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## **LAKE'S LITHIUM TO BE TESTED IN BATTERIES BY NOVONIX LAB**

- **Lake appoints respected Novonix Battery Technology Solutions in Nova Scotia, Canada, to produce high-performance lithium-ion battery test cells using Lake's lithium carbonate samples compared to industry leading materials.**
- **Data from battery technology and materials company Novonix will allow potential users and off-takers of Lake's high purity, responsibly sourced product to make direct comparisons of its performance.**

Clean lithium developer **Lake Resources NL (ASX:LKE; OTC:LLKFF)** announced it has appointed the respected Novonix Battery Technology Solutions, a Nova Scotia-based independent testing and development laboratory used by recognised battery makers, to produce NMC622-based lithium-ion battery test cells using Lake's battery quality lithium carbonate.

Under the agreement with Novonix Limited (ASX:NVX), lithium carbonate samples provided by Lake will be used together with commercial battery cathode precursor materials to form an NMC622 cathode and battery.

Novonix is currently developing 'million mile' battery technologies with revolutionary anode and cathode materials and has designed and manufactured, and sells high precision battery testing equipment to Tier 1 battery makers and OEMs in 15 countries including Panasonic, CATL, Samsung, SK Innovation, Apple, Bosch, Honda and Dyson.

Using Novonix's pilot cell line and proprietary advanced diagnostic tools, the performance of Lake's high purity, responsibly sourced lithium product will be evaluated for conformity with lithium-ion battery standards. Significantly, this data will allow potential users and off-takers of Lake's product to make direct and relevant comparisons of its performance to familiar cell chemistries.

Lake recently appointed Colorado-based Hazen Research to produce lithium carbonate samples from the lithium chloride produced by Lake's technology partner, Lilac Solutions, at its pilot plant in California (refer ASX release 6 August 2020). Lilac has previously produced 99.9% pure lithium carbonate from this lithium chloride using the conventional lithium carbonate process.

The first battery quality lithium carbonate samples are expected to be produced by Hazen within weeks. Lake is confident that high purity lithium carbonate will be confirmed because the results obtained from the pilot plant are similar to prior benchtop testing.

The first batch of lithium carbonate will then be processed into NMC622 lithium-ion batteries by Novonix, which will take a minimum of four months, with the first results expected two months after the cathode material is produced.

**Lake's Managing Director, Steve Promnitz said:** *"Novonix is a highly-respected and groundbreaking battery testing company spun out of Dr Jeff Dahn's lab at Dalhousie University in Nova Scotia. The team are known as world leaders in new battery technologies, as shown by the quality of their global client base."*

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**CLEANER LITHIUM**  
**FOR AN ELECTRIC WORLD**

*“With EV makers accelerating their production plans, high-purity and responsibly sourced lithium is in increasingly short supply globally. We look forward to expediting the results from Novonix and providing samples to potential off-take partners as soon as possible.”*

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**About Novonix**

Novonix Limited (ASX:NVX) is an integrated developer and supplier of high-performance materials, equipment and services for the global lithium-ion battery industry with operations in the USA and Canada and sales in more than 14 countries. Novonix’s mission is to support the global deployment of lithium-ion battery technologies for a cleaner energy future.

For more information on Novonix, please visit the website at [www.novonixgroup.com](http://www.novonixgroup.com)

**About Lake Resources NL (ASX:LKE OTC:LLKKF) - Cleaner high purity lithium using efficient disruptive clean technology**

Lake Resources NL (ASX:LKE, OTC: LLKKF) is a clean lithium developer utilising clean, direct extraction technology for the development of sustainable, high purity lithium from its flagship Kachi Project, as well as three other lithium brine projects in Argentina. The projects are in a prime location within the Lithium Triangle, where 40% of the world’s lithium is produced at the lowest cost.

This method will enable Lake Resources to be an efficient, responsibly-sourced, environmentally friendly and cost competitive supplier of high-purity lithium, which is readily scalable, and in demand from Tier 1 electric vehicle makers and battery makers.

1. **Clean-Tech:** Efficient, disruptive clean technology to produce sustainable high purity lithium, with a smaller environmental footprint, in demand by Tier1 EV makers and battery makers. This is a cost-competitive technology provided by our partner in California, Lilac Solutions, who have received the backing of the Bill Gates-led Breakthrough energy fund and MIT’s The Engine fund.

2. **High Purity:** High Purity Lithium Carbonate samples (99.9%) with very low impurities has been produced from lithium brines from Lake’s flagship project (refer ASX announcement 9 January 2020). The growth of higher density batteries to drive the latest electric vehicles has significantly increased demand for a high purity product with low impurities, and the process delivers this consistently for a premium price.

3. **Prime Location, Large Projects:** Lake’s projects are located in the Lithium Triangle, in Argentina, the prime location globally for low cost lithium production from large projects. The Kachi project covers 70,000 ha over a salt lake south of Livent’s lithium operation with a large indicated and inferred resource of 4.4 Mt LCE (Indicated 1.0Mt, Inferred 3.4Mt) (refer ASX announcement 27 November 2018). A pre-feasibility study (PFS) by a tier 1 engineering firm over Kachi shows a large, long-life low-cost potential operation with competitive production costs at the lower end of the cost curve similar to current lithium brine producers (refer ASX announcement 28 April 2020).

4. **Sustainable ESG Benefit:** The environmental footprint is far smaller than conventional brine evaporation processes or of hard rock mining. By using a benign water treatment process to produce lithium, Lake avoids any mining and returns virtually all water (brine) to its source without changing its chemistry (apart from lithium removal). This avoids the “water politics” in arid environments and is a better outcome for local communities. Tier 1 electric vehicle makers and Tier 1 battery makers have been seeking more sustainable, responsibly sourced materials in their supply chain which has driven demand for our products.

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 operating on Kachi brines and has shown 80-90% recoveries. Battery quality lithium carbonate (99.9% purity) has been produced from Kachi brine samples with very low impurities (Fe, B, with <0.001 wt%) (refer ASX announcement 9 January 2020). Test results were incorporated into a Pre-Feasibility Study (PFS). The Lilac pilot plant module

in California is producing samples for downstream participants. A pilot plant on site is planned to produce larger battery quality lithium samples. Discussions are advanced with downstream entities, as well as financiers, to develop the project.

On 3 July 2020, Lake Resources announced that the first samples of lithium chloride had been successfully produced from Lilac Solution's direct extraction pilot plant module, supporting the scale-up from previously successful lab-scale work. This was followed by Lake's announcement on 6 August 2020 of the appointment of Colorado-based Hazen Research, Inc to produce larger samples of battery-quality lithium carbonate.

In the coming weeks, lithium carbonate samples will be available for downstream supply chain participants and off-takers. The sector continues to see positive news around demand and issues have been highlighted with a pending shortfall of supply of clean, battery quality lithium.

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/>