

8 January 2021

## Kachi Lithium Brine Project DFS Commences

- **Definitive Feasibility Study commences with appointment of Hatch as lead consultant.**
- **Dr Nicholas Lindsay to manage the DFS and related work streams.**

Clean lithium developer **Lake Resources NL (ASX:LKE; OTC:LLKKF)** announced today the formal commencement of the Definitive Feasibility Study (DFS) for the Kachi Lithium Brine Project, with the appointment of Hatch as the lead consultant.

This builds upon the compelling and robust Pre-Feasibility Study (PFS) announced on 30 April 2020, into the technical and economic viability of Lake's Kachi Lithium Brine Project in Catamarca, Argentina, based on Lilac's sustainable direct lithium extraction process. Subsequently the project's potential to deliver high purity product (99.97% Li<sub>2</sub>CO<sub>3</sub>) required by battery makers was demonstrated by Hazen Research, as announced on 20 October 2020. This product has been sent to Novonix for incorporation into batteries.

The DFS is an important milestone in the development of the Kachi Lithium Brine Project as a sustainable and commercially successful producer of high quality lithium product for the rapidly growing battery market.

Associated work streams to run in parallel with the DFS include the environmental impact study, continued community engagement, and a demonstration plant to be commissioned on-site later in 2021.

To manage the DFS and related work streams, the board of Lake Resources is pleased to announce that it has appointed Dr Nicholas Lindsay as Technical Director. Previously a Non-Executive Director of Lake Resources, Dr Lindsay is experienced in feasibility studies in South America, and is confidently expected to deliver the Kachi DFS by Q1 2022.

**Managing Director Steve Promnitz commented:** *"The formal commencement of the DFS is a key step for Lake to deliver the Kachi project into production with ESG credentials in demand as the transition to EV's gathers pace. The bridging studies have been underway since the PFS and now the formal engagement of Hatch has occurred. Nick Lindsay's assistance with the PFS was invaluable and will now be expanded upon in the DFS."*

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

### **Clean high purity lithium using efficient disruptive clean technology**

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 within the Lithium Triangle in Argentina among other projects covering 200,00 ha. This direct extraction method delivers a solution for two rising demands of electric vehicle batteries – high purity battery materials to avoid performance issues, and more sustainable, responsibly sourced materials.

1. **Clean-Tech:** Efficient, disruptive, cost-competitive technology using well-known water treatment re-engineered for lithium (not mining). Technology partner, Lilac Solutions Inc, supported by Bill Gates led Breakthrough Energy fund and MIT's The Engine fund.

2. **High Purity:** 99.97% purity lithium carbonate samples never previously delivered at scale in a cost competitive manner for a premium price (refer ASX announcement 9 January 2020 and 20 October 2020).

3. **Sustainable /ESG:** Far smaller environmental footprint than conventional methods, that returns virtually all water (brine) to its source without changing its chemistry, avoiding "water politics" in arid environments for a better outcome for local communities.

4. **Prime Location, Large Projects:** Flagship Kachi project in prime location among low cost producers with a large lease holding (70,000 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). The Pre-feasibility study by tier 1 engineering firm showed large, long-life low-cost operation (refer ASX announcement 28 April 2020) and the Definitive Feasibility Study (DFS) will optimise development.

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 are being tested in a NMC622 battery by Novonix. Hazen will produce further samples for downstream supply chain participants and off-takers.

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.

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 28 May, 12 June 2019).

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