

23 March 2021

Lake Accelerates Exploration Across its Broader Projects Portfolio as Lithium Supply-Demand Deficit Grows

- 50,000 litres of brines from Lake's Cauchari Project to be shipped and tested by groups specialising in direct lithium extraction and conversion to lithium hydroxide.
- Pre-feasibility study planning for Cauchari underway.
- Lake to test additional brines from Olaroz and Paso projects to meet objective of producing high purity, sustainable lithium from a number of its 100% owned projects.
- Exploration to be accelerated as demand continues to outstrip supply, with projections of significant supply deficit emerging from 2024.

Clean lithium developer **Lake Resources NL (ASX:LKE; OTC:LLKKF)** is accelerating the expansion of its Argentinian lithium projects in response to strong market demand, based on direct lithium extraction from its Cauchari, Olaroz and Paso Brine Projects, in addition to its flagship Kachi Project.

The move follows the recent boost to the Kachi Project, which has seen its NPV upgraded to US\$1.6 billion based on 25,500 tpa of high purity lithium production suitable for battery and cathode makers (refer ASX announcement 17 March 2021) and an assessment underway to expand this production even more.

Some 50,000 litres of lithium brine samples are to be sent from Lake's Cauchari Project for testing by groups specialising in direct lithium extraction and the conversion of concentrates to lithium hydroxide. This will be followed by a scoping study to expand future production, with Lake planning to commence pre-feasibility study work at Cauchari, including environmental impact studies and drilling for a resource statement, later in 2021.

Lake has previously confirmed multiple high-grade lithium brines zones over a 506m interval (102m to 608m depth) in drilling in 2019 at the Cauchari Project (refer ASX announcement 23 August 2019). This drilling confirmed similar grades and lithium brines extending into Lake's properties from the adjoining Ganfeng/Lithium Americas JV production development at Cauchari. The higher-grade results averaged 493 mg/L lithium over 343m (from 117m to 460m), up to 540 mg/L, with a Li/Mg ratio of 2.9.

Lake holds mining leases over 47,000 hectares over three projects in Jujuy Province in north-west Argentina, including the Cauchari, Olaroz and Paso Projects, 100% owned by Lake. At Olaroz, which is north of Cauchari, Lake's leases extend over 30 kilometres east and north of the adjoining Orocobre's Olaroz lithium production leases. Drilling is anticipated when all planned holes are approved.

Lake's Managing Director, Steve Promnitz commented: *"The scale of market demand for a high purity, sustainably produced product is set to overwhelm current supply, as evidenced by the moves by automakers such as Volkswagen and others. Lake continues to engage with a range of market participants, including large companies seeking to test Cauchari and other brines using their own extraction processes, including converting concentrates into lithium hydroxides and other products."*

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“With a growing supply deficit projected from 2024, Lake sees the need for even greater lithium production and therefore will advance development plans on our other brine projects based on the same production method.

“Significantly, should we reach our target, Lake would become a globally significant producer with relevant scale and high-quality products, at exactly the right time for the accelerating EV and battery storage revolution.”

Authorised for Release by the Board of Lake Resources NL.

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Figure 1. Location of Lake’s Cauchari results in relation to the Lithium America’s production development.

Cauchari Project.

Lake results show:

- similar brines
- similar high grades
- similar flow rates.

506m Brine zone vs
198m in adjoining project

Source: LKF: Advantage Lithium AAL TSXV announcements
5/3/2018, 10/01/2019, 7/03/19, 24/04/19. The marked boundaries
are indicative only. Please refer to the detailed map

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Figure 2: LKE's drilling at Cauchari in 2019 in relation to Orocobre & Ganfeng/Lithium Americas leases. (Note: The marked boundaries are indicative only).

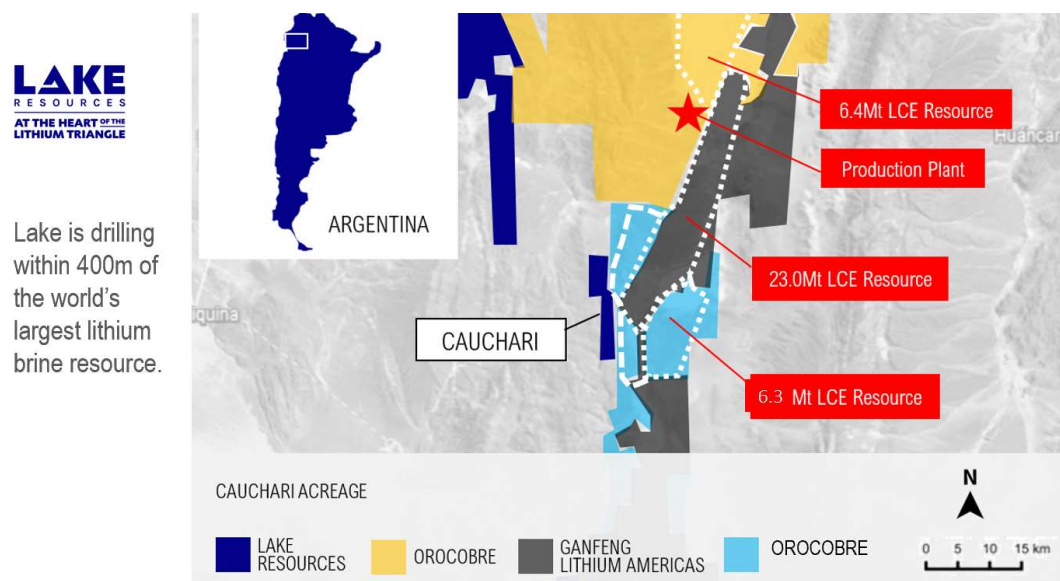


Figure 3: LKE's lease map at Cauchari in relation to the Orocobre & Ganfeng/Lithium Americas leases.

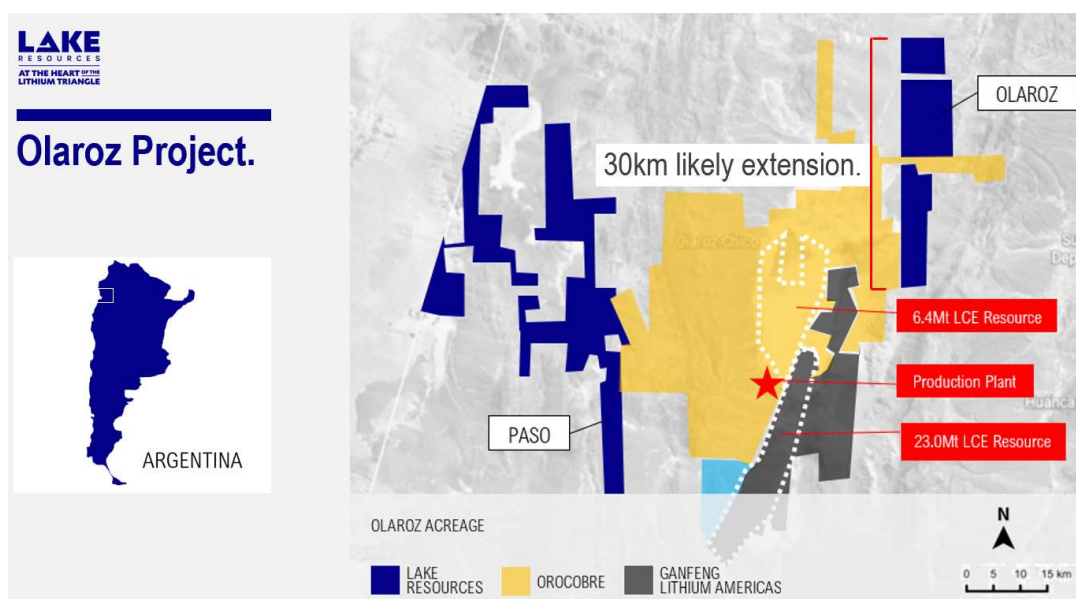


Figure 4: LKE's lease map at Olaroz in relation to the Orocobre leases.

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 200,000 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). Pre-feasibility study by tier 1 engineering firm shows large, long-life low-cost operation (refer ASX announcement 28 April 2020).

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 is 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.

A Definitive Feasibility Study (DFS) is underway at the Kachi Project with Hatch providing engineering, which is aimed for completion in Q1 next year, together with other related studies. Lake is currently funded through to the construction financing phase, anticipated to be mid next year, with production of 25,500 tpa lithium carbonate scheduled for H1, 2024.

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/>

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