

# CLEAN HIGH PURITY LITHIUM

Noosa Virtual Conference

Steve Promnitz - Managing Director

15 July 2020

**LAKE**  
RESOURCES

**CLEANER LITHIUM  
FOR AN 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 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.

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## Clean Technology – High Purity Lithium.

- **Clean Technology** – Simple adaptation of well-known water treatment method
- **Disruptive Direct Extraction with Lilac Solutions** – Innovative, efficient lithium separation from salty water (brine); cost competitive vs traditional process
- **High Purity Lithium** - 99.9% purity battery grade lithium carbonate – Rising demand; ~20% compound growth for lithium; only 50-60% of production is battery grade
- **Responsibly Sourced; Sustainable** – Small environmental footprint; Returns 99% brine to source; Lilac backed by Bill Gates-led Breakthrough fund; MIT's The Engine
- **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



# Sustainable Lithium. Responsibly Sourced

## Solution for more sustainable lithium in EV's

- **Electric Vehicle Makers, EU, Seek More Sustainable Lithium –**  
Volkswagen, Daimler, EU – push for 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

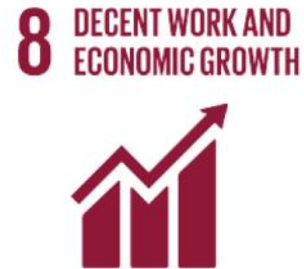
# Sustainable Lithium.

## ESG Targets for the Future – EU, UN

EU



UN



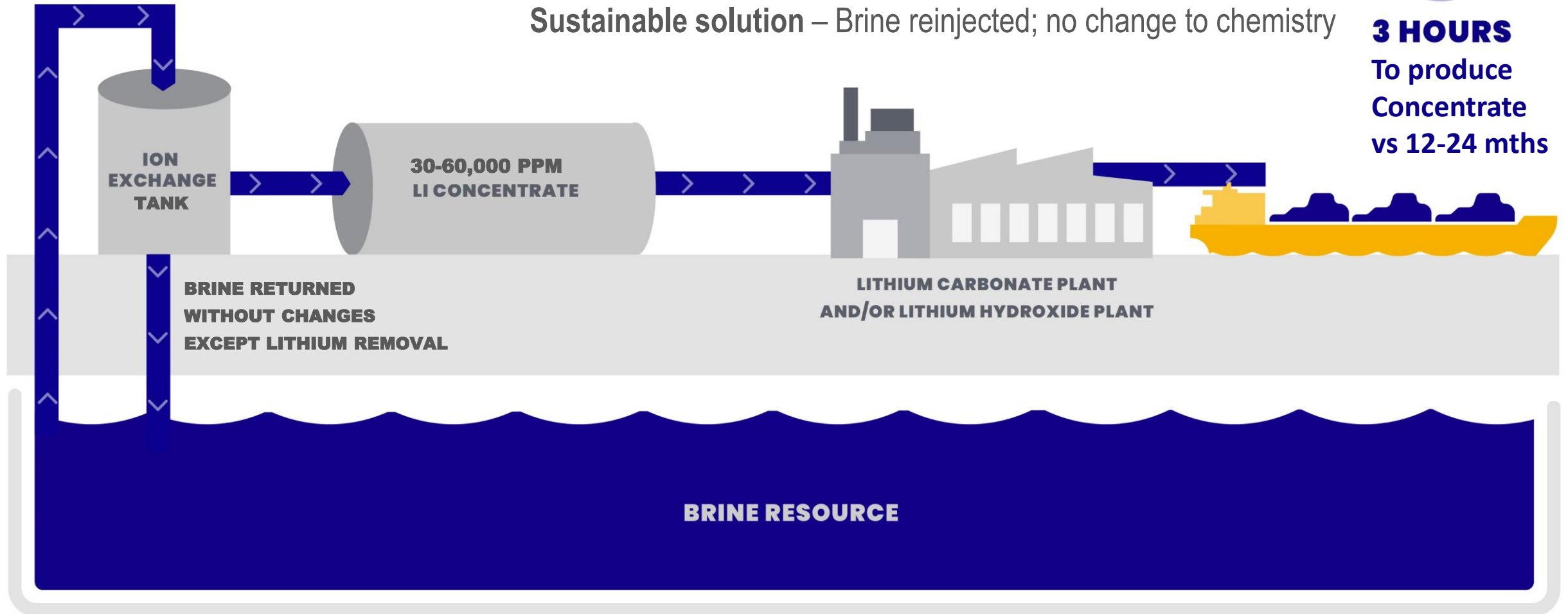
UNGP  
United Nations Guiding Principles  
on Business and Human Rights  
  
SDGs  
Sustainable Development Goals

# 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



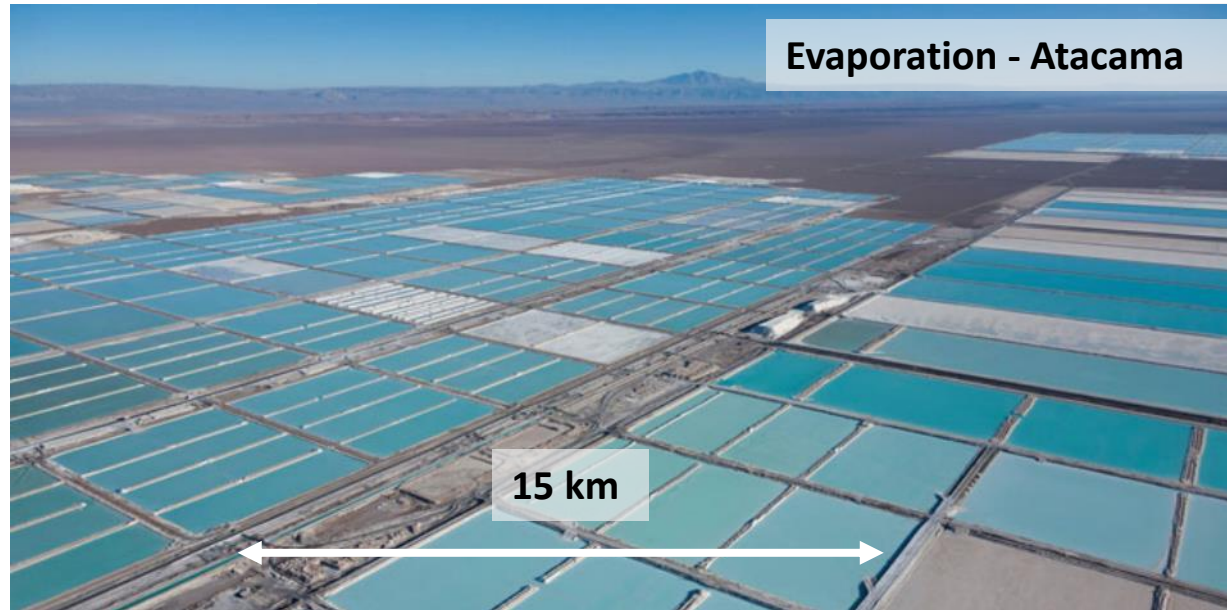
**3 HOURS**  
To produce  
Concentrate  
vs 12-24 mths





# Direct extraction – Small Environmental Footprint

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



Direct Extraction:  
Returns  
brine to source

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# Prime Location – Next to Large Producers.

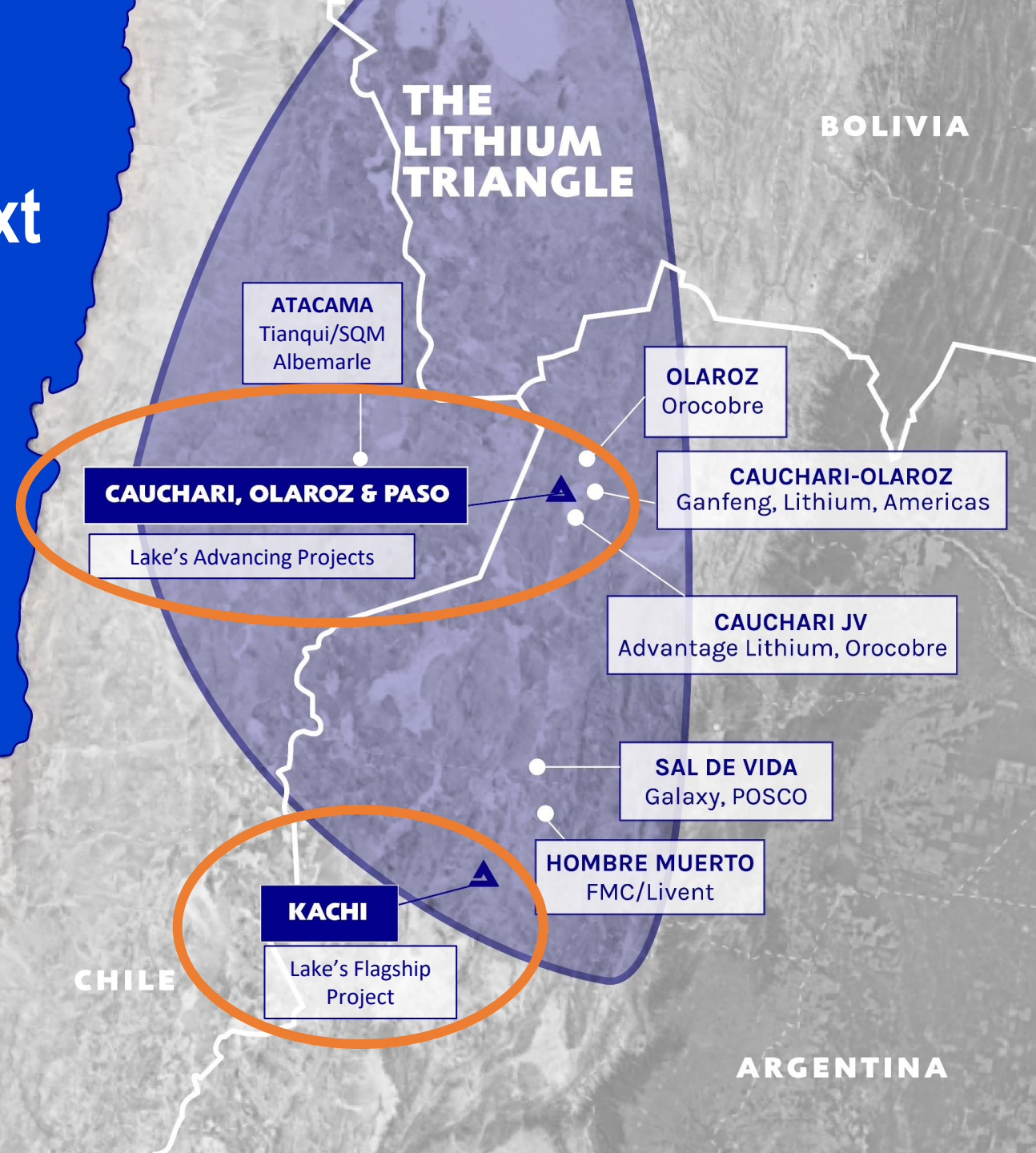
Lithium Triangle: 40% of world's lithium production at the lowest cost.

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

Lake has a large project at Kachi  
3 other brine projects

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## 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)





# Kachi Project - High Margin Pre-Feasibility Results

- **Long Life, High Value Project** - 25 year production 25,500 tpa  
LCE<sup>\*\*</sup>; US\$1050 million project value<sup>\*</sup> (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<sub>2</sub>CO<sub>3</sub>
- **Cost Competitive among Brine Producers** –  
Operating cost US\$4170/t Li<sub>2</sub>CO<sub>3</sub>
- **Prime Location** – Large scalable project in world-class region

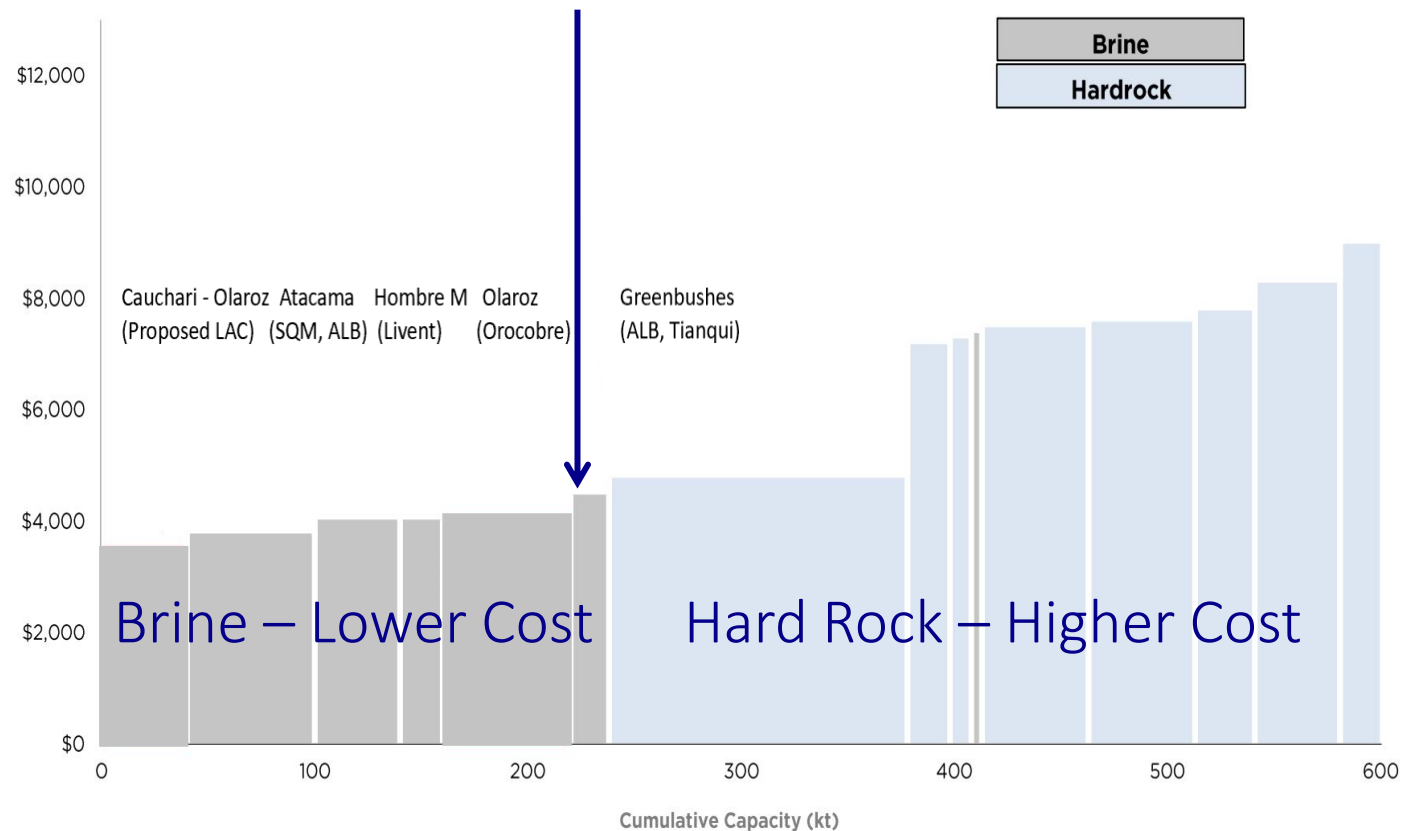




# Cost Competitive Direct Extraction Consistent High Value Low Impurity Product

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

Direct Extraction Kachi Project  
Positioned at lower end of cost curve



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

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Source: Street research including Cauchari-Olaroz DFS and Thacker Pass (before by-product credits). Includes CORFO royalty assuming price of \$9,000/t of lithium carbonate

Lithium Americas (LAC:TSX-V)  
Information Nov 2019

Source: LKE announcements 9/1/2020, 14/01/2020; 10/12/2018

# 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  
Kachi – finalise 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

## LAKE RESOURCES (ASX:LKE , OTC:LLKKF)

Total Current Shares on Issue

**671,461,957**

Listed Options (10c)	Jun 2021 Expiry	52,512,693
Unlisted Options (4.6c)	Oct 2022 Expiry	18,300,000
Unlisted Options (8c)	Feb 2022 Expiry	5,555,000
Unlisted Options (9c)	Jul 2021 Expiry	15,000,000

## Market Data

**Market Cap (\$A)**

@ \$0.039/ sh (10 day VWAP, 14July)

**A \$26.1 million**

**US\$18 million**

Cash (\$A)

31 Mar 2020

**\$2 million**

Unsecured debt

**\$ 0**

Share Price

52 week range

**\$0.023 – 0.10/sh**

Share Register

40% Top 30, High Net Worth Investors

Lake Resources N.L. Chart





## Orior Capital – Lake ‘Incredibly Undervalued’

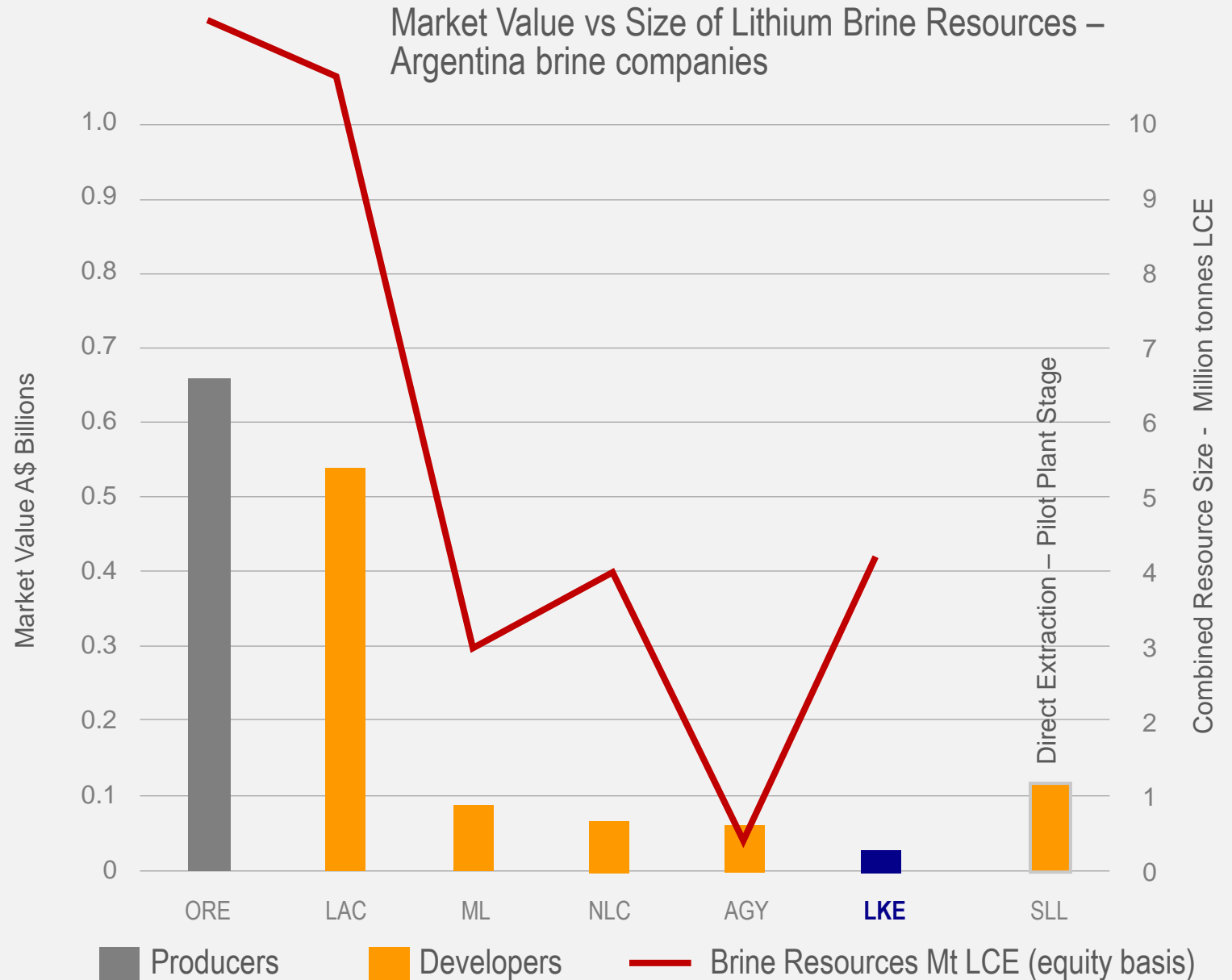
- **Lake Undervalued vs Peers** – Robust financial metrics, advantages of direct extraction & lithium outlook: , Lake trading <2% NPV vs peers trading at around 20%; valuation of **29c per share**
- **Compelling, Cash-Generative Project** – Kachi to generate EBITDA US\$155m pa and EBITDA margin 55%, 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

## Significant Upside

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

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

Research: LKE website



## 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.



## Next Steps – Catalysts.

- **Deliver high purity samples to off-takers** – within weeks
- **Qualification process; Focus on Sustainability** – Off-taker engagement
- **Capital cost, Opex reductions** – Solar power, Staged development 10,000tpa
- **Definitive feasibility study DFS** –  
Complete mid 2021, Production 2023 target



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## Clean High Purity Lithium - Unique Proposition.

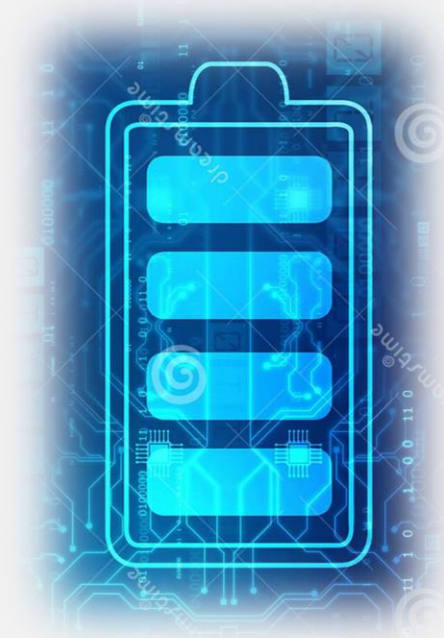
- **New Clean Technology for High Purity Lithium** – Growing need
- **Responsibly Sourced & Sustainable** - Growing demand from EV makers, EU guidelines, Battery makers – Enables a clean future and one of only new suppliers
- **21<sup>st</sup> Century Solution to Batteries for EV's**

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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	55%

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

ASX:LKE  
OTC:LLKKF



# 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, km³	6		41		47	
Brine volume, km³	0.65		3.2		3.8	
Mean drainable porosity %	10.9		7.5		7.9	
Element	Li	K	Li	K	Li	K
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), 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 Potassium is converted to potassium chloride (KCl) with a conversion factor of 1.91						

# Appendix – Table 1 Report – JORC Code 2012.

Criteria	Section 1 - Sampling Techniques and Data
Sampling techniques	<ul style="list-style-type: none"><li>Brine samples were taken from the diamond drill hole with a bottom of hole spear point during advance and using a straddle packer device to obtain representative samples of the formation fluid by purging a volume of fluid from the isolated interval, to minimize the possibility of contamination by drilling fluid then taking the sample. Low pressure airlift tests are used as well. The fluid used for drilling is brine sourced from the drill hole and the return from drillhole passes back into the excavator dug pit lined to avoid leakage.</li><li>The brine sample was collected in a clean plastic bottle (1 litre) and filled to the top to minimize air space within the bottle. A duplicate was collected at the same time for storage and submission of duplicates to the laboratory. Each bottle was taped and marked with the sample number.</li><li>Drill core in the hole was recovered in 1.5 m length core runs in core split tubes to minimize sample disturbance.</li><li>Drill core was undertaken to obtain representative samples of the sediments that host brine.</li></ul>
Drilling techniques	<ul style="list-style-type: none"><li>Diamond drilling with an internal (triple) tube was used for drilling. The drilling produced cores with variable core recovery, associated with unconsolidated material, in particularly sandy intervals. Recovery of these more friable sediments is more difficult with diamond drilling, as this material can be washed from the core barrel during drilling.</li><li>Rotary drilling has used 8.5" or 10" tricone bits and has produced drill chips.</li><li>Brine has been used as drilling fluid for lubrication during drilling.</li></ul>
Drill sample recovery	<ul style="list-style-type: none"><li>Diamond drill core was recovered in 1.5m length intervals in the drilling triple (split) tubes. Appropriate additives were used for hole stability to maximize core recovery. The core recoveries were measured from the cores and compared to the length of each run to calculate the recovery. Chip samples are collected for each metre drilled and stored in segmented plastic boxes for rotary drill holes.</li><li>Brine samples were collected at discrete depths during the drilling using a double packer over a 1 m interval (to isolate intervals of the sediments and obtain samples from airlifting brine from the sediments within the packer).</li><li>As the brine (mineralisation) samples are taken from inflows of the brine into the hole (and not from the drill core – which has variable recovery) they are largely independent of the quality (recovery) of the core samples. However, the permeability of the lithologies where samples are taken is related to the rate and potentially lithium grade of brine inflows.</li></ul>
Logging	<ul style="list-style-type: none"><li>Sand, clay, silt, salt and cemented rock types was recovered in a triple tube diamond core drill tube, or as chip samples from rotary drill holes, and examined for geologic logging by a geologist and a photo taken for reference.</li><li>Diamond holes are logged by a senior geologist who also supervised taking of samples for laboratory porosity analysis as well as additional physical property testing.</li><li>Logging is both qualitative and quantitative in nature. The relative proportions of different lithologies which have a direct bearing on the overall porosity, contained and potentially extractable brine are noted, as are more qualitative characteristics such as the sedimentary facies and their relationships. When cores are split for sampling they are photographed.</li></ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"><li>Brine samples were collected by packer and spear sampling methods, over a metre. Low pressure airlift tests are used as well to purge test interval and gauge potential yields.</li><li>The brine sample was collected in one-litre sample bottles, rinsed and filled with brine. Each bottle was taped and marked with the sample number.</li></ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"><li>The Alex Stewart Argentina/Nor lab SA in Palpala, Jujuy, Argentina, is used as the primary laboratory to conduct the assaying of the brine samples collected as part of the sampling program. The SGS laboratory in Buenos Aires has also been used for both primary and check samples. They also analysed blind control samples and duplicates in the analysis chain.</li><li>The Alex Stewart/Norlab SA laboratory, and the SGS laboratory are ISO 9001 and ISO 14001 certified, and are specialized in the chemical analysis of brines and inorganic salts, with experience in this field. This includes the oversight of the experienced Alex Stewart Argentina S.A. laboratory in Mendoza, Argentina, which has been operating for a considerable period.</li><li>The quality control and analytical procedures used at the Alex Stewart/Norlab SA laboratory or SGS laboratory are considered to be of high quality and comparable to those employed by ISO certified laboratories specializing in analysis of brines and inorganic salts.</li></ul>
Verification of sampling and assaying	<ul style="list-style-type: none"><li>Field duplicates, standards and blanks will be used to monitor potential contamination of samples and the repeatability of analyses. Accuracy, the closeness of measurements to the "true" or accepted value, will be monitored by the insertion of standards, or reference samples, and by check analysis at an independent (or umpire) laboratory.</li><li>Duplicate samples in the analysis chain were submitted to Alex Stewart/Norlab SA or SGS laboratories as unique samples (blind duplicates) during the process</li><li>Stable blank samples (distilled water) were used to evaluate potential sample contamination and will be inserted in future to measure any potential cross contamination</li><li>Samples were analysed for conductivity using a hand-held Hanna pH/EC multiprobe.</li><li>Regular calibration using standard buffers is being undertaken.</li></ul>
Location of data points	<ul style="list-style-type: none"><li>The diamond drill hole sample sites and rotary drill hole sites were located with a hand-held GPS.</li><li>The properties are located at the junction of the Argentine POSGAR grid system Zone 2 and Zone 3 (UTM 19) and in WGS84 Zone 19 south.</li></ul>
Data spacing and distribution	<ul style="list-style-type: none"><li>Brine samples were collected over 1m intervals every 6 m intervals within brine producing aquifers, where this was possible.</li></ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"><li>The salt Lake (salar) deposits that contain lithium-bearing brines generally have sub-horizontal beds and lenses that contain sand, gravel, silt and clay. The vertical diamond drill holes will provide a better understanding of the stratigraphy and the nature of the sub-surface brine bearing aquifers</li></ul>
Sample security	<ul style="list-style-type: none"><li>Samples were transported to the Alex Stewart/Norlab SA laboratory or SGS laboratory for chemical analysis in sealed 3-litre rigid plastic bottles with sample numbers clearly identified. Samples were transported by a trusted member of the team.</li><li>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 location.</li></ul>
Review (and Audit)	<ul style="list-style-type: none"><li>No audit of data has been conducted to date. However, the CP has been onsite periodically during the programme. The review included drilling practice, geological logging, sampling methodologies for water quality analysis and, physical property testing from drill core, QA/QC control measures and data management. The practices being undertaken were ascertained to be appropriate.</li></ul>

Criteria	Section 2 - Mineral Tenement and Land Tenure Status
Mineral tenement and land tenure status	<ul style="list-style-type: none"><li>The Kachi Lithium Brine project is located approximately 100km south-southwest of Livent' (FMC's) Hombre Muerto lithium operation and 45km south of Antofagasta de la Sierra in Catamarca province of north western Argentina at an elevation of approximately 3,000m asl.</li><li>The project comprises approximately 70,462 Ha in thirty seven mineral leases (minas) of which five leases (9,445 Ha) are granted for drilling, twenty two leases are granted for initial exploration (44,328 Ha) and ten leases (16,689 Ha) are applications pending granting.</li><li>The tenements are believed to be in good standing, with statutory payments completed to relevant government departments.</li></ul>
Exploration by other parties	<ul style="list-style-type: none"><li>Marifil Mines Ltd conducted sparse near-surface pit sampling of groundwater at depths less than 1m during 2009.</li><li>Samples were taken from each hole and analysed at Alex Stewart laboratories in Mendoza Argentina.</li><li>Results were reported in an NI 43-101 report by J. Ebisch in December 2009 for Marifil Mines Ltd.</li><li>NRG Metals Inc commenced exploration in adjacent leases under option. Two diamond drillholes intersected lithium bearing brines. The initial drillhole intersected brines from 172-198m and below with best results to date of 15m at 229 mg/L Lithium, reported in December 2017. The second hole, drilled to 400 metres in mid-2018, became blocked at 100 metres and could not be sampled. A VES ground geophysical survey was completed prior to drilling. A NI 43-101 report was released in February 2017.</li><li>No other exploration results were able to be located</li></ul>
Geology	<ul style="list-style-type: none"><li>The known sediments within the <i>salar</i> consist of salt/halite, clay, sand and silt horizons, accumulated in the <i>salar</i> from terrestrial sedimentation and evaporation of brines.</li><li>Brines within the Salt Lake are formed by solar concentration, interpreted to be combined with warm geothermal fluids, with brines hosted within sedimentary units.</li><li>Geology was recorded during the diamond drilling and from chip samples in rotary drill holes.</li></ul>
Drill hole information	<ul style="list-style-type: none"><li>15 drill holes completed, totalling 3150 metres with varying depths up to 403 metres.</li><li>Lithological data was collected from the holes as they were drilled and drill cores or chip samples were retrieved. Detailed geological logging of cores is ongoing.</li><li>All drill holes are vertical, (dip -90, azimuth 0 degrees).</li><li>Assay averages have been provided where multiple sampling occurs in the same sampling interval.</li></ul>
Data aggregation methods	<ul style="list-style-type: none"><li>Relationship between mineralisation widths and intercept lengths</li></ul>
Diagrams	<ul style="list-style-type: none"><li>A drill hole location plan is provided showing the locations of the drill platforms. Individual drill locations are provided in Table 1.</li></ul>
Balanced reporting	<ul style="list-style-type: none"><li>Brine assay results are available from 15 drill holes from the drilling to date, reported here.</li></ul>
Other substantive exploration data	<ul style="list-style-type: none"><li>There is no other substantive exploration data available regarding the project.</li></ul>
Further work	<ul style="list-style-type: none"><li>Further water well drilling is planned to expand the resource and test pumping rates.</li></ul>

Criteria	Section 3 – Estimation and Reporting of Mineral Resources
Database integrity	<ul style="list-style-type: none"><li>Data was transferred directly from laboratory spreadsheets to the database.</li><li>Data was checked for transcription errors once in the database to ensure coordinates, assay values, and lithological codes were correct</li><li>Data was plotted to check the spatial location and relationship to adjoining sample points</li><li>Duplicates and standards have been used in the assay process</li><li>Brine assays and porosity test work have been analyzed and compared with other publicly available information for reasonableness</li><li>Comparison of original and current datasets were made to ensure no lack of integrity</li><li>The Competent Person visited the site multiple times during the drilling and sampling program</li><li>Some improvements to procedures were made during visits by the Competent Person</li></ul>
Site visits	<ul style="list-style-type: none"><li>The geological model is continuing to develop. There is a high level of confidence in the interpretation of the exploration results to date. There are relatively consistent geological units with relatively uniform clastic sediments</li><li>Any alternative interpretations are restricted to smaller scale variations in sedimentology, related to changes in grain size and fine material in units</li><li>Data used in the interpretation includes rotary and diamond drilling methods</li><li>Drilling depths and geology encountered has been used to conceptualize hydro-stratigraphy</li><li>Sedimentary processes affect the continuity of geology, whereas the concentration of lithium and potassium and other elements in the brine is related to water inflows, evaporation and brine evolution in the Salt Lake.</li></ul>
Geological interpretation	<ul style="list-style-type: none"><li>The lateral extent of the resource has been defined by the boundary of the Company's properties. The brine mineralisation subsequently covers 175 km2</li><li>The top of the model coincides with the topography obtained from the Shuttle Radar Topography Mission (SRTM). The original elevations were locally adjusted for each borehole collar with the most accurate coordinates available. The base of the resource is limited to a 400 m depth. The basement rocks underlying the Salt Lake sediments have been intercepted in drilling</li><li>The resource is defined to a depth of 400 m below surface, with the exploration target immediately extending beyond the aerial extent of the resource.</li></ul>
Dimensions	<ul style="list-style-type: none"><li>No grade cutting or capping was applied to the model</li><li>No assumptions were made about correlation between variables. Lithium and potassium were estimated independently</li><li>The geological interpretation was used to define each geological unit and the property limit was used to enclose the reported resources.</li></ul>
Estimation and modelling techniques	<ul style="list-style-type: none"><li>Moisture content of the cores was not Measured (porosity and density measurements were made), but as brine will be extracted by pumping not mining this is not relevant for the resource estimation.</li><li>Tonnages are estimated as elemental lithium and potassium dissolved in brine.</li></ul>
Moisture	<ul style="list-style-type: none"><li>No cut-off grade has been applied</li></ul>
Cut-off parameters	<ul style="list-style-type: none"><li>The resource has been quoted in terms of brine volume, concentration of dissolved elements, contained lithium and potassium and their products lithium carbonate and potassium chloride.</li><li>No mining or recovery factors have been applied although the use of the specific yield (drainable porosity) is used to reflect the reasonable prospects for economic extraction with the proposed mining methodology. (Recoveries of 83% lithium have been used in the PFS for the direct processing method)</li><li>Dilution of brine concentrations may occur over time and typically there are lithium and potassium losses in both the storage ponds and processing plant in brine extraction operations. However, potential dilution will be estimated in the groundwater model simulating brine extraction.</li><li>The conceptual mining method is recovering brine from the Salt Lake via a network of wells, the established practice on existing lithium and potash brine projects.</li><li>Detailed hydrological studies of the lake are being undertaken (groundwater modelling) to define the extractable resources and potential extraction rates.</li></ul>
Mining factors or assumptions	<ul style="list-style-type: none"><li>Lithium carbonate is targeted as the commercial product</li><li>It would be obtained by the brines being subjected to direct lithium extraction (ionic exchange and reverse osmosis) to produce a high grade LCI eluate (30,000 to 60,000 mg/L lithium), which is processed in a conventional lithium carbonate plant by reaction with sodium carbonate: <math display="block">LiCl + Na_2CO_3 \rightarrow Li_2CO_3 + NaCl</math></li><li>Process work has been undertaken by Ulic Solutions, which is an expert laboratory in the treatment of brines by ion exchange.</li><li>Bench tests include short and long-term tests using ion exchange media and brine from Kachi to establish recovery, reagent consumption, and engineering parameters used in the PFS</li><li>Analyses of solutions by ICP and includes the use of standards</li><li>The longevity of the ion exchange media has been tested over 1000 cycles, or six months</li><li>Lithium carbonate of high purity and low impurities has been produced which can be considered equivalent to metallurgical test work is being carried out on the brine following initial test work.</li><li>Pilot plant module test work has commenced using Kachi brine.</li></ul>
Environmental factors or assumptions	<ul style="list-style-type: none"><li>Impacts of a lithium operation at the Kachi project would include surface disturbance from the installation of extraction/processing facilities and associated infrastructure, accumulation of various salt tailings impoundments and extraction from brine and fresh water aquifers regionally</li><li>Environmental management plan for the protection of wetlands, salt lakes, and surrounds</li><li>Consultation with communities in the area of influence of the project</li><li>Environmental impact analysis on-going.</li></ul>
Bulk density	<ul style="list-style-type: none"><li>Density measurements were taken as part of the drill core assessment. This included determining dry density and particle density as well as field measurements of brine density. Note that no mining is to be carried out as brine is to be extracted by pumping and consequently sediments are not mined</li><li>No bulk density was applied to the estimates because resources are defined by other, rather than by tonnage</li></ul>
Classification	<ul style="list-style-type: none"><li>The resource has been classified into the two possible resource categories based on confidence in the estimation.</li><li>A Measured resource would reflect higher density drilling, with porosity samples from drill cores and well constrained vertical brine sampling in the holes.</li><li>The Indicated resource reflects the higher confidence in the brine sampling in the rotary drilling and lower quality geological control from the drill cuttings.</li><li>The Inferred resource underlying the Measured and/or Indicated resource reflects the limited drilling to this depth together with the geophysics through the property.</li><li>In the view of the Competent Person the resource classification is believed to adequately reflect the available data and is consistent with the suggestions of Houston et al., 2011</li></ul>
Audits or reviews	<ul style="list-style-type: none"><li>The Mineral Resource was estimated by the Competent Person.</li></ul>
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"><li>An independent estimate of the resource was completed using a nearest neighbour estimate and the comparison of the results with the ordinary kriging estimate is below 0.3% for measured resources and 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 and sections, swath plots in the north, south and vertical directions to detect any spatial bias shows a good agreement between the samples and the ordinary kriging estimates.</li></ul>