LAKE RESOURCES N.L. (ASX:LKE)

ASX Market Announcements Office 27 November 2018

MAIDEN 4.4 MT LCE RESOURCE ESTIMATE - KACHI LITHIUM BRINE PROJECT

- **Maiden Mineral Resource estimate of 4.4 million tonnes of contained Lithium Carbonate Equivalent in Inferred and Indicated Categories extending to 400m below ground level in porous, permeable sediments.**
- **Indicated Mineral Resource estimate of 1.0 million tonnes of Lithium Carbonate Equivalent (LCE) in the central area of Kachi.**
- **Inferred Mineral Resource estimate of 3.4 million tonnes LCE in the surrounding area.**
- **Estimate based on results of 15 drill holes. Brine bearing sediments remain open at depth and laterally with opportunity for resource expansion from additional deeper drilling and extending the area of exploration drilling.**
- **Resource estimate centred within an exploration target with potential for 8 to 17 million tonnes LCE over 20 km x 15km with brines from surface to 400+ metres depth, demonstrating scale of the project of a similar size to globally significant lithium producers.**

Argentine-focused lithium exploration and project development company **Lake Resources NL (ASX:LKE)** is pleased to release a large maiden resource estimate for Lake's 100% owned Kachi Lithium Brine Project in Argentina (see Figure 1).

The maiden resource estimate contains 1 Mt of lithium carbonate equivalent (LCE) as Indicated resources, and 3.4 Mt of LCE as Inferred resources, with a resource depth of 400m for both areas (see Table 2).

Lake Resources Managing Director Steve Promnitz said**:** "We are very pleased to report such a significant maiden JORC Mineral Resource estimate for Kachi. The team advanced drilling within 12 months on an undrilled project, and defined a large resource and located a project that stands alongside the largest lithium projects in Argentina."

"We will expand the resource with more drilling and move into a pre-feasibility study using conventional and a direct extraction technology from Lilac Solutions which indicate high recoveries, low costs and a reduced time to production of lithium."

Project Background

Lake Resources' 100%-owned Kachi Lithium Brine Project in Catamarca province, Argentina covers 69,000 hectares (170,000 acres) with 36 mining leases owned by Lake's Argentine subsidiary, Morena del Valle Minerals SA. These are held over the centre and southern extension of the salt lake at Kachi in the lowest point (around 3000 m altitude) of a large drainage area of approximately 6800 square kilometres (2500 square miles). The basin drains the lithium bearing volcanic rocks of Cerro Galan, which is interpreted to provide the lithium for the FMC Lithium (Livent) production at Hombre Muerto, together with hot springs. Surface samples with positive lithium results in brines were explored at depth through the drilling and geophysics programs.

Drilling at Kachi has returned positive lithium values in the southwest of the project, where the passive seismic geophysics suggests the basin is the deepest, and brine extends under cover to the south.

Resource Summary

The company has to date drilled 15 brine investigation drill holes to depths of up to 403m across principal target areas of the Kachi salt lake (Figure 1). This has revealed thick permeable sand dominated sediments that are expected to continue below current drilling depth limits and beyond the surface dimensions of the salt lake. The ongoing 2017-2018 investigation program has completed a total of 3150m of drilling to date, comprising diamond drill holes, rotary wells and installation of test production bores. The table below and Table 2 outline the resource reported in accordance with the JORC Code (2012) and estimated by a Competent Person as defined by the JORC Code.

Kachi Mineral Resource Estimate - November 2018 (JORC Code 2012 Edition)

RESOURCE ESTIMATE KACHI						
	Indicated		Inferred		Total Resource	
Area km^2	17.10		158.30		175.40	
Aquifer volume km^3	6		41		47	
Brine volume km^3	0.65		3.2		3.8	
Mean drainable porosity % (Specific yield)	10.9		7.5		7.9	
Element	Li	K	Li	K	Li	K
Weighted mean concentration mg/L	289	5,880	209	4,180	211	4380
Resource tonnes	188,000	3,500,000	638,000	12,500,000	826,000	16,000,000
Lithium Carbonate Equivalent tonnes	**1,005,000**		**3,394,000**		**4,400,000**	
Potassium Chloride tonnes	6,705,000		24,000,000		**30,700,000**	

Lithium is converted to lithium carbonate (Li2CO3) with a conversion factor of 5.32
Potassium is converted to potassium chloride (KCl) with a conversion factor of 1.91

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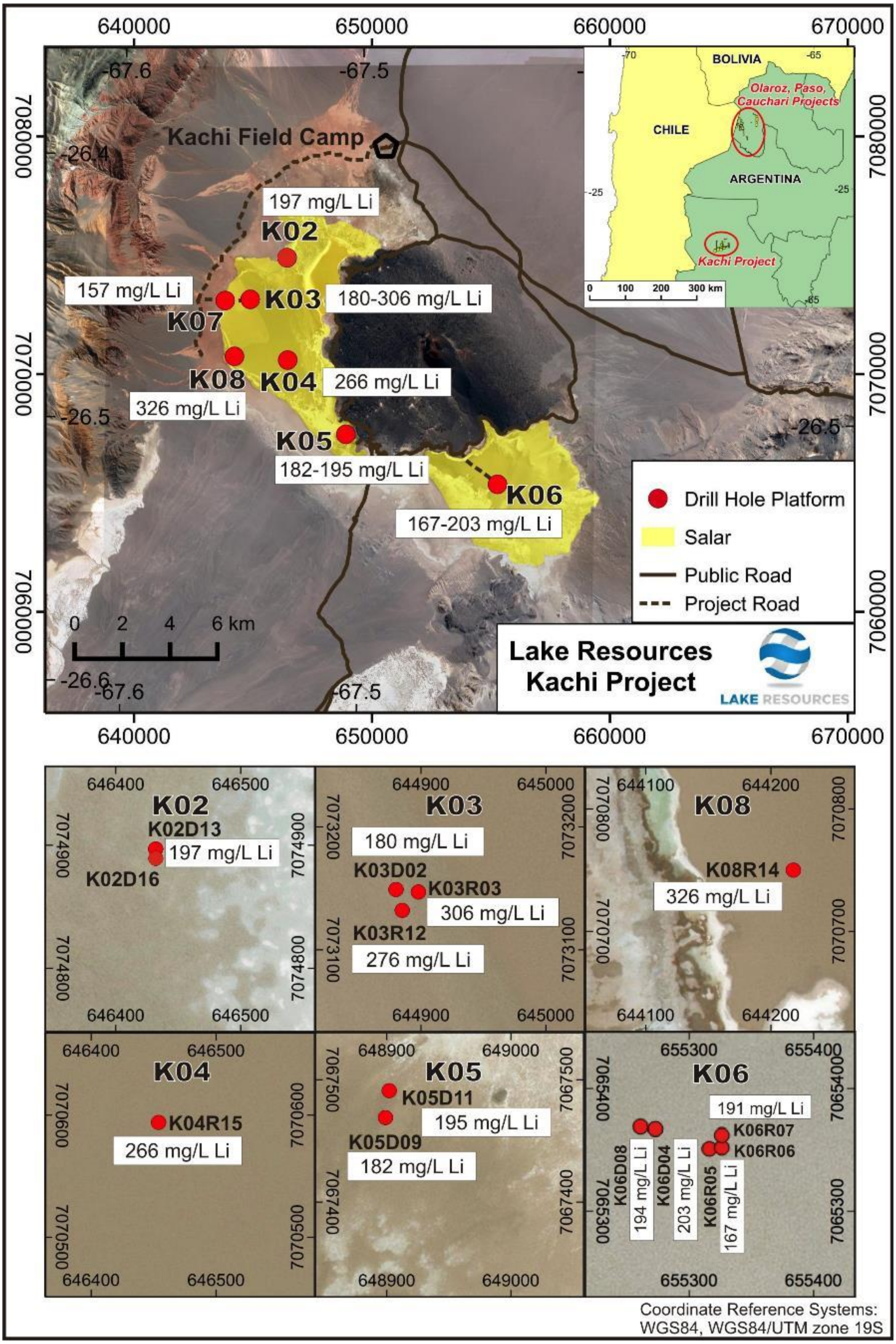

Figure 1. Kachi Lithium Project showing drilling locations and details of the drilling platforms with averaged lithium concentrations for each drill holes.

Project Geology - Kachi

Geological Setting

The Kachi salt lake is located within a large hinterland drainage basin of approximating 6,800 km^2. The basin is bounded to the east and west by north south trending mountain ranges that have been raised by reverse faults that expose a basement sequence of rocks that rise to an elevation of 5100m. The ranges are formed from Ordovician Falda Cienaga Formation, green-grey turbidites in outcrop, Permian Pataquia Formation, red-brown unit in satellite imagery, and beige-green Eocene aged Geste Formation (50-100 m thick).

The Kachi salt lake basin is rhomboid in shape with a NW-SE long axis and covers an area of approximately 135 km^2. A Pliocene basaltic cone overlies the basin infill sediments with flow and air fall basalts creating a veneer over the sediments and covering an area of approximately 70 km^2. The basaltic shield volcano has a NW-SE striking fissure vent that is interpreted to be underlain by a NW-SE aligned intrusive dyke or plug of much smaller dimensions than the basalt cone. This orientation in combination with N-S trending regional reverse faulting have provided an extensional regime allowing accumulation of extensive infill sediments in the salt lake basin.

To the south of the salt lake, pale grey Pliocene, Pleistocene and Holocene welded ignimbrites and unconsolidated pyroclastic sediments of the Cerro Blanco Pyroclastic Complex are interpreted to cover brine bearing Kachi basin sediments. Ignimbrites are also exposed east of the basaltic cone and form deformed terraces heavily influenced by structural complexity. To the northeast of Carachi Pampa the basin is covered by extensive SSW dipping, uplifted, faulted, and eroded sand and gravel terraces.

Geological Interpretation

Drilling on seven platforms to the west and south of the basalt cone shows the Kachi basin infill is predominantly sand dominated with intercalated silts and clays. Surficial halite is variable and little halite has been intersected in drill holes. This leads to a classification of Kachi as an immature salar system. There are ignimbrites within the basin sediments, but these do not have a basin wide distribution and are limited in thickness. A deep conglomerate with interbedded ignimbrites has been intersected at depth in hole K06D08 and is interpreted to extend basin wide and form the base of brine bearing basin sedimentary sequence.

A number of distinct depositional geomorphic units can be recognised in the modern Kachi basin including: the Carachi Pampa salar whose margin is defined by bands of white recrystalized salt; the salar nucleus which has a coarse halite crust ~1-5 m thick; lake sediments on the southern margin of the salar; Laguna Carachi Pampa which is a permanent body of saline water fed by volcanic springs on the north eastern margin of the salar; Vega Carachi Pampa, an ephemeral wetland plain to the north of the laguna; and Barreal Carachi Pampa, a clay pan located on the western and northern margins of the modern salar that is composed of material derived from uplifted Permian sediments exposed in the basement range to the west of the basin. These units are partly covered by even more recent alluvial and colluvial sediments and aeolian sand dunes.

Geophysical Mapping

Seismic geophysical mapping of the basin thickness has been undertaken using passive seismic techniques, with the aim of developing an understanding of basin geometry and thickness of the sediments hosting the brine. This method distinguishes lithologies with highly contrasting seismic velocities such as unconsolidated lake sediments and harder cemented sediments, basement rocks or ignimbrites.

The distinct reflectors identified in the survey correlate well with dense lithologies such as a number of ignimbrite units within the predominantly sandy sediments and the thick partially cemented conglomerate likely to overly basement rocks intersected at 300m depth in K06D08 in the southeast of the project area. Drilling at K06 provides a correlation with the seismic survey and indicates the presence of unconsolidated (probably sandy) sediments to a depth in excess of 500m under gravel cover away from the areas of surface salt where drilling is currently being conducted and in excess of 600m in the vicinity of site K03.

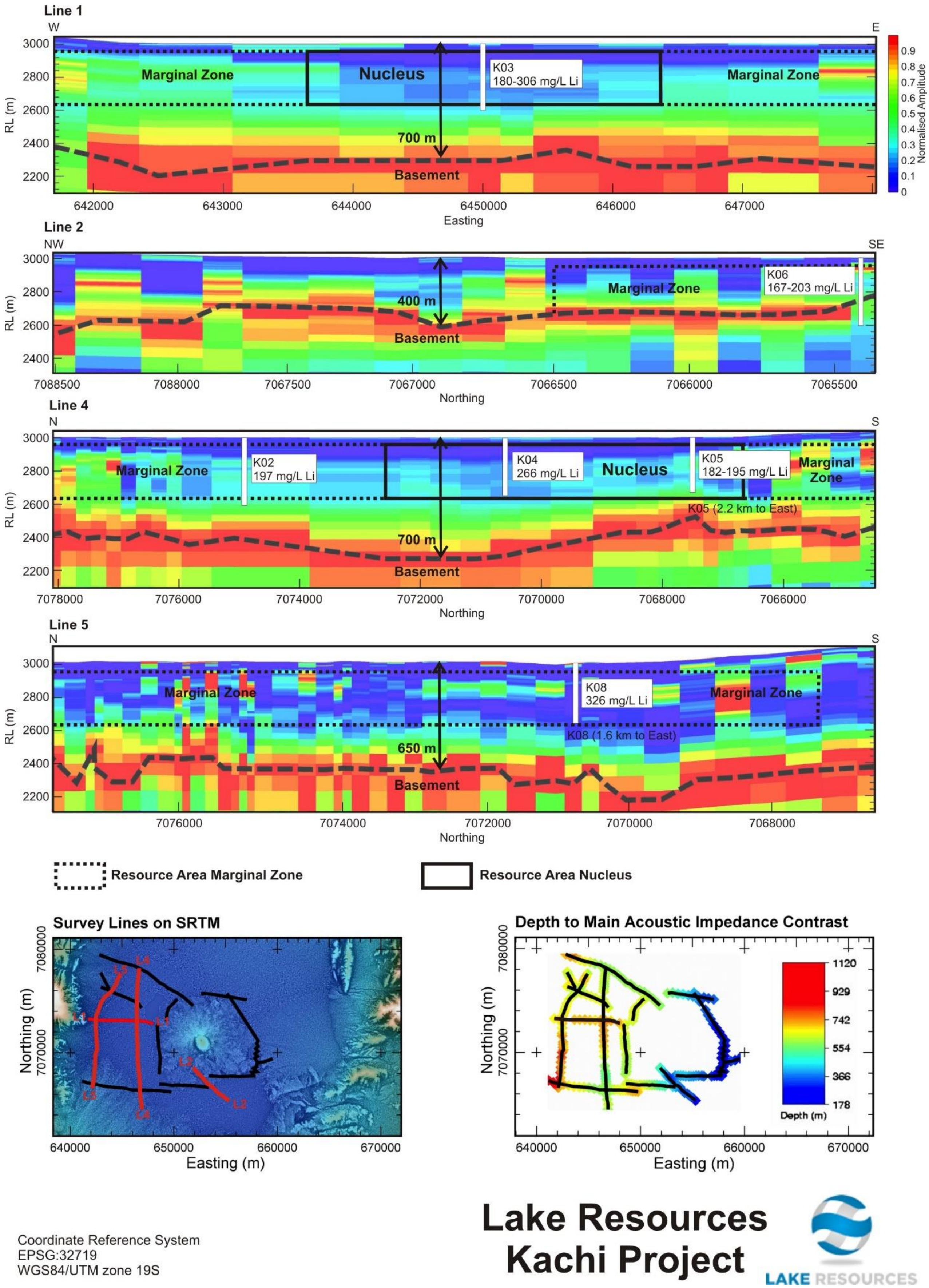

Figure 2. Kachi Lithium Project Seismic Profiles showing location and depth to basement together with the depths used in the mineral resource estimate and exploration target calculation (thick dashed black line is the basement reflector).

Figure 2 shows a schematic cross-section and raw data used for the interpretation. Importantly the seismic survey also suggests the majority of the basaltic shield forms a thin veneer overlying the salt lake and permeable basin infill likely to host brine also continues beneath surficial ignimbrite further south, considered very positive for the project as it further increases the volume of sediments that potentially host brines.

Surface Water Hydrology

The Kachi salt lake has formed in a sub-regional topographic low and the catchment covers an area of 6800 km2. The catchment is entirely closed and there is no surface water outflow from the basin. Two large alluvial fans from the north and south provide a pathway for surface water to enter the salt lake, although seasonal surface flooding events are rare.
A permanent surface water feature, “Laguna” , occupies areas to the west and south of the Basaltic shield volcano. These “Laguna” are being fed primarily from springs emanating from the basalt and sub basin brine from depth.

Groundwater Hydrology
Diamond drilling intersected thick intervals of intercalated sands, gravels and sandy clays with some clay horizons. The predominant litho-type of these sediments is sand-dominant, and poorly consolidated, with relatively low core recoveries in sandy material. Initial indications from field hydraulic testing indicate high permeabilities for the sandy material, which will be further tested with the installation of large diameter production test bores. Available down hole geophysics supports the presence of predominantly sandy material.

Observations Appendix A:
The following information and tables are provided to ensure compliance with the JORC Code (2012) requirements for the reporting of Exploration Results and Mineral Resources.

2017-18 Drilling program
Between December 2018 and the end of October 2018, the company drilled a total of 7 Diamond holes and 8 rotary drill holes on the project for a total of 3150m. The resource drilling program consisted of up to 400m deep drill holes for brine sampling. Table 1 shows exploration drill hole details to date.

Resource Drilling Methods

DDH drilling
The diamond drill hole program used HQ drill equipment and HWT casing. Where drilling was prevented due to unconsolidated sands, which also affected core recovery, Rotary drilling was carried out using a 3-7/8-inch tri-cone bit, with sample recovery through the HWT casing to surface. The rotary drilling provided information on the lithologies encountered, although not of the same quality provided by diamond drilling. Drill cuttings were recovered from drilling fluid, stored in plastic bags, with representative samples collected in labelled chip trays.

Rotary Drilling
Conventional rotary drilling was undertaken using drilling muds to allow drilling in the unconsolidated sands that predominate in the project. Rotary drill holes were drilled to depths up to 400 m, with the installation of filters / screens and solid casing to allow the pumping of these holes as test pumping wells. Drill cuttings were collected and described during drilling operations.

Drill Hole Spacing and Density
Drill holes are located within the Lake Resources properties with a hole spacing from drilling between 1 km and 3 km in the resource area, and up to 6km outside the central area, although holes are clustered together on drill platforms and drilled to different depths. The overall drill hole density is 1 bore per 11 km^2. The drill hole density is considered adequate to support Inferred and Indicated resource categories.

Table 1: Kachi Lithium Project – details of drill-hole locations

Exploration Hole	Drilling Method	Easting	Northing	Total Depth (m)	Assay Interval (m)	Lithium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)
Northern Area								
K07D01	Diamond	643829	7073100	76.25	10 - 34	157		3330
K03D02	Diamond	644880	7073149	150.5	74 - 92	180	1740	4435
K03R03	**Rotary**	**644898**	**7073147**	**242**	**213 - 237**	**306***	**1307***	**5998***
K03R12	**Rotary**	**644885**	**7073132**	**400**	**358 - 400**	**267***	**1180***	**5180***
K02D13	Diamond	646432	7074897		60	217	3557	4438
					64 - 108	182	2884	3620
					269 - 298	204	2163	4100
					313 - 343	**252**	**1411**	**4987**
Southern Area								
K06D04	Diamond	655320	7065352	167.5	95 - 113	203	766	3321
K06R05	Rotary	655273	7065354	87	68 - 85	167	1000	3160
K06R06	Rotary	655307	7065374	180	Not Sampled			
K06R07	Rotary	655326	7065362	189	159 – 179	191	1009	961
K06D08	Diamond	655326	7065362	405	69 -70	194	958	3171
					120 - 121	191	873	3199
					165-166	170	880	3650
					205-206	164	894	3590
					258-259	164	888	3560
					354-405	170	877	3670
K05D09	Diamond	648899	7067469	139	62	83	1229	965
					108	222	1325	4360
K05D11	Diamond	648902	7067491	391	157	95	1460	1926
					188	215	919	3596
					224 - 248	175	876	3065
					289	143	1088	2251
					300.5	116	1035	1782
					291 - 334	234	3199	4980
					349 - 391	185	1955	3892
K08R14	**Rotary**	**644218**	**7070750**	**364**	**301 - 361**	**326***	**1232***	**6038***
K04R15	**Rotary**	**646454**	**7070594**	**350**	**290 - 350**	**265***	**1154***	**4993**

Coordinates are WGS84 Z19 South
No samples collected from drillhole R10

* Average for multiple samples during extended air lift

Diamond Drill Hole Sampling

Diamond holes were sampled using the drive point method in which a spear is pushed into the sediments at the base of the hole and a diaphragm is punctured to allow fluid from the sediments surrounding the spear to flow into the base of the rods connected to the spear. Prior to sampling fluid is purged from the hole, to minimise the risk of sample contamination with drilling fluids. Sampling for brine in unconsolidated sandy material is challenging, because of the high porosity and permeability of the sediments, with sand entering into and blocking sampling equipment periodically.

Rotary Drill Hole Sampling

Sampling from larger diameter installed screens was undertaken using an extended period (3 day) of air lifting tests where routine samples were taken to test the consistency of the brine. Samples for this method were composited over an installed screen interval.

Installation of wells – construction

All resource drill holes in the diamond program were converted to 50 mm diameter monitoring wells on completion of drilling. Production wells were installed in large diameter rotary drill holes, drilled at 254mm diameter. This included 150mm PVC screened at variable intervals as indicated in Table 1 by the assay intervals.

Pumping Tests

Although no specific test pumping have been undertaken to date, test bores have been installed for this purpose. Air lift pumping has been conducted for multiple days to obtain brine chemistry samples and evaluate recovery characteristics of the aquifer from these events – which indicate very high transmissivities (permeabilities) typical of all locations drilled to date.

Brine Sampling and Analysis

Lithium brine projects are fundamentally different to hard rock mining projects, in that the lithium is dissolved in brine, which is hosted in pore spaces in sediments. During the exploration stage brine must be sampled for resource estimation in a representative way to minimize the potential for contamination between sample intervals. Brine will flow into the drill hole as it is advanced.

In the Kachi project the brine sampling was carried out using a different methodology for each of the types of drilling, with different levels of confidence in the sampling. Sampling methods include:

- Bailer – tubular sampling tools with a non-return valve which remain open until lowered to a chosen depth (bottom of hole). When the bailer is drawn back up, the weight of the water seals the bailer base.
- Drive Point – air lifting from a spear advanced past the diamond drill bit.
- Installed production test bores - Air Lifting from a defined screen interval.

Unconsolidated sands caused difficulties during the HQ Diamond drilling program rendering bailer and drive point methods inadequate. Where this occurred, redrilling with rotary methods was undertaken and bulk sampling over selected intervals enabled defined sampling at depth.

Brine Chemistry

Brines typically with a high density (1.18 - 1.22 g/cm^3) have been intersected throughout the thick sandy aquifers. Analytical results for lithium to date have been highest (more than 300mg/L lithium) in drill-holes K03R03 and K08R14. Brine samples in these holes display encouraging densities with a favourable Mg/Li ratio of 3.8 to 4.3 respectively. There is a very high correlation of Lithium with Potassium.

Other brine samples from drill holes and surficial grid-based pit sampling, shows a high variability of lithium concentrations with a higher relative magnesium concentration in locations that show lower lithium results. This suggests shallower samples are more variable, and potentially reflects the influence of more dilute surficial brine in shallow stratigraphy.

Brine Assays and QA/QC Measures

Brine samples were submitted to the primary laboratory (Alex Stewart Argentina) accompanied by blind QA/QC samples comprising field duplicates, laboratory certified standard samples and blank (fresh water) samples. Two standard samples were prepared from the project. These standard samples were then submitted to SGS in Argentina, and a third laboratory in Australia (ALS), to check the performance.

A total of 104 primary brine samples have been analysed from the ongoing 2017-18 drilling campaign. These primary analyses were supported by a total 44 QA/QC analyses consisting of 19 standard samples, 14 duplicates and 11 blank samples. This is a rate of 18% duplicates, 13% for standards and 10% for blanks.

In addition to evaluation of standards, field duplicates and blanks the ionic balance (the difference between the sum of the cations and the anions) was evaluated for data quality. Balances are generally considered to be acceptable if the difference is <5% and were generally <1%. Two samples were rejected as having > 5% balances. The results of standard duplicate and blank samples analyses are considered to be adequate and appropriate for use in the resource estimation.

Porosity Data Collection - Core Sampling and Laboratory testing

Diamond drilling was conducted to collect samples of the sediments to evaluate variations in grain size, porosity and permeability. Core samples collected from diamond drilling were collected in plastic tubes within the core barrel, to minimise disturbance of the sample. Intervals of the core were cut from tubes and sealed with caps and tape to maintain sample humidity during transport to the laboratory.

Specific Yield Test Methodology

For the 2017-18 drilling program to date the Geosystems Analysis Laboratory, in Arizona USA, was used as the primary test laboratory. A Relative Solution Release Capacity (RSRC) methodology in which samples are re-saturated with a synthetic brine based on the composition of the average salar brine and then tested over a period of 6 days, was used to drain brine from the samples under simulated geostatic conditions.

Grain size analyses were completed on select core samples to understand the particle size distribution and correlate these results with the stratigraphy observed which to date has been interpreted as a single massive geological unit. Observations of grain size of the holes, where a tri-cone bit was used, assist to conceptualise hydrogeology and develop a relationship to permeability. It should be noted however, that there is a bias towards coarser fractions during sampling during rotary drilling.

Based on all the results collected for the project to date average drainable porosity (Sy) values form a reasonably normal statistical distribution and show no apparent significant differences throughout the stratigraphic profile again indicating that the sequence is a massive continuous sand aquifer with intercalations of finer material. However, this will be further tested with collection and testing of additional samples. Mean Sy from test work to date is 13%, whereas for the sample population available to date the geometric mean is 10.9% and the Harmonic mean is 7.5%. This indicates a slight skew towards sediments with a finer fraction which is also reflected in the grain size analysis undertaken. However, this is more a reflection of a higher proportion of finer grained samples taken due to the much higher core recovery rate in these sediments compared to more sandy material . Downhole geophysics (natural gamma) demonstrates the consistently variable nature of the stratigraphic profile oscillating between fine to medium sands and fine sands, silts and clays. A reflection of the mixed fluvial, colluvial and aeolian depositional regimes.

Reasonable Prospects for Resource Extraction

Porosity testing and air lift tests indicate that the porosity and permeability characteristics of the sediments in the resource area are very favourable for brine extraction by pumping. The company is working with lithium processing company Lilac Solutions to evaluate direct extraction of lithium from the Kachi brine. Direct extraction technologies provide many advantages over traditional evaporation pond concentration. As test work is ongoing the eventual potential cut-off grade that may apply to Kachi brine is uncertain. Consequently the resource is presented as a global tonnage without application of a cut-off grade.

Mineral Resource Estimation

Resource Inputs

Area

The resource area was constrained by the location of the holes drilled by the company, restricting the Indicated resource to within 2 km of drill holes and the Inferred resource to within 4 km of drill holes. Additional constraints on the area of the resource are the limits of the properties held by the company and the surface outcrop of the basalt shield volcano. Although it is interpreted to be very likely sediments hosting brine underlie the basalt volcano, no resource has been estimated in this area at this time, providing potential resource upside with the completion of additional drilling.

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Thickness

The brine resource begins within 50 m from the surface of the salt lake and continues to the maximum depth of the drilling at 400 m, extending over a uniform thickness of 350 m throughout the resource area. The seismic geophysical survey indicates that the host sediments extend well below 400 m in the west of the basin. The exploration target which was recently released outlined the potential extent of brine mineralisation.

Porosity

Specific yield (Drainable porosity) results from laboratory testing were used to estimate the brine volume and associated resource estimate. The specific yield for each designated resource area was assigned a specific yield value based on statistical averages with a geometric mean of 10.9% applied to the higher confidence zone providing an indicated resource and a harmonic mean of 7.5% applied to inferred areas due to lower confidence at greater distances from test locations. Assigned values have been rounded to the nearest decimal place.

Brine Concentrations

There is variability in brine concentrations, both laterally and vertically, with the highest lithium concentrations in the upper halite unit and a slight increase in brine concentration noted with depth. The upper halite unit and the upper 50 m of the sediments have been excluded from the resource as there is evidence that to a depth of 50 m lithium concentrations are diluted due to surface waters and are not representative of the lithium concentrations at greater depths. As a relatively limited number of brine samples are available, due to difficulties with brine sampling in the friable highly porous sediments averages of the available data were applied in the higher confidence zone classified as Indicated (289 mg/L lithium) and in the lower confidence zone classified as Inferred (209 mg/L Lithium).

Resource Estimation Methodology

Nucleus and marginal zones were defined from an interpretation of satellite imagery, topography, drill hole geology and drill hole chemistry (nucleus K03, K04, K08 average 289 mg/L Li; marginal zone K02, K05, K06 average 193 mg/L Li). Resource areas were defined and classified as: Indicated = 0-2,000 m radius from drill holes with an average drill hole spacing of approximately 2,500 m; Inferred = 2,000-4,000 m radius from drill holes. The indicated nucleus has been tested by five drill holes on platforms K03, K04 and K08 with a spacing of 2240-2990 m between platforms. The inferred marginal zones have been tested by ten drill holes on platforms K02, K05 and K06 with a spacing of 6.7-7.8 km between platforms. These spacings fall well within suggested drill hole spacings for the evaluation of immature salars: 2.5 km = measured; 5 km = indicated; 7-10 km = inferred (Houston et al., 2011).

Average elevation of the Carachi Pampa salar was calculated from SRTM data to be 3007 m and the depth to basement and thickness of host basin sedimentary cover was calculated from the 278 Tromino passive seismic stations. Grid interpolation of the thickness of host sedimentary cover for the Kachi project area was completed using inverse distance squared method and the average thickness of 500 x 500 m blocks was calculated from this grid with a cut off depth of 400 m. The volume of sediments was calculated for each block and the total volume of brine calculated for each of the resource area polygons using the specific yields discussed above and excluding the top 50 m below 3007 m and 2957 m RL's as discussed above.

The salar nucleus and brine is inferred to extend beneath lake sediments, pyroclastic sediments and dunes exposed to the south of the outcropping Carachi Pampa salar. Marginal zone brine is inferred to extend beneath alluvial and barreal cover to the west and north of Carachi Pampa salar. It is possible that this marginal zone brine is underlain by lake/salar sediments hosting higher grade nucleus brines but this has not been inferred in this estimate. It is possible that brines also extend beneath the western and southern flanks of the Carachi Pampa shield volcano but this has not been inferred in this estimate.

This resource estimate assumes uniform brine extends from 50 m below the Carachi Pampa salar surface (3007 m RL) to 400 m below surface 2607 m RL, the maximum depth of drilling to date. Passive seismic data suggest basin sediments (and potentially brine) extend to +700 m depths below surface but an average thickness of ~350 m has been assumed for both the marginal and nucleus brine bodies in this preliminary resource estimate. Figure 3 shows resource areas generated from this approach.

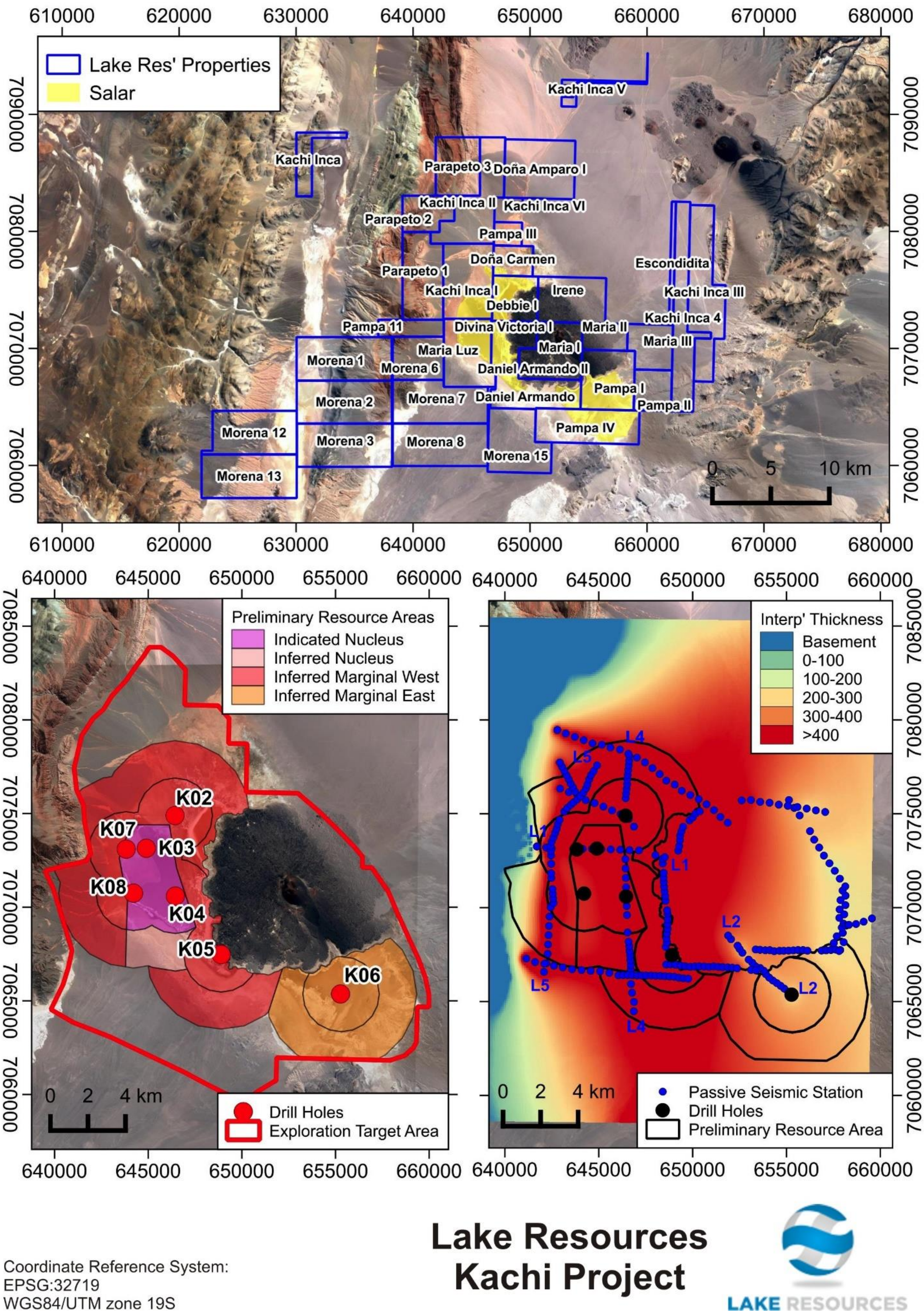

Figure 3. Kachi Lithium Project showing mining lease boundaries and areas defined by levels of confidence to the mineral resource estimate and exploration target with the Seismic Survey Results.

Model Domain Constraints

Average elevation of the Kachi salt lake was calculated from SRTM_23_18 data to be 3007 m AHD. The minimum, maximum and mean thickness of host sedimentary cover was calculated for each of the 989 block (average of 19 cells per block) using QGIS Grid Statistics for Polygons algorithm from the second interpolated thickness of sedimentary cover grid reduced to a maximum thickness of 400 m. The upper 50 m was then clipped from the model. The basis for removing the upper 50m was uncertainty in results from shallow sampling and a chemical signature with high magnesium to Lithium ratio suggesting contamination from surficial brine used as drilling fluids.

Resource Output

The initial resource estimate (Table 2) contains a total resource of 188,000 tonnes of lithium metal classified as Indicated and 638,000 tonnes of lithium metal classified as Inferred. It also contains a total resource of 3.5 million tonnes of potassium classified as Indicated and 12.5 million tonnes of potassium classified as Inferred. In total, this is 1,092,500 tonnes of lithium metal or 4.4 million tonnes of lithium carbonate, and 30 million tonnes of Potassium Chloride. A conversion factor of 5.32 was used for lithium carbonate and 1.91 for Potassium Chloride was used to convert the lithium and potassium content to the equivalent in compounds. The resource is based on the specific yield, the relevant lithium and Potassium concentrations and constrained volume. It represents the portion of the exploration target volume which could potentially be extracted using wells across the properties.

Table 2: Kachi Mineral Resource Estimate - November 2018 (JORC Code 2012 Edition)

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	Indicated		Inferred		Total Resource	
Area km^2	17.10		158.30		175.40	
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Brine volume km^3	0.65		3.2		3.8	
Mean drainable porosity % (Specific yield)	10.9		7.5		7.9	
Element	Li	K	Li	K	Li	K
Weighted mean concentration mg/L	289	5,880	209	4,180	211	4,380
Resource tonnes	188,000	3,500,000	638,000	12,500,000	826,000	16,000,000
Lithium Carbonate Equivalent tonnes	**1,005,000**		**3,394,000**		**4,400,000**	
Potassium Chloride tonnes	6,705,000		24,000,000		**30,700,000**	

Resource Classification (JORC)

The resource estimate consists of Indicated and Inferred resources. Figure 4 shows property boundaries. The resource which is classified as Indicated is in Kachi Inca I and Maria Luz properties, where drilling has been focused. The resource classified as inferred includes the following properties: Daniel Armando, Debbie I, Divina Victoria I, Doña Carmen, Kachi Inca II, Kachi Inca VI, Maria Luz, Morena 15, Morena 6, Morena 7, Pampa I, Pampa II, Pampa III, Pampa IV, Parapeto 1, Parapeto 2 and Parapeto 3.

Exploration Target (JORC)

The company previously released an exploration target suggesting the potential dimensions of the Kachi project which covers the area of the resource defined in this document. The resource lies entirely within the area of the exploration target and is not additive to it. The geological exploration target area was generated based on the following lines of logic.

Additionally, a passive seismic survey has been undertaken over a large portion of the basin and this has provided a critical insight into basin delineation with summary data presented above showing basin depths in the west extending beyond 700m depth. The seismic profiles show a strong reflection boundary which has shown good correlation with drilling data from Platform K06 in the south east. This reflection boundary corresponds to partially cemented conglomerates, ignimbrites and basement lithologies. Above this are basin infill sediments with lower sediment density, which are sandy and relatively uniform in nature. These correlate to intercalated sands and clays to 400m depth in the drilling to date.

The exploration target area has three primary zones (refer to LKE announcement 7 November 2018). An inner zone with the highest concentration of seismic survey lines and in which all drilling has currently been undertaken. This is the high confidence volume given the data collected to date.

A second, moderate confidence zone, which has seismic profile data but no drilling, surrounds the central high confidence zone where trends from geological analysis indicate considerable thicknesses of lake sediments are present. The brine may also continue outside of this zone as geological and geophysical evidence suggests it is open to the north and south into the low confidence zone.

The inner high confidence zone is further delineated into an Eastern Sector and Western Sector, based around the drilling results and differences in sediment thickness. The western Sector occupies a zone west of the basalt shield volcano where indicated depths are more than 700m.

The key parameters in generating an estimate of the exploration target includes:

- a surface representing the base of the basin, as the primary reflection depth from the passive seismic results was generated representing the basin geometry
- Surface topography from SRTM99
- Upper 25m removed based on surface topography
- Maximum drilling depths to date; and
- Lake Resources property boundaries

An upper layer of 25m was been removed from the exploration target. This has been based on geochemical data which indicates variable lithium grades and higher magnesium signature in the shallow zone. A volumetric model was built using raster mathematics within QGIS software and separated aerially based on the zones of confidence defined.

A range of specific yields was applied to the resulting volumetric zones, 7.5% and 10.9% respectively. Although the average data from physical property testing to date suggests a higher potential value with mean average of all data results for Sy being 13%, there is some uncertainty of higher value results as these tend to be sand dominated and are disturbed during sample collection. Validation of composite specific yield data will improve validation with aquifer test pumping planned at a later date. The resulting volume represents pore space that is potentially recoverable and occupied by brine.

Lithium and potassium concentrations were applied to the brine volumetric estimates for each zone. The upper and lower concentration estimate is based on analytical geochemistry to date and the range represents one standard deviation from the overall average.

Conversion factors were applied to the resulting mass of Lithium to produce an estimate of Lithium Carbonate (5.32) and for Potassium to Potassium Chloride (1.91). The results are presented in Table 3.

The geological exploration target is estimated to range between **8 million tonnes and 17 million tonnes LCE** (lithium carbonate equivalent) over an equivalent area of 20 kilometres x 15 kilometres, based on containing brines from near surface to 400 metre depths within approximately 13 cubic kilometres of brine (13,000 gigalitres). Table 3 provides the details of the geological exploration potential in the confidence sectors defined The upper and lower ranges of the geological potential were bounded by one standard deviation around the calculated average lithium concentration of the limited data collected to date. All indications are that the typical sediment infill stratigraphy of the basin system has excellent hydraulic characteristics. The geology of the Kachi basin suggests there is good potential to convert brine within the exploration target to a defined resource. The exploration target is based on completed exploration within the high probability zone, with the moderate probability zone subject to future exploration.

Table 3: Kachi Project Potential – Exploration Target Estimate

KACHI EXPLORATION TARGET ESTIMATE										
Subarea	**Area km²**	**Average Thickness m**	**Specific yield %**	**Brine volume million m³**	**Lithium Concentration mg/L**	**Contained Lithium metric tonnes**	**Lithium Carbonate tonnes***	**Potassium Concentration mg/L**	**Contained Potassium metric tonnes**	**Potassium Chloride tonnes***
UPPER RANGE SCENARIO										
High Confidence Western Sector	55.2	375	10%	2,801	310	641,000	**3,412,000**	5,880	16,470,000	31,457,000
High Confidence Eastern Sector	16.7	338	10%	873	250	141,000	752,000	5,880	5,133,000	9,804,000
Moderate Confidence Sector	150.7	350	10%	6,631	310	1,633,000	8,689,000	5,880	38,990,000	74,471,000
Low Confidence Sector	72.6	321	10%	2,733	310	723,000	3,849,000	5,880	16,070,000	30,694,000
					Total	3,139,000	**16,700,000**		76,663,000	146,426,000
LOWER RANGE SCENARIO										
High Confidence Western Sector	55.2	375	7%	2,801	210	304,000	**1,618,000**	4,180	6,053,000	32,204,000
High Confidence Eastern Sector	16.7	338	7%	873	150	83,000	442,000	4,180	1,655,000	8,803,000
Moderate Confidence Sector	150.7	350	7%	6,631	210	774,000	4,120,000	4,180	15,415,000	82,009,000
Low Confidence Sector	72.6	321	7%	2,733	210	343,000	1,825,000	4,180	6,828,000	36,327,000
					Total	1,480,000	**7,878,000**		29,951,000	159,342,000

Numbers may not add, due to rounding

Competent Person's Statement – Cauchari Lithium Brine Project

The information contained in this ASX release relating to Exploration Results has been compiled by Mr Andrew Fulton. Mr Fulton is a Hydrogeologist and a Member of the Australian Institute of Geoscientists and the Association of Hydrogeologists. Mr Fulton has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a competent person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Andrew Fulton is an employee of Groundwater Exploration Services Pty Ltd and an independent consultant to Lake Resources NL. Mr Fulton consents to the inclusion in this announcement of this information in the form and context in which it appears. The information in this announcement is an accurate representation of the available data from initial exploration at the Cauchari project.

APPENDIX 1 - JORC Code, 2012 Edition

JORC Table 1 Report: Kachi Lithium Brine Project

Criteria	Section 1 - Sampling Techniques and Data
Sampling techniques	• Brine samples were taken from the diamond drill hole with a bottom of hole spear point during advance and using a straddle packer device to obtain representative samples of the formation fluid by purging a volume of fluid from the isolated interval, to minimize the possibility of contamination by drilling fluid then taking the sample. Low pressure airlift tests are used as well. The fluid used for drilling is brine sourced from the drill hole and the return from drillhole passes back into the excavator dug pit lined to avoid leakage. • The brine sample was collected in a clean plastic bottle (1 litre) and filled to the top to minimize air space within the bottle. A duplicate was collected at the same time for storage and submission of duplicates to the laboratory. Each bottle was taped and marked with the sample number. • Drill core in the hole was recovered in 1.5 m length core runs in core split tubes to minimize sample disturbance. • Drill core was undertaken to obtain representative samples of the sediments that host brine.
Drilling techniques	• Diamond drilling with an internal (triple) tube was used for drilling. The drilling produced cores with variable core recovery, associated with unconsolidated material, in particularly sandy intervals. Recovery of these more friable sediments is more difficult with diamond drilling, as this material can be washed from the core barrel during drilling. • Rotary drilling has used 8.5" or 10" tricone bits and has produced drill chips. • Brine has been used as drilling fluid for lubrication during drilling.
Drill sample recovery	• Diamond drill core was recovered in 1.5m length intervals in the drilling triple (split) tubes. Appropriate additives were used for hole stability to maximize core recovery. The core recoveries were measured from the cores and compared to the length of each run to calculate the recovery. Chip samples are collected for each metre drilled and stored in segmented plastic boxes for rotary drill holes. • Brine samples were collected at discrete depths during the drilling using a double packer over a 1 m interval (to isolate intervals of the sediments and obtain samples from airlifting brine from the sediments within the packer). • As the brine (mineralisation) samples are taken from inflows of the brine into the hole (and not from the drill core – which has variable recovery) they are largely independent of the quality (recovery) of the core samples. However, the permeability of the lithologies where samples are taken is related to the rate and potentially lithium grade of brine inflows.
Logging	• Sand, clay, silt, salt and cemented rock types was recovered in a triple tube diamond core drill tube, or as chip samples from rotary drill holes, and examined for geologic logging by a geologist and a photo taken for reference. • Diamond holes are logged by a senior geologist who also supervised taking of samples for laboratory porosity analysis as well as additional physical property testing. • Logging is both qualitative and quantitative in nature. The relative proportions of different lithologies which have a direct bearing on the overall porosity, contained and potentially extractable brine are noted, as are more qualitative characteristics such as the sedimentary facies and their relationships. When cores are split for sampling they are photographed.
Sub-sampling techniques and sample preparation	• Brine samples were collected by packer and spear sampling methods, over a metre. Low pressure airlift tests are used as well to purge test interval and gauge potential yields. • The brine sample was collected in one-litre sample bottles, rinsed and filled with brine. Each bottle was taped and marked with the sample number.
Quality of assay data and laboratory tests	• The Alex Stewart Argentina/Norlab SA in Palpala, Jujuy, Argentina, is used as the primary laboratory to conduct the assaying of the brine samples collected as part of the sampling program. The SGS laboratory in Buenos Aires has also been used for both primary and check samples. They also analyzed blind control samples and duplicates in the analysis chain. The Alex Stewart/Norlab SA laboratory and the SGS laboratory are ISO 9001 and ISO 14001 certified, and are specialized in the chemical analysis of brines and inorganic salts, with experience in this field. This includes the oversight of the experienced Alex Stewart Argentina S.A. laboratory in Mendoza, Argentina, which has been operating for a considerable period. • The quality control and analytical procedures used at the Alex Stewart/Norlab SA laboratory or SGS laboratory are considered to be of high quality and comparable to those employed by ISO certified laboratories specializing in analysis of brines and inorganic salts.
Verification of sampling and assaying	• Field duplicates, standards and blanks will be used to monitor potential contamination of samples and the repeatability of analyses. Accuracy, the closeness of measurements to the "true" or accepted value, will be monitored by the insertion of standards, or reference samples, and by check analysis at an independent (or umpire) laboratory. • Duplicate samples in the analysis chain were submitted to Alex Stewart/Norlab SA or SGS laboratories as unique samples (blind duplicates) during the process

	• Stable blank samples (distilled water) were used to evaluate potential sample contamination and will be inserted in future to measure any potential cross contamination • Samples were analysed for conductivity using a hand-held Hanna pH/EC multiprobe. • Regular calibration using standard buffers is being undertaken.
Location of data points	• The diamond drill hole sample sites and rotary drill hole sites were located with a hand-held GPS. • The properties are located at the junction of the Argentine POSGAR grid system Zone 2 and Zone 3 (UTM 19) and in WGS84 Zone 19 south.
Data spacing and distribution	• Brine samples were collected over 1m intervals every 6 m intervals within brine producing aquifers, where this was possible.
Orientation of data in relation to geological structure	• The salt lake (*salar*) deposits that contain lithium-bearing brines generally have sub-horizontal beds and lenses that contain sand, gravel, salt, silt and clay. The vertical diamond drill holes will provide a better understanding of the stratigraphy and the nature of the sub-surface brine bearing aquifers
Sample security	• Samples were transported to the Alex Stewart/Norlab SA laboratory or SGS laboratory for chemical analysis in sealed 1-litre rigid plastic bottles with sample numbers clearly identified. Samples were transported by a trusted member of the team. • The samples were moved from the drillhole sample site to secure storage at the camp on a daily basis. All brine sample bottles sent to the laboratory are marked with a unique label not related to the location.
Review (and Audit)	• No audit of data has been conducted to date. However, the CP has been onsite periodically during the programme. The review included drilling practice, geological logging, sampling methodologies for water quality analysis and, physical property testing from drill core, QA/QC control measures and data management. The practices being undertaken were ascertained to be appropriate.
Criteria	**Section 2 - Mineral Tenement and Land Tenure Status**
Mineral tenement and land tenure status	• The Kachi Lithium Brine project is located approximately 100km south-southwest of FMC's Hombre Muerto lithium operation and 45km south of Antofagasta de la Sierra in Catamarca province of north western Argentina at an elevation of approximately 3,000m asl. • The project comprises approximately 69,047 Ha in thirty six mineral leases (minas) of which five leases (9,445 Ha) are granted for drilling, twenty two leases are granted for initial exploration (51,560 Ha) and nine leases (8042 Ha) are applications pending granting. • The tenements are believed to be in good standing, with statutory payments completed to relevant government departments.
Exploration by other parties	• Marifil Mines Ltd conducted sparse surface pit sampling of groundwater at depths less than 1m in 2009. • Samples were taken from each hole and analysed at Alex Stewart laboratories in Mendoza Argentina. • Results were reported in an NI 43-101 report by J. Ebisch in December 2009 for Marifil Mines Ltd. • NRG Metals Inc commenced exploration in adjacent leases under option. Two diamond drill holes intersected lithium bearing brines. The initial drillhole intersected brines from 172-198m and below with best results to date of 15m at 229 mg/L Lithium, reported in December 2017. The second hole, drilled to 400 metres in mid-2018, became blocked at 100 metres and could not be sampled. A VES ground geophysical survey was completed prior to drilling. A NI 43-101 report was released in February 2017. • No other exploration results were able to be located
Geology	• The known sediments within the *salar* consist of salt/halite, clay, sand and silt horizons, accumulated in the *salar* from terrestrial sedimentation and evaporation of brines. • Brines within the Salt Lake are formed by solar concentration, interpreted to be combined with warm geothermal fluids, with brines hosted within sedimentary units. • Geology was recorded during the diamond drilling and from chip samples in rotary drill holes.
Drill hole Information	• Lithological data was collected from the holes as they were drilled and drill cores or chip samples were retrieved. Detailed geological logging of cores is ongoing. • All drill holes are vertical, (dip -90, azimuth 0 degrees).
Data aggregation methods	• Assay averages have been provided where multiple sampling occurs in the same sampling interval.
Relationship between mineralisation widths and intercept lengths	• Mineralisation interpreted to be horizontally lying and drilling perpendicular to this.
Diagrams	• A drill hole location plan is provided showing the locations of the drill platforms. Individual drill locations are provided in Table 1.
Balanced reporting	• Brine assay results are available from 13 drill holes from the drilling to date, reported here. Information will be provided as it becomes available.
Other substantive exploration data	• There is no other substantive exploration data available regarding the project.
Further work	• The company has undertaken a 1000m maiden diamond drilling programme and 2000m maiden rotary water well drilling programme which is being expanded based on results.

Criteria	Section 3 Estimation and Reporting of Mineral Resources
Database integrity	• Data was transferred directly from laboratory spreadsheets to the database. • Data was checked for transcription errors once in the database, to ensure coordinates, assay values and lithological codes were correct • Data was plotted to check the spatial location and relationship to adjoining sample points • Duplicates and Standards have been used in the assay process. • Brine assays and porosity test work have been analysed and compared with other publicly available information for reasonableness. • Comparisons of original and current datasets were made to ensure no lack of integrity.
Site visits	• The Competent Person visited the site multiple times during the drilling and sampling program. • Some improvements to procedures were made during visits by the Competent Person
Geological interpretation	• The geological model is continuing to develop. There is a high level of confidence in the interpretation of for the Project to date. There are relatively consistent geological units with relatively uniform, clastic sediments. • Any alternative interpretations are restricted to smaller scale variations in sedimentology, related to changes in grain size and fine material in units. • Data used in the interpretation includes rotary and diamond drilling methods. • Drilling depths and geology encountered has been used to conceptualize hydro-stratigraphy. • Sedimentary processes affect the continuity of geology, whereas the concentration of lithium and potassium and other elements in the brine is related to water inflows, evaporation and brine evolution in the salt lake.
Dimensions	• The lateral extent of the resource has been defined by the boundary of the Company's properties. The brine mineralisation consequently covers 142 km^2. • The top of the model coincides with the topography obtained from the Shuttle Radar Topography Mission (SRTM). The original elevations were locally adjusted for each borehole collar with the most accurate coordinates available. The base of the resource is limited to a 400 m depth. The basement rocks underlying the salt lake sediments have been intersected in drilling. • The resource is defined to a depth of 400 m below surface, with the exploration target immediately extending beyond the areal extend of the resource.
Estimation and modelling techniques	• No grade cutting or capping was applied to the model. • No assumptions were made about correlation between variables. Lithium and potassium were estimated independently.
Moisture	• Moisture content of the cores was not Measured (porosity and density measurements were made), but as brine will be extracted by pumping not mining this is not relevant for the resource estimation. • Tonnages are estimated as metallic lithium and potassium dissolved in brine.
Cut-off parameters	• No cut-off grade has been applied.
Mining factors or assumptions	• The resource has been quoted in terms of brine volume, concentration of dissolved elements, contained lithium and potassium and their products lithium carbonate and potassium chloride. • No mining or recovery factors have been applied (although the use of the specific yield = drainable porosity is used to reflect the reasonable prospects for economic extraction with the proposed mining methodology). • Dilution of brine concentrations may occur over time and typically there are lithium and potassium losses in both the ponds and processing plant in brine mining operations. However, potential dilution will be estimated in the groundwater model simulating brine extraction. • The conceptual mining method is recovering brine from the salt lake via a network of wells, the established practice on existing lithium and potash brine projects. • Detailed hydrologic studies of the lake are being undertaken (groundwater modelling) to define the extractable resources and potential extraction rates
Metallurgical factors or assumptions	• Lithium and potassium would be produced via conventional brine processing techniques and evaporation ponds to concentrate the brine prior to processing • Process test – work (which can be considered equivalent to metallurgical test work) is being carried out on the brine following initial test work.
Environmental factors or assumptions	• Impacts of a lithium and potash operation at the Kachi project would include; surface disturbance from the creation of extraction/processing facilities and associated infrastructure, accumulation of various salt tailings impoundments and extraction from brine and fresh water aquifers regionally.
Bulk density	• Density measurements were taken as part of the drill core assessment. This included determining dry density and particle density as well as field measurements of brine density. Note that no mining is to be carried out as brine is to be extracted by pumping and consequently sediments are not mined but the lithium and potassium is extracted by pumping.

	• However, no bulk density was applied to the estimates because resources are defined by volume, rather than by tonnage.
Classification	• The resource has been classified into the two possible resource categories based on confidence in the estimation. • The Measured resource reflects the predominance of sonic drilling, with porosity samples from drill cores and well constrained vertical brine sampling in the holes • The Indicated resource reflects the higher confidence in the brine sampling in the rotary drilling and lower quality geological control from the drill cuttings • The Inferred resource underlying the Measured resource in the Litio properties reflects the limited drilling to this depth together with the likely geological continuity suggested by drilling on the adjacent Cocina property and the geophysics through the property • In the view of the Competent Person the resource classification is believed to adequately reflect the available data and is consistent with the suggestions of Houston et. al., 2011
Audits or reviews	• This Mineral Resource was estimated by the Competent Person.
Discussion of relative accuracy/ confidence	• An independent estimate of the resource was completed using a nearest neighbour estimate and the comparison of the results with the ordinary kriging estimate is below 0.3% for measured resources and below 3% for indicated resources which is considered to be acceptable. • Univariate statistics for global estimation bias, visual inspection against samples on plans and sections, swath plots in the north, south and vertical directions to detect any spatial bias shows a good agreement between the samples and the ordinary kriging estimates. • References: • Houston, J., Butcher, A., Ehren, P., Evans, K., and Godfrey, L. The Evaluation of Brine Prospects and the Requirement for Modifications to Filing Standards. Economic Geology. V 106, p 12251239. • CIM Best Practice Guidelines for Resource and Reserve Estimation for Lithium Brines.

References

Houston, J., Butcher, A., Ehren, P., Evans, K., and Godfrey, L. The Evaluation of Brine Prospects and the Requirement for Modifications to Filing Standards. Economic Geology. V 106, p 12251239.

About Lake Resources NL (ASX:LKE)

Lake Resources NL (ASX:LKE, Lake) is a lithium exploration and development company focused on developing its 3 lithium brine projects and 1 hard rock project in Argentina, all owned 100%. The leases are in a prime location among the lithium sector's largest players within the Lithium Triangle where half of the world's lithium is produced. Lake holds one of the largest lithium tenement packages in Argentina (~200,000Ha) secured in 2016 prior to a significant 'rush' by major companies. The large holdings provide the potential to provide consistent security of supply demanded by battery makers and electric vehicle manufacturers.

The Kachi project covers 69,000 Ha over a salt lake south of FMC's lithium operation and near Albemarle's Antofalla project in Catamarca Province. Drilling at Kachi has confirmed a large lithium brine bearing basin over 20km long, 15km wide and 400m to 800m deep. Drilling over Kachi (currently 16 drill holes, 3100m) has produced a maiden indicated and inferred resource of 4.4 Mt LCE within a 8-17 Mt LCE exploration target.. A direct extraction technique is being tested in partnership with Lilac Solutions, which has shown 80-90% recoveries and lithium brine concentrations in excess of 3000 mg/L lithium and is planned to be trialled on site in tandem with conventional methods as part of a PFS to follow the resource statement. Scope exists to unlock considerable value through partnerships and corporate deals in the near-term.

The Olaroz-Cauchari and Paso brine projects are located adjacent to major world class brine projects either in production or being developed in the highly prospective Jujuy Province. The Olaroz-Cauchari project is located in the same basin as Orocobre's Olaroz lithium production and adjoins Ganfeng Lithium/Lithium Americas Cauchari project, with high grade lithium (600 mg/L) with high flow rates drilled immediately across the lease boundary.

Two drill rigs are currently drilling at Cauchari with results anticipated to extend the proven resources in adjoining properties into LKE's area with results anticipated from November into December 2018. This will be followed by drilling extensions to the Olaroz area in LKE's 100% owned Olaroz leases.

Significant corporate transactions continue in adjacent leases with development of Ganfeng Lithium/Lithium Americas Cauchari project with Ganfeng announcing a US$237 million for 37% of the Cauchari project previously held by SQM. Nearby projects of Lithium X were acquired via a takeover offer of C$265 million completed March 2018. The northern half of Galaxy's Sal de Vida resource was purchased for US$280 million by POSCO in June 2018. These transactions imply an acquisition cost of US$55-70 million per 1 million tonnes of lithium carbonate equivalent (LCE) in resources.

The demand for lithium continues to be strong for lithium ion batteries in electric vehicles, according to recent data from the leading independent battery minerals consultant - Benchmark Mineral Intelligence. Supply continues to be constrained suggesting good opportunities for upstream lithium companies for many years.