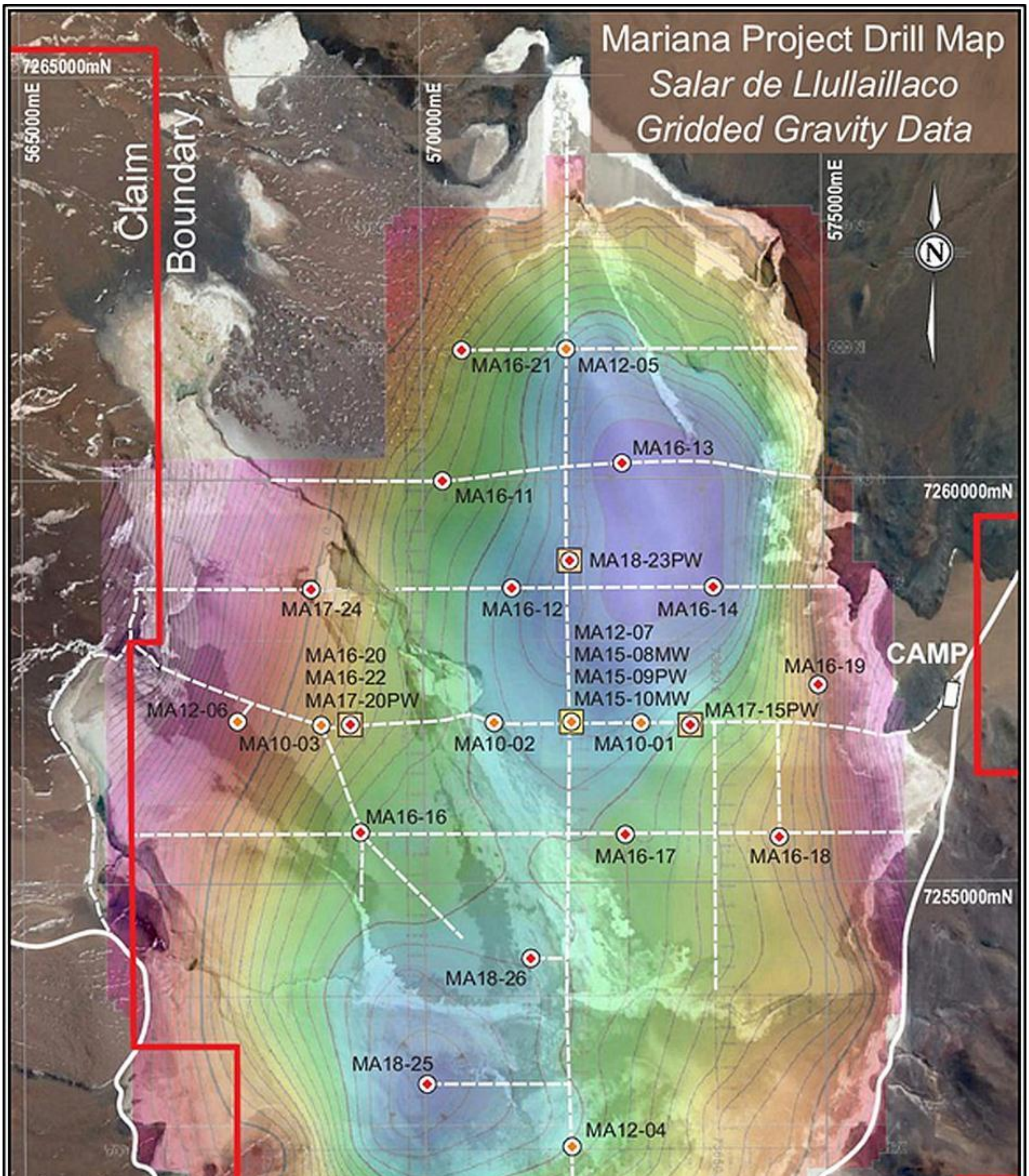

Figure 15: Gravity survey lines and gridded data

10.5 Bulk Density

Sediment densities were determined for 406 selected samples from drillholes MA16-11 to MA16-24. These samples were forwarded to AGAT laboratories, Calgary, Canada, for porosity analysis. Thirty-two samples from MA16-15 had no description and were excluded from the statistical analyses. Sediment bulk density has a minor influence in this style of deposit, a brine reservoir. Table 6 is a summary of sediment bulk density results.

Density of brine samples was measured in the field using a densimeter. In addition, the density of brine samples was also conducted by the laboratories where brine samples were forwarded for chemical analyses. A detailed analysis of the brine density from brine samples is presented in Section 18.7 Brine Density.

Generalised Lithology Sampled	Number of Samples	Minimum	Maximum	Average
Massive halite	96	1.64	2.94	2.07
Saccharoidal halite	41	1.42	2.31	2.06
Halite with secondary porosity	42	1.22	2.25	2.01
Tuff	7	1.25	2.28	1.85
Volcanogenic sand	27	1.56	2.15	1.90
Halite cemented volcanogenic sand	21	1.31	2.66	2.02
Volcanogenic debris flow	42	1.65	2.45	2.07
Volcanic rock	15	1.72	2.50	2.14
Unconsolidated sand (+/- halite)	25	1.68	2.30	2.01
Sulfate beds	65	1.07	2.27	1.93
Carbonate beds	2	1.49	2.06	1.77
Total/Average	374	1.07	2.94	2.02

Table 6: Summary of sediment samples Bulk Density measurements

10.6 Hydrogeological Pump Testing

2015 Testing Program – MA15-09PW

Hydrogeological tests conducted during 2015 (Mariana Project Pumping Test Program, Final Report, 27/07/2015, IMExbiz) in the upper 94m of the salar sedimentary package, utilizing MA15-09PW as the pumping well and three monitoring wells: MA15-08MW, MA15-10MW and MA12-07MW. The test identified two units: an upper unconfined aquifer and a semi-confined lower gravel-sand aquifer.

Well draw-down at a pumping flow rate 8L/s (691.2m^3/day) was less than 0.06m at monitoring wells and a maximum of 0.46m at the pumping well. The brine level achieved a steady state within minutes during both step-down and constant rate pumping tests, indicating that the aquifer transmits brine rapidly, and is not relying on storage. A very high yielding aquifer system was indicated with transmissivity ranging between 1,560 and 10,300m^2/day and an average transmissivity 5,544m^2/day. A conservative estimate of maximum pumping rate for the test well of 350m^3/hr (97L/s) was recommended, with a suggested maximum 15m drawdown (dynamic level).

During drilling in 2016, ILC's field staff registered the depth of ground water level and the flow rates at various depths downhole. From discussions and comments by ILC staff, and observations during site visits by Geos, the drillholes are interpreted to have been saturated from near surface (0.6m depth) to end of hole. Fluctuations in the phreatic level were recorded and range up to 0.08m. These measurements are an approximate indication of phreatic brine level across the Mariana Project and were used as a reference in the estimation of the assumed thicknesses of the aquifers in the hydrogeological conceptual model.

2017 Testing Program – MA17-20PW

LMA conducted a 30-day constant rate pump test on drillhole MA17-20PW, located in the western salar part of the Mariana Project resource area from December 02 2017 to January 01 2018 (Sawyer, 2018).

The constant rate test was conducted at an average pumping rate of 58 L/s. Drawdowns were recorded both manually and by transducer in six observation bores: MA17-20A, MA17-20B, MA17-20C at 10m radius from the pumping well; MA17-20 and MA16-22 at 32m radius; plus MA17-20D at 100m distance. These were screened at different levels within the same intercalated and layered aquifer system as the pumped well MA17-20PW. Maximum drawdown occurred in observation bore MA17-20B, which intercepted a volcanoclastic flow / fractured volcanic breccia unit at a similar level as the pumped well. Minor drawdown was observed in observation bores monitoring both higher and lower parts of the aquifer system.

The lack of drawdown in shallower observation bores, plus the one deeper observation bore MA17-20C, indicated that the pumped aquifer at the level of MA17-20B is acting in a nearly confined manner. This volcano-sedimentary and volcanic aquifer has intermittent connectivity / interaction with overlying or underlying leaky aquitards. This may also be reflecting bore storativity. However, this does not show up in the data.

The dominant volcanogenic aquifer has been estimated to have an average transmissivity T = 3198m^2/day and a storativity of S = 1.6 x 10^{-5}. The overlying sulphate-sand-halite sequence leaky aquitard recorded an average transmissivity T = 311 m^2/day and a storativity of S = 1.04 x 10-11. Hydraulic conductivity (K) ranged from 5m/day to 98m/day; it is estimated that the principle aquifer tested has K = 53m/day.

No drawdown was observed in more distal observation piezometers, MA10-03, MA12-06, MA16-16, MA17-24 and Laguna Central. There is no evidence that the zone of influence of the pumping well or the cone of depression had extended to or beyond 330m distance from MA17-20PW. As the meter difference from the pre-pumping standing water level and the maximum drawdown of the brine level in MA17-20D is only 0.41m, it is considered that the cone of depression has not extended far beyond this 100m radius but could extend to as far as 200m distance.

The 2017 pumping test program achieved an extraction rate of 5011m^3/day of brine. Only a negligible decrease in lithium ion content over the time of the program was observed.

2018 Testing Program – MA17-15PW

LMA conducted long-term pump tests on pumping well MA17-15PW, located in the central part of Salar de Llullaillaco, from May 19 2018 to June 19 2018, with nine monitoring wells up to 1,800m from the pumping well. The pumping rate during the test was 59.6 L/sec. Recovery Test monitoring of the returning brine levels were monitored manually at rates ranging from 30 second readings to hourly readings for 24 hours after pumping was stopped. Further recovery monitoring was undertaken up to 5 days after the pumping test.

Short term (24 hour) pump test of the lower aquifers was undertaken from June 27 to June 28 2018, followed by a 22 hour recovery period. Pumping rate during the test was 27 L/sec.

Short term (25 hour) pump test, using a packer to isolate the upper halite aquifer from the deeper volcano-sedimentary aquifer, was undertaken from June 30 to July 01 2018, followed by a 4 hour recovery period. Pumping rate during the test was 59.6 L/sec. These two “packer” tests were completed by August 02 2018 (Sawyer, 2018).

The majority of monitoring wells and the pumping well had recovered to 97% or greater of the before pumping brine levels by the end of the 24-hour period. The only drillhole that had not reached 97% recovery was MA16-17A, which was only at 82% of the before pump test brine level. The recovery data for MA16-17A was reviewed and it was determined that monitoring of this piezometer could occur daily for the next 3 days before the levels would be near 97%. MA16-17A recovered to 96.9% by the end of the 3-day period.

The lower volcano-sedimentary aquifer was estimated to have transmissivity in the range from 1,366m^2/day to 2,828 m^2/day and storativity range of 3.9 x 10^{-5} - 1 x 10^{-3} from the 30-day test. The isolation test of the shallow halite aquifer gave similar results.

The overlying halite aquitard was estimated to have a transmissivity in the range of 304m^2/day - 654m^2/day and a storativity of less than 1 x 10^{-20} from the 30-day test. The isolation test on the deeper aquifer gave similar results of transmissivity but much higher storativity of up to 0.73.

Hydraulic conductivity ranged from 3m/day to 14m/day. It was estimated that the principal aquifer tested had a hydraulic conductivity of up to 31m / day.

Maximum drawdown from the long-term pump test occurred in observation drillhole MA18-15B, which was screened across a volcanoclastic debris flow / fractured volcanic breccia unit, at a similar level as the pumped well. Notable drawdown was observed in only those drillholes monitoring the deeper volcano-sedimentary lower part of the aquifer system: MA17-15A, MA18-15B and MA18-15C. Shallow drawdown was also observed in observation drillhole MA16-17A, located 1.7km to the south-southwest, which was also screened in the deeper volcano-sedimentary unit.

No drawdown from the long-term pump test was observed in the upper aquifer portion, above the volcanoclastic unit, in the shallow monitoring drillholes: MA16-15, MA18-15D, MA18-15E and MA18-15F. This was also the case for the other distant monitoring drillholes: MA10-01, MA16-14, MA16-17B, MA16-18, MA16-19, or Laguna Central.

The lack of drawdown from the long-term pump test in all shallower observation drillholes suggests that the pumped aquifer at the level of MA18-15B is acting in a confined manner. Therefore, it was proposed that the volcano-sedimentary - volcanic aquifer may at best have only intermittent connectivity / interaction with the overlying leaky halite aquitard at this location. This may also be reflecting bore storativity.

There is no evidence that the zone of influence from the long-term pumping, the cone of depression, extended to or beyond a calculated 450m distance from MA18-23PW, towards either the east or west. However, the noted shallow direct response to pumping at drillhole MA16-17A, 1,591m distant, clearly indicates a considerable elongation to the zone of influence in a south–southwest orientation. This was considered to be due to the preferred orientation of the volcano-sedimentary geological unit dominating the targeted aquifer. The lack of connectivity between the upper halite aquifer and the lower system was postulated to have impeded any detection of the cone of depression in the shallow observation bores.

It was postulated that with extraction under production conditions drawdown from the volcanogenic aquifer would increase and extend to distances in the order of 2,000m. Extraction from the lower leaky aquitard(s) would correspondingly increase. Where there is natural or induced connectivity (e.g. penetrating drillholes) with the upper secondary porosity halite aquifer, inflow from this aquifer would be expected to recharge to the lower aquifer system.

The long-term pumping test achieved an extraction rate of 5,165m^3 / day of brine. Continued extraction at this rate over an 11-month period has the potential to produce 1.73Mm^3 of brine or 1,725ML. Extraction at a lower level from a series of twin nested well head sets across the salar, operated on a rotational basis, would be recommended for long term maintenance and stability of the aquifer system within sustainable volumes derived from the drainage basin water balance.

The two 24-hour constant rate isolation pump tests confirmed that the volcano-sedimentary sequence and the lower interlayered sedimentary sequence responded significantly to pumping from within the volcano-sedimentary sequence. The two tests also showed that these units had a much lower response during pumping from the halite unit above them. Of the shallow observation bores, only MA16-15 notably responded to pumping from within the upper halite unit. No shallow observation bores responded during pumping from the isolated deeper system.

2018 Testing Program – MA18-23PW

For the pumping tests on drillhole MA18-23PW, there were two long term constant rate pump tests that were targeted between the upper and lower aquifers. The first 20-day test targeting the lower aquifers was run from 16 September to 06 October 2018 at a pumping rate of 44.5 L/sec. The second constant rate test of 19 days from 13 October to 07 November 2018 tested only the upper aquifer at a pumping rate of 52.2 L/sec. Both constant rate isolation tests used a packer to segregate the upper halite aquifer from the deeper volcano-sedimentary aquifer.

Drawdown of brine level was recorded both manually and by downhole transducer logger in the pumping well MA18-23PW, as well as five observation bores; MA16-23, MA16-23A & MA17-23B, at approximately 9m radius or less east of MA18-23PW; MA17-23C at 30m radius and MA17-23D at 97m distance, both to the south. These observation bores were screened at different levels, to cover the full extent of the intercalated and layered aquifer system of the salar in which the pumped well MA18-23PW was sited.

The isolation test of the deeper volcano-sedimentary aquifer resulted in estimates for transmissivity in the range of 127 m^2/day to 1,033 m^2/day, hydraulic conductivity in the range of 1.6 m/day to 5.6 m/day, and storativity range of 4×10^{-5} to 1.3×10^{-3}. Whilst the isolation test of the shallow halite aquifer gave widely varying results with transmissivity ranging from 2,373 m^2/day to a very high 66,190 m^2/day, hydraulic conductivity ranging from 31 m/day to 833 m/day, and storativity (specific yield) ranging from 3.1×10^{-4} to 0.2.

The geometric means of the hydraulic parameters' estimates are considered representative of the tested aquifers. These were, for the deep volcano-sedimentary aquifer: transmissivity 354 m^2/day, hydraulic conductivity 2.7 m/day, and storativity range of 0.003. Parameters for the shallow halite aquifer were: transmissivity 17,286 m^2/day, hydraulic conductivity 170 m/day, and storativity range of 0.003.

Although the pumping rate was high at 52 L/s maintained over the 19-day period for the shallow aquifer isolation test there is no evidence that the zone of influence of the pumping bore or the cone of depression extended to or beyond 50 m distance from MA18-23PW in any direction.

Low level to negligible connectivity between the upper halite aquifer and the volcano-sedimentary aquifer was confirmed by hydrogeological isolation testing. The two isolation tests showed that the volcano-sedimentary sequence had a significantly lower response during pumping from the halite unit above. MA17-23C was the only shallow observation bore that showed a weak response to pumping from within the upper halite unit. Only very minor to insignificant drawdown occurred in shallow observation bores during pumping from the isolated deeper system. Furthermore, the constant rate isolation pump test confirmed that the volcano-sedimentary sequence responded significantly to pumping from within the volcano-sedimentary sequence.

10.7 Previous Mineral Resources

Geos Mining completed a Preliminary Brine Resource Estimate (Sawyer & Willetts, 2017), based on information available as at January 2017 (drillholes up to MA16-23, plus geophysics surveys). Table 7 shows the brine resources as reported for average specific yield (SY) of 15% and a cut-off value of 230 mg/L Li.

Category	Effective Volume Mm^3	Brine Density g/mL	Li mg/L	B mg/L	K mg/L	SO_4^{2-} mg/L	Mg mg/L	Li kt	LCE# kt
Indicated	766	1.218	306	599	9,456	15,530	4,291	234	1,248
Inferred	361	1.222	322	642	10,316	15,315	4, 566	116	618
Exploration Target#	504 - 1,232	1.218 - 1.219	296 - 313	450 - 600	9,000 – 10,100	-	-	149 - 386	794 - 2053

Table 7: Mineral Resources estimated as at January 2017 (Sawyer & Willetts, 2017)

LCE = calculated Lithium Carbonate Equivalent

#Exploration Target was based on a number of assumptions and limitations and is conceptual in nature. It is not an indication of a Mineral Resource Estimate in accordance with NI43-101 and it is uncertain if future exploration will result in the determination of a Mineral Resource. N.B. figures may not add due to rounding.

11 Drilling

11.1 Drilling Programs

A total of 46 vertical drillholes (totaling 7,672.5m) were completed at the Mariana Project since 2010 (Table 8, Figure 9).

Drillholes MA10-01 to MA12-07 were drilled by reverse circulation techniques on an irregular drill spacing up to 5km, with an objective to define broad zoning of the salar stratigraphy and brines.

Eighteen drillholes, mainly for resource definition, were by diamond core drilling on a nominal 2km offset drill spacing. In the opinion of the QP, the drillhole spacing is adequate to determine Mineral Resources.

Hydrogeological pump test wells MA17-20PW, MA17-15 PW and MA18-23PW plus associated monitoring wells were drilled by rotary drilling method using tricone bits.

Hole ID	Easting	Northing	RL	Depth	Well type
MA10-01	572,716.3	7,256,964.4	3,753.8	65.8	
MA10-02	570,875.5	7,256,976.1	3,753.7	91.0	
MA10-03	568,713.1	7,256,970.7	3,753.8	64.0	
MA12-04	571,823.8	7,251,723.5	3,754.3	102.0	
MA12-05	571,809.2	7,261,624.8	3,753.7	119.5	
MA12-06	567,670.8	7,256,996.7	3,753.6	100.0	
MA12-07	571,843.5	7,256,998.1	3,753.8	122.0	Monitor
MA15-08MW	571,835.2	7,256,977.9	3,753.9	84.2	Monitor
MA15-09PW	571,825.5	7,256,989.5	3,753.8	171.0	Pump
MA15-10MW	571,835.8	7,256,989.9	3,753.8	30.6	Monitor
MA16-11	570,252.6	7,259,959.5	3,753.7	198.9	
MA16-12	571,104.7	7,258,632.9	3,753.7	199.0	
MA16-13	572,499.2	7,260,185.7	3,753.8	202.0	
MA16-14	573,616.3	7,258,633.1	3,753.8	185.5	
MA16-15	573,319.2	7,256,949.8	3,753.5	252.6	Monitor
MA16-16	569,217.3	7,255,633.1	3,753.9	195.6	
MA16-17	572,512.3	7,255,590.3	3,753.4	196.1	
MA16-18	574,429.3	7,255,562.7	3,754.0	193.0	
MA16-19	574,924.0	7,257,439.0	3,753.7	160.1	
MA16-19A	574,921.0	7,257,441.0	3,753.7	135.0	
MA16-20	569,079.6	7,256,980.1	3,753.5	152.5	Monitor
MA16-21	570,508.6	7,261,590.2	3,753.4	229.0	
MA16-22	569,080.1	7,256,978.3	3,753.5	250.0	Monitor
MA16-23	571,829.8	7,258,999.8	3,753.3	331.1	Monitor
MA17-15A	573,322.5	7,256,946.4	3,753.6	253.8	Monitor
MA17-15PW	573,328.0	7,256,954.6	3,753.5	260.0	Pump
MA17-20A	569,060.0	7,256,969.9	3,753.5	250.8	Monitor
MA17-20B	569,059.9	7,256,967.8	3,753.5	172.7	Monitor
MA17-20C	569,059.5	7,256,965.7	3,753.6	90.0	Monitor
MA17-20D	569,148.9	7,256,974.7	3,753.5	90.0	Monitor
MA17-20PW	569,050.0	7,256,969.9	3,753.4	257.0	Pump
MA17-23A	571,829.7	7,258,997.7	3,753.4	174.0	Monitor
MA17-23B	571,829.6	7,258,996.4	3,753.5	66.0	Monitor
MA17-23C	571,832.4	7,258,970.7	3,753.5	66.0	Monitor
MA17-23D	571,839.0	7,258,903.2	3,753.4	66.0	Monitor
MA17-24	568,600.6	7,258,631.2	3,753.4	223.0	
MA18-15B	573,324.4	7,256,945.1	3,753.6	128.6	Monitor
MA18-15C	573,296.1	7,256,953.9	3,753.6	131.6	Monitor
MA18-15D	573,296.2	7,256,951.9	3,753.5	73.6	Monitor

Hole ID	Easting	Northing	RL	Depth	Well type
MA18-15E	573,228.4	7,256,949.7	3,753.5	102.6	Monitor
MA18-15F	573,360.0	7,256,956.2	3,753.5	124.6	Monitor
MA18-23PW	571,820.8	7,258,998.3	3,753.3	342.4	Pump
MA18-25	570,001.6	7,252,500.9	3,753.7	185.2	
MA18-26	571,314.1	7,254,044.6	3,753.4	494.0	
MA19-26A	571,319.1	7,254,044.6	3,753.4	56.0	Monitor
MA19-26C	571,329.6	7,254,053.2	3,753.5	232.5	Monitor

Table 8: Drillholes completed at Mariana

Note: Collar coordinates in WGS94, UTM Zone 19S datum

Suffix: PW = Pumping well; MW = Monitoring well

11.2 Geological Logging

Geological lithological logging, consistent with the industry standard, has been undertaken for the drillholes. Drillholes undertaken during 2016-2018 used a logging procedure updated from the earlier programs. This updated procedure was undertaken to optimize the lithological coding and other parameters to suit the style of the deposit. This involved including recognition of several different aspects such as, primary and secondary porosity, various sedimentary facies, and other observations related to mineralogy. All drillholes completed prior to 2016 have not been relogged by ILC staff to the updated procedure. This procedure will aim to better reflect the recognition of sedimentary facies as a consequence of evidence from more recent drilling.

At least 35 different volcanic, sedimentary and evaporite lithologies were identified in the logging, plus some units consisting of combinations of the main lithologies (Appendix 1).

11.3 Drillhole Geophysical Logging

Geophysical surveys were conducted downhole for drillholes completed since 2012 using an electrical probe. Resistivity and spontaneous potential were measured. No density, sonic, natural gamma or neutron readings were conducted.

Results indicate a moderate to good relation between long and short resistivity measurements and the amount of compact halite or other very tight and non-brine saturated rocks, showing contacts and changes between evaporate sediments and volcanogenic units, as would be expected. For the most part the resistivity was low, indicating complete saturation of the strata with brine. No downhole geophysics was done in relation to porosity measurements. Low resistivity areas within halite were interpreted and often correlated with secondary porosity or sand beds. High resistivity results often correlated with compact massive halite.

Definition of finer details within the evaporate beds was not evident using these methods.

12 Sampling Methods

12.1 Pitting and Surface Brine Sampling

The surface and pit sampling program conducted during 2009 was undertaken by contract services staff of Petra Gold and Conhidro. The pit holes were allowed to fill with brine from the upper aquifer level, and sediment to settle out, before a sample was taken using a sample bailer.

12.2 Reverse Circulation Brine Sampling

The initial three RC drillholes were sampled at intervals determined from geophysical logs by construction of packed perforated PVC casing. Submersible pumps were then lowered to the level of the perforations to flush the brine and then run at a rate not to create any significant drawdown whilst drawing a sample. Some mixing of the brine was anticipated.

Later RC drill sampling used a procedure whereby brine and sediment samples were air lifted to the surface.

The brine (liquid) samples were taken after the drilling was stopped and the drilling equipment lifted, allowing for the total flushing of the internal pipe interval until the brine appeared reasonably clean of sediment.

Drillholes were allowed to fill with water and, in cases where there was sufficient inflow, pumped out in order to rinse the hole and minimize the effect of material that may have fallen into the hole. The drillholes were then allowed to fill again from the aquifer surrounding or below, and then a sampling device was lowered into the hole to collect the brine samples.

Brine samples were collected every 6m and at the end of the drillhole. Temperature, pH, brine density, and flow rate were recorded. Other data for brine sample field measurements, electrical conductivity, decantation time, total dissolved solids (TDS) and operational conditions, among other observations such as brine coloration, and absence of flow or brine recovery, have not been presented. Two samples were collected for every 6m sample interval. In the initial three drillholes, these were sent to separate laboratories for analysis. For the 2012 drilling program, one set of duplicate samples was kept in storage.

12.3 Core Drilling Brine Sampling

In general, ILC/LMA took 2 x 500mL brine samples every 6m down diamond core drillholes.

- A number of methods were initially trialed including airlift, well point screen, double valve bailer and in hole inflatable 2 packer seal pump
- The in-hole two inflatable packer seal pump method was considered to be the most accurate method to recover near undisturbed and representative brine samples and was utilized the most

- Where this sampling method was not able to be used, the double valve bailer was used as the next preference to recover near undisturbed brine samples
- All methods involved flushing of the drillhole after drilling to clear / clean the hole prior to sampling
- A wait period of several (2-4hrs) hours, to enable the brine flow to equilibrate to near normal, was instigated prior to sampling

Samples were packaged and sent to either Alex Stewart Argentina S.A. (ASA) in Mendoza (2015 samples) or its affiliated laboratory Norlab in Palpalá, Jujuy (2016 samples); or SGS Argentina S.A. (SGS), Laboratorio de Medio Ambiente in Salta. All laboratories are understood to be ISO 9001:2000-certified and are independent of ILC and LMA.

12.4 Sample Security

Sample security during the drilling programs relied upon the remote nature of the site and the fact that samples were in storage at the camp and in closed containers during transport. Security seals were used to seal the containers containing the bottles and their numbers recorded.

The stored duplicate samples were collected for future analysis and as backup samples in case the forwarded samples become damaged during transport.

We understand that solid rejects from the RC drilling were buried as these were not stored properly and the plastic bags holding the rejects had deteriorated to the point that it was not possible to separate different sample intervals.

Photographic evidence indicates that a representative spoils sample was collected in chip trays during 2010 and then in large petri dishes with lids in subsequent years. Drill core from 2016-2017 was laid in core trays with lids and has been stored on site at the exploration camp within sealable shipping containers, once detailed geological logging has been completed.

We are of the opinion that sample-security measures have been adequate. However, notable delay in transport time between sampling and receipt at the various laboratories may have had an impact upon the results obtained. Other than potential brine column mixing in the initial three RC drillholes, and transport time scheduling issues, no other issues outside of industry practice are identified in the sampling process that would materially impact the accuracy and reliability of the results within accepted error factors.

13 Sample Preparation & Analyses

The samples did not undergo major preparation procedures at the laboratories as they were already liquids that only required some sub-sampling and dilution.

Analytical procedures included:

- ICP analysis of metal ions (mainly Li, K, B, Ca, Na, Mg, Fe)
- Alkalinity measurements
- Determination of Total Dissolved Solids
- Determination of carbonate & bicarbonate contents
- Determination of chloride, sulfate & nitrate contents
- Electrode measurement of pH and conductivity
- Density

The QP, Llyle Sawyer, has not visited the laboratories used for sample preparation and analyses. However, he has discussed matters of sample preparation and analyses with ILC staff and interpreter-assisted conversations with Alex Stewart Laboratories staff in relation to preparation and analyses of brine samples at various times over the last 5 years. The QP is not aware of any issues with laboratories used in relation to sample preparation, handling or analyses that would materially affect the outcome of this estimation.

14 Data Verification

14.1 Site Visits

During site visits, the QP verified the data supplied by LMA:

- Reviewed the historical data;
- Verified that the information was presented accurately as it exists in those files and reports;
- Verified the location of the drill collars of 50% of the drillholes using a handheld GPS unit, and did not observe significant differences with the locations recorded in the database for those drillholes;
- Verified the drilling, logging, and sampling procedures, and found them to be of industry standard and acceptable for this stage of exploration;
- Examined the assay certificates for approximately 70% of the samples and compared them with the corresponding database entries. No deviations were identified; and,
- Verification of the geology of the Project, and visual verification of the brine and brine host materials.

The QP is of the opinion that the recorded data accurately reflects the original information:

- A low-level of variation or waning in brine density, electric conductivity (EC), and pH, is indicated between field tests and laboratory analyses of samples:
    - This may be the result of field method versus laboratory technique;
    - Or the result of extended delay between collecting samples and laboratory analysis;

  - Possibly reflecting some minor loss of brine density by salt precipitation or reaction within the sample container or other salts within the sample; and,
  - May possibly reflect a loss of ions in the brine samples.
- QAQC of laboratory analyses were found to have only minor deviation, well within industry accepted limits and well within acceptable parameters for this brine style deposit.

14.2 Quality Assurance / Quality Control Programs

Analytical quality was monitored through the use of blanks and two standard reference materials (SRMs). One SRM was certified; the second, a locally sourced potable spring water, was not certified. QA/QC samples were blind-inserted into the sample stream and submitted to the analytical laboratories; this is consistent with industry best practice.

14.2.1 Blanks

Suitable blanks should have grades below the analytical detection limit, because these blanks provide information about possible contamination during sampling and assaying. A barren commercial mineral water was used as blank material. Blanks were blind inserted at a rate of one per 30 samples, on average.

Lithium assays for the blank samples submitted to ASA Laboratories pre-2016 indicated low-level Li contamination, varying between 111 mg/L Li to 128 mg/L Li. This may be due to selection of unsuitable blank material.

Blank samples submitted to ASA and SGS during 2016 and later returned very low Li values, 1 mg/L Li to 11 mg/L Li.

14.2.2 Duplicates

Repeat field samples, or duplicates, were inserted in the drilling campaigns at a rate of one per 16 samples, on average, which equates to ~6% of sampling.

The majority of duplicate sample Li assay results fell within an acceptable range of 5%, with only 4 out of 34 sample duplicates outside of this range (up to 11% variation). There does not appear to be any consistent variations for other elements.

14.2.3 Standard Reference Materials

Standard reference materials were inserted blind at a rate of one per 80 samples, on average. A series of 26 spiked samples were added blind into the sample stream during the 2016 campaign, at a rate of one per 22 samples. These samples were spiked with a known quantity of high lithium bearing brine.

Assay results for the spiked samples showed a broad range, from 869 mg/L Li to 1206 mg/L Li, which may be due to errors in the "spike" addition process. Because these values are much higher than the normal brine assays, they are not of much use in determining the accuracy of the analytical procedures.

14.2.4 Potable Water

Four potable water samples, which were sourced from a local spring, were added blind to the samples submitted to the laboratories for analysis. These samples all returned very low values, < 3 mg/L Li, which is consistent with the environmental water analyses from this same water source.

14.3 Databases

All field data were entered into Excel tables at the Mariana exploration camp or at ILC offices. Data from third parties, such as laboratories and geophysical surveys, were generally supplied in digital form. These records were stored digitally for future reference.

The dataset of excel spreadsheets catalogued per drillhole was transferred to Geos Mining (via Llyle Sawyer during his December 2016 site visit). More recent exploration data were transferred via Dropbox during 2018 and 2019. Geos then undertook the following to obtain a usable database for modelling purposes:

- Review and assessment of dataset
- Update of relational database linked directly to modelling software
- All data was re-verified to original data during transfer – consolidation
- Geocoding of drillhole geological logs were verified, MA10-01 to MA16-23 and MA17-24
- Drillhole geological logs were then re-coded using the coding modified from that of ILC/LMA to give a consistent log to maiden resource estimation
- Hydrogeological unit coding, aquifer, Aquitard or aquiclude was performed from geological logs
- Data interrogated within the modelling software to detect errors

15 Pump Testing

Hydraulic testing of production wells has been ongoing since 2015 up until the end of November 2018, with pumping rates ranging from 8 L/s to over 50 L/s. Monitoring of water levels has included each pumping well and one or more nearby and far afield monitoring wells. Data loggers were used extensively, particularly in later years. Test durations ranged from 24 hours in early tests to 30 days in later tests.

The pumping tests evaluated hydraulic response between wells and provided data from which primary hydraulic parameters were estimated. Table 9 presents a summary of testing completed at site and Figure 16 presents a map showing the locations of each pumping well.

Year	Pump Wells	Monitor Wells	Rate (L/s)	Duration (Days)	Transmissivity (m^2/day)		
					High	Low	Ave
2015	MA15-09PW	3	8	1	9,630	990	**3,755**
2017	MA17-20PW	11	58	30	6,315	311	**3,636**
2018	MA17-15PW	9	60	30	5,230	304	**1,650**
2018	MA17-15PW (Lower aquifer)	9	56	1			
2018	MA17-15PW (Upper aquifer)	9	60	1			
2018	MA18-23PW (Lower aquifer)	9	44	16	877	166	**502**
2018	MA18-23PW (Upper aquifer)	9	52	20	41,194	2,373	24,642

Table 9: Summary of Pumping Test Results

Widespread monitoring established a likely zone of influence for some tests, which allowed estimates of contributing areas for the test. Test work at site MA17-20-PW and MA18-23-PW indicted very narrow radius of influence of pumping of between 100m and 300m. Testing at MA17-15-PW showed a notable south-orientated elongated radius of influence to 1.2km with a narrow radius of influence in the other directions of up to 400m.

Water quality was monitored in each test at the beginning of pumping and at the end of pumping to verify the consistency of water chemistry and to test for the influx of differing water quality during the duration of the testing. Water quality (grade and density) was found to be consistent throughout the tests.

The testing completed to date demonstrates that the salar deposits can sustain high yield wells for periods of long duration without measurably exhausting aquifer capacity. This has been demonstrated in three locations: MA17-15-PW, MA17-20-PW and MA17-23-PW.

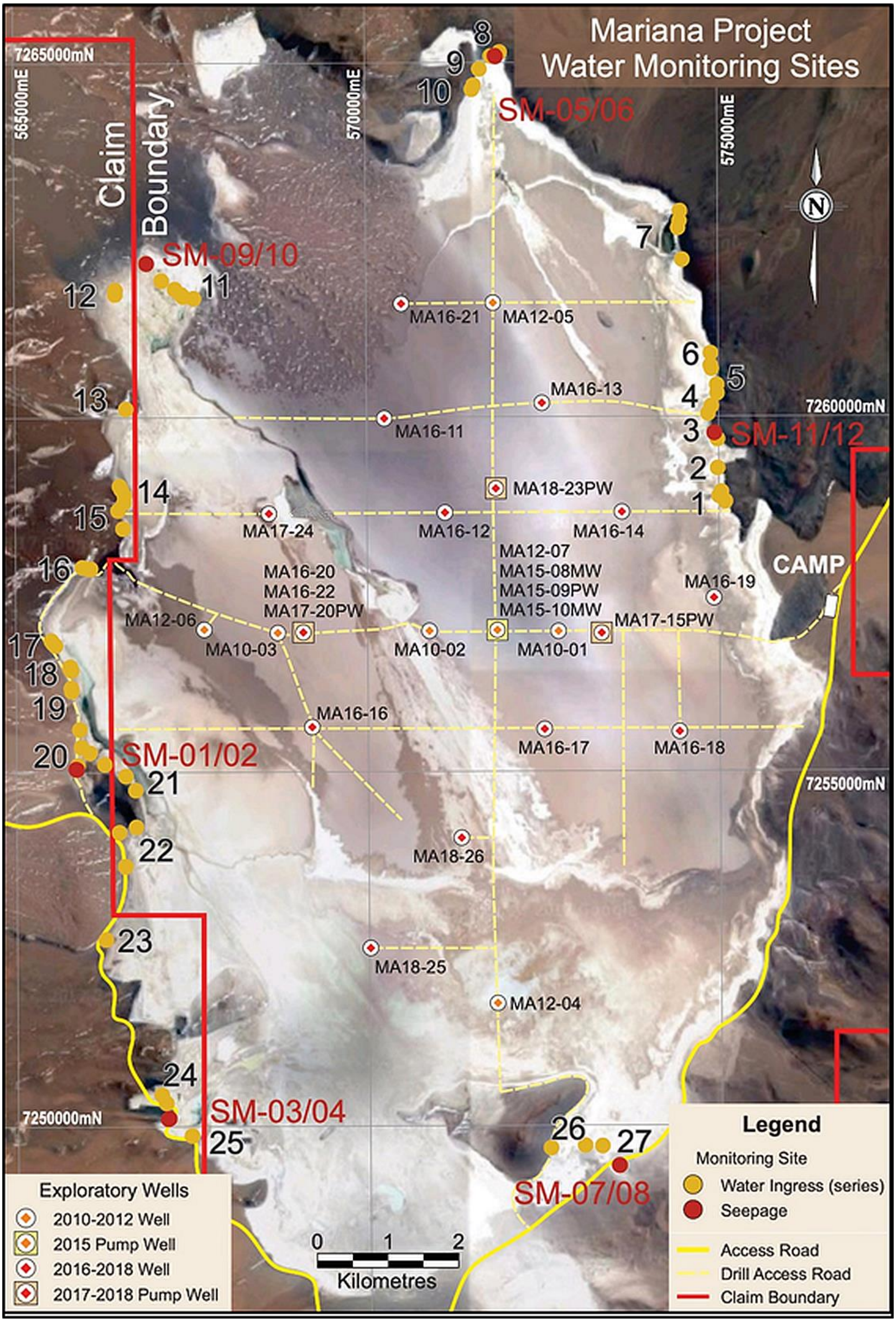

Figure 16: Locations of hydrogeological testing wells, water inflow and seepage monitoring sites

Source: (Golder Associates, 2019)

16 Adjacent Properties

The authors are not aware of any adjacent properties that could affect the exploration work or future brine production on the Mariana project.

17 Metallurgical Testwork

During 2015, ILC/LMA commissioned a study by an independent consultancy, Door to Design, that specializes in lithium brine processing. They conducted a series of laboratory bench style tests and developed a conceptual-level process route for the Project.

- Geos used this confidential study as background information when assessing reasonable prospects of economic extraction criteria for purposes of declaration of Mineral Resources; and,
- 70% lithium recovery to 6% enriched bittern was indicated by the bench tests (Door to Design, 2015, internal report).

The Prefeasibility Study indicates that the brine is able to be concentrated to 3 g/L lithium (bittern) by *insitu* field pond evaporation. Pilot test evaporation trials have shown the brine from Salar de Llullaillaco is readily able to be concentrated to the required level for proposed production at Mariana Project.

Weather data, such as evaporation rates, affect the sizing of the ponds as well as the chemistry. All may be affected due to ambient temperature.

During the first quarter of 2017, LMA began to construct a field test scale series of evaporation ponds and field trial processing plant, with the aim to trial the production of a lithium enriched bittern to 6% lithium concentration and to test the isolation of waste materials and / or other potentially-recoverable salts. This work continues with the addition of the lithium-bearing bittern being subject to additional test-work to confirm the process flow sheet for production of lithium chloride and / or other recoverable products using bitterns concentrated to 3 g/L lithium.

The QP is not aware of the progress of this recovery process, other than that the work is ongoing and that bittern of adequate concentration was achieved within 18 months of pilot plant operation.

18 Mineral Resource Estimation

18.1 Introduction

Determination of a brine resource for a salar is based on three fundamental parameters:

- Geometry and continuity of the host aquifer or aquifers,
- Specific yield, and

- Grade or concentration of the brine.

These elements combine to allow the estimate of an *in-situ* brine capacity with reasonable prospects of extraction. It should be noted that brine estimates are not "solid mineral deposits", as defined under the 2010 CIM definition standards. However, the guidelines published in the JORC Code 2012, CIM Best Practice Guidelines for Resource and Reserve Estimation for Lithium Brines, and referenced in NI43-101, provide a useful guide to brine estimation and reporting.

To determine a recoverable brine resource, the permeability of the aquifer, the specific yield of the aquifer (the unit volume of fluid that will drain under gravity) and the water balance (the fluid inputs and outputs to the aquifer) must be considered. These parameters are best obtained from several onsite hydrogeological pumping tests conducted on identified aquifers that have reasonable prospects of extraction within recognized geological domains of the host salar.

18.2 Geological Model

Eight lithological units have been interpreted from the drillhole logging and geophysics data (Table 5). Although many intercalated units are recognized in the geological logging of the core and spoils, continuity of the major units is supported by downhole geophysical surveys and between drill holes by TEM survey data.

Similar facies have been grouped together to obtain consistent, continuous units across the deposit. Lithologies were assessed on section relative to adjacent holes. Logs were reviewed, in many cases, to obtain additional lithological data for assignment. Interbedded transitional boundaries between facies were assigned to the dominant lithology.

- Due to the distance between drillholes, a broad categorization of the sedimentary and volcanic facies has been implemented;
- Geocoding and geological / lithofacies categorization was applied to logged drillholes; and
- The broad categorization (Table 5) can be correlated between drillholes in the geological model developed using the TEM data.

The upper tuff (TUFF_1) is generally not recognized in the geophysical data. However, it was categorized as it is recorded in nearly all drillholes, was noted at a near consistent depth throughout the salar and serves as a distinct marker horizon.

Volcanic units of andesite-dacite and tuff were logged in various holes; correlation between drillholes have been cautiously made with similar intercepts in neighbouring drillholes. The presence of specific volcanic lithologies at similar depths is not consistently recorded in the drillhole logs, which means that the interpretation of continuous units between holes is tentative. However, volcanic intersections have been consistently recorded, which enables a broad category to be defined.

The Leapfrog geological model was constructed within the salar boundaries using the following relationships:

- SED_2, HLT_2, VOL_1 laterally continuous stratigraphy
- SED_1 as erosion between VOL_1 and HLT_1
- HLT_1, TUFF_1 & TOP laterally continuous stratigraphy
- DEB as avalanche deposit over TOP halite in the NW part of the salar

In the west, east and southern extents of the basin the top of the aquifer is limited by the current bounds of the salar at the surface but may extend beyond the base of the alluvial fan gravels, debris flows and volcanic ignimbrite flows, as has been identified is the case in the northwest debris flow deposit.

Lithological unit data was interpolated using several Leapfrog algorithms. Continuous stratigraphic units employed the stratigraphic interpolant, which creates simple layered stratigraphy. The sediment channel and volcanic debris flows were modelled as erosive events, which cut into the underlying stratigraphy.

Current drillhole spacing does not allow direct correlation of a sedimentary stratigraphic facies between drillholes. This uncertainty in the geological continuity has a limiting effect on the confidence level of the geology model. However, correlation of logging data with TEM geophysical survey transects does support the basic interpretation of a thick mixed sedimentary sequence locally separated by cross-bedded or intercalated impermeable, semipermeable and permeable layers of volcanic, volcano-sedimentary and halite lithologies.

Modelled geological unit volumes are presented in Table 10.

Lithology Class	Total Volume Mm^3
DEB	198
TOP	1,341
TUFF_1	181
HLT_1	3,710
SED_1	108
VOL_1	6,301
HLT_2	3,355
SED_2	5,557
Total	**20,752**

Table 10: Volumes of geological model units

Note: Rounded to nearest million m^3

18.3 Hydrogeological Model

The saturated aquifer is considered contiguous from surface to 328m depth (drillhole MA16-23). The aquifer includes numerous facies changes that include volcanic tuff and volcanic flow units that cover most of the salar, as well as interbedded and intercalated sulfate enriched deposits, halite and sand lenses. Variable thickness halite units range from less than 1m to in excess of 50m and can form mega-lenses acting as aquitards where they are more competent.

As with the geological categorization, only broad scale hydrogeological units were able to be defined and correlated between drillholes. These were based upon the facies categorization developed and modified as per below:

- Aquifer – high flow
  - SEDsv, SEDvbx, +/- SULsed, VOLbx, VOLdf
  - Any HLT or SUL or VOL or VOLT modified by secondary porosity - noted secondary porosity or fracturing in descriptive log; or by alteration of consolidation/cementation noted in descriptive logs as low ("baja") or weak ("debil") consolidation/cementation, friable or semi-consolidated. Also, where VOL (VOLBx) has been noted as disaggregated in descriptive logs.
- Aquitard – restricted or low flow
  - HLT, CB, SUL, VOL, VOLT - where not modified by noted secondary porosity or alteration
  - Any SED where modified by moderate to high or intense cementation. Any VOL with <= 4 fractures.
- Aquiclude was taken to mean a zone of no flow
  - VOL – solid andesite, basalt or dacite, no fractures or porosity
- Consolidation was then applied to these hydrogeological categories on the basis below:
  - Where thin interbedded units (<2m) are classed as aquitard (or aquiclude) in a broader aquifer these were included in the aquifer. Conversely where small intervals of aquifer are interbedded within a broader aquitard these are included within the aquitard
  - Where there is notable interlayering of relatively reasonable thicknesses (>=3m) of aquifer and aquitard, these have been reclassified in accordance with the dominant unit within the interlayered sequence interval
- Intervals with zero core recovery have been included as an aquifer
  - Most drilling difficulty encountered was in unconsolidated sand units, highly fractured/disaggregated or gravelly units, or where larger cavities were encountered
  - Hence, without any other qualification information to aid in the classification of these intervals, they are all suspected of being one of the units mentioned here and as such would be classified as an aquifer, unless notably within a zone of aquitard or aquiclude
- Aquitard units were collaborated by downhole geophysical survey data and correlated between holes using TEM modelled data
- Geology was then classified into aquifer (AQ), aquiclude (AC) and aquitard (AT) in interpreted logs
- Aquitards modelled within each lithology with lenticular form
- Minor manual edits applied to resultant wireframes to ensure realistic forms

Drilling to date has intersected a sedimentary sequence that is dominated by highly permeable materials, as well as thick accumulations of lacustrine sulfate deposits and thick deposits of halite. Sedimentary structures (layering), size sorting, mineral composition and grain size and aspect in the sediments drilled to date, are all indicative of variable basin fill regimes of differing sediment sources. Within these sedimentary facies' deposits, variation in the distribution of sand, gravel, gravelly sand and sandy gravel are expected. Variability would be anticipated on different scales. To delineate such variability, a large amount of drilling would be necessary to work out these sediment types in any detail. Such tightly spaced drilling is not recommended, since the hydraulic properties of the different sediment materials would vary little and would be averaged across a 50m to 200m pumping-well screen.

Various classified lithologies in the geology model have higher lithium content than the modelled Measured Resource, of up to 348 mg/L and average grade of 317 mg/L Li. The variation in lithium ion content in the brine between lithologies is, however, low and, hence, there is little potential to obtain significantly higher-grade brine from within the estimated resource area.

Combined well field drawdown impact and grade variation with production extraction has not been modelled at this stage. However, long term 30-day, high pump rate (~60 L/s), hydrogeological tests have not noted any significant impact on notable surface features, brine bodies, or brine grade outside of seasonal variation or previously noted minor variation with lithology.

18.4 Aquifer Porosity

A total of 405 samples, representing 66.98 m of core from drillholes MA16-11 to MA16-16, MA16-20 to MA16-23 and MA17-24, were measured by AGAT for Specific Yield Porosity (SYP), Effective Porosity (EP) and Total Porosity (TP) values (Table 11). These potentially show bias, primarily due to the nature of the materials intersected in drilling. That is, more solid / competent material was selected in sampling simply as these are more enduring in the drill core. There were also some issues with handling during packaging and transport disrupting materials.

SYP Values	No. of samples	Total lengths (m)	Proportion of intervals (%)	Ave SYP (%)	Ave EP (%)	Ave TP (%)
0 – 10%	203	33.97	50.7	3.7	11.5	19.1
10% - 20%	103	17.14	25.5	15.0	25.1	33.3
>20%	99	15.87	23.7	25.8	33.8	38.6
TOTALS	405	66.98		12.0	20.4	27.5

Table 11: Summary of porosity data

Some notable low results were returned for samples expected to have good porosity, e.g. medium to coarse sand partially halite saturated, fine grained unconsolidated gravel or fine to medium grained unconsolidated sand. More notable is that other samples of similar material with no notable difference returned relatively high effective porosity (EP) and Specific Yield Porosity (SYP) readings.

It should be noted that MA16-13 is an unusual hole in relation to all other holes, in that it represents a very low porosity (as evidence by low flow rate in flow rate tests), thicker solid halite sequence occurrence in the salar, and is the only drillhole tested to date with low porosity (average 4.4%). Excluding porosity results from this drillhole gives a raw average of 12.6% SYP.

50.1% of the tested intervals returned SYP values less than or equal to 10% and an average of 3.7%. This is in the minimum range for sandy clay (mud) and silt or slightly above average for clay as per Morris & Johnson (1967) (Table 12).

Geological logs indicate that intervals containing material similar to those that returned greater than 10% SYP in the tested drillholes account for ~49% of all lithology intervals in these drillholes. Hence, the proportions of 50% aquifer materials with SYP of 20.4% to 50% aquitard materials with SYP of 3.7% are valid approximations.

Material	Specific Yield Porosity (%)		
Unconsolidated deposits	**minimum**	**average**	**maximum**
Clay	0	2	5
Sandy clay (mud)	3	7	12
Silt	3	18	19
Fine sand	10	21	28
Medium sand	15	26	32
Coarse sand	20	27	35
Gravelly sand	20	25	35
Fine gravel	21	25	35
Medium gravel	13	23	26
Coarse gravel	12		

Table 12: Values of specific yield for unconsolidated sediments

Source: Morris & Johnson (1967)

Drill logs for MA12-04 indicate a mixed finer grained sedimentary sulfate, silt and halite sequence. Equivalent sedimentary units from the porosity test samples gave a Specific Yield Porosity of 15%. From Johnson's (1967) work (Table 12) 15% is within the silt - fine sand categories; which is consistent with the geology logs for MA12-04. Thus, 15% was used in estimating the exploration potential for the aquifer materials in the southern sulfate dominated portion of the salar. For aquitard materials 3.7% was used, in line with the northern salar portion.

Geological and hydrogeological unit modelling indicates that aquifer materials account for 72.7% of the northern basin salar sequence; the higher figure is due to the higher intersect of aquifer sediments in drillholes MA16-16 to MA16-22. Therefore, the average specific yield porosity of 20.4 % is justifiably able to be applied to the global 72.7% aquifer materials and the specific yield porosity of 3.7% applied to the remaining 27.3% aquitard materials.

Modelling of the available porosity data, specifically the effective and specific yield porosities, domained by lithology class, gives the results in Table 13.

These domained model results (Table 13) include all samples as recorded and does not exclude suspect sample results. Notably the SYP average is 9.9%, which, according to Morris & Johnson (1967) (Table 12), puts the overall aquifer sequence in the sandy clay (mud) – silt – minimum for fine sand range of materials. Geological logging and observational evidence from drill core would support this result for only approximately 50% of the HLT_1, HLT_2 and SED_1 units.

Lithology units	Ave Effective Porosity (%)	Ave Specific Yield Porosity (%)	Ave Total Porosity (%)
DEB	32.5	21.6	38.9
TOP	21.3	13.0	27.9
TUFF_1	21.1	12.2	27.4
HLT_1	21.0	11.4	27.4
SED_1	18.8	10.4	24.5
VOL_1	21.8	11.8	29.1
HLT_2	21.1	11.6	29.1
SED_2	24.0	11.0	31.2
Averages	**22.2**	**11.6**	**29.3**

Table 13: Aquifer Porosity results modelled by lithology class

Comparisons of total porosities and specific yield from published studies of the Salar de Olaroz (Groundwater Insight Inc., 2010 and John Houston and Peter Ehren, 2010) were considered generally applicable to the Project area. Geos Mining staff member Llyle Sawyer is familiar with sediments and evaporite lithologies at Salar de Olaroz, having worked at this site during the exploration drilling phase. Mr Sawyer is confident that the grain size of the sand and gravel units at Mariana Project is, in general, greater than that at Salar de Olaroz. However, there is no laboratory data (granulometric analysis) of the geologic material at the Mariana Project to compare with the Salar de Olaroz project. Geos assumed an equivalent sand grain size material for both salars. Table 14 presents comparable ranges of values of total porosity and specific yield.

Project	Total Porosity (%)		Specific Yield (%)	
	From	To	From	To
Olaroz	25	35	12	22
Mariana	24	39	10	22

Table 14: Comparable Total Porosity and Specific Yield Ranges, Mariana vs. Olaroz

The Mariana values for total porosity and specific yield show a greater range than the comparable Olaroz values. The lower values at Mariana Project are marginally lower than Olaroz, while the higher values are 4% higher. The modelled weighted mean laboratory-derived specific yield values of 11.4%, 11.7% and 12.3% for Measured, Indicated and Inferred Resources, respectively, are considered to be highly conservative.

18.5 Downhole Compositing

No downhole compositing of the brine assays was undertaken. Sample locations were taken as point data at the downhole reference point for the brine sampling.

18.6 Brine Chemistry

Parameters for brine chemistry interpolated in the modelling include: Li, Mg, K, B, $HC0_3^-$, SO_4^{2-} & brine density. Assays were composited into 2m intervals down-hole. Values from MA12-07 were excluded from the interpolated solids due to suspected data errors.

The vertical grade distribution shows average concentrations approximately 308 mg/L of lithium (Li) for all drillholes. Only minor vertical grade variation, ranging from 234 mg/L Li to a maximum of 357 mg/L Li, existed across all drillholes. This limited variation has been noted since the first drill program in 2010. Modelled brine sample ion concentration, domained to the classified lithology, shows that average ion concentration variation is relatively correlative with lithological sequence class, as shown in Table 15.

While the drillholes offered good coverage overall, some holes were not sampled within the upper 60m or for intervals in excess of 20m, due to drillhole caving or other drilling issues. This has a limiting effect on the assessment of any possible bias between drillholes and the understanding of the influence of ion distribution in the different sequences.

Assay data was interpolated using the Leapfrog RBF interpolator. Variance was modelled using a spherical function alongside a lenticular search geometry, i.e. significantly elongate along X axis and Y axis relative to Z axis. This approach favors thin, laterally continuous geometry, allowing fine vertical variations in grade to be defined. However, analyses were generally sufficiently consistent in grade down-hole to produce broad grade shells.

Lithology Class	Average Density (g/mL)	Average B (mg/L)	Average Li (mg/L)	Average K (mg/L)	Average Mg (mg/L)	Average HCO_3^- (mg/L)	Average SO_4^{2-} (mg/L)
DEB	1.222	692	345	10,200	4,610	489	16,600
TOP	1.220	604	318	9,880	4,450	556	15,300
TUFF_1	1.217	577	306	9,590	4,380	493	15,300
HLT_1	1.219	598	314	9,870	4,490	505	15,200
SED_1	1.220	606	306	9,600	4,380	614	16,000
VOL_1	1.218	602	321	10,200	4,520	452	16,100
HLT_2	1.219	609	318	9,820	4,400	483	16,000
SED_2	1.216	583	313	9,800	4,350	432	15,700

Table 15: Average brine ion concentrations and density by lithology class

18.7 Brine Density

Density measurements of the brine samples were taken in the field by ILC personnel using a hand-held densimeter instrument. Geos Mining personnel directly observed such measurements during site visits and consider that the readings were conducted to the manufacturer's specifications and the procedures and quality assurance and quality control (QA/QC) measures (duplicates) used in this program were of a very high standard. The density of the brine samples was also determined by the laboratories where the samples were forwarded for analyses. Available field tested and laboratory analyzed brine samples, excluding QAQC samples, returned densities as summarised in Table 16.

The laboratory analyses are 0.6% lower than field test average. However, the lower and upper bounds of the ranges are within 0.4%; with the laboratory tests being 0.4% higher than the field tests. Both differences are below acceptable error, and the accepted mean for the density of the brine is considered to be 1.217 mg/L (g/cm^3).

Modelled density data for the complete geological (global) model domained to classified lithology results are shown in Table 17.

The average for the global geological model is within acceptable variance to the straight statistically calculated average. It is interesting to note the change in density average through various lithology classes, with the lowest brine densities being in the lowest stratigraphic lithology class.

No density measurements were taken by geophysical logging that the authors are aware of.

Parameter	Density (g/cm3)		
	Field	Lab ASA	Lab SGS
Count	531	861	60
Mean	1.219	1.212	1.216
Standard Error	0.0008	0.001	0.004
Median	1.221	1.22	1.216
Mode	1.22	1.23	1.216
Standard Deviation	0.02	0.029	0.001
Sample Variance	0.0004	0.0009	0.0008
Kurtosis	124.7	25.01	1.23
Skewness	-11.1	-4.316	-0.577
Range	0.235	0.321	0.005
Minimum	1.000	1.000	1.213
Maximum	1.235	1.310	1.218
Confidence Level (95%)	0.002	0.002	0.002

Table 16: Statistics for field and laboratory tests of brine density

Note: No QAQC samples included

Lithology Class	Average of Density (g/mL)
DEB	1.222
TOP	1.220
TUFF_1	1.217
HLT_1	1.219
SED_1	1.220
VOL_1	1.218
HLT_2	1.219
SED_2	1.216
Average	**1.222**

Table 17: Modelled aquifer density data domained to lithology class

18.8 Block Modelling

Block modelling was conducted using Leapfrog Geos 4.5 software. Block dimensions were set according to the relative spacing between points of observation (X & Y dimensions), sampling resolution down-hole and the scale of the hydrogeological units (Z dimension).

- Block size set at 300mE x 300mN x 5mRL in relation to drill and downhole data spacing
- Geological, hydrogeological & brine chemistry interpolants evaluated onto block model.
- Blocks can be filtered by stratigraphic & hydrogeological units, allowing flexible reporting of resource quantities.

18.9 Resource Classifications

Brine deposits are unlike the majority of mineral deposits in that they are fluid. Fluids within a brine deposit can move and can mix with adjacent fluids when exploitation of a brine deposit begins. Evaluation of such deposits, therefore, requires special considerations that are not applied to other mineral deposits. Brine resource classification must integrate criteria addressing at least the following four parameters:

- geological continuity of the mineralization, including porosity (confidence in location, geometry and thickness between drill holes);
- grade continuity and support;
- data quality; and
- reasonable prospects for economic extraction.

The quantity and quality of the collar, lithological, brine flow in-hole and brine sample data (including analysis results) is adequate to support in-situ Mineral Resources estimation and reporting. Hydraulic and hydrogeological parameters have been adequately tested. Although these are spatially limited, they do show continuity, are comparable with other deposits of similar type and deemed sufficient for use in determining Mineral Resources for the Mariana brine deposit.

The assessment has defined Mineral Resources at different levels of certainty, varying from Measured Mineral Resources to Inferred Mineral Resources, based on the certainty provided by the exploration data (surface sampling, pitting, geophysics, drilling).

A “Measured Mineral Resource”, as defined in the JORC Code 2012, 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 gathered through appropriate techniques that is sufficient to confirm geological and grade continuity between points of observation where data and samples are gathered. A Measured Mineral Resource has a higher level of confidence than that applying to either Indicated or Inferred Mineral Resources and may be converted to a Proved Ore Reserve or Probable Ore Reserve.

Measured Mineral Resources at Mariana have been estimated for areas where:

- Long term pumping tests conducted to accepted standards / practices were performed and the confirm ability of the aquifer to support pumping and reasonable prospects for economic extraction;

- Aquifer hydraulic properties (permeability and specific yield) have been estimated from aquifer tests and /or laboratory drainable porosity testing;
- Monitoring boreholes occur in a wide range around the test boreholes (depending on aquifer conditions);
- Drilling on a moderate density (1.2 km to 1.4 km spacing between drillholes) is adequate to confirm local site geology and indicate continuity of the geological units and aquifer configuration;
- Geophysics data (ground Transient Electromagnetic (TEM), gravimetric, and seismic) has been able to confirm continuity of geological units and aquifer configuration between adjacent drillholes to a high level of confidence;
- Precise hydrogeological model (aquifer/aquitard) based on measured data (TEM data, seismic data, gravity data, drilling data, well logging data);
- A sufficient number of brine samples have been collected from bores to confirm brine concentrations;
- Duplicate samples of all samples taken (10 % of all brine samples) have been analyzed by a second (independent) certified laboratory with the analyses showed comparable results within an error range of less than 10 %;
- The laboratories have stated the analysis methods.
- Measured Mineral Resource area drafted on: 1000m buffer to hydrogeological pump test bores and resource drillholes + salar STEM height + highest data confidence level from above criteria.

An “Indicated Mineral Resource”, as defined in the JORC Code 2012, 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 mine planning and evaluation of the economic viability of the deposit. Indicated Resources have a lower level of confidence than that applying to Measured Mineral Resources and may only be converted to Probable Ore Reserves.

Indicated Mineral Resources at Mariana have been estimated for areas where:

- Drilling on a moderate density (1.2km to 1.4km spacing between drillholes) has confirmed local site geology and aquifer configuration and the ability of the aquifer to support pumping;
- Geophysics data has been able to confirm continuity of geological units between some adjacent drillholes with the Measured Mineral Resource;
- Aquifer hydraulic properties (permeability and specific yield) have been estimated from laboratory drainable porosity testing and /or aquifer tests;
- A sufficient number of brine samples have been collected from all drillholes to confirm brine concentrations;
- Duplicate samples of all samples taken (10 % or more of all brine samples) have been analyzed by a second (independent) certified laboratory;
- The laboratories have stated the analysis methods;
- Extrapolated hydrogeological model (aquifer/aquitard determination) based on measured data (in hole flow rate test data, well logging data);

- Indicated Mineral Resource area drafted on: 1500m distance buffer to resource drillholes + salar STEM height + existing salar outline + moderate data confidence level from above criteria.

An "Inferred Mineral Resource", as defined in the JORC Code 2012, 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 continuity. An Inferred Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonable expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

Inferred Mineral Resources at Mariana have been estimated, based on a lesser amount of data, where:

- Broader spaced drilling has confirmed local site geology and aquifer configuration;
- Areas where no drilling has occurred, but geophysics data has been able to confirm stratigraphy extent is contiguous with other areas of the salar for which drilling data are available;
- Aquifer properties can be inferred from tests undertaken in other, contiguous areas of the same or similar salar stratigraphy;
- Brine concentrations have been measured in certified laboratories from surface pits or ponds as well as limited drill holes, and the presence of brine extending through sediments to depth can reasonably be inferred;
- The laboratories have stated the analysis methods;
- Limited brine chemistry data available provides an indication of the brine quality, and aquifer continuity with known brine resources may be expected based on geophysics interpretations;
- Inferred Mineral Resource drafted on: 2000m distance buffer to resource drillholes + salar STEM height + existing salar outline + lower data confidence level of above criteria

The spatial distribution of the resource categories (Measured, Indicated and Inferred) and locations of drillhole collars are shown in Figure 17.

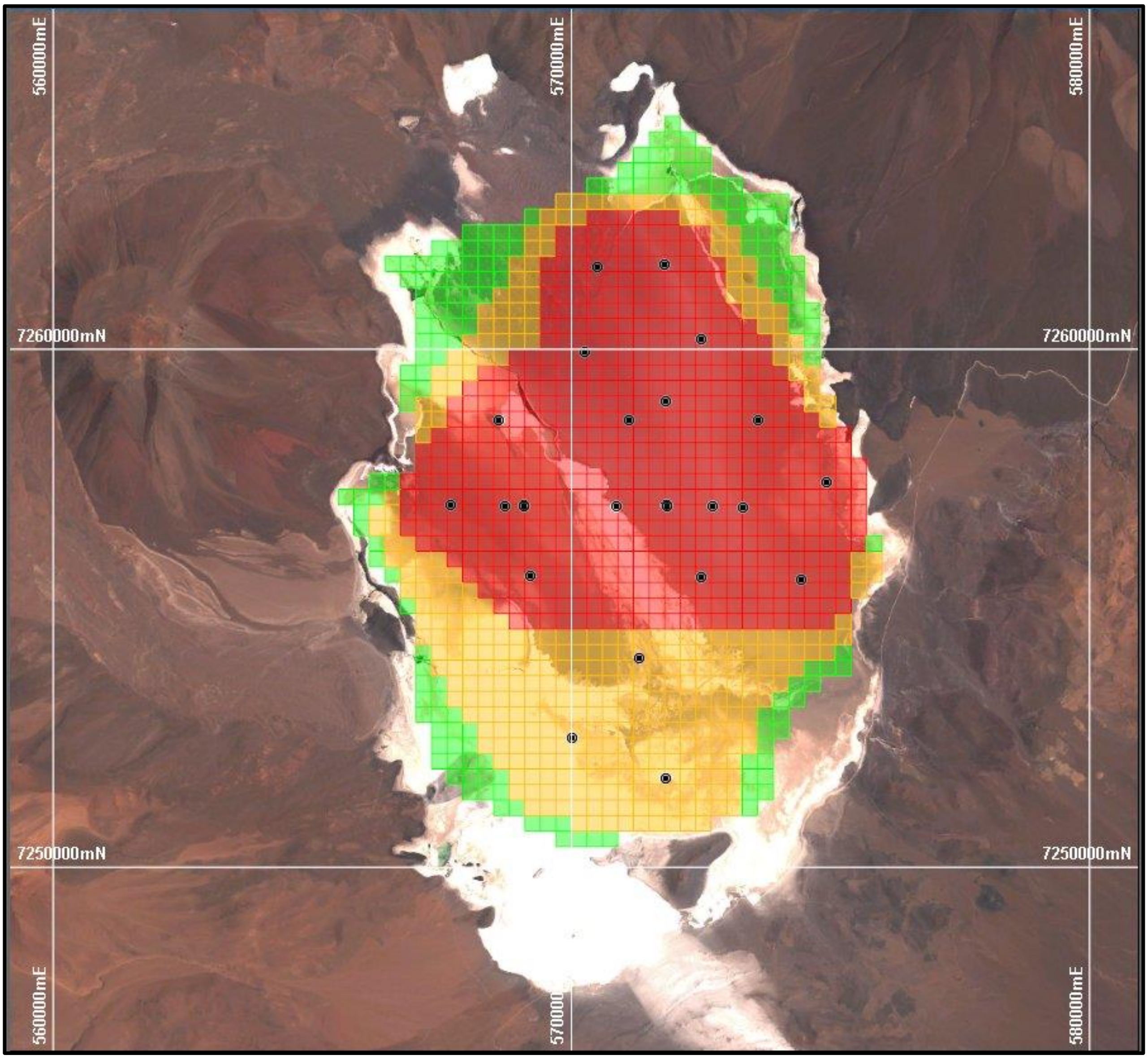

Figure 17: Classified Mineral Resources Areas

(Measured – red, Indicated – orange, Inferred - green)

Grid co-ordinates datum WGS84, UTM Zone 19S

18.10 Resource Compliance

The Qualified Person for the brine resource estimate is Llyle Sawyer, MAIG. The effective date for the estimate is 23 August 2019.

The Mineral Resources have been estimated in accordance with the principles and guidelines of the JORC Code 2012. The JORC Code is an internationally recognized set of principles on which projects are judged. Llyle Sawyer is a Competent Person in terms of the JORC Code 2012 for the style of deposit being assessed.

18.11 Classified Mineral Resources

Brine volumes are reported using an average specific yield (SY) of 15% (Table 18Table 18). Due to the nature of brine deposits, it is not relevant to estimate Mineral Resources to a specific cut-off grade. However, a nominal grade cut-off value of 230 mg/L Li has been applied for reporting purposes only.

Resource Category	Aquifer Volume (Mm^3)	Brine Volume (GL)	Brine Density (g/mL)	Li (mg/L)	K (mg/L)	Li (kt)	LCE# (kt)	K (kt)	KCl# kt
Measured	11,200	1,680	1.219	314	9,710	528	2,810	16,300	31,200
Indicated	6,400	960	1.216	316	10,100	303	1,600	9,730	18,500
Inferred	3,140	470	1.218	328	10,340	154	786	4,860	9,260
Measured + Indicated		**2,640**	**1.218**	**315**	**9,860**	**831**	**4,410**	**26,030**	**49,700**

Table 18: Classified Mineral Resources Estimates

Based on standard conversion rates, and assumptions of production efficiency of ~86%

LCE = Lithium Carbonate Equivalent; conversion factor 5.324 (Ministry of Energy and Mines, British Columbia, Canada)

KCl = Potassium Chloride; conversion factor 1.907

NB. Figures have been rounded

The weight of contained Li within the Measured + Indicated Resources represents a 255% increase over the 2017 Mineral Resources and the contained Li within the Inferred Resources represents a 32% increase over the 2017 figures. These increases are largely due to additional exploration allowing the 2017 Exploration Targets to be now classified as Resources.

Detailed breakups of the Mineral Resources within the various geological units are presented in Appendix 2.

The following figures (Figure 18, Figure 19, Figure 20) show the modelled lithium grades in plan view and section views. The block model has been extended to incorporate all drillholes to the completion of MA18-26. Modelling has been extended to cover the entire salar, now incorporating the southern basin. The model has been cut to the salar boundary and to a depth based on the depth of drilling with a limit of 250m applied where there is limited data.

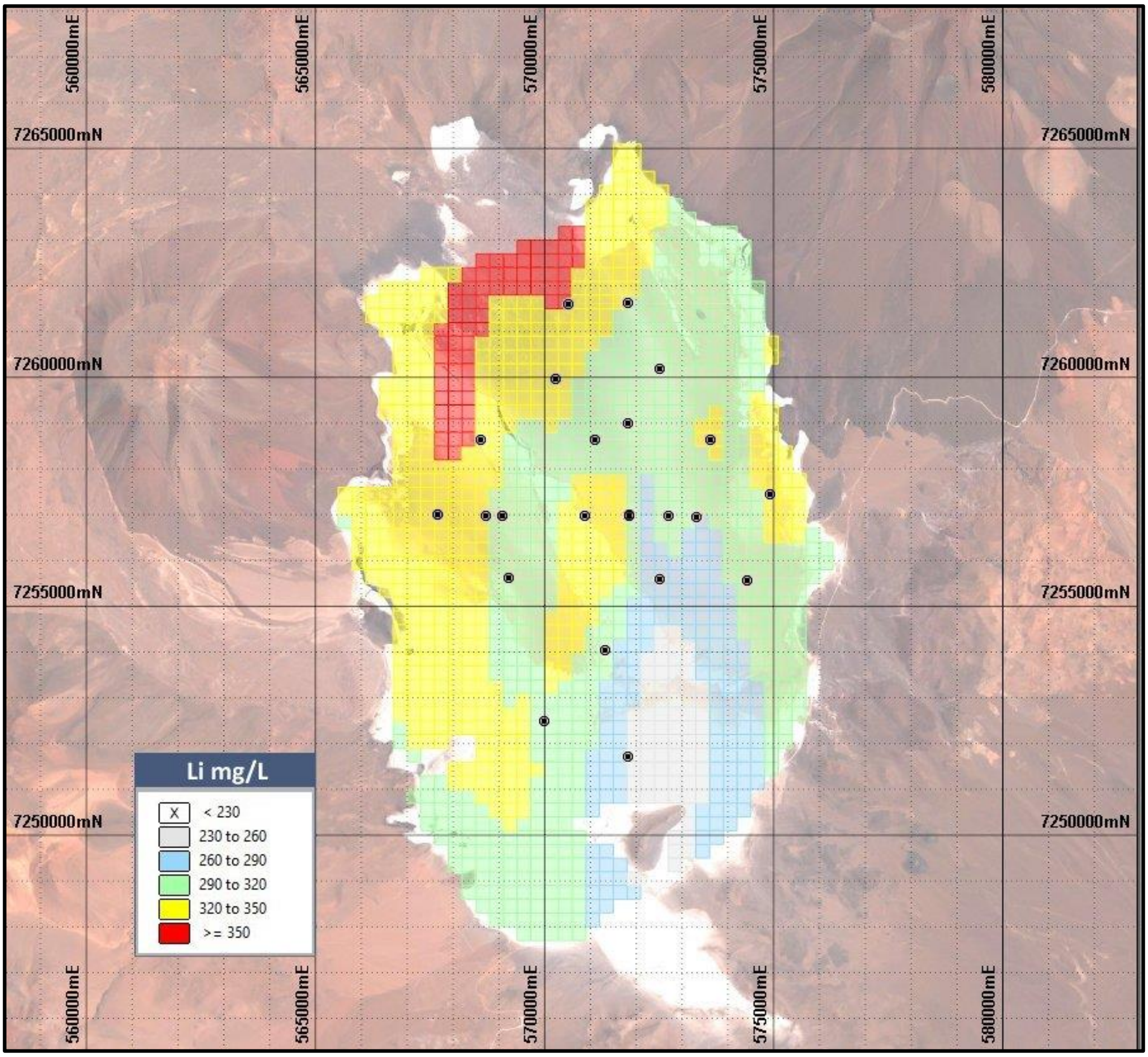

Figure 18: Block modelled Lithium grades at surface – plan view

The blocks of >350 mL/L Li to the northwest of the drilling (Figure 18 and RHS of Figure 20) may be a manifestation of the software estimation algorithms and should be treated with caution until more widespread drilling can be completed to better define these blocks.

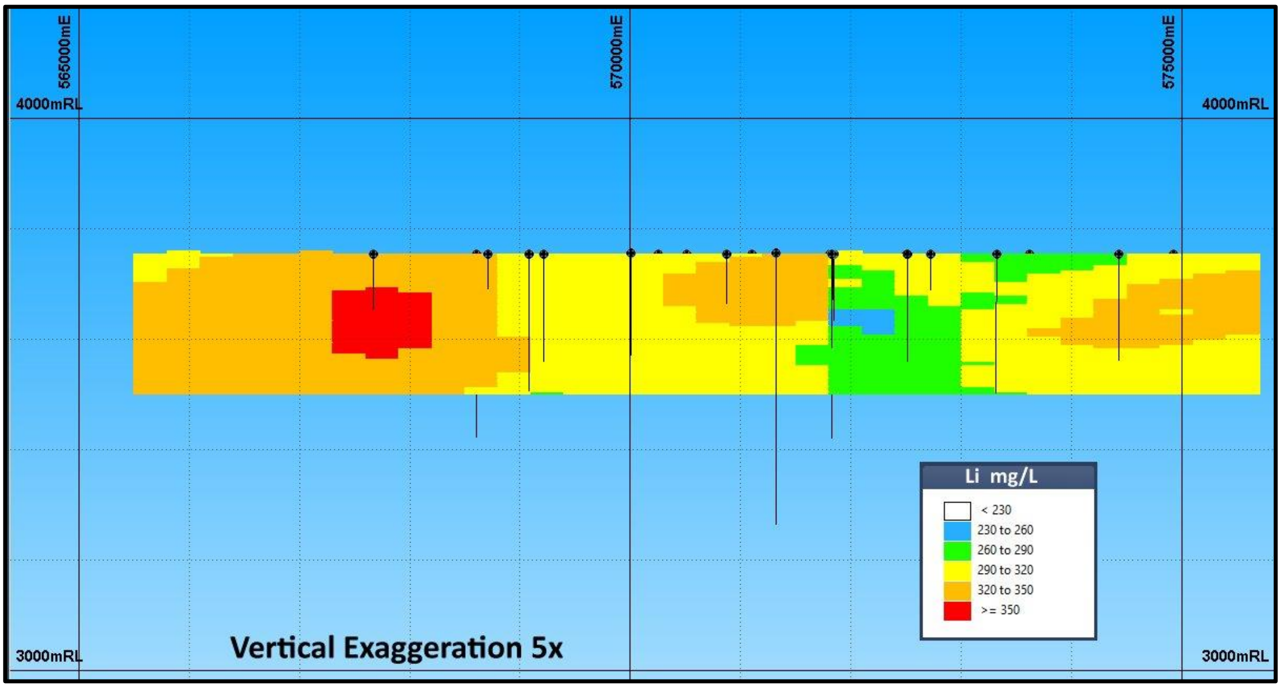

Figure 19: Block modelled Lithium grade - East–West Section 7,257,000mN

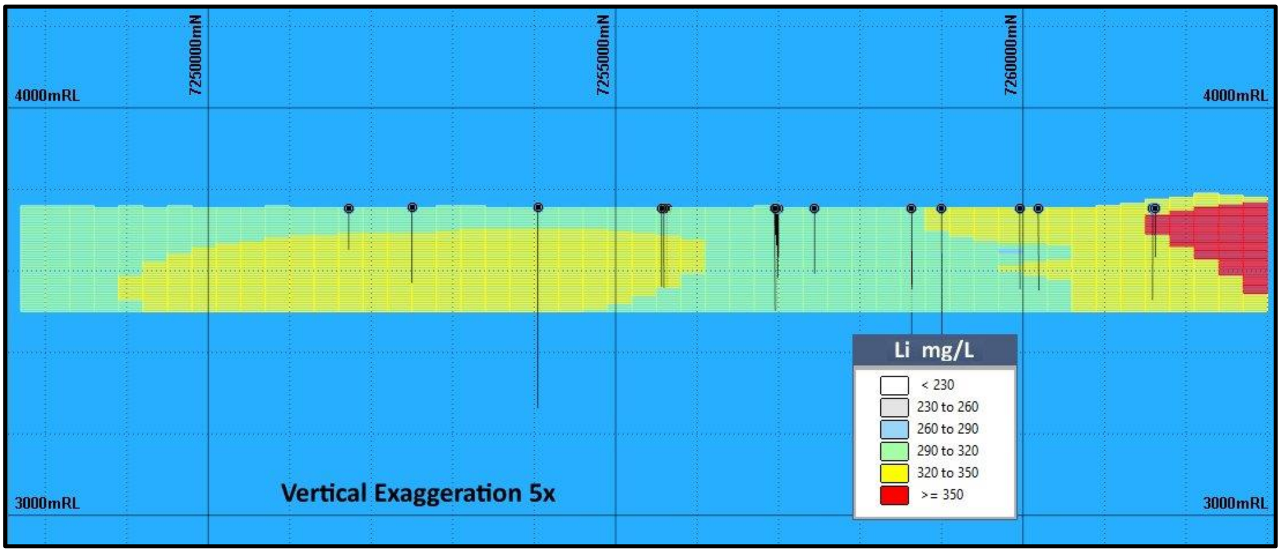

Figure 20: Block modelled Lithium grade – South-North Section 570,000mE

18.12 Associated Elements

The Mariana project brines contain associated elements and salts that may or may not be commercially viable or can have an influence on the production process. The average grades for these are listed within the various resource categories are listed in Table 19.

Category	Brine Volume (GL)	B (mg/L)	Mg (mg/L)	SO_4^{2-} (mg/L)	HCO_3^- (mg/L)	Cl^- (mg/L)	Na (mg/L)
Measured	1,680	603	4,360	15,600	523	186,000	111,000
Indicated	960	584	4,508	16,000	391	184,000	111,000
Inferred	470	610	4,600	15,800	440	184,000	112,000

Table 19: Associated Elements within Resource Categories

18.13 Future Exploration Potential

The aquifer volume is still open at depth in the majority of the salar, since only three drillholes (MA16-18, MA16-23 and MA18-26) potentially intercepted Mesozoic basement volcanic lithologies. No age dating or mineralogical studies have been conducted on the intercepted volcanic units to determine their derivation. Brine was recovered to the end of drilling for the majority of the remaining drillholes.

There is potential to extend and define additional aquifer volume through extra drilling proximal to the salar margins and throughout the salar at depth below the current resource drilling level.

Increasing the understanding of lateral variations of the various sedimentary facies, related to the effective porosity and specific yield of those facies, has the potential to impact the estimation of the extractable volume of brine. It would have a direct bearing on the volume of the brine resources, which may be contained and recoverable from within the salar and, as a result, would reduce the uncertainty of any estimation.

18.14 Prospects for Eventual Economic Extraction

For the purposes of assessing reasonable prospects of economic extraction, a cut-off grade of 230 mg/L Li has been applied for comparative purposes with other operations in Argentina where lithium recovery from brine is undertaken by evaporative processes.

The Measured Brine Resources have been stated as 1,680GL grading at 314 mg/L lithium. This equates to 528,000 tonnes of contained lithium (or 2.8Mt of lithium carbonate (Li_2CO_3), using the conversion factor of 5.324). Using a processing recovery estimate of 86% provided by the consultant engineers (Golder Associates, 2019), an estimate of recovery from processing is 2.4Mt of Li_2CO_3 from the Measured Resource.

Indicated Brine Resources have an estimated average grade at 316 mg/L Li. The potential recoverable brine volume from the Indicated Resources, based on the same criteria as for Measured Resources, is estimated at 960GL. This equates to 303,000 tonnes of contained lithium or, upon conversion, a potential estimated recovery of 1.4Mt of Li_2CO_3.

Although these brine resource estimations are low grade in comparison to other operating lithium brine projects, the volume of the contained aquifer and, hence, brine available for extraction, is extremely large in comparison to the volume required for the proposed lithium production annually.

Due to concentration admixing during extraction, it would be expected that the average grade for a combined Measured + Indicated Brine Resources would be proportionally reduced. Hence, the potential recoverable lithium element would not be a simple addition of the two figures above but rather an equivalently proportioned tonnage. The estimated combined effective volume of brine is 2,642GL at a grade of 315 mg/L of lithium. Using the same criteria as for the Measured Brine Resources, this equates to a lithium element of 831,100 tonnes Li or upon conversion 4.4Mt Li_2CO_3. Using a processing estimate of 86% provided by the consultant engineers, an estimate of recovery from processing of all the combined effective volume of brine is 3.8Mt of Li_2CO_3 (LCE).

At a proposed production of 20,000t LCE per year, there is potential for a "mine life" of up to 190 years (Table 20).

Target production (tonnes LCE/year)	Mine life (years)
10,000	380
15,000	250
20,000	190

Table 20: Estimation of "mine life"

This is a simple numerical estimate. No attempt has been made to model or estimate the particle flow paths and changes to grade over time as extraction induces groundwater (brine) flow within the salar.

Estimates and projections are modelled on the exploration data acquired; as such they are conceptual in nature and may not reflect actual values or volumes of returns from the project.

While the wide-spaced drilling conducted to date may not be capable of resolving the full nature of the aquifer system, recorded lithofacies data and flow rates at drill holes indicate a broad deep brine aquifer system to at least 328m. It could be reasonably expected that a fair proportion of the brine in the halite and volcanoclastic sand aquifer could be extracted. Houston (pers comm, 2006) stated that 30% of the total in-situ brine will be able to be effectively extracted from any aquifer system. Therefore, the 12% specific yield used for resource modelling is conservative.

The estimation of the resource quantity and the method of brine extraction are subject to uncertainties that are unique to brine deposits. Specific differences include, but are not limited to the following:

- Variability of effective porosity, specific yield and hydraulic conductivity in three dimensions, all of which influence the estimate of resource.

- Numerical modelling of brine resources relies on reasonable and accurate estimations of the physical parameters outlined above, as well as the three-dimensional distribution of brine chemical composition.
- Aside from the characterization of the physical parameters and brine assays, lower density, dilute brine inflow may negatively impact the sustained extraction of brine at a consistent brine chemical composition
- A resource estimate for a brine resource is accurate as of the date the input assays were collected. Production-level brine extraction will re-distribute the brine deposit over time.
- While effective porosity measurements were estimated from sample analysis laboratory methods, specific capacity required indirect measurement and was determined by extended (long term) large-scale brine aquifer testing.

Based on work completed to date, the geological continuity of the Llullaillaco Salar aquifers is well demonstrated. However, basin fill debris flow facies and volcanic flows, or buried structural features, influence locally. Some faulting interpreted from core logs and geophysical survey imaging, occurs between drillholes. This has a localized effect on the geological continuity, with a greater effect on deeper infill material. However, the offsets, although not known, are interpreted as small scale, with indication that structures are draped by the infill lithologies or developed succinctly to the faults and retained hydraulic connectivity.

Grade continuity and distribution within the surficial halite aquifer above the volcanoclastic strata are impacted by less saline brine inflow.

In addition to uncertainty derived from the grade and geological information, there is a low level of uncertainty in the resource estimation in relation to the spatial distribution of the effective porosity and specific yield within the classified stratigraphy of the aquifer; particularly, where drillhole coverage is lower. Specific yield provides an indication of the volume of brine that may be extracted from the subsurface aquifers by conventional pumping techniques, and therefore, provides a base for an estimate of recoverable brine resources. The porosity of the selected samples from the drillholes is generally lower than indicated by the hydrogeological pump test high transmissivity results.

Since the beginning of 2019, lithium prices have declined to less than $10/kg LCE due to weaker than expected demand from China and increased production from spodumene miners (CRU International Ltd, 2019). However, CRU continues to forecast strong lithium demand growth as a result of worldwide roll-out of electric vehicles. With this improved long-term scenario in mind, the QP of this report is satisfied that the Mineral Resources estimated for the Mariana lithium brine project meet the JORC Code 2012 criteria for having reasonable prospects for eventual economic extraction commencing within a medium-term time scale of 5-10 years. Measured Resources, qualifying factors remaining equivalent, has potential to support extraction of up to 20,000 t of lithium per year in excess of 20 years minimum.

18.15 Significant Risks and Uncertainties

- Special circumstances may be prevalent in this mature halite dominated salar including
  - Low Lithium grade in comparison to other projects
  - The Mineral Resources are of significant high volume
  - Magnesium and SO_4^{2-} contents are high, affecting concentration and processing
  - Disposal of large quantities of concentrated waste product from concentration may impact operations
  - High grade of potassium & potential impacts on recovery may add to the project
- Given the elevation of the salar (3,754masl), the variation of diurnal temperatures would be expected to have a serious effect on the crystallization of compounds as well as changing the dynamics of the phase chemistry. Field trialing the evaporation sequence of the process has better defined recovery estimates, up to 86%. However, climatic fluctuations may impact the viability of the project.
- Variation of the brine chemistry from any future extraction wells, while expected to occur, is indicated to be minimal and should have negligible instantaneous effect on any processing. Significant averaging of brine composition in the salt fields due to the volumes extracted for high production rates is anticipated, though marginal in this case based on current modelling, there may be notable variation.
- Any major shift will be identified by the sampling of the ponds during concentration field trials and allow the operation to shift or divert flow to maximize recoveries of products as well as increase or decrease brine treatment flow.
- With the number of potential projects in advanced study but not in production, vendors qualified and able to deliver the necessary supplies at the required volume and quality may not be able to provide accurate pricing and timely supply.
- Argentina represents a significant high-risk category in terms inflation, debt crisis, shortages of natural gas, electricity, demands for higher wages and living standards.

19 Conclusions

- The geologic and hydrogeological understanding of the brine reservoir settings, sedimentary lithologies, basin structure and variation controls on mineralization is sufficient to support estimation of Measured, Indicated and Inferred brine resources.
- There is sufficient information to infer the existence of semi-confined leaky aquifers locally separated by aquitards.
- Lateral zonation of some geological and hydrogeological parameters is indicated, but not directly confirmed.
- Structures are indicated within the salar, effects on lateral aquifer continuity appear limited although not directly observed.

- The mineralization style and setting are well understood and can support declaration of brine resources.
- The exploration programs completed to date are appropriate to the brine deposit and support estimation of brine resources.
- Brine sampling interval up to 3.7m is appropriate to support the Mineral Resource estimation.
- Sampling procedures, samples collected, and methods employed and approach, were thorough and provide sufficient information to support resource estimation. There are no drilling or recovery factors that would materially impact the accuracy and reliability of the drilling results.
- The samples collected are considered of sufficiently high quality to provide unbiased results of the brine geochemistry.
- The assay protocols are adequate for this type of deposit.
- The quality control (QC) program included the insertion of SRMs and blanks. No significant biases were observed that could materially affect brine resource estimation. A low-level of lithium contamination appears to exist, as indicated by blank samples. This may be the result of an unrealistically low detection limit stated by the laboratory, or by the selection of an unsuitable blank material.
- The samples were analyzed at Alex Stewart Laboratories (ASL) in Mendoza and Palpala, Jujuy, and by SGS Laboratories in Buenos Aires. The sample preparation and analytical methods used by ASL and SGS to assay the samples were appropriate.
- The data recorded in the database accurately reflects the original information.
- Analytical accuracy at ASL and SGS for Li, K and B was within acceptable limits.
- There are two density data sets: measured from samples measured in the field and measured by the laboratory.
- Brine resources were estimated using drill hole brine sampling data and have been performed using industry-standard practices.
- The differences for drill hole collar elevations, with the digital elevation model (DEM) surface, are usually within ±1 m; these differences are primarily attributed to differences between the differential GPS used by the surveyors and the calibration of the satellite DEM.
- Considering the wide spacing of the drilling and uncertainties in the location of the basement, and therefore in the thickness of the lower aquifer, the boundary of the lower aquifer at depth was limited by an extrapolated depth from TEM interpretation correlated to drill hole logs. With the exception of the three drill holes that intercepted the basement, where the depths were honoured.
- Preliminary extraction concepts used to support considerations of reasonable prospects for economic extraction include extracting the brines through pumping wells and piping to surface pre-concentration ponds and then a processing plant. This supported by successful long-term hydrogeological testing at near production rates.
- The lower aquifer is still open in depth. Brine was recovered until the bottom of most drill holes. The semi-confined leaky to unconfined aquifer is fully saturated.
- The deposit remains open laterally beyond the resource definition drilling area.

- Further definition of the lateral and vertical extents of individual sedimentary and volcano-sedimentary basin fill facies is possible with additional work. Any such further work would only be recommended for upgrading resource categories to Proven and Probable Reserves.
- The resources for Salar de Llullaillaco have been estimated using a conservative specific yield value of 15%, derived from porosity analyses results. Salar de Llullaillaco differs from regional salars in having more evaporite and volcanoclastic dominated lithofacies sequences and only minor clay facies within the aquifers, particularly, within the northern portion of the salar. The specific yield for dominant evaporite and volcanoclastic aquifers should potentially be notably higher than that from other salars throughout the region. Specific yield for solid halite will be negligible in all cases.

20 References

CRU International Ltd, 2019. *Lithium prices crash through $10,000 as hype meets reality.* [Online] Available at: https://www.crugroup.com/knowledge-and-insights/insights/2019/lithium-prices-crash-through-10-000-as-hype-meets-reality/?utm_term=&utm_content=Read%20full%20Insight&utm_campaign=CRU%20Insight%20newsletter%202019%20september&contactID=428088&utm_source=Ade
[Accessed 9 September 2019].

Ensinck, J. & Unger, N., 2016. *Transient Electromagnetic (TEM) Survey (Phase II), Geophysical Report,* s.l.: Quantec Geoscience Argentina S.A. report for Litio Minera Argentina S.A..

Golder Associates, 2019. *Feasibility Study of thre Mariana Lithium Brine Project, Salar de Llullaillaco, Salta Province, Argentina,* s.l.: Consultants report for Litio Minera Argentina S.A..

Harrop, J. & MacDonald, K., 2011. *Mariana Lithium Project, Salar de Llullaillacao, Salta, Argentina,* s.l.: International Lithium Corp..

International Lithium Corp, 2015. *Management Discussion and Analysis for the Year ended December 31, 2014,* s.l.: International Lithium Corp.

Montgomery & Associates, 2019. *Balance Hídrico del Salar de Llullaillaco,* s.l.: Montgomery & Associates report for Litio Minerta Argentina S.A..

Morris, D. & Johnson, A., 1967. *Summary of Hydrologic and Physical Properties of Rock and Soil Material,* s.l.: U.S. Geological Survey paper 1839-D.

Sawyer, L., 2016. *Hydrogeology pump test data review - Mariana,* s.l.: Geos Mining report for International Lithium Corp.

Sawyer, L., 2018. *Hydrogeological Test Review MA17-20PW, Mariana Project, Salar de Llullaillaco, Argentina,* s.l.: Geos Mining report for Litio Minera Argentina S.A..

Sawyer, L., 2018. *Hydrogeological Test Review MA18-23PW, Mariana Project, Salar de Llullaillaco, Argentina,* s.l.: Geos Mining report for Litio Minera Argentina S.A..

Sawyer, L. & Willetts, O., 2017. *Preliminary Brine Resource Estimate, Mariana Project, Salar de Llullaillaco, Argentina,* s.l.: Geos Mining report for International Lithium Corp..

21 Appendix 1 – Glossary of Technical Terms

Technical Terms

Alluvium	A general term for unconsolidated material deposited during comparatively recent geological time by running water or wind
Andesite / Andesitic	An intermediate variety of igneous rock
Anomalous	Having statistically significantly higher or lower values than the norm
Aquiclude	A porous but non-permeable formation that will not transmit water quickly
Aquifer	A permeable formation with high hydraulic conductivity that will transmit water quickly
Aquitard	A non-porous formation that restricts the transmission of water from one aquifer to another
Assay	A chemical method to determine the metal content of a sample
Breccia	A rock type composed mainly of broken angular fragments
Ca	Chemical symbol for calcium
Deformation	Process by which rocks are folded and faulted
Diamond drilling	A drilling technique using diamond tipped drill bits to extract cylindrical rock core for analysis
EM / TEM	Electromagnetics, an electrical geophysical surveying method / Method based on recording the time-decay of EM signal
Fe	Chemical symbol for iron.
Geochemical sample	A sample of rock, soil or sediments collected for analysis to determine metal or mineral content.
Geophysical survey	Methods to measure the physical properties of the earth, such as electrical, magnetic or density.
GL	Giga liter (1,000,000,000 liters)
Grade	Quantity of metal or valuable material per unit weight / volume of the host rock or sample.
Hydrothermal	Refers to geologic processes related to hot fluids.
Igneous	Rock types formed from the cooling and solidification of molten magma.
Intermediate	A type of igneous rock containing 45-55% silica (SiO_2) and less than 10% free quartz.
Intrusive	An igneous rock solidified from magma beneath the earth's surface.
Intrusive complex	An area containing a number of intrusive bodies.
K	Chemical symbol for potassium
Lava	A volcanic rock solidified from magma extruded onto the earth's surface.
Li	Chemical symbol for lithium
Limestone	A sedimentary rock composed mainly of calcium carbonate.
Ma	Symbol for millions of years before the present time.
Magma	Molten rock composed of mineral crystals and dissolved gases.

Mg	Chemical symbol for magnesium
mg / L	Milligrams per liter. Method of expressing the content of chemical salts dissolved in a liquid
Minas	Argentinian mineral development permit
Mineral Resource	A concentration or occurrence in the Earth's crust of material of intrinsic value in such form, quality and quantity that there are reasonable prospects for eventual economic extraction.
Mineralization	Concentration of metals or other minerals of value within a body of rock.
Miocene	A geological time period ranging from 23.3 to 5.2 million years ago.
Mm^3	Million cubic meters
Mt	Million tonnes
Outcrop	Exposure of bedrock at the surface projecting through soil cover.
Pliocene	A geological time period ranging from 5.2 to 2.6 million years ago
ppm	Parts per million.
Pyroclastic	A type of fragmental volcanic rock formed by violent volcanic eruptions.
Quartz	A common rock forming mineral composed of silica and oxygen.
Quaternary	A geological time period ranging from 2.6 million years ago to present.
RC drilling	A drilling method that uses a downhole hammer to fracture rock formations. The resultant rock chips are brought to the surface using compressed air / water
Resistivity	A geophysical surveying technique to compare bulk rock electrical properties.
Salar	A salt-encrusted depression that may or may not be the basin of an evaporated lake
Shear	A narrow, linear zone of rock deformation or faulting.
Silicified	Alteration of a rock to silica.
Tenement	Area of land defined by a Government authority over which the holder has the sole rights to mineral exploration or mining activities.
Weathering	Set of processes at or near the surface whereby bedrock is broken up or decayed by physical or chemical processes.

Lithology Codes used in Drillhole Logging

Code	Description	Hydro Unit*
And	Andesite	AQ
BO	Borates	AT / AC
CB	Carbonates	AT > AQ
HLTcb	Halite - interlaminated with carbonates	AC
HLTcp	Halite - compact	AC > AQ
HLTcpcs	Halite - compact + sandy	AC
HLTcps	Halite - sandy + compact	AC > AQ
HLTp	Halite - cloudy, porous	AQ
HLTps	Halite - sandy, saccharoidal	AQ
HLTsal	Halite - interbedded with fine sand & organic matter	AT
HLTsp	Halite - secondary, porous	AQ
HLTsul	Halite - with sulfates +/- borates	AC
NR	No recovery	AQ
SEDm	Sediments - fine-grained silt, sand	AQ
SEDs	Sediments - fine to coarse-grained sand	AQ
SEDsv	Sediments - fine to coarse volcanics	AQ
SEDvbx	Sediments - resedimented volcanic breccia	AQ
SUL	Sulfates - fine-grained	AT
SULhal	Sulfates - with halite	AC
SULsed	Sulfates - with sediments	AT
SULvolc	Sulfates - with volcaniclastics	AQ
Trv	Travertine	AT / AC
VOLand	Volcanics - andesite	AQ
VOLav	Volcanics - avalanche flow	AQ
VOLbx	Volcanics - brecciated flow	AQ
VOLdac	Volcanics - fragmental	AQ
VOLdf	Volcanics - debris flow	AQ
VOLign	Volcanics - ignimbrite, pumice	AQ
VOLrio	Volcanics - rhyolite	AQ
VOLs	Volcanics - medium to fine sand	AQ
VOLT	Volcanics - tuff	AC / AQ / AT
VOLTc	Volcanics - tuff, coarse-grained	AT
VOLTf	Volcanics - tuff, fine-grained	AT
VOLTp	Volcanics - tuff + pumice	AQ
VOLvs	Volcanics - vesicular basalt / andesite	AQ

*Hydro units: AQ = Aquifer; AC = Aquiclude; AT = Aquitard

22 Appendix 2 – Mineral Resources within Geological Units

Measured Resources

Lithology Class	Volume (Mm^3)	Mean effective Porosity %	Effective Volume (GL)	Brine Density (g/Ml)	Li (mg/L)	K (mg/L)	B (mg/L)	Mg (mg/L)	SO_4^{2-} (mg/L)	HCO_3^- (mg/L)	Avg DIst# (m)
Debris Flow	86	31.8	13	1.223	343	10,100	688	4,610	16,500	496	679
Upper Halite	888	18.8	133	1.221	313	9,720	580	4,410	15,300	582	688
Marker Tuff	93	19.8	14	1.221	310	9,590	572	4,350	15,300	560	678
Halite	2,110	19.6	317	1.222	317	9,820	595	4,460	15,400	534	695
Upper Sediment	104	18.9	16	1.217	305	9,570	605	4,360	16,000	616	589
Volcanic Unit	2,930	20.8	439	1.221	320	9,920	620	4,440	15,800	523	674
Lower Halite	2,120	21.0	317	1.218	310	9,580	615	4,300	15,800	530	665
Sulfate Unit	2,880	25.4	433	1.216	309	9,500	589	4,240	15,500	489	682
Total / Average	**11,200**	**21.7**	**2,420**	**1.219**	**314**	**9,710**	**603**	**4,360**	**15,600**	**523**	**678**

NB. Figures may not add up due to rounding.

Average distance of drill hole traces to model block

Indicated Resources

Lithology Class	Volume (Mm^3)	Mean effective Porosity %	Effective Volume (GL)	Brine Density (g/Ml)	Li (mg/L)	K (mg/L)	B (mg/L)	Mg (mg/L)	SO_4^{2-} (mg/L)	HCO_3^- (mg/L)	Avg Dist# (m)
Debris Flow	66	33.0	10	1.221	347	10,300	695	4,610	16,600	488	1,350
Upper Halite	217	24.3	33	1.218	319	9,840	634	4,410	15,000	519	1,300
Marker Tuff	61	21.8	9	1.211	296	9,430	574	4,390	15,200	493	1,170
Halite	1,010	22.3	152	1.217	302	9,710	591	4,450	14,800	467	1,270
Upper Sediment	2	16.5	0.3	1.209	319	10,300	640	4,670	14,500	573	1,420
Volcanic Unit	2,420	22.5	363	1.215	318	10,300	581	4,570	16,400	380	1,200
Lower Halite	719	21.8	108	1.219	325	10,200	590	4,530	16,300	381	1,270
Sulfate Unit	1,900	23.4	285	1.216	315	10,100	572	4,470	16,100	346	1,210
Total / Average	**6,400**	**22.8**	**960**	**1.216**	**316**	**10,100**	**584**	**4,510**	**16,000**	**391**	**1,230**

NB. Figures may not add up due to rounding.

Inferred Resources

Lithology Class	Volume (Mm^3)	Mean effective Porosity %	Effective Volume (GL)	Brine Density (g/Ml)	Li (mg/L)	K (mg/L)	B (mg/L)	Mg (mg/L)	SO_4^{2-} (mg/L)	HCO_3^- (mg/L)	Avg DIst# (m)
Debris Flow	47	33.2	7	1.221	348	10,300	695	4,600	16,700	476	1,990
Upper Halite	236	28.0	35	1.217	336	10,500	665	4,670	15,500	493	2,270
Marker Tuff	27	24.0	4	1.214	312	9,950	602	4,480	15,200	455	2,150
Halite	583	23.8	87	1.216	325	10,360	621	4,640	14,800	465	2,090
Upper Sediment	2	17.3	0.3	1.210	323	10,400	628	4,680	14,200	551	2,060
Volcanic Unit	955	22.7	143	1.216	329	10,500	605	4,630	16,100	417	2,110
Lower Halite	512	20.4	77	1.221	339	10,400	610	4,660	16,300	435	2,200
Sulfate Unit	775	20.3	116	1.218	320	10,000	586	4,480	15,700	433	2,050
Total / Average	**3,140**	**22.5**	**470**	**1.217**	**328**	**10,300**	**610**	**4,600**	**15,800**	**440**	**2,110**

NB. Figures may not add up due to rounding.

23 Appendix 3 – Certificate of Qualified Person

Llyle Sawyer, MAIG #3152

Geos Mining

Suite 301, 68 Alfred St, Milsons Point, NSW 2061Australia

Tel. 612 9929 6868;

Email: llyle.sawyer@geosmining.com

This certificate applies to the technical report entitled “Update of Lithium Brine Mineral Resources” that has an effective date of August 23, 2019 (the “Report”).

I, Llyle Sawyer, am employed as a Senior Geological Consultant with GM Minerals Consultants Pty Ltd (ABN 44 608 768 083) trading as Geos Mining. I graduated from the University of Technology, Sydney, with a Bachelor of Applied Science degree in 1989, and subsequently from University of New South Wales in 1991 with a Master of Applied Science degree in Hydrogeology, Engineering Geology and Environmental Geology.

I am a member of the Australian Institute of Geoscientists (MAIG), membership number 3152.

I have been involved in mineral resource estimation of mineral projects since 2009. My experience includes estimation of Mineral Resources for comparable laterally continuous deposits that can be considered analogous to salar-hosted brine deposits, and estimation using the geostatistical techniques employed in the brine resource estimation process.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 Standards of Disclosure for Mineral Projects (NI 43–101), and a Technical Expert as recommended by ASIC Chapter 11.

I am responsible for the preparation of Sections 1 to 22 inclusive of the Report.

I am independent of Litio Minera Argentina S.A. (and Mariana Lithium Corp.) as independence is described by Section 1.4 of NI 43–101. I have visited the Mariana Project on several occasions during drilling operations since May 2016 and during pump testing during 2018 and 2019, with the last visit during hydrogeological pump testing in October to November 2019. I have been involved with the Project since August 2010 in the form of ongoing advice, discussion of exploration programs and during preparation of the brine resource estimate and this Report.

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.

Signature: