

10 January 2023

## Lake Resources and Lilac Solutions Announce Achievement of Critical Milestones for Project Kachi

- **Demonstration plant has operated continuously for over 1,000 hours to date, fulfilling 1,000-hour requirement;**
- **40,000 litres of Lithium Chloride concentrate have been produced within specified concentration limits, confirming previous test results;**
- **Output sent to Saltworks for conversion to Lithium Carbonate**

Clean lithium developer Lake Resources NL (ASX: LKE; OTC: LLKKF) (“LAKE”) and its direct lithium extraction technology partner, Lilac Solutions (“Lilac”), are pleased to announce the on-time achievement of key milestones for Project Kachi. Project Kachi is a world-class lithium development project that is poised to lead the industry in the production of high-quality lithium with a minimal environmental footprint.

As outlined in the agreement between Lilac and Lake, Lilac has successfully operated the Demonstration Plant for 1,000 consecutive hours and produced 40,000 litres of lithium chloride eluate before December 31, 2022, and therefore has met all key testing milestones in accordance with the agreed timeline. The lithium chloride eluate produced by Lilac is in the process of being shipped to Saltworks and converted to lithium carbonate, after which it will be independently tested for purity.

Lake CEO and Managing Director David Dickson said the achievement of these milestones demonstrated the significant promise of Project Kachi.

“Lilac has proven to be an exceptional partner to work with in our joint pursuit of the efficient and cleaner delivery of high-quality lithium, which is in increasingly high demand by battery makers,” said Mr. Dickson.

“We are pleased with our accomplishments to date and are intently focused on the next stages of this project. Above all, we are proud of the work we and Lilac have achieved thus far to innovate the production of lithium in a way that is inclusive and respectful of the local communities in which we operate, and protective of the environment.”

Lilac Solutions CEO David Snyder commented: “Lilac’s ion exchange technology is revolutionizing lithium extraction, and we are very excited to ship these first truckloads of lithium chloride produced on site at the Kachi project. Increasing the global supply of lithium is critical for our energy transformation, and we are proud of our progress in building an environmentally- and socially responsible lithium supply chain. We look forward to future achievements alongside Lake Resources.”

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**Lake Investors please contact:**

**Twitter:** [https://twitter.com/Lake\\_Resources](https://twitter.com/Lake_Resources)

**LinkedIn:** <https://www.linkedin.com/company/lake-resources/>

**Facebook:** <https://www.facebook.com/LakeResources>

**Website:** <http://www.lakeresources.com.au>

**Join Lake's mailing list:** <http://eepurl.com/gwA3o9>

**IR:** Anthony Fensom, Republic PR, +61 (0) 407 112 623, [anthony@republicpr.com.au](mailto:anthony@republicpr.com.au)

**For media queries, please contact:**

Nigel Kassulke at Teneo

**M:** +61407904874

**E:** [Nigel.Kassulke@teneo.com](mailto:Nigel.Kassulke@teneo.com)

**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 state-of-the-art ion exchange 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 ion exchange extraction technology 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 will earn in to the Kachi Project, up to a 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) of which only 20% is used for 25 years production at 25,500tpa (JORC Resource: Indicated 1.0Mt, inferred 3.4Mt, refer ASX announcement 27 November 2018). Pre-feasibility study 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 (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. The DFS will use a base case of 50,000 tpa LCE.)

**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 ion exchange extraction technology, 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 Allkem'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).

#### **About Lilac Solutions:**

Lilac Solutions is a cutting-edge lithium extraction technology company based in Oakland, California. Lilac has developed a patented ion exchange technology that facilitates production of lithium from brine resources with high efficiency, minimal cost, and ultra-low environmental footprint. Lilac's technology is revolutionizing lithium production in support of the electric vehicle industry and the global energy transition.