CLEAN HIGH PURITY LITHIUM

Efficient Clean Technology

Steve Promnitz - Managing Director

10 December 2020    Battery Week

LAKE RESOURCES

ASX:LKE    FRA:LK1   OTC:LLKKF
Disclaimer

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Forward Looking Statements

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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.
Solution to EV & Cathode/Battery Maker Demand

Key Demand – Consistently high purity & more sustainable

• #1 High Purity Battery Materials - to avoid performance issues – Low impurities are being sought in battery materials to ensure reliable battery performance

• #2 Responsibly Sourced, Traceable, Sustainable Battery Materials - With transition to electric vehicles from fossil fuel vehicles, demand for more sustainable battery materials is critical. Smaller CO2, water, physical, energy footprint.

• #3 Low Cost Structure - To deliver affordable batteries for electric vehicles

• Lake/Lilac Solution – High purity/low impurity consistently; Cost Competitive; Scalable; Small environmental footprint; Returns 99% brine to source; Low water usage
Clean Technology – No Mining – High Purity

- **Clean Technology – Direct Extraction by Partner, Lilac Solutions** – Efficient lithium separation from brine; backed by Bill Gates-led Breakthrough Energy fund

- **High Purity Lithium** - 99.97% purity battery quality lithium carbonate: Kachi Project

- **Responsibly Sourced; Sustainable; ESG** – Returns 99% brine to source

- **Demonstrated Path to Production – Kachi Project**
  Successful pilot plant module; Small scale-up to production; Cost-competitive; Large project
Direct extraction - Clean, Efficient

Re-engineered well-known technology in water treatment

- Efficient – just lithium removed from brine
- Faster – days not months or years
- Higher recoveries than evaporation
- High purity – because only lithium removed
- Cost competitive with traditional method
- Scalable, flexible to meet demand quickly
- Environmentally friendly - small footprint
- Returns brine to source; no change to chemistry; no heating of brine
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
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
Direct extraction - Small Environmental Footprint - 90% less

Lilac Direct Extraction Footprint vs Brine Evaporation Ponds (Atacama) and Hard Rock Mining (Greenbushes)
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
Low Impurities - Premium Pricing - Cost Competitive

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

- Brine
- Hard Rock

Direct Extraction Kachi Project
Positioned at lower end of cost curve

Lithium Carbonate Pricing Range

<table>
<thead>
<tr>
<th>Chemical Component</th>
<th>Actual (wt%)</th>
<th>Target</th>
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<tbody>
<tr>
<td>Lithium (Li)</td>
<td>99.97</td>
<td>99.5 Min</td>
</tr>
<tr>
<td>Sodium (Na)</td>
<td>0.0011</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>&lt;0.001</td>
<td>0.005 Max</td>
</tr>
<tr>
<td>Potassium (K)</td>
<td>0.0049</td>
<td>0.005 Max</td>
</tr>
<tr>
<td>Sulphur (S)</td>
<td>&lt;0.01</td>
<td>0.01 SO4 Max</td>
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<tr>
<td>Aluminium (Al)</td>
<td>&lt;0.001</td>
<td>0.001 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>0.005 Max</td>
</tr>
<tr>
<td>Boron (B)</td>
<td>&lt;0.001</td>
<td>0.005 Max</td>
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</tbody>
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Source: LKE announcements 20/10/2020, 14/01/2020
Sustainable Lithium - In demand

Electric Vehicle Makers want more sustainable battery materials in EV’s

• Electric Vehicle Makers, EU Seek More Sustainable Lithium – Volkswagen, Daimler, BMW, EU want more responsible sourcing of battery materials (Reuters)

• Direct extraction is not mining and avoids water politics

• Lilac backed by high profile successful investors – Lilac supported by Bill Gates-led Breakthrough fund, MIT’s The Engine Fund

• Entire Life Cycle Important – Process reduces environmental cost
High Purity Lithium Process – Few Steps; De-Risked

- Pumping Brines - Kachi
- Direct Extraction Lithium Chloride – Lilac Pilot Plant Module
- Lithium Carbonate - Hazen
- Cathode/ Battery - Novonix
De-Risked Processing; Simple Production Scale-up

Direct Extraction Lithium – Lilac Pilot Plant Module

Pilot to Production

Direct Extraction Lithium – Lilac Production Scale

Production Scale
50+ modules

Modules here are not an example of the actual modules
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

Lake has a large project at Kachi
3 other brine projects
Kachi Project.
100% Lake owned
Major brine resource - Top10
4.4 Mt LCE Total Resource
(1Mt LCE Indicated Resource; 3.4 Mt Inferred)
PFS only uses 20% of resource
70,000 hectares of leases
PFS in 2020
DFS/ESIA in 2021
Production 25,500tpa in 2023
Why 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
LAKE RESOURCES (ASX:LKE, OTC:LLKKF)

Total Current Shares on Issue 817,128,624

<table>
<thead>
<tr>
<th>Listed Options (10c)</th>
<th>Jun 2021 Expiry</th>
<th>52,512,693</th>
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</thead>
<tbody>
<tr>
<td>Unlisted Options (4.6c)</td>
<td>Oct 2022 Expiry</td>
<td>18,300,000</td>
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<tr>
<td>Unlisted Options (8c)</td>
<td>Feb 2022 Expiry</td>
<td>5,555,000</td>
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<tr>
<td>Unlisted Options (9c)</td>
<td>Jul 2021 Expiry</td>
<td>15,000,000</td>
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Market Data

<table>
<thead>
<tr>
<th>Market Cap ($A)</th>
<th>@ $0.077/sh (10 day VWAP, 7 Dec)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>A $62 million</strong></td>
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<tr>
<td></td>
<td><strong>US$46 million</strong></td>
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<tr>
<td>Cash ($A)</td>
<td>30 Sept 2020</td>
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<td><strong>A$3 million</strong></td>
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<tr>
<td>Secured debt</td>
<td>$ 0</td>
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<tr>
<td>Share Price</td>
<td>52 week range</td>
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<tr>
<td></td>
<td><strong>$0.023 – 0.095/sh</strong></td>
</tr>
<tr>
<td>Share Register</td>
<td>40% Top 30, High Net Worth Investors</td>
</tr>
</tbody>
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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

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