

August 23, 2023

Lake Resources Reports Important Progress Towards DFS Completion in December for Flagship Kachi Project

- **Drilling, successful extraction and reinjection testing confirm the large scale and quality of the Kachi Lithium Brine Project**
- **Environmental Impact Assessment underway - workshop with environmental consultant; 2nd statutory community consultation scheduled this month**
- **Process plant design underway**
- **Important progress towards finalizing power solution - revised design to include capability for off-grid commissioning and start-up for train 1 of phase 1**
- **Lake Resources remains on track for completion of DFS in December 2023**

Clean lithium developer Lake Resources NL (ASX: LKE; OTC: LLKKF) (“LAKE” or “the Company”) confirms that it is on track to complete the Definitive Feasibility Study (DFS) for its flagship Kachi project (“Kachi”) by December 2023, as previously announced.

“We have drilled deeper for better grades and improved our drilling performance by 40 percent this year,” Lake CEO David Dickson said.

“Grades from recent extraction tests are 20 percent higher than exploration samples and we can expect further JORC updates prior to submitting the DFS.”

Dickson said the process plant had been relocated closer to the resource extraction area. The revised plant Plot Plan has been drafted, for this new location, with a model review now scheduled.

He said Lake had now demonstrated the viability of extraction and injection in its core resource area.

In the attached ASX presentation and in an investor webinar today Lake also gives details on the power solution for the project. The base case for the project includes an off-grid solution for train 1 commissioning and start-up with connection to the grid for full Phase 1 capacity. Lake continues to review alternatives including a full off-grid solution for Phase 1 built around solar and battery storage with technical reviews ongoing at this time.

“We have revised our design to include capability for off-grid commissioning and early production of Lithium Carbonate,” Dickson said.

“We are pleased to now have the optionality for a power solution, and we are also considering aspects of grid connection and the needs of local communities.”

Mr. Dickson said he had visited Argentina recently and had productive meetings with mining regulators and federal, state, and local governments.

“We continue working with United States and Argentina authorities on strengthening the lithium supply chain.”

He said he was also having regular updates with Export Credit Agencies in the United Kingdom and Canada and with offtake partners while working with strategic advisors on capital management.

The webinar can be accessed at [Lake Resources Investor Update - webinar.net](https://www.lakeresources.com.au/webinar).

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About Lake Resources NL (ASX:LKE OTC:LLKKF)

Lake Resources NL (ASX:LKE, OTC: LLKKF) is a responsible 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. Lake also has three additional early-stage projects in this region.

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.

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

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Investor Webcast

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August 23 2023



General Statement and Cautionary Statement

This presentation has been prepared by Lake Resources N.L (Lake) for information purposes and meetings with sophisticated and professional investors, institutional investors and brokers and not any particular party. The information in this presentation is based upon public information and internally developed data and reflects prevailing conditions and views as of this date, all of which are accordingly subject to change. The information contained in this presentation is of general nature and is not intended to address the circumstances of any particular individual or entity. There is no guarantee that the information is accurate as of the date it is received or that it will continue to be accurate in the future. No warranties or representations can be made as to the origin, validity, accuracy, completeness, currency or reliability of the information. No one should act upon such information without appropriate professional advice after a thorough examination of the particular situation. Lake Resources NL accepts no responsibility or liability to any party in connection with this information or views and Lake disclaims and excludes all liability (to the extent permitted by law) for losses, claims, damages, demands, costs and expenses of whatever nature arising in any way out of or in connection with the information, its accuracy, completeness or by reason of reliance by any person on any of it. The information regarding projects described in this presentation are based on exploration targets, apart from the Kachi project's resource statement. The potential quantity and grade of an exploration target is conceptual in nature, with insufficient exploration to determine a mineral resource and there is no certainty that further exploration work will result in the determination of mineral resources or that potentially economic quantities of lithium will be discovered. Some leases are located within and around the Orocobre, Orocobre/Advantage Lithium and Ganfeng/Lithium Americas projects and although data is limited within the properties, the leases may cover potential extensions to the Cauchari/Olaroz projects with potential extensions to aquifers, although this provides no assurance that any resource will be identified on the Lake leases. The lithium pegmatite leases occur adjacent to past producers of spodumene but no potential extension to any mineralisation can be assured.

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.

Compliance Statement

The information contained in this presentation relating to financial forecasts, production targets, exploration results, Measured, Indicated and Inferred resource estimates, project execution, infrastructure and testing work, has been derived from the information in Lake's JORC update announced on ASX on 15 June 2023. Lake Resources N.L. confirms that it is not aware of any information that materially affects the information included in Lake's JORC update announced on ASX on 15 June 2023 and all material assumptions contained in that announcement continue to apply and have not materially changed. On this basis, Lake confirms that the Competent Person's findings in Lake's JORC update announced on ASX on 15 June 2023 have not changed nor been modified in any material respects since that announcement.

On Today's Webcast:



David Dickson
CEO



Sean Miller
SVP, Field
Operations



Scott Munro
SVP, Technology,
Strategy and Risk

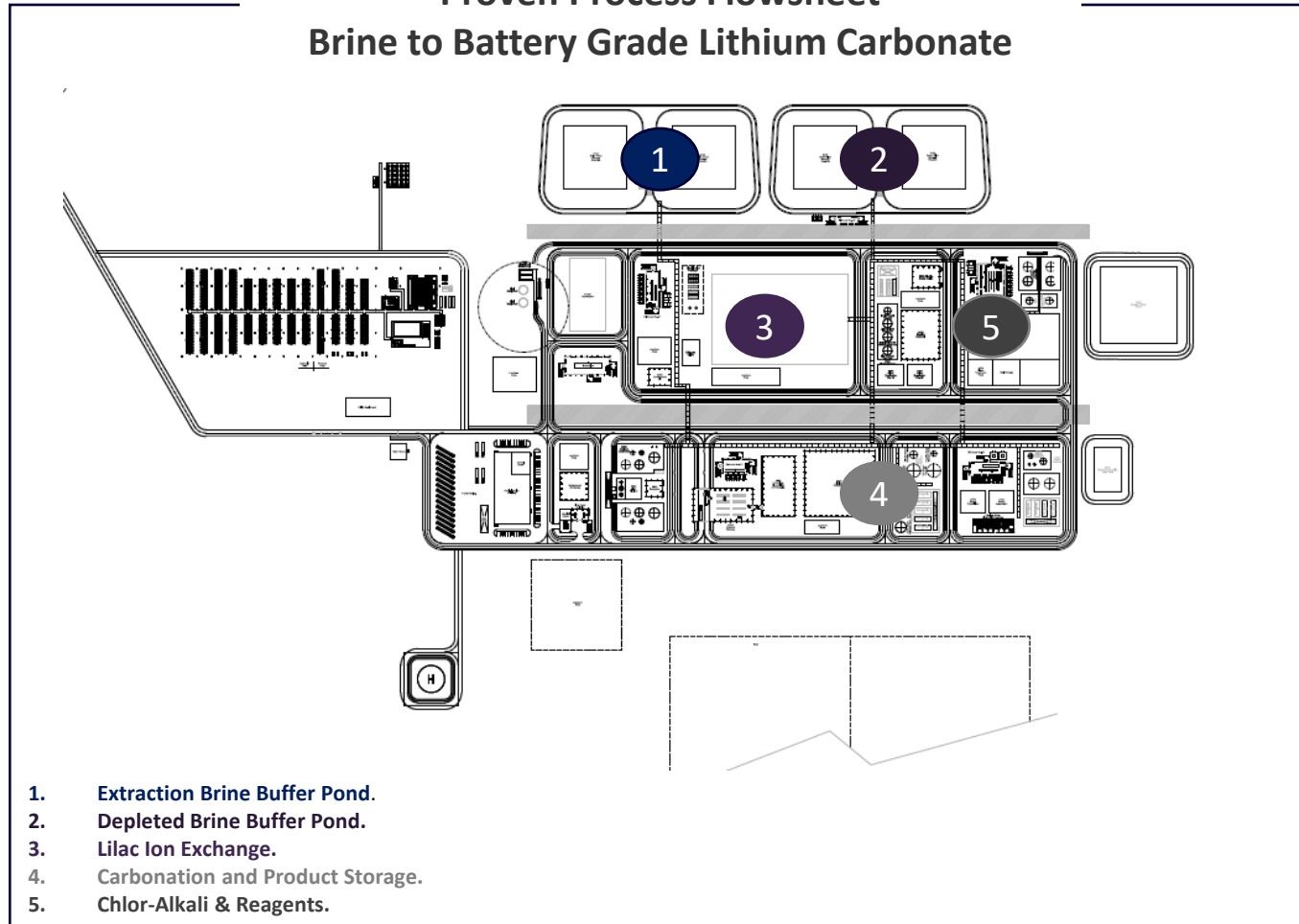
Overview of activities since June Operational Update:

- Drilling Program, Extraction and Reinjection Testing
- Update on DFS/EIA
- Next Steps
- Answers to Investor Questions

Recent progress:

- Recent drilling reveals vertical and lateral expansion of lithium-bearing brine
- 40% improvement in Drilling Performance in 2023
- Drilling deeper – 610m achieved in K23
- Further drilling planned in the Southern region (K24 & K25)
- Successful completion of stage 1 extraction and injection tests
- Demonstrated viability of injection in core resource area
- Provides confidence around injection in more geologically favorable areas outside of the Salar core
- Grades from recent extraction tests 20% higher than exploration core samples
- Further JORC updates prior to DFS submission
- Regular information sessions with Communities and Government

Proven Process Flowsheet Brine to Battery Grade Lithium Carbonate



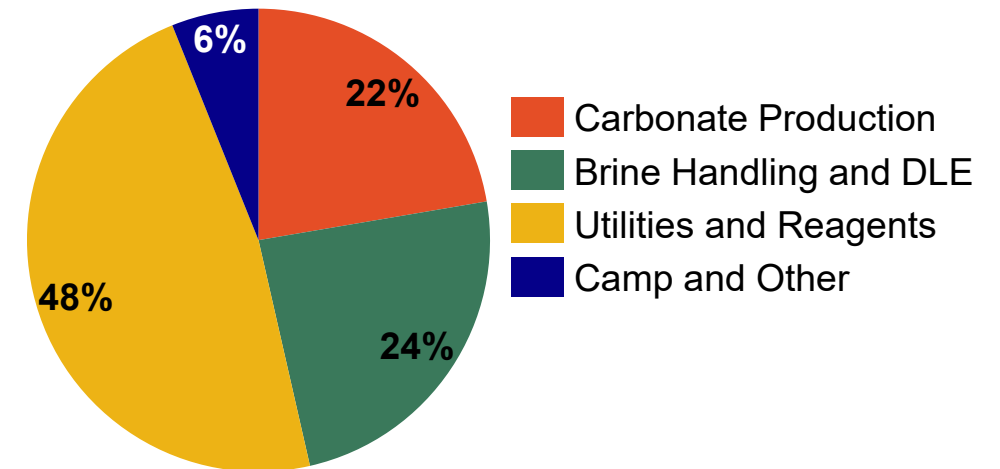
DFS & EIA Updates

- Revised design to include capability for Off-Grid commissioning and early production of Lithium Carbonate
- Heat and Material Balance for Phase 1 Issued For HAZID (IFH) including DLE input. Opens work streams for Environmental Permitting, Power demand variance, equipment supply, and CapEx/OpEx validation to be finalized.
- Draft well field, gathering network and reinjection networks prepared.
- Process plant relocated closer proximity to resource. Plot Plan at new site drafted. Model review scheduled.
- Completed in-country review of logistics route options.
- Process flowsheet review workshop scheduled with environmental consultant this month
- 2nd statutory community consultation scheduled for this month

- Base plan for phase 1 includes at site power island with 25 MW of solar capacity, 20 MW of thermal backup and grid connection for up to 60 MW.
 - Phase 1 – Train 1 Commissioning and Start-Up 20-25 MW
 - Phase 1 – Full capacity 55-60 MW
- **Northern Transmission Route Option – 280 km** high voltage line (HVL) from La Puna in Salta to Kachi selected as the preferred technical option
- **Distrocuyo released to perform detailed feasibility study** of 2 X 220 kV (220 MW) HVL along selected route from the north
- Initial cooperation discussions with other potential users in the transmission corridor to share infrastructure
- Commercial discussions commenced with multiple Independent Power Producers (IPP's) to provide transmission system and power supply
 - Intent is to enter into a long-term Power Purchase Agreement (PPA) with an IPP. IPP will design, build, own and operate the transmission system and generation capacity.
 - All solar + battery storage remains as an alternative subject to technology review and assessment

Phase 1: 365-Day Average Load, MW

	Phase 1
Carbonate production	12.5
Brine Handling and DLE	13.5
Utilities and Reagents	26.6
Camp and other	3.4
Total Facility (MW)	56



Note: All values based up preliminary estimates and will be updated upon completion of DFS engineering

Strategically delivering on Kachi

- Recent visit to Argentina included productive meetings with mining regulators, federal and local government
- Ongoing conversations with Export Credit Agencies in the UK and Canada, bankers and offtake partners
- Working with strategic advisors on:
 - Capital requirements
 - Working with US and Argentina on strengthening lithium supply partnerships
 - Strategic partnerships

Drilling program continues to confirm the large scale and quality of Kachi Brine

Process plant design underway

Important progress towards finalizing power solution

On target for completion of DFS in December 2023

Topics

- Technology being used at the processing plant
- Lilac equity and technical relationship
- Continuing processing at the demonstration plant
- DFS Status
- Offtake agreements
- Project financing
- Capital management
- Investing in other projects
- Argentinian economy
- View on Lithium price forecast



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Thank you!