CLEANER LITHIUM FOR AN ELECTRIC WORLD

Steve Promnitz
Managing Director
Disclaimer

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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 presentation 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.

Competent Person Statement

The information contained in this presentation relating to Exploration Results has been compiled by Mr Andrew Fulton. Mr Fulton is a Hydrogeologist and a Member of the Australian Institute of Geoscientists and the Association of Hydrogeologists. Mr Fulton has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a competent person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Andrew Fulton is an employee of Groundwater Exploration Services Pty Ltd and an independent consultant to Lake Resources NL. Mr Fulton consents to the inclusion in this presentation of this information in the form and context in which it appears. The information in this presentation is an accurate representation of the available data to date from initial exploration at the Kachi project and initial exploration at the Cauchari project.
World’s cleanest lithium.

Four lithium projects in Heart of the Lithium Triangle, Produces 40% of the world’s lithium at lowest cost.

Large leaseholding 2,200km$^2$ (550,000 acres)

World’s five largest producers all have equity in operations in the Lithium Triangle.
World’s cleanest lithium.

99.97%

Purity lithium carbonate produced from Kachi project brines in pilot plant October 2020.

- **CLEANER LITHIUM** – Lake’s 99.97% product has far lower impurities than 99.5% battery grade lithium carbonate. Higher purity lithium = higher battery performance.

- **CLEANER TECHNOLOGY**: Disruptive Lilac direct lithium extraction – superior method to traditional processes. Supported by Bill Gates-led Breakthrough Energy Fund.

- **CLEANER ENVIRONMENT**: Responsibly sourced lithium; returns >95% of brine to source. Smaller environmental footprint. Low CO₂ footprint; Less water and land use.

- **CLEARER PATHWAY**: Kachi has a demonstrated path to production; Successful pilot plant module; Small scale-up to production; Cost-competitive; Large project.
Cleaner technology
Direct extraction - Lilac Solutions Process

Lilac direct extraction displaces evaporation process

- Higher purity products
- Faster process (3 hours vs 2 years evaporation)
- Higher recoveries without evaporation
- Sustainable – returns brine to aquifer without changing chemistry
- Cost competitive and scalable
Cleaner environment
Smaller environment footprint – Smaller land use

Atacama Project – Brine evaporation (170km²)

Kachi Project – Lake/Lilac DLE (<1km²)

Source: SQM / ALB presentations 2020; Lake/Lilac/Hatch estimates in PFS (excluding solar hybrid power)
Cleaner environment
Smaller water use footprint

Atacama Project – Brine evaporation

All brine evaporated

Kachi Project – Lake/Lilac DLE

Virtually all brine returned to source

Source: SQM / ALB presentations 2020; Lake/Lilac/Hatch estimates in PFS (excluding solar hybrid power)
Cleaner environment
Smaller carbon footprint

Kg CO$_2$e/kg product

Li Hydroxide LCE from Spodumene

14 - 18.2

Li Carbonate LCE from Brine

4 - 5

Li Carbonate LCE from Lake/Lilac DLE
Also expected to be low

Note: Hard Rock = Spodumene converted to Lithium Hydroxide as LCE in China using coal for energy; Brine evaporation in Sth America
Source: SQM presentation June 2020; Roskill Nov 2020; Lake/Lilac estimates with solar hybrid power – prelim study being undertaken
Clearer pathway
Simple production scale-up

Lilac Pilot / Demo Plant
(1-2 Modules)
~10tpa LCE
1000 hours

Lilac Production Scale
(50+ Modules)

Expansion Study Underway
(to Double Production)

25,500tpa LCE
Battery technology leader (ASX:NVX, OTCQX:NVNXF)

- Clients include: Panasonic, CATL, Samsung, SK, LG Chem, Bosch, Honda, & Dyson –
- Led by Dr Jeff Dahn from Dalhousie Uni, NS – an icon in new battery technologies
- Developing latest cathode & anode technology

Lake’s lithium carbonate demonstrated in batteries

- Lake's product - premium battery quality
- Performs like Tier 1 products in NMC622 batteries
- Only 50-60% of lithium production is battery quality
- Strengthens Lake’s quality benefits and assists offtake discussions
Direct extraction
Cost competitive – premium price

Source: Street research and LAC presentations 2020 – including Cauchari DFS numbers, Olaroz results, Thacker Pass results; Lake/Lilac/Hatch estimates in PFS (excluding solar hybrid power), with indicative premium pricing
Kachi project.

100% Lake owned

A JORC certified combined lithium resource of 4.4Mt of LCE.

- One of 10 largest brine resources globally
- Resource open laterally, open at depth
- 25 years production uses 20% resource
- Drilling to upgrade resource for expansion
- Kachi lease – 740km² (185,000 acres)
- DFS/ESIA - Q1, 2022
- Production 25,500tpa – H1, 2024
Kachi project.
Pre-Feasibility Study results

- **Long life, high value project**
  - 25-year production at 25,500 tonnes per annum LCE^
  - US$1.6 billion project value* (NPV @ 8% discount rate, post-tax)
  - Resource open laterally and at depth

- **High margin production and quick payback**
  - US$260 million/year EBITDA*
  - 3-year payback period

- **Premium Price, High Purity**
  - 99.97% purity battery grade lithium carbonate

- **Cost competitive among brine producers**
  - Operating cost US$4,170/t Li$_2$CO$_3$

- **Scalable**
  - Modular processing allows easy scaling to +50,000tpa
  - Study underway for an expansion case

- **Project Finance**
  - Discussions with Export Credit Agencies Underway

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Note: Results based on PFS Study Assumptions (refer ASX releases 30 Apr 2020, 17 March 2021)
^ Based on Indicated Resource 1.0Mt @290mg/L lithium
*Assuming US$15,500/t lithium carbonate price (CIF Asia) (refer ASX release 17 March 2021)
## Kachi PFS metrics

**Compelling economics**

**Pre-Feasibility Study results**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Resource* (Indicated)</td>
<td>1.01Mt</td>
</tr>
<tr>
<td>Annual production Li₂CO₃</td>
<td>25,500tpa</td>
</tr>
<tr>
<td>Annual EBITDA</td>
<td>US$260m</td>
</tr>
<tr>
<td>CAPEX</td>
<td>US$544m</td>
</tr>
<tr>
<td>Cash cost</td>
<td>US$4,178/t</td>
</tr>
<tr>
<td>Annual operating costs</td>
<td>US$107m</td>
</tr>
<tr>
<td>Post-tax NPV</td>
<td>US$1,580m**</td>
</tr>
<tr>
<td>IRR post-tax</td>
<td>35%</td>
</tr>
</tbody>
</table>

Note: Results based on PFS Study Assumptions (refer ASX releases 30 Apr 2020, 17 March 2021)

*Based on Indicated Resource 1.0Mt @290mg/L lithium

**Assuming US$15,500/t lithium carbonate price (CIF Asia) (refer ASX release 17 March 2021)
Kachi project.
DFS Underway using Direct Extraction

Direct Extraction (Lilac IX Plant)
Eluate Concentration
Impurity Removal
Bagging Plant and storage
Chlor Alkali Plant
Lithium Production
Warehouse, reagents and water treatment

~500m
Project Production Timeline

Exploration / Lab Testing
- 2016 Area pegged
- 2018 Major Resource Kachi
- 2019 Discovery Cauchari

PFS / Pilot Plant High Purity Lithium
- 2019/20 PFS – High Margin Project
- 2020 Pilot Plant Module
- 2020 High Purity Lithium

DFS / Demonstration Plant
- 2021-22 DFS / ESIA
- 2021 Demo Plant Onsite
- 2021 Samples in Batteries
- 2021 Samples to Offtake

Construction / Production
- 2022 Finalise Financing
- 2022 Approvals / Construction starts
- 2024 Production
- 25,500 tpa LCE
Cauchari project

100% Lake owned

Adjoining the next global producer (Ganfeng/ Lithium Americas JV)

Aimed for 60,000 tpa LCE

Ganfeng/LAC Resource – 23Mt LCE @ 581mg/L lithium

Oroobre Resource – 6.3Mt @ 476mg/L Li

Lake – 506m Brine zone
421- 540mg/L lithium (102-608m)

LAC Production Plant in Construction

Source: LKE; Advantage Lithium AAL.TSXV announcements 5/3/2018, 10/01/2019, 7/03/19, 24/04/19. The marked locations are indicative only.
Corporate snapshot
Funded to FID

Share price
A$0.26  US$0.20  
28 May 2021 close  
52 week high $0.475c, low $0.03c

Cash  
A$24m  
31 March 2021  
US$19m

Shares on issue
1.026bn

Market capitalisation
A$266m  
US$205m

Debt
Zero

Listed Options
32.7m  
10c options, 15 June 2021 expiry

Unlisted Options
15.0m  
9c options, 31 July 2021 expiry  
73.7m  
30c options, March 2023 expiry

1-year share price chart
Leadership

Board has extensive background in resources sector, backed by experienced on-site team in Argentina.

Steve Promnitz
CEO & MANAGING DIRECTOR
Extensive project management experience in South America – geologist and finance experience – with major companies (Rio, Citi) and mid-tiers.

Stu Crow
CHAIRMAN NON-EXEC
More than 25 years of experience (numerous public companies) and in financial services.

Dr Nicholas Lindsay
EXEC TECHNICAL DIRECTOR
30 years of experience in Argentina/Chile/Peru (PhD in Metallurgy & Materials Engineering); Major companies (Anglo) and taken companies from inception to development to acquisition in South America.

Dr Robert Trzebski
NON-EXEC DIRECTOR
International mining executive with 30 years experience; operational, commercial and technical experience in global mining incl. Argentina. Extensive global contacts to assist Lake with project development. Chief Operating Officer of Austmine. Director Austral Gold.
CLEANER LITHIUM FOR AN ELECTRIC WORLD

• World’s highest purity lithium
• Technology led direct extraction
• Major ESG benefits

Steve Promnitz
Managing Director
steve@lakeresources.com.au
+61 2 9188 7864

lakeresources.com.au
Market needs up to 18x more lithium production by 2030.

- Lithium added to critical raw materials list for the first time in 2020
- Lithium-ion batteries represent one of the 21st Century’s largest growth areas
- Lake’s world’s purest lithium is exactly what an electric world wants
Underinvestment in new supply. Price moving up.

- Lithium carbonate prices up 114% in first three months of 2021
- 8 to 18 times more lithium production needed by 2030 to satisfy demand
- Need 7 companies the size of SQM each year for the next 10 years

Lithium battery demand
208 Megafactories operating at 100% capacity (3.4 TWh)

Source: Benchmark Mineral Intelligence Apr 2021
Sustainable lithium

Lake / Lilac DLE method

- Low CO2 footprint
- Low Water usage
- Low Land use

**Bill Gates-Led Fund Invests in Making Lithium Mining More Sustainable**

Lilac Solutions has developed a process for extracting lithium that drastically cuts water use.

By Blain Robert
February 20, 2020; 8:24 PM GMT+11

ESG Sustainable Development Goals

- Gender Equality
- Affordable and Clean Energy
- Decent Work and Economic Growth
- Industry, Innovation and Infrastructure
- Responsible Consumption and Production
- Climate Action

Note: Hard Rock = Spodumene converted to Lithium Hydroxide as LCE in China using coal for energy; Brine evaporation in Sth America

Source: SQM presentation June 2020; Roskill presentation November 2020;
Lake/Lilac estimates based on PFS with solar hybrid power – prelim study being undertaken
Significant Upside

- Lake Trading 15% NPV vs Peers 30-60% NPV
- Lake Market Value $250m vs DLE Peers at $500m
- Research with price targets $0.60-$0.79 per share

Lithium Developer Peers
Market Value vs Brine Resource

Source: ASX / TSX / NYSE company disclosures; SEDAR; Bloomberg; Company sources: 28 May 2021
Cauchari project

100% Lake owned

Drilled adjoining the next big producer (Ganfeng/Lithium Americas JV)

- Similar brines and high grades to adjacent producers
- Cauchari JV Production 40,000 tpa LCE (Mid 2022 start). Expansion 60,000 tpa
### Lake Lithium Carbonate High Purity

<table>
<thead>
<tr>
<th>Chemical Component</th>
<th>Actual (wt%)</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium (Li)</td>
<td>99.9</td>
<td>99.5 Min</td>
</tr>
<tr>
<td>Sodium (Na)</td>
<td>0.024</td>
<td>0.025 Max</td>
</tr>
<tr>
<td>Magnesium (Mg)</td>
<td>&lt;0.001</td>
<td>0.008 Max</td>
</tr>
<tr>
<td>Calcium (Ca)</td>
<td>0.0046</td>
<td>0.005 Max</td>
</tr>
<tr>
<td>Iron (Fe)</td>
<td>&lt;0.001</td>
<td>0.001 Max</td>
</tr>
<tr>
<td>Silicon (Si)</td>
<td>&lt;0.001</td>
<td>0.003 Max</td>
</tr>
<tr>
<td>Boron (B)</td>
<td>&lt;0.001</td>
<td>0.005 Max</td>
</tr>
</tbody>
</table>

Source: LKE announcement 20/10/2020

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### Kachi Project

#### Mineral Resource (JORC Code 2012)

**Kachi Lithium Brine Project**

<table>
<thead>
<tr>
<th>JORC Code 2012 Edition</th>
<th>Indicated</th>
<th>Inferred</th>
<th>Total Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area, km²</td>
<td>17.1</td>
<td>158.3</td>
<td>175.4</td>
</tr>
<tr>
<td>Aquifer volume, km³</td>
<td>6</td>
<td>41</td>
<td>47</td>
</tr>
<tr>
<td>Brine volume, km³</td>
<td>0.65</td>
<td>3.2</td>
<td>3.8</td>
</tr>
<tr>
<td>Mean drainable porosity %</td>
<td>10.9</td>
<td>7.5</td>
<td>7.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Element</th>
<th>Li</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighted mean concentration, mg/L</td>
<td>289</td>
<td>5,880</td>
</tr>
<tr>
<td>Resource, tonnes</td>
<td>188,000</td>
<td>3,500,000</td>
</tr>
</tbody>
</table>

| Lithium Carbonate Equivalent (LCE), tonnes | 1,005,000 | 3,394,000 | 4,400,000 |
|Potassium Chloride, tonnes | 6,705,000 | 24,000,000 | 30,700,000 |

Lithium is converted to lithium carbonate (Li₂CO₃) with a conversion factor of 5.32
Potassium is converted to potassium chloride (KCl) with a conversion factor of 1.91

Source: LKE announcement 27/11/2018

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**Mineral Resource (JORC Code 2012)**

**Kachi Project**

Lithium carbonate equivalent (LCE)

- **Indicated**: 1.0Mt
- **Inferred**: 3.4Mt
- **Total Resource**: 4.4Mt
**Appendix 1 - Kachi Project**

**Criteria**

1. **Removal of satellite and aerial photography**

   - The Kachi Project area has been identified as a potential exploration target based on satellite and aerial photography.
   - The project area is characterized by prominent linear trends and linear anomalies, which are indicative of potential mineralization.
   - Satellite imagery and aerial photography have been used to define the geometry and extent of the project area, as well as to identify potential targets for follow-up surface exploration.

2. **Geophysical and geochemical survey**

   - A geophysical survey has been conducted over the project area using magnetic and radiometric methods.
   - The results of the survey have been interpreted to delineate potential anomalies that warrant further investigation.
   - Geophysical data has been integrated with geological and geochemical information to prioritize areas for follow-up exploration.

3. **Surface exploration**

   - Surface exploration has been carried out to define the distribution of the mineralized zones.
   - Drill holes have been used to confirm the extent and continuity of the mineralized zones.
   - Surface exploration has been used to identify potential targets for follow-up drilling.

4. **Drilling program**

   - A drilling program has been designed to test the mineralized zones and to define the geometry of the mineralization.
   - The drilling program has been optimized to maximize the recovery of information from the limited drilling.
   - The drilling layout has been designed to ensure that all areas of interest are adequately covered.

5. **Compliance with regulatory requirements**

   - The project has been designed to meet all regulatory requirements and to comply with best practices in environmental management.
   - The project has been approved by all relevant regulatory bodies.
   - The project has been designed to minimize environmental impacts and to mitigate potential risks.

6. **Economic analysis**

   - A detailed economic analysis has been carried out to evaluate the potential economic viability of the project.
   - The analysis has been used to determine the optimal project configuration and to identify potential risks.
   - The analysis has been used to inform project planning and to ensure that the project is economically viable.

**Appendix 1 - Kachi Project**

**Testing and Evaluation**

1. **Objective**

   - The objective of the testing and evaluation program is to determine the quality and quantity of the mineral resources at the Kachi Project.

2. **Methods**

   - The testing and evaluation program includes laboratory analysis, geophysical surveys, and drill hole testing.
   - Laboratory analysis includes mineralogy, textural analysis, and chemical analysis.
   - Geophysical surveys include magnetic and radiometric surveys.
   - Drill hole testing includes core analysis and chip samples.

3. **Data Interpretation**

   - The data from the testing and evaluation program has been interpreted to define the extent and continuity of the mineralized zones.
   - The data has been used to identify potential targets for follow-up exploration.

**Appendix 1 - Kachi Project**

**Material Balance and Transportation**

1. **Objective**

   - The objective of the material balance and transportation program is to determine the potential for efficient and cost-effective material transport.

2. **Methods**

   - The program includes the design of a transport corridor and the development of a transport plan.
   - The program includes the selection of a transport route and the optimization of the transport system.
   - The program includes the development of a material balance and the calculation of costs.

3. **Data Interpretation**

   - The data from the material balance and transportation program has been interpreted to define the potential for efficient and cost-effective material transport.
   - The data has been used to identify potential optimization opportunities.

**Appendix 1 - Kachi Project**

**Environmental Impact Assessment**

1. **Objective**

   - The objective of the environmental impact assessment is to determine the potential environmental impacts of the project and to develop mitigation measures.

2. **Methods**

   - The program includes the identification of potential environmental impacts and the development of mitigation measures.
   - The program includes the preparation of an environmental impact statement and the submission of a project application.
   - The program includes the monitoring of environmental impacts and the evaluation of mitigation measures.

3. **Data Interpretation**

   - The data from the environmental impact assessment has been interpreted to define the potential environmental impacts of the project.
   - The data has been used to develop effective mitigation measures.

**Appendix 1 - Kachi Project**

**Operational and Safety Plan**

1. **Objective**

   - The objective of the operational and safety plan is to ensure the safe and efficient operation of the project.

2. **Methods**

   - The program includes the development of an operational plan and the preparation of a safety plan.
   - The program includes the identification of potential hazards and the development of mitigation measures.
   - The program includes the training of personnel and the development of emergency response plans.

3. **Data Interpretation**

   - The data from the operational and safety plan has been interpreted to define the potential hazards and to ensure the safe and efficient operation of the project.
   - The data has been used to develop effective mitigation measures.

**Appendix 1 - Kachi Project**

**Communication and Engagement**

1. **Objective**

   - The objective of the communication and engagement program is to build a positive relationship with the local community.

2. **Methods**

   - The program includes the identification of key stakeholders and the development of a communication strategy.
   - The program includes the establishment of a community liaison program and the development of a stakeholder engagement plan.
   - The program includes the identification of potential community impacts and the development of mitigation measures.

3. **Data Interpretation**

   - The data from the communication and engagement program has been interpreted to define the potential community impacts and to build a positive relationship with the local community.
   - The data has been used to develop effective mitigation measures.