



LAKE RESOURCES N.L. (ASX:LKE)

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LAKE RESOURCES AND LILAC SOLUTIONS PARTNER TO ADVANCE KACHI LITHIUM BRINE PROJECT, ARGENTINA

- **Partnership to advance a rapid, low cost method for direct extraction of lithium from brines at the Kachi Project.**
- **Process aims to reduce the lead time to production, reduce operating costs and significantly increase recoveries to above 95% in 2 hours, rather than 9-24 months of evaporation in conventional methods.**
- **Lake has reviewed a number of technologies and believes Lilac has an innovative method based on conventional ion exchange extractive techniques common in the industry. This new method will be trialed together with conventional methods.**
- **The new process appears more environmentally sustainable than traditional methods, is easily scalable to increase production and has a smaller footprint.**
- **LKE expects an initial resource at Kachi Project to be released in the next 8 weeks followed by a pre-feasibility study and strategic investment discussions**

Argentine-focused lithium exploration and project development company **Lake Resources NL (ASX: LKE)** and Lilac Solutions, Inc. ("Lilac") are pleased to announce a significant step forward in the development of Lake's 100%-owned Kachi Lithium Brine Project in Argentina ("Kachi").

The companies have entered into a partnership to leverage Lilac's proprietary ion exchange technology (the "Lilac Technology") for the Kachi brine with the goal of establishing a rapid, robust, and low-cost process for producing lithium at Kachi. Lilac is initiating engineering work to confirm low operating costs for direct production of lithium carbonate or lithium chloride at Kachi using the Lilac Technology.

The Kachi Lithium Brine Project covers 54,000 hectares (133,000 acres) over almost an entire lithium-bearing salt lake in Catamarca province, approximately 100 km (60 miles) south of FMC's Hombre Muerto Lithium brine production operation. FMC Corp has been operating its lithium business in Argentina for over 20 years.

Lilac Solutions is transforming lithium production with its innovative ion exchange technology for extraction of lithium from brine resources. Lilac deploys unique ion exchange media and related processes to extract lithium from a wide variety of brine resources with high recoveries, minimal costs, and rapid processing times. Benchtop testing of other brines has indicated recoveries over 95% in less than 2 hours versus 9-24 months in evaporation ponds. This approach eliminates the need for evaporation ponds, which are expensive to build, slow to ramp up, and vulnerable to weather fluctuations.

A significant environmental benefit comes from the removal of evaporation ponds as the footprint of the operation is significantly reduced. Further, the method allows for the remaining brine to be re-injected into the same aquifer from where it is sourced, without significantly adjusting the water quality, thereby preserving an aqueous resource in an arid environment.

Lilac's technology can economically access brines with low lithium concentrations and high concentrations of other salts, such as magnesium. Cost advantages come from reduced time, higher recoveries and a simplified extraction flowsheet with fewer reagents. The technology is modular to suit various project sizes and integrates with conventional plant designs for production of battery-grade lithium carbonate and lithium hydroxide. The technology has been successfully tested with real brine samples across the Americas.

Lake and Lilac believe that combining Lake's scale and project experience with Lilac's technology and process expertise will unlock the Kachi resource, enabling a rapid path to commercial production of lithium.

"Lake Resources is delighted to be partnering with Lilac on a rapid, direct extraction process of lithium from brines. We have reviewed a number of technologies, and we consider Lilac to offer a compelling opportunity to be reviewed in tandem with conventional methods as part of a pre-feasibility study that we will commence soon after the release of our initial resource," said Steve Promnitz, Managing Director of Lake Resources.

"The potential to reduce the timeline to production at low cost is a major advantage in the current market with a constrained supply of lithium. Increased recoveries indicate that a 300 mg/L lithium brine would produce similar volumes of final product as a 600 mg/L lithium brine."

"Lake has potentially a very large resource at Kachi and this is a unique and compelling opportunity for us," said David Snydacker, CEO of Lilac Solutions. "Our team is confident that we can quickly adapt our system to the Kachi brine and establish a flowsheet with low operating costs. This engineering work is a significant first step in a swift process of bringing the Kachi project online and establishing a long-term, fruitful partnership with Lake Resources."



Figure 1. Conventional Process for lithium extraction of brines from evaporation ponds (left) versus Lilac's innovative Ion Exchange method (right), which promises high recoveries in less than 2 hours versus 9-24 months using evaporation to concentrate the lithium. Lilac's method allows for the re-injection of brines to the aquifer from where it is sourced without significantly adjusting the water quality.

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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 (~180,000Ha) secured in 2016 prior to a significant 'rush' by major companies. The large holdings provides the potential to provide security of supply demanded by battery makers and electric vehicle manufacturers.

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

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 confirmed a large lithium brine bearing basin over 22km long and over 400m deep. Drilling over Kachi is aimed to produce a resource statement in 2018, anticipated in Oct 2018.

Drilling will commence in coming months at Olaroz-Cauchari now that tenure has been confirmed in a landmark agreement in March 2018. This will provide several catalysts for the company's growth. Scope exists to unlock considerable value through partnerships and corporate deals in the near-term.

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 on 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 recently 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

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.

About Lilac Solutions

Lilac Solutions is a mining technology company based in Oakland, California. Lilac offers a full-service ion exchange technology for lithium extraction from brine resources that is cheap, fast, effective, and environmentally friendly, and that is adaptable to a wide variety of brine chemistries.