

3 March 2022

## **Lilac Demonstration Plant being delivered to Kachi Lithium Project.**

- **Demonstration plant assembled and dispatched from California USA to the Kachi Project by Lake Resources' technical partner, Lilac Solutions, after extensive successful test work.**
- **Disruptive lithium processing technology cuts operating costs and boosts lithium recovery from Kachi Project brines, while protecting scarce water resources.**
- **Producing high purity product on site further derisks project for offtakers, financiers and investors.**
- **Test work in California continues to produce data for the Definitive Feasibility Study and product samples for testing.**

Clean lithium developer Lake Resources NL (ASX: LKE; OTC:LLKKF) confirms the modular demonstration plant designed and built by the engineering team at Lilac Solutions Inc, has been dispatched from California USA to the Kachi Project in Argentina.

Lilac Solutions, Lake's technical partner, has assembled the ion exchange modules and supporting equipment for the demonstration plant within five 40 ft (12m) shipping containers.

The modular design allows for a "plug and play" approach, once brine feed, power and reagents are connected.

The demonstration plant will operate for around 3 to 4 months to produce lithium chloride (eluate) representing 2.5 tonnes of lithium carbonate. This will be converted into high purity battery quality lithium carbonate for potential offtakers and battery qualification later in the year. The demonstration plant operations on site will also inform final engineering design prior to construction of the commercial-scale project.

"Our technology is truly disruptive; we've taken ion exchange, a non-mining technology solution that is ubiquitous in the water treatment industry, and with cutting-edge innovations have created a unique technology for lithium extraction which we strongly believe will reduce operating costs and boost lithium recovery for production of lithium chemicals from the Kachi brines," Lilac's Chief Executive Officer, Dave Snyder, said

"Relative to conventional technology, our production process is lower cost and offers higher lithium recovery rates of 80-90 percent to produce battery quality lithium carbonate, while also protecting the local environment, including water resources.

"Our process is modular, produces high purity lithium, and can be ramped up quickly from pilot to commercial stages – our equity stake ensures a rapid commercialization of the Lilac technology at what is a globally significant lithium resource.

"We've worked extensively with this brine, generating the data needed for engineering studies, and it is a fantastic fit for the Lilac technology," he said.

Meanwhile, test work at Lilac Solutions' facility in California continues to produce the data required for the Definitive Feasibility Study and lithium carbonation testwork continues at Hazen Research in Colorado.

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“Both Lake and Lilac are very confident that the demonstration plant incorporating Lilac’s proprietary ion exchange process will prove to investors and offtakers that it is scalable and functions well on site by successfully producing a high quality lithium product. Lake is well positioned to deliver a major project with consistent high quality product with substantial ESG benefits”, Lake’s Managing Director, Mr Steve Promnitz, said.

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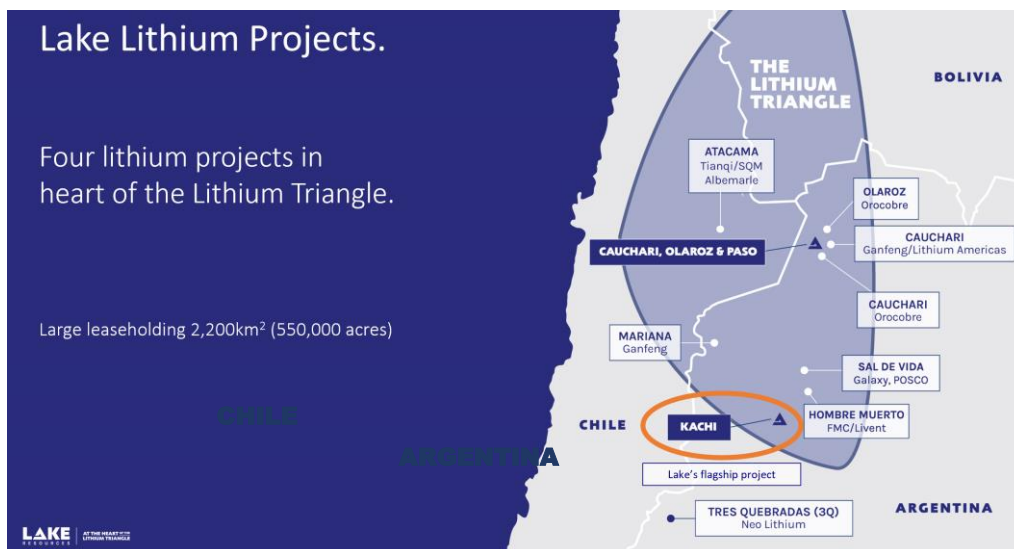
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**Figure 1.** Location of Lake’s Kachi Project and Lake’s Cauchari, Olaroz and Paso Projects in Argentina.



**Figure 2.** One of the 5 containers hosting the Lilac modules leaving California for the port to ship to Argentina .

**About Lake Resources NL (ASX:LKE OTC:LLKFF) –**

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

Lake Resources NL (ASX:LKE, OTC: LLKFF) 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 currently owns 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 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.

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 pretax, 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.)

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 to standard project finance terms (refer ASX announcements 11 August 2021; 28 September 2021).

An innovative direct extraction technique, based on a well-used ion exchange water treatment method, has been tested for over 18 months in partnership with Lilac Solutions, with a pilot plant module in California operating on Kachi brines and has shown 80-90% recoveries. Battery quality lithium carbonate (99.97% purity) has been produced from Kachi brine samples with very low impurities (refer ASX announcement 20 October 2020). The first samples of high purity (99.97% purity) battery quality lithium carbonate were tested in a NMC622 battery by Novonix with excellent results (2 March 2021).

This method of producing high purity lithium can revolutionise and disrupt the battery materials supply industry as it's scalable, low cost, and delivers a consistent product quality with a significant ESG benefit.

Lake's other projects include the Olaroz and Cauchari brine projects, located adjacent to major world class brine projects in production or construction, including 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).

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