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Lake Resources Provides Operational Update

- Expansion and Reorganization of Operating Team to better align with technical needs of Kachi Project development
- Updated report shows Kachi M&I resource doubled to 2.2 million tonnes
 Lithium Carbonate Equivalent with 3.1 million tonnes Inferred resource
- Demonstration Plant operating for over 1,000 hours and conversion of 40,000
 Litres of LiCl into Lithium Carbonate underway
- Focus on completing next stages and further evaluation of project timeline
- Enhancement of Board to strengthen governance and oversight

Clean lithium developer Lake Resources NL (ASX: LKE; OTC: LLKKF) ("LAKE") announces it has made important progress towards key operational milestones, while strengthening the organization and its Board with the addition of critical expertise.

Reorganization

To better position the Company for success as it moves into the development stage of the Kachi project, and further develop the future opportunities of Cauchari, Olaroz and Paso, Lake has expanded its operating team significantly, adding technical, procurement, project, hydrogeology, drilling and engineering experts, to oversee the technical requirements of this next stage of development.

Strategic and structural organizational changes have been put in place to optimize the productivity of this team.

These changes included the division of the role of operational oversight into two main areas of responsibility: 1) Process Plant Development and Operations; and 2) Field Development and Evaluation.

In addition to these changes, Gautam Parimoo, previously Chief Operating Officer, has left the organization.

Kachi Project Update

As announced to the ASX earlier this week, Lilac has achieved two important milestones of the Kachi Pilot Plant Agreement and Saltworks is expected to complete the conversion of the 40,000 litres of LiCl to Lithium Carbonate over the next months.

LAKE RESOURCES NL

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After an extensive drilling program Lake also reported to the ASX a 100 percent increase in the mineral resource estimate of Kachi, to 2.2 million tonnes of lithium carbonate equivalent of Measured and Indicated, and 3.1 million tonnes of Inferred resources.

This further supports the Lake Resources business plan to produce 50,000 tpa (tonnes per annum) of Lithium Carbonate.

Considering this material resource upgrade, and with a new team now in place, the Company is doing a rigorous evaluation of project timelines and estimated capital costs, which it expects to complete and report on early in the second quarter of 2023.

Lake is continuing to advance its Definitive Feasibility Study (DFS), completing the evaluation of the processing plant, and moving into the next phase of the project study. Lake is targeting to complete the DFS by mid 2023.

Lake remains in ongoing discussions with both SK On and WMC regarding the implementation of the CFAs, which were previously announced to the ASX in October 2022.

Enhanced Board of Directors

Also previously announced to the ASX, Lake has added sector-leading industry, capital markets and governance expertise to its Board in recent months. The additions of Howard Atkins, Cheemin Bo-Ling and Ana Gomez Chapman, bring strong pillars of strategic, operational, financial, and ESG oversight.

"We are pleased with the progress we are seeing at Kachi, especially regarding the recent update on the Kachi Mineral Resource Estimate, and the good progress by our partner Lilac in developing and operating the demonstration plant," said David Dickson, CEO of Lake Resources.

"With the ongoing recruitment of talented experts, the realignment and new focus of the organization, and the enrichment of our Board, we are well-positioned to complete the development of Kachi, while pursuing development of Cauchari, Olaroz and Paso.

"We look forward to producing high-quality, sustainable lithium for our customers and delivering value to all of our stakeholders".

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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 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. **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).

Forward Looking Statements

Certain statements contained in this announcement, including information as to the future financial performance of the projects, are forward-looking statements. Such forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Lake Resources N.L. are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies; involve known and unknown risks and uncertainties and other factors that could cause actual events or results to differ materially from estimated or anticipated events or results, expressed or implied,



reflected in such forward-looking statements; and may include, among other things, statements regarding targets, estimates and assumptions in respect of production and prices, operating costs and results, capital expenditures, reserves and resources and anticipated flow rates, and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions and affected by the risk of further changes in government regulations, policies or legislation and that further funding may be required, but unavailable, for the ongoing development of Lake's projects. Lake Resources N.L. disclaims any intent or obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise. The words "believe", "expect", "anticipate", "indicate", "contemplate", "target", "plan", "intends", "continue", "budget", "estimate", "may", "will", "schedule" and similar expressions identify forward-looking statements. All forward-looking statements made in this announcement are qualified by the foregoing cautionary statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein. Lake does not undertake to update any forward-looking information, except in accordance with applicable securities laws.

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