Lake Resources NL: Battery Grade Lithium Carbonate 99.9% Purity Produced

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Brisbane, Australia - Lithium explorer and developer Lake Resources NL (ASX:LKE) (FRA:LK1) is pleased to announce a major step forward, confirming that battery grade lithium carbonate with 99.9% purity has been produced with very low impurities from Lake's Kachi Lithium Brine Project using Lilac Solutions' disruptive technology in California.

Lithium carbonate with 99.9% purity exceeds the industry standard specifications for battery-grade purity (>99.5 wt%). A significant outcome was that very low impurities were produced with results of iron (Fe) <0.001wt% and boron (B) <0.001wt%. Demonstrating low impurity levels has been a key focus of the company in this process and a high priority in recent downstream discussions with battery/cathode producers.

Samples are being produced from the first pilot plant modules using Lilac Solutions' direct extraction ion exchange process, a result of over nine months of testing to optimise the process for Kachi brine samples. The information is being used in the Kachi Pre-Feasibility Study (PFS) which will be reported on shortly.

Larger samples of battery grade lithium product will be produced for potential downstream off-takers from the 20,000 litres of Kachi brine samples recently shipped from Argentina. This follows discussions with potential off-takers and other international development partners who are extremely interested in the low impurities of material produced by the direct extraction technology and are seeking confirmation of its potential.

Welcoming the results, Lake's Managing Director Steve Promnitz said: "This is potentially groundbreaking for the industry that we have demonstrated that a high purity battery grade lithium carbonate can be produced using brines from Kachi after 9 months of detailed test work. The critical development is the confirmation of very low levels of impurities which no doubt will be welcomed by potential off-takers.

"We are now focused on delivering greater volumes of battery grade lithium carbonate from Kachi brines and the pilot plant modules which will form the basis for more active engagement with potential off-takers increasingly focused on sustainability. With the Kachi PFS nearing completion, we are confident we can generate the right product at the right time, delivering consistently high quality, low impurity products that meet the needs of global buyers. Whilst we had anticipated releasing the PFS in late 2019, the study has been only slightly delayed awaiting additional engineering studies. We now anticipate the release date to be within the next month."

Lake aims to produce at Kachi a high quality, low impurity product capable of attracting premium pricing. Lab testing has shown that lithium concentrations of 30-60,000 mg/L lithium can be produced from brines of ~300 mg/L lithium in a few hours using the Lilac process.

Significantly, Lilac's direct extraction process offers a sustainable solution for Lake Resources when extracting lithium from brine as processed brine is returned to the aquifer once the lithium has been extracted removing the need for traditional evaporation ponds. This addresses increasing interest from electric vehicle makers (OEM's) and battery makers to demonstrate they have access to a sustainable scalable supply chain for raw materials.

To view tables and figures, please visit:
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About Lake Resources NL:

Lake Resources NL (ASX:LKE) is a lithium exploration and development company focused on developing its three lithium brine projects and 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 (Indicated 1.0Mt and Inferred 3.4Mt) within a 8-17 Mt LCE exploration target (refer ASX announcement 27 November 2018).

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.

Source:

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