SUSTAINABLE HIGH PURITY LITHIUM

Pre-Feasibility Study Results – Kachi Project
High Margin, Long Life Lithium Production

Steve Promnitz - Managing Director
30 April 2020

LAKE RESOURCES
AT THE HEART OF THE LITHIUM TRIANGLE
ASX:LKE OTC:LLKKF
Disclaimer

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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.
New Technology – High Purity Sustainable Lithium.

- **High Purity Lithium** - 99.9% purity battery grade lithium carbonate

- **Disruptive Lilac Solutions Direct Extraction Technology** – Innovative method extracts lithium from brine faster; modular; smaller environmental footprint; pilot plant underway; Lilac supported by Bill Gates-led Breakthrough Energy fund

- **Prime Location in Lithium Triangle** – Flagship Kachi Project in world-class region alongside all 5 major lithium producers; produces 40% of global product

- **Management team** – Experienced local team; in-country experience

- **Key Catalysts** – Samples to Offtake Partners; Recent research - major upside
PFS – Kachi Project - High Margin Production. Pre-Feasibility Study Results

- **High Margin Future Lithium Production** - 62% Operating Margin (EBITDA)*
  A$245 million EBITDA in first full year of operation*

- **Long Life, High Value Project** - 25 year production at 25,500 tpa LCE**
  A$1.66 billion project value* (NPV @ 8% discount rate, Pre-tax); 60x LKE market value

- **High Purity Lithium; Premium Price** - 99.9% purity battery grade Li₂CO₃

- **Cost Competitive with Brine Producers** – Operating cost US$4170/t Li₂CO₃

- **Commercial New Technology** - Lithium product in days, not 9-18 months

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
### 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><strong>NPV$_8$ (NPV @ 8% discount rate) Pre-tax</strong></td>
<td>US$1,052 million (A$1,660 million)*</td>
</tr>
<tr>
<td><strong>NPV$_8$ (NPV @ 8% discount rate) Post-tax</strong></td>
<td>US$748 million (A$1,180 million)*</td>
</tr>
<tr>
<td><strong>IRR pre-tax</strong></td>
<td>25%</td>
</tr>
<tr>
<td><strong>IRR post-tax</strong></td>
<td>22%</td>
</tr>
<tr>
<td><strong>EBITDA, annual</strong></td>
<td>US$155 million (A$245 million)*</td>
</tr>
<tr>
<td><strong>EBITDA margin</strong></td>
<td>62%</td>
</tr>
</tbody>
</table>

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

- Deliver high purity samples to off-takers – from Lilac pilot plant module
- Target lowering up-front costs – Solar power should lower energy costs
- Staged development – Option to commence at 10,000tpa LCE indicatively
- Capital cost reductions – Construction, Contingency (US$91m)
- Resource development – to extend project life beyond 25 years
- Definitive feasibility study DFS – Project economics drive DFS study
Prime Location – Next to Large Producers.

Lithium Triangle produces 40% of world’s lithium at the lowest cost.

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

Cauchari - China’s Ganfeng paid US$413 million for 50%

Sal De Vida - South Korea’s Posco paid US$280 million.
Demand growth

Demand increase 5x to 9x

- Major electric vehicles (EVs) commitments driving lithium battery makers expansion.
- Legislation for EV’s in Europe; China subsidies
- Li-ion Battery Megafactories grown from 3 to 52 in 5 years; 123 Megafactories planned
- Lithium undersupply in 2023/25; Expansions have stalled
- Pricing soft 2020 due COVID19; then increase

Lithium demand to increase

300t to 1400t

‘000s TONNES OF LITHIUM CARBONATE EQUIVALENT

+500% increase vs 2018

Demand increase 5x to 9x

- Focus on high purity lithium

Planned Global Production 800kt now under threat

Source: Benchmark Mineral Intelligence Dec 2019; Company sources.
Kachi Project – Size Matters.

11x

Large scale

70,000 Hectares (170,000 acres) Mining leases

(11x Size of Manhattan Island)
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 22% of resource
Open at depth and laterally
Plan to increase potential production life
Direct extraction – New Technology.

Disruptive game changer in industry

More efficient process that removes lithium from salty water (brine) without using the industry wide evaporation process

- Faster
- Higher Recoveries
- High Purity products
- Cost Competitive
- Sustainable
- Returns brine to aquifer without changing chemistry
Direct extraction.

Ion exchange

Lilac Solutions (Silicon Valley backed)

Disruptive Technology (3 hrs to 60,000 ppm vs 1-2 years)
Saves time and money - Faster to production. Higher recoveries
Lower impurities
Sustainable solution – brine reinjected to aquifer

3 HOURS
To produce Concentrate vs 12-24 mths

BRINE RETURNED WITHOUT CHANGES EXCEPT LITHIUM REMOVAL

50-60,000 PPM LI CONCENTRATE

LITHIUM CARBONATE PLANT AND/OR LITHIUM HYDROXIDE PLANT

BRINE RESOURCE
Direct extraction. – Plant Layout

Production Plant Design with Lilac Solutions Direct Extraction Technology

<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>
<tr>
<td>I</td>
<td>Salt storage for Chlor-Alkali plant</td>
</tr>
</tbody>
</table>

Kachi Lithium Brine Project – chloride stream to lithium carbonate

Lilac DX Procession Exchange with HCl

Extraction Wells

~40 mg/L Li
4 km

Lithium Carbonate Process

NaCl

Reagent
Regeneration (Chlor-Alkali)

Na\(_2\)CO\(_3\)

Lithium carbonate to market or lithium hydroxide

NaCl solution
Direct extraction.
Positioned at Low End of Cost Curve

- **Hard Rock** – Higher Cost
- **Brine** – Lower Cost

Positioned at lower end of cost curve

- Cauchari - Olaroz - Atacama (Proposed LAC) (SQM, ALB) (Livent)
- Hombre M - Olaroz (Orocober)
- Greenbushes (ALB, Tianqui)

Direct Extraction Kachi Project

High Value
Low Impurity Product

<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 announcements 9/1/2020, 14/01/2020; 10/12/2018
Pilot Plant with New Lilac Technology
High Purity Sustainable Lithium.

California – Pilot Plant modules – Processing brine from Kachi Project
Samples Produced for Off-Takers - 99.9% purity battery grade lithium carbonate
Sustainable Lithium.

Lilac’s Technology + Lake’s Large Brine Basin = Solution

Bloomberg Green

Energy & Science

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 Ashraf Rathi
February 23, 2020, 4:00 PM GMT+11

Lithium: The Irreplaceable Element of the Electric Era

Why is lithium so important for the production of electric car batteries? And how will Volkswagen secure a sustainable supply chain? We answer the key questions.

Source: Reuters 12 Feb 2020; Bloomberg 20 Feb 2020; Volkswagen April 2019
Leadership.

Lake has extensive development experience in the resources sector and in Argentina.

Steve Promnitz  
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.

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.
Production Timeline.

2016 - 2018
Large Lease Area Pegged in 2016
Kachi – Large new discovery; major resource
Direct Extraction method – Phase 1 engineering study
Pegmatite area secured

2019
Cauchari – extended high grades; discovery
Kachi – PFS commenced; Pilot plant initiated
Kachi offtake and partner discussions

2020
Kachi direct extraction pilot plant – operating; later moved to site
Kachi samples to battery makers for qualification purposes
Kachi PFS (Apr 2020)
Finalise finance for initial US$10-20m for DFS, approvals
Kachi – finalise offtake and strategic partner discussions

2021-2023
**Kachi – Production**
Kachi – 25,000tpa LCE; Capex ~US$400-550m
Phased expansion from 10,000tpa LCE Capex ~US$100-140m
Potential to expand to 100,000 tpa LCE
Olaroz – Drill, Resource, Pre-production
# LAKE RESOURCES (ASX:LKE, OTC:LLKKF)

<table>
<thead>
<tr>
<th>Total Current Shares on Issue</th>
<th>671,461,957</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed Options (10c)</td>
<td>June 2021 Expiry</td>
</tr>
<tr>
<td>Listed Options (4.6c)</td>
<td>October 2022 Expiry</td>
</tr>
<tr>
<td>Unlisted Options (8c)</td>
<td>February 2022 Expiry</td>
</tr>
<tr>
<td>Unlisted Options (9c)</td>
<td>July 2021 Expiry</td>
</tr>
<tr>
<td>Expiry</td>
<td>52,512,693</td>
</tr>
<tr>
<td>Expiry</td>
<td>18,300,000</td>
</tr>
<tr>
<td>Expiry</td>
<td>5,555,000</td>
</tr>
<tr>
<td>Expiry</td>
<td>15,000,000</td>
</tr>
</tbody>
</table>

## Market Data

<table>
<thead>
<tr>
<th>Market Cap ($A)</th>
<th>A $24.8 million</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.037/ sh (10 day VWAP, 29 Apr)</td>
<td>US$15.8 million</td>
</tr>
<tr>
<td>Cash ($A)</td>
<td>$2 million</td>
</tr>
<tr>
<td>31 Mar 2020</td>
<td></td>
</tr>
<tr>
<td>Unsecured debt</td>
<td>($0.8 million)</td>
</tr>
<tr>
<td>Convertible Notes $2m Terminated Feb 2020</td>
<td></td>
</tr>
<tr>
<td>Share Price</td>
<td>$0.023 – 0.115/sh</td>
</tr>
<tr>
<td>52 week range</td>
<td></td>
</tr>
<tr>
<td>Share Register</td>
<td>45% Top 30, High Net Worth Investors</td>
</tr>
</tbody>
</table>
Significant Upside

Lake $25m vs Peers $50-120m market cap

Research Mar 2020: Available LKE website

Note: Any perceived relationship between market value of explorers/developers versus producers (ORE) should not be made.
Lake – Where are we now.

• High purity lithium carbonate from Lilac pilot plant; Larger samples soon to potential off-takers

• Financier short list: US$10-20m to fund studies and approvals for 24 mths Technology partner financed - Bill Gates-led Breakthrough fund

• Pilot plant with New Technology: 1st operational; 1st full study with renowned firm

• Post PFS to initiate full study; production target 2022/23

• Meeting desire for Sustainable Lithium Supply

Contact.
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lakeresources.com.au
Kachi Lithium brine Project.

<table>
<thead>
<tr>
<th>KACHI LITHIUM BRINE PROJECT</th>
<th>MINERAL RESOURCE ESTIMATE</th>
</tr>
</thead>
<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>
</tr>
<tr>
<td>Weighted mean concentration, mg/L</td>
<td>289</td>
</tr>
<tr>
<td>Resource, tonnes</td>
<td>188,000</td>
</tr>
<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 1

<table>
<thead>
<tr>
<th>Section 1 - Sampling Techniques and Methods</th>
<th>Section 2 - Analytical Methods and Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sampling techniques</strong></td>
<td><strong>Analytical methods and results</strong></td>
</tr>
<tr>
<td>The ten samples were taken from the different zones where the lithium-bearing spars are located. The samples were collected using a diamond core drill. The samples were then split using a riffle splitter to ensure representative samples were obtained.</td>
<td>The ten samples were analyzed for lithium content using a combination of chemical and instrumental methods. The chemical analysis was performed using aqua regia digestion followed by ICP-MS. The instrumental analysis was performed using X-ray fluorescence (XRF) and inductively coupled plasma mass spectrometry (ICP-MS).</td>
</tr>
<tr>
<td><strong>Analytical methods and results</strong></td>
<td><strong>Conclusions and Recommendations</strong></td>
</tr>
<tr>
<td>The results show a range of lithium contents from 1.2% to 3.5% in the different zones. The average lithium content is 2.2%.</td>
<td>The results indicate that the deposit has a significant lithium potential. To further evaluate the deposit, more detailed exploration and testing are recommended. Additional samples should be taken to confirm the lithium grades and to determine the mineralogy and textural characteristics.</td>
</tr>
</tbody>
</table>