



## LAKE RESOURCES

### LAKE RESOURCES N.L. (ASX:LKE)

ASX Market Announcements Office  
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## LAKE CONTINUES DRILLING LITHIUM BRINES AT KACHI LITHIUM PROJECT

- **Drilling continues within lithium brines at Lake's 100%-owned Kachi Lithium Brine Project in Catamarca Province, Argentina.**
- **Thick porous sands, which are excellent horizons for brines, have proven challenging to drill with slow progress, delaying the delivery of sufficient brine samples for results.**
- **Another drill rig is being contracted for immediate commencement to advance drill progress.**
- **Drilling is targeting depth of 300 metres to intersect further horizons which may show significant grades as suggested by nearby third party drilling.**
- **Discussions are progressing well to grant access to areas in Jujuy Province adjacent to SQM/Lithium Americas' and Orocobre's respective projects in Jujuy.**

Lithium exploration company Lake Resources N.L. (ASX:LKE, "Lake" or "LKE") is pleased to report that drilling of lithium brines within porous sands, which are excellent host horizons, is progressing at the Company's 100%-owned Kachi Lithium Brine Project in Catamarca.

Drilling has been slower than anticipated due to the challenging nature of the sandy horizons with drilling advancing 25m in January. This has delayed the anticipated brine samples for assay results. As a result, Lake has contracted a larger drilling rig for immediate commencement to advance drill progress. The rig that has been contracted is a rotary rig better suited for testing brines rather than geology.

Drilling is aimed at reaching a target depth of 300m to intersect further brine horizons which are anticipated at depth. These may show significant results as suggested by nearby third party drilling with results above 250 mg/L lithium below 170m depth.

### **Kachi Lithium Brine Project - Background**

The Kachi Lithium Brine Project covers over 50,000 ha of mining leases owned 100% by Lake's Argentine subsidiary, Morena del Valle Minerals SA, over the centre of the known salt lakes in the deepest part of a large basin. Surface sampling has revealed positive lithium results and drilling has shown conductive brines in thick porous sands with the potential for a significant lithium brine basin.

The company has a focus on an inclusive approach with local communities together with appropriate environmental management. A Letter of Intent was signed with Catamarca Province to facilitate the project through various permitting stages from exploration to production which bodes well for the future.

### **Update on Olaroz Cauchari Project in Jujuy Province**

Lake also advises shareholders that discussions are progressing well to grant exploration access to areas within Lake's ~19,000 hectare Olaroz Cauchari Project in Jujuy Province. The project is adjacent to SQM/Lithium Americas development project and Orocobre's lithium production and targets the same aquifers.

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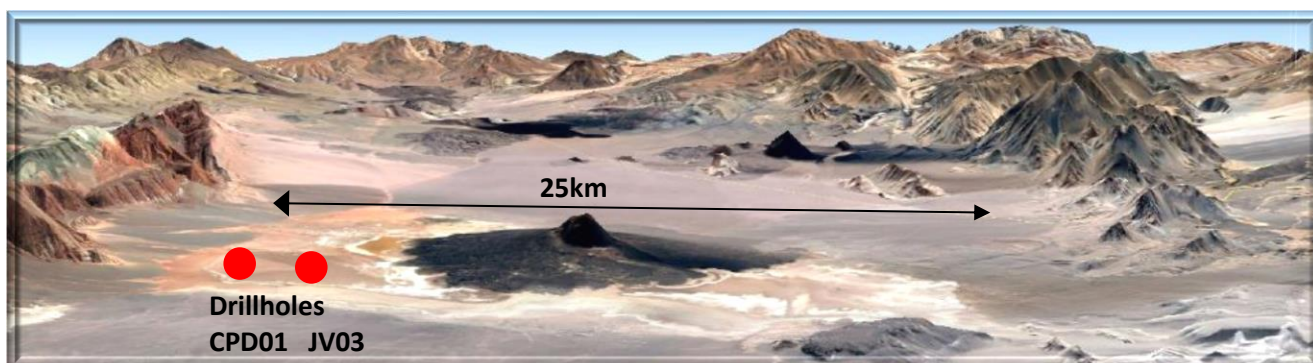
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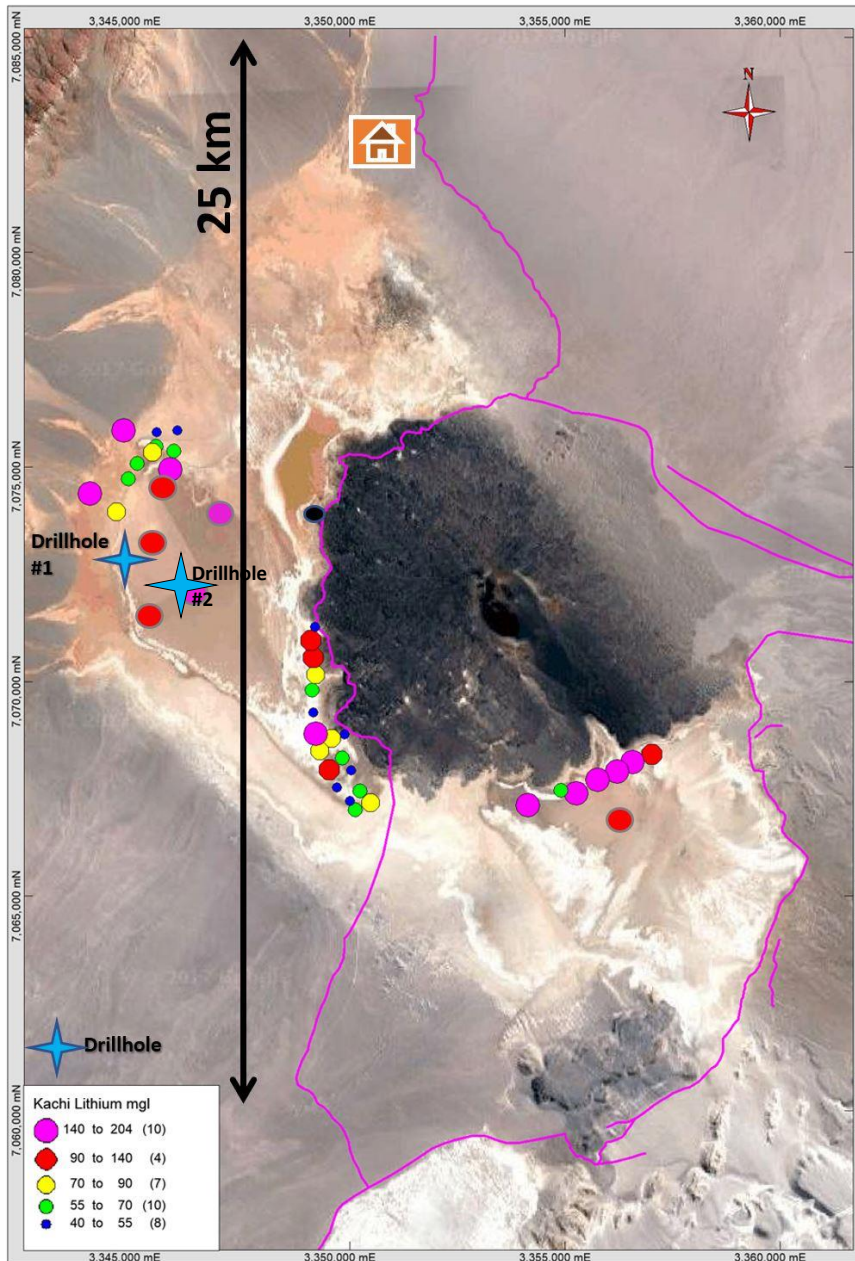
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**Images of the diamond drill rig at the first and second drill holes of the Kachi project**



### Location of near surface auger samples and the first two drill holes at the Kachi project

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

Lake Resources NL (ASX:LKE, Lake) is undertaking an aggressive exploration programme to explore and develop prime lithium projects in Argentina, owned 100%, among some of the largest players in the lithium sector. Lake holds one of the largest lithium tenement packages in Argentina (~170,000Ha) secured prior to a significant 'rush' by major companies with three key lithium brine projects located in the Lithium Triangle which produces half of the world's lithium. Lake also holds one large package of lithium pegmatite properties which were an unappreciated source of lithium in Argentina until recently.

The three key brine projects, Olaroz/Cauchari, Paso and Kachi, have similar settings to major world class brine projects being developed in the highly prospective Jujuy and Catamarca Provinces. One project is located next to Orocobre's Olaroz lithium production and SQM/Lithium Americas Cauchari project. The Kachi project covers 50,000 Ha over a salt lake south of FMC's lithium operation and near Albemarle's Antofalla project.

Drilling at Kachi has shown conductive brines in thick porous sands with results anticipated over the coming months. Surface sampling has revealed positive lithium results which will be expanded through the drilling program and geophysics. Exploration and permitting over Kachi and the other projects will provide several catalysts for the company's growth as these areas are assessed for major discoveries.

Significant corporate transactions continue in adjacent leases with development of SQM/Lithium Americas Olaroz/Cauchari project with an equity/debt investment over \$300 million and Advantage Lithium's equity transaction in some of Orocobre's leases. LSC Lithium has also raised over \$60 million on a large lease package in similar areas as Lake's properties. Nearby projects of Lithium X were subject to a takeover offer of C\$265 million in December 2017.

## 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.

### APPENDIX 1 - JORC Code, 2012 Edition

**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 the diamond drill hole with 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.</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> <li>• Drill core in the hole was recovered in 1.5 m length core runs in core split tubes to minimize sample disturbance.</li> <li>• Drill core was undertaken to obtain representative samples of the sediments that host brine.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Brine has been used as drilling fluid for lubrication during drilling.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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) over an ~1 m interval.</li> <li>• 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.</li> </ul>
<i>Logging</i>	<ul style="list-style-type: none"> <li>• Sand, clay, silt and salt was recovered in a triple tube diamond core drill tube, was examined for geologic logging by a geologist and a photo taken for reference.</li> <li>• 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.</li> <li>• 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.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>• Brine samples were collected by packer sampling of brine, on a metre basis from the fluid extracted from within the packer device as a representative sample following purging of brine from the packer equipment and surrounding sediments. Low pressure airlift tests are used as well to purge test interval and gauge potential yields.</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..</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>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.</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.</li> <li>Regular calibration using standard buffers is being undertaken..</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>The diamond drill hole sample sites were located with a hand held GPS.</li> <li>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.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Brine samples were collected over 1m intervals every 6 m intervals within brine producing aquifers.</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 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</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 drillhole sample site to secure storage at the camp 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. However, Competent Person Andrew Fulton of GES was present on site during drilling of the 2nd drillhole in 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.</li> </ul>
<b>Criteria</b>	<b>Section 2 - Mineral Tenement and Land Tenure Status</b>
<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 51,770 Ha in twenty seven mineral leases (minas) of which five leases (9,445 Ha) are granted for drilling, twenty leases are granted for initial exploration (39,575 Ha) and two leases (2750 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 recently commenced exploration in adjacent leases under option. An initial diamond drillhole intersected lithium bearing brines from 172-198m and below with best results to date of 15m at 229 mg/L Lithium, reported in December 2017. A VES ground geophysical survey was completed prior to drilling. A NI 43-101 report was released in February 2017.</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, clay, sand and silt horizons, 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 .</li> <li>Geology was recorded during the diamond drilling</li> </ul>
<i>Drill hole information</i>	<ul style="list-style-type: none"> <li>Lithological data was collected from the hole as it was drilled and cores were retrieved. Detailed geological logging of cores has not been completed to date.</li> <li>All drill holes are vertical, (dip -90, azimuth 0 degrees).</li> </ul>

<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>N/A pending results</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>A drill hole location plan is provided showing the locations of the drill holes and the surface sampling.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>No brine assay results are available from the drilling to date, other than observations of the sediment types. Information will be provided as it becomes available.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>There is no other substantive exploration data available regarding the project.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>The company is undertaking a 1000m maiden diamond drilling programme in 4 holes and will expand the programme based on results to rotary water well drilling and further diamond drilling. Ground geophysics will also be undertaken.</li> </ul>