

ASX & OTC ANNOUNCEMENT

Wed 2 November 2022

Lilac Solutions demonstration plant delivers “at spec” product from Lake Resources Kachi project

- Initial test work delivers “at spec” product from Kachi demonstration plant.
- Kachi brine test work underway, commission phase completed.
- One month after wet commissioning already achieving 80 percent lithium recoveries.
- Plant optimisation work underway.
- Third Party Validation by Hatch to commence shortly to allow DFS completion.
- Continued de-risking of the project for financiers and investors.

Clean lithium developer Lake Resources NL (ASX: LKE; OTC: LLKKF) (Lake) is pleased to provide an update on progress at the Kachi project lithium processing demonstration plant.

Completion of construction of the demonstration plant on site and the wet and dry commissioning process took place during September and October.

The demonstration plant is now processing Kachi brines with final optimisation of the process now nearing completion.

Lilac Solutions Executive Vice President, Bart Packer, has been on site at Kachi to oversee the final adjustments to the plant to ensure optimisation of processes prior to continual processing getting underway.

“Initial operations of the demo plant have already delivered product at spec, with the demonstration plant achieving similar lithium recoveries that were achieved in the Oakland pilot plant test work in California.

“Optimisation work continues on site; Lilac anticipate the first samples of Lithium Chloride will be shipped for conversion to Lithium Carbonate within two weeks.”

Lake proposes that this final lithium product will then be qualified by a tier one battery maker to validate product specifications.

Lilac CEO, David Snyder said these excellent early results validate Lilac's ability to quickly scale up lithium production at the Kachi site.

"Just one month after the start of wet commissioning, we are already achieving 80 percent lithium recoveries even as we complete the commissioning process and increase recoveries.

"Cheers to our field operations team, which has been working 24/7 to achieve these results in partnership with Lake Resource's fantastic team at Kachi.

"We are excited to expand our collaboration with the Lake team as we work to fast-track commercial-scale production of lithium carbonate," he said.

Lake CEO, David Dickson said Lake was delighted to see initial test results achieving anticipated specifications.

"This validates the many years of test work that took place in Lilac's Oakland facility during Covid whilst access to site was impossible.

"We look forward to seeing the test work move into to steady state and then for the process to be validated by Hatch so that work on the DFS can be completed."

Mr Dickson said every resource project in construction phase globally had faced inevitable challenges in recent times and he had been pleased to see the Lake and Lilac teams in Argentina working together closely to overcome early construction challenges and to now deliver excellent results from the initial work completed on Kachi brines.

Lake Executive Chairman Stu Crow said Lilac's method of producing high purity lithium would disrupt the battery materials supply industry as it was scalable, low cost, and delivers a consistent product quality with a significant ESG benefit.

"The news of successful demonstration plant results is timely as Lake Resources full board is in Sydney to attend the IMARC conference this week to meet and host a strong delegation of representatives from Argentinian Federal and Provincial Governments and Departments, as well as continue discussions with international and domestic investment banks and financial market participants who have been assisting Lake in developing its strategy as the company moves toward financial investment decision (FID) in 2023," he said.

As noted in the September Quarterly Report, Lake intends to make several new executive and board appointments before year end as it transitions from an exploration company toward development and production.

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About Lake Resources NL (ASX: LKE; OTC: LLKKF)

Clean high purity lithium using efficient disruptive clean technology - in demand by EV makers and lithium-ion batteries

Lake Resources NL (ASX: LKE; OTC: LLKKF) is a clean lithium developer utilising direct extraction technology for production of sustainable, high purity lithium from its flagship Kachi Project in Catamarca Province within the Lithium Triangle in Argentina among three other projects covering 220,000 ha.

This direct extraction method delivers a solution for two rising demands – high purity battery materials to avoid performance issues, and more sustainable, responsibly sourced materials with low-carbon footprint and significant ESG benefits.

1. Climate-Tech:

Efficient, disruptive, clean, cost-competitive technology using well-known water treatment re-engineered for lithium (not mining). Technology partner, Lilac Solutions Inc, is supported by the Bill Gates led Breakthrough Energy fund, MIT's The Engine fund, Chris Sacca's Lowercarbon Capital, BMW, Sumitomo, and SK Materials. Lilac has currently earned in to 10% of the Kachi Project and may earn-in to a total 25% stake, based on certain milestones, and then be expected to fund their c.US\$50 million pro-rata share (refer ASX announcement 22 September 2021)

2. High Purity:

99.97% purity lithium carbonate samples for a premium price, demonstrated in pilot plant operations in California with a demonstration plant en route to the Kachi Project. Demonstrated high quality in nickel rich NMC622 lithium-ion batteries (refer ASX announcement 20 October 2020; 2 March 2021).

3. Sustainable /ESG:

Far smaller environmental footprint than conventional methods, that returns virtually all water (brine) to its source with a low CO2 footprint.

5. Finance Indicatively Available:

Long duration, low-cost project debt finance for the Kachi Lithium Project is indicatively available from the United Kingdom's Export Credit Agency UKEF and Canada's EDC with Expressions of Interest to support approx. 70% of the total finance required for Kachi's development, subject UKEF and EDC respective approvals, to standard project finance terms, including satisfactory completion of the DFS, ESIA and offtake arrangements (refer ASX announcements 11 August 2021; 28 September 2021).

4. Prime Location, Large Projects:

Flagship Kachi project in prime location among low-cost producers with a large lease holding (74,000 ha) and expandable resource (4.4 Mt LCE) used for 25 years production at 50,000tpa (JORC Resource: Indicated 1.0Mt, inferred 3.4Mt, refer ASX announcement 27 November 2018). Pre-feasibility study at 25,500tpa by tier 1 engineering firm shows large, long-life low-cost operation with US\$1.6 billion NPV pre-tax, and annual EBITDA of US\$260 million from 2024 using past pricing of US\$15,500/tonne lithium carbonate (refer ASX announcement 17 March 2021; 28 April 2020). (No changes to the assumptions in the resource statement or the PFS have occurred since the announcement date.)

6. Other Projects:

Lake's other projects include the Olaroz and Cauchari brine projects, located adjacent to major world-class brine projects in production or construction, including Allkem's (Orocobre's) Olaroz lithium production and adjoins the impending production of Ganfeng Lithium/Lithium Americas 'Cauchari project. Lake's 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 and infer an extension and continuity of these brines into Lake's leases (refer ASX announcements 12 June 2019, 23 March 2021). Drilling commenced on the Olaroz leases in February 2022. For more information on Lake, please visit <http://www.lakeresources.com.au/home/>.