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LILAC PILOT PLANT MODULE TO PROCESS ~5,000 LITRES OF REPLICATE BRINES AHEAD OF KACHI TEST WORK

- 5,000 litres of replicate samples are being used in testing and commissioning process of ion exchange pilot plant module, in preparation for arrival of Kachi brine samples
- Kachi brine samples being transported are currently on the west coast with final arrival expected within 10 days to the Port of Oakland.
- An audio interview for investors with MD Steve Promnitz is available for access at:
<https://www.youtube.com/watch?v=BSFtnu9bDIY&feature=youtu.be>

Lithium explorer and developer **Lake Resources NL (ASX: LKE)** provides this update on ongoing test work and commissioning of the Lilac Solutions ion exchange pilot plant module.

As shareholders are aware, ~20,000 litres of brine samples are being transported from Kachi and are currently on the west coast and expected to arrive in 10 days to the docks in Oakland, California. These brine samples will be initially used to complete the commissioning of a Lilac Solutions pilot-scale ion exchange module. High-purity lithium chloride will be produced for conversion to battery-grade lithium carbonate. Deliveries of lithium carbonate samples to downstream groups are being planned to start the qualification process with off takers.

In the lead up to this test program, Lake and Lilac Solutions are currently testing ~5,000 litres of ‘replicate brine’ through the ion exchange pilot plant as commissioning in preparation for the arrival and testing of the Kachi brines and to ensure the technology is consistent and fully functional.

The replicate samples are expected to produce very similar results as the initial Kachi brines and Lake and Lilac will report on the outcomes from this test work.

Lake’s Managing Director Steve Promnitz said: *“Our key focus at this time is to prove conclusively that the Lilac Solutions pilot-scale ion exchange module can consistently process the Kachi brines into high purity, battery grade lithium carbonate at volume. The rationale for processing these replicate brines is to ensure the pilot plant testing of the actual Kachi brines is completed without a ‘hitch’.*

“This is a transformational moment in the industry. Lake has an almost unique opportunity to deliver more sustainable lithium products with very low impurities - what EV makers and battery makers are increasingly seeking. The Kachi brines will arrive at Lilac in the next 10 days and testing will commence shortly thereafter. This is a critical program for Lake and Lilac and we look forward to providing updates as the test work unfolds.”

Lake aims to produce at Kachi a high quality, low impurity product capable of attracting premium pricing. The PFS which is almost completed is anticipated to show production costs in the lower part of the global cost curve.

The direct extraction process, together with the Kachi project, offers a sustainable solution for the downstream battery makers by extracting lithium from brines using ion exchange without traditional evaporation ponds. Brine is returned to the aquifer once the lithium has been extracted without changing the brine chemistry.

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**AT THE HEART OF THE
LITHIUM TRIANGLE**

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.

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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 three lithium brine projects and a 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 40% of the world's lithium is produced at the lowest cost. Lake holds one of the largest lithium tenement packages in Argentina (~200,000Ha) which provides the potential for consistent security of supply, scalable as required.

Lake considers it is in a strong position to benefit from the market opportunity in electric vehicles and the batteries that power the energy revolution due to:

1. **High Purity Lithium Carbonate** samples (99.9%) with very low impurities, recently produced from the pilot plant using a direct extraction process (ion exchange);
2. **Increased Engagement with Off-takers** as larger samples are produced, anticipated from late March 2020 onwards, for off-takers to commence qualification testing to then engage to assist in financing;
3. **Kachi Project PFS**, in the final stages of completion which is anticipated to show projected production costs at the lower end of the cost curve similar to current lithium brine producers. The Kachi project has a resource (announced Nov 2018) considered large enough for long term production and could be potentially scaled to a much larger project is required as leases cover an area 10 times Manhattan.
4. **Sustainable and Scalable Future Lithium Production**, demanded by the larger Electric Vehicle makers and an increasing number of battery/cathode makers, who need to show both the quality and provenance of battery materials for ESG/sustainability and carbon footprint reporting. The direct extraction process reinjects brine once the lithium has been removed using ion exchange beads without affecting the chemistry. This means a much smaller footprint and less water usage because evaporation ponds are not used.
5. **Comparable Project's Valuation** - LKE's market value is below comparative companies with similarly advanced brine projects, as set out in the recent presentation, based on information available.

The Kachi project covers 70,000 ha over a salt lake south of FMC/Livent's lithium operation in Catamarca Province. Drilling confirmed a large lithium brine bearing basin over 20km long, 15km wide and 400m to 800m deep. Drilling over Kachi produced a maiden indicated and inferred resource of 4.4 Mt LCE (Indicated 1.0Mt, Inferred 3.4Mt) (refer ASX announcement 27 November 2018).

A direct extraction technique has been tested in partnership with Lilac Solutions, with a pilot plant being commissioned, which has shown 80-90% recoveries and lithium brine concentrations over 60,000 mg/L lithium. Battery grade lithium carbonate (99.9% purity) has been produced from Kachi brine samples with very low impurities (Fe, B, with <0.001 wt%). Phase 1 Engineering Study results have shown operating costs forecast in the lowest cost quartile (refer ASX announcement 10 December 2018). Test results have been incorporated into a Pre-Feasibility Study (PFS) in the final stages of completion. The Lilac pilot plant in California will produce samples for downstream participants prior to being transported to site to produce larger battery grade lithium samples. Discussions are advanced with downstream entities, mainly battery/cathode makers, as well as financiers, to jointly develop the project.

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 the Ganfeng Lithium/Lithium Americas Cauchari project, with high grade lithium (600 mg/L) with high flow rates drilled immediately across the lease boundary.

The Cauchari project has shown lithium brines over 506m interval with high grades averaging 493 mg/L lithium (117-460m) with up to 540 mg/L lithium. These results are similar to lithium brines in adjoining leases scheduled for production in late 2020 and infer an extension and continuity of these brines into Lake's leases (refer ASX announcements 28 May, 12 June 2019).

Significant corporate transactions have occurred in adjacent leases with development of Ganfeng Lithium/Lithium Americas Cauchari project as Ganfeng announced a US\$397 million investment for 50% of the Cauchari project, together with a resource that had doubled to be the largest on the planet. Ganfeng then announced a 10 year lithium supply agreement with Volkswagen on 5 April 2019. 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-Dec 2018. LSC Lithium was acquired in Jan-Mar 2019 for C\$111 million

by a mid-tier oil & gas company with a resource size half of Kachi. These transactions imply an acquisition cost of US\$55-110 million per 1 million tonnes of lithium carbonate equivalent (LCE) in resources.

For more information on Lake, please visit <http://www.lakeresources.com.au/home/>