

20 April 2020

ADDITIONAL 20,000 LITRES OF KACHI LITHIUM BRINES BEING SENT TO LILAC PILOT PLANT

- **A total of 40,000 litres of Kachi Project brines to now be processed at Lilac Technologies' pilot plant**
- **Ensures LKE has sufficient samples to meet increasing demand from potential off-takers**
- **Processing of first 20,000 litres progressing but delayed slightly**
- **LKE's current focus is on delivering high purity samples from Lilac's US pilot plant to demonstrate successful production of lithium chloride for conversion into battery grade lithium carbonate**
- **Kachi Pre-Feasibility Study (PFS) to be released this month**

Lithium explorer and developer **Lake Resources NL (ASX: LKE; OTC:LLKKF)** can confirm that a further 20,000 litres of brine samples from a number of wells is being sent from Lake's Kachi Lithium Brine Project to Lilac Solutions' pilot plant in California.

This takes the total volume of Kachi brines to be processed at Lilac's facility to 40,000 litres and ensures Lake will have continuity of supply of requisite sample sizes to meet the growing demand from potential off-takers. Interest in the direct extraction process for the Kachi project using Lilac's technology has increased from EV manufacturers, battery makers and others in the supply chain.

The second batch of 20,000-litre samples were pumped from a number of wells to provide a range of brine types and are being dispatched from site successfully. This process has involved using increased personal protective equipment (PPE) and under heightened security around travel and activities, following guidelines under COVID-19 set out by the federal and provincial governments in Argentina.

The samples have been collected and are being transported from Kachi (see Figs 1,2).

These samples will be processed similarly to current brine samples in the pilot plant modules using Lilac Solutions' direct extraction ion exchange process into larger battery grade lithium carbonate samples with 99.9% purity. Processing of the first 20,000 litres is still ongoing but has understandably been slower than anticipated under initial COVID-19 guidelines. However, both the operations in Argentina and in California are considered essential services and work can continue.

Previously, the pilot plant was successfully commissioned using initially replicate brines and later smaller sample brines from Kachi. As reported, very high purity lithium carbonate was produced from both these brines.

Lake is also pleased to confirm that the Pre-Feasibility Study (PFS) of the Kachi Project using the direct extraction processing method is in the final review process and is anticipated to be released before the end of the month.

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**AT THE HEART OF THE
LITHIUM TRIANGLE**

Lake's Managing Director Steve Promnitz said: "Lake continues to be focused on delivering samples of battery grade lithium carbonate from Kachi brines from the pilot plant despite some of the inevitable delays under COVID-19. Naturally our first emphasis is on the health and safety of our team and the communities in which we work and the same applies for the pilot plant."

We hope to be able to report results from the processing of the first 20,000 litres soon and we are encouraged by the fact that this work is ongoing at Lilac, albeit more slowly. The additional 20,000 litres that we now transporting to site and then testing will further validate that this technology works well and we can deliver high purity lithium carbonate from the Kachi brines."

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Figure 1: Lithium bearing brines being pumped into containers at the Kachi Lithium Brine Project.



Figure 2: Vehicles being sprayed and cleaned at the Kachi Lithium Brine Project prior to trucking containers of brines to port for dispatch to California.

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.

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, supported by Bill Gates – led Breakthrough Fund and MIT's The Engine fund. A pilot plant is 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 in March/April/May 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. Orocobre has announced on 19 Feb 2020 the acquisition of all shares in Advantage Lithium, valued at around C\$75 million, which holds leases next to Lake at Cauchari. These transactions, except for the Advantage deal, 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/>