Salar de Diablillos Project, Salta Province, Argentina NI 43-101 Technical Report on Brine Resource Estimate

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Prepared for:
Rodinia Lithium Inc.
Project No: M40045

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I, Paula Larrondo, MAusIMM, am employed as a Principal Geostatistician with AMEC International Ingeniería y Construcción Limitada, a division of AMEC Americas Limited.

This certificate applies to the technical report entitled “Rodinia Lithium, Salar de Diablillos Project, Salta Province, Argentina, NI 43-101 Technical Report on Brine Resource Estimate” that has an effective date of 21 January 2011 (the “Report”).

I graduated from the University of Chile initially with a Bachelor of Science degree, and subsequently in 2002 with a Master of Science degree in Geology, and from the University of Alberta with a Master of Science in Mining Engineering degree in the field of Geostatistics in 2004.

I am a member of the Australian Institute of Mining and Metallurgy (MAusIMM), membership number 302539.

I have been involved in mineral resource estimation of mineral projects in South America since 1998. 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).
I have not visited the Salar de Diablillos Project.

I am responsible for the preparation of Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22 and 23 of the Report

I am independent of Rodinia Lithium Inc as independence is described by Section 1.4 of NI 43–101.

I have been involved with the Project since December 2010 during preparation of the brine resource estimate and this Report.

I have read NI 43–101 and this report has been prepared in compliance with that Instrument.
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.

“Signed”

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Dated: 3 May 2011

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This certificate applies to the technical report entitled “Rodinia Lithium, Salar de Diabilos Project, Salta Province, Argentina, NI 43-101 Technical Report on Brine Resource Estimate” that has an effective date of 21 January 2011 (the “Report”).

I graduated from the University of Bucharest with a Bachelor of Engineering degree in Geology and Geophysics in 1974, and a Doctorate of Engineering in 1985.

I am registered as Professional Geoscientist with the Australian Institute of Geoscientists (MAIG # 3003).

Since 1974, I have been involved in mineral exploration projects for precious/base metals and industrial minerals in Argentina, Brazil, Canada, Colombia, Cuba, Chile, Democratic Republic of Congo, Eritrea, Ethiopia, Guyana, Jamaica, Madagascar, Mexico, Nicaragua, Peru, Pakistan, Portugal, Romania, Russia, South Africa and Vietnam. My experience includes working on comparable laterally continuous deposits that can be considered analogous to salar-hosted brine deposits in the areas of geology, drilling, sampling, analysis and quality control and quality assurance.

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).

I have not visited the Salar de Diablillos Project.

I am responsible for the preparation of Sections 11, 12, 13, 14 and those portions of the Summary, Conclusions and Recommendations that pertain to those sections of the Report.

I am independent of Rodinia Lithium Inc as independence is described by Section 1.4 of NI 43–101.

I have been involved with the Project since December 2010 during preparation of the Report.

I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

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.

“Signed and sealed”

Armando Simon, MAIG, R.P.Geo. (AIG # 3003)

Dated: 3 May 2011

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This certificate applies to the technical report entitled “Rodinia Lithium, Salar de Diablillos Project, Salta Province, Argentina, NI 43-101 Technical Report on Brine Resource Estimate” and dated 21 January 2011 (the “Report”).

I am a member of Quebec order of Professional Engineers. I graduated from Laval University, Quebec, Canada in 1998 with a Bachelor of Applied Science degree in Geological Engineering and a Master in Science degree of Earth Science with a focus on borehole geophysics as applied to groundwater studies).

I have practised my profession continuously since graduation. I have been directly involved in mine operations and mine engineering in Africa, Asia, North American and South America since graduation.

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).

I visited the Salar de Diabilos Project (the “Project”) from 4 to 8 April 2011.

I am responsible for the Sections 7.3, 7.4, 10.3 and 10.4 and those portions of the Summary, Conclusions and Recommendations that pertain to those sections.

I am independent of Rodinia Lithium Inc as independence is described by Section 1.4 of NI 43–101.

I have been involved with the Project since December 2010, during preparation of a hydrogeological study, where I reviewed and performed activities in relation to hydrostratigraphy.

I have read NI 43–101 and this report has been prepared in compliance with that Instrument.

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.

“Signed and sealed”

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Dated: 3 May, 2011

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IMPORTANT NOTICE

CONTENTS

TABLES

FIGURES

1.0 EXECUTIVE SUMMARY

1.1 Introduction

AMEC Americas Ltd ("AMEC") was commissioned by Rodinia Lithium Inc ("Rodinia"), to provide an independent Qualified Person's Review and Technical Report (the "Report") for Rodinia's wholly-owned Salar de Diablillos project (the "Project") located in the Salta Province of Argentina.

Rodinia requested AMEC evaluate the existing database, prepare a brine resource estimate and compile a report (the "Report") consistent with the standards set out in Canadian Securities Administrators' National Instrument 43-101.

In preparing this report, AMEC took into account and applied processes which AMEC determined to be appropriate for brine situate deposits. This Report has been prepared using the principles set out in National Instrument 43-101 ("NI 43-101") for mineral projects. It is AMEC's understanding, based on review of public filings by other reporting issuers, public pronouncements by the Canadian Securities Administrators (the "CSA") and AMEC discussions with Staff of certain CSA members, that although brine situate deposits have characteristics which in some respects are different than the earth or rock situate mineral deposits which are more commonly the subject of technical reports filed under NI 43-101, that customary practice in the industry has been to file, and the CSA have accepted and supported the use of, NI 43 101 technical reports for brine situate deposits. 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, in general, applied to mineral deposits.

Determination of a brine resource is based on the geometry of the host aquifer or aquifers, the specific yield, and the grade or concentration of the economically significant elements dissolved in the brine. These elements combine to allow the estimate of an in situ brine resource. 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.

The initial brine resource estimate for the Project is based on limited knowledge of the geometry of the aquifers, and the variation in porosity and brine grade within these aquifers. Specific yield values were assumed based on data from analogous salars in the region with similar porosity and stratigraphy. In order to assess the recoverable brine resource with a higher level of confidence, further information on the permeability and flow regime in the aquifer, and its surroundings are necessary.

1.2 Property Description and Location

The Diablillos Project is located approximately 145 km southwest of the city of Salta, a few kilometres north of the border between the Provinces of Salta and Catamarca, Argentina.

In January 2010, Rodinia acquired the rights to explore and exploit the lithium-rich brines on properties on the Salar de Diablillos held by Borax Argentina S.A., a subsidiary of Rio Tinto Minerals ("Borax Argentina"). Following this transaction, Rodinia purchased the rights to an additional five mining leases and two exploration leases ("cateos") corresponding to an additional 3,187 ha; these claims collectively form the "Project".

Verification of the land titles and mining rights purchased by Rodinia through its wholly-owned subsidiary Potasio y Litio Argentina S.A.(PLASA), and previously owned by Borax Argentina and the private land owners was conducted by Dr. Nicolas Vazquez of Estudio J. Nicolas Vasquez Abogados, an independent Argentine legal counsel firm. In the case of Borax Argentina the agreement is for a three-year exploration permit and a 40-year mining concession on 24 leases (2,700 ha).

Based on legal opinion provided to AMEC, the mining rights and assets transferred to Rodinia and/or PLASA with respect to the Salar de Diablillos, properties by Héctor Vittone, Mario Moncholi and Colorado S.A., and Borax Argentina S.A. are valid. The opinion confirms that the mining canons (statutory required payments) have been duly paid and that no injunctions forbidding the assigners from disposing of or selling their property were registered. In addition, the legal opinion confirms the registration of the execution of the agreements between Rodinia and the previous owners with the proper authorities.

1.3 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Diablillos Project is accessible from the city of Salta through the town of San Antonio de Los Cobres via National Highway 51, and then through a secondary gravel road (all-weather provincial route 129) via the town of Santa Rosa de Los Pastos Grandes. It is approximately 320 km from Salta to the Project, which is a driving time of six to seven hours.

The Project is located in the Argentine Puna region that has an extremely dry and arid climate, with little or no annual rainfall precipitation. The Argentine Puna (Puna Austral) is characterized by large plateaus generally averaging 3,500 masl, surrounded by mountain ranges reaching heights that exceed 6,000 masl. The average elevation of the Diablillos Project is approximately 4,000 masl, with surrounding volcanic mountains extending several hundred metres higher.

Exploration activities have been conducted through the year, and it is expected that any future exploitation operations will be able to be conducted year round. The only exceptions to this occur in the latter half of January and early February where summer rains may complicate access to certain portions of the salar.

The city of Salta has approximately 500,000 inhabitants and offers the normal range of modern services. Project site infrastructure includes a semi-permanent camp with a maximum capacity of 40 people, a work shop, offices, and fuel dispensers. Rodinia is in the process of permitting an 80-person permanent camp and the construction of a large shed for machinery and equipment.

1.4 History

Exploration and production history on the Salar de Diablillos has been restricted to minor ulexite ($NaCaB_5(OH)_6 – 5H_2O$) exploitation by local miners and exploration work by Borax Argentina during the last decade. Records of this work are not available to AMEC, but evidence in the field in the form of shallow (less than one metre depth) small pits, were observed during the AMEC site visit. It is unlikely that lithium-bearing brines would have been exposed and/or sampled during these past activities.

1.5 Geological and Hydrogeological Setting

The salar constitutes a typical evaporite depositional environment emplaced within an isolated depression bound by Pre-Palaeozoic, Palaeozoic and Cainozoic crystalline metamorphic basement rocks.

The Diablillos hydrographical basin is an elongated intermountain plane with a length of approximately 3 km in the north–south direction and a width of 2.5 km in the east–west direction. Fresh water enters from the southeast through the Diablillos River. This stream flows southeast to north–northwest following the northeast margin of the salar.

Rodinia carried out a 140-hole auger drilling campaign. Prompt flooding of the auger holes for sampling occurs in almost all holes, indicating the presence of water-bearing sediments. Water table depth was registered in some RC drill holes; however, due to the size of the sampling interval (6 m) and the fact that water had to be injected in the first metre of drilling for some holes, the precise depth of the water table depth is likely to be inaccurate.

The observation of brine surgence both at the shallow auger holes and the deeper facies of the Salar de Diablillos basin suggest the existence of a north–south-elongated water-bearing complex.

AMEC, based on the preliminary drill information, identified three aquifers, as shown in Table 1-1.

Table 1-1: Aquifer Definition

	Aquifer	Type	Theoretical average thickness (m)	Geological/Granulometric Description
	I	Unconfined	4.5	Sand, salts, caliche, clays
←Depth	II	Unconfined/ Partially Confined	36	Medium to coarse sand
	II	Confined	55*	Medium to coarse sand and gravels

* Considering the length of the drill hole as the maximum depth

1.5.1 Aquifer I

Lithological descriptions from the auger holes and from the first 6 m interval of some RC holes indicate the presence of sand, salt, caliche (as calcium carbonate), borates and clay. Granulometric appraisal was visually estimated by Rodinia geologists. Detailed granulometric studies are recommended for future campaigns.

From the presence of surface water in some portions of the salar and the brine flows observed in the auger holes, AMEC assumed a shallow and unconfined aquifer with a water table at between 1.5 m and 5 m depths.

1.5.2 Aquifer II

The primary lithology in Aquifer II is represented by stratified sand of fine to medium grainsize with occasional coarser grainsizes to more gravel materials, in a proportion from 55% to 90%. Finer-grained fractions such as clay and silt form secondary lithologies in some drill holes.

In this aquifer, the average maximum flow from the drill hole data is 267 L/s, if an estimated flow of 1,080 L/s under strong artesian conditions that was observed in one drill hole at a depth of 48 m is excluded.

1.5.3 Aquifer III

The lithology of Aquifer III is similar to Aquifer II; however, the gravel proportion is higher towards the lower portion of the aquifer as shown in the geological logs of several drill holes.

The thickness of Aquifer III is unknown, since only two drill holes intercept the basement. For the resource model, the shape of the surface that limits the basement was obtained from the gravity model but had to be translated downward to accommodate the fact that brine was recovered until the base of all drill holes with the exception of two drill holes. The surface was locally adjusted to honour the geological logging and brine recovery of those two drill holes with intercepts with the basement.

In one drill hole, brine was recovered until the end of the hole at 264 m; however, sub-angular clasts of metamorphic type suggest the basement was actually encountered at 240 m depth.

In the northern and southern extension of the basin beyond the limits of the salar at the surface, the top of Aquifer III and Aquifer II are limited by the base of the alluvial fan gravels from which no brine was recovered.

Since no pumping tests or laboratory testing have yet been performed, the main aquifer properties specific to the Salar de Diablillos, such as effective porosity, specific yield, and hydraulic conductivity, are not available through direct measurements.

AMEC assumed that the total porosities and specific yield from the published studies of the nearby Olaroz Salar were applicable to Salar de Diablillos. Table 1-2 presents the range of values of hydraulic properties assumed by AMEC for the current resource estimate.

Table 1-2: Total Porosity and Specific Yield Ranges Assumed by AMEC

	Total Porosity (%)		Specific Yield (%)	
Aquifer	**From**	**To**	**From**	**To**
I	25	30	12	18
II	30	35	15	22
III	30	35	15	22

The vertical grade distribution shows average concentrations close to 650 mg/L of lithium to about 6–18 m depth, after which the lithium concentration decreases to average of 450 mg/L. At depths of 42–48 m in the southeast and 60–66 m in the northwest, the lithium concentration increases to an approximate average concentration of 550 mg/L.

While the auger holes offered a good coverage of the first 4 m, the RC holes were not sampled for the first 6–12 m, limiting the assessment of any possible bias between these two sources of information and, also, the understanding of the influence of surface evaporation in the differentiation of Aquifer I and II.

With the preliminary information available at the time of this Report, Aquifer I was assumed to be separated from Aquifers II and III by a salar-wide 3 m-thick impermeable clay layer (aquitard).

Clay layers were logged in various RC holes. The widest intercept with a predominant clay granulometry was 24 m in DRC-01 from 12 m depth; however, this intercept could not be correlated with similar intercepts in neighbouring drill holes. The presence of clays reported at analogous depths is not predominant in the 6 m sampling interval, which means that the interpretation of a continuous clay layer between DRC-01 and the closest drill holes was not possible. Current grid spacing does not allow establishment of a stratigraphic facies correlation between drill holes. This uncertainty in the geological continuity was one of the limiting factors for the confidence category of the brine resource.

As more information becomes available on the stratigraphy of the salar, this assumption of a 3 m clay aquitard layer could be found to be too simplistic. There is a possibility that, rather than the current interpretation of a single impermeable layer of constant thickness, Aquifers I and II are locally separated by cross-bedded or intercalated impermeable and permeable layers.

1.6 Deposit Type

Brine deposits form in evaporite-terrigenous depositional environments where brines have generally obtained lithium from geothermal waters. Most active and/or recent terrigenous-evaporite-depositional environments brines contain lithium in small concentrations, of which, three brine deposits were commercially exploited as of 2011: Salar de Atacama, Chile; Salar del Hombre Muerto in Argentina; and Clayton Valley, USA. These deposits have the following features in common:

- Brines are obtained from the porous strata under the surface of the playas
- Sedimentation and evaporation occurred within enclosed basins that generally form a regional topographic low with restricted outflow
- Proximity to lithium-containing hot springs (some extinct)
- Proximity to past volcanic activity
- Comparatively high levels of lithium in brine, all above 160 ppm Li
- High-altitude areas (>1,200 masl)
- Salt flats greater than 40 km^2
- Low precipitation rates and arid climates
- Extreme weather conditions, including high wind conditions and daily/seasonal temperature variation.

The variation in lithium grade exhibited by these brine deposits varies from approximately 100 ppm to 4,000 ppm at Clayton Valley and Atacama respectively. The average production grade at Atacama is approximately 1,500 ppm Li. The Salar del Hombre Muerto has an average lithium grade of 521 ppm, varying between 190 ppm Li and 900 ppm Li.

The Salar de Diablillos is a detrital salar. Substantial sediments were deposited from the southeast and north and cover most of the salar. According to the log descriptions of the shallow pits and RC drilling done by Rodinia, the upper 3-4 m of the salar consists of some calcareous sediments and clays, and at depth, sands, gravels and clays. The maximum depth was reached by DRC-11, which intercepted the metamorphic basement (gneiss) clasts at 240 m and continued into the basement to a final depth of 264.0 m.

1.7 Drilling

Rodinia has completed two drilling campaigns on the Project since 2009: 140 auger drill and 16 reverse circulation (RC) holes. A total of 2,265.4 m were drilled on the Project during the last 20 months (Table 1-3).

The auger hole locations were selected based on a nominal 300 x 300 m grid spacing, in the north-south and east-west directions, in the nucleus of the salar. RC holes were drilled on an irregular and wider grid of up to 2.5 x 2.5 km, with the objective of delineating the margins of the salar and the depth extension of the brines.

The objective of the auger campaign was to map lithium concentrations and brine chemistry near the surface, as well as subsurface water levels and surface geology.

Table 1-3: Drilling Summary

Company	Period	Drill Hole Prefix	Total Holes	Total (m)	Length (m)		Average (m)	Drilling Type
					Min	Max		
Rodinia	2009-2010	DA-02 to 145	140	492.45	2.3	4.3	3.8	Auger
Rodinia	2010-2011	DRC-01-16	16	1,773	48	264	110.8	RC
Total			**156**	**2,265.4**				

Drilling did not reach the basement of the basin except for two RC holes, and the basin remains open at depth in all directions away from these holes.

In AMEC's opinion, the quantity and quality of the lithological, hydrogeological, collar and downhole survey data collected in the exploration programs are sufficient to support Inferred brine resource estimation and reporting.

1.8 Exploration

Historic exploration at the Salar de Diablillos has been limited to informal small-scale ulexite mining by local miners, and the exploration of the top 3–5 m of the salar that was conducted by Borax Argentina S.A.

Rodinia commenced exploration in 2009 during a due diligence evaluation prior to purchase of the Project. Since then, the following exploration programs have been conducted to evaluate the lithium potential:

- Surface sampling: Brine samples were collected from 140 shallow auger wells regularly distributed on the surface of the salar at approximately 300 m by 300 m spacing
- Gravity survey: Ten lines were surveyed to model basement depth
- Reverse circulation (RC) drilling program: RC drilling was conducted to develop vertical profiles of brine chemistry and to provide geological and hydrogeological data at depth in the salar
- Down-hole geophysical surveys
- Flow monitoring program: Brine flow was monitored during drilling and continues being monitored up to date.
- Pumping test program: this has been designed and will be implemented later in 2011.

1.9 Sampling Method and Approach

Rodinia took 500 mL brine samples every 6 m down the holes. The samples were packaged and sent to the ALS Chemex Group Environmental Division Laboratory (ALS), in Fort Collins, Colorado, USA. ALS is an ISO 9001:2000-certified laboratory.

1.10 Sample Preparation, Analyses, and Security

Samples were assayed for barium, boron, calcium, iron, lithium, magnesium, potassium, silicon, silicon as SiO_2, sodium, and strontium using the ALS trace inductively-coupled plasma (ICP) method 6010B and to the ALS standard operating procedure (SOP) 834, Rev. 7.

Analytical quality was monitored through the use of blanks (barren commercial mineral water) and two standard reference materials (SRMs), one of which was certified, which were inserted into the sample stream and submitted to the analytical laboratory.

1.11 Data Verification

During the site visit, AMEC verified the information and data supplied by Rodinia. AMEC reviewed the historical data, and verified that the information was presented accurately as it exists in those files and reports.

AMEC verified the location of the drill collars of 30% of the drill holes using a hand-held GPS unit, and did not observe significant differences with the locations recorded in the database for those drill holes. During the site visit, AMEC also verified the drilling, logging, and sampling procedures, and found them acceptable for this stage of exploration.

AMEC also examined the assay certificates for approximately 50% of the samples and compared them with the corresponding database entries. No deviations were identified.

Verification of the geology of the Property, and visual verification of the mineralization were accomplished via field visits.

AMEC is of the opinion that the recorded data accurately reflects the original information. 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, or may reflect actual low-level contamination in the laboratory.

1.12 Mineral Processing and Metallurgical Testing

Due to the early exploration stage of this Project and the limited amount of sample data available, detailed process testwork indicating the most advantageous method of elemental extraction has not been fully defined or completed.

Rodinia commissioned a report from an independent consultancy that specializes in lithium studies which developed a conceptual-level process route for the Project. AMEC used this confidential study as background information when assessing reasonable prospects of economic extraction criteria for purposes of declaration of Mineral Resources.

1.13 Brine Resource Estimates

A brine resource estimate for the brine content that could be recoverable was developed for the Project using Vulcan® three-dimensional block modeling software. The geological model and resource estimate were based on a conceptual hydrogeological model, stratigraphic logs, geochemical profiles along the drill holes, total porosity and indicative density values derived from nuclear probe logs, and flow and artesian condition records obtained during drilling.

A series of spatial constraints, such as faults, sampling depth, fresh water presence, geophysical survey and stratigraphic logging were used to define the basin volume. Once this volume was defined, it was divided according to the conceptual hydrogeological model into three aquifers using geological, geophysical, geochemical, and flow records obtained during logging of the drill holes.

The aquifer volumes were discretized into irregular sub-blocks using a 250 m x 250 m x 6 m block size with sub blocks down to 50 m x 50 m x 2 m for Aquifers II and III. For Aquifer I, where auger sampling was done on 300 m x 300 m spacing, the parent block size was reduced to 50 m x 50 m x 6 m with sub-blocks down to 25 m x 25 m x 2 m.

Block grades were calculated using inverse distance squared ("ID2") grade estimation methodologies. All blocks were assigned an Inferred brine resource classification. At depth, brines within the third aquifer were limited by an extrapolated surface projected 30 m below the total depth of drill holes with the exception of the two RC drill holes that intercepted the basement, where the depths of these intercepts was honoured.

The current brine resource estimate is supported by 140 (1,773 m) auger wells and 16 (492.45 m) RC holes, with 132 Li, K, B, Mg and SO_4 assay results from the auger drilling, and 186 Li, K, B, Mg and SO_4 assays from the RC drilling.

Basin volume was apportioned in the three aquifers following the hydrogeological conceptual model and adjusted by the geochemistry profile along the drill holes. To represent the assumed impermeable layers between the aquifers, the surfaces that divide each aquifer were translated 3 m up and down, allowing a space without brine.

The original assay lengths were 6 m, which in AMEC's opinion is too coarse for proper understanding of the vertical stratigraphic variations for these types of deposits. Because of this, AMEC used the actual sample intervals, without compositing, to support the brine resource estimate.

There is insufficient information to infer spatial correlation for the different elements; therefore, variograms were not modelled, and an inverse distance approach was used for grade interpolation.

The interpolation was performed using search ellipsoids with increasing radii starting at 600 m horizontally in Aquifer I and 1,500 m in Aquifers II and III. The minimum and maximum number of samples used to estimate the blocks vary between three and nine, and five and nine respectively. The maximum number of samples that are allowed per individual drill hole varies from one to two samples.

Considering the wide spacing of the RC drilling, uncertainties in the location of the basement, and therefore uncertainties in the thickness of Aquifer III, all blocks were assigned an Inferred brine resource classification.

In addition to the uncertainty derived from the grade and volume estimation, there is uncertainty in the spatial distribution of the specific yield within the aquifers.

Reasonable prospects of economic extraction were taken into consideration through the use of an economic cut-off of 230 mg/L Li.

Recoverable brine resources are determined by the specific yield which is the unit volume of fluid that will drain under gravity. Specific yields are taken from the midpoint of ranges stated in Table 1-2. The specific yield values may change when specific yield data from the Diablillos deposit are collected. These brine resources do not include allowance for losses in extraction of Li, K and B from brines that would be likely to occur in a treatment plant.

Inferred brine resources that are considered to be recoverable are reported in Table 1-4.

Table 1-4: Inferred Brine Resources (Recoverable), Salar de Diablillos Project, Effective Date January 21, 2011, Paula Larrondo MAusIMM

Aquifer	Recoverable Brine Volume	Specific Yield	S.G.	Concentration			Recoverable Tonnage			Recoverable		
										LCE	PE	BAE
				Li	K	B	Li (t)	K (t)	B (t)	Li_2CO_3 (t eq.)	KCl (t eq.)	Boric Acid (t eq.)
	(Mm^3)	(%)		(mg/L)	(mg/L)	(mg/L)	(1000)	(1000)	(1000)	(1000)	(1000)	(1000)
I	41	15.00	1.10	592	6,298	647	30	260	30	130	500	150
II	271	18.50	1.07	471	5,269	540	130	1,430	150	680	2,720	840
III	640	18.50	1.10	589	6,595	691	380	4,220	440	2,010	8,050	2,530
TOTAL	953	18.31	1.09	556	6,206	646	530	5,910	620	2,820	11,270	3,520

Notes to accompany Brine Resource Table 1-4

1. Inferred recoverable brine resource estimate for the Salar de Diablillos. Equivalent tonnages are reported as recoverable in metric tonnes ("t") and were calculated using standard conversion rates as determined by the chemical composition of the final product, and are independent of price and mining processes. A 230 mg/L Li cut-off was used for all resource estimations.
2. Recoverable resources are determined by the specific yield which is the unit volume of fluid that will drain under gravity. The specific yield values may change when further data from the Diablillos deposit are collected. These resources do not include allowance for losses in extraction of Li, K and B from brines in a treatment plant. Specific yields are taken from the midpoint of ranges stated in Table 1-2.
3. The economic cut-off applied was based on analogous deposits.
4. Assumptions regarding thicknesses of Aquifers ll and lll may change with more detailed drilling and geophysical data.
5. LCE stands for lithium carbonate equivalent; PE stands for potassium chloride equivalent and BAE for boric acid equivalent. These are the commercially-saleable products. To obtain the recoverable tonnage for these compounds, the estimated concentration of each element was multiplied by a factor that is based on the atomic weights of each element in the compound to obtain the final compound weight. Factors used were 5.322785 to obtain LCE from the Li concentration; 1.906758 to obtain PE from the K concentration; and 5.717471 to obtain H_3BO_3 from the B concentration.
6. Totals may differ slightly from sum or weighted sum of numbers due to rounding.

1.14 Interpretations and Conclusions

The QPs have reviewed the Project data and are of the opinion that:

- AMEC used the principle of the NI 43-101 disclosure standards and the general format of Form NI 43-101F1 in preparing the estimate and this Report
- Legal opinion provided to AMEC indicates that the mineral tenure held by Rodinia for the Project area is valid, and sufficient to support declaration of brine resources
- The status of the surface rights was not confirmed; confirmation of surface rights will be required to support more detailed Project studies

- An environmental impact study covering the 2010 drilling campaign has been approved by the Argentinean Government. Additional studies will be required to support Project development
- The geologic understanding of the deposit settings, lithologies, and structural and alteration controls on mineralization is sufficient to support estimation of Inferred brine resources only
- The hydro-geologic understanding of the deposit, including porosity and specific yield, and aquifer limits and recharge is sufficient to support estimation of Inferred brine resources only
- There is sufficient drill information to infer the existence of three separate aquifers
- Lateral zonation of some hydro-geological parameters is inferred but could not be confirmed from current drill spacings
- For the brine resource estimate, specific yield values were assumed based on data from analogous salars in the region with similar porosity and stratigraphy; in order to assess the recoverable brine resource with a higher level of confidence, additional data on the permeability and flow regime in the aquifer, and its surroundings are necessary
- The mineralization style and setting is sufficiently understood to support declaration of brine resources
- The exploration programs completed to date are appropriate to the brine style of the deposit and to support Inferred brine resources
- Work completed has consisted of surface auger sampling, RC drilling, surface gravity geophysical survey, flow monitoring, pumping tests, and bore hole geophysical density surveys
- Drilling and logging procedures appear generally adequate; however, the holes were not down-hole surveyed; this is currently not a significant issue given the relatively shallow depth of the holes, AMEC recommends that future drill holes are down-hole surveyed
- Sampling was performed every 6 m, in AMEC's opinion, this sampling interval is appropriate only for support of an Inferred brine resource. A smaller set of sample intervals at various interval spacings (1 m, 2 m, and 3 m, for example) should be tested in a few selected drill holes and matched with corresponding 6 m sample intervals from the same drill holes to demonstrate that the 6 m sample interval provides sufficient resolution for the modelling of the geological and hydrogeological parameters

- Sampling procedures, samples collected, and methods employed and approach were acceptable 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 two SRMs (one of which was certified) and blanks; no significant biases were observed that could 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 analysed by ALS; the sample preparation and analytical methods used by ALS to assay the samples were appropriate
- The data recorded in the database accurately reflect the original information
- Analytical accuracy at ALS for Li, K and B was within acceptable limits
- There are two density data sets, measured from samples in the field by a hand-held densimeter and from bore-hole geophysical surveys; the procedures used in the measurement of the first data set were not available to AMEC, and from examination of the second dataset, there may be calibration issues with the survey data; AMEC considers that the density data are indicative only; this interpretation may be revised as additional data support become available
- Calibration with a specific standard taken from Salar de Diablillos was not available at the time of this resource estimate; therefore, geophysical logs could only be used to assess relative changes in the total porosity and density along the drill holes
- Based on preliminary test work, the lithium recovery in the chemical plant is estimated to be about 79%, and the overall lithium recovery (following losses via clay pond leakage, salt entrainment, occlusion in the magnesium hydroxide gelatinous slurry, and plant inefficiencies) estimated at about 41.1%
- There have been no engineering studies performed yet to support a Preliminary Assessment on the property; however, preliminary exploitation concepts include extracting the brines through pumping wells and surface trenches
- Brine resources, which were estimated using auger and RC drill data, have been performed to industry best practices

- AMEC found that the elevations of the auger-hole collars recorded in the database were systematically 12 m higher than the elevations indicated by the topographic contours; the RC holes differences with the topographic surface are usually within ±1 m; these differences are primarily attributed to the vertical accuracy of handheld GPS devices versus the differential GPS used by the surveyors
- There is insufficient information to infer spatial correlation for the different elements; therefore, variograms were not estimated and an inverse distance approach was used for grade interpolation
- Considering the wide spacing of the RC drilling, uncertainties in the location of the basement, and therefore in the thickness of the Aquifer III, all blocks were assigned an Inferred brine resource classification; at depth, resources within Aquifer III were limited by an extrapolated surface projected 30 m below the total depth of drill holes with the exception of the two drill holes that intercepted the basement, were the depths of this intercepts was honoured
- The aquifer is still open at depth since only two drill holes intercepted the basement. Brine was recovered until the bottom of all drill holes except these two
- The deposit is also open laterally.

1.15 Recommendations

AMEC has proposed a two-phase work program for the Project. The first phase consists of additional drilling, metallurgical testwork, geophysical surveys and modifications to current data collection procedures. Phase 1 is estimated to cost about $4.4 million. The second phase is contingent on the results of the first, and consists of an infill drill program, the size of which will be determined by the results of a planned geostatistical drill section and metallurgical testwork. Depending on the drill spacing that is required to perform infill drilling, the program costs could range from $5.9 million to $8.6 million. AMEC has presented the second phase as an indication of the potential maximum expenditure if drill spacing is required at 500 m centres; the program costs will be less if wider drill spacing is supported.

2.0 INTRODUCTION

Rodinia Lithium Inc ("Rodinia") is a company listed on the TSX Venture Exchange with its corporate head office and exploration office located in Toronto, Ontario. In January 2010, Rodinia acquired the rights to explore and exploit the lithium-rich brines of Borax Argentina S.A., a subsidiary of Rio Tinto Minerals ("Borax Argentina"), properties on the Salar de Diablillos. Following this transaction, Rodinia purchased 100% ownership of an additional 2,987 ha of the surrounding salar.

Rodinia requested AMEC evaluate the existing database, prepare a brine resource estimate and compile a report (the "Report") consistent with the standards set out in Canadian Securities Administrators' National Instrument 43-101.

This Report will be used in support of press releases entitled "*Rodinia Lithium Inc. Defines 4,959,000 Tonne Lithium Carbonate Equivalent Resource at Salar De Diablillos"* dated 2 March, 2011 and "*Rodinia Lithium Inc. Defines Recoverable Resource Estimate for the Salar De Diablillos*", dated 1 April, 2011.

2.1 Effective Dates

The effective date of the brine resource estimate and this Report is January 21, 2011, which represents the date of the most recent data that supports the brine estimate and this report. 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.

2.2 Terms of Reference

In preparing this report, AMEC took into account and applied processes which AMEC determined to be appropriate for brine situate deposits. This Report has been prepared using the principles set out in National Instrument 43-101 ("NI 43-101") for mineral projects. It is AMEC's understanding, based on review of public filings by other reporting issuers, public pronouncements by the Canadian Securities Administrators (the "CSA") and AMEC discussions with Staff of certain CSA members, that although brine situate deposits have characteristics which in some respects are different than the earth or rock situate mineral deposits which are more commonly the subject of technical reports filed under NI 43-101 that customary practice in the industry has been to file, and the CSA have accepted and supported the use of NI 43 101 technical reports for brine situate deposits.

Brine deposits are unlike the majority of solid mineral deposits in that brines are a fluid. Fluids within a brine deposit can move, and can mix with adjacent fluids when exploitation of a brine deposit begins. Evaluation of such fluid deposits therefore requires special considerations that are not, in general, applied to solid mineral deposits.

Determination of a brine resource is based on the geometry of the host aquifer or aquifers, the specific yield, and the grade or concentration of the brine. These elements combine to allow the estimate of an in situ brine resource. 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.

AMEC has reported the brine resources for the Project consistent with industry standards for mineral resources.

An initial brine resource estimate is based on knowledge of the geometry of the aquifer, and the variation in porosity and brine grade within the aquifer. For this brine resource estimate, specific yield values were assumed based on data from analogous salars in the region with similar porosity and stratigraphy. In order to assess the recoverable brine resource with a higher level of confidence, additional information on the permeability and flow regime in the aquifer and its surroundings will be necessary.

AMEC is independent of Rodinia.

2.3 Sources of Information

Reconnaissance exploration and evaluation data have been made available to AMEC for the project area by Rodinia, and consists of surface auger drilling, reverse circulation (RC) drilling, assay results, gravity survey data, down-the-hole porosity measurements, slug tests, surface topography and other field measurements.

Mineral rights and land ownership data were provided by Rodinia through their legal consultant in Argentina, Estudio J. Nicolas Vasquez Abogados.

Geological information was reviewed in sufficient detail to prepare the entire Report.

During the site visit, and later in Santiago, AMEC benefited from the assistance of various Rodinia personnel, including William Randall, President and CEO of Rodinia.

AMEC has quoted and paraphrased from the content of a technical report that was previously prepared on this property by Todd Keast (2010) in the preparation of this report. AMEC acknowledges that Sections 5.0, 6.0, 7.1, 7.2 and 8.0 of this Report are based entirely on Keast report, with some modifications and additions by the AMEC QPs.

Sources of information are listed in Section 22.0 and are also acknowledged where referenced in the text of the Report. Information received during discussions with other persons is also acknowledged in the Report.

2.4 Previous Technical Reports

Rodinia has previously filed a technical report on the Project, entitled:

Keast, T., 2010: Technical Report on the Diablillos Property Salta Province, Argentina: technical report prepared by independent consultant Todd Keast for Rodinia Lithium, dated March 22, 2010

2.5 Report Authors

The Qualified Persons (QP) responsible for preparation of the Report are:

- Mrs. Paula Larrondo, MAusIMM, Principal Geostatistician with AMEC
- Mr. Marc Etienne, Ing. Senior Hydrogeologist with AMEC
- Dr Armando Simon, MAIG, R.P.Geo., Principal Geologist with AMEC

Table 2-1 summarizes the QP site visit dates and the sections of responsibility for Report preparation.

Table 2-1: Areas of Report Responsibility and Site Visits

	Site Visits	Report Sections of Responsibility (or Shared Responsibility)
Paula Larrondo	No site visit	Sections 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22 and 23
Armando Simon	No site visit	Sections 11, 12, 13, 14 and those portions of the Summary, Conclusions and Recommendations that pertain to those sections
Marc Etienne	4 to 8 April 2011	Sections 7.3, 7.4, 10.3 and 10.4 and those portions of the Summary, Conclusions and Recommendations that pertain to those sections

The QPs are not aware of any material scientific and technical changes to the information on the Project between the dates of the site visit and Report signature date.

2.6 Units

Unless otherwise stated, all units of measurement in this report are metric, and currency is expressed in US dollars unless stated otherwise. Sample locations are surveyed in Universal Transverse Mercator (UTM) coordinates, WGS84 Zone 19 South. The Report uses Canadian English.

2.7 Report Sections following the Form of 43-101F1

Table 2-2 relates the sections as shown in the contents page of this Report to the Items in Form 43-101F1.

Table 2-2: Contents Page Headings in Relation to Form 43-101F1 Item Headings

Item Number	Form 43-101F1 Heading	Report Section Number	Report Section Heading
Item 1	Title Page		Cover page of Report
Item 2	Table of Contents		Table of contents
Item 3	Summary	Section 1	Summary
Item 4	Introduction	Section 2	Introduction
Item 5	Reliance on Other Experts	Section 3	Reliance on Other Experts
Item 6	Property Description and Location	Section 4	Property Description and Location
Item 7	Accessibility, Climate, Local Resources, Infrastructure and Physiography	Section 5	Accessibility, Climate, Local Resources, Infrastructure and Physiography
Item 8	History	Section 6	History
Item 9	Geological Setting	Section 7	Geological Setting and Hydrogeological Setting
List Item 10	Deposit Types	Section 8	Deposit Types
Item 11	Mineralization	Section 9	Mineralization
Item 12	Exploration	Section 10	Exploration
Item 13	Drilling	Section 11	Drilling
Item 14	Sampling Method and Approach	Section 12	Sampling Method and Approach
Item 15	Sample Preparation, Analyses and Security	Section 13	Sample Preparation, Analyses and Security
Item 16	Data Verification	Section 14	Data Verification
Item 17	Adjacent Properties	Section 15	Adjacent Properties
Item 18	Mineral Processing and Metallurgical Testing	Section 16	Mineral Processing and Metallurgical Testing
Item 19	Mineral Resource and Mineral Reserve Estimates	Section 17	Brine Resource
Item 20	Other Relevant Data and Information	Section 19	Other Relevant Data and Information
Item 21	Interpretation and Conclusions	Section 20	Interpretation and Conclusions
Item 22	Recommendations	Section 21	Recommendations
Item 23	References	Section 22	References
Item 24	Date and Signature Page	Section 23	Date and Signature Page
Item 25	Additional Requirements for Technical Reports on Development Properties and Production Properties	Section 18	Additional Requirements for Technical Reports on Development Properties and Production Properties
Item 26	Illustrations		Incorporated in Report under appropriate section number

3.0 RELIANCE ON OTHER EXPERTS

The QPs, as authors of this Report, state that they are qualified persons for those areas as identified in the relevant "Certificate of Qualified Person" attached to this Report. The QPs have relied on, and believe there is a reasonable basis for this reliance, upon the following reports of other experts, which provided information regarding brine rights, surface rights, property agreements and environmental status in sections of this Report as noted below.

3.1 Brine Tenure

AMEC has not reviewed the brine tenure, nor independently verified the legal status, ownership of the Project area, underlying property agreements or permits. AMEC has fully relied upon, and disclaims responsibility for, information derived from legal experts for this information through the following documents:

- Vázquez, N., 2011: Legal Opinion of Property Titles for Potasio y Litio de Argentina S.A. confidential letter prepared by Estudio J. Nicolas Vasquez Abogados for AMEC Internacional Ingeniería y Construcción Limitada, April 21, 2011.

This information is used in Section 4.0 of the Report.

3.2 Property Agreements

The QPs have not reviewed the property agreements, nor independently verified the legal status. AMEC has fully relied upon, and disclaims responsibility for, information derived from legal experts for this information through the following documents:

- Vázquez, N., 2011: Legal Opinion of Property Titles for Potasio y Litio de Argentina S.A. confidential letter prepared by Estudio J. Nicolas Vasquez Abogados for AMEC Internacional Ingeniería y Construcción Limitada, April 21, 2011.

This information is used in Section 4.0 of the Report.

3.3 Environmental Status

The QPs have not reviewed the environmental status of the project, nor independently verified any environmental impacts. AMEC has fully relied upon, and disclaims responsibility for; information derived the following document for this information:

- Informe De Impacto Ambiental Etapa II- Exploración Avanzada Con Perforaciones “Proyecto Salar De Diablillos” prepared by the independent geologist Manuel Yapur, May, 2010.

Rodinia advised AMEC that this environmental impact assessment, covering the 2010 drilling campaign, has been approved by the Ministry of Mines from the Argentinean Government.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

The Diablillos property is located approximately 145 km southwest of the city of Salta, a few kilometres north of the border between the Provinces of Salta and Catamarca, Argentina. The entire property is located within the Province of Salta in the Puna region of north-western Argentina (Figure 4-1). Approximate centroid co-ordinates for the Project are 726,800 E and 7,206,050 N (Universal Transverse Mercator (UTM) system, WGS84 Zone 19 South).

Figure 4-1: Location of Diablillos Property (Red Outline) from Keast (2010)

Rodinia have the tenure rights for 5,786 ha, which covers the entirety of the Salar de Diablillos nucleus and a vast majority of the surrounding land, with only approximately 600 ha of land in the hands of private individuals.

4.2 Brine Tenure

There are two types of mineral tenure in Argentina: Mining Permits and Exploration Permits. Mining Permits (“minas”) are licenses that allow the property holder to exploit the property, providing environmental approval is obtained. Exploration Permits (“cateos”) are licenses that allow the property holder to explore the property for a period of time that is proportional to the size of the property (five years per 10,000 ha approximately). An Exploration Permit can be transformed into a Mining Permit any time before the expiry date of the Exploration Permit by presenting a report and paying canon rent.

In January of 2010, Rodinia acquired the rights to explore and exploit the lithium-rich brines properties on the Salar de Diablillos held by Borax Argentina S.A, a subsidiary of Rio Tinto Minerals (“Borax Argentina”). Following this transaction, Rodinia purchased the rights to an additional three mining leases and two exploration licences (cateos) corresponding to an additional 2,987 ha; these claims collectively form the Project. Rodinia pays a bi-annual canon rent of $400 Argentinean Pesos (approximately 100 US dollars) per each 100 ha.

Verification of the land titles and mining rights purchased by Rodinia through its wholly owned subsidiary Potasio y Litio Argentina S.A.(PLASA), and previously owned by Borax Argentina and private land owners, was conducted by Dr. Nicolas Vazquez of Estudio J. Nicolas Vasquez Abogados, an independent Argentine legal counsel firm.

In the case of Borax Argentina the agreement is for a three-year exploration permit and a 40-year mining concession commencing in 2010, on 24 leases (2,700 ha).

As stated in the document: *Legal Opinion of Property Titles*, the mining rights and assets transferred to Rodinia and/or PLASA with respect to the Salar de Diablillos, properties by Héctor Vittone, Mario Moncholi and Colorado S.A., and Borax Argentina S.A. are valid, and confirm the assigners’ property on the mines and mining rights as assigned. The certificates also confirm that the mining canon has been duly paid and that no injunctions forbidding the assigners’ from disposing of or selling their property were registered. In addition, the legal opinion confirms the registration of the execution of the agreements between Rodinia and the previous owners with the proper Argentinean authorities.

Tenement boundaries are based on geographic co-ordinates based on the Gauss Kruger system and the Campo Inchauspe datum.

Tenure for minas is indefinite, providing that annual payments (servidumbre) are made in February and July each year.

The location and configuration of the subject mining leases and cateos are shown in Figure 4-2. Table 4-1 lists all tenements with relevant information.

Figure 4-2: Claims and Cateos Salar de Diablillos

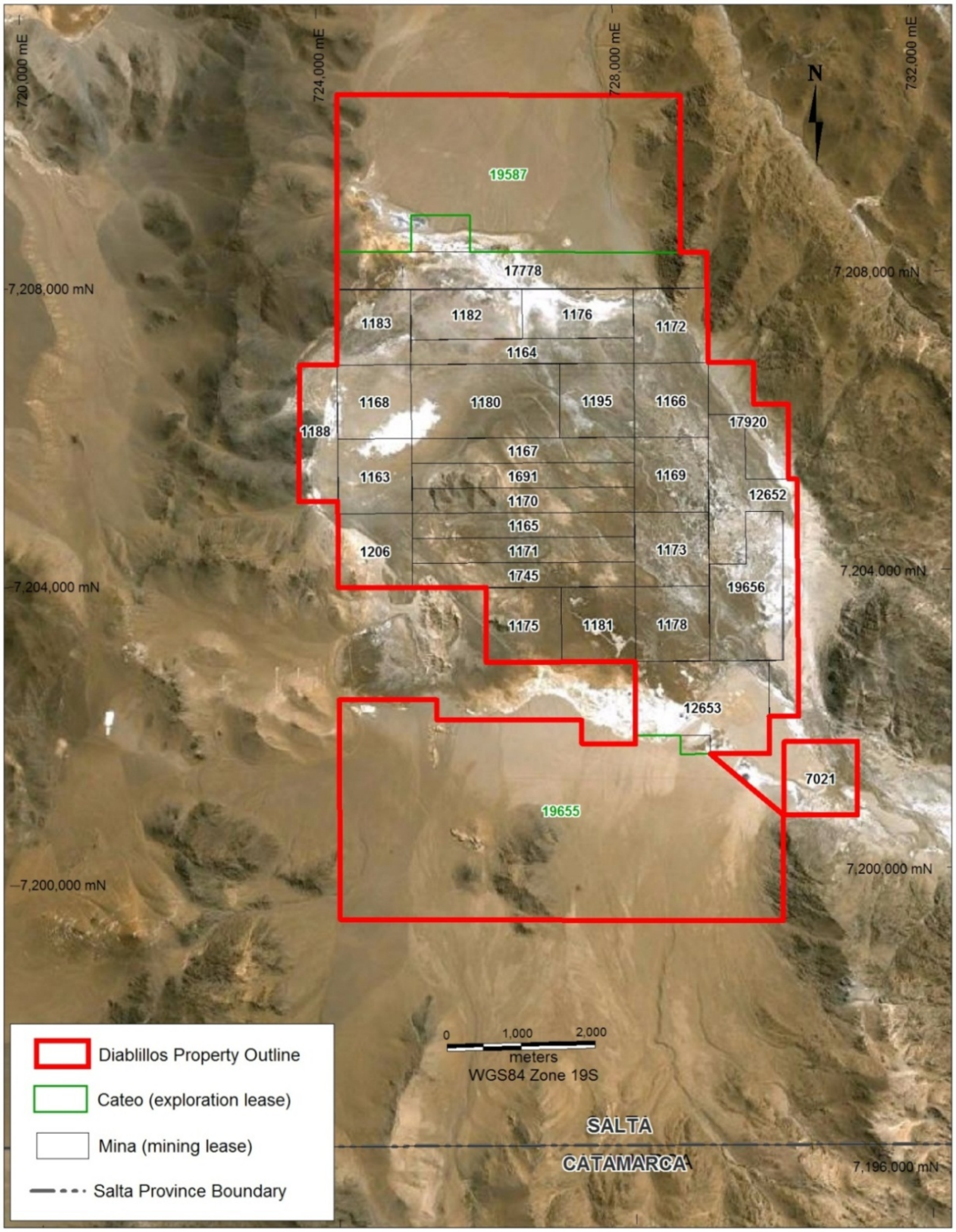


Table 4-1: Description of Land Titles

Lease	File Number	Area (Ha)	Owner	Legal Status	Title
Angélica	17,920	100.00	PLASA	Purchased	Public deed No.275
San Atilio	1,188	100.00		Purchased from Colorado S.A. all the rights and obligations from 2 mine concessions. Colorado S.A. and Santiago Sáenz S.A. reserved the right to constitute a usufruct right to exploit the solid borates deposits on those mines in a proportions of 40 and 60% respectively.	Public deed No.276
Nuestra Señora del Luján	1,183	100.00			
La Petisa	17,778	246.50		Purchase and Sale Agreement	*Boleto con H. Vittone*
Zorro I	19,656	165.00			
S/N Cateo	19,587	975.00			
S/N Cateo	19,655	1,500.00			
Aegyr	1,176	100.00	Borax Argentina S.A.	Three years exploration permit and forty years mine concession favorable to PLASA. Dated January 2010. Three years exploration right and irrevocable option (subject to same term period) to set up an usufruct right for a forty years, limited to the exploration and exploitation of the brine on the mines. Dated January 2010.	*Boleto con Borax*
Chinchillas	12,652	200.00			
Consuelo	1,164	100.00			
Coral	7,021	100.00			
Esperanza	1,167	100.00			
La Entrerriana	12,653	200.00			
La Pichunga	1,172	100.00			
La Tosca 1 y 2	1,180	200.00			
Odin y Thor	1,182	100.00			
San Andrés	1,178	100.00			
San Felipe	1,166	100.00			
San Jorge	1,169	100.00			
San José	1,168	100.00			
San Juan	1,171	100.00			
San Marcelo	1,195	100.00			
San Martín	1,173	100.00			
San Miguel	1,206	100.00			
San Pablo	1,165	100.00			
San Pedro	1,170	100.00			
Santa Rosa	1,163	100.00			
Santiago	1,175	100.00			
Santo Domingo	1,181	200.00			
Santo Tomás	1,745	100.00			
Sol Argentino	1,691	100.00			
TOTAL		**5,986.5 ha**			

4.3 Environmental and Socio-Economic Issues

The general status of environmental permits for programs conducted prior to 2010 on the Project was not confirmed.

Rodinia prepared an Environmental Impact Study for the second step of the drilling program (Empresa Rodinia Minerals Inc., 2010) in which visual impact was identified as the main estimated negative impact of the drilling campaign. There are no known archaeological sites or artefacts on the property.

There may be minor surficial environmental impacts as a result of artisanal mining activity; these are likely to be primarily restricted to visual impacts.

4.4 Comment on Section 4.0

In the opinion of the AMEC, the following conclusions are appropriate:

- Information from legal experts supports Rodinia's statements on their ownership of mineral tenure and is sufficient to support declaration of brine resources
- AMEC has no information on surface rights or permits that may be held by Rodinia
- The Project is at an early stage of development, and there are no advanced environmental studies; water management in an fragile environment such as salars will require particular attention

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Diablillos property is accessible from the city of Salta through the town of San Antonio de Los Cobres via National Highway 51, and then through a secondary gravel road (all-weather provincial route 129) via the town of Santa Rosa de Los Pastos Grandes (Figure 4-1). By road the distance from Salta to the property is approximately 320 km, which is a driving time of six to seven hours.

An alternate road route exists via the town of Pocitos on Provincial Route 17, which is the main road to Antofagasta, Chile and the primary road access to the Borax Argentina Minas Tincalayu borax mine, located a few kilometres southwest of the Diablillos property on the north-eastern shore of the Salar Hombre Muerto.

These secondary roads are regularly maintained as they are used daily for transportation purposes during mining and processing of borates in the region.

The Salar de Diablillos may be accessed from the north and the south by two local roads veering off the secondary trucking road. The local roads are relatively narrow gravel roads that can be driven with regular two-wheel drive vehicles with high clearance; however, during the rainy periods between January and March, sections of the road are susceptible to flooding or small landslides, and in those months four-wheel drive vehicles are required for access within the property.

The closest commercial airport is at Salta.

5.2 Climate

The Salar de Diablillos is located in the Argentine Puna region with an extremely dry and arid climate, with little or no annual rainfall. At nearby Salar del Hombre Muerto rainfall is reported to average 60-80 mm/year, and the evaporation rate is about 1,500 mm/year (Garrett 2004, in Keast, 2010). The majority of the precipitation occurs during the months of February and March.

During the winter season (July and August), temperatures average between 8°C to 10°C during the daytime and -5°C to -8°C during the night, but exhibit large daily variations commonly reaching -25°C and 15°C within 24 hours. During the summer months (December to February) temperatures average between 25°C to 30°C during the daytime and around freezing during the night. Strong northwest and west winds in excess of 45 km/h are common in the area, particularly during the winter and spring seasons (Borax Argentina, 2009).

Exploration activities have been conducted throughout the year, and it is expected that any future exploitation operations will be able to be conducted year-round. The only exceptions to this may occur in the latter half of January and early February where summer rains may complicate access to certain portions of the salar.

5.3 Local Resources and Infrastructure

The city of Salta, with a population of approximately 500,000 people, is the largest urban centre and is located 145 km northeast in a straight line from the Diablillos Project, and is 320 km by road. Salta is the main regional commercial centre where supplies, fuel, and equipment may be purchased and trucked to the property year-round. Salta is also serviced by regular daily commercial flights from Buenos Aires and other major South American cities.

On-site Project infrastructure includes a semi-permanent camp with a maximum capacity of 40 people, a workshop, offices, and fuel dispensers. Rodinia is in the process of permitting an 80 person permanent camp and the construction of a large shed for machinery and equipment.

The closest permanent communities to the Diablillos Project are Santa Rosa de los Pastos Grandes (100 people) and San Antonio de los Cobres (1,500 people). Basic supplies, fuel, lodging and unskilled labour may be obtained in San Antonio de los Cobres. The town is also host to three processing plants that are serviced by potable and process water, natural gas, and railway services.

A high-tension power line and a natural gas pipeline cross the Salta Province on their way to Chile. Pocitos, approximately 100 km north of the property, is the closest access point to this power line, while the gas pipeline is approximately 140 km from the Property. Trucking routes between Diablillos, Pocitos and San Antonio de los Cobres are established and are in use by local borate producers. The narrow-gauge General Belgrano Railway line connects the city of Salta with the seaport of Antofagasta, Chile.

Communications for exploration-level activities have primarily been by text, as cell phone service can be unreliable. Rodinia plans to install a cell phone booster in the main camp and this will provide reliable cellular coverage. However, the main communications will continue to be by satellite phones.

Argentina has sufficient experienced and skilled professionals to run any lithium, potash and boron recovery operation that could be constructed in the Project area.

Rodinia holds over 5,986.5 ha of mineral tenure. In the immediate vicinity of the historical exploitation area, and within the Rodinia ground holdings, there is sufficient area to support construction of a lithium operation. . Planned infrastructure, in the event of mine construction, could include evaporation ponds, wells, permanent housing, and a carbonation plant. The size and extent of these facilities are not known at this time and are anticipated to be addressed in future studies.

5.4 Physiography

The property is located within the Puna physiographic region of the Andes, consisting of broad valleys separating ranges of mountains, which extend southward from Peru and Bolivia into northern Chile and northwestern Argentina. The Argentine Puna (Puna Austral) is characterized by large plateaus generally averaging 3,500 masl surrounded by mountain ranges reaching heights that exceed 6,000 masl (Figure 5-1).

Figure 5-1: Overview of Salar de Diablillos and Ulexite ($NaCaB_5(OH)_6 – 5H_2O$) Nodules

The average elevation of the Diablillos Project is approximately 4,000 masl, with surrounding volcanic mountains extending several hundred metres higher.

The Puna vegetation is sparse, consisting of small shrubs and varieties of upland grasses. Locally, vegetation is limited to halophile and xerophile species, generally of poor stature and with foliage limited to thorns. Plant and shrub species that can be found on the margins or the surrounding areas of the Salar are limited to tola (*Lepidophillum phillicoeforme*), añagua (*Adermia horridiuscula*), copa copa (*Artemisia* sp.), as well as a few grasses found on alluvial plains where fresh water can be found at depth.

Fauna present in the region is just as scarce as the flora. Mammals inhabiting the Diablillos area include vicuña, llamas, *Chinchilla brevicaudata*, donkeys and red foxes. A variety of rodents and birds can be observed including flamingos and native grouse. The surface of the salar nucleus is generally free of fauna and flora.

5.5 Comment on Section 5.0

In the opinion of the AMEC, the existing and planned infrastructure, availability of staff, the existing power, water, communications and transportation facilities can support the declaration of brine resources.

6.0 HISTORY

Exploration and production history on the Salar de Diablillos has been restricted to minor ulexite ($NaCaB_5(OH)_6 – 5H_2O$) exploitation by local miners and exploration work by Borax Argentina during the last decade. Records of this work are not available to the authors, but evidence on the field in the form of shallow (less than one metre depth) small pits (Figure 6-1), were observed during the AMEC site visit. It is unlikely that lithium-bearing brines would have been exposed and/or sampled during these past activities.

Historical information on drilling in the salar reported by the Servicio Geológico Minero Argentino indicates that a drill hole was completed in the south-eastern margin of the salar, reaching the metamorphic basement at a depth of 75 vertical metres. The reported stratigraphy consisted of a one metre layer of ulexite followed by 10 cm of caliche and more extensive, but unspecified, clays. Below the clays a sand aquifer was logged to a depth of 30 m giving way to a basal conglomerate towards the bottom of the hole.

Figure 6-1: Past Exploration Activities, Pile of Ulexite from Shallow Pit (Keast,2010)

7.0 GEOLOGICAL AND HYDROGEOLOGICAL SETTING

7.1 Regional Geology

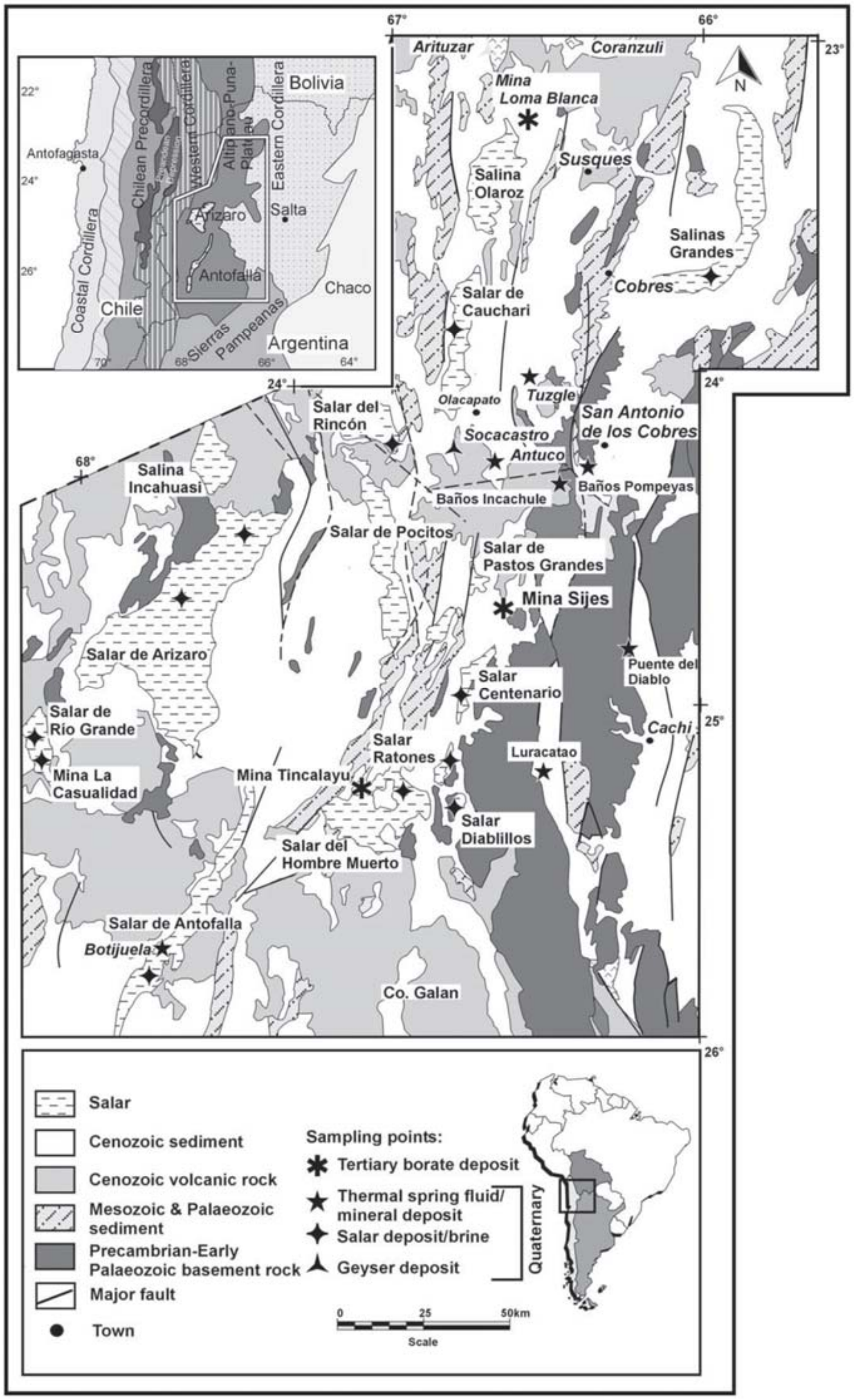
According to Turner (1972) and Isacks (1988), the main lithium-bearing region of South America is located in the Altiplano Puna plateau, which is approximately 2,000 km long by 300 km wide with an average elevation of 3,700 m, controlling the geomorphology of the central Andes. A volcanic arc forms the western margin of the Puna/Altiplano. 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 and Gardeweg, 1989) and they are the origin of mineralized fluids. Uplift of the plateau is the combined result of late Tertiary crustal shortening and magmatic addition (Isacks, 1988).

The climate of the Puna varies from semiarid on the eastern border to arid along the western volcanic arc. 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 (Alonso, 1986; 1991; Vandervoort, 1995). Extensive salars cover the basin floors, which are typically surrounded by expansive alluvial systems. Thick (up to 5 km) sections of Neogene strata are present within the modern depositional basins (Jordan and Alonso, 1987; Alonso et al., 1991) containing evaporites (mainly halite, gypsum and borates) and alluvial clastic material with minor tuffaceous horizons (Alonso, 1986). Exposed Neogene strata are present in reverse fault-bounded slices along salar margins or as intrabasin uplifts within salars (Vandervoort, 1995). Waters drain towards these closed basins so that the only way of returning to the hydrological cycle is by means of evaporation, leaving behind brines enriched in various metals and salts, sometimes including anomalous levels of lithium, boron, and/or potassium. Figure 7-1 shows the simplified regional geology of the Puna Plateau and the location of the salars and borate deposits of the area.

7.2 Local Geology

The Salar de Diablillos is located on the western margin of the central portion of the Puna geological province (Turner, 1972) and within the Puna Austral geological sub-province defined by Alonso et al., (1984). The altitude of the saline salt flat or playa is approximately 4,000 metres above sea level. The salar constitutes a typical evaporite depositional environment emplaced within an isolated depression bound by Pre-Palaeozoic, Palaeozoic and Cainozoic crystalline metamorphic basement rocks (Vinante & Alonso, 2006).

Figure 7-1: Simplified Geological Map of the Puna Plateau, Showing the Location of the Boron-Bearing Deposits and Salar Deposits (from Kasemann et. al., 2004)



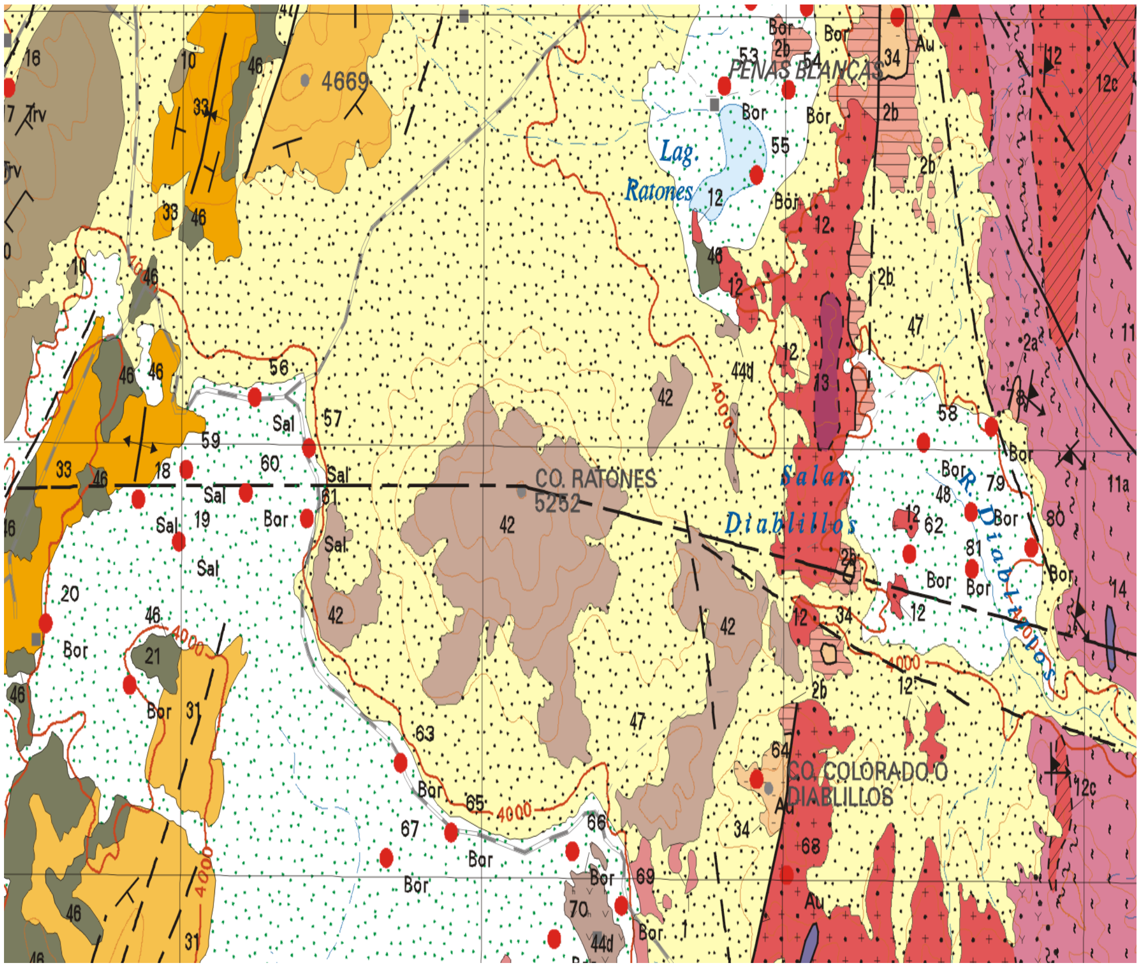
The Salar de Diablillos saline surface covers an area of approximately 3,700 ha. Although limited published literature is available describing the stratigraphy of the basin, there are various references to the large extent and grade of the ulexite mineralization within the surficial sandstone strata. The salar is generally described as a true “boratera” referring to the extent of ulexite mineralization that covers virtually the entire salar, varying from 20 cm to several metres in thickness (Alonso 1984, Alonso 1999, Alonso 2006, among others). The borate minerals are an example of chemical-evaporitic sedimentation in arid continental environments with periods of active volcanism.

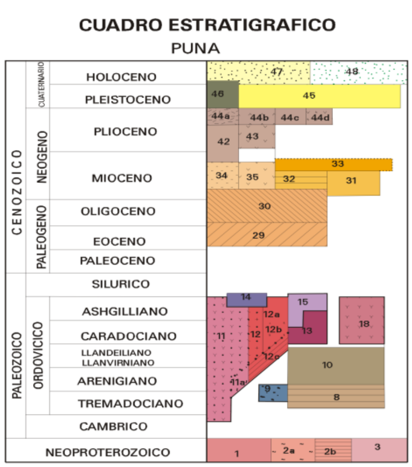
The areal distribution of borates within the salar is irregular and is thought to be related to the location of the hot springs from which they are derived (Alonso 1999). In Diablillos, as well as Salares Ratones and Centenario, remains of ancient hot spring deposits have been identified so that the predominant hypothesis is that their genesis is directly related to the supply of hot boron-bearing water from vents at the margins and/or interior of the depressions (Alonso & Gutierrez, 1984; Alonso 1988). These hydrothermal fluids rose through fracture planes that structurally control the depressions during periods of relaxation, or within extensional periods in the predominantly compressive regional tectonics. As shown in Figure 7-2, the Salar de Diablillos is bound to the south by the roughly east–west-trending Ratones fault(s), to the east by a perpendicular north-south unnamed fault, and to the west by a chain of granitic-composition hills that are elongated north–south and are probably structurally-controlled.

The hydrothermal fluids that are inferred to be the source of boron to the basins have been associated with correlative levels of lithium and potassium (Viramonte, Alonso, Gutierrez & Argañaz, 1984). Examples of this are Cauchari, Ratones and Diablillos salars which exhibit high concentrations and distribution of borate minerals as well as high concentrations of lithium in sub-surface brines. The Salar de Diablillos is considered the richest borate deposit in the Puna Austral (Alonso, 1984). According to Viramonte et al (1984) it is possible to classify the salars of the region based on this association between lithium and borates in two groups: lithium-borate rich and lithium-borate deficient.

Stratigraphy below the borate layer, generally between 1 m and 5 m below surface, has been explored during an auger drill campaign. It is a mixed sequence that includes clays, thin evaporite facies (sodium chloride, mirabilite (Na_2SO_4 – $10H_2O$)) carbonate facies, ulexite facies and the coarse clastic sediments from alluvial fans encroaching on the salars. Thinly-bedded clay, silt, sand and evaporite facies (mostly halite and scarce gypsum) continue to depth.

Figure 7-2: Geological Map – Cachi Sheet 2566





47 – ALLUVIAL DEPOSITS AND ALLUVIAL FANS (gravels, sands and clays)
46 - INCAHUASI FORMATION (Basalts) – Quaternary-Pleistocene
44 - CERRO GALAN VOLCANIC COMPLEX (Ignimbrites, lavas, domes, and dacitic ignimbrites)
42 – RATONES ANDESITES
34 - INCA VIEJO FORMATION (Rhyolithic and dacitic porphyries)
33 - SIJES FORMATION (Sands and evaporitic pelites, mainly borates of economical interest).
15/11- OIRE ERUPTIVE COMPLEX (Pegmatites, aplites and lamprophyres)
13 – Gabbros y Diorites
12 –Granites y Granodiorites characterized by coarse grain and megacrystals
1.- PACHAMAMA FORMATION (Schists and gneiss with limestones and amphibolites intercalations)

7.3 Hydrogeological Setting

The hydrogeological setting for most of the Argentinean Puna is characterized by the strong endorheic (closed basin) behaviour where saline depressions (salars) received relatively small discharges of fluvial tributaries. In the centre of these depressions, temporal or permanent shallow closed lagoons are formed.

The occasional but intense precipitations during the summer occur either in the form of snow or hail in the higher mountains of the surroundings. At lower altitudes, strong rains occur.

After short-duration surface run-offs, the water from the mountains returns to the atmosphere through evaporation during the daytime, due to the high temperature and low relative humidity, or infiltrates rapidly in thick alluvial fans with high permeability. However, in certain areas where the waters reach the surface, lowlands are formed.

7.3.1 Salar de Diablillos Basin

The Diablillos Salar is located in the southeast end of the Puna of Salta and is the endpoint of the run-off waters of the western slope of the southern peaks of the Luracatao mountain chain. The basin is geographically isolated since it is completely enclosed by the surrounding mountains. However, it receives discharge from the Diablillos River, which is one of the rivers with greater flow in the area.

The salar is located east of Ratones Hill, at an altitude of 3,900 masl. The basement of the salar corresponds to the Rio Blanco Precambrian metamorphic complex. Extensive alluvial plains ascend to the north and south. The endorheic[1] basin covers an area of 416 km^2, from which 33 km^2 corresponds to the evaporitic salar environment. The salar has a thin salt efflorescence crust covering a layer of borate ulexite on almost all salar surfaces (Alonso, 1986). Towards the edges, this crust graduates to a more clastic facies.

Travertine deposits from former springs are irregularly distributed and represented by the trace of the entrance of the Diablillos River from the southeast.

1 a watershed from which there is no outflow of water (either on the surface as rivers, or underground by flow or diffusion through rock or permeable material).

7.3.2 Surface Water

The Diablillos hydrographical basin is an elongated intermountain plane with length of approximately 3 km in the north–south direction and width of 2.5 km in the east–west direction. Fresh water enters from the southeast through the Diablillos River. This stream flows from the southeast to the north–northwest following the northeastern margin of the salar.

7.3.3 Ground Water

During RC drilling, Rodinia's geologists registered the depth of ground water level and the depths where artesian conditions were encountered. Table 7-1 summarizes this information. These measurements are an approximate indication of ground water levels at Salar de Diablillos and were used only as a reference in the estimation of the assumed thicknesses of the aquifers in the hydrogeological conceptual model. More detailed measurements of the ground water levels, based on accepted industry standards, should be carried out during future drilling campaigns.

Table 7-1: Ground Water Level (Depths)

Hole ID	Water Level (m)	Artesian Conditions (m)
DRC-01	5	100
DRC-02	1.5	104
DRC-03	4	52
DRC-04	1.5	96
DRC-05	4	48
DRC-06	-	81
DRC-07	15	93
DRC-08R	12	66
DRC-09	1.5	-
DRC-10	1.5	-
DRC-11	35	130
DRC-12	42	-
DRC-13	42	-
DRC-14	16	105
DRC-15	46	80
DRC-16	3	54

7.3.4 Hydraulic Parameters

For unconsolidated soil, the total porosity is the number of pore spaces between soil particles, irrespective of consideration of the quantity of groundwater that could be drained from this material.

Specific yield, also known as the drainable 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, but it cannot be assessed through pumping tests in unconfined aquifers.

Since no pumping tests or laboratory testing have been performed as of the effective date of this Report, the main aquifer properties specific to the Salar de Diablillos, such as effective porosity, specific yield and hydraulic conductivity, are not available by direct measurement.

AMEC assumed total porosities and specific yield from the published studies of the nearby Olaroz Salar (Groundwater Insight inc., 2010 and John Houston and Peter Ehren, 2010) were generally applicable to the Project area. In the absence of correlation between grain size and laboratory data (granulometric analysis) of the geologic material of the Diablillos salar and the Olaroz Salar, AMEC assumed an equivalent sand grain size material for both salars.

Table 7-2 presents the range of values of hydraulic properties assumed by AMEC for input to the brine resource estimation.

Table 7-2: Total Porosity and Specific Yield Ranges Assumed by AMEC

	Total Porosity (%)		Specific Yield (%)	
Aquifer	**From**	**To**	**From**	**To**
I	25	30	12	18
II	30	35	15	22
III	30	35	15	22

7.4 Hydrogeological Conceptual Model

The observation of brine surgence both in the shallow auger holes and in RC holes intersecting the deeper facies of the Salar de Diablillos basin, suggests the existence of a north–south-elongated water-bearing complex.

The spatial distribution of lithium and the other associated elements, as well as the artesian conditions found in some holes, were the most relevant aspects that led AMEC to define an hydrogeological conceptual model that apportions the water-bearing complex into, at least, three aquifers and their corresponding aquitards (impermeable clay layers with very low hydraulic conductivity).

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

- Auger and RC lithological logging, in particular the grain size description
- Total porosity and density geophysical logs for six RC holes
- Basement elevation from gravity model
- Flow records profile for RC holes
- Geochemistry profiles along RC holes

Aquifer definition is outlined in Table 7-3.

Table 7-3: Aquifer Definition

	Aquifer	Type	Assumed average thickness (m)	Geological/Granulometric Description
←Depth	I	Unconfined	4.5	Sand, salts, caliche, clays
	II	Unconfined/ Partially Confined	36	Medium to coarse sand
	II	Confined	55*	Medium to coarse sand and gravels

* Considering the length of the drill hole as the maximum depth

Rodinia carried out a 140 hole auger drilling campaign. Prompt flooding of the auger holes for sampling occurred in almost all holes indicating the presence of water-bearing strata (see Sections 11.0 and 12.0).

Water-table depth was registered in some RC drill holes; however, due to the sampling interval (6 m) and the fact that water had to be injected in the first metre of drilling for some holes, precision of the water-table depth is considered inaccurate by AMEC.

The vertical grade distribution shows average concentrations close to 650 mg/L of lithium to about 6–18 m depth, after which the lithium concentration decreases to an an average of 450 mg/L. At depths of 42–48 m in the southeast and 60–66 m in the northwest, the lithium concentration increases to an approximate average concentration of 550 mg/L.

While the auger holes offered a good coverage of the first four meters, the RC holes were not sampled for the first 6–12 m, limiting the assessment of any possible bias between these two sources of information and, also, the understanding of the influence of surface evaporation in the differentiation of Aquifers I and II.

With the preliminary information available at the time of this Report, Aquifer I was assumed to be separated from Aquifers II and III by an interpreted 3 m-thick constant clay layer across the salar.

Clay layer intercepts were logged in various RC holes. The widest intercept of 24 m with a predominant clay granulometry can be found in DRC-01 at 12 m depth; however, this intercept could not be correlated with similar intercepts in neighbouring drill holes. The presence of clays reported at analogous depths is not predominant in the 6 m sampling interval, which means that the interpretation of a continuous clay layer between DRC-01 and the closest drill holes was not possible.

AMEC recommends that a smaller sample interval should be tested in a few selected holes to demonstrate if 6 m provides sufficient resolution for the modelling of the geological and hydrogeological parameters. The current grid spacing does not allow for establishment of a stratigraphic facies correlation between drill holes.

AMEC considers that the current interpretation is appropriate for the current level of geological knowledge, but as with most geological interpretations, more complexity will be recognized with the collection of more detailed information. It is possible that, rather than the interpretation of a single impermeable layer of constant thickness, Aquifers I and II are locally separated by the cross-bedding of impermeable and permeable layers.

7.4.1 Aquifer I

Lithological descriptions from auger holes, and the first 6 m for some RC holes, indicate the presence of sand, salt, caliche (as calcium carbonate), borates and clay for Aquifer I. Granulometric appraisal was done visually by Rodinia geologists. Detailed granulometric studies should be considered in future campaigns.

Based on the presence of surface water in some portions of the salar and the brine flows observed, especially in the auger holes, AMEC assumed a shallow and unconfined aquifer with a water table at between 1.5 m and 5 m.

7.4.2 Aquifer II

The primary lithology in Aquifer II is represented by stratified sand of fine to medium grainsize with occasional coarser grain size to gravel material, in a proportion from 55% to 90%. Finer grain size fractions such as clay and silt occur as secondary lithologies in some drill holes.

7.4.3 Aquifer III

The lithology of Aquifer III is similar to Aquifer II; however, the gravel proportion is higher towards the lower portion of the aquifer as shown in the geological logs of several drill holes.

The thickness of Aquifer III is unknown, since only two drill holes intercept the basement. For the purposes of the geological model, the shape of the surface that limits the basement was obtained from a gravity-survey model, but the model had to be translated down 60 m to accommodate the fact that brine was recovered until the bottom of all drill holes with the exception of DRC-10 and DRC-11. The surface was locally adjusted to honour the geological logging and brine recovery of those two drill holes to their basement intercepts.

The depth intercept for DRC-10 occurred at 49.5 m; this drill hole is located towards the western margin of the basin, and the depth is consistent with the topographic relief. In DRC-11 sub-angular clasts of metamorphic rock were encountered at 240 m, and the hole terminated in basement at 264.0 m.

In the northern and southern extension of the basin beyond the limits of the salar on surface, the top of Aquifer III and potentially Aquifer II, are limited by the base of the alluvial fan gravels from which no brine was recovered.

7.5 Comment on Section 7.0

The Salar de Diablillos is a water-bearing complex with high artesian conditions at depth. In the opinion of AMEC the early stage of exploration and the presence of a multi-aquifer complex with a relatively broad drill-hole spacing can only support the estimation of Inferred brine resources at this time.

Understanding of the lateral variations of the different granulometric facies is currently insufficiently understood to assess the variations of total porosity and specific yield within the aquifer volume; this has a direct impact on the uncertainty of the amount of the brine resources that may be recoverable.

The influence of surface evaporation and/or fresh water contamination from Diablillos River in the variations of grade concentration in depth is not sufficiently understood to establish the impact on the volume definition of Aquifers I and II.

8.0 DEPOSIT TYPES

Lithium can be concentrated in two major deposit types: hard rock mineral deposits in pegmatite (spodumene) and brine deposits. Hard rock lithium deposits generally occur as pegmatite formations due to the high solubility of lithium in late stage crystallization of cooling alkaline magmas.

Brine deposits form in evaporite-terrigenous depositional environments where brines have generally obtained lithium from geothermal waters (Garrett, 2004). Most active and/or recent terrigenous-evaporite-depositional environment brines contain lithium in small concentrations, whereas only three brine deposits were commercially exploited as of 2003: Salar de Atacama, Chile; Salar del Hombre Muerto, Argentina; Clayton Valley, USA (Garrett, 2004). These three deposits have the following features in common:

- Brines are obtained from the porous strata under the surface of the playas
- Sedimentation and evaporation occurred within enclosed basins that generally form a regional topographic low with restricted outflow
- Proximity to lithium-containing hot springs (some extinct)
- Proximity to past volcanic activity
- Comparatively high levels of lithium all above 160 ppm Li
- High altitude areas (>1,200 masl)
- Salt flats greater than 40 km^2
- Low precipitation rates and arid climates
- Extreme weather conditions, including high wind conditions and daily/seasonal temperature variation

The variation in lithium grade exhibited by these brine deposits varies from approximately 100 ppm to 4,000 ppm at Clayton Valley and Atacama respectively. The average production grade at Atacama, the highest grade known deposit to date, is approximately 1,500 ppm (Garrett, 2004; Kunasz, 1994; Coad, 1984). Salar del Hombre Muerto has an average lithium grade of 521 ppm, varying between 190 ppm and 900 ppm (Garrett, 2004).

The Salar de Diablillos is a detrital salar. Substantial sediments were deposited from the southeast and north, and cover most of the salar. According to the log descriptions of the shallow pits and reverse circulation drilling undertaken by Rodinia, the upper 3–

4 m of the salar consists of calcareous sediments and clays, and at depth, of sands, gravels, and clay. The maximum depth was reached by DRC-11, which intercepted the metamorphic basement (gneiss) at 240 m and then continued into the basement to a final drill hole depth of 264.0 m.

9.0 MINERALIZATION

Mineralization of interest on the Project consists of lithium- and potassium-rich brines. Lithium and other elements are interpreted to be leached from volcanic rocks primarily by hydrothermal solutions emanating from deep-seated faults. This may also involve circulation of meteoric waters within fault systems.

Based on the drill information, the brines within the Project area are interpreted to cover an area of about 60 km^2, with an approximate length of nine kilometres, width of six kilometres, and extend from depths of about 0.5 m to at least 264 m. Within the area drilled brines show good continuity of the between drill holes, but host lithologies and in particular the total porosity of the host have not been confirmed at the currently drill hole spacing. Due to the relatively early stage of this exploration project and the limited amount of available data, there is not an abundance of detailed mineralogical information which is available over the entire salar, and therefore more mineralogical work is required in order to refine the overall understanding of the mineralogy of the area.

Keast (2010) notes that:

"Mineralization of interest on the property consists of lithium and potassium rich subsurface brines. Lithium and other elements are leached from volcanic rocks primarily by hydrothermal solutions emanating from deep-seated faults. This may also involve circulation of meteoric waters within fault systems. The length, width, depth, and continuity of lithium-bearing brines are uncertain at this early stage of exploration. However, sampling described within this report indicates brines with elevated contents of lithium, potassium, and boron in solution, apparently distributed over a large portion of the salar."

A third-party consultant report completed by Tru Group Inc., dated November 3, 2010 and entitled "Scoping of the Lithium Project at Salar de Diablillos, Argentina" did provide additional mineralogical information describing the salar, based solely on historical reports which begin referencing the salar in 1907, (Alonso,1999). From the Tru Group Inc. report it is stated that:

"All the available literature on the Salar de Diablillos is in reference to the occurrence of boron", with mention of lithium in sediments. This geological evidence also states that "There are no saline crust or halite layers on the surface which is favourable to borate extraction."

The report further explains that:

"The genetic aspect shows a direct relation between borates and extinguished hydrothermal sources located in the borders and the interior of the Salar. However, no work has been done on the brines. Although, the fundamental publications of Nicolli, Poppi and Ygarzabal mention the Salar de Diablillos, no chemical analyses are provided."

Further brine chemical information referenced within the Tru Group Inc. report states:

"Several phases of shallow sampling and brine collection have revealed substantial lithium and potassium concentrations in the central part of the salar, with the highest values extending along a SE-NW axis and diminishing towards the northeast and southwest."

Due limited information currently available on bulk brine chemistry of each aquifer, and one reference to traces of lithium in the sediments that host the brines it is recommended that:

- Using the available samples obtained from the exploration program, the brine composition needs to be evaluated in detail to assess the properties of the brine and quantify the chemical variation of the various aquifers, at various depths
- Using the retained RC logging samples, a mineralogical evaluation of the chips be conducted to quantify the lithium mineralogy
- Update the model of the aquifers using the information obtained from the above recommendation
- Begin a program for laboratory testing of the brine samples from each aquifer to validate the aquifer model and determine the chemistry of each,

10.0 EXPLORATION

Previous exploration at the Salar de Diablillos was limited to informal small-scale ulexite mining by local miners, and the exploration of the top 3-5 m of the salar that was conducted by Borax Argentina S.A.

Rodinia began exploring in 2009 during a due diligence investigation that was conducted prior to Project purchase. The due diligence campaign was primarily designed to as a preliminary evaluation of the lithium potential of the mineral leases that were to be acquired.

To date, the following work program has been completed:

- Surface geochemistry: Brine samples were collected from 140 shallow auger wells regularly distributed on the surface of salar at 300 by 300 metres spacing.
- Borehole geophysical logging: Total porosity and density from neutron-neutron logs were obtained for six RC holes.
- Gravity survey: Ten lines were surveyed to model basement depth.
- RC drilling program: RC drilling was conducted to develop vertical profiles of brine chemistry and to provide geological and hydrogeological data at depth in the salar.
- Flow monitoring program: Brine flow was monitored during drilling and monitoring is currently continued.

A pumping test program has been designed and is planned to be implemented later in 2011.

Auger and RC drilling campaigns are described in Section 11.0.

10.1 Grids and Surveys

Rodolfo Moreno, an accredited surveyor from Salta, was contracted in 2010 by Rodinia to survey RC collars and to provide topographic contours for the property. The survey points were established by differential GPS. Location coordinates are provided using the Universal Transverse Mercator (UTM) system, WGS84 Zone 19 South.

Topographic contours have 1 m accuracy and cover the full extent of the salar surface and the majority of the Project mineral tenure.

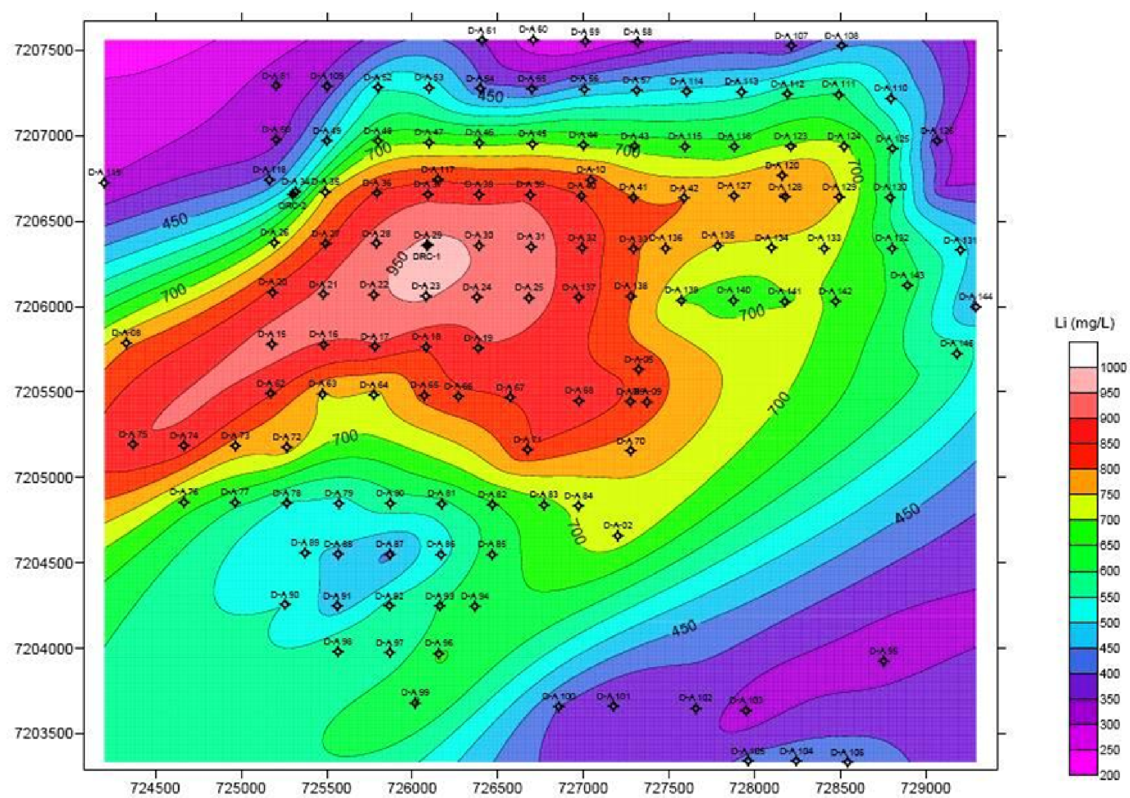
10.2 Geological Logging

Geological logging consistent with the industry standard is only available only for eight of the auger drill holes. Where auger drill hole collars were altered, or drill holes were terminated early due to the presence of a caliche layer, this information is also available. RC holes have a complete logging procedure that involves different aspects such as, primary and secondary lithology and granulometric facies, and other observations related to brine flow.

10.3 Geochemistry

Chemical analyses from a regularly-spaced grid of auger holes indicate a concentric gradation of lithium grade decreasing from the salar nucleus outwards. Figure 10-1 shows lithium concentration greater than 800 mg/L in the salar nucleus.

Figure 10-1: Interpolation Map of Lithium Concentrations from Auger Samples



10.4 Geophysical Surveys

10.4.1 Borehole Geophysical Logging

Wellfield Services Ltda (Wellfield). conducted the borehole geophysical characterization for six RC drill holes for Rodinia.

Down-the-hole geophysical logging is available for drill holes DRC-07, DRC-08R, DRC-11, DRC-13, DRC-14 and DRC-16 (Figure 10-2). The figure is included because it gives an indication of the relative porosity and density changes that may be expected with drill hole depth.

Average total resistivity from the neutron–neutron logs indicates minimum and maximum values of 29% and 47% for total porosity. Density values ranged between 1.9 g/cm^3 and 2.7 g/cm^3 for the brine.

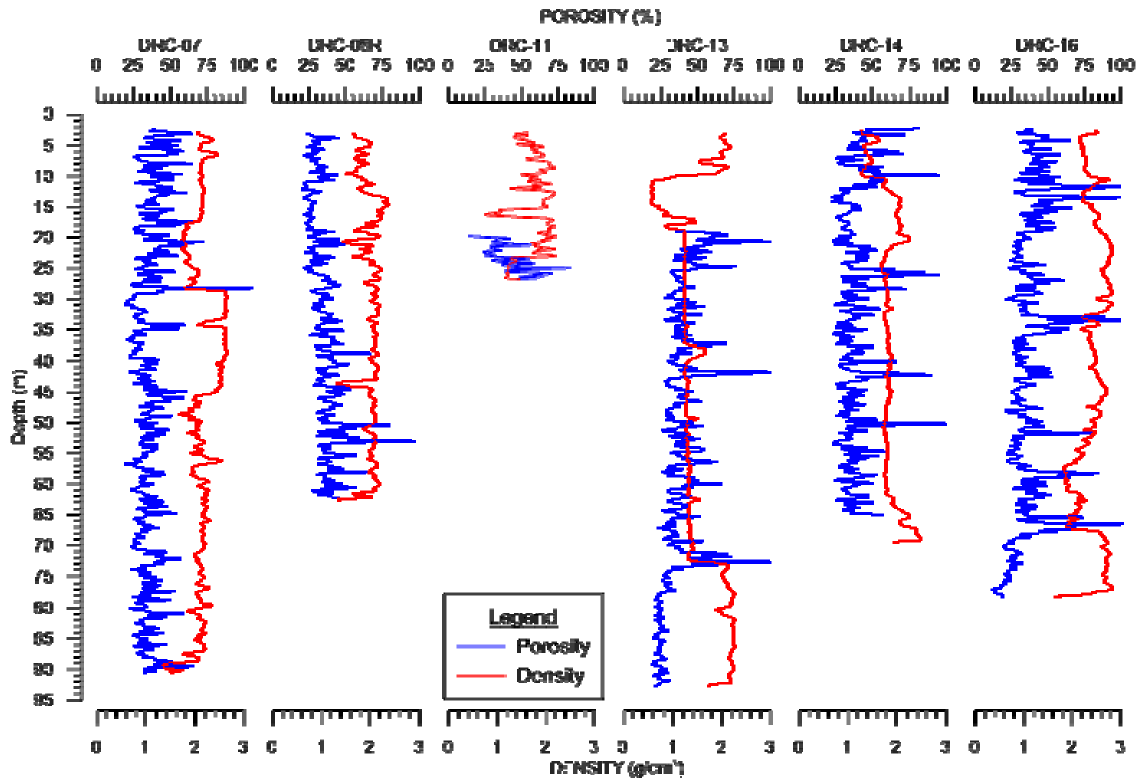
The neutron logging tool records neutron absorption which can be correlated to the hydrogen content in soil. Factors which can affect the log, and which require the instrument to be appropriately calibrated, include hole diameter, fluid characteristics, presence of chlorides or salt water, presence of hydrogen atoms in the lithologies downhole (for example in clays, gypsum). No information on the post-processing corrections applied to the logging data was available to AMEC at the effective date of this Report. AMEC notes that there were partial collapses of the walls of some of the drill holes noted during the geophysical logging, and therefore drill hole diameters may not be accurate.

As a result for the purposes of this Report, these geophysical logs can only be used in AMEC's opinion to assess relative changes in the total porosity and density along the drill holes because the calibration documentation that typically accompanies such logging was not available to AMEC. AMEC recommends that the appropriate calibration documentation be obtained from Wellfield, the geophysical consultant used for the logging.

The depth at which the porosity and density changes occurred in the geophysical logs was considered by AMEC when interpreting depth of the base of Aquifers I and II.

AMEC notes that although DRC-11 is the deepest drill hole currently in the Project area, geophysical logging was not available beyond 24 m due to operational issues.

Figure 10-2: Porosity and Density Logs



10.4.2 Gravity Survey

Rodinia contracted Quantec Geoscience Argentina S.A. (Quantec Geoscience) to conduct a gravity survey at Salar de Diablillos with the objective of determining the relative depth-distribution of the salar, and to provide data for 3D model depth estimates of the salar.

The gravity survey was carried out through nine east-west gravity profiles and one north-south tie-line. The nominal line separation was 1,000 m or 1,500 m. Down-line survey stations were located at 250 m intervals.

For the modeling process, data were interpreted using the free air gravity reduction method. Since density measurements from the survey site were unavailable at the time of the surveying and modelling, a value of 1.7 g/cm^3 was assumed for the sandy overburden, whereas 2.6 g/cm^3 was found to produce the best data fit over the hills around the salar.

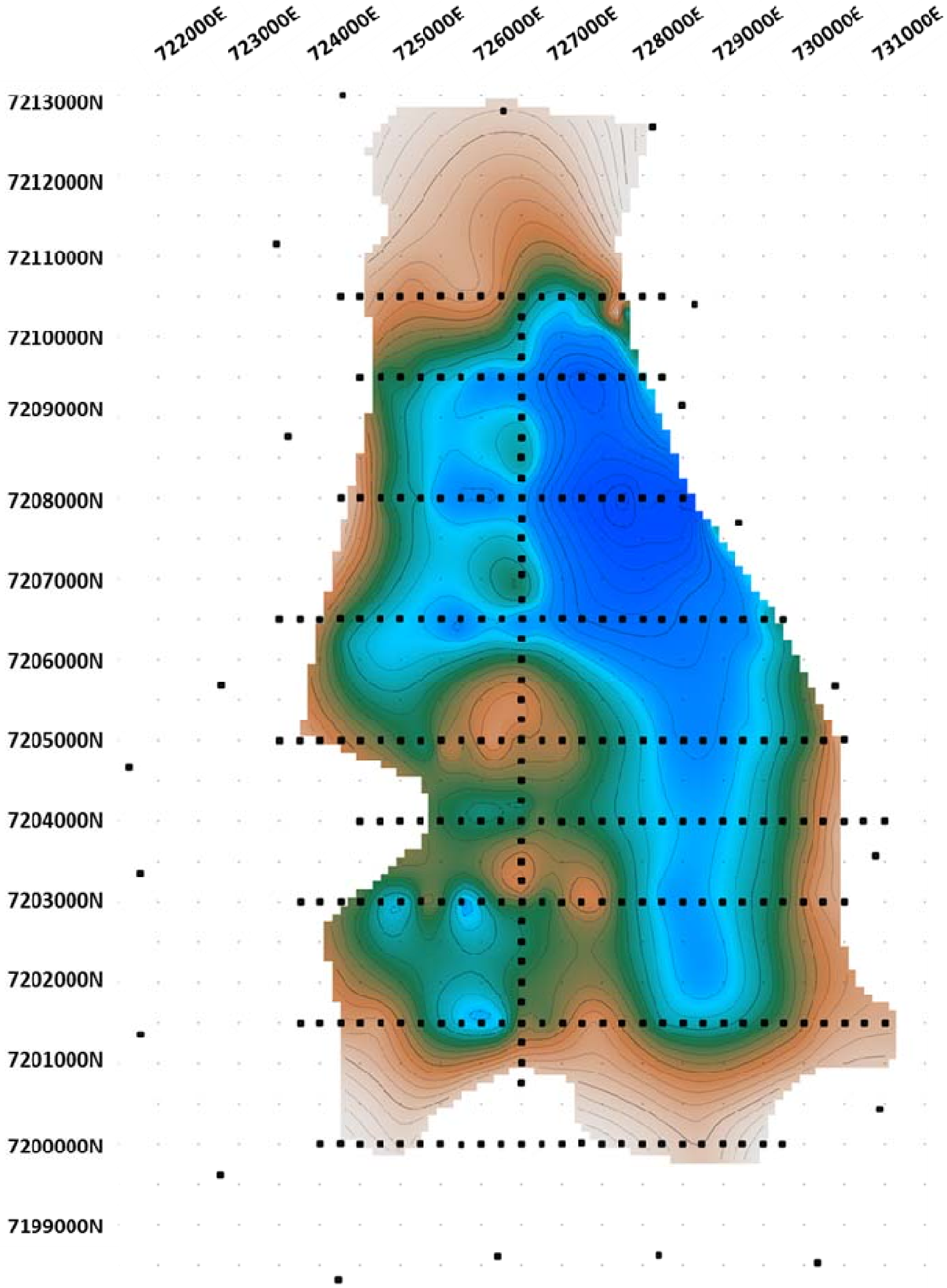
In order to achieve a better global fit, a first-order trend correction of the northern tie-lines was introduced through the addition of an underlying wedge of 2.9 g/cm^3.

These different gravimetrical compensations could represent a more complex lithological sequence, like for example, the presence of alluvial fans with possible different densities that cover the aquifers at the northern and southern of the salar limits.

The gravity model shows a larger “gravity low” or depression elongated in the north-south direction in the northwest portion of the salar basin (Figure 10-3); another “gravity low” can be found towards the southeast. These gravity lows are consistent with depths in which brine flow was recorded at RC holes and support the continuity of the aquifers across the salar.

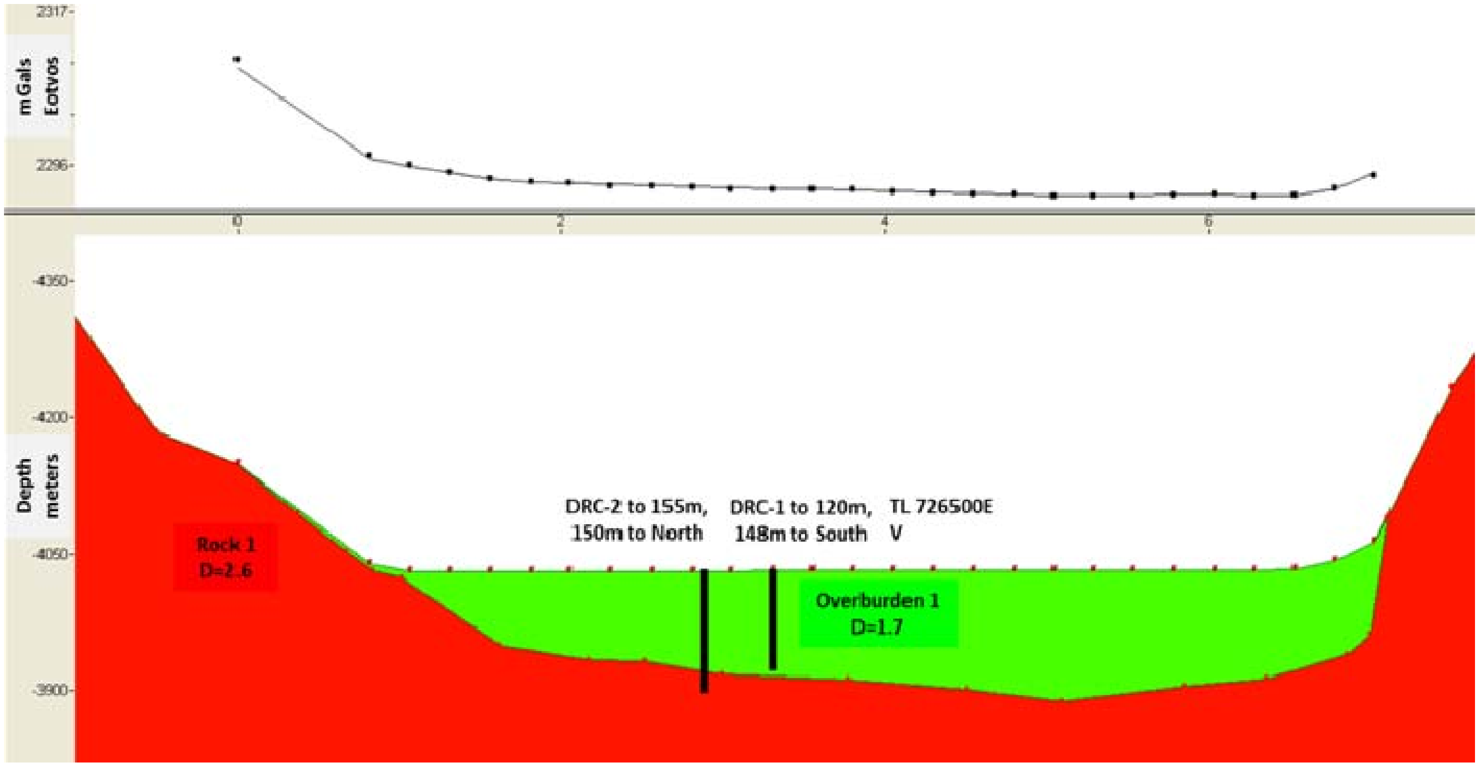
Figure 10-4 shows an example of a cross section of the gravimetric model provided by Quantec Geoscience (2010).

Figure 10-3: Plan View of Survey Stations and Modeled Topography of the Salar Basement (from Quantec Geoscience, 2010)



Cooler colours indicate lower elevations while warmer colours indicate higher elevations

Figure 10-4: Gravity Model Section 7,206,500 N



10.5 Bulk Density

Bulk density for the Project is discussed in Section 12.0.

10.6 Hydrogeology

A surface water monitoring program was initiated in late 2010 to record the flow and chemistry of surface water in the Salar de Diablillos. Measurements were taken for each 6 m interval in the RC drilling and auger holes for pH, conductivity and temperature.

Flow rates in RC drilling at a 6 m support were quantified by Rodinia's geologists through the record of the time of filling of 18 litre-buckets with brine from the cyclone; these measurements were taken in seconds and, then recalculated to obtain the final litres per minute flow rate figure.

10.7 Exploration Potential

The aquifer volume is still open at depth, since only two drill holes intercepted the basement. Brine was recovered to the bottom of all drill holes except these two RC drill holes.

The gravity survey suggests an extension of the aquifer volume further north and south.

The aquifer volume is still open laterally and at depth, and there is potential to extend the aquifer volume through additional drilling.

10.8 Comment on Section 10.0

In AMEC's opinion, the exploration programs completed to date are appropriate to support estimation of Inferred brine resources.

Additional geophysical surveys, such as seismic refraction, should be considered as a tool to provide better definition of the basement topography.

Borehole geophysical surveys should be completed for all drill holes and should be incorporated as standard procedure in future drilling campaigns. Calibrations of such down-hole surveys should be supplied with the survey data.

A pumping test and monitoring program is required to estimate hydraulic parameters specific to Salar de Diablillos. Rodinia plans to commence such a program during 2011.

11.0 DRILLING

Rodinia has completed two drilling campaigns on the Project since 2009 comprising 140 auger drill and 16 RC holes. A total of 2,265.4 m were drilled on the Project during the last 20 months (Table 11-1). Figure 11-1 shows the auger and RC drill hole locations.

Table 11-1: Drilling Summary

Company	Period	Drill Hole Prefix	Total Holes	Total (m)	Length		Average (m)	Drilling Type
					Min (m)	Max (m)		
Rodinia	2009–2010	D-A-02 to 145	140	492.45	2.3	4.3	3.8	Auger
Rodinia	2010–2011	DRC-01-16	16	1,773	48	264	110.8	RC
Total			**156**	**2,265.4**				

The auger holes were drilled by Rodinia's own personnel. A gas-powered auger was used to drill the 2–3 m deep auger holes. A six-inch diameter auger blade was used for the first two metres of drilling and then downsized to a four-inch diameter auger blade for the final metre of drilling. A four-inch diameter plastic casing (Figure 11-2), perforated at the lower end was inserted into the hole to minimize caving of the hole prior to the water sampling.

The auger hole locations were selected on an approximately regular 300 m x 300 m grid spacing in the nucleus of the salar. Minor displacements from the theoretical grid location result from drilling difficulties caused by the presence of caliche layers. The objective of the auger campaign was to map lithium concentrations and brine chemistry near the surface, as well as subsurface water levels and surface geology.

Compañia Argentina de Perforaciones S.A. (CAPSA), an independent drill contractor, was contracted to drill the RC holes. . CAPSA used a T4W Ingersoll Rand rig with 8", 6", and 4½" drill pipe and tri-cone bits.

RC holes were drilled on an irregular and wider grid of up to 2.5 x 2.5 km, with the objective of defining the margins of the salar and the depth extent of the brines. RC locations were selected to target the deeper portions of the salar based on the gravity survey results when made available.

Figure 11-1: Auger (green dots) and RC drilling (red dots) Distribution in Diablillos Salar.

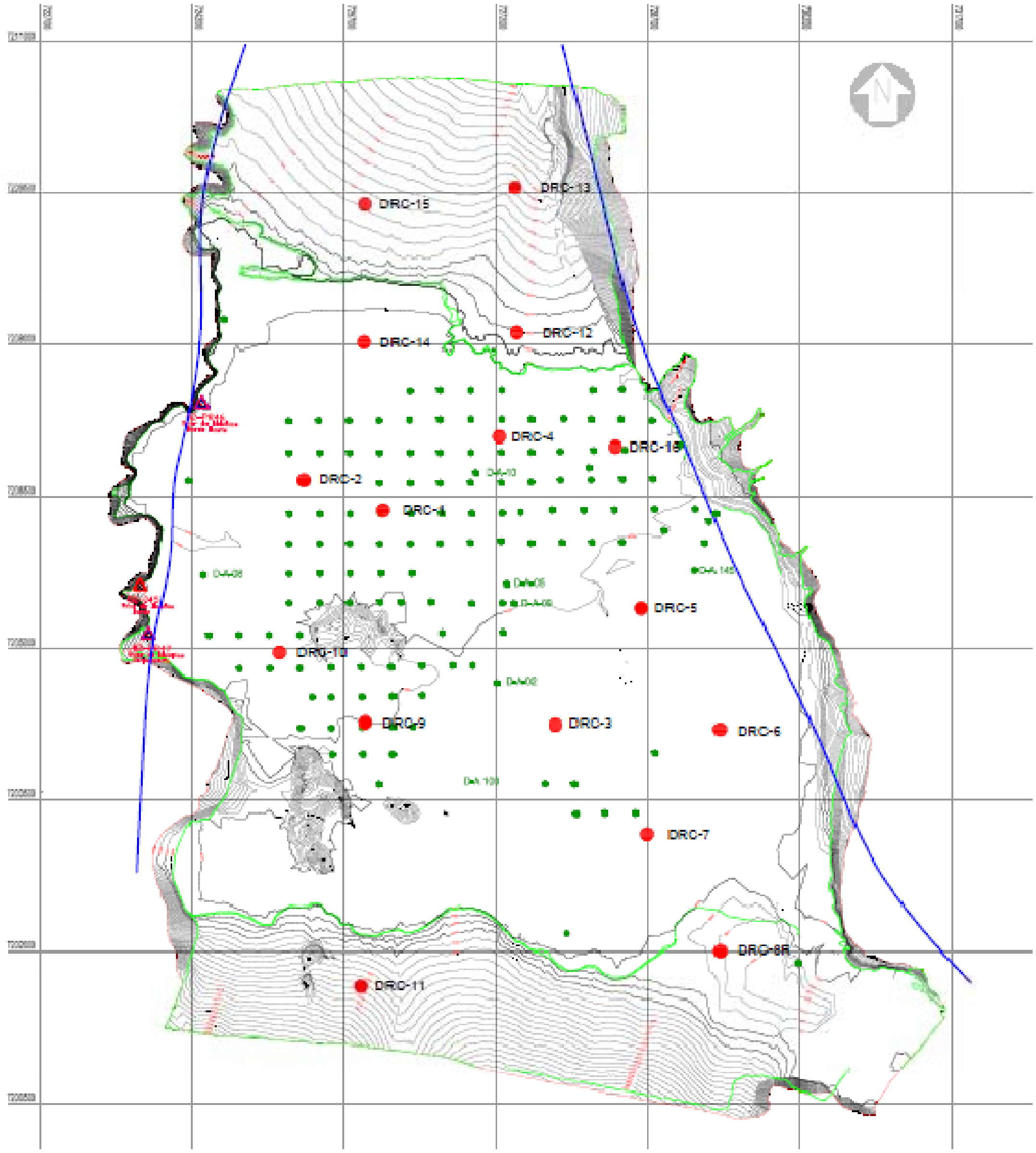


Figure 11-2: Auger Hole DA-03 with Plastic Casing (from Keast, 2010)

The holes were located using a non-differential GPS unit, while RC holes were surveyed by Rodolfo Moreno, an accredited surveyor from Salta.

All drill holes are vertical; no down-the-hole deviations from the -90° dip were measured. No down-hole surveys were performed. Due to the shallow length of the drill holes and the fact that all drill holes are vertical, no significant deviations are expected.

Table 11-2 shows a list of aquifer intercepts.

Table 11-2: Aquifer Intercept Table

Drill Hole ID	X	Y	Z	Total Depth	Aquifer 1		Aquifer 2		Aquifer 3		Total thickness of Aquifer
	Co-ordinate	Co-ordinate	Co-ordinate	(m)	From (m)	to (m)	From (m)	to (m)	From (m)	to (m)	(m)
DRC-1	726084	7206359	4037	120	0	12	12	66	66	120	54
DRC-2	725298	7206655	4038	150	0	12	12	60	60	150	90
DRC-3	727740	7204214	4047	108	0	18	18	48	48	108	60
DRC-4	727211	7207068	4039	114	0	12	12	60	60	114	54
DRC-5	728606	7205378	4039	48	0	12	12	42	42	48	6
DRC-6	729408	7204183	4039	81	0	18	18	48	48	81	33
DRC-7	728180	7203155	4039	100.5	—	—	18	48	48	100.5	52.5
DRC-8R	729165	7202008	4043	70.5	—	—	—	—	70	70.5	0.5
DRC-9	725902	7204243	4039	70.5	0	6	6	36	36	70.5	34.5
DRC-10	725062	7204939	4038	60	0	12	12	49.5	-1	-1	0
DRC-11	725838	7201651	4060	264	—	—	—	—	48	264	216
DRC-12	727412	7208115	4042	70.5	—	—	40.5	66	66	70.5	4.5
DRC-13	727377	7209553	4058	163.5	—	—	54	84	84	163.5	79.5
DRC-14	725887	7208028	4038	124.5	0	18	18	54	54	124.5	70.5
DRC-15	725903	7209408	4053	121.5	—	—	42	90	90	121.5	31.5
DRC-16	728387	7207023	4038	106.5	0	30	30	60	60	106.5	46.5

11.1 Comment on Section 11.0

In the opinion of AMEC, the quantity and quality of the lithological, hydrogeological, collar and downhole survey data collected in the exploration programs are sufficient to support Inferred Brine Resource estimation and reporting.

The QPs note that:

- Auger and RC drilling and logging used industry standard practices for exploration programs for lithium brines
- Collar surveys have accuracy acceptable for Inferred brine resources
- No down-hole survey deviations have been measured for RC holes; due to the shallow length of the drill holes, significant deviations are not expected. AMEC recommends that as best practice, in future campaigns down-hole surveys should be completed, in particular, where the drill-hole length exceeds 100 m
- Recovery logs are acceptable; more complete logs will be required to support any future mining studies
- Additional drill holes are required to delimit the deposit laterally. Infill drilling is required to model the lateral porosity variations, due to facies changes within the aquifers. Specific yield, used to estimate the quantity of brine that is recoverable, and its spatial variations across the deposit is yet to be established.
- Additional drill holes are likely to be required to permit high-quality logging; a sonic drill is recommended to obtain a better recovery rate.

12.0 SAMPLING METHOD AND APPROACH

Drill samples were collected under the supervision of a field geologist.

Sample containers and sampling equipment were rinsed prior to collecting the samples; bottles were rinsed at least three times with brine, then filled, labelled and sealed for transportation to the laboratories.

12.1 Auger Sampling

The auger sampling program was carried out between July–October 2009. Sampling was undertaken by Rodinia employees under the supervision of Todd Keast and William Randall. The auger holes were allowed to fill with brine for at least an hour from the upper aquifer level, and sediment to settle out, before a sample was taken.

The brine samples from the first eight auger drill holes were collected by Todd Keast during 2010, stored in tamper-proof containers, and marked with a unique sample number. The remaining 132 samples were collected by Rodinia personnel using the same procedure stated by Keast (2010). Two individual samples of 500 mL (A and B series) were collected from each site. One complete set of samples (Series A) was shipped to the ALS Laboratory Group Environmental Division (ALS), in Fort Collins Colorado, USA. The other set (Series B) was stored at Rodinia facilities in Salta, Argentina, as backup for future analysis.

12.2 Reverse Circulation Sampling

RC drill sampling was more complex. A procedure established by Rodinia and TRU Group at Clayton Valley was implemented at Diablillos. The procedure establishes that brine and sediments samples are air lifted when possible. Injection of drilling fluids (water) is allowed only in the upper part of the hole until before the water table is intercepted; after that, only air was used so as to avoid dilution or contamination of the brines.

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

During AMEC's December 2010 site visit, AMEC reviewed the site surface geology, as well as the drilling, drill-hole surveying, sampling, sample handling and procedures. Since at the time of the visit the RC drilling campaign was ongoing, not only the written procedures for previous campaign were reviewed, but also the actual sample handling and drilling for the for the latest two drill holes (RC-15 and RC-16) of the campaign in progress.

Drill holes 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 drill holes were then allowed to fill again for two hours from the aquifer below, and then a sampling device was lowered into the hole to collect the brine samples.

The unconsolidated material penetrated by the drill was recorded for each drill hole, and photographed.

For each RC drill hole, logs were completed including: lithology (primary and secondary), flow (measured as seconds per 18 litres), temperature, pH, specific gravity, electrical conductivity, decantation time, total dissolved solids (TDS) and operational conditions, among other observations such as brine colouration, and absence of flow. Brine and solids recovery were recorded.

Rock chips/sediments and brine were collected every 6 m, or less when a noticeable change in the granulometry from visual inspection or consolidation occurred. However, if collected more frequently, the samples were combined into a 6 m representative sample after geological logging. Solid samples were stored in plastic trays as shown in Figure 12-1.

Figure 12-1: Rock Chips/Sediments Samples Stores in the Warehouse in Salta, Argentina.

Solids and liquid fractions were separated at the cyclone; no sieving was involved (Figure 12-2). .

Figure 12-2: Cyclones at RC Drilling Platform

The liquid from the cyclone was allowed to stand for several minutes to let the small amount of sediments to settle out. The collected brine samples from the RC holes were also assayed at the Environmental Division of ALS Laboratory Group, in Fort Collins Colorado, USA

12.3 Sample Security

Sample security during the drilling program relied upon the remote nature of the site and the fact that samples were locked at the warehouse at the camp and Salta.

Brine samples were stored in tamper-proof containers, which could not be opened without destroying the containers. Security seals have not been used at this point in the exploration campaign.

The B series samples were collected for future analysis and as a backup samples in case A series samples become damaged during transport. The B series of samples were stored at Rodinia storage facilities in Salta (Figure 12-3).

Figure 12-3: Brine Sample Containers Stored at Rodinia´s Warehouse

Solid rejects were bagged and labelled. At the time of preparation of this Report they were exposed to the open-air. AMEC recommends that they be stored at Rodinia's warehouse at the Diablillos camp as soon as practicable (Figure 12-4).

In AMEC's opinion, no sample-security factors were identified during the sampling process that would materially impact the accuracy and reliability of the results.

12.4 Density

Density measurements were taken in the field by Rodinia personnel using a hand-held densometer instrument. No information was available to AMEC on the procedures and quality assurance and quality control (QA/QC) measures used in this program.

Density measurements were also taken by geophysical logging. Until calibration data are available (refer to Section 10.4.1), AMEC considers that the density data are indicative only.

Figure 12-4: Rock Chips Rejects Waiting for Storage at Rodinia's Warehouse

12.5 Comment on Section 12.0

In AMEC's opinion, the sampling procedure, samples collected, and methods employed and approach were thorough, and provide sufficient information to support brine resource estimation:

- All collection and bagging of solid and brine samples were carried out by Rodinia personnel.
- Sample collection and handling of cuttings was undertaken in accordance with industry standard practices, with procedures to limit potential sample losses and sampling biases
- No factors were identified within the drilling programs that could affect the reliability of the sample data used for brine resource estimation.
- Data are collected following industry-standard sampling protocols for brine deposits
- There are no drilling or recovery factors identified 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 gross brine geochemistry
- The size of the sampled areas is representative of the distribution and orientation of the brines.

Data validation of the drilling and sampling program is discussed in Section 13.0.

In the opinion of the QPs, the sampling methods are acceptable, meet industry-standard practice, and are adequate for Inferred brine resource estimation purposes.

AMEC recommends that:

- A detailed granulometric analysis should be undertaken on the existing samples and for future drilling campaigns
- A smaller set of sample intervals at various interval spacings (1 m, 2 m, and 3 m, for example) should be tested in a few selected drill holes and matched with corresponding 6 m sample intervals from the same drill holes to demonstrate that the 6 m sample interval provides sufficient resolution for the modelling of the geological and hydrogeological parameters
- Documentation be collated and reviewed that can be used to support use of the density and porosity data as collected
- On selected drill holes, the down-hole geophysical log should be duplicated to provide a measure of QA/QC on the logging performed.

13.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

13.1 Overview

One set of 500 mL brine samples, corresponding to 6 m drill hole intervals or to the depth of an auger hole, was packaged and sent to ALS, in Fort Collins, Colorado, USA. ALS is an ISO 9001:2000-certified laboratory.

Samples were submitted to the laboratory with their drill hole identification depth. At ALS, a correlative number was provided. Because of this, control samples inserted by Rodinia as part of their QA/QC program were not blind to the analytical laboratory. ALS sample receipt records indicate the samples arrived in good condition with no apparent damage, except for some occasional leaks.

Based on the reports provided by ALS, samples were received at ambient temperature and were unpreserved. Prior to analysis, samples were filtered, but not digested.

Samples were assayed for barium, boron, calcium, iron, lithium, magnesium, potassium, silicon, silicon as SiO_2, sodium, and strontium using trace inductively-coupled plasma (ICP) method 6010B and to SOP 834, Rev. 7. Details of the elements and detection limits are summarized in Table 13-1.

Table 13-1: Details of Assay Methods used by ALS

Sample Matrix:	WATER	**Prep Batch:**	IP100726-10	**Sample Aliquot:**	5 ml
% Moisture:	N/A	**QCBatchID:**	IP100726-10-1	**Final Volume:**	5 ml
Date Collected:	20-Jul-10	**Run ID:**	IT100726-1A6	**Result Units:**	MG/L
Date Extracted:	26-Jul-10	**Cleanup:**	NONE	**Clean DF:**	1
Date Analyzed:	26-Jul-10	**Basis:**	As Received		
Prep Method:	SW3005 Rev A	**File Name:**	T100726A		

Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
BARIUM	100	10	10	U	
BORON	100	570	10		
CALCIUM	100	1100	100		
IRON	100	10	10	U	
LITHIUM	1000	810	10		
MAGNESIUM	100	2800	100		
POTASSIUM	1000	8800	1000		
SILICON	100	13	4.6		
SILICON AS SiO2	100	28	9.8		
SODIUM	1000	78000	1000		
STRONTIUM	100	21	1		

13.2 Comments on Section 13.0

AMEC is of the opinion that the sample preparation and analytical methods used by ALS are appropriate to the Project geochemistry.

14.0 DATA VERIFICATION

Dr. Rustin Cabrera, an employee of AMEC at the time, visited site between December 15-18, 2010, and contributed information to the QPs on the drilling program then in progress.

During the site visit, AMEC verified the information and data supplied by Rodinia.

AMEC reviewed the historical data, and verified that the information was presented accurately as it exists in those files and reports to the best of its ability.

AMEC verified the location of the drill collars of 30% of the holes using a hand-held GPS unit, and did not observe significant differences compared to the location recorded in the database. During the site visit, AMEC also verified the drilling, logging and sampling procedures, and found them acceptable for this stage of Project development.

AMEC also examined the assay certificates for approximately 50% of the samples and compared them with the corresponding database entries. No deviations were identified.

Verification of the geology of the Property, and visual verification of the mineralization were accomplished via field visits.

14.1 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 was not certified. QA/QC samples are typically blind-inserted into the sample stream and submitted to the analytical laboratories. However, assay certificates from ALS show that this was not the case, as samples were submitted to the laboratory with the drill interval marked for drill samples, and no interval if the samples were QA/QC samples.

14.1.1 Blanks

Suitable blanks should have grades below the analytical detection limit because these blanks provide information about possible contamination during sampling and assaying. Rodinia used a barren commercial mineral water as blank material. Blanks were inserted by Rodinia personnel at a rate of one per 34 m on average.

Lithium, B and K assay values of blank samples were plotted against the assay values corresponding to the previous sample. A safe line was established at three times the laboratory detection limit level. Figure 14-1 shows that low-level Li contamination appears to exist. This may be the result of an unrealistically low detection limit stated by the laboratory, or by the selection of an unsuitable blank material, or be due to actual contamination from the preceding sample. AMEC recommends that analytical duplicates be inserted in future campaigns in order to determine the practical detection limit. In addition, the blank material should be properly assessed prior to start using it as a blank. AMEC notes that only one sample out of 16 (6.25%) reported a possible high contamination value, which is considered to be acceptable. Potassium and boron analyses do not show contamination (Figure 14-2 and Figure 14-3).

Figure 14-1: Blank versus Previous Sample Plot for Li

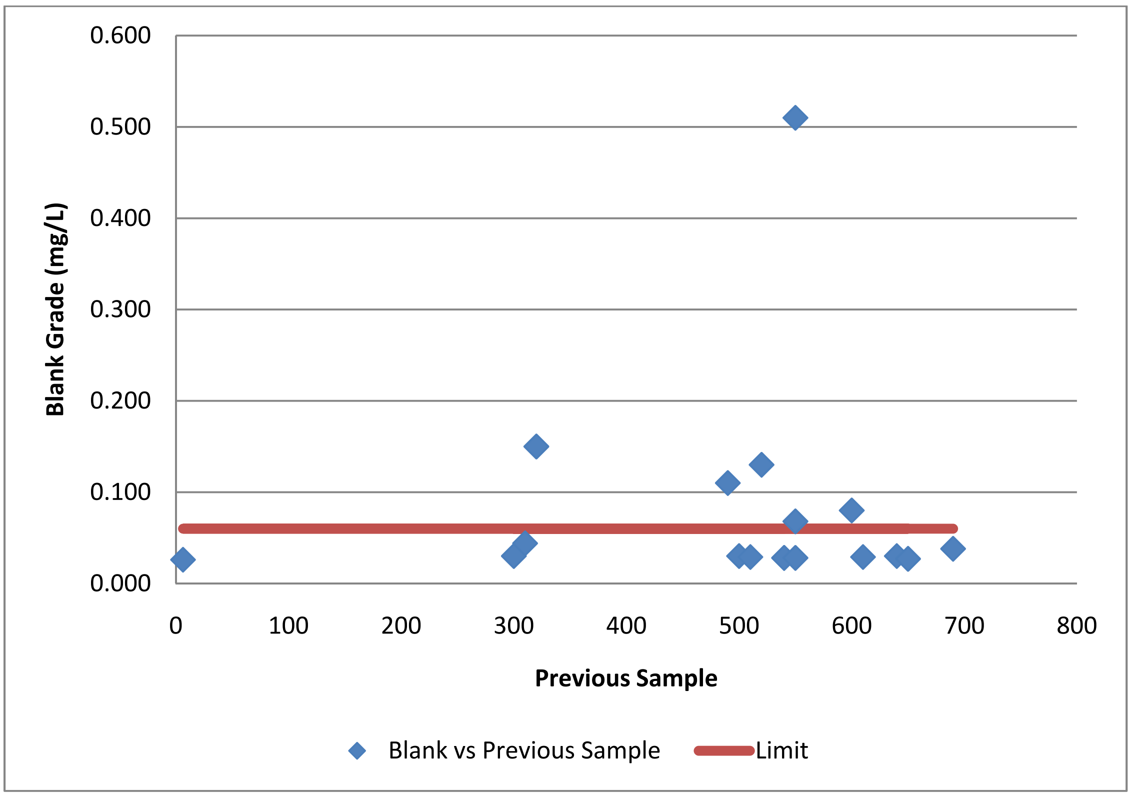


Figure 14-2: Blank versus Previous Sample Plot for K

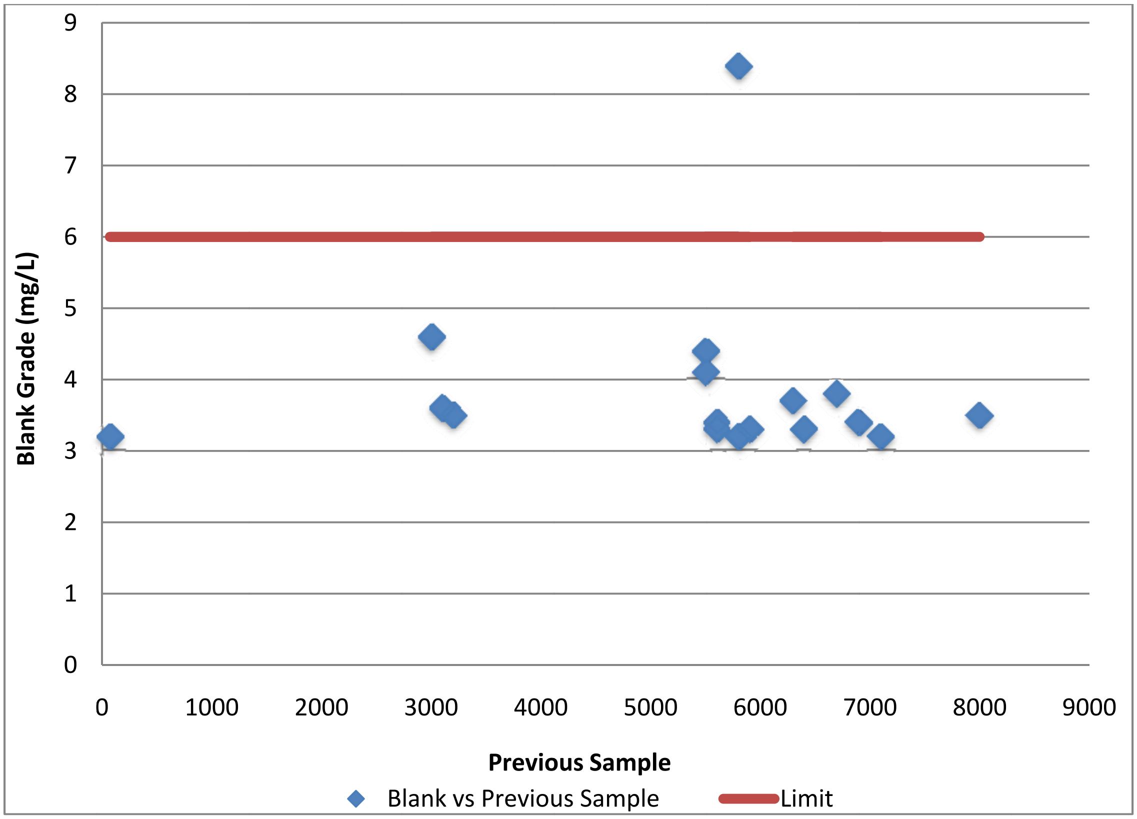
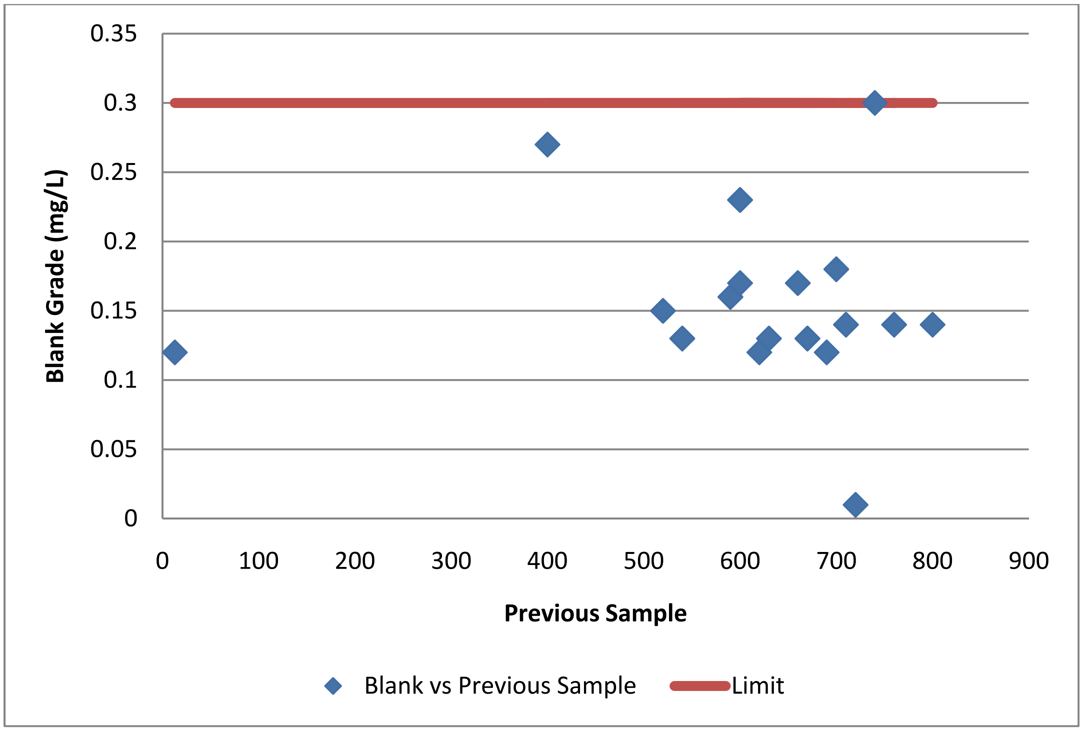


Figure 14-3: Blank versus Previous Sample Plot for B



14.1.2 Standard Reference Materials

Rodinia prepared a sample to be used as a reference material. This material, named "New Standard", was subject to a round robin using three certified laboratories: ALS, SGS in Lakefield, Canada, and Alex Stewart in Mendoza, Argentina. SGS Laboratory in Lakefield is an ISO 9001:2000-certified laboratory. Alex Stewart branch in Mendoza is an ISO 9001:2000-certified laboratory. The best values (BVs) for Li, K and B were calculated as the averages of the three laboratories, and are presented in Table 14-1, together with the SRM statistics (averages and bias values).

Table 14-1: Best Values and Relevant Values for New Standard

Element	BV (mL/L)	Average (mL/L)	Count	Bias (%)
Li	251	255.71	7	1.9
K	2253	2171.43	7	-3.6
B	560	552.86	7	-1.3

AMEC reviewed the performance of SRM "New Standard". As shown in Table 13-1 and in Figure 14-4, Figure 14-5 and Figure 14-6, ALS obtained a good analytical accuracy for Li, K and B. No outliers were identified.

Figure 14-4: Lithium Performance of SRM "New Standard"

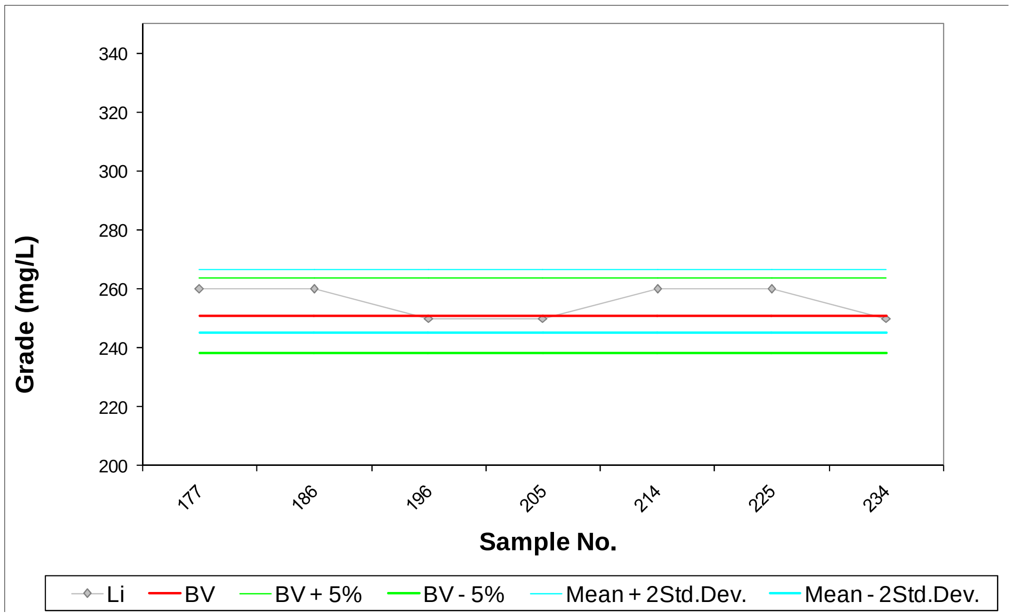


Figure 14-5: Potassium Performance of SRM "New Standard"

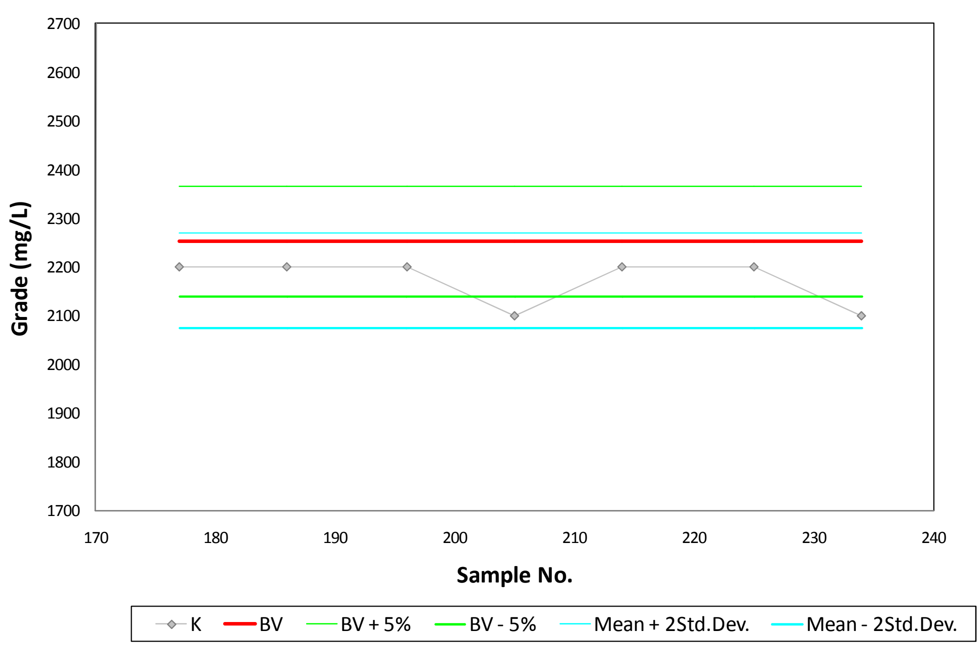
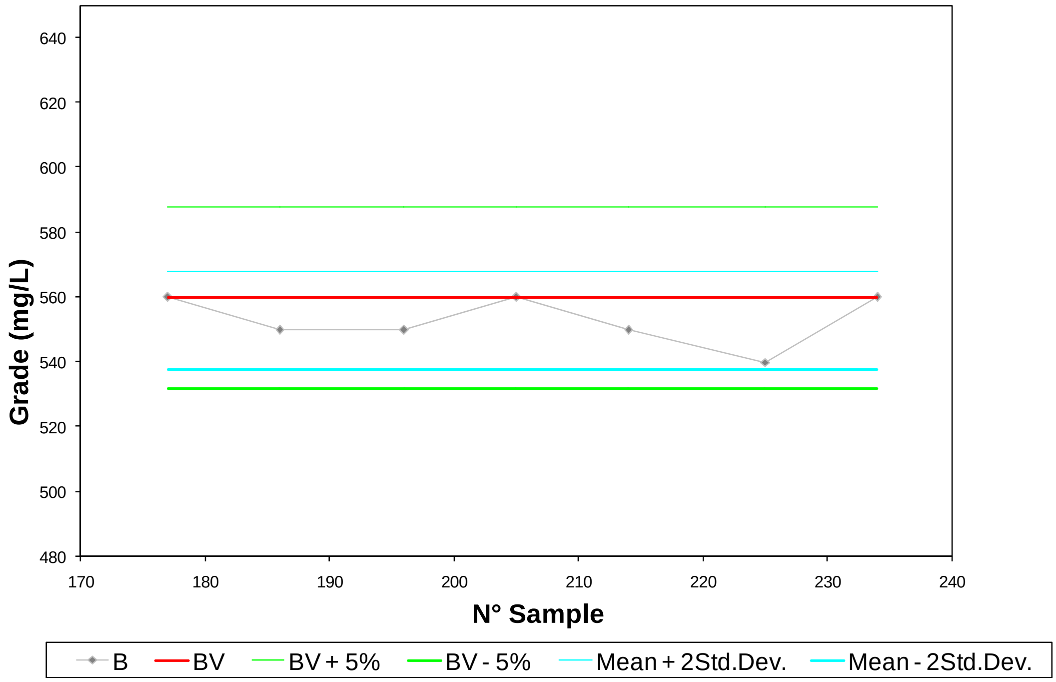


Figure 14-6: Boron Performance of SRM "New Standard"



In addition to this SRM, a commercial, certified SRM was submitted on five occasions (Rustin Cabrera, pers comm.). The database provided to AMEC does not differentiate between the "New Standard" and the commercial SRM, therefore AMEC has included the commercial SRM results in the evaluations discussed for the "New Standard".

14.2 Databases

All field data were entered into Excel tables at the camp or at Rodinia facilities at Salta. Data from third parties, such as laboratories and geophysical surveys, are generally supplied in digital and printed form. These records were printed out and kept in binders for future reference.

14.3 Comments on Section 14.0

AMEC is of the opinion that the recorded data accurately reflects the original information, and is acceptable for use in brine resource estimation. Analytical accuracy at ALS for Li, K and B was within acceptable limits.

A low-level Li 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, or be the result of contamination.

AMEC recommends that analytical duplicates be inserted in future campaigns in order to determine the practical detection limit. In addition, the blank material should be properly assessed to confirm that it is an acceptable material to use as a blank.

Rodinia should employ data-entry screens with range checks for future exploration programs. All assay data and other data that supports resource modelling should be double-entered.

15.0 ADJACENT PROPERTIES

This section is not relevant to this Report.

16.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Due to the early exploration stage of this Project and the limited amount of sample data available, detailed process testwork indicating the most advantageous method of elemental extraction has not been fully defined or completed.

Rodinia commissioned a report from an independent consultancy that specializes in lithium studies which developed a conceptual-level process route for the Project.

AMEC used this confidential study as background information when assessing reasonable prospects of economic extraction criteria for purposes of declaration of Mineral Resources.

AMEC recommends that Rodinia completes the following:

- Using the available samples obtained from the exploration program, the brine chemistry needs to be evaluated in detail to assess the properties of the brine and to quantify the chemical variation of the various aquifers, at various depths.
- Update the process simulation model using the information obtained from the above recommendation.
- Begin a program for laboratory testing of the actual brine samples to validate the simulation model, or to provide data points to modify the process simulation assumptions.

17.0 BRINE RESOURCE ESTIMATES

17.1 Overview

The brine resource estimate was prepared by AMEC Principal Geostatistician, Paula Larrondo, MAusIMM, under the supervision of Dr. Harry Parker, P. Geo., and Technical Director with AMEC. Mrs. Larrondo is the Qualified Person for the estimate.

Brine estimates are not “solid mineral deposits” as defined under the 2010 CIM definition standards. However, there are sufficient similarities to mineral deposits that the guidelines published by the CIM and referenced in NI 43-101 provide a useful guide to brine estimation reporting. AMEC used the principle of the NI 43-101 disclosure standards, the general format of Form NI 43-101F1 in preparing the report on the estimate, and considered recommendations in the CIM best practice guidelines for mineral resource estimation when preparing the estimate.

Determination of a brine resource is based on the geometry of the host aquifer or aquifers, the specific yield, and the grade or concentration of the brine. These elements combine to allow the estimate of an in situ brine resource. 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.

The brine estimate was developed using Vulcan® three-dimensional block modeling software. The geological model and resource estimate were based on a conceptual hydrogeological model, stratigraphic logs, geochemical profiles along the drill holes, total porosity and density from nuclear probe logs, and flow and artesian condition records obtained during drilling.

A series of spatial constraints, such as faults, sampling depth, fresh water presence, geophysical survey and stratigraphic logging were used to define the basin volume. Once this volume was defined it was divided according to the conceptual hydrogeological model into three aquifers using geological, geophysical, geochemical and flow records obtained during logging of the drill holes.

The aquifer volumes were discretized into irregular sub-blocks using a 250 m x 250 m x 6 m block size with sub blocks down to 50 m x 50 m x 2 m for Aquifers II and III. For Aquifer I, where auger sampling was done on 300 m x 300m spacing, the parent block size was reduced to 50 m x 50 m x 6 m with sub-blocks down to 25 m x 25 m x 2 m.

Block grades were calculated using inverse distance squared (“ID2”) grade estimation methodologies. All blocks were assigned an Inferred classification. At depth, estimation within the third aquifer were limited by an extrapolated surface projected 30 m below the total depth of drill holes.

17.2 Database

The current brine resource estimate is supported by 140 (1,773 m) auger wells and 16 (492.45 m) RC holes, and by 132 Li, K, B, Mg and SO_4 assays from the auger drilling, and 186 Li, K, B, Mg and SO_4 assays from the RC drilling. The assays and logging of the auger wells support the definition of the volume and grade estimate of Aquifer I; Aquifers II and III, are supported by the RC drilling.

17.3 Topography

Rodinia provided surveyed topographic contours at 1 m intervals.

AMEC found that the elevations of the auger-hole collars recorded in the database were systematically 12 m higher than the elevations indicated by the topographic contours, with a minimum and maximum difference of 8.8 m and 13.7 m. The RC holes had differences in their collar elevations with the topographic surface of ±1 m, with the exception of DRC-3 which has a positive difference of 8 m. These differences are primarily attributed to the vertical accuracy of hand-held GPS devices versus the differential GPS used by the surveyors.

For the brine estimate presented in this Report the drill collar elevation obtained from the projection of the drill collar onto the topographic surface was used.

AMEC recommends that the auger-hole collars are resurveyed by an accredited surveyor and any remaining large differences subsequent to this survey are checked.

17.4 Aquifer Volume

AMEC interpreted the basin volume in 3-D using Vulcan® software, considering the following spatial constraints:

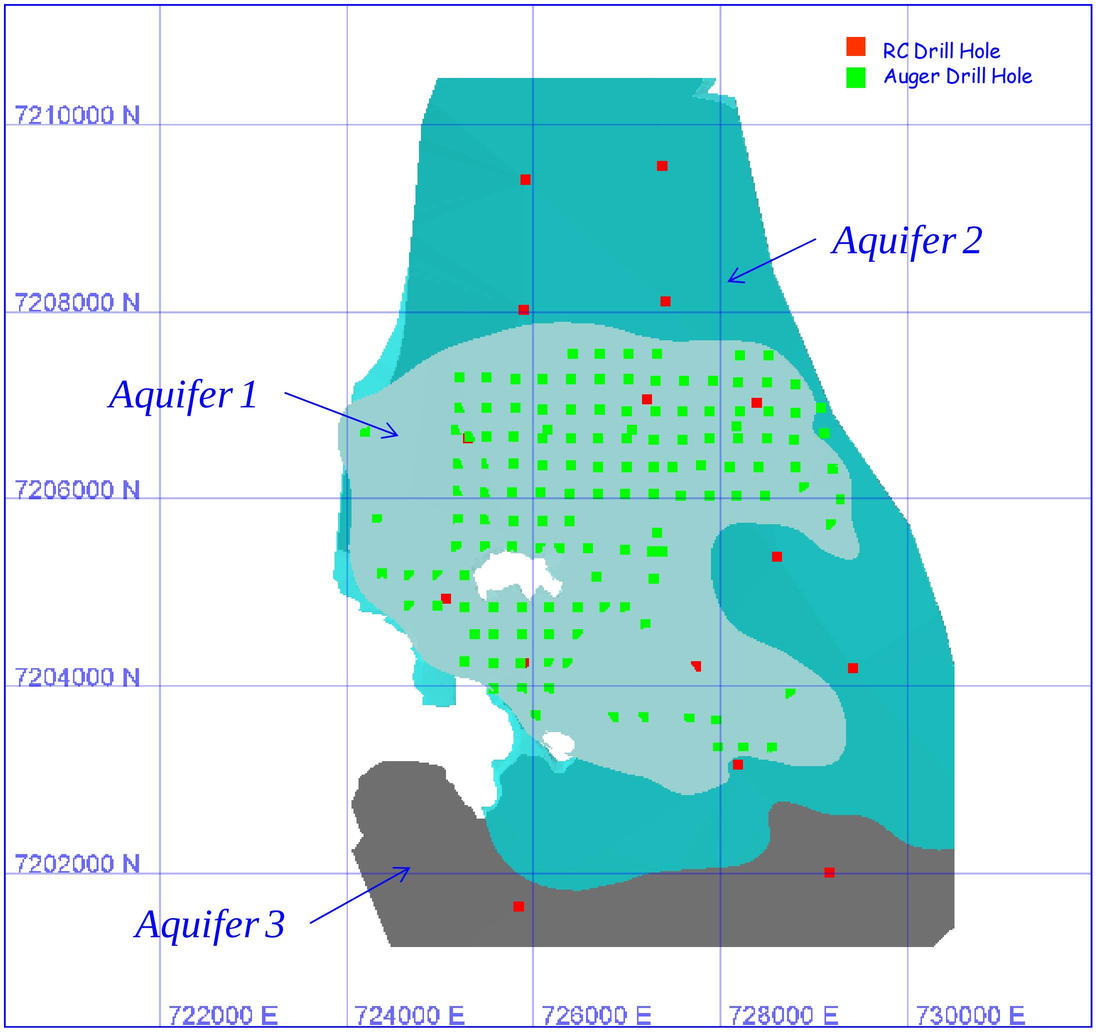
- The contact between the basement and the unconsolidated material that hosts the brines was assumed to have the same shape as the 3-D surface model obtained from the gravity survey, but the z-coordinates were translated and locally adjusted to honour the geological logging of the two drill holes that intercept the basement, as well as the water flow observations recorded during drilling.

- To the east, the lateral extent of the basin volume was limited by the interpreted unnamed fault. To the west the basin was limited by the range of north-south trending hills.
- The estimated volume was restricted by the data coverage; for example, Aquifer I was constrained by the auger distribution; furthermore, the lateral extent of Aquifers II and III was restricted by a radius of 2 km for each RC drill hole. At depth, the base of Aquifer III was limited by an interpolated surface projected 30 m below the total depth of drill holes.

The basin volume was apportioned in the three aquifers following the hydrogeological conceptual model and adjusted by the geochemistry profile along the drill holes (Figure 17-1). To represent the theoretical impermeable layers between the aquifers, the surfaces that divide them were translated 3 m up and down, allowing a space without brine.

Within the aquifers, constant values were assumed for porosity and specific yield.

Figure 17-1: Plan View of the Interpreted Aquifers



17.5 Block Model Setup

The Diablillos block model was created in Vulcan® using two block sizes, given the different spacing of the RC drilling that defines Aquifers II and III and the auger sampling available only for Aquifer I. A parent block size of 250 m x 250 m x 6 m with sub-blocks down to 50 m x 50 m x 2 m was set up for Aquifers II and III, while for Aquifer I, where auger sampling was done at 300 m x 300 m spacing, the parent block size was set up at 50 m x50 m x6 m with sub-blocks down to 25 m x 25 m x 2 m.

A sub-block model was generated to achieve a high geological resolution at interpreted boundaries of the three aquifers.

Block model properties are summarized in Table 17-1:

Table 17-1: Block Model Definition

Coordinate	Block Model Origin	Parent Block		Sub-Block	
	(m)	Size (m)	No. of Blocks	Size (m)	No. of Blocks
Aquifer I					
Easting	723,500	50	140	25	280
Northing	7,201,250	50	185	25	370
Elevation	3,700	6	100	2	300
Aquifers II and III					
Easting	723,500	250	28	50	140
Northing	7,201,250	250	37	50	185
Elevation	3,700	6	100	2	300

17.6 Compositing

The original assay lengths were 6 m. In AMEC's opinion, the sample interval is too large for proper understanding of the stratigraphic variations in the vertical direction for these types of deposits. Because of this, AMEC used the samples directly, without compositing, to perform the resource estimate.

17.7 Exploratory Data Analysis

AMEC generated histograms, probability plots and box plots for lithium, potassium, boron, magnesium and sulphate globally and by aquifer. The results show different geochemical signatures for each aquifer that support their use as estimation domains. Univariate statistics by aquifer are summarized in Table 17-2, Table 17-3 and Table 17-4.

Table 17-2: Univariate Statistics – Lithium Assays

Aquifer	No. Samples	Min Li (mg/L)	Max Li (mg/L)	Mean Li (mg/L)	Coefficient of Variation
I	132	100	1,000	644	0.37
II	65	110	800	475	0.49
III	121	310	750	583	0.12

Table 17-3: Univariate Statistics – Potassium Assays

Aquifer	No. Samples	Min K (mg/L)	Max K (mg/L)	Mean K (mg/L)	Coefficient of Variation
I	132	950	11,000	6,901	0.37
II	65	1,300	9,000	5,366	0.37
III	121	2,700	9,300	6,530	0.17

Table 17-4: Univariate Statistics – Boron Assays

Aquifer	No. Samples	Min B (mg/L)	Max B (mg/L)	Mean B (mg/L)	Coefficient of Variation
I	132	130	1,200	671	0.34
II	65	99	8,000	529	0.24
III	121	430	980	690	0.16

There is insufficient information to perform a reliable contact analysis of changes in the grade profile at lithological contacts. Therefore, hard boundaries were adopted for the interpolation. Contact plots calculated by AMEC suggested that soft boundaries between the second and the third aquifer may be appropriate for future brine estimates if supported when more data become available.

17.8 Spatial Correlation

There is insufficient information to infer spatial correlation for the different elements; therefore, variograms were not estimated, and an inverse distance approach was used for grade interpolation.

17.9 Grade Interpolation

Block grades were estimated using inverse distance squared (“ID2”) grade estimation methodologies with a highly anisotropic search, extended in the horizontal, but very restrictive in the vertical direction. No outlier restriction was applied, as distributions of the different elements do not show anomalously high values.

A three-pass estimation strategy with expanding search ellipses was employed. The minimum and maximum number of samples was adjusted for each pass ensuring a minimum of two drill holes for all passes excepting the third pass for Aquifers II and III. Hard boundaries were enforced between aquifers.

The numbers of samples used and search radii are provided in Table 17-5. The interpolation plans were refined using the results of block model validation.

Table 17-5: Interpolation Parameters

Pass	Search Ellipse						Min. No. of Composites	Max. No. of Composites	Max. No. of Composites per Hole
	Rotation (°)			Ranges (m)					
	Z	Y	X	X	Y	Z			
Aquifer I									
1	0	0	0	600	600	24	9	9	1
2	0	0	0	1,200	1,200	48	5	5	1
3	0	0	0	2,400	2,400	96	5	5	1
Aquifers II and III									
1	0	0	0	1,500	1,500	24	3	8	2
2	0	0	0	3,000	3,000	48	3	8	2
3	0	0	0	6,000	6,000	96	5	8	-

The parent blocks were discretized on a pattern of 4 m x 4 m x 1 m.

Figure 17-2 to Figure 17-4 show examples of the block model estimates in cross sections at different north coordinates.

Figure 17-2: Block Model Lithium Estimates, Section 7,204,200 N ± 100m

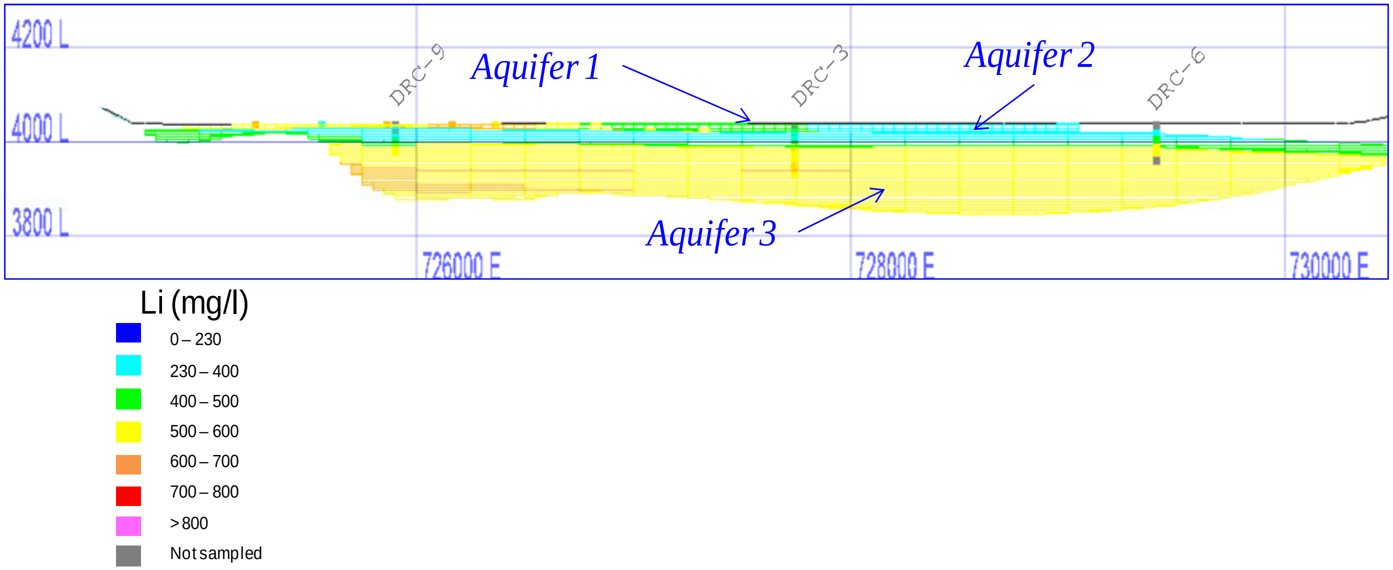


Figure 17-3: Block Model Lithium Estimates, Section7,206,300 N ± 100m

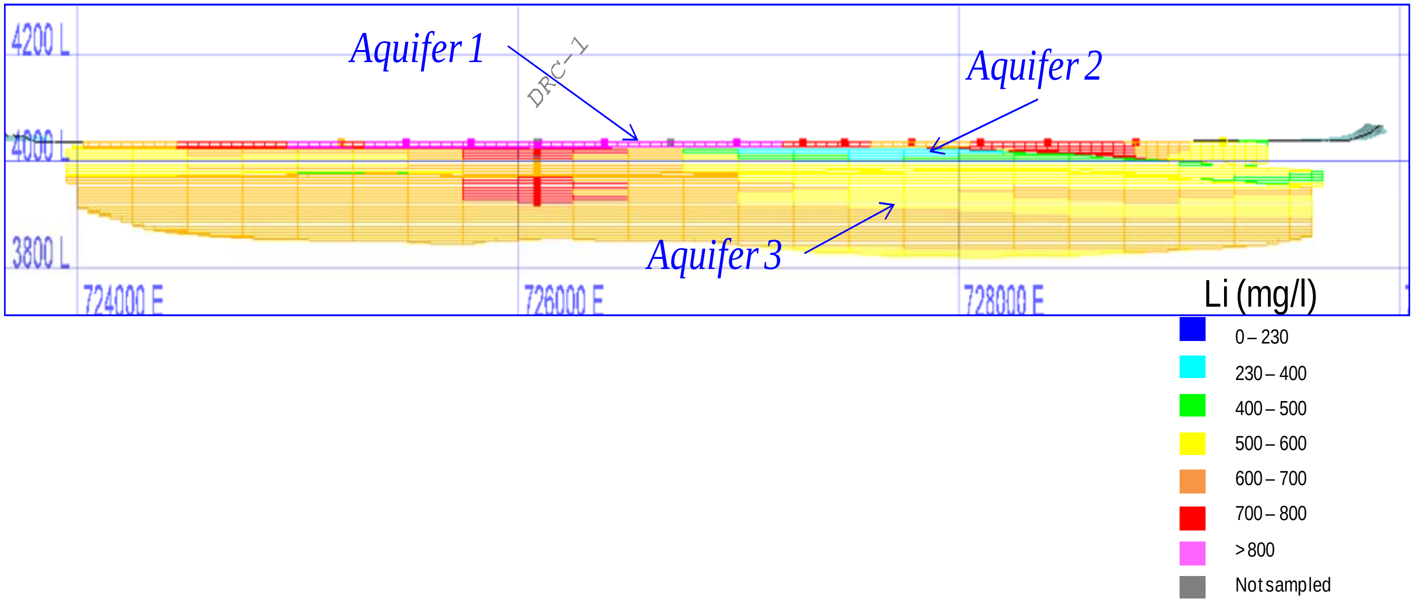
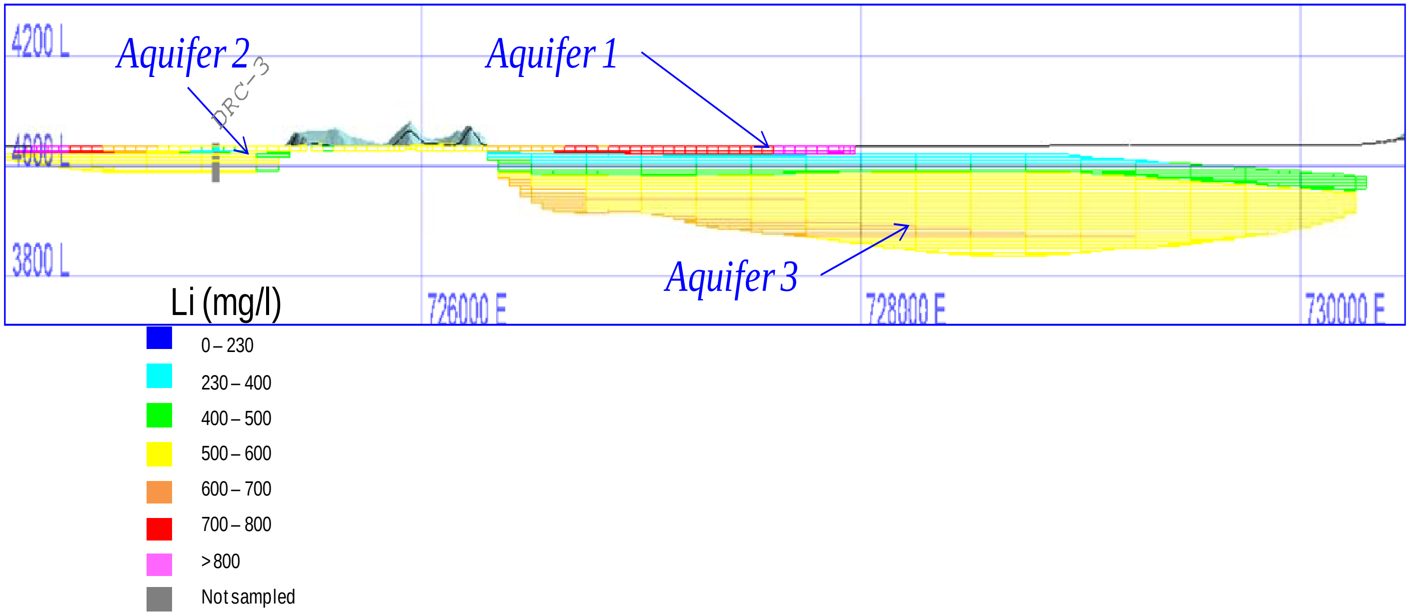


Figure 17-4: Block Model Lithium Estimates, Section7,205,000 N ± 100m



17.10 Density

The database has 194 density determinations measured by Rodinia geologists during logging, with a mean of 1.09 g/cm^3 a minimum of 1.00 g/cm^3 and a maximum of 1.175 g/cm^3. Average density by aquifer is included in Table 17-6. Based on the table, constant values were assigned to each aquifer in the block model.

Table 17-6: Average Densities by Aquifer

Aquifer	Density (g/cm^3)
I	1.1
I	1.073
II	1.099
Average	**1.09**

17.11 Block Model Validation

AMEC validated the block model using a series of checks including comparison of summary statistics for global estimation bias, visual inspection of estimated grades against composites on plans and sections, and swath plots in the north, south and vertical directions to detect spatial bias.

AMEC generated an independent nearest-neighbour (NN) model for each aquifer in order to verify that the estimates honour the drill-hole data. The NN model also provides a declustered distribution of drill-hole data that can be used for validation.

Visual validation shows a good agreement between the samples and the ID2 estimates. A global statistics comparison shows relative differences between the mean of the ID2 estimates and the NN mean below 5% (Table 17-7), which is considered acceptable. Variance reduction on the ID2 estimates compared to the NN model was found acceptable considering the scarce data and low coefficients of variation shown by the different element assays.

Spatial bias in the block model can be detected using swath plots. These are obtained by plotting the average ID2 estimates and NN grades in east–west, north–south, and vertical slices corresponding to three blocks from the model.

Swath plots were calculated for all elements and for each aquifer. Plots show a good agreement between the NN and the estimates in all cases. As an example, lithium swath plots by aquifer are shown in Figure 17-5 and Figure 17-6.

Table 17-7: Univariate Statistics Comparison between ID2 and NN Estimates, All Passes

Element	Aquifer	No.	Mean		Variance		Difference	
			ID2	NN	ID2	NN	Mean	Variance
Li	I	27,240	597	598	37,829	58,984	-0.1%	-43.7%
	II	10,090	470	464	7,572	14,304	1.3%	-61.5%
	III	15,148	592	589	2,894	4,941	0.5%	-52.3%
K	I	27,240	6,358	6,369	4,660,296	7,131,497	-0.2%	-41.9%
	II	10,090	5,256	5,172	1,884,932	2,916,089	1.6%	-43.0%
	III	15,148	6,657	6,619	657,586	1,123,521	0.6%	-52.3%
B	I	27,240	648	640	28,691	53,225	1.2%	-59.9%
	II	10,090	540	536	6,853	16,860	0.7%	-84.4%
	III	15,148	685	691	5,213	11,333	-0.9%	-74.0%
Mg	I	27,240	2,367	2,329	606,473	987,154	1.6%	-47.8%
	II	10,090	1,766	1,725	158,591	266,689	2.4%	-50.8%
	III	15,148	2,148	2,131	124,954	168,680	0.8%	-29.8%
SO_4	I	27,240	6,449	6,667	8,347,951	12,139,519	-3.3%	-63.3%
	II	10,090	6,565	6,595	937,010	2,313,569	-0.4%	-84.7%
	III	15,148	8,822	8,791	1,548,221	5,161,553	0.4%	-107.7%

Figure 17-5: Lithium Swath Plots by Aquifer, All Passes

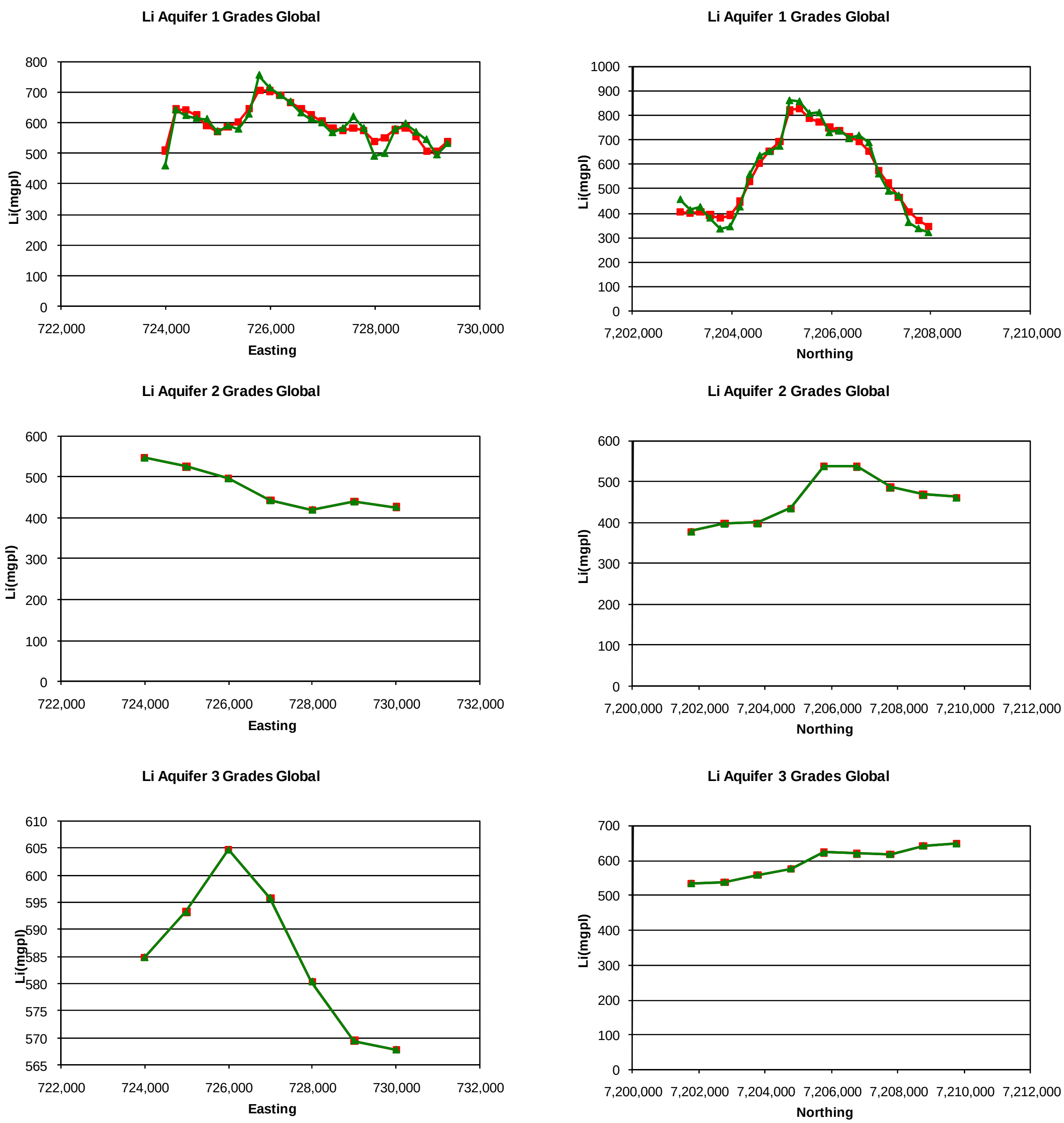
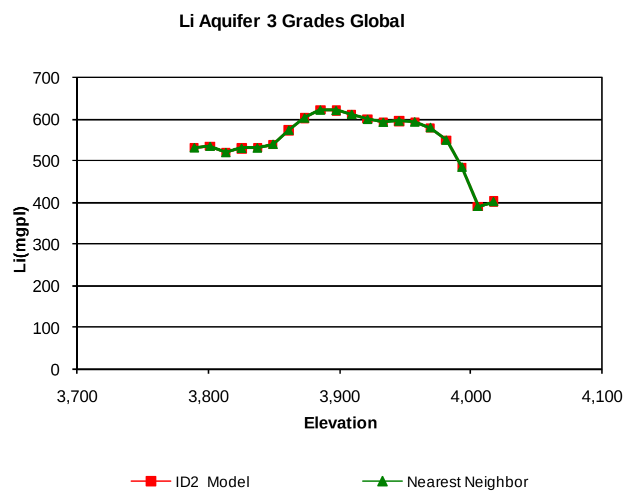


Figure 17-6: Lithium Swath Plot in Elevation Direction, Aquifer 3, All Passes



17.12 Resource Classification

Brine resource classification should 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
- Reasonable prospects for economic extraction.

In this type of deposit, grade continuity is typically good. For the Diablillos deposit, geological continuity of the aquifers could be confirmed between drill holes, and total porosity was adequately continuous. The aquifer volume remains open laterally and at depth. In AMEC's opinion, the sampling procedure, samples collected, methods employed and approach were thorough and provide sufficient information to support an initial brine resource estimate. 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 sufficient quality to support estimation.

Considering the wide spacing of the RC drilling, uncertainties in the location of the basement, and therefore in the thickness of the Aquifer III, all blocks were assigned an Inferred classification. At depth, the mineral resource model within Aquifer III was limited by an extrapolated surface projected 30 m below the total depth of drill holes with the exception of the two drill holes that intercepted the basement, were the depths of these intercepts were honoured.

In addition to the uncertainty derived from the grade and volume estimation, there is uncertainty in the spatial distribution of the total porosity and specific yield within the aquifers. 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 an estimate of recoverable brine resources. Rodinia plans to undertake a test campaign to obtain specific yield measurements for the Salar de Diablillos.

17.13 Reasonable Prospects of Economic Extraction

For the purposes of assessing reasonable prospects of economic extraction a cut-off of 230 mg/L Li was applied.

Recoverable brine resources have been estimated using assumed specific yield values derived from analogous salars in the region, and are not based on actual measurements from the Salar de Diablillos. .

For the purposes of the estimate, AMEC assumed that the total brine volume will be extracted using pumping techniques. However, in certain portions of the salar near surface brine there is potential that brines may be extracted by trenching. There may be potential to increase the volume percentage that may be recovered.

17.14 Resource Statement

Brine resources for the Project were classified using criteria consistent with industry practices for laterally continuous deposits that can be considered analogous to salar-hosted brine deposits.

The Qualified Person for the brine resource estimate is Paula Larrondo, MAusIMM. The effective date for the estimate is January 21, 2011.

In situ brine resources (Table 17-8) were initially reported in a press release entitled "*Rodinia Lithium Inc. Defines 4,959,000 Tonne Lithium Carbonate Equivalent Resource At Salar De Diablillos"* dated March 2, 2011.

The estimate reported in Table 17-9 is an updated estimate that is based on recoverable brine resources, and was disclosed in the press release entitled "*Rodinia Lithium Inc. Defines Recoverable Resource Estimate for the Salar De Diablillos*", dated April 1, 2011.

The recoverable brine resource estimate is the base case estimate for the Project.

Both in situ and recoverable brine resources are tabulated and reported for a cut-off of 230 mg/L Li.

The recoverable brine resources are a sub-set of the in situ brine resources and the two estimates are not additive.

Table 17-8: Inferred Brine Resource (In-situ), Salar de Diablillos Project, Effective Date January 21, 2011, Paula Larrondo MAusIMM

Aquifer	In-situ Brine Volume (Mm^3)	Total Porosity (%)	S.G.	Concentration Li (mg/L)	Concentration K (mg/L)	Concentration B (mg/L)	Recoverable Tonnage Li (t) (1000)	Recoverable Tonnage K (t) (1000)	Recoverable Tonnage B (t) (1000)	Recoverable LCE Li2CO3 (t eq.) (1000)	Recoverable PE KCl (t eq.) (1000)	Recoverable BAE Boric Acid (t eq.) (1000)
I	76	27.50	1.10	592	6,298	647	50	480	50	240	910	280
II	476	32.50	1.07	471	5,269	540	220	2,500	260	1,190	4,780	1,470
III	1,125	32.50	1.10	589	6,595	691	660	7,420	780	3,530	14,140	4,440
TOTAL	1,677	**32.23**	**1.09**	**556**	**6,206**	**646**	**930**	**10,400**	**1,080**	**4,960**	**19,840**	**6,190**

Notes to accompany In-situ Brine Resource Table 17-8:

1. Inferred in-situ brine resource estimate for the Salar de Diablillos. Equivalent tonnages are reported in metric tonnes ("t") and were calculated using standard conversion rates as determined by the chemical composition of the final product, and are independent of price and mining processes. A 230 mg/L Li cut off was used for all resource estimations.
2. In-situ resources are determined by the total porosity. These resources do not include allowance for losses in extraction of Li, K and B from brines in a treatment plant. Total porosity are taken from the midpoint of ranges stated in Table 7-2, based on analogous salar-hosted brines and may change when detailed data from the Diablillos deposit are collected.
3. The economic cut-off applied was based on analogous deposits.
4. Assumptions regarding thicknesses of Aquifers ll and lll may change with more detailed drilling and geophysical data.
5. LCE stands for lithium carbonate equivalent; PE stands for potassium chloride and BAE for boric acid equivalent. These are the commercially-saleable products. To obtain the recoverable tonnage for these compounds, the estimated concentration of each element was multiplied by a factor that is based on the atomic weights of each element in the compound to obtain the final compound weight. Factors used were 5.322785 to obtain LCE from the Li concentration; 1.906758 to obtain PE from the K concentration; and 5.717471 to obtain H_3BO_3 from the B concentration.
6. Totals may differ slightly from sum or weighted sum of numbers due to rounding.

Table 17-9: Inferred Brine Resource (Recoverable), Salar de Diablillos Project, Effective Date January 21, 2011, Paula Larrondo MAusIMM

Aquifer	Recoverable Brine Volume	Specific Yield	S.G.	Concentration			Recoverable Tonnage			Recoverable		
										LCE	PE	BAE
				Li	K	B	Li (t)	K (t)	B (t)	Li2CO3 (t eq.)	KCl (t eq.)	Boric Acid (t eq.)
	(Mm^3)	(%)		(mg/L)	(mg/L)	(mg/L)	(1000)	(1000)	(1000)	(1000)	(1000)	(1000)
I	41	15.00	1.10	592	6,298	647	30	260	30	130	500	150
II	271	18.50	1.07	471	5,269	540	130	1,430	150	680	2,720	840
III	640	18.50	1.10	589	6,595	691	380	4,220	440	2,010	8,050	2,530
TOTAL	953	18.31	1.09	556	6,206	646	530	5,910	620	2,820	11,270	3,520

Notes to accompany Brine Resource Table 17-9:

1. Inferred recoverable brine resource estimate for the Salar de Diablillos. Equivalent tonnages are reported as recoverable in metric tonnes ("t") and were calculated using standard conversion rates as determined by the chemical composition of the final product, and are independent of price and mining processes. A 230 mg/L Li cut off was used for all resource estimations.
2. Recoverable resources are determined by the specific yield, which is the unit volume of fluid that will drain under gravity. The specific yield values may change when further data from the Diablillos deposit are collected. These resources do not include allowance for losses in extraction of Li, K and B from brines in a treatment plant. Specific yields are taken from the midpoint of ranges stated in Table 7-2
3. The economic cut-off applied was based on analogous deposits.
4. Assumptions regarding thicknesses of Aquifers II and III may change with more detailed drilling and geophysical data.
5. LCE stands for lithium carbonate equivalent; PE stands for potassium chloride and BAE for boric acid equivalent. These are the commercially-saleable products. To obtain the recoverable tonnage for these compounds, the estimated concentration of each element was multiplied by a factor that is based on the atomic weights of each element in the compound to obtain the final compound weight. Factors used were 5.322785 to obtain LCE from the Li concentration; 1.906758 to obtain PE from the K concentration; and 5.717471 to obtain H_3BO_3 from the B concentration.
6. Totals may differ slightly from sum or weighted sum of numbers due to rounding.

18.0 ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORT ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES

This section is not relevant as the property is in exploration stage.

19.0 OTHER RELEVANT DATA AND INFORMATION

On 4 April 2011, Rodinia announced that the company would commission a Preliminary Economic Assessment on the Project.

20.0 INTERPRETATION AND CONCLUSIONS

The QPs are of the opinion that:

- AMEC used the principle of the NI 43-101 disclosure standards and the general format of Form NI 43-101F1 in preparing the estimate and this Report
- Legal opinion provided to AMEC supports Rodinia's statement on their ownership interest, and that the mineral tenure held by Rodinia on the Property area is valid, and sufficient to support declaration of brine resources
- The status of the surface rights was not confirmed; surface rights will be required to support a feasibility study
- An environmental impact study covering the 2010 drilling campaign had been approved by the Argentinean Government. AMEC is not aware of any additional environmental studies for future developments
- The geologic understanding of the deposit settings, lithologies, and structural and alteration controls on mineralization is sufficient to support estimation of Inferred brine resources only
- The hydrogeological understanding of the deposit, including porosity and specific yield, and aquifer limits and recharge is sufficient to support estimation of Inferred brine resources only
- There is sufficient information to infer the existence of three separate aquifers
- Lateral zonation of some hydrogeological parameters is suspected but could not be confirmed
- For the brine resource estimate, specific yield values were assumed based on data from analogous salars in the region with similar porosity and stratigraphy; in order to assess the recoverable brine resource with a higher level of confidence, further information on the permeability and flow regime in the aquifers, and their surroundings is necessary
- The mineralization style and setting is well understood and can support declaration of brine resources
- The exploration programs completed to date are appropriate to the brine style of the deposit and to support Inferred brine resources
- Work completed has consisted of surface auger sampling, RC drilling, surface gravity geophysical survey, flow monitoring, pumping tests, and bore hole geophysical density surveys

- Drilling and logging procedures appear generally adequate, however, the holes were not down-hole surveyed; this is not a significant issue given the relatively shallow depth of the holes
- Sampling was performed every 6 m; in AMEC's opinion, this sampling interval is appropriate only for support of an Inferred brine resource. A smaller set of sample intervals at various interval spacings (1 m, 2 m, and 3 m, for example) should be tested in a few selected drill holes and matched with corresponding 6 m sample intervals from the same drill holes to demonstrate that the 6 m sample interval provides sufficient resolution for the modelling of the geological and hydrogeological parameters
- 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 deposits
- The quality control (QC) program included the insertion of SRMs and blanks; no significant biases were observed that could 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 analysed at ALS Laboratory Group Environmental Division (ALS), in Fort Collins Colorado, USA; the sample preparation and analytical methods used by ALS to assay the samples were appropriate
- The data recorded in the database accurately reflect the original information
- Analytical accuracy at ALS for Li, K and B was within acceptable limits
- There are two density data sets, measured from samples and from bore-hole geophysical surveys; procedures and QA/QC procedures for the first data set are not available and should be documented; based on the information available to AMEC, geophysical logs could only be used to assess relative changes in the total porosity and density along the drill holes; a review of the calibration procedures used for the geophysical logs is required
- Based on preliminary test work, the lithium recovery in a conceptual chemical plant is estimated to be about 79%, and the overall lithium recovery (following losses via clay pond leakage, salt entrainment, occlusion in the magnesium hydroxide gelatinous slurry, and plant inefficiencies) estimated at about 41.1%

- There have been no engineering studies performed; however, preliminary exploitation concepts used to support considerations of reasonable prospects for economic extraction include extracting the brines through pumping wells and surface trenches
- Brine resources were estimated using auger and RC drill data and have been performed using industry-standard practices
- AMEC found that the elevations of the auger-hole collars recorded in the database were systematically 12 m higher than the elevations indicated by the topographic contours; the differences for RC collar elevations with the topographic surface are usually within ±1 m; these differences are primarily attributed to the vertical accuracy of hand-held GPS devices versus the differential GPS used by the surveyors
- There is insufficient information to inferred spatial correlation for the different elements; therefore, variograms were not estimated and an inverse distance approach was used for grade interpolation
- Considering the wide spacing of the RC drilling, uncertainties in the location of the basement, and therefore in the thickness of Aquifer III, all blocks were assigned an Inferred classification; at depth, the boundary of Aquifer III was limited by an extrapolated surface projected 30 m below the total depth of drill holes with the exception of the two drill holes that intercepted the basement, where the depths of these intercepts were honoured
- Aquifer III is still open in depth since only two drill holes intercepted the basement. Brine was recovered until the bottom of all drill holes except these two
- The deposit remains open laterally.

21.0 RECOMMENDATIONS

AMEC has prepared a work program for the Project that will require two stages. The program includes work that Rodinia has planned.

The first phase consists of additional drilling, metallurgical and chemical testwork, and recommended modifications to current procedures.

The second work phase is contingent upon the results of the first. When this second stage is complete, there will be sufficient resulting information to support advanced engineering studies.

21.1 Phase 1 Work Program

The following work should be undertaken as part of Phase 1:

- Rodinia plans to complete 1,250 m of RC and 2,400 m of triple-tube core drilling to support preliminary engineering studies
- The auger-hole collars need to be re-surveyed by an accredited surveyor, and large differences with the surface topography model should be checked. The auger collars could be picked up at the same time as the drill holes are surveyed for the proposed RC/sonic program
- Implement a more complete logging procedure
- A detail granulometric analysis should be performed for the existing samples and be undertaken for all future drilling campaigns
- Bore-hole density geophysical surveys should be calibrated so as to have reliable density data
- Additional geophysical surveys should be used to define the topography of the basin basement. A seismic refraction survey and a transient electromagnetic (TEM) survey are proposed
- Pumping tests and monitoring programs are required to estimate hydraulic parameters (such as porosity and specific yield) specific to Diablillos; AMEC understands that a program is already designed by Rodinia and will be implemented shortly
- In the drill holes, samples to be used for lithological logging purposes should be taken every metre instead of every 6 m

- Analytical duplicates should be inserted in future campaigns in order to determine the practical detection limit; in addition, the blank material should be properly assessed prior to start using it as a blank
- Additional process test work is required; using the available samples obtained from the exploration program, the brine chemistry needs to be evaluated in detail to assess the properties of the brine and to quantify the chemical variation of the various aquifers, at various depths; the process simulation model should be updated using the information obtained from the above recommendation; and a program for laboratory testing of the actual brine samples should be implemented to validate the simulation model, or provide data points to modify the process simulation assumptions
- Rodinia is planning to run an onsite pilot plant

An estimated budget for this phase of the work program is included as Table 21-1.

Table 21-1: Phase 1 Budget Estimate

Item	Detail	Budget (US$)
Drilling	RC drilling 1,250 m at $350/m Costs include mobilization, drilling, sampling and assay costs.	437,500
	Triple tube core drilling 2,400 m at $350/m Costs include mobilization, drilling, sampling and assay costs. [Core costs are based on budget figures supplied by Rodinia]	840,000
	Wells 1,000 m at $500/m	500,000
	Observation wells 2,400 m at $250/m	600,000
Quality Control	Assaying of selected blank to ensure sample is unmineralized with respect to brines	500
	Update logging procedures	2,000
	Granulometric analysis	5,000
Pumping Tests	Include four pumping wells with three observation wells	400,000
Ground Geophysical Surveys	Seismic refraction (35 line km)	280,000
	TEM	150,000
Process Tests	Preliminary laboratory testing and simulation	200,000
	Onsite pilot plant	1,000,000
Total Phase 1		4,415,000

21.2 Phase 2 Work Program

The Phase 2 program is contingent upon the results of Phase 1.

Once the results of the Phase 1 work program are to hand, the lithology and aquifer boundaries should then re-interpreted and the brine resource re-estimated.

To support planned more detailed studies at the level of pre-feasibility and feasibility assessments, AMEC recommends that the additional drill programs be undertaken, with the locations of the proposed drill holes finalized once the results of the Phase 1 program have been assessed.

AMEC considers that because the Diablillos salar is a clastic salar, there will likely be variations between drill holes due to variations in the porosity and specific yield associated with different lithologies, and in the geometry of the aquifers on a quasi-local basis. At the current drill spacing, this variation is unable to be quantified. At the current drill spacing it is also not possible to correlate individual lithologies. AMEC has therefore recommended additional drilling.

The initial program should be to complete a geostatistical cross-section of RC drill holes in the nucleus of the salar to provide sufficient confidence on the spacing that will be required to infill drill the deposit at an appropriate drill spacing to support estimation of higher-confidence mineral resources.

AMEC suggests that this geostatistical section comprise 10 drill holes in an east–west orientation at 250 m spacing, with an additional 10 drill holes in the north–south direction at the same drill spacing. Drill holes are assumed to be an average 150 m in depth, for a total of 3,000 m of RC drilling.

This program will then indicate what drill spacing is required to provide the most appropriate infill drill spacing for feasibility-level studies. AMEC's work program assumes that 500 m to 1,000 m spacing may be required, which would be in the order of 50–100 RC holes (7,500–15,000 m), but this total is likely to be revised. AMEC has presented the infill phase budget as an indication of the potential maximum expenditure if drill spacing is required at 500 m centres; the program costs will be less if wider drill spacing is supported.

AMEC has also included provision for approximately 10 sonic drill holes. AMEC considers that sonic drilling will provide a better recovery from unconsolidated materials than is likely to result from core drilling. However, because of the significant cost of the sonic drill holes, the preferred method is to attempt core drilling first, and therefore the core drill holes are included in Phase 1.

The sonic drill program will comprise 150 m approximate depths for the program, for a total 1,500 m of sonic drilling. AMEC recommends Rodinia consider siting at least two of the sonic drill holes so as to twin RC drill holes, to provide additional support for the data obtained from the RC programs.

An estimated budget for this phase of the work program is included as Table 21-2.

Table 21-2: Phase 2 Work Program

Item	Detail	Budget (US$)
Drilling	Geostatistical cross-section 20 RC drill holes, 250 m spacing, 150 m depths, total 3,000 m of drilling, assuming $350/m total drilling costs	1,050,000
	Infill drilling. Depending on drill hole spacing identified as appropriate from the geostatistical cross section, could range from 50–100 drill holes, at 150 m average depths, 7,500–15,000 m of drilling, assuming $350/m total drilling costs	2,625,000 to 5,250,000
	Sonic drilling. Ten drill holes at 150 m average depths, 1,500 m of drilling in total, assuming $800/m drilling costs.	1,200,000
	Drill hole collar surveys	5,000
	Drill hole down-hole surveys	5,000
	Down-hole geophysical surveys	50,000
Process Tests	Includes additional pump tests, and on site pilot plant	1,000,000
Total Phase 2		*5,935,000 to 8,560,000*

22.0 REFERENCES

Alonso, R., Jordan, T., Tabbutt, K., Vandervoort, D., 1991. Giant Evaporite Belts of the Neogene Central Andes. Geology, 19, 401- 404.

Alonso, R.N, 1986. Ocurrencia, posición estratigráfica y génesis de los depósitos de boratos de la Puna Argentina. Tesis doctoral. Universidad Nacional de Salta, 196 pp.

Alonso, R.N., 1991. Evaporitas Neógenas de los Andes Centrales. In J. J. Pueyo-Mur (ed.). Génesis de formaciones evaporíticas: modelos andinos e ibéricos, Barcelona, Universidad de Barcelona, 267-332.

Alonso, R.N., 1999. Sobre el origen de los borates de la Puna. Acta Geológica Hispánica, v. 34 (1999), nº 2-3, 141-166

Alonso, R.N., 2006. Ambientes Evaporíticos Continentales de Argentina. Temas de la Geología Argentina I (2), INSUGEO, Serie Correlación Geológica, 21:155-170

Alonso, R., 1988. Los boratos de salares en Argentina. Asoc. Argentina de Geólogos Economistas, Rev., 6(6), 11-22.

Alonso, R., Gutiérrez, R., Viramonte, J., 1984. Megacuerpos salinos cenozoicos de la Puna Argentina. IX Congr. Geol. Arg., Actas, I, 25-42.

Borax Argentina SA., 2009. Informe de Impacto Ambiental Explotación en Salares Diablillos y Ratones. 40 pp.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2003: Estimation of Mineral Resources and Mineral Reserves, Best Practice Guidelines: Canadian Institute of Mining, Metallurgy and Petroleum, 23 November 2003, http://www.cim.org/committees/estimation2003.pdf.

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2010: Definition Standards on Mineral Resources and Mineral Reserves, Resources and Reserves Definitions: Canadian Institute of Mining, Metallurgy and Petroleum, 27 November 2010, http://www.cim.org/UserFiles/File/CIM_DEFINITON_STANDARDS_Nov_2010.pdf

Coad, M., 1984. Lithium Production in Chile's Salar de Atacama. Ind. Miner. 205, 27-33 (Oct.)

Empresa Rodinia Minerals Inc., May 2010. Informe de Impacto Ambiental, Etapa II-Exploración Avanzada con Perforaciones, "Proyecto Salara de Diablillos".

Garrett, D.E., 2004. Handbook of Lithium and Natural Calcium Chloride: their deposits, processing, uses and properties. Elsevier Academic Press, 476 pp

Groundwater Insight inc. 2010. Amended inferred resource estimation of lithium and potassium at the Cauchari and Olaroz salars, Jujuy province, Argentina,

Houston, J., and Ehren, P., 2010. Technical report on the Olaroz project, Jujuy province, Argentina.

Isacks, B., 1988. Uplift of the Central Andes and bending of the Bolivian orocline. Jour. Geophys. Res., 284, 3211-3231.

Jordan, T., Alonso, R., 1987. Cenozoic stratigraphy and Basin Tectonics of the Andes Mountain, 20º-28º South Latitude. Am. Assoc. Petrol. Geologists, 71(1), 49-64.

Jordan, T.E., Gardeweg, M., 1989. Tectonic evolution of the late Cenozoic central Andes (20º-33ºS). In Z. Ben-Avraham (ed.). The evolution of the Pacific Ocean margins, Oxford University Press, 193-207.

Jordan, T.E., Isacks, B., Allmendinger, R.W., Brewe r, J. A., Ramos, V.A., Ando, C.J., 1983. Andean tectonics related to geometry of the subducted Nazca plate. Geol. Soc. Am. Bull., 94, 341-361.

Kasemann, S.A., Meixner, A., Erzinger, J., Viramonte, J.G., Alonso, R.N., and Franz, G., 2004. Boron isotope composition of geothermal fluids and borate minerals from salar deposits (central Andes/NW Argentina). Journal of South America Geosciences, 16, 685-697.

Keast, T., 2010: Technical Report on the Diablillos Property Salta Province, Argentina: technical report prepared by independent consultant Todd Keast dated March 22, 2010.

Kunasz, I.A. 1994. Lithium Resources. Mono., Ind. Minerals, Rocks (D.D. Carr ed.), pp 631-642, Soc. Min. Met. Explor.

Quantec Geoscience 2010. Summary of 2D Models for the Salar de Diablillos Gravity Survey prepared for Rodinia Minerals Inc., by Miles Rideout Senior Geophysicist and dated September 21, 2010

Turner, J.C., 1972. Puna. In A. Leanza (ed.). Geología Regional Argentina. Acad. Nac. Cien. Córdoba, 91-116.

Vandervoort, D.S., Jordan, T.E., Zeitler, P.K., Alonso, R.N., 1995. Chronology of internal drainage development and uplift, Southern Puna plateau, Argentine Central Andes. Geology, 23(2), 145-148.

Vázquez, N., 2011: Legal Opinion of Property Titles for Potasio y Litio de Argentina S.A. confidential letter prepared by Estudio J. Nicolas Vasquez Abogados for AMEC Internacional Ingeniería y Construcción Limitada, April 21, 2011

Vinante, D., Alonso, R.N., 2006. Evapofacies del Salar del Hombre Muerto, Puna Argentina: Distribución y Genesis. Revista de la Asociación Geol. Arg. 61(2), 286-297

Viramonte, J., Alonso, R., Gutiérrez, R., Argañaraz, R., 1984. Génesis del litio en los salares de la Puna Argentina. IX Congr. Geol. Arg., Actas, III, 471-481.

22.1 Units of Measure

Unit	Definition
'	seconds (geographic)
"	minutes (geographic)
"	inches
#	number
%	percent
/	per
<	less than
>	greater than
µm	micrometer (micron)
masl	meters above sea level
BAE	boric acid; multiplicative factor of 5.717471
BQ	36.5 mm size core
C	Celsius
d	day
g	gram
g/cm3	grams per cubic centimetre
ha	hectares
HQ	63.5 mm size core
kg/m3	kilograms per cubic meter
km	kilometre
km2	square kilometres
L	litre
M	million
LCE	lithium carbonate equivalent; multiplicative factor of 5.322785
m	meter
m3	cubic meter
Ma	million years ago
Mm	million meters
mm	millimetre/millimetres
mg/L	Milligram per litre
Mt	million tonnes
NQ	47.6 mm size core
º	degrees
ºC	degrees Celsius
PE	potash; multiplicative factor of 1.906758
pH	measure of the acidity or alkalinity of a solution

pop	population
ppb	parts per billion
ppm	parts per million
PQ	85 mm size core
t	metric tonne

22.2 Abbreviations

Abbreviation	Definition
®	registered name
AA	atomic absorption spectroscopy
AusIMM	Australasian Institute of Mining and Metallurgy
BAE	boric acid equivalent
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CRM	certified reference material
E	east
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
GPS	global positioning system
H	horizontal
ICP	inductively-couple plasma
ICP-MS	inductively-coupled plasma mass spectrometry
ICP-OES	inductively-coupled plasma optical emission spectrometry
ID	Inverse distance interpolation; number after indicates the power, eg ID6 indicates inverse distance to the 6^{th} power.
ING	Ingénieur
IP	induced polarization
LCE	lithium carbonate equivalent
MAusIMM	Member of the Australasian Institute of Mining and Metallurgy
mm/year	Millimetres per year
N	north
NI 43-101	Canadian National Instrument 43-101 “Standards of Disclosure for Mineral Projects”
NN	nearest-neighbor/ nearest neighbour
NW	northwest
P.Eng. or P.E.	Professional Engineer
P.Geol or P.Geo	Professional Geologist
PA	preliminary assessment
PE	potassium chloride equivalent
QA/QC	quality assurance and quality control
RQD	rock quality designation
S	south
SCL	
SE	southeast
SG	specific gravity
SQM	
SRM	standard reference material
Topo	topography
W	west
XRD	X-ray diffraction
XRF	X-ray fluorescence

23.0 DATE AND SIGNATURE PAGE

The effective date of this Report entitled "Rodinia Lithium, Salar de Diablillos Project, Salta Province, Argentina, NI 43-101 Technical Report on Brine Resource Estimate", is 21 January 2011.

"signed and sealed"

Paula Larrondo, MAusIMM

dated: 3 May 2011

"signed and sealed"

Armando Simon, Ph.D., M.AIG. (R.P.Geo)

dated: 3 May 2011

"signed and sealed"

Marc Etienne, Ing.

dated: 3 May 2011