

6 October 2020

## HAZEN EXPANDS STUDIES TO OPTIMISE BATTERY QUALITY LITHIUM CARBONATE

- Hazen has broadened its scope by reviewing different process combinations to optimize the consistent production of larger battery-quality lithium carbonate samples, with first samples next week.
- Hazen was appointed due to their thorough analysis using different applications to achieve the best quality product prior to producing samples in large volumes.
- Feedback to date from Hazen has been very encouraging and Lake remains confident in delivering high purity lithium carbonate samples.

Clean lithium developer **Lake Resources NL (ASX:LKE; OTC:LLKKF)** announced today that Hazen Research Inc (Hazen) has extended its scope of analysis and testwork of the lithium chloride samples with different process combinations to optimize consistent production of larger samples of battery quality lithium carbonate.

Crystallization is currently underway as part of production of lithium carbonate and Lake now expects first samples of high purity lithium carbonate next week.

Hazen was appointed due to their thorough analysis and have shown their expertise in seeking the best process to consistently produce development of sustainable, high-purity lithium in the near future. The result of these expanded studies will benefit the company by having an optimized production process.

**Lake's Managing Director, Steve Promnitz said:** "Hazen's work is rigorous and they are undertaking a much wider range of alternatives which will improve the production of quality product at larger volumes. This is a good outcome as the final results given us further optionality. Naturally Lake is keen to get the first samples produced and sent to Novonix for battery testing and this is not far away."

Lilac Solution's lithium extraction pilot plant module has successfully processed Kachi brine with high recoveries to produce lithium chloride, which Hazen is converting into battery grade lithium carbonate using a range of conventional carbonate processes. Lilac has previously produced 99.9% pure lithium carbonate from this lithium chloride using the conventional lithium carbonate process (refer ASX announcement 9 January 2020).

**For further information please contact:**

**Steve Promnitz, Managing Director**  
**+61 2 9188 7864**  
[steve@lakeresources.com.au](mailto:steve@lakeresources.com.au)

**Follow Lake on Twitter:** [https://twitter.com/Lake\\_Resources](https://twitter.com/Lake_Resources)  
**Follow on LinkedIn:** <https://www.linkedin.com/company/lake-resources/>  
**Website:** <http://www.lakeresources.com.au>

**For media queries, contact:**

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

Henry Jordan, Six Degrees Investor Relations: +61 (0) 431 271 538 , [henry.jordan@sdir.com.au](mailto:henry.jordan@sdir.com.au)

**LAKE RESOURCES NL**

Level 5, 126 Phillip Street  
Sydney NSW 2000  
+61 2 9188 7864

**LAKERESOURCES.COM.AU**  
ASX:LKE FRA:LK1 OTC:LLKKF

## 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. 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/>