

## LAKE RESOURCES N.L.

ABN 49 079 471 980

---

ASX Market Announcements Office

6 February 2017

### **ELEVATED LITHIUM RESULTS - KACHI LITHIUM BRINE PROJECT - ARGENTINA**

Elevated lithium results up to 322 mg/L Lithium have been recorded from initial surface auger samples at the Kachi Lithium Brine Project of Lake Resources N.L. (ASX:LKE, "Lake") in Catamarca, Argentina.

An aggressive exploration programme recently commenced with a systematic brine sampling programme over the lithium brine salt lakes at the Kachi Project. 40 surface samples have been prioritised for analysis. Results are expected soon. Sampling over the salt lakes covered approximately 20,000 Ha within the current Lake leases of almost 50,000 Ha More. Lake controls the area 100%.

#### **Elevated Lithium Results from Initial Sampling - Actively Explored Kachi Lithium Brine Project**

Lake is pleased to provide lithium brine results from initial surface auger samples over the Kachi Lithium Brine Project in Catamarca province.

Best Results were:

- 322 mg/L Li
- 209 mg/L Li

Samples were taken on the border of the salt lake (salar). Better results may be anticipated towards the centre of the salt lake when results are available from the recently completed surface auger sampling programme. The exploration programme will continue with ground based electrical geophysics followed by drilling, with drill targets refined with further results.

Lake Resources Managing Director, Stephen Promnitz, commented "The initial results are promising and we expect additional results soon from the systematic sampling and geophysics over the salt lakes."

"These positive initial results validate our strategy of prioritising exploration over the Kachi Project. Our intention is to move quickly to drilling."

"Lake is encouraged by the increasing corporate activity in the lithium sector in Argentina. We continue to review opportunistic growth opportunities to deliver increased scale and optionality to the asset base."

#### **The Kachi Lithium Brine Project**

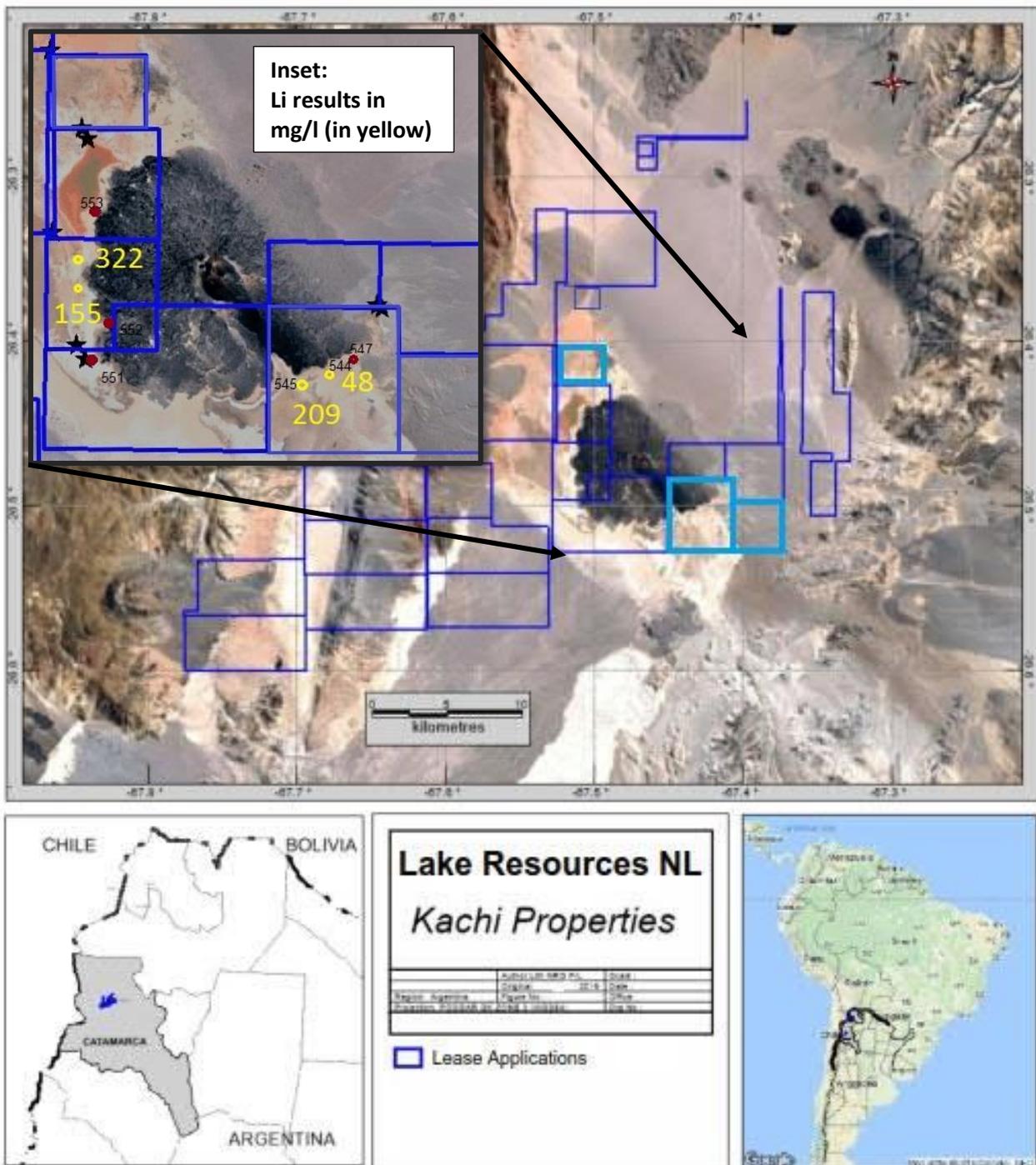
The Kachi Lithium Brine Project is located in Catamarca province, approximately 100km south of FMC's Hombre Muerto Lithium brine production operation. The Kachi Lithium Brine Project overlies an area of almost 50,000 Ha of leases and lease applications, centred around a salt lake within a large basin almost 100km long. The Kachi Project is under active exploration, following the Company's recent announcement of the commencement of an aggressive exploration programme over lithium brine lease applications in Argentina. The Kachi Project area was also recently increased through acquisition of contiguous leases. The leases lie in the Lithium Triangle where the world's largest and lowest cost production of lithium is located.

#### **Initial Brine Sampling**

Brine samples were collected from groundwater in auger holes to depths of 0.3 – 1.7m. Breaking through the 20-40 cm plus salt crust was difficult, so samples were taken relatively close to the margins of the salt lake and therefore may not be as representative as brine collected further into the centre of the salt lake.

Due to the difficulty cutting through the thick salt crust, many of the samples were taken in areas where fresher water had largely dissolved (thinned) the salt crust, so this may have biased the lithium results lower. One litre water samples with duplicates were collected in clean bottles and tested for conductivity. Only samples with electrical conductivity (EC) of  $>100 \mu\text{S}/\text{cm}$  (or  $\text{mS}/\text{cm}$ ) EC were analysed in the Alex Stewart/Norlab laboratory in Jujuy, Argentina. Figure 1 shows the location of test sites on the perimeter of the project area along with lithium results from this initial sampling program. Figure 2 provides analytical results of the brine sampling as well as QA/QC checks. Figure 3 shows physical features and attributes of the project location and the sampling methodology.

Sparsely reported results from previous explorers returned up to 261 mg/L Li (NI 43-101 report from J. Ebisch 2009). No previous drilling is known to have been conducted in the area. An electrical geophysical survey was completed by another explorer recently with plans for drilling soon.



**Figure 1: Kachi project location with inset with lithium results in mg/l (in yellow)**

Analysis	544	546	548	550	Duplicate 548	Blank
<i>Li</i>	209	48	322	155	316	< 0.1
<b>Mg</b>	2841	596	5960	3352	5917	14
<b>Ca</b>	4042	3009	145	39	136	39
<b>K</b>	4291	1093	6435	3307	6525	2
<b>Na</b>	110176	29335	113348	86464	104552	12
<b>SO4</b>	2387	4478	20546	10100	55975	13
<b>Cl</b>	189796	51044	185842	138036	127970	37
<b>Alcalinity Total</b>	400	150	1225	1875	1275	300
<b>Total dissolved solids</b>	320400	96100	330300	238000	297250	7700
<b>Density g/cc</b>	1.19	1.05	1.19	1.15	1.19	0.99
<b>pH</b>	7.69	7.88	7.6	8.35	7.88	8.7
<b>Coordinates - WGS84 Zone19 south</b>						
<b>WGS84 E</b>	655337	656137	647786	647903		
<b>WGS84 N</b>	7067098	7067459	7071743	7070620		

**Figure 2: Kachi Project auger near surface brine sampling results**



**Figure 3: Kachi project location with sampling equipment and assistants**

### Exploration Programme

Systematic auger and pit sampling has been completed at 500 m spaced points on lines separated by 1000m north south. Electrical geophysics (VES) is also scheduled, with the timing to be finalised. Both data sets should provide effective targeting for the drilling programme to follow.

The project has reasonable access by unsealed roads and tracks from a sealed road which leads to the nearby town of Antofagasta de la Sierra, which also provides accommodation. Mobile phone coverage is available near the town, with communication on site by satellite phone and two-way radio.

Steve Promnitz  
 Managing Director  
 Lake Resources N.L.  
 T: +61 2 9188 7864  
 E: [steve@lakeresources.com.au](mailto:steve@lakeresources.com.au)

## Competent Person's Statement – Kachi 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 Kachi project.

## Background on Lake Resources NL (ASX:LKE)

Lake Resources NL (ASX:LKE, Lake) is a lithium exploration company undertaking an aggressive programme to explore prime lithium basins in Argentina, among some of the largest players in the lithium sector. Mining leases and applications are located in the Lithium Triangle which accounts for 49% of current lithium production.

Lake recently completed the acquisition of an early mover in Argentina, Lith NRG Pty Ltd, who had secured an extensive strategic package of ~90,000 Ha, prior to a significant 'rush' to secure projects by major companies in the sector. Lake recently consolidated title around one project. This is one of the largest tenement packages in Argentina, controlled 100% by Lake.

Lake has three key areas that have similar settings to major world class projects being developed – Olaroz/Cauchari, Paso and Kachi in the highly prospective Jujuy and Catamarca Provinces. Upcoming exploration in lithium brine basins, one which is adjacent to some of the leading lithium producers/developers, including Orocobre and SQM, may provide several catalysts for growth as the areas are assessed for major discoveries. Significant corporate transactions continue in adjacent leases with development of Lithium Americas Olaroz/Cauchari project with a 28% equity investment of C\$106 million, from Gangfeng, an important Chinese producer, and BCP Innovation. Both Chinese investors will also provide US\$205 million debt facility with offtake commitments, sufficient to develop Lithium Americas share in the Stage 1 production from Olaroz/Cauchari. Advantage Lithium announced a transaction to earn 65-75% equity in some of Orocobre's leases, raising C\$40 million in the market.



Figure 4: Location map of Lake Resources lithium brine projects in NW Argentina

Table 1 Report: Kachi Lithium Brine Project

Criteria	Section 1 - Sampling Techniques and Data
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>• Brine samples were taken from groundwater with a bailing device from a hand dug pit that was deepened using a soil auger at depths of 0.3m to 1.7m. The bailer is lowered to the base of the hole and the brine sample collected and brought to surface.</li> <li>• 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.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• Soil, salt and cuttings from each auger pit was examined for geologic logging by a geologist and a photo taken for reference.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• Brine samples were collected by bailing brine, which collects at the base of the hole. Bailing homogenizes samples and no sub-sampling is undertaken in the field.</li> <li>• 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.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• 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. They also analyzed blind control samples and duplicates in the analysis chain. The Alex Stewart/Norlab SA laboratory is ISO 9001 and ISO 14001 certified, and it is specialized in the chemical analysis of brines and inorganic salts, with experience in this field and with the oversight of the experienced Alex Stewart Argentina S.A. laboratory in Mendoza, Argentina, which has been operating for a considerable period. The reader is cautioned that no certified standard samples were included with this small batch (as certified standards were not available at this time), but will be included in all future batches of analyses. However field duplicates and blank samples were included with the primary samples analyzed.</li> <li>• The quality control and analytical procedures used at the Alex Stewart/Norlab SA 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.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>• Certified standards were not included with the samples. However field duplicates and blanks were included to monitor potential contamination of samples and the repeatability of analyses. A detailed QA/QC program is planned as part of the future sampling programme and would be in a future drilling program. Accuracy, the closeness of measurements to the “true” or accepted value, will be monitored by the insertion of certified laboratory standards, or reference samples, and by check analysis at an independent (or umpire) laboratory.</li> <li>• Duplicate samples in the analysis chain were submitted to Alex Stewart/Norlab SA as unique samples (blind duplicates) during the process</li> <li>• Stable blank samples (distilled water) were used to evaluate potential sample contamination and will be inserted in future to measure any potential cross contamination</li> <li>• Samples were analysed for conductivity using a hand held Hanna pH/EC multiprobe. Higher conductivity samples were sent to the lab for analysis, together with some low conductivity samples as a check.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>• The auger hole sample sites were located with a hand held GPS.</li> <li>• The location is in POSGAR Faja 2 and Faja 3 (UTM 19) or in WGS84 UTM.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• Brine samples were collected at sporadic intervals. The planned auger sampling survey will be on 500m points on 1000m spaced lines north-south.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• The salt lake (<i>salar</i>) deposits that contain lithium-bearing brines generally have sub-horizontal beds and lenses that may contain sand, gravel, salt, silt and clay. The near-surface auger samples test the near-surface groundwater. Future planned vertical drill holes would be essentially perpendicular to these units, intersecting their true thickness</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• Samples were transported to the Alex Stewart/Norlab SA 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.</li> <li>• The samples were moved from the auger sample site to secure storage at the hotel on a daily basis. All brine sample bottles are marked with a unique label not related to the location.</li> </ul>
<i>Review (and Audit)</i>	<ul style="list-style-type: none"> <li>• No audit of data has been conducted to date.</li> </ul>

Criteria	Section 2 - Mineral Tenement and Land Tenure Status
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The project comprises approximately 49,740 Ha in twenty five mineral leases (minas) of which nine leases (12,830 Ha) are granted for initial exploration and sixteen leases (36,470 Ha) are applications pending granting.</li> <li>• The tenements are believed to be in good standing, with payments made to relevant government departments.</li> </ul>
<i>Exploration by other parties</i>	<ul style="list-style-type: none"> <li>• Marifil Mines Ltd conducted sparse near-surface pit sampling of groundwater at depths less than 1m during 2009.</li> <li>• Samples were taken from each hole and analysed at Alex Stewart laboratories in Mendoza Argentina.</li> <li>• Results were reported in an NI 43-101 report by J. Ebisch in December 2009 for Marifil Mines Ltd.</li> <li>• NRG Metals Inc has recently commenced exploration in adjacent leases under option. Local inhabitants reported that ground geophysics has been conducted. An NI 43-101 report is anticipated based on a December 2016 release.</li> <li>• No other exploration results were able to be located</li> </ul>
<i>Geology</i>	<ul style="list-style-type: none"> <li>• The known sediments within the <i>salar</i> consist of salt/halite and some clay. The sediments below 2 m are not known, but may include, sands, gravels, silts and clays accumulated in the <i>salar</i> from terrestrial sedimentation and evaporation of brines .</li> <li>• Brines within the salt lake are formed by solar concentration, with brines hosted within sedimentary units, which are unknown beyond 2 m depth.</li> <li>• Geology was recorded during the auger drilling of all the holes</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>• The company will undertake ground geophysics and consider drilling on the tenements once the next auger sampling programme has been completed and results assessed.</li> </ul>