# CLEAN HIGH PURITY LITHIUM

## **Efficient disruptive clean technology**

### ASX Small and Mid-Cap Conference 2020

Steve Promnitz - Managing Director

9 September 2020



CLEANER LITHIUM 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. All forward-looking statements made in this presentation are gualified 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 forwardlooking 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 Australaian 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.

LAKE

RESOURCES

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# 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

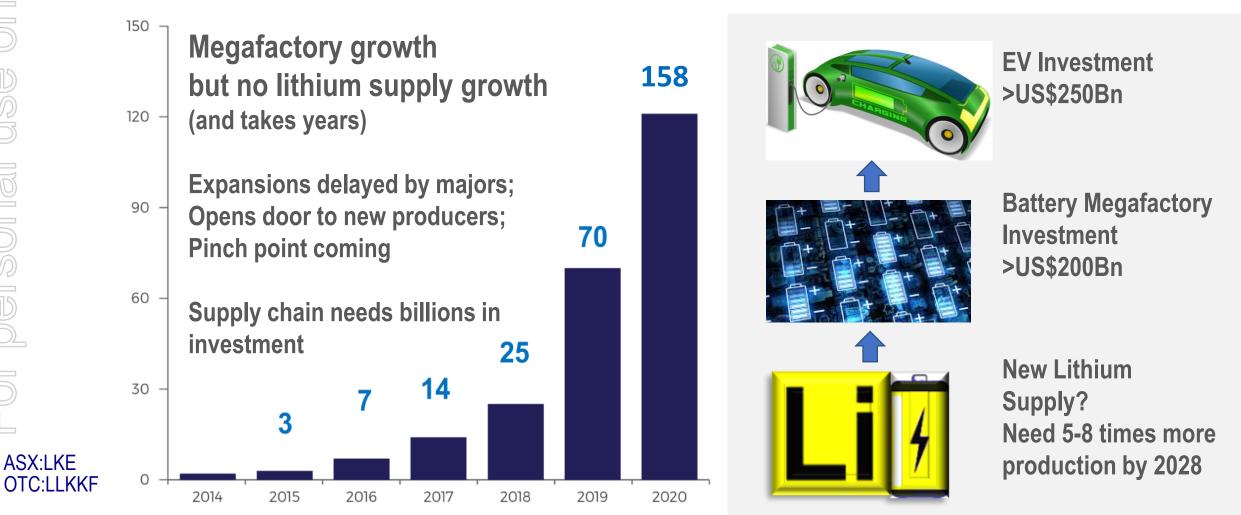
# Direct extraction – Clean Technology Disruptive – No Evaporation or Mining New adaptation to known technology in water treatment

- 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

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## 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



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# Why Lithium? Future Demand Growth for Sustainable Supply

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

2050 x25 x20 x15 x10 2030 x5 Lithium Cobalt Graphite

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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 1<sup>st</sup> 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

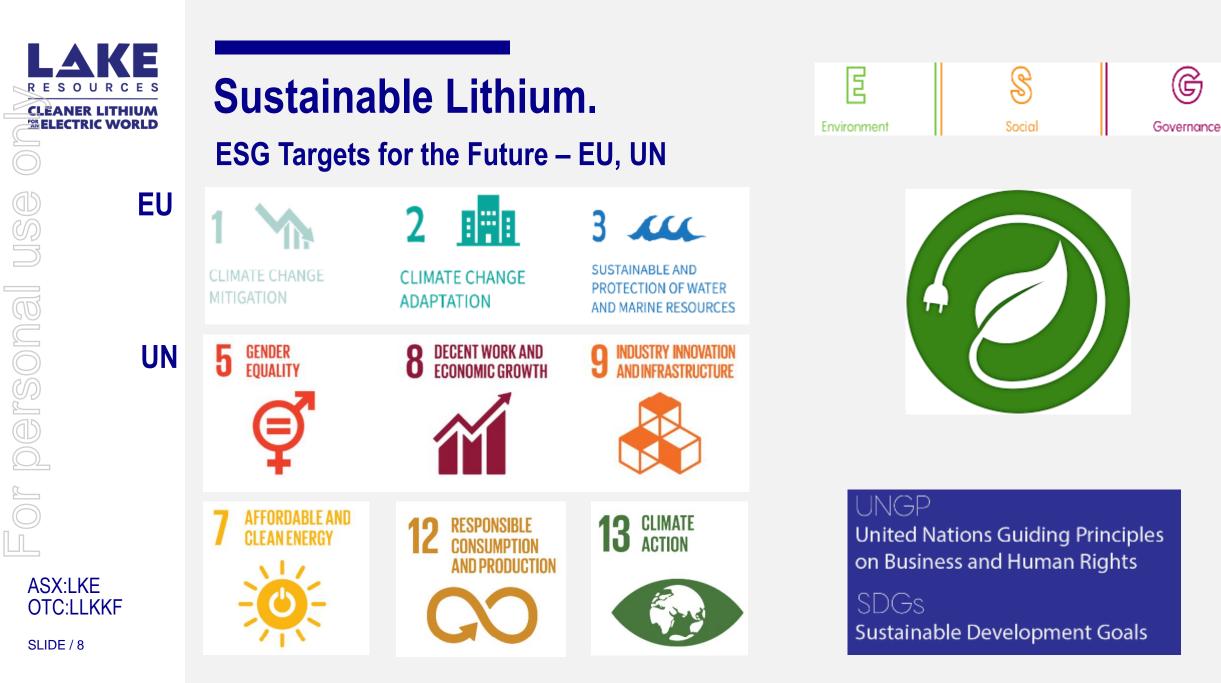
Growth in high quality products Growth in sustainable, non-mining method

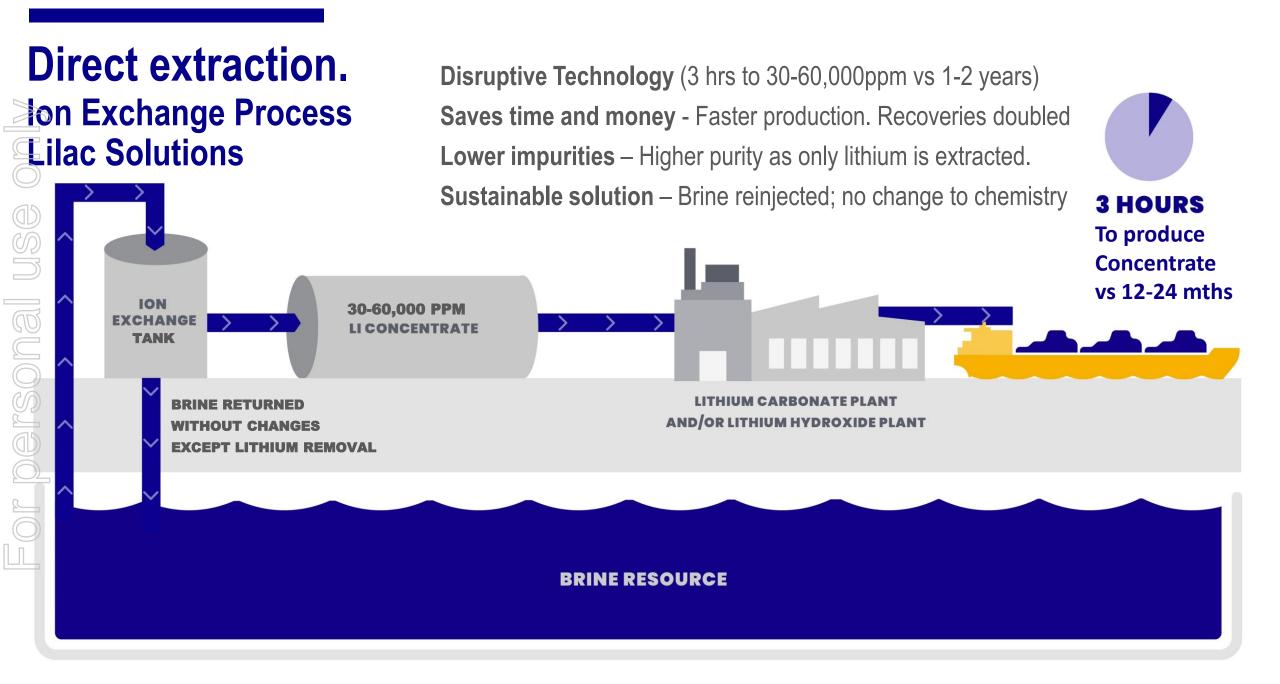
Source: European Commission (mid range selected); Financial Times 31 August 2020; Benchmark Mineral Intelligence

# **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

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## **Direct extraction – Small Environmental Footprint**

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



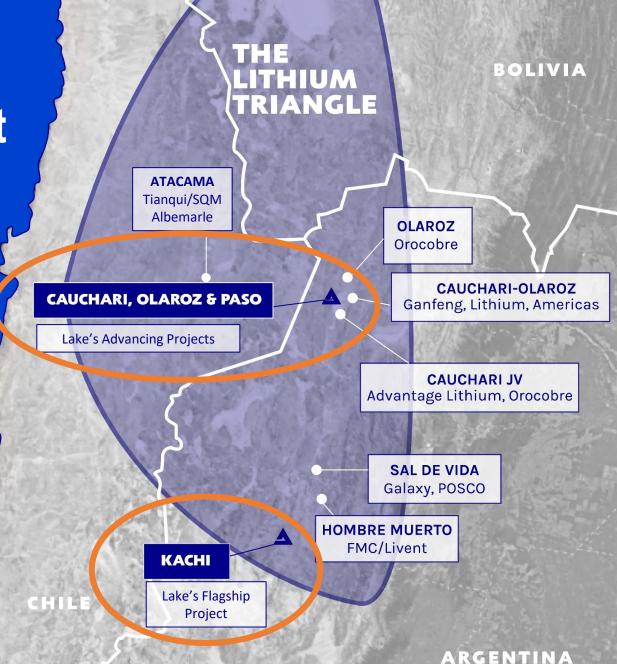


# Prime Location – Next to Large Producers.

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





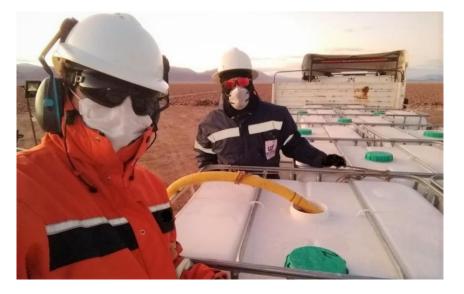
Kachi Project.
100% Lake owned
Major brine resource - Top10
4.4 Mt LCE Total Resource
1Mt LCE Indicated Resource; 3.4 Mt Inferred)
PFS only uses 20% of resource
Open at depth and laterally

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

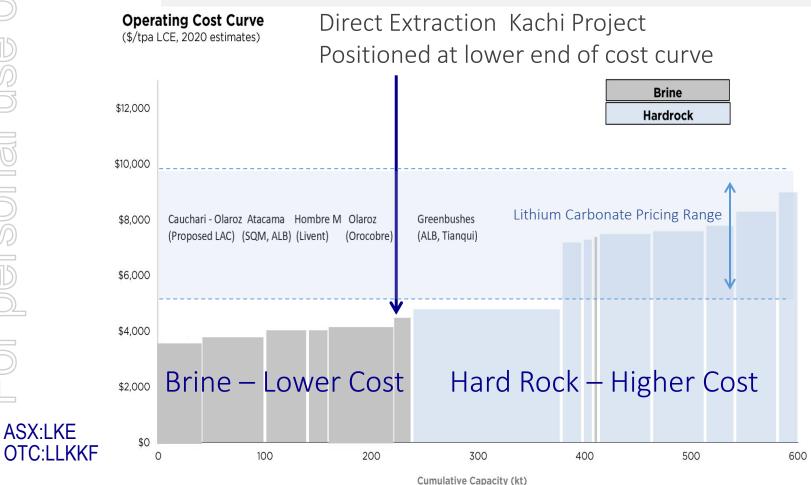
- Long Life, High Value Project 25 year production 25,500 tpa LCE\*\*; US\$1050 million project value\* (NPV @ 8% discount rate, Pre-tax)
- High Margin Lithium Production –
- 55% Operating Margin; US\$465 million EBITDA in 1st 3 years\*
- High Purity 99.9% purity battery grade Li2CO3
- Cost Competitive among Brine Producers Operating cost US\$4170/t Li2CO3
- 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**





| <b>Chemical Component</b> | 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

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## 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

# Accelerate your battery research

NOVONIX

## **Production Timeline.**

#### H1 - 2020

competitive

#### H2 – 2020 , H1 - 2021

High purity samplesKachi samples to battery makers for qualificationKachi direct extraction pilotpurposes; testing by Novonixplant module – operatingKachi – offtake and strategic partner discussionsKachi PFS (Apr 2020) –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

Robust economics; cost

#### 2022-2023

Kachi – Production

Kachi – 25,500tpa LCE; Capex US\$540m

Phased expansion from 10,000tpa LCE Capex Reduced

Olaroz, Cauchari – Drill, Resource, PFS

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## **Experienced.**

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



#### 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



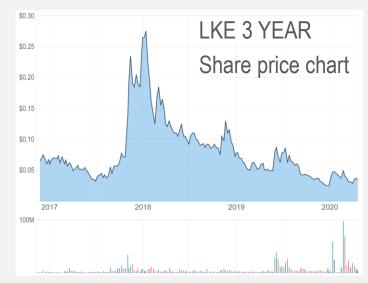
#### Robert Trzebski NON-EXEC DIRECTOR

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.



|   | CES (ASX:LKE , OTC:LLKKF             | :)  |  |
|---|--------------------------------------|---|--|
| Total Current Shares  | Total Current Shares on Issue        |   |  |
| Listed Options (10c)<br>Unlisted Options (4.6c)<br>Unlisted Options (8c)<br>Unlisted Options (9c) |                                      | 52,512,693<br>18,300,000<br>5,555,000<br>15,000,000 |  |
| Market Data   |                                      |   |  |
| Market Cap (\$A)  | @ \$0.034/ sh (15 day VWAP, 4 Sept)  | A \$26 million<br>US\$19 million                    |  |
| ©ash (\$A)  | 31 August 2020                       | A\$2.5 million                                      |  |
| Secured debt  |                                      | \$ O  |  |
| Share Price   | 52 week range                        | \$0.023 – 0.10/sh                                   |  |
| Share Register  | 40% Top 30, High Net Worth Investors |   |  |





# **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



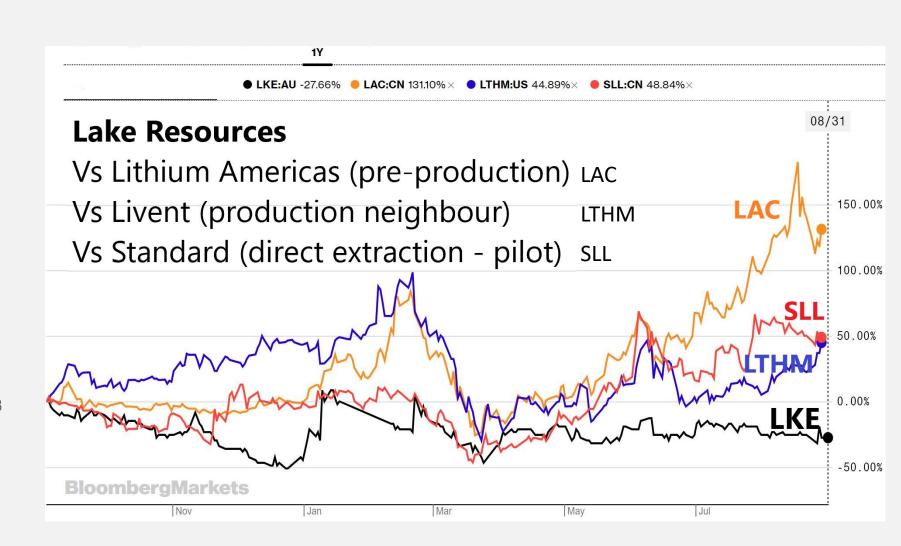
## Lithium Producers Recently Uplifted

Developers yet to rise

Lake \$27m vs Peers \$50-120m market cap

Trading at <2%NPV<sub>8</sub> vs Peers 10-15% NPV<sub>8</sub>

Research: LKE website



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 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
- 21<sup>st</sup> Century Solution to Batteries for EV's Lake's clean lithium being tested in latest batteries

## **Contact: lakeresources.com.au** Steve Promnitz - Managing Director

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**Appendix - PFS** 

## PFS - Kachi.

Compelling Economics; High EBITDA Margin Cost Competitive; High Value Product

| Key Financial Parameters                           | Values                                |
|--|---------------------------------------|
| NPV <sub>8</sub> (NPV @ 8% discount rate) Pre-tax  | US\$1,052 million (A\$1,660 million)* |
| NPV <sub>8</sub> (NPV @ 8% discount rate) Post-tax | US\$748 million (A\$1,180 million)*   |
| IRR pre-tax  | 25%                                   |
| IRR post-tax                                       | 22%                                   |
| EBITDA, annual                                     | US\$155 million (A\$245 million)*     |
| EBITDA margin                                      | 62%                                   |

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

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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

R E S O U R C E S CLEANER LITHIUM ELECTRIC WORLD

## Appendix – Mineral Resource – JORC Code 2012 Kachi Lithium brine Project.

| KACHI LITHIUM BRINE PROJECT  | MINERAL RESOURCE ESTIMATE |           |            |            |                |            |
|--|---------------------------|-----------|------------|------------|----------------|------------|
| JORC Code 2012 Edition   | Indicated                 |           | Inferred   |            | Total Resource |            |
| Area, km²  | 17.1                      |           | 158.3      |            | 175.4          |            |
| Aquifer volume, km <sup>3</sup>  | 6                         |           | 41         |            | 47             |            |
| Brine volume, km <sup>3</sup>  | 0                         | .65       | 3.2        |            | 3.8            |            |
| Mean drainable porosity %  | 10.9                      |           | 7.5        |            | 7.9            |            |
| Element  | Li                        | К         | Li         | К          | Li             | К          |
| Weighted mean concentration, mg/L  | 289                       | 5,880     | 209        | 4,180      | 211            | 4,380      |
| Resource, tonnes   | 188,000                   | 3,500,000 | 638,000    | 12,500,000 | 826,000        | 16,000,000 |
| Lithium Carbonate Equivalent (LCE),<br>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<br>Potassium is converted to potassium chloride (KCl) with a conversion factor of 1.91 |                           |           |            |            |                |            |

R E S O U R C E S CLEANER LITHIUM

### Appendix – Table 1 Report – JORC Code 2012.

| Criteria                     | Section 1 - Sampling Techniques and Data   | Criteria                                      | Section 2 - Mineral Tenement and Land Tenure Status   | Criteria<br>Database integrity | Section 3 – Estimation and Reporting of Mineral Resources     Data was transferred directly from laboratory spreadsheets to the database.  |
|------------------------------|--|---|---|--------------------------------|--|
| Sampling techniques          | <ul> <li>Brine samples were taken from the diamond drill hole with a bottom of hole spear point during advance</li> </ul>  |   | <ul> <li>The Kachi Lithium Brine project is located approximately 100km south-southwest of Livent' (FMC's)</li> </ul>   | Dutubuse integrity             | <ul> <li>Data was checked for transcription errors once in the database to ensure coordinates, and</li> </ul>  |
|                              | and using a straddle packer device to obtain representative samples of the formation fluid by purging  | land tenure status                            | Hombre Muerto lithium operation and 45km south of Antofagasta de la Sierra in Catamarca province  |                                | and lithological codes were correct  |
|                              | a volume of fluid from the isolated interval, to minimize the possibility of contamination by drilling fluid   | 0   | of north western Argentina at an elevation of approximately 3,000m asl.   |                                | · Data was plotted to check the spatial location and relationship to adjoining sample points   |
|                              | then taking the sample. Low pressure airlift tests are used as well. The fluid used for drilling is brine  | 0   | · The project comprises approximately 70,462 Ha in thirty seven mineral leases (minas) of which five  |                                | <ul> <li>Duplicates and standards have been used in the assay process</li> </ul>   |
|                              | sourced from the drill hole and the return from drillhole passes back into the excavator dug pit lined   | 0   | leases (9,445 Ha) are granted for drilling, twenty two leases are granted for initial exploration (44,328   |                                | Brine assays and porosity test work have been analysed and compared with other public  |
|                              | to avoid leakage.  | 0   | Ha) and ten leases (16,689 Ha) are applications pending granting.   |                                | information for reasonableness<br>Comparison of original and current datasets were made to ensure no lack of integrity   |
|                              | <ul> <li>The brine sample was collected in a clean plastic bottle (1 litre) and filled to the top to minimize air</li> </ul>   | 0   | <ul> <li>The tenements are believed to be in good standing, with statutory payments completed to relevant</li> </ul>  | Site visits                    | Comparison of original and current datasets were made to ensure no tack of integrity     The Competent Person visited the site multiple times during the drilling and sampling prog  |
|                              | space within the bottle. A duplicate was collected at the same time for storage and submission of  | 0   | government departments.   | Site visits                    | <ul> <li>Some improvements to procedures were made during visits by the Competent Person</li> </ul>  |
|                              | duplicates to the laboratory. Each bottle was taped and marked with the sample number.   | Exploration by other                          | <ul> <li>Marifil Mines Ltd conducted sparse near-surface pit sampling of groundwater at depths less than 1m</li> </ul>  | Geological Interpretation      | <ul> <li>The geological model is continuing to develop. There is a high level of confidence in the int</li> </ul>  |
|                              | <ul> <li>Drill core in the hole was recovered in 1.5 m length core runs in core split tubes to minimize sample</li> </ul>  | parties                                       | <ul> <li>Warmin Wines Ltd conducted sparse near-surface pic sampling of groundwater at deputs less than 1m<br/>during 2009.</li> </ul>  |                                | of the exploration results to date. There are relatively consistent geological units wit   |
|                              | disturbance.   | purues  | <ul> <li>Samples were taken from each hole and analysed at Alex Stewart laboratories in Mendoza Argentina.</li> </ul>   |                                | uniform clastic sediments  |
|                              | <ul> <li>Drill core was undertaken to obtain representative samples of the sediments that host brine.</li> </ul>   | 0   |   |                                | <ul> <li>Any alternative interpretations are restricted to smaller scale variations in sedimentology</li> </ul>  |
| Drilling techniques          | <ul> <li>Diamond drilling with an internal (triple) tube was used for drilling. The drilling produced cores with</li> </ul>  | 0   | <ul> <li>Results were reported in an NI 43-101 report by J. Ebisch in December 2009 for Marifil Mines Ltd.</li> </ul>   |                                | changes in grain size and fine material in units<br>Data used in the interpretation includes rotary and diamond drilling methods   |
|                              | variable core recovery, associated with unconsolidated material, in particularly sandy intervals.  | 0   | NRG Metals Inc commenced exploration in adjacent leases under option. Two diamond drillholes  |                                | <ul> <li>Data used in the interpretation includes rotary and diamond drilling methods</li> <li>Drilling depths and geology encountered has been used to conceptualise hydro-stratigrap.</li> </ul>   |
|                              | Recovery of these more friable sediments is more difficult with diamond drilling, as this material can   | 0   | intersected lithium bearing brines. The initial drillhole intersected brines from 172-198m and below  |                                | <ul> <li>Sedimentary processes affect the continuity of geology, whereas the concentration of</li> </ul>   |
|                              | be washed from the core barrel during drilling.  | 0   | with best results to date of 15m at 229 mg/L Lithium, reported in December 2017. The second hole,   |                                | potassium and other elements in the brine is related to water inflows, evaporation and bri   |
|                              | <ul> <li>Rotary drilling has used 8.5" or 10" tricone bits and has produced drill chips.</li> </ul>  | 0   | drilled to 400 metres in mid-2018, became blocked at 100 metres and could not be sampled. A VES   |                                | in the Salt Lake.  |
|                              | <ul> <li>Brine has been used as drilling fluid for lubrication during drilling.</li> </ul>   | 0   | ground geophysical survey was completed prior to drilling. A NI 43-101 report was released in February  | Dimensions                     | <ul> <li>The lateral extent of the resource has been defined by the boundary of the Company's pro</li> </ul>   |
| Drill sample recovery        | <ul> <li>Diamond drill core was recovered in 1.5m length intervals in the drilling triple (split) tubes. Appropriate</li> </ul>  | 0   | 2017.   |                                | brine mineralisation subsequently covers 175 km2   |
|                              | additives were used for hole stability to maximize core recovery. The core recoveries were measured  | 0   | <ul> <li>No other exploration results were able to be located</li> </ul>  |                                | The top of the model coincides with the topography obtained from the Shuttle Radar   |
|                              | from the cores and compared to the length of each run to calculate the recovery. Chip samples are  | Geology                                       | · The known sediments within the salar consist of salt/halite, clay, sand and silt horizons, accumulated  |                                | Mission (SRTM). The original elevations were locally adjusted for each borehole collar w<br>accurate coordinates available. The base of the resource is limited to a 400 m depth. Th   |
|                              | collected for each metre drilled and stored in segmented plastic boxes for rotary drill holes.   |   | in the salar from terrestrial sedimentation and evaporation of brines.  |                                | rocks underlying the Salt Lake sediments have been intercepted in drilling   |
|                              | <ul> <li>Brine samples were collected at discrete depths during the drilling using a double packer over a 1 m</li> </ul>   | 0   | <ul> <li>Brines within the Salt Lake are formed by solar concentration, interpreted to be combined with warm</li> </ul>   |                                | · The resource is defined to a depth of 400 m below surface, with the exploration target   |
|                              | interval (to isolate intervals of the sediments and obtain samples from airlifting brine from the  | 0   | <ul> <li>Brines within the sait take are formed by solar concentration, interpreted to be combined with warm geothermal fluids, with brines hosted within sedimentary units.</li> </ul> |                                | extending beyond the aerial extent of the resource   |
|                              | sediments within the packer).  | 0   |   | Estimation and modelling       | <ul> <li>No grade cutting or capping was applied to the model</li> </ul>   |
|                              | As the brine (mineralisation) samples are taken from inflows of the brine into the hole (and not from  |   | <ul> <li>Geology was recorded during the diamond drilling and from chip samples in rotary drill holes.</li> </ul>   | techniques                     | · No assumptions were made about correlation between variables. Lithium and pote   |
|                              | the drill core – which has variable recovery) they are largely independent of the quality (recovery) of  | Drill hole Information                        | <ul> <li>15 drill holes completed, totalling 3150 metres with varying depths up to 403 metres.</li> </ul>   |                                | estimated independently  |
|                              | the core samples. However, the permeability of the lithologies where samples are taken is related to   | 0   | Lithological data was collected from the holes as they were drilled and drill cores or chip samples were  |                                | <ul> <li>The geological interpretation was used to define each geological unit and the property lin<br/>to enclose the reported resources.</li> </ul>  |
|                              | the rate and potentially lithium grade of brine inflows.   | 0   | retrieved. Detailed geological logging of cores is ongoing.   | Moisture                       | <ul> <li>Moisture content of the cores was not Measured (porosity and density measurements)</li> </ul>   |
| Logging                      | Sand, clay, silt, salt and cemented rock types was recovered in a triple tube diamond core drill tube, or  | (   | <ul> <li>All drill holes are vertical, (dip -90, azimuth 0 degrees).</li> </ul>   | - WIOTSLAFE                    | <ul> <li>Moisture content of the cores was not measured (porosity and density measurements of<br/>but as brine will be extracted by pumping not mining this is not relevant for the resource of</li> </ul>   |
|                              | as chip samples from rotary drill holes, and examined for geologic logging by a geologist and a photo  | Data aggregation<br>methods                   | <ul> <li>Assay averages have been provided where multiple sampling occurs in the same sampling interval.</li> </ul>   |                                | <ul> <li>Tonnages are estimated as elemental lithium and potassium dissolved in brine.</li> </ul>  |
|                              | taken for reference.   |   | Mineralisation interpreted to be horizontally lying and drilling perpendicular to this.   | Cut-off parameters             | No cut-off grade has been applied  |
|                              | Diamond holes are logged by a senior geologist who also supervised taking of samples for laboratory  | Relationship between<br>mineralisation widths | <ul> <li>Mineralisation interpreted to be horizontally lying and drilling perpendicular to this.</li> </ul>   | Mining factors or              | The resource has been quoted in terms of brine volume, concentration of dissolver  |
|                              | porosity analysis as well as additional physical property testing.   | and intercept lengths                         |   | assumptions                    | <ul> <li>The resource has been quoted in terms of prime volume, concentration of dissolved<br/>contained lithium and potassium and their products lithium carbonate and potassium chlo</li> </ul>  |
|                              | <ul> <li>Logging is both qualitative and quantitative in nature. The relative proportions of different lithologies</li> </ul>  | Diagrams                                      | · A drill hole location plan is provided showing the locations of the drill platforms. Individual drill   | -                              | · No mining or recovery factors have been applied although the use of the specific view  |
|                              | which have a direct bearing on the overall porosity, contained and potentially extractable brine are   | (   | locations are provided in Table 1.  |                                | porosity) is used to reflect the reasonable prospects for economic extraction with the prop  |
|                              | noted, as are more qualitative characteristics such as the sedimentary facies and their relationships.   | Balanced reporting                            | <ul> <li>Brine assay results are available from 15 drill holes from the drilling to date, reported here.</li> </ul>   |                                | methodology. (Recoveries of 83% lithium have been used in the PFS for the direct process   |
|                              | When cores are split for sampling they are photographed.   | Other substantive                             | There is no other substantive exploration data available regarding the project.   | -                              | <ul> <li>Dilution of brine concentrations may occur over time and typically there are lithium an</li> </ul>  |
| Sub-sampling techniques      | Brine samples were collected by packer and spear sampling methods, over a metre. Low pressure airlift  | exploration data                              | <ul> <li>There is no other substantive exploration data available regarding the project.</li> </ul>   |                                | losses in both the storage ponds and processing plant in brine extraction operation:<br>potential dilution will be estimated in the groundwater model simulating brine extraction.   |
| and sample preparation       | tests are used as well to purge test interval and gauge potential yields.  | Further work                                  | <ul> <li>Further water well drilling is planned to expand the resource and test pumping rates.</li> </ul>   | -                              | <ul> <li>The conceptual mining method is recovering brine from the Salt Lake via a network of</li> </ul>   |
|                              | <ul> <li>The brine sample was collected in one-litre sample bottles, rinsed and filled with brine. Each bottle was</li> </ul>  | ( )   |   | _                              | <ul> <li>The conceptual mining method is recovering office non-role sale cake via a network of<br/>established practice on existing lithium and potash brine projects.</li> </ul>  |
|                              | taped and marked with the sample number.   |   |   |                                | <ul> <li>Detailed hydrological studies of the lake are being undertaken (groundwater modelling) to</li> </ul>  |
| Quality of assay data and    | The Alex Stewart Argentina/Nor lab SA in Palpala, Jujuy, Argentina, is used as the primary laboratory  |   |   |                                | extractable resources and potential extraction rates.  |
| laboratory tests             | to conduct the assaying of the brine samples collected as part of the sampling program. The SGS  |   |   |                                | <ul> <li>Lithium carbonate is targeted as the commercial product</li> </ul>  |
|                              | laboratory in Buenos Aires has also been used for both primary and check samples. They also analysed   |   |   | assumptions                    | <ul> <li>It would be obtained by the brines being subjected to direct lithium extraction (ionic extraction)</li> </ul>   |
|                              | blind control samples and duplicates in the analysis chain.  |   |   |                                | reverse osmosis) to produce a high grade LiCl eluate (30,000 to 60,000 mg/L lithiur<br>processed in a conventional lithium carbonate plant by reaction with sodium carbonate:  |
|                              | <ul> <li>The Alex Stewart/Norlab SA laboratory and the SGS laboratory are ISO 9001 and ISO 14001 certified.</li> </ul>   |   |   |                                | processed in a conventional lithium carbonate plant by reaction with sobium carbonate:<br>$LiCI + Na_2CO_3 \rightarrow Li_2CO_3 + NaCI$  |
|                              | and are specialized in the chemical analysis of brines and inorganic salts, with experience in this field.   |   |   |                                | <ul> <li>Process work has been undertaken by Lilac Solutions, which is an expert laboratory in the t</li> </ul>  |
|                              | This includes the oversight of the experienced Alex Stewart Argentina S.A. laboratory in Mendoza.  |   |   |                                | brines by ion exchange.  |
|                              | Argentina, which has been operating for a considerable period.   |   |   |                                | · Bench tests include short and long-term tests using ion exchange media and brine fro   |
|                              | The quality control and analytical procedures used at the Alex Stewart/Norlab SA laboratory or SGS   |   |   |                                | establish recovery, reagent consumption, and engineering parameters used in the PFS  |
|                              | laboratory are considered to be of high quality and comparable to those employed by ISO certified  |   |   |                                | <ul> <li>Analyses of solutions by ICP and includes the use of standards</li> </ul>   |
|                              | laboratories specializing in analysis of brines and inorganic salts.   |   |   |                                | <ul> <li>The longevity of the ion exchange media has been tested over 1000 cycles, or six months</li> </ul>  |
| Verification of sampling     | <ul> <li>Field duplicates, standards and blanks will be used to monitor potential contamination of samples and</li> </ul>  | 1   |   |                                | <ul> <li>Lithium carbonate of high purity and low impurities has been produced which can be<br/>equivalent to metallurgical test work) is being carried out on the bring following initial test</li> </ul>   |
| and assaying                 | the repeatability of analyses. Accuracy, the closeness of measurements to the "true" or accepted value,  |   |   |                                | <ul> <li>Pilot plant module test-work has commenced using Kachi brine.</li> </ul>  |
|                              | will be monitored by the insertion of standards, or reference samples, and by check analysis at an   |   |   | Environmental factors as       | <ul> <li>Impacts of a lithium operation at the Kachi project would include surface disturbance</li> </ul>  |
|                              | independent (or umpire) laboratory.  |   |   | assumptions                    | installation of extraction/processing facilities and associated infrastructure, accumulation   |
|                              | <ul> <li>Duplicate samples in the analysis chain were submitted to Alex Stewart/Norlab SA or SGS laboratories</li> </ul>   |   |   |                                | salt tailings impoundments and extraction from brine and fresh water aquifers regionally   |
|                              | as unique samples (blind duplicates) during the process <ul> <li>Stable blank samples (distilled water) were used to evaluate potential sample contamination and will</li> </ul>   |   |   |                                | Environmental management plan for the protection of wetlands, salt lakes, and surrounds  |
|                              | <ul> <li>Stable blank samples (distilled water) were used to evaluate potential sample contamination and will<br/>be inserted in future to measure any potential cross contamination</li> </ul>  |   |   |                                | <ul> <li>Consultation with communities in the area of influence of the project</li> </ul>  |
|                              | <ul> <li>Samples were analysed for conductivity using a hand-held Hanna pH/EC multiprobe.</li> </ul>   |   |   | Bulk density                   | Environmental impact analysis on-going   |
|                              | Regular calibration using standard buffers is being undertaken.  |   |   | Burk density                   | <ul> <li>Density measurements were taken as part of the drill core assessment. This included dete<br/>density and particle density as well as field measurements of brine density. Note that no</li> </ul>   |
| Location of data points      | The diamond drill hole sample sites and rotary drill hole sites were located with a hand-held GPS.   |   |   |                                | density and particle density as well as field measurements of brine density. Note that no<br>be carried out as brine is to be extracted by pumping and consequently sediments are not  |
|                              | <ul> <li>The properties are located at the junction of the Argentine POSGAR grid system Zone 2 and Zone 3</li> </ul>   |   |   |                                | <ul> <li>No bulk density was applied to the estimates because resources are defined by volume, rather than t</li> </ul>  |
|                              | (UTM 19) and in WGS84 Zone 19 south.   |   |   | Classification                 | The resource has been classified into the two possible resource categories based on confi  |
| Data spacing and             | <ul> <li>Brine samples were collected over 1m intervals every 6 m intervals within brine producing aquifers,</li> </ul>  |   |   |                                | estimation.  |
| distribution                 | where this was possible.   | 1   |   |                                | <ul> <li>A Measured resource would reflect higher density drilling, with porosity samples from dr</li> </ul>   |
| Orientation of data in       | <ul> <li>The salt lake (salar) deposits that contain lithium-bearing brines generally have sub-horizontal beds</li> </ul>  |   |   |                                | well constrained vertical brine sampling in the holes.   |
| relation to geological       | and lenses that contain sand, gravel, salt, silt and clay. The vertical diamond drill holes will provide a   |   |   |                                | <ul> <li>The Indicated resource reflects the higher confidence in the brine sampling in the rotary<br/>lower quality geological control from the drill cuttings.</li> </ul>  |
| structure<br>Sample security | better understanding of the stratigraphy and the nature of the sub-surface brine bearing aquifers     Samples were transported to the Alex Stewart/Norlab SA laboratory or SGS laboratory for chemical   | 1   |   |                                | <ul> <li>Inver quality geological control from the drill cuttings.</li> <li>The Inferred resource underlying the Measured and/or Indicated resource reflects the lin</li> </ul>  |
|                              | <ul> <li>Samples were transported to the Alex Stewart/Norlab SA laboratory or SGS laboratory for chemical<br/>analysis in sealed 1-litre rigid plastic bottles with sample numbers clearly identified. Samples were</li> </ul>   |   |   |                                | <ul> <li>The inferred resource underlying the Measured and/or indicated resource reflects the lin<br/>to this depth together with the geophysics through the property</li> </ul>   |
| Sample Secarity              | analysis in sealed 1-litre rigid plastic bottles with sample numbers clearly identified. Samples were<br>transported by a trusted member of the team.  |   |   |                                | <ul> <li>In the view of the Competent Person the resource classification is believed to adequate</li> </ul>  |
| Sumple Security              |  |   |   |                                | available data and is consistent with the suggestions of Houston et. al., 2011   |
|                              |  |   |   | Audits or reviews              | The Mineral Resource was estimated by the Competent Person.  |
|                              | transported by a trusted member of the team. The samples were moved from the drillhole sample site to secure storage at the camp on a daily basis. All brine sample bottles sent to the laboratory are marked with a unique label not related to the   |   |   |                                |  |
|                              | <ul> <li>The samples were moved from the drillhole sample site to secure storage at the camp on a daily basis.</li> </ul>  |   |   |                                | <ul> <li>An independent estimate of the resource was completed using a nearest neighbour estin</li> </ul>  |
| Review (and Audit)           | <ul> <li>The samples were moved from the drillhole sample site to secure storage at the camp on a daily basis.<br/>All brine sample bottles sent to the laboratory are marked with a unique label not related to the<br/>location.</li> </ul>  |   |   |                                | <ul> <li>An independent estimate of the resource was completed using a nearest neighbour estin<br/>comparison of the results with the ordinary kriging estimate is below 0.3% for measured re</li> </ul>   |
|                              | <ul> <li>The samples were moved from the diffibele samples site to secure storage at the camp on a daily basis.<br/>All brine sample bottles sent to the laboratory are marked with a unique label not related to the<br/>location.</li> <li>No audit of data has been conducted to date. However, the CP has been onsite periodically during the</li> </ul> |   |   | Discussion of relative         | comparison of the results with the ordinary kriging estimate is below 0.3% for measured re<br>below 3% for indicated resources which is considered to be acceptable.   |
|                              | <ul> <li>The samples were moved from the drillhole sample site to secure storage at the camp on a daily basis.<br/>All brine sample bottles sent to the laboratory are marked with a unique label not related to the<br/>location.</li> </ul>  |   |   | Discussion of relative         | <ul> <li>An independent estimate of the resource was completed using a nearest neighbour estim<br/>comparison of the results with the ordinary kriging estimate is below 0.3% for measured re<br/>below 3% for indicated resources which is considered to be acceptable.</li> <li>Univariate statistics for global estimation bias, visual inspection against samples on plans<br/>swath plots in the north, south and vertical directions to detect any spatial bias has</li> </ul> |

ASX:LKE OTC:LLKKF