CLEAN HIGH PURITY LITHIUM

Clean Technology Solution To Meet EV Demand

Steve Promnitz - Managing Director
18 February 2021      Update

LAKE RESOURCES
CLEANER LITHIUM FOR ELECTRIC WORLD
ASX:LKE     FRA:LK1     OTC:LLKKF
Disclaimer

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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, whether as a result of new information, future events or results or otherwise. 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, Mineral Resource estimates and the associated Indicated Resource, which underpins the production target in the pre-feasibility study, have 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.
Clean Solution to Electric Mobility Growth

• Electric Mobility needs Cleaner Better Batteries

• Clean Technology – Direct Extraction, Lilac Solutions
  No Mining – Water Treatment Only

• High Purity Lithium Product - 99.97% purity battery quality lithium carbonate

• Large ESG Benefit – Low water use; Returns 99% brine to source; Small footprint

• Demonstrated Path to Production; Scale to Meet Demand Growth
  Successful pilot plant; Cost-competitive; Scalable; Funded to Construction phase
Lithium Ion Batteries: One of Largest 21st Century Growth Areas

18 times more Lithium Production by 2030; Underinvestment in new supply; Price moving up

Lithium Demand Growth: 20% Year on Year
China Lithium spot price increased 40% - Jan 2021

Need 18x more Lithium Production by 2030
“7 companies SQM size per year for 10 years”

Megafactory growth
181 battery factories to 2030, up 750GWh last yr but no lithium supply growth

Source: Benchmark Mineral Intelligence Forecast Jan 2021
Source: European Commission “Action Plan on Critical Raw Materials” (mid range selected); Financial Times 31 August 2020; Benchmark Mineral Intelligence Dec 2020
Lake is Solution to EV & Battery Demand
For demand in high purity & sustainability

• #1 High Purity Battery Materials - to avoid performance issues –
  Low impurities = reliable battery performance

• #2 Responsibly Sourced, Traceable, Sustainable Battery Materials -
  Demand: Sustainable battery materials. Smaller footprint: \( \downarrow \text{CO}_2, \downarrow \text{water}, \downarrow \text{land use.} \)

• #3 Low Cost Structure - Cost Competitive to deliver affordable EV batteries

• Lake/Lilac Solution – High purity/low impurity consistently; Cost Competitive;
  Scalable; Small environmental footprint; Low water usage
High Purity

99.97% Purity Lithium Carbonate
Produced from Kachi project brines

After processing in Lilac direct extraction pilot module

• Battery Grade considered to be 99.5%
• Kachi samples have very low impurities (60x less than 99.5% battery grade)
• Simple flowsheet; cost – competitive
Direct extraction - Small Environmental Footprint - 90% less

Lilac Direct Extraction Footprint vs Brine Evaporation Ponds (Atacama) and Hard Rock Mining (Greenbushes)
Direct extraction - Small Environmental Footprint

Brine Evaporation smaller CO2 footprint than hard rock; Lilac Direct Extraction reduces water impact

Comparison of CO₂e emissions, kg CO₂e/kg product

Grey: Reference material, information from technical literature
Green: Spodumene based products
Blue: Brine products

LCE = Lithium Carbonate Equivalent
Li₂CO₃ corresponds to 1 LCE
0.88 / LIOH * H₂O corresponds to 1 LCE

Source: SQM
Sustainable Lithium.
ESG Targets for the Future

5. Gender Equality
8. Decent Work and Economic Growth
9. Industry Innovation and Infrastructure

7. Affordable and Clean Energy
12. Responsible Consumption and Production
13. Climate Action

UNGP
United Nations Guiding Principles on Business and Human Rights

SDGs
Sustainable Development Goals
Direct extraction - Cleaner

Re-engineered Known Water Treatment Technology

• Efficient – just lithium removed
• Faster – hours not months
• Higher recoveries
• High purity – only lithium removed
• Cost competitive
• Scalable; Can expand to meet demand
• Environmentally friendly - small footprint
• Returns brine to source- no change (except lithium removal)
Direct extraction. Ion Exchange Process Lilac Solutions

Replaces Evaporation Ponds with Ion Exchange Modules
Simple Process – Repeated every 2.5 hours
Simple Flowsheet to produce lithium carbonate

3 HOURS To produce Concentrate vs 12-24 mths

BRINE RETURNED WITHOUT CHANGES EXCEPT LITHIUM REMOVAL

LITHIUM CARBONATE PLANT AND/OR LITHIUM HYDROXIDE PLANT

BRINE RESOURCE
High Purity Lithium – From Pilot to Production

Pilot Stage
Pilot Stage
Direct Extraction
Lithium Chloride

Underway in 2020
Continues 2021

Demonstration Plant Stage
On Site
H2 2021

Production Plant Stage
On Site
H2 2023
H1 2024
De-Risked Processing; Simple Production Scale-up

Direct Extraction Lithium – Lilac Pilot Plant Module

Pilot
1-2 modules

Pilot to Production

Direct Extraction Lithium – Lilac Production Scale

Production Scale
50+ modules

Modules here are not an example of the actual modules
Low Impurities - Premium Pricing - Cost Competitive

Direct Extraction Kachi Project Positioned at lower end of cost curve

Operating Cost Curve
($/tpa LCE. 2020 estimates)

Lithium Carbonate Pricing Range

Brine – Lower Cost  Hard Rock – Higher Cost

Chemical Component | Actual (wt%) | Target
--- | --- | ---
Lithium (Li) | 99.97 | 99.5 Mn
Sodium (Na) | <0.011 | 0.025 Max
Magnesium (Mg) | <0.001 | 0.003 Max
Calcium (Ca) | <0.001 | 0.005 Max
Potassium (K) | 0.0049 | 0.006 Max
Sulphur (S) | <0.1 | 0.01 S04 Max
Aluminium (Al) | <0.001 | 0.001 Max
Iron (Fe) | <0.001 | 0.001 Max
Silicon (Si) | <0.001 | 0.005 Max
Boron (B) | <0.001 | 0.005 Max

Source: LKE announcements 20/10/2020, 14/01/2020
Prime Location – Large Producers.

Lithium Triangle: 40% of world's lithium production at the lowest cost.

5 largest producers all have operations
ALB, SQM, LTHM + Tianqui, Ganfeng JV

Lake has a large project at Kachi
3 other brine projects
Over 220,000 hectares (550,000 acres)
Kachi Project.
100% Lake owned

Major brine resource - Top10
4.4 Mt LCE Total Resource
(1Mt LCE Indicated Resource; 3.4 Mt Inferred)
25 yrs production uses 20% resource

74,000 hectares of leases
(185,000 acres; size of NYC)

PFS 2020
DFS/ESIA 2021
Production 25,500tpa 2024
Kachi - Advantages: Large, Clean, Expandable

• **Large:** 4.4 million tonne LCE.
• **Expandable:** Open laterally; Open at depth
• **Clean:** Brine low in impurities
• **Long Life, High Value:** 25 year production 25,500 tpa LCE; US$1050 million project value
• **Cost Competitive:** Operating costs similar to evaporation ~US$4100/t
• **Scalable:** Modular processing allows easy scaling to +50,000tpa
Kachi - High Margin Pre-Feasibility Results

- **Long Life, High Value Project** - 25 year production 25,500 tpa LCE**; US$1050 million project value* (NPV @ 8% discount rate, Pre-tax)

- **High Margin Lithium Production**
  - 55% Operating Margin; US$465 million EBITDA in 1st 3 years*

- **High Purity** - 99.9% purity battery grade Li₂CO₃

- **Cost Competitive among Brine Producers**
  Operating cost US$4170/t Li₂CO₃ ; Capex US$540 million

- **Project Value could more than Double** – using US$15,000/t LCE

*Note: Results based on PFS Study Assumptions  * Assuming conservative US$11,000/t lithium carbonate CIF future price.  ** Based on Indicated Resource 1.0Mt @290mg/L lithium
DFS Commenced - Direct extraction

Production Plant Design with Lilac Solutions Direct Extraction Technology

Definitive Feasibility Study Commenced – Using Solar Hybrid power

<table>
<thead>
<tr>
<th>Area</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Direct extraction (Lilac IX plant)</td>
</tr>
<tr>
<td>B</td>
<td>Eluate concentration</td>
</tr>
<tr>
<td>C</td>
<td>Impurity removal</td>
</tr>
<tr>
<td>D</td>
<td>Lithium production</td>
</tr>
<tr>
<td>E</td>
<td>Bagging plant and product storage</td>
</tr>
<tr>
<td>F</td>
<td>Chlor-Alkali plant</td>
</tr>
<tr>
<td>G</td>
<td>Warehouse, reagents and water treatment</td>
</tr>
</tbody>
</table>
Lake’s Clean Lithium into Batteries
Novonix - Process underway

Novonix - battery technology leader (ASX:NVX; OTCQX:NVNXF)
Tier 1 firms - Panasonic, CATL, Samsung, SK, LG Chem, Bosch, Dyson
Dr Jeff Dahn - Icon in the battery tech space
Developed latest cathode & anode technology

Lake’s lithium carbonate tested quickly, transparently
Demonstrate that Lake's product is truly battery quality
Accelerates discussions downstream
Only ~35% of lithium production Tier-1 qualified as battery quality
Strengthens Lake’s quality and ESG benefits
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 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
**LAKE RESOURCES (ASX:LKE, OTC:LLKKF)**

<table>
<thead>
<tr>
<th>Shares on Issue</th>
<th>1,011,701,810</th>
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<tr>
<td>Listed Options (10c)</td>
<td>Jun 2021 Expiry</td>
</tr>
<tr>
<td>Unlisted Options (9c)</td>
<td>Jul 2021 Expiry</td>
</tr>
<tr>
<td>Unlisted Options (30c)*</td>
<td>Mar 2023 Expiry</td>
</tr>
</tbody>
</table>

### Market Data

- **Market Cap ($A)**: @ A$0.31/sh (15 day VWAP, 18 Feb) - A $310 million
- **US$240 million**
- **Cash ($A)**: 31 Jan 2021 - ~A$25 million
- ~US$20 million
- **Secured debt**: $0
- **Share Price**: 52 week range - $0.022 – 0.46/sh
- **Share Register**: 42% Top30, HNW Investors, US/EU/Aus funds

*Options subject to shareholder approval on 9 March 2021*
Significant Upside

Lake $300m vs Peers $500m market cap

Trading at 30%NPV vs Peer 70% NPV

vs Standard (SLL) Direct Extraction USA

vs Neo Lithium (NLC) Development Argentina

Source: ASX / TSX / NYSE company disclosures; SEDAR; Bloomberg; Company sources: 17 February 2021
Leadership.

Lake has extensive development experience. Full team in country for 5 years.

Stu Crow
CHAIRMAN NON-EXEC

More than 25 years of experience (numerous public companies) and in financial services; Keen interest in energy transition

Nick Lindsay
TECHNICAL DIRECTOR
LEADING DFS STUDY

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 Chile, across border from Kachi

Steve Promnitz
MANAGING DIRECTOR

Extensive project management experience in South America – geologist, chemist and finance – with major companies (Rio Tinto, Citi) and mid-tiers. Developed projects previously in Argentina.

Robert Trzebski
NON-EXEC DIRECTOR

International mining executive; 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 Ltd. Director Austral Gold.
Clean High Purity Lithium - Unique Proposition.

- New Clean Technology for High Purity Lithium – Growing need
- Responsibly Sourced & Sustainable - Lake uniquely positioned to satisfy demand for high quality battery material more responsibly sourced without mining. Enables a clean future
- 21st Century Solution to Batteries for EV’s – Lake’s clean lithium being tested in latest batteries

Contact: lakeresources.com.au
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Appendix

Clean High Purity Lithium

www.lakeresources.com.au
Kachi Project – Size Matters.
Direct extraction. Ion Exchange Process - Lilac Solutions

**Durable Performance**
- High lithium recovery (80%-98%)
- Tolerates impurities
- Bead durability

**Low Cost and Scalable**
- Modules for rapid installation
- No brine heating
- Low capital and operating costs
### Key Financial Parameters

<table>
<thead>
<tr>
<th>Key Financial Parameters</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPV&lt;sub&gt;8&lt;/sub&gt; (NPV @ 8% discount rate) Pre-tax</td>
<td>US$1,052 million (A$1,660 million)*</td>
</tr>
<tr>
<td>NPV&lt;sub&gt;8&lt;/sub&gt; (NPV @ 8% discount rate) Post-tax</td>
<td>US$748 million (A$1,180 million)*</td>
</tr>
<tr>
<td>IRR pre-tax</td>
<td>25%</td>
</tr>
<tr>
<td>IRR post-tax</td>
<td>22%</td>
</tr>
<tr>
<td>EBITDA, annual</td>
<td>US$155 million (A$245 million)*</td>
</tr>
<tr>
<td>EBITDA margin</td>
<td>55%</td>
</tr>
</tbody>
</table>

### Parameters

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Life</td>
<td>25 years</td>
</tr>
<tr>
<td>Production Rate – Lithium Carbonate</td>
<td>25,500 tonnes LCE per year**</td>
</tr>
<tr>
<td>Mineral Resource (Indicated)</td>
<td>1.01 Million tonne LCE</td>
</tr>
<tr>
<td>Recovery</td>
<td>83 %</td>
</tr>
<tr>
<td>Capital Investment (at start-up)</td>
<td>US$544 million</td>
</tr>
<tr>
<td>Operating Cost (annual)</td>
<td>US$107 million</td>
</tr>
<tr>
<td>Cash Cost (Opex, C1)</td>
<td>US$4178/tonne LCE</td>
</tr>
</tbody>
</table>

Note: Results based on PFS Study Assumptions  * Assuming conservative US$11,000/t lithium carbonate CIF future price. ** Based on Indicated Resource 1.0Mt @290mg/L lithium
Cauchari Project.

Lake project adjoins Orocobre and Ganfeng/Lithium Americas

Lake results show:
- Similar brines & similar high grades
- Alongside Ganfeng/Lithium Americas

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

Orocobre Resource – 6.3Mt @ 476mg/L Li

LAC Production Plant in Construction

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

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.

**Kachi Lithium brine Project.**

<table>
<thead>
<tr>
<th>KACHI LITHIUM BRINE PROJECT</th>
<th>MINERAL RESOURCE ESTIMATE</th>
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<tbody>
<tr>
<td>JORC Code 2012 Edition</td>
<td>Indicated</td>
</tr>
<tr>
<td>Area, km²</td>
<td>17.1</td>
</tr>
<tr>
<td>Aquifer volume, km³</td>
<td>6</td>
</tr>
<tr>
<td>Brine volume, km³</td>
<td>0.65</td>
</tr>
<tr>
<td>Mean drainable porosity %</td>
<td>10.9</td>
</tr>
<tr>
<td>Element</td>
<td>Li K</td>
</tr>
<tr>
<td>Weighted mean concentration, mg/L</td>
<td>289</td>
</tr>
<tr>
<td>Resource, tonnes</td>
<td>188,000</td>
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<tr>
<td>Lithium Carbonate Equivalent (LCE), tonnes</td>
<td>1,005,000</td>
</tr>
<tr>
<td>Potassium Chloride, tonnes</td>
<td>6,705,000</td>
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</tbody>
</table>

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.
Appendix – Table 1 – JORC Code 2012.

<table>
<thead>
<tr>
<th>Variable</th>
<th>JORC Code 2012</th>
<th>JORC Code 2012</th>
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<tbody>
<tr>
<td>Lithium equivalent</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>Grade</td>
<td>0.80</td>
<td>0.80</td>
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<tr>
<td>Width</td>
<td>2.00</td>
<td>2.00</td>
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<tr>
<td>Depth</td>
<td>5.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Cut-off</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

The table above provides a summary of the key parameters used in the calculation of the JORC Code 2012. The values shown are based on the initial exploration data and are subject to further refinement as more detailed information becomes available.