

Mines and Money Mining Spotlight

LAKE
RESOURCES

31 October 2023

Disclaimer

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 presentation, 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.

Kachi Project



Argentina is an attractive location for lithium investment on a global scale, not only due to its vast lithium resource base, but also given the supportive regulatory and legal environment. Lake is well positioned to optimize its lithium assets, resources and relationships in Argentina

Kachi – Lake's Flagship Project

- Located in Catamarca region, within the Lithium Triangle which holds ~56% of the world's lithium reserves¹
- Government is committed to speedily developing the country's lithium resources, with investments in Argentina's lithium sector
- Strong relationship with the provincial government of Catamarca

Notes:

1. US Geological Survey (USGS)



Kachi Fact Sheet

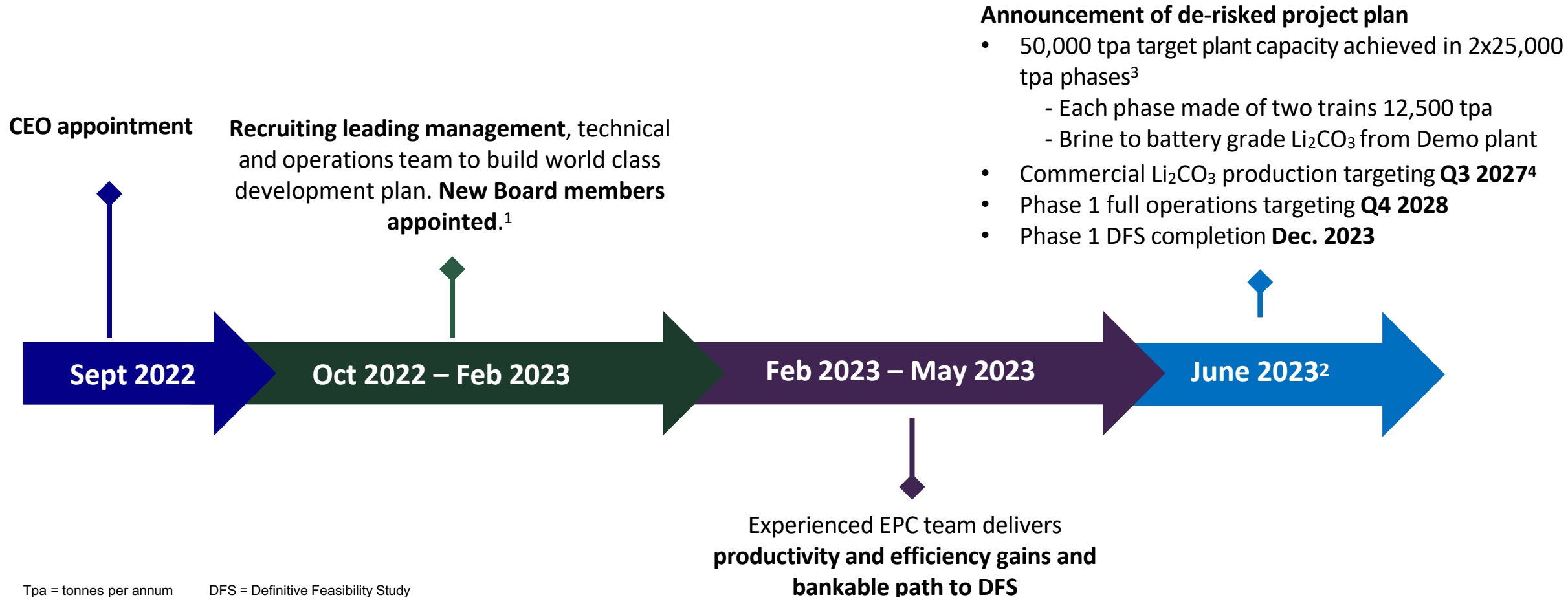
Location	Catamarca Province, Argentina
Project Stage	Completion of Phase 1 Definitive Feasibility Study (DFS) targeted for December 2023
Products	Battery Grade Lithium Carbonate
Measured & Indicated Resources²	2.9 million tonnes Lithium Carbonate Equivalent (LCE)
Inferred Resources²	5.2 million tonnes LCE
Project Execution Approach³	50,000 tonnes per annum target plant capacity <ul style="list-style-type: none">• Phase 1 – 25,000 target plant capacity• Phase 2 – Additional 25,000 target plant capacity
Non-Binding Offtake Agreements	100% of Lithium Carbonate production
Mine Life¹	25 years

Notes:

1. Not DFS estimates. Mine life for the reserve will be confirmed with the DFS; refer to 19 June 2023 ASX announcement
2. See JORC release on the 15th of June 2023; please refer to Appendix A for additional information.
3. These figures refer to target plant capacity only and are not production targets, nor predictions of what the plant will produce. Further information will be available upon completion of the Phase 1 DFS.

A year of progress, preparing Kachi for project execution

Clear parallels between DLE and oil & gas projects in developing Kachi



Tpa = tonnes per annum DFS = Definitive Feasibility Study

1. Refer to ASX announcement dated 12 January 2023

2. Refer to ASX announcement dated 19 June 2023

3. 50,000 tpa target plant capacity made up of Phase 1 (25,000 tpa) + Phase 2 (25,000 tpa)

4. When first train (12,500 tpa) in Phase 1 commences operation

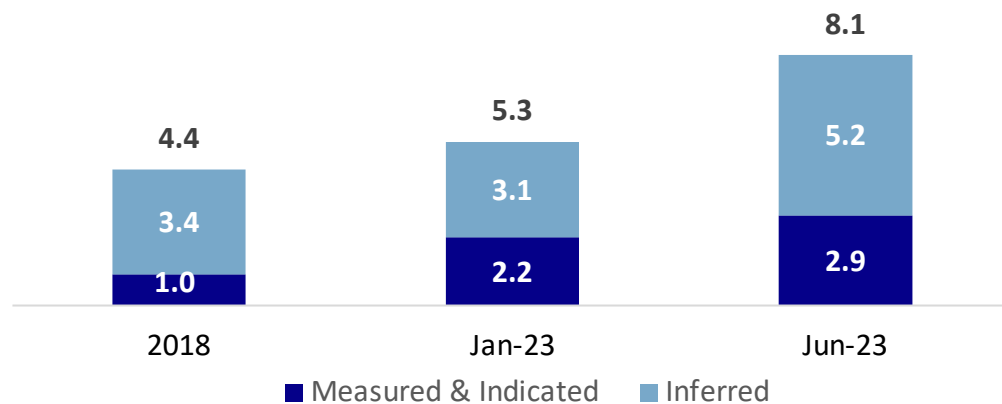
Substantial Resources With Embedded Upside

Kachi is a large-scale lithium carbonate project with significant LCE resource and further expansion potential

Large-Scale Lithium Carbonate Project

	Li (Kt)	LCE (Kt)	Grade (mg / l)
Measured	416	2,211	210
Indicated	135	716	174
M&I	550	2,926	200
Inferred	974	5,183	199

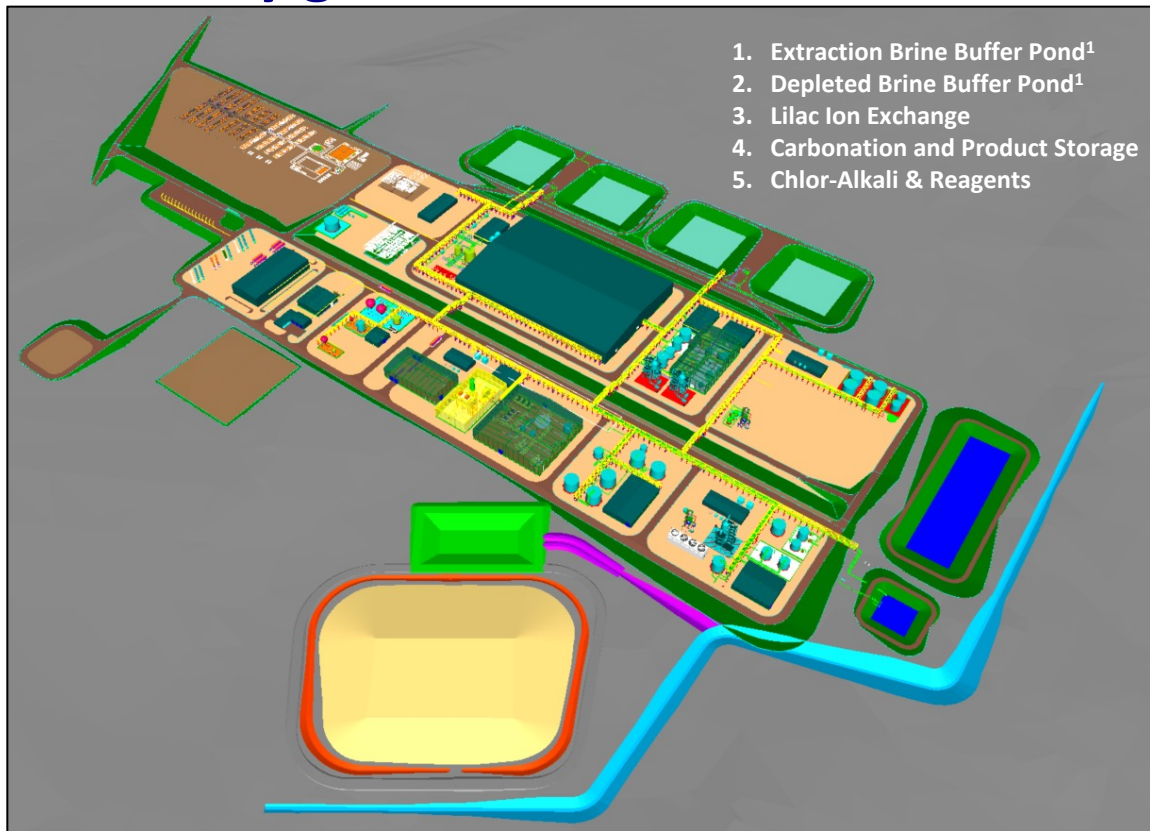
Resources (in Million Tonnes LCE)



Substantial Expansion and Exploration Potential

- Measured and Indicated (M&I) resources have increased from 2.2Mt in Jan-23 to 2.9Mt in Jun-23 of LCE defined, to a depth of 400m over 106km
- Surrounding the M&I resources are Inferred Resources of 5.2Mt LCE defined over 161km
 - The resource remains open to depths over 600m below ground surface (bgs) and open laterally, where drilling is underway to better define the resource extent
- The footprint of the Inferred Resource has expanded substantially north and south from recent characterization activities and transient electromagnetic geophysics suggests the lithium brine may extend significantly further indicating substantial additional exploration potential
- Current and future drilling is targeting additional step out holes and defining the deeper resource beyond 400m bgs

Process flow sheet proven from brine to battery grade lithium carbonate



Major Milestones Achieved in Kachi Demonstration Plant using Lilac DLE Technology

DLE demonstration plant continuously operational for more than 2,500 hours with 90% uptime

Highly selective process with consistent results on sample testing

> 90% impurity removal³

> 80%² lithium recovery³

Produced 200,000 liters of eluate containing more than 4,100 kg of LCE

Lithium Carbonate exceeds battery grade requirements > 99.8% purity³

Initial offtake samples shipped

¹ Buffer pond size for our target 50Ktpa plant capacity is more than 100x smaller than evaporation ponds required for same output. ² For DLE recovery only; >76% for total plant.

³ Refer to ASX Announcements on 3 April 2023, 19 June 2023 and 26 September 2023

- 30-day pumping test complete; reviewing data to incorporate learnings into future well designs
- Process design plant finalized
- Ongoing conversations with Export Credit Agencies in the UK and Canada, bankers and offtake partners
- Working with strategic advisors on:
 - Near term Capital requirements
 - Project financing structure
- Resource and reserve for Phase 1 DFS are undergoing review processes; we will release updates to the market in the coming weeks as required, as a result of that review
- Finalize power design and selection of Independent Power Producer (IPP)

On target for completion of Phase 1 DFS in December 2023

Appendix A



Table 1: Updated resource estimate of contained lithium

Measured June 2023								
Unit	Sediment Volume m ³	Specific Yield %	Brine volume m ³	Litres	Li mg/l	Li grams	Li Tonnes	Tonnes LCE
A	14,620,000,000	0.07	1,073,675,256	1,073,675,256,000	200	214,735,051,200	214,735	1,142,390
B	4,594,900,000	0.08	358,054,366	358,054,366,070	222	79,488,069,268	79,488	422,877
C	8,487,400,000	0.06	543,960,861	543,960,860,960	223	121,303,271,994	121,303	645,333
Total	27,702,300,000		1,975,690,483	1,975,690,483,030	210	415,526,392,462	415,526	2,210,600
Indicated June 2023								
Unit	Sediment Volume m ³	Specific Yield %	Brine volume m ³	Litres	Li mg/l	Li grams	Li Tonnes	Tonnes LCE
A	5,559,400,000	0.07	401,416,477	401,416,477,000	172	69,043,634,044	69,044	367,312
B	1,968,900,000	0.07	144,809,839	144,809,838,540	176	25,486,531,583	25,487	135,588
C	3,528,700,000	0.06	225,883,379	225,883,378,840	177	39,981,358,055	39,981	212,701
Total	11,057,000,000		772,109,694	772,109,694,380	174	134,511,523,682	134,512	715,601
Combined Measured + Indicated								
	38,759,300,000	-	2,747,800,177	2,747,800,177,410		550,037,916,143	550,038	2,926,202
Inferred June 2023								
Unit	Sediment Volume m ³	Specific Yield %	Brine volume m ³	Litres	Li mg/l	Li grams	Li Tonnes	Tonnes LCE
A	35,100,000,000	0.08	2,695,188,600	2,695,188,600,000	188	506,695,456,800	506,695	2,695,620
B	8,982,700,000	0.07	661,907,317	661,907,316,630	201	133,043,370,643	133,043	707,791
C	20,794,000,000	0.07	1,534,617,994	1,534,617,994,000	218	334,546,722,692	334,547	1,779,789
Total	64,876,700,000		4,891,713,911	4,891,713,910,630	199	974,285,550,135	974,286	5,183,199

Note: This table has been directly extracted from the JORC update announced 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.

- JORC definitions were followed for mineral resources.
- The Competent Person for this Mineral Resource estimate is Andrew Fulton, MAIG.
- No internal cut-off concentration has been applied to the resource estimate. The resource is reported at a zero mg/l cut-off, given the consistent grade of the deposit.
- Numbers may not add due to rounding.
- Specific Yield (Sy) = Drainable Porosity
- Lithium is converted to lithium carbonate (Li₂CO₃) with a conversion factor of 5.32.

Mines and Money Mining Spotlight

LAKE
RESOURCES

31 October 2023