CLEAN HIGH PURITY LITHIUM

Efficient disruptive clean technology

ASX Small and Mid-Cap Conference 2020

Steve Promnitz - Managing Director
9 September 2020
Disclaimer

General Statement and Cautionary Statement

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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. 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 Technology – No Mining.

- **Clean Technology** – Adaptation of known water treatment method; No mining

- **Disruptive Direct Extraction with Tech Partner, Lilac Solutions** – Efficient lithium separation from salty water (brine); cost competitive vs traditional process; Technology partner backed by Bill Gates-led Breakthrough Energy fund, MIT’s The Engine

- **High Purity Lithium** - 99.9% purity battery quality lithium carbonate - Rising demand; ~20% compound growth for lithium to 2028; only 50-60% of production is battery quality

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

- **Path to Commercialisation** – Pilot plant module proven scale-up from lab testing
Direct extraction – Clean Technology

Disruptive – No Evaporation or Mining

New adaptation to known technology in water treatment

- Efficient - lithium removed from brine; no evaporation
- Faster, with higher recoveries
- High purity products – In demand
- Cost competitive and scalable
- Environmentally friendly - Returns brine to source; no change to chemistry
Why Lithium? Growth in Lithium Batteries; Limited New Supply

From 3 to 158 Battery Megafactories in 5 years – Yet underinvestment in supply of battery materials

Megafactory growth but no lithium supply growth (and takes years)

Expansions delayed by majors; Opens door to new producers; Pinch point coming

Supply chain needs billions in investment

EV Investment
>US$250Bn

Battery Megafactory Investment
>US$200Bn

New Lithium Supply?
Need 5-8 times more production by 2028

Source: Benchmark Mineral Intelligence
Why Lithium? Future Demand Growth for Sustainable Supply

Need 18 times more Lithium Production by 2030; 60x by 2050; Growth in sustainable high quality

EU Commission Report – 3 September 2020
“Action Plan on Critical Raw Materials”

Need 18 times more Lithium Production by 2030
~60 times more lithium by 2050;
For e-mobility and renewable energy storage
1st time lithium added to critical raw materials list

US$20-50Bn needs to be invested to meet demand in new battery materials supply in next 10 years

Growth in high quality products
Growth in sustainable, non-mining method

Source: European Commission (mid range selected); Financial Times 31 August 2020;
Benchmark Mineral Intelligence
Sustainable Lithium. Responsibly Sourced
Solution for more sustainable lithium 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 – Known water treatment process (since 1940’s) drastically cuts water use (Bloomberg)

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

• Pilot plant modules demonstrate process works and is scalable – Pilot plant modules in California processing Kachi brines

Sustainable Lithium.

ESG Targets for the Future – EU, UN
Direct extraction.
Ion Exchange Process
Lilac Solutions

Disruptive Technology (3 hrs to 30-60,000ppm vs 1-2 years)
Saves time and money - Faster production. Recoveries doubled
Lower impurities – Higher purity as only lithium is extracted.
Sustainable solution – Brine reinjected; no change to chemistry

3 HOURS
To produce Concentrate vs 12-24 mths
Direct extraction – Small Environmental Footprint

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

Evaporation - Atacama

Hard Rock - Greenbushes

15 km

5 km

Direct Extraction - Kachi

Direct Extraction: Returns brine to source

ASX:LKE
OTC:LLKKF
Prime Location – Next to 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  
Open at depth and laterally  
70,000 hectares of leases  
(11x Size of Manhattan Island)  

It’s Not About Grade –  
In industrial chemistry, ‘low impurities’ is king
Kachi PFS - 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 Li$_2$CO$_3$

- **Cost Competitive among Brine Producers** –
  Operating cost US$4170/t Li$_2$CO$_3$

- **Prime Location** – Large scalable project in world-class region

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
Cost Competitive Direct Extraction
Consistent High Value Low Impurity Product

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) | 99.9 | 99.5 Min
Sodium (Na) | 0.024 | 0.025 Max
Magnesium (Mg) | <0.001 | 0.008 Max
Calcium (Ca) | 0.0046 | 0.005 Max
Iron (Fe) | <0.001 | 0.001 Max
Silicon (Si) | <0.001 | 0.003 Max
Boron (B) | <0.001 | 0.005 Max

Source: LKE announcements 9/1/2020, 14/01/2020; 10/12/2018
Testing Lake’s clean lithium in Batteries – Novonix
State-of-the-art battery testing equipment

Novonix - leader in battery technology.
Tier 1 firms
- Panasonic, CATL, Samsung, SK, Apple, Bosch, Honda and Dyson
Work with Dr Jeff Dahn at Dalhousie Uni
- a ground breaking "name" 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 qualified as battery quality by Tier 1 battery makers
Strengthens Lake’s quality and ESG benefits
Production Timeline.

H1 - 2020
- High purity samples
- Kachi direct extraction pilot plant module – operating
- Kachi PFS (Apr 2020) – Robust economics; cost competitive

H2 – 2020, H1 - 2021
- Kachi samples to battery makers for qualification purposes; testing by Novonix
- Kachi – offtake and strategic partner discussions
- Kachi – Initiate DFS, EISA, pilot plant to site
- Complete DFS, approvals; construction finance

2016-19
- Large Lease Area Pegged in 2016
- Kachi – Large new discovery; major resource
- Kachi – PFS commenced; Pilot plant initiated
- Direct Extraction method – Testing
- Cauchari – extended high grades; discovery

2022-2023
- Kachi – Production
  - Kachi – 25,500tpa LCE; Capex US$540m
  - Phased expansion from 10,000tpa LCE
  - Capex Reduced
  - Olaroz, Cauchari – Drill, Resource, PFS
Experienced.

Lake has extensive development experience – both at the board level and local management

**Steve Promnitz**
MANAGING DIRECTOR

Experienced project management experience in South America – geologist and financial 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.

**Nick Lindsay**
NON-EXEC 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.

**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.
**LAKE RESOURCES (ASX:LKE, OTC:LLKKF)**

**Total Current Shares on Issue** 777,128,624

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

**Market Data**

- **Market Cap ($A)** @ $0.034/sh (15 day VWAP, 4 Sept) **A $26 million**
- **Cash ($A)** 31 August 2020 **A$2.5 million**
- **Secured debt** $0
- **Share Price** 52 week range **$0.023 – 0.10/sh**
- **Share Register** 40% Top 30, High Net Worth Investors

**Market Cap ($US)** **US$19 million**
Orior Capital – Lake ‘Incredibly Undervalued’

- **Lake Undervalued vs Peers** – Robust financial metrics, advantages of direct extraction & lithium outlook: Lake trading <2% NPV vs peers trading at around 20%; valuation of **29c per share**

- **Compelling, Cash-Generative Project** – Kachi to generate EBITDA US$155m pa and EBITDA margin 55%, based on conservative lithium carbonate price of US$11,000/t

- **Significant and Sustainable Competitive Advantages** – Energy storage sector is increasingly demanding low impurities and product consistency

- **It’s Not About Grade** – In industrial chemistry, ‘low impurities’ is king and Kachi delivers

- **Supply-Side Constraints** – Lithium demand rising as EV revolution continues, yet projects suffering cutbacks or delays; evaporation pond projects coming under environmental scrutiny

*Note: Refer Orior Capital research report 26 May 2020, available at Lake’s website*
Lithium Producers Recently Uplifted

Developers yet to rise
Lake $27m vs Peers $50-120m market cap
Trading at <2%NPV vs Peers 10-15% NPV

Research: LKE website

Note: Any perceived relationship between market value of explorers/developers versus producers (LTHM) should not be made. Source: ASX / TSX / NYSE company disclosures; SEDAR; Bloomberg; Company sources: 31 August 2020
Clean High Purity Lithium - Unique Proposition.

- New Clean Technology for High Purity Lithium – Growing need
- Responsibly Sourced & Sustainable - Growing demand from EV makers, EU guidelines – Enables a clean future; One of few new sustainable lithium suppliers
- 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 - PFS

### PFS - Kachi.

**Compelling Economics; High EBITDA Margin**

**Cost Competitive; High Value Product**

<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)&lt;sup&gt;*&lt;/sup&gt;</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)&lt;sup&gt;*&lt;/sup&gt;</td>
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<tr>
<td>IRR pre-tax</td>
<td>25%</td>
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<tr>
<td>IRR post-tax</td>
<td>22%</td>
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<tr>
<td>EBITDA, annual</td>
<td>US$155 million (A$245 million)&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>EBITDA margin</td>
<td>62%</td>
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</table>

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Values</th>
</tr>
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<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&lt;sup&gt;**&lt;/sup&gt;</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

**Kachi Lithium brine Project.**

<table>
<thead>
<tr>
<th>KACHI LITHIUM BRINE PROJECT</th>
<th>MINERAL RESOURCE ESTIMATE</th>
</tr>
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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</td>
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<tr>
<td>Weighted mean concentration, mg/L</td>
<td>289</td>
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<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>
</tr>
</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 Report – JORC Code 2012.

<table>
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<tr>
<th>Table 1: Mineral Resource Estimate at 100%</th>
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<tr>
<td><strong>Class</strong></td>
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<tr>
<td><strong>Type</strong></td>
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**Legend**

- **Resource**
- **Mineralisation**
- **Class**
- **Type**

**Notes**

1. *Note text here.*
2. *Additional notes.*

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**Table 2: Ore Reserves Estimate at 100%**

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**Legend**

- **Resource**
- **Mineralisation**
- **Class**
- **Type**

**Notes**

1. *Note text here.*
2. *Additional notes.*

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**Table 3: Reserve Life**

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- **Resource**
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**Notes**

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2. *Additional notes.*