

LithiumAmericas

NI 43 – 101 TECHNICAL REPORT

Updated Feasibility Study

**Reserve Estimation and Lithium Carbonate Production
at the Cauchari-Olaroz Salars, Jujuy Province, Argentina**



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Effective Date: March 29, 2017

Filing Date: May 11, 2017

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1.0 SUMMARY

1.1 INTRODUCTION

This report titled “Updated Feasibility Study, Reserve Estimation and Lithium Carbonate Production at the Cauchari-Olaroz Salars, Jujuy Province, Argentina” (the “Report” or “Technical Report”), was prepared by Andeburg Consulting Services Inc. (“ACSI”) to provide Lithium Americas Corporation (“LAC” or “Lithium Americas” or “the Company”) with a Technical Report that is compliant with National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI-43-101”) on the Cauchari-Olaroz Salars (the “Cauchari-Olaroz Project” or “Project” or “Property”), located in the Jujuy Province, Argentina. Lithium Americas Corporation and Sociedad Quimica y Minera de Chile S.A. (“SQM”) own the Cauchari-Olaroz Project through a 50/50 joint venture company (“JV”), Minera Exar S.A. (“Minera Exar”). Lithium Americas is a public company listed on the TSX under the symbol “LAC” and on the OTCQX under the symbol “LACDF”. ACSI understands that the Company may use this Report for internal decision making purposes and it will be filed as required under applicable Canadian securities laws.

The current updated Reserve Estimate presented in this Report has been prepared in compliance with the “CIM Standards on Mineral Resources and Reserves – Definitions and Guidelines” as referred to in NI 43-101 and Form 43-101F, Standards of Disclosure for Mineral Projects as well as Ontario Securities Commission (“OSC”) Staff Notice 43-704 regarding brine projects and in force as of the effective date of this Report, which is March 29, 2017.

1.2 LOCATION AND OWNERSHIP

The Cauchari and Olaroz Salars are located in the Department of Susques in the Province of Jujuy in northwestern Argentina, approximately 250 kilometers (“km”) northwest of San Salvador de Jujuy, the provincial capital. The salars extend in a north-south direction from S23°18’ to S24°05’ and in an east-west direction from W66°34’ to W66°51’. The average elevation of the salars is 3,940 meters. The midpoint between the Olaroz and Cauchari Salars is located along National Highway 52, 55 km west of the Town of Susques where the LAC field offices are located. The nearest port is Antofagasta (Chile), located 530 km west of the Project by road.

LAC has negotiated, through its Argentine subsidiary, Minera Exar, mining and exploration permits from relevant mining authorities in Argentina. A total of 70,796 ha of exploration and mining permits have been requested in the Department of Susques; 46,520 ha have been granted to date. The claims are contiguous and cover most of the Cauchari Salar and the eastern portion of the Olaroz Salar. The aggregate annual property payment required by Minera Exar to maintain the Property claims is approximately US\$66,415 (AR\$1,056,000).

On March 28, 2016, the Company sold a 50% interest in Minera Exar to SQM for US\$25M, and the parties executed a Shareholders Agreement that establishes the terms by which the parties plan to develop the Cauchari-Olaroz Project.

As of September 30, 2016, the Company’s 50% portion of Minera Exar’s commitments and contingencies include an annual royalty of US\$100,000 due in May of every year and expiring in 2041, as well as annual payments to six communities located in the Cauchari-Olaroz project area that have terms from five to thirty years. The annual fees due are US\$270,000 between 2017 and 2021 and US\$2,323,000 between 2021 and 2055, assuming that these payments will be extended for the life of the project. These payments will be incurred only if the Project starts production.

On March 28, 2016, Minera Exar entered into a purchase option agreement (“Option Agreement”) with Grupo Minero Los Boros (“Los Boros”) for the transfer of title to the Minera Exar for certain mining properties that comprised a portion of the Cauchari-Olaroz project. Under the terms of the Option Agreement, Minera Exar paid US\$100,000 upon signing, and has a right to exercise the purchase option at any time within 30 months for the total consideration of US\$12,000,000 to be paid in sixty quarterly installments of US\$200,000.

If Minera Exar exercises the purchase option, a US\$300,000 payment must be made within 10 days of the commercial plant construction start date; and a payment of 3% net profit interest (the Company’s portion is 1.5%) for 40 years, payable in pesos, annually within the 10 business days after calendar year end.

Minera Exar can acquire the first 20 years of net profit interest in exchange for a one-time payment of US\$7,000,000, extendable for an additional 20 years for another one-time payment of US\$7,000,000.

Minera Exar has granted a right to Jujuy Energia y Minería Sociedad del Estado (“JEMSE”), a mining investment company owned by the government of Jujuy Province in Argentina, to acquire an 8.5% equity interest in Minera Exar for one US dollar and the provision of management services as required to develop the project. The remaining 91.5% of Minera Exar is split evenly between LAC and SQM under Shareholders Agreement.

1.3 GEOLOGY

There are two dominant structural features in the region of the Cauchari and Olaroz Salars: north-south trending high-angle normal faults and northwest-southeast trending lineaments. The high-angle north-south trending faults form narrow and deep horst-and-graben basins, which are accumulation sites for numerous salars, including Olaroz and Cauchari. Basement rock in this area is composed of Lower Ordovician turbidites (shale and sandstone) that are intruded by Late Ordovician granitoids. Bedrock is exposed to the east, west and south of the two salars, and generally along the eastern boundary of the Puna Region.

The salars are in-filled with flat-lying sedimentary deposits, including the following five primary informal lithological units that have been identified in drill cores:

- Red silts with minor clay and sand;
- Banded halite beds with clay, silt and minor sand;
- Fine sands with minor silt and salt beds;
- Massive halite and banded halite beds with minor sand; and
- Medium and fine sands.

Alluvial deposits intrude into these salar deposits to varying degrees, depending on location. The alluvium surfaces slope into the salar from outside the basin perimeter. Raised bedrock exposures occur outside the salar basin. The most extensive intrusion of alluvium into the basin is the Archibarca Fan, which partially separates the Olaroz and Cauchari Salars. National Highway 52 is constructed across this alluvial fan. In addition to this major fan, much of the perimeter zone of both salars exhibits encroachments of alluvial material associated with fans of varying sizes.

1.4 MINERALIZATION

The brines from Cauchari are saturated in sodium chloride with total dissolved solids (TDS) on the order of 27% (324 to 335 grams per litre) and an average density of about 1.215 grams per cubic centimetre. The other primary components of these brines include: potassium, lithium, magnesium, calcium, sulphate, HCO_3 , and boron as borates and free H_3BO_3 . Since the brine is saturated in NaCl, halite is expected to precipitate during evaporation. In addition, the Cauchari brine is predicted to initially precipitate ternadite (Na_2SO_4) as well as a wide range of secondary salts that could include: astrakanite ($\text{Na}_2\text{Mg}(\text{SO}_4)_2 \cdot 4\text{H}_2\text{O}$), schoenite ($\text{K}_2\text{Mg}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$), leonite ($\text{K}_2\text{Mg}(\text{SO}_4)_2 \cdot 4\text{H}_2\text{O}$), kainite ($\text{MgSO}_4 \cdot \text{KCl} \cdot 3\text{H}_2\text{O}$), carnalite ($\text{MgCl}_2 \cdot \text{KCl} \cdot 6\text{H}_2\text{O}$), epsomite ($\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$) and bischofite ($\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$).

1.5 EXPLORATION AND DRILLING

The following exploration programs were conducted between 2009 and 2011 to evaluate the lithium development potential of the Project area:

- Surface Brine Program – 55 brine samples were collected from shallow pits throughout the salars to obtain a preliminary indication of lithium occurrence and distribution.
- Seismic Geophysical Program – Seismic surveying was conducted to support delineation of basin geometry, mapping of basin-fill sequences, and siting borehole locations.
- Gravity Survey - A limited gravity test survey was completed to evaluate the utility of this method for determining depths to basement rock.
- Time Domain Electromagnetic (TEM) Survey – TEM surveying was conducted to attempt to define fresh water and brine interfaces within the salar.
- Air Lift Testing Program – Testing was conducted within individual boreholes as a preliminary step in estimating aquifer properties related to brine recovery.
- Vertical Electrical Sounding (VES) Survey – A VES survey was conducted to attempt to identify fresh water and brine interfaces, and surrounding fresh water occurrences.
- Surface Water Sampling Program – A program was conducted to monitor the flow and chemistry of surface water entering the salars.
- Pumping Test Program – Pumping and monitoring wells were installed and pumping tests conducted at five locations to estimate aquifer properties related to brine recovery and fresh water supply.
- Boundary Investigation – This test pitting and borehole program was conducted to assess the configuration of the fresh water/brine interface at the salar surface and at depth, at selected locations on the salar perimeter.
- Reverse Circulation (RC) Borehole Program – Dual tube reverse circulation drilling was conducted to develop vertical profiles of brine chemistry at depth in the salars and to provide geological and hydrogeological data. The program included installation of 24 boreholes and collection of 1487 field brine samples (and additional Quality Control samples).
- Diamond Drilling (DD) Borehole Program – This program was conducted to collect continuous cores for geotechnical testing (RBRC, grain size and density) and geological characterization. The program included 29 boreholes and collection of 127 field brine samples (and additional Quality Control samples).

1.6 MINERAL RESOURCES AND RESERVES

The lithium resources and reserves described in this report occur in subsurface brine. The brine is contained within the pore space of salar deposits that have accumulated in a structural basin.

A hydrostratigraphic model was developed for the brine Resource Estimate (King 2010b) and was updated in 2012 (King, Kelley, Abbey, 2012). The 2012 Resource Estimate is used in this Report. At the 2012 Resource Estimate stage, the model supported an estimate of bulk in situ brine volume, with preliminary characterization of brine recoverability based on a porous media parameter known as specific yield.

The Reserve Estimate has been updated in 2017 by Montgomery and Associates, and the characterization of brine recoverability was considerably enhanced relative to previous estimates. The hydrostratigraphic model was incorporated into a numerical groundwater model, and the following groundwater flow and solute transport parameters were assigned to the model layers:

- Boundary conditions for lithium and TDS;
- Recharge and evaporation at the ground surface;
- Lateral surface and subsurface recharge to the salar;
- Hydraulic conductivity, storage characteristics, and specific yield of aquifers and aquitards; and
- Dispersivity and diffusion of dissolved constituents.

A numerical groundwater model was developed for the central area of the basin, to support this Reserve Estimate. The model simulates long-term brine recovery, and is based on a rigorous assembly of groundwater flow and solute transport parameters. The numerical model was calibrated to pre-pumping steady-state conditions and short-term dynamic pumping tests conducted by LAC. It was then used to simulate long-term brine recovery, which provided the basis for the Reserve Estimate.

It is the opinion of the independent QPs that the dataset used to develop the numerical model is acceptable for use in the Reserve Estimate.

A Resource Estimate for the Project is summarized in Table 1.1. A Reserve Estimate for the Project is summarized in Table 1.2.

A cut-off value was not employed in the Reserve Estimate because the average calculated lithium concentration after 40 years of pumping was significantly above the processing constraint. The 2012 Resources are expressed relative to a lithium grade cut-off of ≥ 354 mg/L, which was identified as a brine processing constraint by LAC engineers at that time.

TABLE 1.1 LITHIUM RESOURCE SUMMARY				
Description	Average Lithium Concentration (mg/L)	Mass Cumulated ¹ (cut-off 354 mg/L)		Brine Volume (m ³)
		Li (tonne)	Li ₂ CO ₃ (tonne)	
2012 Measured Resource	630	576,000	3,039,000	9.1 x 10 ⁸
2012 Indicated Resource	570	1,650,000	8,713,000	2.9 x 10 ⁹
Total	585	2,226,000	11,752,000	3.8 x 10⁸

- (1) The 2012 Resources are expressed relative to a lithium grade cut-off of ≥ 354 mg/L, which was identified as a brine processing constraint by LAC engineers.
- (2) Mineral Resources are not mineral reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the mineral resource will be converted to mineral reserves.
- (3) Lithium carbonate equivalent ("LCE") is calculated based the following conversion factor: Mass of LCE = 5.323 x Mass of lithium metal
- (4) The values in the columns on Lithium Metal and Lithium Carbonate Equivalent above are expressed as total contained metals within the relevant cut-off grade.

TABLE 1.2 LITHIUM RESERVE SUMMARY				
Description	Average Lithium Concentration (mg/L)	Mass Cumulated		Brine Volume (m ³)
		Li (tonne)	Li ₂ CO ₃ (tonne)	
Proven Reserves (Years 1-5) ¹	712	35,159	187,000	4.9 x 10 ⁷
Probable Reserves (Years 6-40) ¹	695	246,474	1,312,000	3.5 x 10 ⁸
Total (Years 1-40)	698	281,633	1,499,000	4.0 x 10⁸

- (1) Ratios of lithium to other metals include: K:Li of 8.2, Mg:Li of 2.4, B:Li of 1.6, SO₄:Li of 28.5.
- (2) LCE is calculated based the following conversion factor: Mass of LCE = 5.323 x Mass of lithium metal
- (3) The conversion is direct and does not account for estimated processing losses.
- (4) The values in the columns on Lithium Metal and Lithium Carbonate Equivalent above are expressed as total contained metals.

Reserve Estimate values of Table 1.2 are based on numerical model predictions of pumped brine (pre-processing).

Extensive sampling indicates the brine has a relatively low magnesium/lithium ratio (lower than three, on average), suggesting it would be amenable to conventional lithium recovery processing. The brine is relatively high in sulphate, which is also advantageous for brine processing because the amounts of sodium sulphate or soda ash required for calcium removal would be relatively low.

1.7 BRINE PROCESSING

In the 2012 Feasibility Study, LAC developed a process model for converting brine to lithium carbonate. The proposed process follows industry standards: pumping brine from the salar, concentrating the brine through evaporation ponds, and taking the brine concentrate through a hydrometallurgical facility to produce high-grade lithium carbonate. The 2012 process model employed proprietary, state-of-the-art physiochemical estimation methods and process simulation

techniques for electrolyte phase equilibrium. Since SQM acquired a 50% interest in Minera Exar in 2016, SQM has advanced the process engineering work, employing their proprietary technology and operational experience, the results of which are reflected in this current Feasibility Study. The basis of the anticipated process methods have been tested and supported by laboratory evaporation test work, as well as pilot testing facilities.

1.7.1 Lithium Carbonate Production

The process route simulated for the production of lithium carbonate from Cauchari brines resembles the flowsheet presented in Figure 17.7. Primary process inputs include water, lime, soda ash, HCl, NaOH, steam, and natural gas. The evaporation ponds produce salt tailings composed of Na, Mg, Ca, K, and borate salts. The brine concentrate from the terminal evaporation pond is further processed, through a series of polishing and impurity removal steps. Soda ash is then added with the purified brine concentrate to produce a lithium carbonate precipitate, that is dried, compacted / micronized, and packaged for shipping.

Operating criteria for the Lithium Carbonate plant is presented Table 1.3.

TABLE 1.3		
LITHIUM CARBONATE PLANT OPERATING CRITERIA		
Description	Unit	Value
Li ₂ CO ₃ production	tonnes per year	25,000
Annual operation days	days	330
Annual operation hours	hours	7,700
Availability	%	90.4
Utilization (22 h/d)	%	97.2
Plant Overall Efficiency	%	71

1.8 SITE INFRASTRUCTURE AND BUILDINGS

1.8.1 Wells

Well Production Equipment Selection

Screened wells will target the largest lithium brine aquifers. Submersible electric pumps are proposed for brine pumping. These pumps will send the brine to evaporation ponds through a network of pipelines and mixing pools.

1.8.2 Evaporation Ponds

An evaporation rate of 2.52 mm per day (920 mm/year) was used as criterion to design the pond system. This rate corresponds to measured evaporation at the site where the ponds will be located. The pond orientation and placement were based on predominant wind patterns observed in the area.

Assuming the above-mentioned evaporation rate, the total evaporation area required for the production of 25,000 tpa of lithium carbonate is 1,100 ha. The ponds will be lined with a polymer-based material laid over a protective geosynthetic material and engineered granular bedding. The ponds configuration includes provision for uninterrupted production during salt harvesting and maintenance work.

Brine will be transferred between the successive evaporation ponds using self-priming pumps.

1.8.3 Salt Harvest Equipment

The ponds have been designed for the efficient annual removal of salt deposits formed at the bottom of the ponds. Salt removal will be conducted using typical earthmoving machinery, such as bulldozers, front end loaders, and dump trucks.

1.8.4 Site Infrastructure and Support Systems

1.8.4.1 Natural Gas Pipeline

Natural gas will be obtained from the Rosario gas compression station, which is on the Gas Atacama pipeline, 52 km north of the project site.

Capital costs for this pipeline are estimated at US\$ 11.8 million, as quoted from a contractor bid. This pipeline will be capable of supplying natural gas at capacities that are sufficient for a 25,000 tpa LCE facility, and beyond.

1.8.4.2 Power Supply

Electricity will be provided by a new 138 kV transmission line that will interconnect with an existing 345 kV transmission line located approximately 60 km south of the Project. The interconnection will consist of a sub-station with a voltage transformer (345/138 kV) and associated switchgear. Another substation at the Project site will consist of a voltage transformer (132/23 kV) and electrical room with associated switchgear and auxiliary equipment for a 23 kV local distribution system.

The 23 kV local electrical distribution system will provide power to the plant, camp, PDA brine homogenizing pools/lime pumps, wells and ponds. In general, all distribution is aerial unless there are major restrictions, in which case underground distribution is adopted.

The estimated load for the Project is approximately 53,700 MWh/y or 8 MW/h, which includes a design safety factor of 1.2.

A stand-by diesel generating station, located closed to main substation, will power selected equipment during grid outages.

1.8.4.3 Camp

The construction and permanent camps will be located approximately 300 m north of National Highway 52. The permanent camp is a full habitational and administrative complex to support all workforce activities, with a capacity for approximately 300 people. The permanent camp covers a footprint of 15,000 m² of buildings and 35,700 m² of external facilities.

The permanent camp includes: administration building, habitational area, dining facilities, medical room, maintenance workshops, spare parts warehouse, laboratory, lockers, gym, soccer field, helipad and parking lots. The habitational area includes single bedrooms with private bathrooms, dormitories with private bathrooms, and large dorm rooms with shared bathrooms.

Temporary modules will be used during construction to accommodate a maximum construction crew capacity of approximately 800 people, and will be expanded and contracted during construction, as required.

1.8.4.4 Other Buildings

Other buildings include:

- A warehouse for spare parts and consumables;
- A steel building for the storage of soda ash;
- A steel building for the storage of solvent extraction plant chemicals designed with appropriate ventilation, safety, and security features;
- Operating facilities for sheltering operators, electrical equipment, and central control rooms; and,
- Product storage facility, designed for protecting the product against dust contamination and deleterious winds.

1.8.4.5 Security

A metallic perimeter fence will be built surrounding the lithium carbonate plant, warehouses, administrative offices, and camp. Given the location of the facilities, it is not necessary to enclose the pond area. Nevertheless, the pond area is to be illuminated to allow night work and improve security.

A metallic peripheral fence will be installed at each brine well facility, providing protection to main equipment, instruments and valves.

1.8.4.6 Access and Site Roads

Access to the plant site is via paved National Highways 9 and 52, which connect the site to San Salvador de Jujuy and Salta in Argentina. In addition, National Highway 52 connects to Paso Jama to the west, a national border crossing between Chile and Argentina, and provides connection to Chilean Route 27 and convenient access to Antofagasta, the likely embarkation port for the product.

Access within the site is possible through a gravel road, Route 70, which skirts the west side of the salars. This road is approximately 1 km from the plant site. Site roads to ponds, wells, and other infrastructure will be part of the overall construction.

1.8.4.7 Fuel Storage

The plant includes a diesel storage and dispensing station for mobile equipment and transport vehicles. Diesel fuel will also be used in stand-by generators, for boilers and dryers in the plant. The main fuel for equipment operation will be natural gas.

1.8.4.8 Water Supply

The estimated average consumption of industrial water is 80 liters per second (“L/s”) \pm 20%.

Water demands for industrial use will be supplied by groundwater wells adjacent to the salar.

1.8.4.9 Pond Solid Wastes

The evaporation process in the ponds leaves considerable amounts of salts on the bottom of the ponds. These salts must be harvested and transported to nearby piles. These salt piles may reach 10 m in height and can be built on the salar surface. It is estimated that approximately 390 ha of salt piles will be built over a 40 year period and these piles will be built near the pond areas.

These discarded salts are classified as inert waste. The salts are generated from brines already present in the salar and do not introduce foreign compounds. It is estimated that sodium chloride and sulphate make up over 87% of this waste.

1.8.4.10 Tailings Liquid Disposal

Several possible sites for the evaporation ponds for the plant's industrial liquid wastes were analyzed. A 20 ha parcel located close to the plant has been selected for the industrial waste evaporation ponds and presents no risks to distant populated areas.

1.9 MARKET STUDIES AND CONTRACTS

A market study, conducted recently by a third party, was used to establish three pricing scenarios for lithium carbonate (per tonne) used in the economic analysis: Low (US\$10,000), Base Case (US\$12,000) and High (US\$14,000).

Production from the Project will be divided equally between the partners of Minera Exar (SQM and LAC). LAC has agreed to lithium carbonate Offtake Entitlements with two counterparties, GFL International Co. Ltd ("Ganfeng") and The Bangchak Petroleum Public Company Limited ("Bangchak"). These offtake entitlements are related to strategic investment agreements by the counterparties, which include both debt facilities for Project construction and equity participation in the Company.

1.9.1 Ganfeng Offtake Entitlement

As outlined in the LAC press release dated January 17, 2017, Ganfeng and LAC have agreed to terms for an Offtake Entitlement such that Ganfeng may purchase of up to 70% of LAC's share of the Project's lithium carbonate production at market prices, rising to 80% only if/when Bangchak's 15% offtake becomes effective. The entitlement does not apply to potential future expansion(s). The transaction is subject to approval by Chinese authorities.

1.9.2 Bangchak Offtake Entitlement

As outlined in the LAC press release dated January 19, 2017, Bangchak and LAC have agreed to terms for an Offtake Entitlement such that Bangchak may purchase up to 15% of LAC's share of the Project's lithium carbonate production at market prices. The entitlement does not apply to potential future expansion(s). Pursuant to the Company's announcement on January 19, 2017, LAC anticipates closing the financing with BCP Innovation Pte Ltd., a wholly-owned subsidiary of Bangchak subsequent to the closing of the Ganfeng Lithium transaction.

1.10 PERMITTING, ENVIRONMENTAL STUDIES AND SOCIAL OR COMMUNITY IMPACT

1.10.1.1 Permits and Authorities

Argentina has a provincial system to manage natural resources. Therefore, the province of Jujuy has the responsibility of providing social and environmental permits, through the Provincial Department of Mines and Energy under the Secretariat of Mining and Hydrocarbons. Other entities involved in the permitting process are Jujuy's Provincial Department of Water Resources, the Department of Environmental Management, which has supervisory authority for environmental and natural resources, and the Secretariat of Tourism and Culture, which regulates operating permits in areas of potential archaeological and paleontological interest. The Cauchari-Olaroz Salar is a Protected Area for Multiple Use (Law No. 3820/81), which allows mining activities, but has a specifically designed control system that aims to protect the local vicuña population.

These authorities have granted, or are evaluating, the authorizations and permits required for the exploration and test work and the construction to be carried out by LAC on its mining properties in Cauchari-Olaroz. An Environmental Impacts Report for the exploitation phase was presented in December 2011 to the Provincial Government of Jujuy (Dirección Provincial de Minería y Recursos Energéticos) and approved by Resolution 29/2012 on 08 November 2012 based on an initial annual production rate of 20,000 tonnes of lithium carbonate with a second expansion phase to 40,000 tonnes/year. A report for the renewal of the permit was submitted in March 2015 based on the same Project description as the initial 2011 filing, which has yet to be approved by the Authority. A further renewal application was submitted in February 2017 based on updated Project parameters. It was agreed with the Authority that this would replace and supercede the March 2015 submission.

The update to the Environmental Impacts Report for Exploitation for the Cauchari-Olaroz Project is therefore under evaluation by the Authority. Although the updates have not yet been approved by the Authority, the permit for exploitation issued in 2012 for the Project is still valid as ratified by a letter issued by the Gobierno de Jujuy (NOTA SMeH No 043/20179, issued 16 March 2017), which also states that “construction may commence on the necessary infrastructure approved in this permit, without prejudice to future adaptations and updates that the mining operator performs with respect to the mining project, which are subject to the analysis of this authority.”

1.10.2 LAC's Environment and Social Policy

LAC adhered firmly to the Equator Principles¹ (“EP”) even before exploration operations began. These principles are a voluntary commitment, which arose from an initiative of the International Finance Corporation (IFC), member of the World Bank Group, to stimulate sustainable private sector investment in developing countries. Financial institutions that adopt these principles are bound to evaluate and consider environmental and social risks of the projects they finance in developing countries and, therefore, to lend only to those who show the proper administration of its social and environmental impacts such as biodiversity protection, use of renewable resources and waste management, protection of human health and population movements.

¹ EP: Credit risk management framework for determining, assessing and managing environmental and social risk in Project Finance transactions.

In this context, LAC established from the beginning that the Equator Principles will be the minimum standards for developing the Project, taking the measures that are described in the corresponding section of the report.

1.10.3 Environmental Baseline Studies

Minera Exar engaged Ausenco to carry out baseline environmental and social studies and associated impact assessments required to complete the permit applications.

Ausenco's team carried out environmental baseline field surveys between September 2010 and July 2011. Two subsequent biannual renewals to the EIA for Exploitation were presented to the authorities which required Ausenco to update the environmental baseline database in March 2015 and October 2016.

These surveys contain all the environmental attributes that could be affected by a future mining project, including both inert (air, soil, water, geology) and biotic (flora, fauna, and limnology) components. In addition, socio-economic and cultural assessments were also conducted.

1.10.4 Evaluation of Impacts

Environmental and social impacts of the project, both positive and negative, were assessed for each of the various stages of the lithium brine exploitation project, including construction, operations, and closure.

During the Construction and Operation stages of the project, moderate impacts on the environment will occur, which can be reversed or mitigated in the short, medium, and long term. These potential impacts have been reassessed and updated in the subsequent updates to the IIA (Environmental Impact Indicator, or Indicador de Impacto Ambiental) for exploitation as the understanding of the project and the environment has developed.

The area of influence of the Project includes the communities of Susques, Huancar, Pastos Chicos, Puesto Sey, Catua, and Olaroz Chico. The Project implementation will have a potential economic impact on its area of influence that will result in both positive and negative changes in these communities.

1.10.5 Community Relations Plan

Minera Exar has developed a plan that promotes social and economic development within a sustainable framework. Minera Exar began work on the Community Relations Plan with the Susques Department in 2009. This plan was created to integrate local communities into the Project by implementing programs aimed at generating positive impacts on these communities and minimizing negative impacts.

The Community Relations Plan has been divided into several programs: one dealing with external and internal communications to provide information and transparency; a second is a consultation program that allows Minera Exar to acknowledge community perceptions of their mining activities; a third program deals with service and supply contracts to be signed with the communities. The intended outcome of the plan is to deliver social, cultural, and environmental initiatives.

Minera Exar has signed formal contracts with neighbouring communities that own the surface rights where the Project will be developed. According to these contracts, the communities agree to grant Minera Exar traffic and other rights in exchange for cash payments to be used as the members of the communities decide.

1.11 CAPITAL AND OPERATING COST ESTIMATE

1.11.1 Capital Cost Estimate

Capital expenditures are based on an operating capacity of 25,000 tpa of lithium carbonate. Capital equipment costs have been determined based on over 100 quotes for equipment items and construction services; in addition, an in-house database maintained by an engineering consultancy was used for minor items. Minera Exar and its consultants have verified the validity of these estimated capital expenditures.

The estimates are expressed in current US dollars on a 100% project equity basis. LAC will need to contribute or secure 50% of these costs, matching its current shareholding in Minera Exar. No provision has been included to offset future cost escalation since expenses, as well as revenue, are expressed in constant dollars.

Capital costs include direct and indirect costs for:

- Brine production wells;
- Evaporation and concentration ponds;
- Lithium carbonate plant;
- General site areas, such as electric, gas, and water distribution;
- Stand-by power plant, roads, offices, laboratory and camp, and other items;
- Off-site infrastructure, including gas supply pipeline and high voltage power line; and
- Contingencies, salaries, construction equipment mobilization, and other expenses.

The capital investment for the 25,000 tpa lithium carbonate project, including equipment, materials, indirect costs and contingencies during the construction period is estimated to be US\$425 million. This total excludes interest expense that might be capitalized during the same period. Disbursements of these expenditures start in year 1 (2017). These capital expenditures are summarized in Table 1.4.

TABLE 1.4		
CAPITAL COSTS SUMMARY		
Direct Cost		US\$ M
Brine Ext. Wells and piping		14.8
Evaporation Ponds		129.1
Lithium Carbonate Plant and Aux.		121.5
On-Site Infra structure		26.3
Off-site Services		41.3
Total Direct Cost		333.0
Indirect Cost		
Total Indirect Cost		37
Total Direct And Indirect Cost		
TOTAL DIRECT AND INDIRECT		370
Contingencies	15%	55
Total Capital		425

1.11.2 Estimate Confidence Range

Expected confidence range of this estimate is $\pm 15\%$, and contingencies are estimated as 15% of direct and indirect costs.

1.11.3 Exclusions

The following items are not included in this estimate:

- Legal costs;
- Special incentives and allowances;
- Permissions and construction insurance;
- Escalation;
- Interest and financing costs; and
- Start-up costs beyond those specifically included.

1.11.4 Currency

All values are expressed in current US dollars; the exchange rate between the Argentine peso and the US dollar has been assumed as AR\$15.90/US\$; no provision for currency escalation has been included.

1.11.5 Operating Cost Estimate

The operating cost estimate ($\pm 15\%$ expected accuracy) for the Project is estimated at \$2,495 per tonne of lithium carbonate (Table 1.5). This estimate is based upon vendor quotations for main costs such as reagents, fuel (diesel and natural gas), transport, and catering & camp services. Reagents consumption rates were determined by pilot plant and laboratory work, as well as computer model runs. Energy consumption was determined on the basis of the specific equipment considered in each sector of the facilities and their utilization rate. Labour requirements are based on SQM's expertise in operating a similar type of facility. Labour costs have been estimated using the results of a specific salary survey, carried out on behalf of Minera Exar in Argentina, on mining companies with similar conditions, and supported by SQM. Consumables costs were estimated on the basis of SQM's related experience.

TABLE 1.5 OPERATING COSTS SUMMARY		
Description	Total 000 US\$/Year	US\$/Tonne Li ₂ CO ₃
Direct Costs		
Reagents	24,775	991
Maintenance	5,250	210
Electric Power	4,675	187
Pond Harvesting & Tailing Management	8,625	345
Water Treatment System	950	38
Natural Gas	2,125	85
Manpower	4,150	166
Catering, Security & Third Party Services	2,425	97
Consumables	1,275	51
Diesel	1,725	69
Bus-in/Bus-out Transportation	875	35
Product Transportation	3,375	135
Direct Costs Subtotal		2,409
Indirect Costs		
G&A	1,895	76
E&C	250	10
Indirect Costs Subtotal		86
Total Operating Costs		2,495

1.12 ECONOMIC ANALYSIS

A sophisticated economic analysis of the Project was conducted to determine its financial viability. Capital and Operational Expenditures presented in previous sections have been used in this model. The forecasted tax schedules, both payments and rebates, were researched using internal and external taxation experts. Prices for lithium carbonate were based on a market study carried out by a qualified third party.

Results obtained include Net Present Values (NPV) for a range of discount rates, and Internal Rate of Return (IRR), as well as Payback (PB) periods. In order to determine the influence of different input parameters on projected results, a sensitivity analysis has also been carried out. Parameters considered in this analysis were CAPEX, selling prices, production levels, and OPEX.

Evaluation criteria and tax assumptions used in developing the cash flow model are detailed in the corresponding section. The model assumes the current charges for royalties, taxes and payments obligations and a 2.5% return on export value.

1.12.1 Capital Expenditures (CAPEX)

The capital expenditures schedule is presented in Table 1.6.

TABLE 1.6 CAPEX EXPENDITURE SPEND SCHEDULE				
Description	2017 000 US\$	2018 000 US\$	2019 000 US\$	Total 000 US\$
Brine Extraction Wells	3,780	10,400	4,730	18,910
Evaporation Ponds	32,950	90,630	41,190	164,770
Lithium Carbonate Plant	37,720	103,740	41,150	188,610
Infrastructure & General	10,540	28,990	13,180	52,710
Total	84,990	233,760	106,250	425,000

1.12.2 Production Revenues Schedule

The production revenues schedule is presented in Table 1.7.

TABLE 1.7 PRODUCTION AND REVENUE SCHEDULE			
Year	Total Revenues 000 US\$	Accumulated 000 US\$	Li ₂ CO ₃ (t)
1 (2017)	0	0	-
2 (2018)	0	0	-
3 (2019)	72,000	72,000	6,000
4 (2020)	168,000	240,000	14,000
5 (2021)	300,000	540,000	25,000
6 (2022)	300,000	840,000	25,000
7 (2023)	300,000	1,140,000	25,000
8 (2024)	300,000	1,440,000	25,000
12 (2028)	300,000	2,640,000	25,000
18 (2034)	300,000	4,440,000	25,000
24 (2040)	300,000	6,240,000	25,000
32 (2048)	300,000	8,640,000	25,000
40 (2056)	300,000	11,040,000	25,000
Total		11,040,000	920,000

1) Li₂CO₃ price US\$/tonne: \$12,000

1.12.3 Other Expenses

Other expenses and cash flow items considered in the model include Argentinian transaction tax, Jujuy and private royalties, licenses and permits, export refunds, easement rights, equipment depreciation, sustaining capital, exploration expenses amortization and remediation allowances.

1.12.4 Economic Evaluation Results

Economic evaluation results are presented in Table 1.9.

TABLE 1.8 PROJECT EVALUATION RESULTS SUMMARY ¹			
Price Case US\$/t Li ₂ CO ₃	High	Medium	Low
	\$14,000	\$12,000	\$10,000
CAPEX	425	425	425
Max Negative Cash Flow	265	265	265
Average Yearly Values (US\$ M)			
Revenue	350	300	250
OPEX	62.3	62.3	62.3
Other Expenses	8.2	7.2	6.2
EBITDA	282	233	184
Before Taxes (US\$ M)			
NPV (6%)	3,064	2,450	1,837
NPV (8%)	2,190	1,728	1,266
NPV (10%)	1,626	1,266	907
DCF (8%) Payback ²	2Y, 11M	3Y, 4M	3Y, 11M
IRR	39.50%	34%	28.10%
After-Taxes (US\$ M)			
NPV (6%)	2,015	1,609	1,204
NPV (8%)	1,420	1,113	807
NPV (10%)	1,042	803	564
DCF (10%) Payback ²	3Y	3Y, 5M	4Y
IRR	33%	28.4%	23.5%

¹ Presented on a 100% project equity basis. LAC currently owns 50% of the project.

² Measured from the end of the capital investment period

1.13 CONCLUSIONS AND RECOMMENDATIONS

1.13.1 Conclusions

- Brine Reserve/Resource: The lithium Resources and Reserves described in this report occur in subsurface brine. The brine is contained within the pore space of salar deposits that have accumulated in a structurally confined basin.
- Groundwater Model: A numerical groundwater model was updated in 2017 for the central area of the basin to calculate the Reserve Estimate. The model simulates long-term brine recovery, and is based on a rigorous assembly of groundwater flow and solute transport parameters.
- It is the opinion of the independent QPs responsible for the Reserve Estimate that the dataset used to develop the numerical model is acceptable for use in the Reserve Estimate.
- Reserves: The total reserve estimate for proven and probable reserves is 1,499,000 tonnes of LCE.
- Brine Composition: Extensive sampling indicates that the brine has a relatively low magnesium/lithium ratio (<3, on average), suggesting that it would be amenable to conventional lithium recovery processing. The brine is relatively high in sulphate which is also advantageous for brine processing because the amounts of sodium sulphate or soda ash required for calcium removal would be relatively low.

- Lithium Industry: Market studies indicate that the lithium industry has a promising future. The use of lithium ion batteries for electric vehicles and renewable energy storage applications are driving lithium demand rapidly to unprecedented levels.
- Project Capital Cost: The capital investment for the 25,000 tpa lithium carbonate Cauchari Project, including equipment, materials, indirect costs and contingencies during the construction period is estimated to be US\$425 million. Costs have been estimated using consulting engineering services for facilities definition and supplier quotations for all major items.
- The main CAPEX driver is pond construction, which represents 44% of total project capital expenditures.
- Operating Costs: The operating cost estimate (+/-15% accuracy) for the 25,000 tpa lithium carbonate facility is US\$2,495 per tonne. This figure includes pond and plant chemicals, energy/fuel, labour, salt waste removal, maintenance, camp services, and transportation.
- Sensitivity Analysis: The Project is forecast to generate positive cash flow even under unfavourable market conditions for key variables. The sensitivity analysis indicated that lithium carbonate price and annual production have the highest impact on economic performance results (NPV and IRR). Economic performance is less sensitive to capital expenditures and total operating costs.
- Project Economic Viability: Project cash flow analysis for the base case and alternative cases indicates the project is economically viable based on the assumptions used.

1.13.2 Recommendations

- Probable and Proven Reserves: The ongoing operation of all production wells should be managed as long term pumping tests, to assist in the conversion of Probable Mineral Reserves to Proven Reserves over time.
- Pumping Test Manual: A formal manual should be compiled and followed for execution of construction phase pumping tests.
- Monitoring Activities Manual: A formal manual should be compiled and followed for all long-term monitoring activities.
- Project Database: All existing and new site data should be compiled in a formal database.
- Updates to Groundwater Model: The composition of the numerical groundwater model should be re-evaluated at least every quarter, as site production well construction and operation proceeds. The model should be updated as appropriate. Types of model re-evaluation activities should include:
 - Comparison of the model hydrostratigraphy against any new borehole data;
 - Comparison of produced brine concentrations against predicted concentrations;
 - Comparison of measured production and monitor well drawdown levels against predicted levels;
 - Comparison of measured production well flow rates against predicted rates; derivation of updated K (Hydraulic Conductivity) and SS (Specific Storage) estimates from analysis of pumping and drawdown information, and comparison with the values used in the model; and incorporation of third party brine pumping from adjacent properties, if any occurs in the future.
- New Well Testing: In addition to the long-term evaluation components recommended above, each new production well should be initially pump tested for at least four days, for initial assessment of long-term performance.

- Resource Expansion: Given the persistence of high grades at the north, south and below the current Resource Zone, it is recommended that additional investigation be conducted to determine the extent to which the resource can be expanded into these areas.
- Project capacity expansion: Given the high level of mineral resources estimated in this report, we recommend that a capacity expansion project be carried out at Feasibility Study (FS) level.
- Lithium hydroxide production study: Process data and market study work suggest it should be feasible to produce lithium hydroxide at Cauchari. It is recommended that this possibility be the subject of a technical study.
- Lime supply: We recommend that efforts to locate an alternate lime supply source be pursued, and also perform tests to analyze the effect of different lime sources on process yields and product quality. A local supply of lime may result in operational cost savings.
- Process tests: Process tests that can improve the economics of the project should be completed during detailed engineering.

2.0 INTRODUCTION AND TERMS OF REFERENCE

2.1 TERMS OF REFERENCE

Lithium Americas Corp. retained Andeburg Consulting Services Inc. (“ACSI”), Montgomery and Associates (“M&A”), and Ausenco to complete an updated, independent NI 43-101 compliant Feasibility Study and Reserve Estimate on the Cauchari-Olaroz Salars, located in the Province of Jujuy in Argentina. The supervising Independent Qualified Person (“QP”) for the Report is Ernie Burga, P.Eng. of ACSI. Groundwater Insight and Matrix Solutions Inc. have signed off on Section 12 (Data Verification) and Section 14 (Resource Estimate) being carried forward from the 2012 Feasibility report titled NI 43-101 Technical Report Reserve Estimation and Lithium Carbonate and Potash Production at the Cauchari-Olaroz Salars, Jujuy Province, Argentina dated July 11th, 2012.

The Reserve Estimate considers lithium brine at the Cauchari-Olaroz Project that is potentially amenable to pumping. The current Reserve Estimate presented in this report has been prepared in compliance with the “CIM Standards on Mineral Resources and Reserves – Definitions and Guidelines” as referred to in NI 43-101 and Form 43-101F, Standards of Disclosure for Mineral Projects and in force as of the effective date of this report. This is consistent with the Ontario Securities Commission (OSC) Staff Notice 43-704 (dated July 22, 2011), in which it is stated that the OSC considers brine projects to be mineral projects, as defined in NI 43-101. Additional discussion of the NI 43-101 standards as they relate to brine deposits is provided in Section 2.4.

This report was prepared by the authors, at the request of Lithium Americas Corp., a Vancouver registered company, trading under the symbol of “LAC” on the Toronto Stock Exchange with its corporate office at:

1100-355 Burrard Street,
Vancouver, British Columbia, Canada
V6C 2G8

This report is considered current as of March 29th, 2017.

2.2 SITE VISITS

Mr. Ernie Burga, P.Eng., Mr. David Burga, P.Geo. (ACSI), and Mr. Mike Rosko, P.Geo. (M&A) all qualified persons under the terms of NI 43-101, conducted a site visit of the Property on January 24, 2017. Mr. Daron Abbey, P.Geo. (Matrix Solutions Inc.) a qualified person under the terms of NI 43-101, conducted a site visit of the Property on June 1-4, 2010. Dr. Mark King, P.Geo., (Groundwater Insight) a qualified person under the terms of NI 43-101, conducted several site visits to the Property, with the most recent occurring on September 12-15, 2011.

2.3 SOURCES OF INFORMATION

This Report is based, in part, on internal company technical reports maps, published government reports, company letters, memoranda, public disclosure and public information, as listed in the References at the conclusion of this Report. Sections from reports authored by other consultants have been directly quoted or summarized in this Report, and are so indicated where appropriate.

David Burga, P.Geo. will be taking responsibility for Sections 2 - 12. Sections 2.4.1 and Sections 4-12 were taken from the 2012 King, Kelley, Abbey report. Sections 4,5,6 and 12 were updated for the 2017 report. Mr. Burga's role in Sections 7-11 is in a review capacity.

The Reserve Estimate presented in this report is based on geologic and hydrostratigraphic models for the basin, which were developed using the following information sources:

- Geologic and hydrostratigraphic models for the salar basin, which in turn are based on:
 - Expertise in salar geology held by members of the LAC technical team;
 - Geologic logging of 29 ddh holes and 24 RC holes drilled by LAC;
 - Salar boundary investigations conducted by LAC, which include test pit transects and multi-level monitoring well nests;
 - Geophysical surveys conducted by LAC;
 - Surface water and brine monitoring programs conducted by LAC;
 - Hydraulic and sampling information from pumping tests at five locations on the salar;
 - Near-surface distributions of lithium and other dissolved constituents, delineated through collection and analysis of 55 brine samples from shallow, hand-dug pits; and,
 - Formation porosity measurements, obtained through the collection and analysis of 832 undisturbed core samples from diamond drill boreholes.

2.4 SPECIAL CONSIDERATIONS FOR BRINE RESOURCES

2.4.1 Evaluation Framework

NI 43-101 applies to all disclosures of scientific or technical information made by an issuer, including disclosure of a mineral resource or a mineral reserve, concerning a "mineral project" on a property material to the issuer. NI 43-101 defines the term "mineral project" to include "any exploration, development or production activity in respect of a natural solid inorganic material including industrial minerals."

In the Ontario Securities Commission (OSC) Staff Notice 43-704 (dated July 22, 2011), it is stated that the OSC considers brine projects to be mineral projects, as defined in NI 43-101. It is further stated that OSC considers the definitions of mineral resources and mineral reserves to be applicable to brine projects. LAC and the QP co-authors of this report concur with these views. We consider that NI 43-101 provides a proper and rigorous reporting framework for mineral projects hosted in a brine while also providing the necessary flexibility to accommodate these projects' specific characteristics and analytical parameters. Furthermore, reporting on mineral projects hosted in a brine pursuant to NI 43-101 provides the necessary level of protection expected by investors.

The approach used herein to estimate Mineral Resources and Reserves is based on the framework in the CIM Definition Standards for Mineral Resources and Reserves (2005), with some enhancements to accommodate the special considerations of a brine resource. CIM defines a Mineral Resource as:

"A concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction",

and a Mineral Reserve as:

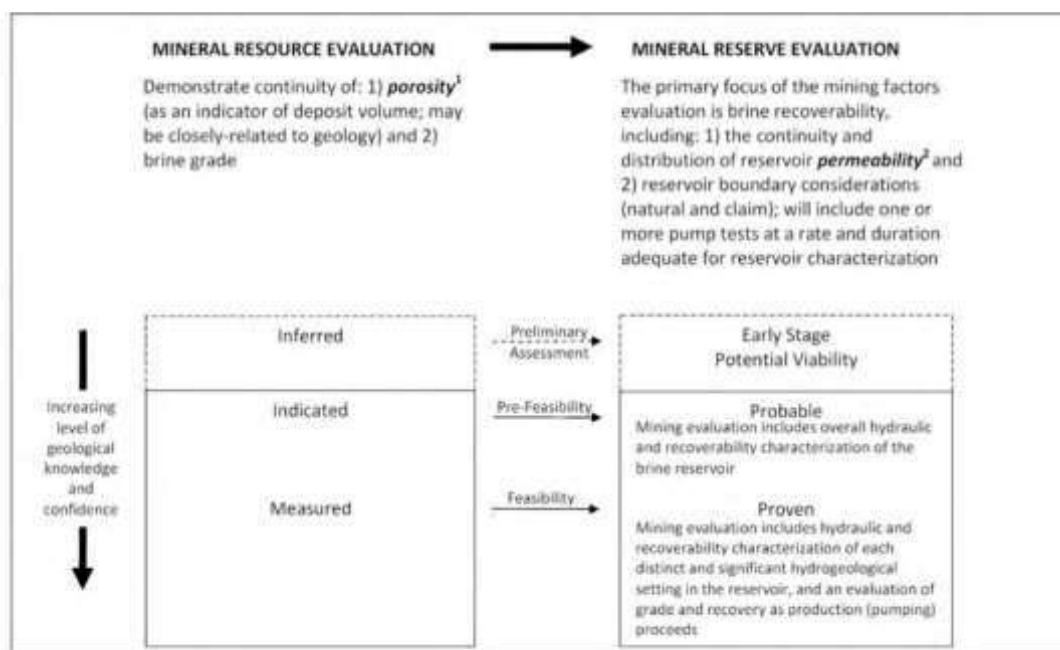
“The economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified”.

For the reasons discussed above, in the professional opinion of the QP co-authors and LAC, the CIM definition of Mineral Resource extends to natural solid inorganic material such as lithium and potassium, which are both industrial minerals that happen to be hosted in a liquid brine.

Furthermore, it is the professional opinion of the supervising independent QP and LAC that, subject to taking into consideration certain additional parameters of a brine, including porosity, permeability, and boundary conditions, the CIM framework for evaluating a Mineral Resource and Mineral Reserve is applicable to minerals hosted in a brine.

The evaluation framework developed and used for this project is shown in Figure 2.1. As indicated in the figure, the primary enhancements are related to the porosity of the host formation (for Resources) and the permeability and boundary conditions of the host formation (for Reserves).

Figure 2.1 Evaluation Framework Developed and Used for this Project



Notes:

1. *Porosity* – a measure of the void (pore) space in a geologic material; several porosity-related parameters are available and may be appropriate, depending on the application, including: total porosity, effective porosity, drainable porosity, relative brine release capacity, etc.
2. *Permeability* – A measure of the ease with which liquid can be transmitted through a geological material.

These components for Resource and Reserve Evaluation of a lithium deposit in brine are enhancements of, or otherwise in addition to, those already contained in the CIM Standards as provided by CIM (2005) and OSC, APGO and TSX (2008).

2.4.2 Brine Resources – Porosity

Evaluation of the resource potential of a brine deposit includes estimation of two key components:

- The continuity and distribution of brine grade; and
- The portion of host material porosity that contains the resource.

The first of these is analogous to solid deposits. Brine grade continuity and distribution are evaluated through detailed sampling and an understanding of site geology, similar to a solid deposit exploration program. The second component (host material porosity) does not have a direct analogy to solid deposits. The term “porosity” denotes the ratio of the volume of void spaces in a rock or sediment to the total volume of the rock or sediment (e.g., Fetter, 1994). It is relevant to brine deposits because brine occurs in the pore spaces of a rock or sediment. However, not all of the brine present in the pore space constitutes a resource. A portion of the brine will not be recoverable, due to:

- Partial retention of brine by capillary tension within the pore spaces; and
- Dead-end pores that are not hydraulically connected to the broad pore network.

For the Resource Estimates conducted for the property to date, a porosity-related parameter known as Relative Brine Release Capacity (RBRC) is used to estimate the portion of host material porosity that contains the resource. The RBRC methodology was developed for this Project by D.B. Stephens and Associates Laboratory in response to some of the unique technical challenges in determining porosity-related parameters for brine-saturated samples. The method is described in Section 11.2.4.2.2 and sample collection is described in Section 11.1.3. The values provided by the RBRC test can be considered approximately equivalent to the more common term “Specific Yield” (Sy), defined as the ratio of the volume of water a rock or soil will yield by gravity drainage to the volume of the rock or soil (e.g., Fetter, 1994). It is noted, however, that Sy is a concept, while RBRC is a measurement determined with a specific test method. The brine Resource Estimate stage was supported by the development of a hydrostratigraphic model, initially described by King (2010b) and updated as described in Section 7. Consistent with the description above, the model was primarily intended to define the distribution of RBRC (and therefore Sy) throughout the Resource zone. This was a preliminary step in assessing the recoverability of the brine, since the derived estimates were lower than the total estimated brine in the system (i.e., Sy is lower than total porosity). Additional, more sophisticated assessment of brine recoverability is conducted at the Reserve Estimate stage.

2.4.3 Brine Reserves - Permeability and Boundary Conditions

At the Reserve Estimate stage (as described in Section 15 of this report) the volume of brine that can be recovered from the reservoir is evaluated in more detail. Many components of Reserve estimation are site and deposit-specific, regardless of whether a mineral deposit is solid or brine. However, the two following considerations are unique to brine deposits, and are incorporated into the Reserve Estimate:

- The continuity and distribution of permeability (the ease with which brine can be pumped from the brine reservoir); and
- Brine reservoir boundary conditions.

Permeability is evaluated through testing to define values for two primary hydraulic properties of the host material:

- Hydraulic Conductivity (K) – a coefficient of proportionality describing the rate at which water of a given density/viscosity can move through a porous earth material (e.g., Freeze and Cherry, 1979); and
- Specific Storage (SS) – the volume of water that a unit volume of porous earth material releases from storage in response to a unit decline in hydraulic head (e.g., Freeze and Cherry, 1979).

For this Project, these properties were evaluated with results from pumping tests and numerical modeling (Section 9.10 and Section 15 respectively). Defining the reservoir boundary conditions involves specifying hydraulic properties and brine grades at a boundary that is relevant to the reserve estimation zone. These specified conditions affect the predicted response of the brine deposit to production pumping. They are critical to the Reserve Estimate because they determine the predicted duration and/or rate at which the brine deposit can be pumped before non-economic grades are recovered. For this Project, boundary conditions were evaluated with pumping tests, numerical modeling results, assessment of brine grade distributions, hydrogeological interpretations, and a targeted boundary investigation program.

2.4.4 Cut-off Values for Brine Resources and Reserves

For a brine deposit, the application of a cut-off value differs substantially between the Resource and Reserve stages of evaluation. As applied to a brine Resource, the cut-off defines a three dimensional static brine body within which all concentrations are estimated to be at or above the specified grade. Conversely, the cut-off value for a brine Reserve will likely be expressed relative to the aggregate grade of brine recovered from all projected wells in a future production well field. The Reserve itself is based on a dynamic assessment of the point at which aggregate produced grade decreases to below the cut-off. In evaluating the Reserve, it may not be critical that the grade of all recovered brine exceeds the cut-off value. Unlike the Resource, it may be reasonable to recover some brine from low grade regions (less than the cut-off value), as long as the aggregate produced grade of the Reserve is predicted to remain above the cut-off.

2.5 UNITS AND CURRENCY

Unless otherwise stated all units used in this report are metric. Salt contents in the brine are reported in weight percentages or mass per volume. The US\$ is used throughout this report unless otherwise specified. The exchange rate as at the effective date of the Report is 1 U.S.\$ = 15.9 AR\$

The coordinate system used by Cauchari for locating and reporting drill hole information is the UTM system. The property is in UTM Zone 19K and the WGS84 datum is used. Maps in this Report use either the UTM coordinate system or Gauss Kruger-Posgar 94 datum coordinates that are the official registration coordinates of the local registry.

The following list shows the meaning of the abbreviations for technical terms used throughout the text of this report.

Abbreviation	Meaning
1D	One dimensional
3D	Three dimensional
°C	Celsius degrees
A	Altitude, in masl
ADT	Average Daily Traffic

AET	Actual evapotranspiration
α	alpha, the fitting coefficient of the capillary head curve
Ah	Ampere-hour
AR\$	Argentine Pesos
ARAWP	ARA WorleyParsons
ASA	Alex Stewart Argentina
ASL	Alex Stewart Laboratories S.A.
AT	After Tax
B	Boron
BIT	Before Interest and Tax
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
Ca	Calcium
CaCl ₂	Calcium Chloride
CaCO ₃	Calcium Carbonate
CAGR	Compound Annual Growth Rate
CaO	Calcium Oxide
CAPEX	Capital Expenditure
CaSO ₄ ·2H ₂ O	Gypsum
CC	Curvature coefficient
CEO	Chief Executive Officer
CFR	Cost and Freight
CHP	Combined Heat and Power Unit
CIS	Commonwealth of Independent States
Cl	Chloride
COMIBOL	Corporacion Minera de Bolivia (Bolivian Mining Corporation)
CU	Uniformity coefficient
δ	delta, the exponent for the relative permeability curve
DC + IC	Direct Costs plus Indirect Costs
DD	Diamond Drilling
Deg	Degrees
DEM	Digital Elevation Model
Dep, Amort & RA	Depreciation, Amortization and Remediation Allowance
DL	Longitudinal Dispersivity
DT	Transverse Dispersivity
Ebitda	Earnings before interest , taxes, depreciation and amortization
EIA	Estudio de Impacto Ambiental (Environmental Impacts Report)
Elevb	Elevation of site b in masl
EP	Exploration Permit
Ep'	Equator Principles
Epan	Pan Evaporation, mm/yr
ET	Evapotranspiration
ETp	potential evaporation
EV	Electric vehicles
FOB	Free on Board
FS	Feasibility Study
G&A	General and Administration
g/cm ³	grams per cubic centimeter
g/L	grams per liter
GEC	Geophysical Exploration Consulting
GIS	Geographic Information System
h	Hour

h/d	hours per day
H ₂ S	Hydrogen sulphide
H ₃ BO ₃	Boric acid
ha	hectares
HCO ₃	Bicarbonate
HDPE	High Density Polyethylene
HEV	Hybrid electric vehicles
HMS	Hydrologic Modeling System
hectopascal (100 pascals)	hPa
I	Inflow
ICE	Internal combustion engine
ICP	Inductively Coupled Plasma
IFC	International Finance Corporation
IIA	Indicador de Impacto Ambiental (Environmental Impact Indicator)
IIT	Instituto de Investigaciones Tecnológicas (Technology Investigations Institute)
ILO	International Labour Organization
in	inches
INTA	Instituto Nacional de Tecnología Agropecuaria (National Institute of Agricultural Technology)
IRR	Internal Rate of Return
IT	Information Technology
IUCN	International Union for Conservation of Nature
K	Potassium
K	Hydraulic Conductivity
K ₂ Mg(SO ₄) ₂ ·4H ₂ O	Leonite
K ₂ Mg(SO ₄) ₂ ·6H ₂ O	Schoenite
K ₂ SO ₄	Potassium sulfate
K ₂ SO ₄ ·CaSO ₄ ·H ₂ O	Syngenite
K ₃ Na(SO ₄) ₂	Glaserite
KCl	Potash
kg	kilograms
KH	Horizontal Hydraulic Conductivity
KH,SAND	Sand Horizontal Hydraulic Conductivity
km	kilometers
km ²	square kilometers
km/h	kilometers per hour
KR	Recession constant, h
ktonne/yr	1,000 tonnes per year
KUS\$	Thousands of US dollars
KV	Vertical Hydraulic Conductivity
kWh	kilo watt hour
Kx	Hydraulic Conductivity in the X direction
Ky	Hydraulic Conductivity in the Y direction
Kz	Hydraulic Conductivity in the Z direction
L/s	Liters per second
LAC	Lithium Americas Corp
LC	Least Concern
LCE	Lithium Carbonate equivalent
Li	Lithium
Li ₂ CO ₃	Lithium Carbonate

LiBOB	Lithium bis(oxalate)borate
LiOH	Lithium hydroxide
LSGC	Lower Salt Generation Cycle meters
m	the second fitting exponent for the capillary head curve
m	meters
m/d	meters per day
m/ka	meters every thousand years
masl	meters above sea level
m/s	meters per second
m ⁻¹	1/meter
m ² /s	square meters per second
m ³	cubic meters
m ³ /d	cubic meters per day
m ³ /MWh	cubic meter per mega watt hour
m ³ /yr	cubic meters per year
mbgs	metres below ground surface
Mg	Manganese
mg/L	Milligrams per liter
mGal	10 ⁻³ gal , also called galileo (10 ⁻³ cm/s ²)
MgCl ₂	Magnesium chloride
MgCl ₂ ·6H ₂ O	Bischofite
MgCl ₂ ·KCl·6H ₂ O	Carnalite
Mg(OH) ₂	Magnesium hydroxide
MgSO ₄ ·7H ₂ O	Epsomite
MgSO ₄ ·KCl·3H ₂ O	Kainite
MIBC	Methyl Isobutyl Carbinol
mm	millimeters
mm/d	millimeters per day
mm/yr	millimeters per year
mm/yy	month/year
MP	Mining Permit
MT	Million tonnes
MW	Mega Watt
n	the fitting exponent for the capillary head curve
n/a	Not Applicable
Na	Sodium
Na ₂ Mg(SO ₄) ₂ ·4H ₂ O	Astrakanite
NaCl	Sodium chloride
Na ₂ CO ₃	Sodium carbonate, soda ash
φ _e	Transport properties include effective porosity
Pe	effective porosity
RBRC	relative brine release capacity
Ss	specific storage
Sr	residual saturation
Sy	specific yield

3.0 RELIANCE ON OTHER EXPERTS

ACSI has assumed, and relied on the fact, that all the information and existing technical documents listed in the References section of this Report are accurate and complete in all material aspects. While we carefully reviewed all the available information presented to us, we cannot guarantee its accuracy and completeness. We reserve the right, but will not be obligated to revise our Report and conclusions if additional information becomes known to us subsequent to the date of this Report.

Although copies of the tenure documents, operating licenses, permits, and work contracts were reviewed, an independent verification of land title and tenure was not performed. ACSI has not verified the legality of any underlying agreement(s) that may exist concerning the licenses or other agreement(s) between third parties but has relied on the client's solicitor to have conducted the proper legal due diligence.

A draft copy of this Report has been reviewed for factual accuracy by LAC, and ACSI has relied on LAC's historical and current knowledge of the Property in this regard. ACSI has also relied on LAC's independent consultants and partner, SQM, as cited in the text of the Report and in the references, for information on costs, prices, legislation and tax in Argentina, as well as for general project information.

Any statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this Report.