

March 2020 Initiation

12 Month Price Target: A\$0.25

## CAPITAL STRUCTURE

Share Price	\$0.031
12 Month Range	\$0.023- \$0.115
Market Cap (diluted)	A\$22m US\$14m
Issued Shares	632.5m
SPP Shares allocated	62.5m
Total	695.0m
Various options	100.8m

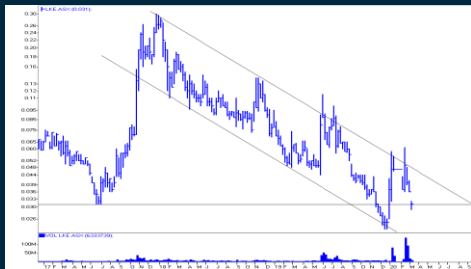
## DIRECTORS

Steve Promnitz	Managing Director
Stu Crow	Non-Executive Chairman
Nick Lindsay	Non-Executive Director
Robert Trzebski	Non-Executive Director

## TOP SHAREHOLDERS

Lambrecht Trust (Justine Michel)	5.0%
Stephen Promnitz	2.90
202 Limited	2.85
Acuity Capital Investment Pty Ltd	2.83

## THREE YEAR SHARE PRICE CHART



Stock is at long term support levels

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## LAKE RESOURCES NL (LKE.ASX)

### High Purity Lithium Production in Argentina

LKE has a lithium development strategy with projects in the prime Argentinian brine producing regions and utilising innovative technologies to minimise operating costs and to maximise earnings and sustainability benefits.

LKE's 4.4mt LCE Kachi resource will utilise Lilac Solutions ion exchange technology in its project with a PFS due shortly for 2023 production startup.

Lithium sector undergoing improved conditions as supply and demand match.

## KEY POINTS

- Lake Resources has five lithium projects in Argentina:-
  - Brines - Kachi, Cauchari, Olaroz and Paso in Jujuy Province
  - Pegmatites- 150km strike exploration in Catamarca Province
- Flagship Kachi Inferred Ore Reserves of 4.4Mt LCE @216mg/L LCE\*
- PFS for 25ktpa LCE Kachi due in March Qtr 2020
- Unique low operating cost Business Plan
- Pilot plant for innovative Lilac direct extraction technology underway
- Technology gives >80% lithium recovery and slashes processing time
- Lilac Solutions now backed by Gates/Bezos Sustainability Fund
- Cauchari adjoins Ganfeng JV - has achieved 506m @ 505mg/L lithium
- Lithium market bottoming & turning up—needs >600% supply increase
- Strong growth in batteries for EVs demand and energy storage uses
- Project funding likely in 2020 for Kachi and first output in 2023
- Significant rerating of the company due over 2020

\* lithium carbonate equivalent

## SUMMARY

Lake Resources has four lithium brine projects with tenements over lakes in the northwest of Argentina within the famous Lithium Triangle which has 58% of the world's brine resources and 40% of the world's lithium production as brines with low production costs.

Flagship Kachi already has resource of 4.4mt LCE placing it in the global top 10 and is 300km south of the three other projects at Cauchari-Olaroz & existing lithium production.

Kachi is under a Pre-Feasibility Study with results expected end Mar Qtr 2020. Recent testwork results using the Lilac process gave 99.9% LCE product with minimal impurities.

Cauchari/Olaroz tenements abut current producers and results from high grade Cauchari Project with 506m @ 505mg/L lithium prove the salt lake fringe strategy is working.

Lithium is undergoing a production explosion in response to the rapid development of lithium ion batteries that power a wide range of commercial and domestic appliances from phones to tools and power network backups. The emergence of electric vehicles (EVs) is new and will ultimately be the largest end use for lithium in these lithium ion batteries.

The Lilac Solutions ion exchange technology is a potential game changer in lithium brine processing that will bypass the evaporation step, increase recoveries from ~45% to 80-90%, cut processing times by more than 95% and become among the lowest operating cost processes. Pilot plant bulk processing is now underway.

Whilst the near-term outlook is for oversupply, new capacity is required and must be initiated. The urgency is shown by recent acquisition prices paid for entry into Argentina brine resources which have been at multiples of LKE's relative market cap.

Earnings Outlook	A\$ 0.03					
Year end 30 June	2022E	2023E	2024E	2025E	2026E	2027E
Lithium Price US\$/tonne	13000	13000	13000	13000	13000	13000
Total Sales tonnes LCE	10000	15000	25000	25000	25000	25000
Sales Revenue (US\$m)	130	195	325	325	325	325
EBITDA (A\$m)	91	137	228	228	228	228
Pretax earnings (A\$m)	70	109	186	185	185	185
Net After Tax Earnings (A\$m)	70	109	186	129	129	129
Cashflow (A\$m)	91	137	228	172	172	172
EPS	0.07	0.11	0.19	0.13	0.13	0.13
CFPS	0.09	0.14	0.23	0.17	0.17	0.17
PER X	0.43	0.28	0.16	0.23	0.23	0.23
PCFR X	0.33	0.22	0.13	0.17	0.17	0.17
Shares on Issue (m)	1000	1000	1000	1000	1000	1000

## Argentinian assets acquired in 2016...

### Three brine projects



#### Kachi

4.4mt LCE Indicated and Inferred Resource 211mg/l

Area 705 km<sup>2</sup>

#### Cauchari/Olaroz/Paso Valley

Cauchari 506m and 493mg/L

Area 40 km<sup>2</sup>

#### Olaroz

Area 140 km<sup>2</sup>

#### Paso

Area 300 km<sup>2</sup>

#### Catamarca

Pegmatite exploration

Area 900 km<sup>2</sup>

## 1.0 Lake Resources - In Profile

Lake Resources acquired lithium assets in Argentina and a new Board when it merged with LithNRG Pty Ltd in mid-2016. LithNRG's investors had been focused on processes associated with large volume water treatment for purity so its move to the treatment of lithium brines was a logical step.

Treatment of brines has become very big business with sea salt, fertilizers and now lithium being large scale commodities with many related processes.

Tenements for four projects in the Argentine sector of the Lithium Triangle are strategically located including adjacent to major brine deposit operations.

Lake Resources' five lithium projects are in Argentina:-

1. Kachi,
2. Cauchari
3. Olaroz and
4. Paso as brine, and
5. Catamarca as a spodumene pegmatite exploration target.

#### Kachi (LKE 100%) Catamarca ~705km<sup>2</sup>

Located 100 km S of Livent's Hombre Muerto operation and 300km S of Olaroz in floor of 6800km<sup>2</sup> valley and altitude of 3000m asl - about 1000m lower than Cauchari-Olaroz. By mid 2019 the Kachi resource had been delineated and under a Preliminary Feasibility Study.

Mineral Resources Category	Area km <sup>2</sup>	Tonnes Li	Grade mg/L	LCE 000tonnes Lithium
<b>Kachi</b>				
Measured				
Indicated	17	188	289	1,005
Inferred	158	638	209	3,394
<b>Total</b>	<b>175</b>	<b>826</b>	<b>211</b>	<b>4,400</b>

#### Cauchari-Olaroz-Paso Valley Projects

Three projects covering aquifers adjacent to third party resources but hidden under alluvium.

#### Cauchari (LKE 100%) 40km<sup>2</sup>, aquifer intersection 506m @ 493mg/L lithium

These tenements are within 500m of the world's largest lithium brine deposit of 13M tonnes LCE underpinning Ganfeng/Lithium America's Cauchari 40,000tpa LCE plant starting in late 2020. Also adjoins Orocobre's 6.3M tonne Cauchari Project. Drilling and aquifer studies have confirmed large resource potential in similar aquifers and under cover of recent sediments.

#### Olaroz (LKE 100%) 140 km<sup>2</sup>

Tenements E of Orocobre's Olaroz 45ktpa operations - may have same aquifers.

#### Paso (LKE 100%) 300 km<sup>2</sup>

Tenements W of Orocobre's Olaroz operations - may have same aquifers

#### Catamarca (LKE 100%) 900 km<sup>2</sup>

LKE has leases and applications over 90,000 hectares along a 150km corridor of pegmatite dyke swarms. Small workings over the strike length have indicated a 1.3-2.1% Li<sub>2</sub>O content. Early stage exploration.

#### Financial History

Financial History A\$000	2016A	2017A	2018A	2019A	2020E
Year End 30 June					
Assets	75	3,297	6,728	8,495	11,000
Exploration and Evaluation	-	1,887	4,901	6,100	7,000
Cash	74	1,397	1,744	1,727	3,000
Accum losses	(8,883)	(10,054)	(13,594)	(16,825)	(18,000)
Net equity	68	3,228	6,505	12,442	14,000
Net equity per share (cts)		0.01	0.02	0.03	0.02
Shares on issue (m)		227	306	472	695

\*e

## 2.0 Regional Perspective of Lake Resources Assets in Argentina

Situated in Sth America's Lithium Triangle which has 58% of global lithium brine resources (USGS Jan 2020)

Argentina, Bolivia and Chile

Chile has two operations and Argentina currently has three operations...

...producing over 80% of global lithium brine output



Argentina is preferred country of operation for brines with a straight forward permitting approach currently making it more attractive .....

Environmental activism issues over water use in Chile reduce attractiveness.

No production from Bolivia's resources

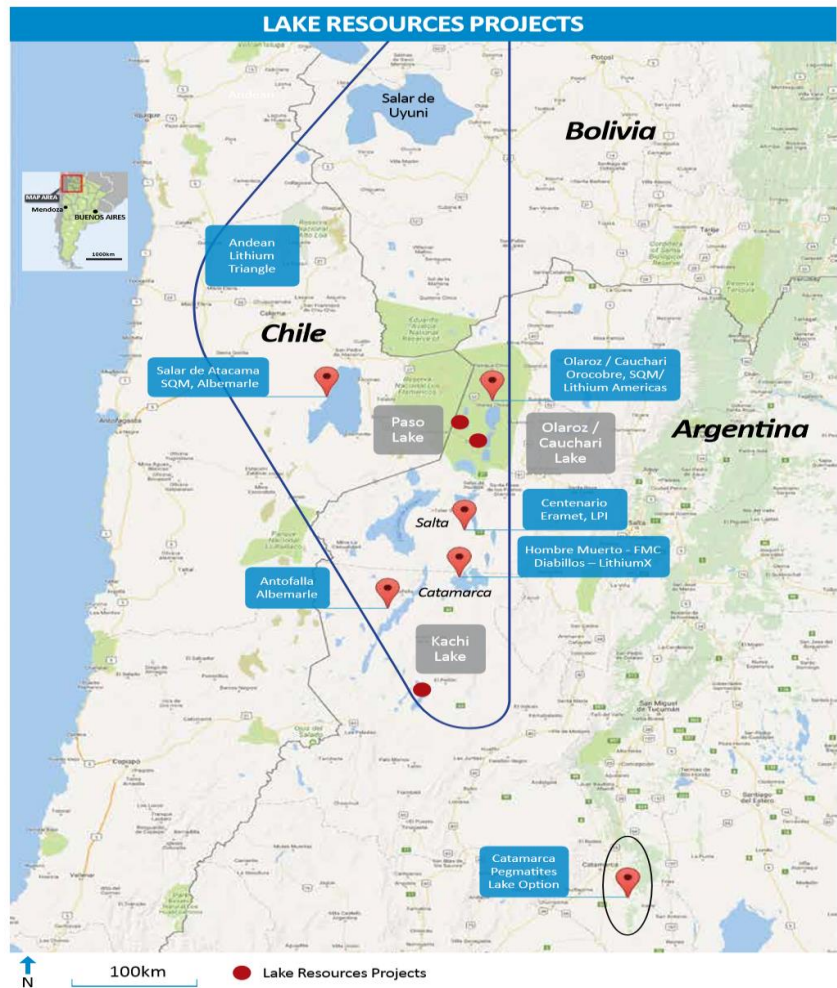
### Lake Resources Tenements

Kachi with resources south of Livent's Hombre Muerto operation and Galaxy's Sal de Vida project

Cauchari/Olaroz region abutting Ganfeng JV and Orocobre operations with exploration potential at

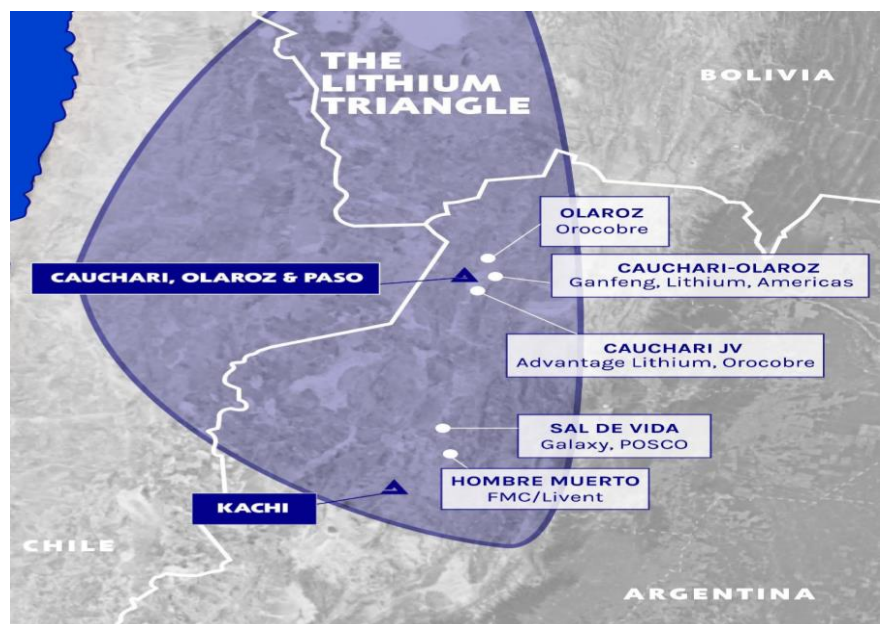
- Cauchari
- Olaroz and
- Paso

Exploration potential exists on all these tenements



Source: Lake Resources

## 2.1 Lake's Tenements in Argentina



Source: Lake Resources

### 3.0 Lithium Market Statement

The market for lithium is potentially a US\$50bn industry that should have major disrupting influence in power and transportation over the next several decades.

This market, unlike for almost any other Australian resources sector product industry outside alumina, is integrated whereby producers are also involved in downstream sectors and indeed, users are becoming involved in upstream supply activities.

Investing in producers, and in particular in Lake Resources, in the Lithium industry therefore requires a reasonable understanding of the entire lithium market place.

#### KEY ISSUES

1. **Lake Resources Outlook - very well positioned**
2. **Lake Resources Tenements – strategically well located**
3. **Process Route Technology – purity and evolution**
4. **Lithium demand - sixfold global increase coming**
5. **Lithium market - prices bottoming out**
6. **Lithium batteries technologies still evolving**
7. **Electric vehicles - Li battery cost decline making it happen**
8. **Power storage – Integrated solutions with PV solar**
9. **Importance of China – biggest producer, processor and user**
10. **Australia’s and Argentina’s role - crucial growing role**

Before going any further investors are recommended to spend 30 minutes watching this very impressive video from Tony Seba of #CleanDisruption at Rethink. <https://www.youtube.com/watch?v=6Ud-fPKnj3Q>

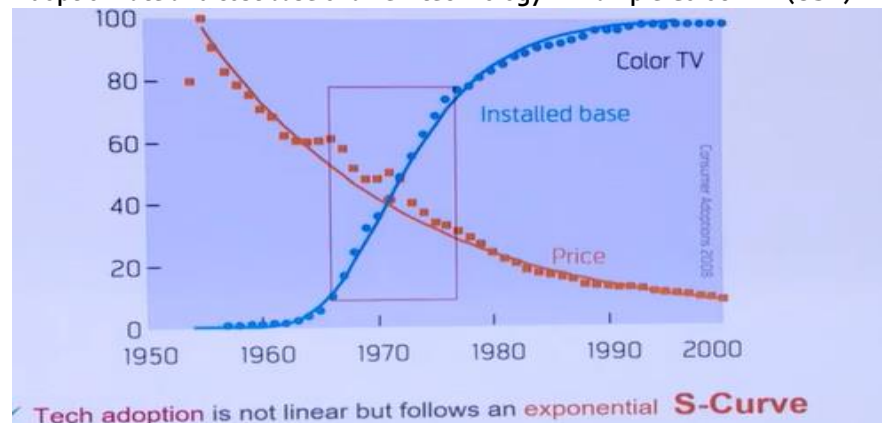
Investors need to be aware of the potential market disruption coming to power and transportation through a probable convergence and then the evolution from motor vehicle ownership to Autonomous Transport as a Service (TaaS).

Low cost lithium batteries will make EVs economically competitive against Internal Combustion Engines (ICE's) and allow the convergence of power and vehicle.

EV adoption from 2023 is likely to be rapid and substantial – just like colour TV- as the EV price falls. Batteries currently make up 20% of the cost of a Tesla 3.

Advantages of low running costs and minimal maintenance will be further benefit.

#### Adoption rate and cost base of a new technology - Example Colour TV (USA)



Source: #Cleandisruption

LKE has

- resources,
- exploration tenements,
- access to innovative game changing technology

Very well positioned

Demand could rise strongly

Lithium prices bottoming after 4 year decline

China dominates supply and demand

EVs could change the world

Tony Seba video is a must see

Market disruption coming through EVs becoming Transport as a Service (TaaS)

Expect a substantial up take of EVs in mid 2020s as battery costs fall

Batteries make up ~20% of current Tesla 3 cost

Lithium will be a major component along with nickel, manganese, copper, cobalt and graphite.

## LITHIUM TO BE A MAJOR BENEFICIARY

## 4.0 Investment Review

The rise and rise of the lithium ion battery is changing the world.

Lithium batteries and Electric Vehicles (EVs) could well change the world

The versatility of this technology for application from smart phones, domestic appliances, power storage to Electric Vehicles (hereon EVs) implies universal acceptance and dependence. The advent of the high tech chemical refiner and processor for battery plants is changing the lithium industry.

Battery factories are being built and will need so much more lithium.

Benchmark Minerals notes the construction of GigaFactories – measured by the annual production of battery capacity - will add 760% to production capacity from 289 GWh in 2018 to 2210GWh by 2028 and will require a 900% increase in lithium (LCE) production over 2019 to 1,100,000 tonnes in 2028. Megafactories increased by 500% last year alone.

2019 alone saw an increase from 289GWh to 1540 GWh in battery manufacturing capacity

China plays a very important role as both producer and processor and also as user of lithium products and is the biggest in manufacture and use of batteries and EVs.

China is centre of the lithium universe

It becomes critical to understand that whilst lithium prices are soft it does appear that they are bottoming and as the near term market balance is being sorted out. Underlying battery demand is inexorably rising between 15-18% per year together with EV and energy storage demand and will eventually impact the lithium price.

Batteries for energy storage also show strong growth

Benchmark Minerals also currently sees increased use in energy storage could actually outstrip demand by electric vehicles as lithium ion battery systems are used with renewables and by balancing out current power networks by load shifting.

High performance and purity

At the same time, this clear rise in technology-based products is demanding ever higher performances from the raw materials that are used in every component of a product or application.

Purity matters

The mass production of smart phones and the competition for performance has meant that these high performance materials are in very high demand. And as performance hurdles rise they make the purity of the material even more important.

And the performance differential for 99.99% component may be 5x that of 99.9% and 10x of 99% purity. **Purity matters.**

Li ion batteries have performance criteria that include

- Charge holding
- Discharge curve
- Recharge rate
- Energy density
- Heat energy generated in charging/discharging
- Battery life

Ion exchange recovery from brines can provide more homogeneous and higher purity products

A 2% improvement in each of these is a cumulative >10% better performance so in an annual market of hundreds of millions of phones and in the future for EVs this evolving superior competitive performance is paramount.

Lithium recovery through the ion exchange treatment of brines can potentially offer a more homogeneous and higher purity product than through evaporation or hard rock ores and their eventual processing.

Australia's and Argentina's growing role in this global industry

Australia is playing a growing role in the lithium market as provider of over 80% of global production of spodumene concentrates which are mostly exported to China. Australia is also producing lithium hydroxide locally from spodumene and producers have additional capacity planned.

## 4.1 Lake's Corporate Outlook - Very well positioned

Strategy of market differentiation

- Quality resources in key brine regions
- Production and product differentiator
- Game changer

LKE has globally significant resources and a has Lilac Solutions' innovative approach to lithium recovery from brines.

Ion exchange technology cuts out the time and capital intensive evaporative process from the flow sheet.

LKE has a strong resource base that can be significantly increased over all four brine projects.

The **Lilac Solutions** technology offers substantial operating gains

And....

..cuts down operating costs, capital costs, footprint, water use and most importantly, TIME!

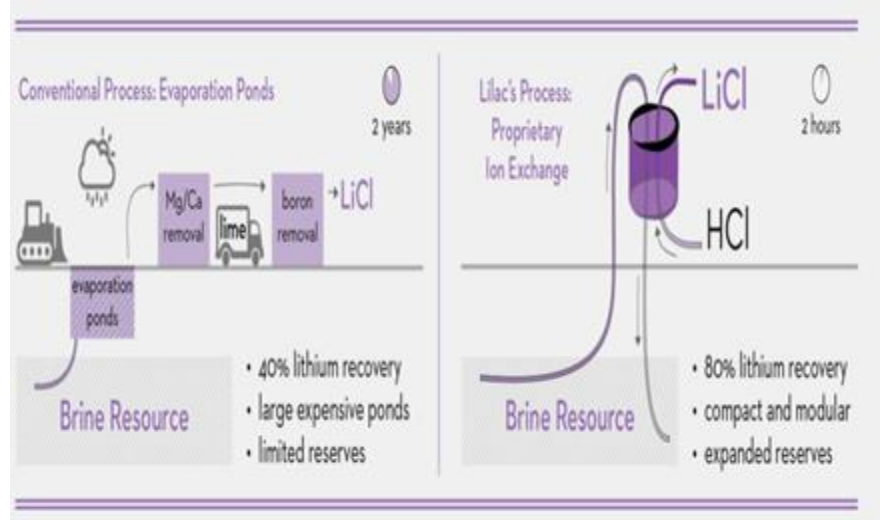
..boosts purity and recovery and reduces cutoff grades to increase resources.

Process is extraction of lithium first rather than recovery of lithium as the leftover.

Recovery up from ~40% to 80-90%.

Concentrate in 60,000ppm vs conventional 3,500ppm

### Conventional Evaporation Process vs Lilac Direct Extraction



### This is a game changer

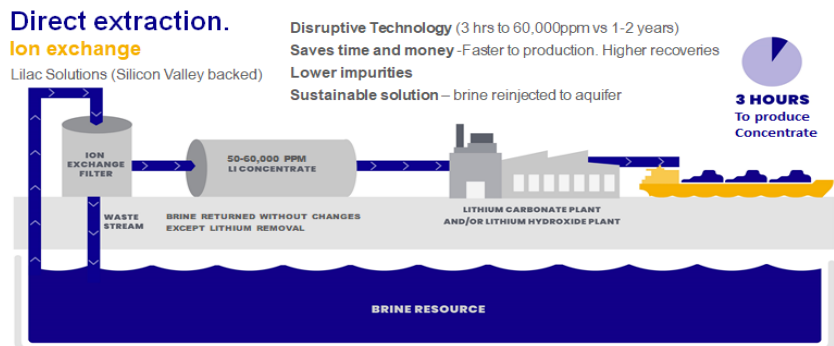
Conventional extraction is pumping brine, evaporating in a series of ponds over 12-18months. Salt disposal and aquifer water loss is now a major sustainability issue.

Direct extraction is pumping brine, extracting 80-90% of lithium as ultra soluble ion in 3 hours and returning all remaining water to the aquifers.

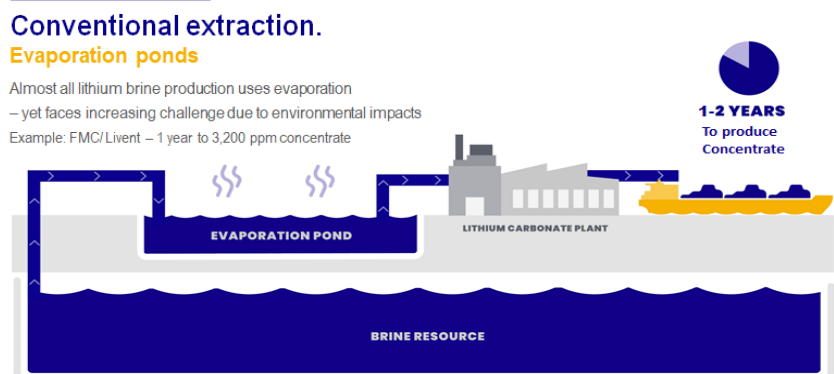
The **Breakthrough Energy Fund** has investors including **Bill Gates, Jeff Bezos** and **Jack Ma** and has invested in Lilac Solutions with this direct extraction technology that uses far less water than conventional extraction

### Making a difference and being a game changer

Direct extraction – remove the lithium up front

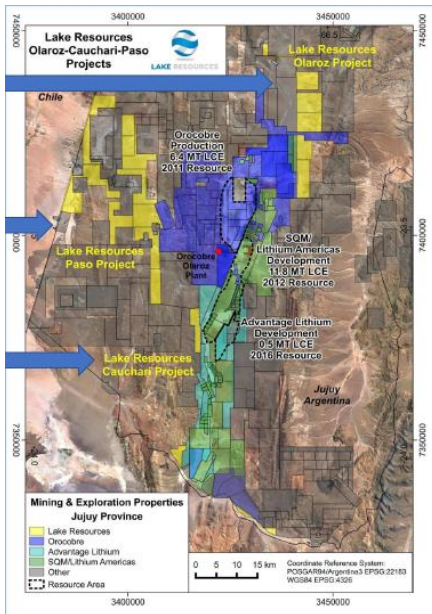


Evaporation extraction – remove the lithium at the end



Source: Lake Resources

Strategically located tenements at the best address at Salar de Olaroz-Cauchari region of Argentina's largest deposits



Strategically linked with Silicon Valley Lilac Solutions and its network

## 4.2 Lake Resources Vision – Very well located

The lithium market is developing into a major new industry as the benefits of electricity storage become increasing obvious and necessary in the modern world.

Lithium production is also moving from conventional processing for end uses with low tech applications to one that requires a rising standards of high performance and purity for high tech uses.

It can be argued that brines offer a clearer path to high purity products and LKE has had the foresight to pick up tenements in the best addresses in the world for very small entry costs. LKE systematically acquired tenements surrounding existing production or major resources on the basis that lithium brine aquifers do not stop at a salar lake edges.

LKE's salt lake fringe approach has so far been vindicated with the success at Cauchari in Jujuy Province along the lake edge where the lithium bearing brine aquifers from Olaroz have clearly extended underneath more recent alluvial fans emanating from the surrounding hills that probably represent fault blocks.

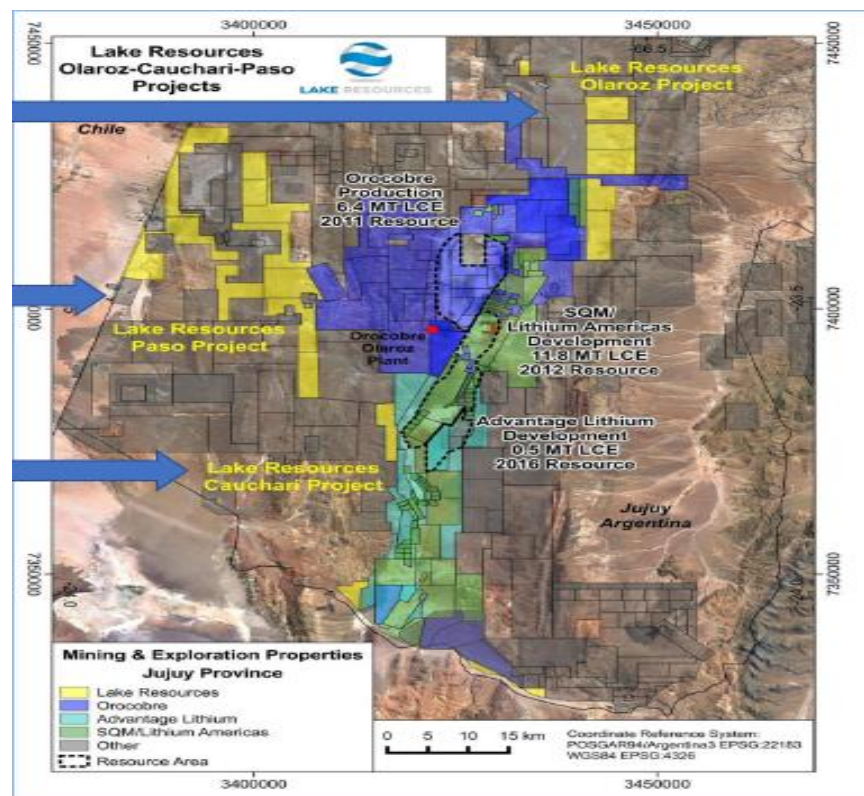
LKE has repeated this tenement acquisition to the east of Orocobre's Olaroz operations and in the north to the western boundaries of Ganfeng at Paso.

In another step of innovation LKE pushed on with exploring Kachi downstream of SQM's Hombre Muerte operation in a region 300km further south in Catamarca Province and has quickly established a 4.4Mt resource at a lower 220mg/L Li grade placing it within the world's top ten lithium brine resources.

The most important step however was allying with Silicon Valley-based Lilac Solutions which offered an innovative brine treatment process that should provide long term sustainability to the lithium brine industry.

The ion exchange technology offers so much to any brine project but most importantly for LKE the high +80% recovery will be almost double that from an evaporative brine process so would make lower grade Kachi very profitable.

The results are here in this location map in Cauchari-Olaroz and in the Kachi Project to the south and the very important tie up with Lilac Solutions.



## 5.0 Lilac Solutions Ion Exchange Technology – Purity and Efficiency

Lilac Solutions is Silicon Valley-based and has a water treatment technology...

A different philosophy for mining technology

Investment from Breakthrough Energy

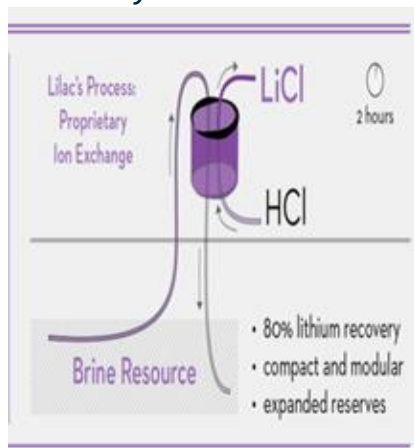
Lithium ions are extracted from the brines by resin beads....

.. so recovers 80-90% of lithium compared to ~40-50% from evaporation method

Beads are stripped by HCl to a 3000ppm LiCl solution

Sodium hydroxide added then water is removed to concentrate the LiOH at 55,000-60,000 ppm

**Process only takes two hours**



demonstration plant results on Kachi brines showed 99.9% pure LCE.

And very low boron and iron impurities.

20,000L being processed by Lilac in California for bulk samples for users in June Qtr 2020

The ion exchange process using resin beads is not a new extractive technology and it has been widely used for many decades in water treatment.

Lilac Solutions Inc, in California, had been working on ion exchange media for a lithium project in Nevada that was based on lithium in clays. Its resin beads have been specifically engineered for lithium attraction.

LKE saw the lithium opportunity and encouraged Lilac to review the lithium brines as a more straightforward process that would use a cleaner feed material and could be scaled up in a bigger industry. The Lilac process also offered LKE a treatment route solution for the lower grade 220ppm Kachi deposit that would not be readily economic if it was to rely solely on an evaporation process in its flow sheet. This is a direct result of higher recoveries using the Lilac process.

The process uses media (beads) that preferentially select lithium ions from solution. Lithium is the smallest metal ion and the most reactive so it can be targeted and relatively easily separated from other metal ions.

The process operates at ambient room temperature and extracts the lithium ions from the brine. The spent brine (without almost 90% of the lithium ions) is simply returned to the aquifer such that impact of the lake water level and, more importantly, on the aquifer itself, is negligible.

The media (ion exchange beads) collects the lithium ions from the brine and is then stripped using hydrochloric acid (HCl) to produce a 3000ppm lithium chloride (LiCl) solution. Using reverse osmosis to remove water, which is then recycled, a concentrated eluate of 55,000-60,000ppm lithium chloride concentrate is produced which can then be converted to lithium carbonate by reaction with sodium carbonate.

**This process takes place within only about two hours.**

This is a very simple process and its success relies upon the life span of the beads. Current results give a 1000+ cycle life (6+ months) but Lilac is seeking to extend bead life.

LKE has delivered Kachi brine samples to Lilac with very pleasing results.

The Kachi lithium carbonate product purity is 99.9% and more importantly, impurities of **boron, iron** and **silica** have been very low.

**Purity matters.**

**Lilac product specifications on Lithium Carbonate from Kachi**

Chemical Component	Actual (wt%)	Target
Lithium (Li)	99.9	99.5 Min
Sodium (Na)	0.024	0.025 Max
Magnesium (Mg)	<0.001	0.008 Max
Calcium (Ca)	0.0046	0.005 Max
Iron (Fe)	<0.001	0.001 Max
Silicon (Si)	<0.001	0.003 Max
Boron (B)	<0.001	0.005 Max

Source: Lake Resources



Pilot plant for bulk samples being set up in California with 20,000 litres sent from Kachi for initial work

Pilot plant to then be transported and set up in Kachi for long term bulk sampling

LKE is now conducting a major test using 20,000L of Kachi brine at Lilac's ion exchange pilot plant in California with the intention of producing bulk volumes of battery grade lithium carbonate samples during the June Qtr.

The pilot plant in California has modular units that will allow it to be simply transported on and set up on site in Argentina for bulk sampling so as to ensure lower risk commissioning procedures. Samples will be sent to key product users for qualification tests.

These samples will be very important and on the assumption of successful high purity battery grade lithium carbonate samples being produced then LKE would gain strong industry support that should lead to binding offtake agreements for project funding and possibly end user funding.

Feedback has already been strong as has been shown by the investment in Lilac Solutions by the Breakthrough Energy Fund.

Deliveries to downstream groups are to begin in June Qtr 2020 and the larger volumes of lithium carbonate will start the qualification process with off takers and demonstrate the scalability for future production planning.

LKE has already undertaken a considerable amount of business development in the past 24 months to build visibility in the battery and EV sectors. The product's high purity will be a critical factor in market uptake.

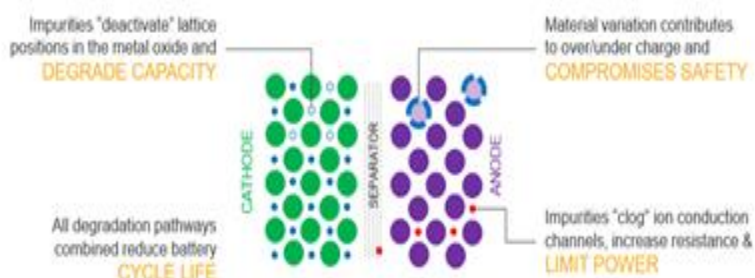
Purity really matters in the premium end of the lithium carbonate market and Lake aims to produce at Kachi a high quality, low impurity product capable of attracting premium pricing.

### **Purity matters**

Purity in chemicals for cathode and anode helps:-

- Maintain battery capacity
- Extend cycle life
- Improve safety
- Maintain battery power

### **Importance of Purity – Impact on battery Performance**



Source: Albermarle

Product quality has been an issue for some lithium products in South America during commissioning of plants.

Kachi should achieve a premium price

The information on the pilot plant product will assist in the finalizing of the Pre-Feasibility Study which is due for release at the end of March Qtr 2020.

PFS due for publication in March Qtr 2020

The PFS is likely to recommend that the Kachi plant produce a highly concentrated brine or a lithium sulphate intermediate product and set up the lithium carbonate plant at a lower altitude with a more established infrastructure and workforce. Most reagents are easily sourced locally, except for Lilac's proprietary reagents.

Lilac Solutions extractive technology is attractive to sustainability policies of EV manufacturers

The ability of the Lilac process to recover the lithium and be able to reinject brines back to the original aquifers and ensure long term sustainability has gained strong support from electric vehicle makers (OEM's) and battery makers to demonstrate they have access to a sustainable scalable supply chain for raw materials. These market participants are likely to be capital providers for LKE's operating plants.



## 6.1 Kachi Lithium Project (100% LIKE) Flagship Project

The Kachi deposit is located in the Catamarca Province Argentina, about 300km south of the Cauchari-Olaroz deposits and at altitude of ~3000m (and about 1000m lower). It is south of Galaxy's Sal de Vida project and Livent's Hombre Muerto operations.

Kachi is LKE's flagship project with resources and is subject to a PreFeasibility Study for March Qtr 2020 and a bulk sample programme is in train.

- Indicated Resource 1.0Mt LCE 290mg/L
- Inferred Resource 3.4Mt LCE 210mg/L
- **Resource target 8-17Mt LCE – a major resource in the making**
- Good chemistry, low impurities
- Low Li/Mg ratio 3.8-4.6 (over 10:1 is bad)
- Brines from surface to 400-800m depth
- High permeabilities in sediment filled basin
- Comparable project studies give +US\$1.2bn NPV

Kachi is on a lake in the centre of a basin with a drainage area of about 6800km<sup>2</sup> The basin drains the lithium bearing volcanic rocks of Cerro Galan, which provides the lithium for the upstream deposits of Galaxy and Livent.

The lake has some surface water but the aquifers extend well beyond the lake edges, up to nearby scarps and upstream beneath alluvial fans. Aquifers are known to be present down as far as 800m depth and extend under alluvium.

The deposit has relatively low lithium grades but the Lilac process will make resource grade less important. The grade is around 200-220mg/L Li (ppm) but, just as importantly, the brine has low impurities and a low Li:Mg ratio of 3.8-4.6.

The resource area is within a 4x10km rectangle (blue below) for 4.4Mt LCE but the resource potential extends further and could make up 8-17Mt LCE (red line).

### Kachi Project.

Large salt lake 20km x 15km  
 Previously untested - now 15 drill holes  
 Indicated Resource 1.0Mt LCE 290mg/L  
 Inferred Resource 3.4Mt LCE 210mg/L

Results:

- Good chemistry, low impurities
- ~320mg/L lithium (250-320mg/L)
- Low Li/Mg ratio 3.7-4.6
- Brines from surface to 400-800m depth
- High permeabilities in sand filled basin

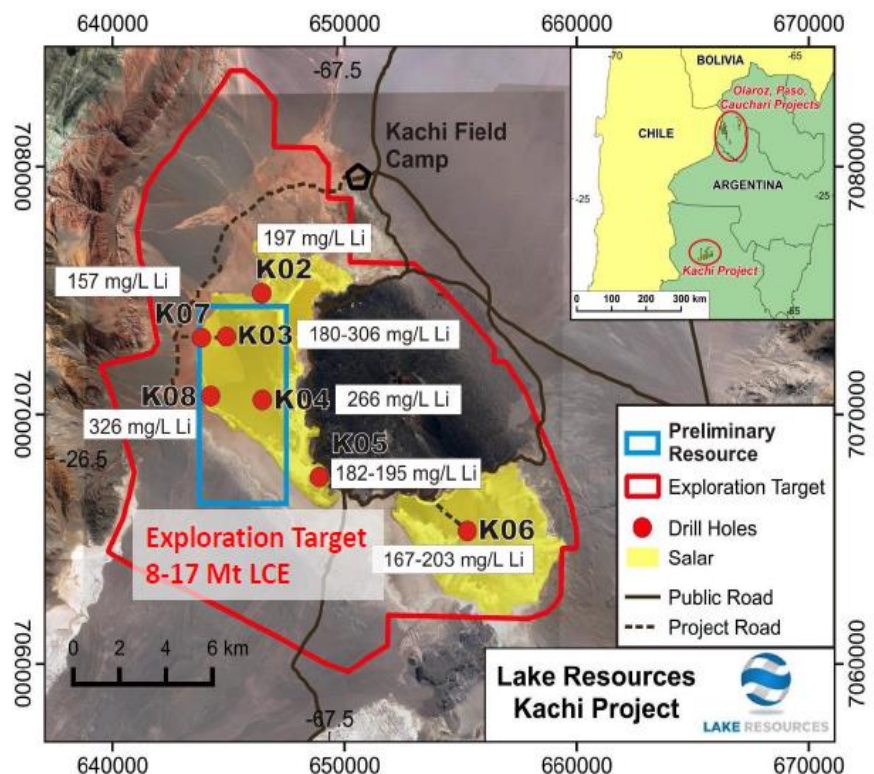
PFS Underway  
 Pilot Plant Underway

PFS underway

NPV of Ganfeng/LAC 40ktpa plant is US\$1.3bn

NPV of Lithium Power 20ktpa Maricunga Chile plant is US\$1.286bn.

### Kachi Project Drilling Data



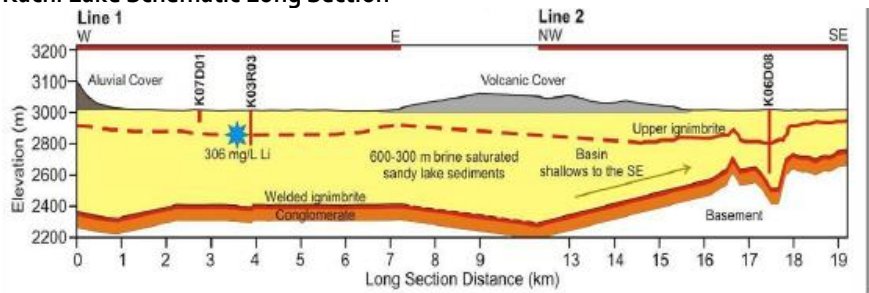
The long section shows an extended aquifer with a basal conglomerate.

Alluvial fans and volcanic cover extend over existing sedimentary basin aquifer

Aquifers extend under lake edges

Drilling has shown the Kachi basin infill is predominantly sand dominated with intercalated silts and clays. A deep conglomerate with interbedded ignimbrites has also been intersected at depth in hole Ko6Do8 and is interpreted to extend basin-wide and form the base of a brine bearing basin sedimentary sequence.

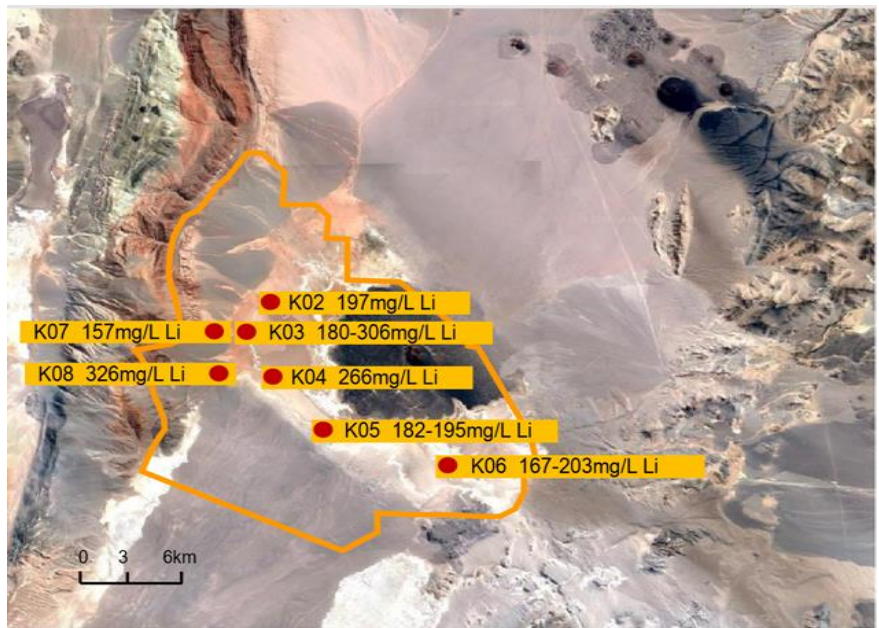
### Kachi Lake Schematic Long Section



Source: Lake Resources

Importantly, the areal extents of brine aquifers have little to do with the current outline of a salar lake. Talus slopes and alluvial fans can overlay valley bottom sediments and basin boundaries can be fault blocks.

### Kachi drill results



The total resource covers 175km<sup>2</sup>

- Aquifer volume in 47km<sup>3</sup>
- Brine volume is 3.8km<sup>3</sup>
- Drainable porosity is ~8%
- Lithium grade is 211 mg/L

LCE 4.4 M tonnes

### Kachi Mineral Resource Estimate – November 2018 (JORC Code 2012)

MINERAL RESOURCE ESTIMATE - KACHI						
	Indicated		Inferred		Total Resource	
Area km <sup>2</sup>	17.10		158.30		175.40	
Aquifer volume km <sup>3</sup>	6		41		47	
Brine volume km <sup>3</sup>	0.65		3.2		3.8	
Mean drainable porosity % (Specific yield)	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
<b>Lithium Carbonate Equivalent tonnes</b>	<b>1,005,000</b>		<b>3,394,000</b>		<b>4,400,000</b>	
<b>Potassium Chloride tonnes</b>	<b>6,705,000</b>		<b>24,000,000</b>		<b>30,700,000</b>	

Source: Lake Resources

As noted above, samples have been prepared at Lilac Solutions that give 99.9% LCE with low impurities. 20,000L are to be treated in California and after successful treatment the pilot plant will be transported to the Kachi site for high volume bulk samples to potential customers. Note that Lilac selectively extracts lithium so potassium is not recovered.

Project economics at Section 10 below.



## 6.2 Cauchari Lithium Project (100% LKE)

Cauchari located adjacent to Ganfeng/Lithium Americas and Orocobre projects.

- Discovery is an extension of contiguous Ganfeng/Orocobre resources
- Lithium brines intersection over 500m down to end of hole at 608m
- Higher grade results average 493mg/L (highest 538mg/l)
- Grades and aquifers match Ganfeng/Orocobre resources
- Cauchari has had +US\$1000m value placed on adjacent Ganfeng asset
- Cauchari has A\$122m value place on adjacent Orocobre asset
- Potential for this asset alone to be worth A\$20 m (~A\$0.03/LKE share)

LKE's Cauchari is deep with a 506 m sediment aquifer column.

### Cauchari is a significant discovery.

Cauchari aquifers are extensions of those in Ganfeng JV area and also Orocobre's tenements.

The 100% LKE Cauchari Lithium Brine Project is located in Jujuy Province Argentina in the heart of the Lithium Triangle. LKE acquired the tenements in 2016 and a successful drilling programme was completed in 2019.

Drilling encountered multiple lithium brine aquifers over a 506m interval (102m – 608m depth). Results ranged from 421 to 540 mg/L lithium (493 mg/L average) in detailed sampling with low Mg/Li ratios of 2.7.

Cauchari is a significant discovery and is an extension to the world-class neighbouring projects containing >30Mt LCE and owned by Ganfeng/Lithium Americas and Orocobre. Ganfeng JV is commencing 40,000tpa LCE in late 2020.

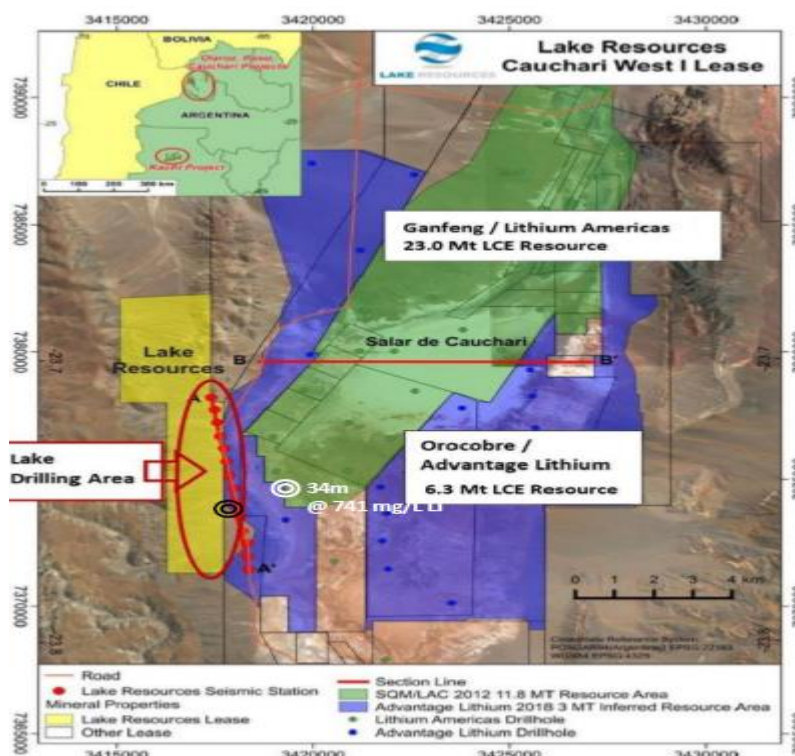
This nearby major Cauchari project of Ganfeng/Lithium Americas (NYSE:LAC) JV is the world's largest deposit with a M&I Resource of 17.9Mt LCE at 581 mg/L lithium. Ganfeng recently (Feb 2020) acquired a further 1% to give a 51% controlling interest for US\$16m to progress its development, after an earlier US\$397m acquisition of 50% of the project.

The Orocobre (ASX:ORE) deposit actually adjoins LKE's leases with results from the nearest drillhole showing 198m brine zone interval (6-204m depth) with 450 mg/L lithium. Orocobre has just (Feb 2020) announced acquisition of JV partner Advantage Lithium that values the tenements with 6.3mt LCE at A\$122m.

Lake's Cauchari abuts Orocobre's 6.3Mt LCE

And has similar aquifers to Ganfeng's 23.0Mt LCE resource

### Cauchari West Leases



Source: Lake Resources

Aquifers extend under the alluvium

LKE has assessed that fault block sides are steep and aquifers extend to them under alluvium

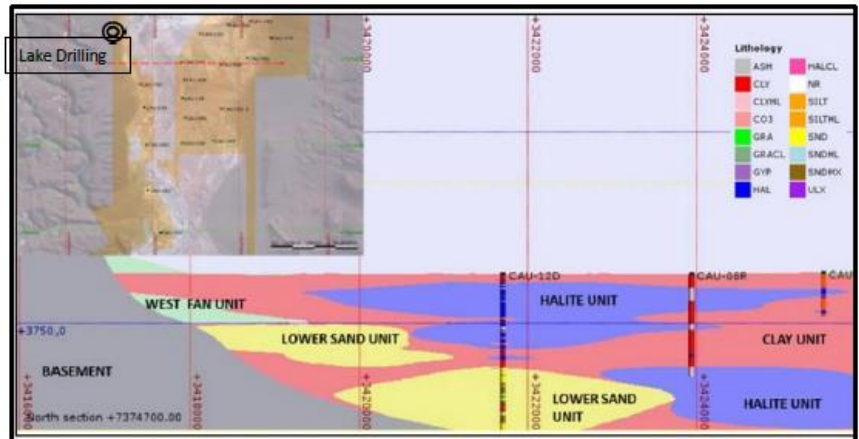
Drilling by LKE at Cauchari has encountered lithium reservoirs and independent consultants have confirmed the concept that the aquifers continue beneath the alluvial fans and are extensions of the aquifers found in the adjacent established resources.

LKE has a 7km corridor along the edge of the lake and is anticipating that it will be able to establish lithium resources here. LKE has assessed that the lake sides are related to fault blocks and will have steep scarps and allow good aquifers to abut these scarps.

The LKE geomorphology model gives steep sides that are hidden beneath talus slopes and alluvial fans and the aquifers actually abut the fault blocks which are considered to be even steeper than in this model.

**Long section of Lake showing steep sides, aquifers and alluvium**

Aquifers extend well back from lake shore

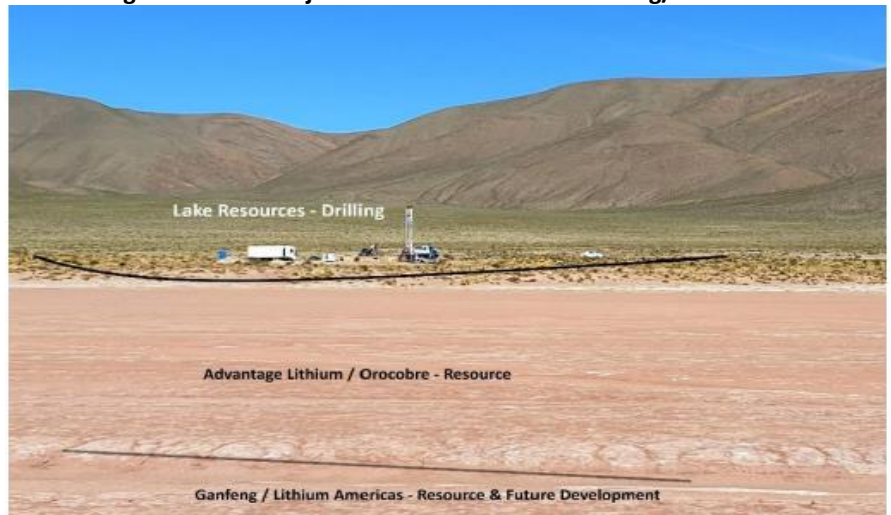


Source: Lake Resources

The landscape picture clearly shows the alluvium extending some distance to the assessed fault block lake sides. Tenements from Orocobre run only to the edge of the lakeside alluvium.

**LKE Drill Rig on alluvium adjacent to Orocobre and Ganfeng/LAC JV salar**

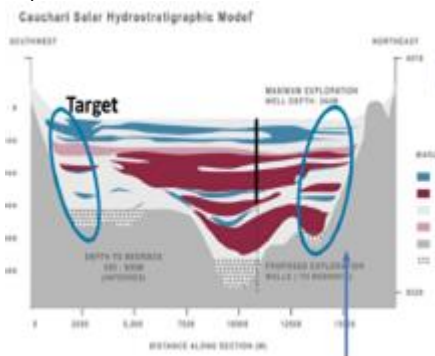
Cauchari drilling shows same aquifers extend from Orocobre and Ganfeng/LAC JV into LKE tenements



Source: Lake Resources

**Cauchari Salar Hydrostratigraphic Model**

Aquifers continue under alluvial fans



Relative values for Cauchari Brine Assets are seen in the acquisition prices of resources on adjacent tenements.

Ganfeng paid US\$397m for a 50% interest in Lithium America's tenements containing 13mt LCE and recently paid a further US\$16m for a controlling 1%.

Orocobre has also made a scrip bid for the outstanding 65% of Advantage Lithium (holder of 75% of the JV) which values the tenement at A\$122m.

This should be worth at least A\$20m to LKE or almost its current market cap.



### 6.3 Olaroz Lithium Project (100% LKE)

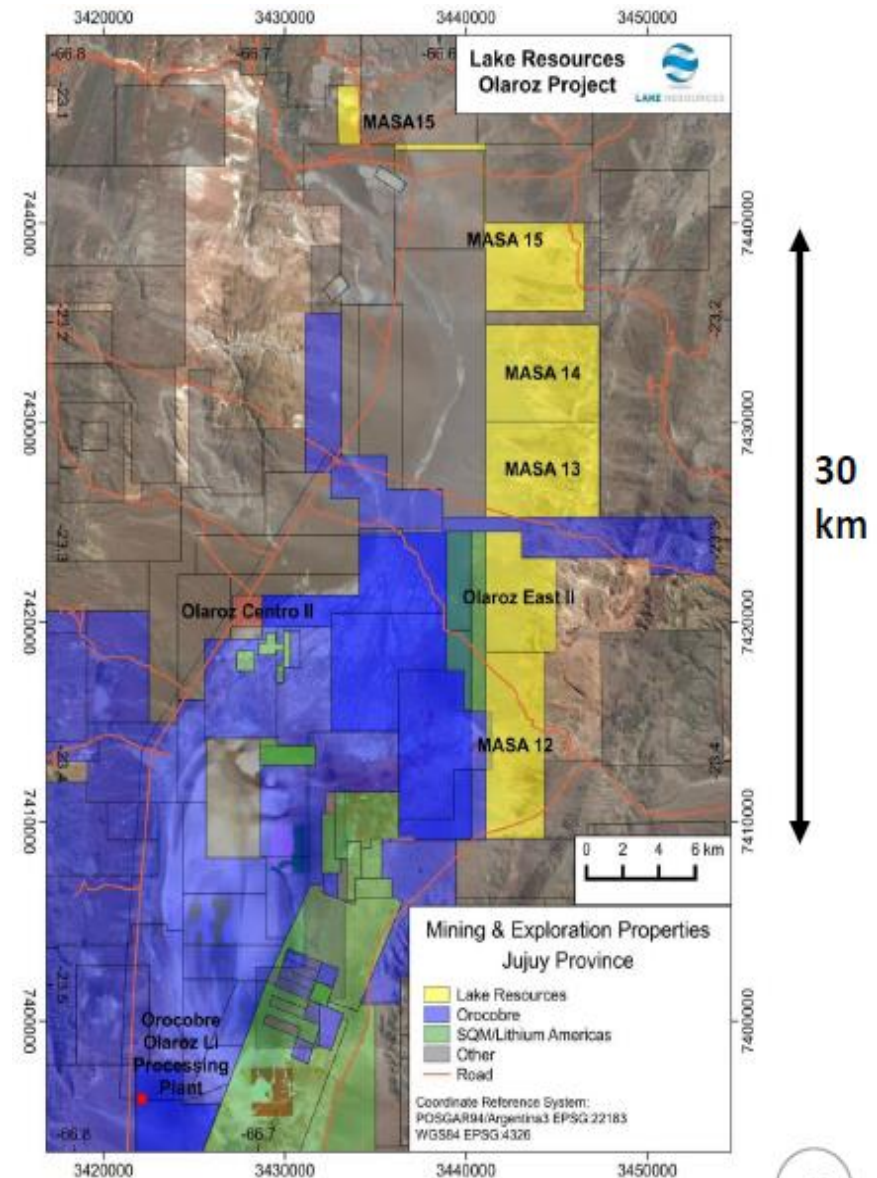
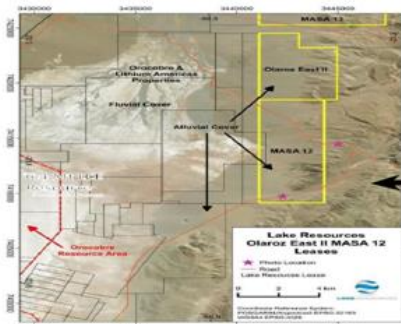
LKE has picked up tenements to the north east of Orocobre's Olaroz operations

- Based on Cauchari basin salt lake fringe concepts
- Lithium Brine Aquifers assessed to extend under alluvium cover
- Tenements extend over 30 km strike
- LKE will target drill same aquifers
- Drilling permits submitted for approvals

LKE has assessed that lithium brine reservoirs exist independent of salar lake edges and taken out leases near Orocobre operations.

In Olaroz, Lake's leases extend 30 km north-south along the adjoining Orocobre's Olaroz lithium production leases to the east. Approvals are being finalised to drill these areas with the aim of repeating the success encountered at Cauchari.

Olaroz East and MASA 12 abut Orocobre and SQM leases



## 6.4 Paso Lithium Project (100% LKE)

Paso Project tenements are about 20km west of Orocobre's operating 13,000tpa plant

LKE has picked up tenements to the west of Orocobre's Olaroz operations

- Based on Cauchari basin salt lake fringe concepts
- Lithium Brine Aquifers assessed to extend under alluvium cover
- Tenements extend over 50 km
- LKE will target drill same aquifers
- Drilling permits submitted for approvals

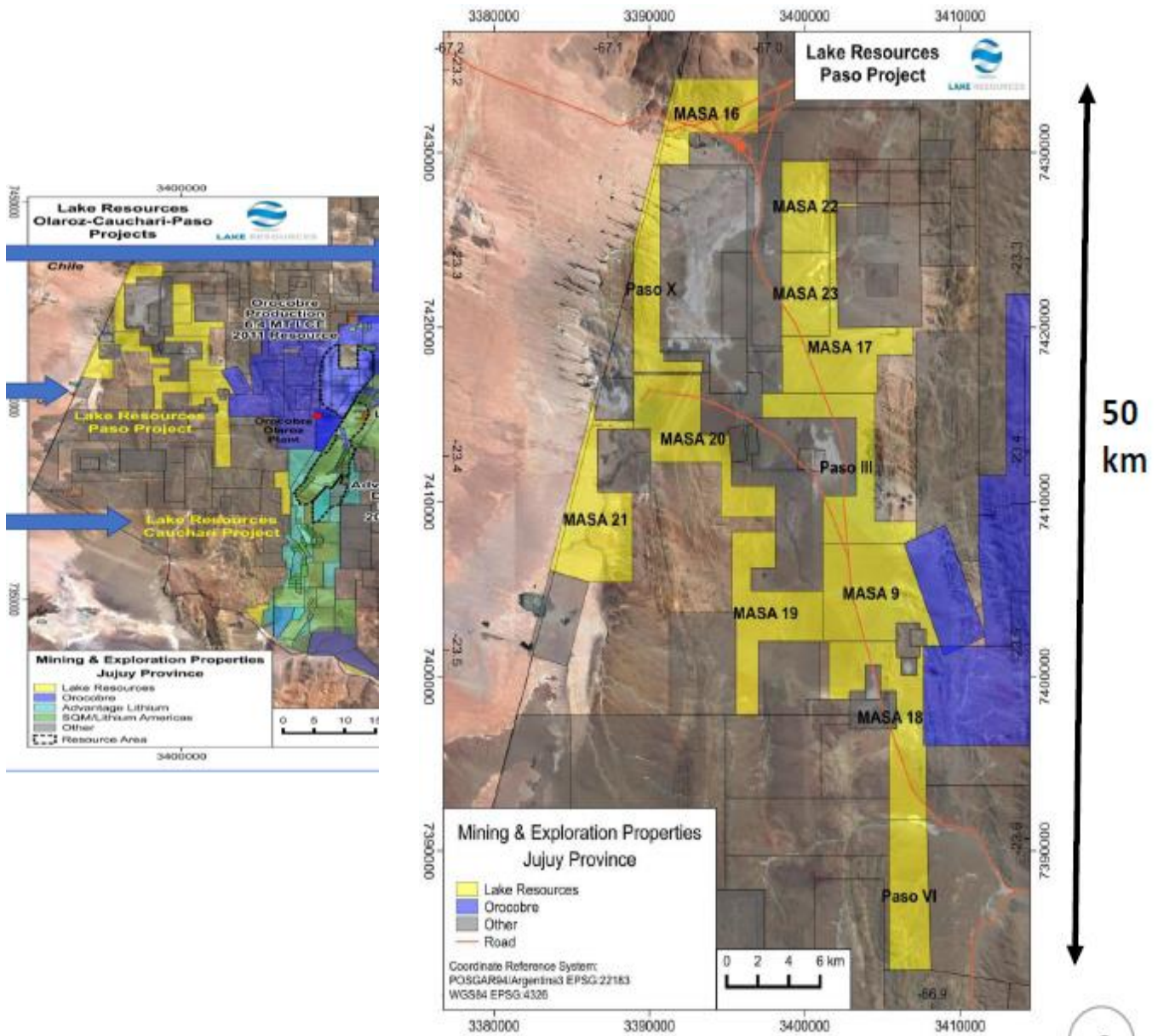
At Paso, Lake's leases extend 50 km north-south of the adjoining Orocobre's Olaroz lithium production leases ~25km to the east.

These tenements are to the north west of LKE's Cauchari leases.

As with Olaroz, approvals are being sought to drill these areas with the aim of repeating the success encountered at Cauchari.

Given the high grades applying to Orocobre's Olaroz and those for the Ganfeng JV LKE is seeking to replicate high grades in these areas.

### LKE's Paso Tenements



## 6.5 Catamarca Pegmatite Project

Swarm of pegmatite dykes extends over 150km

Has seen small scale mining

Early stage exploration opportunity

LKE has also applied innovative thinking on picking up a large tract of area that include swarms of lithium bearing pegmatite dykes.

- New exploration models adopted
- 150km long belt of Pegmatites
- Large Area ~90,000 hectares
- Potential for the belt to host large scale deposits
- Coarse grained spodumene crystals (30-70cm)
- Adjacent drill results 1.2 –2.2% Li<sub>2</sub>O

The Company has lease holdings and applications over 80,000 hectares of outcropping pegmatites with lithium potential within Catamarca Province in NW Argentina.

Exploration is still at an early stage over a 150 kilometre-long belt which favourably hosts significant lithium mineralisation as spodumene in large pegmatite swarms, with prior small scale production. The lithium pegmatites are part of a belt of pegmatite swarms outcropping at relatively low altitudes (300-1500m) in Ancasti, Catamarca Province, which has good year-round access.

### Spodumene Pegmatite Exploration Leases



Source: Lake Resources



## 7.0 Lithium In Profile

Lithium is Number 3 element in the Periodic Table.

Lightest metal

It is in the second Period and is in Group I which is the Alkali Metals.

Is most reactive of the Alkali Metals of Group I

It is the lightest of the metals and the lightest solid element and has a Specific Gravity of 0.53g/cc making it half the density of water so it would actually float.

Being an Alkali Metal and in the lowest period it is the smallest atom and smallest ion and is also the most reactive of the Alkali Metals.

Group I The Alkali Metals						
	Atomic Number	Atomic Weight	Melting Point °C	Density	Atomic Radius	Ionic Radius
<b>Lithium</b>	<b>3</b>	<b>6.94</b>	<b>180</b>	<b>0.534</b>	<b>1.67</b>	<b>0.90</b>
<b>Sodium</b>	<b>11</b>	<b>22.9</b>	<b>98</b>	<b>0.971</b>	<b>1.69</b>	<b>1.16</b>
<b>Potassium</b>	<b>19</b>	<b>39.09</b>	<b>63</b>	<b>0.862</b>	<b>2.43</b>	<b>1.52</b>
<b>Rubidium</b>	<b>37</b>	<b>85.47</b>	<b>39</b>	<b>1.532</b>	<b>2.65</b>	<b>1.66</b>
<b>Cesium</b>	<b>55</b>	<b>132.91</b>	<b>28</b>	<b>1.873</b>	<b>2.98</b>	<b>1.81</b>

Very soluble

All this means that lithium is very reactive and very soluble in water.

Last metal to be precipitated in pegmatites which are the last minerals to form in fluids from granites

It also has the smallest ionic radius and so last metal to be deposited in mineralised fluids and therefore very common in pegmatites.

And last in solution in evaporation process

It will also be the last element ion to remain soluble through the evaporation process.

Lithium has only minor use in its metallic state and is very volatile but new high technology alloys are being developed.

Lithium ores such as spodumene are graded according to the content of Li<sub>2</sub>O

Most lithium ores, concentrates and chemicals are measured in lithium carbonate equivalent (LCE).

Lithium passing from a predominantly low spec industrial mineral .....to a high performance chemical industry material.

Lithium hydroxide is becoming a more exacting product for nickel based cathodes in battery manufacture and is becoming the preferred product.

Lithium Conversion Rates			
	Chemistry	Li%	
<b>Lithium</b>	<b>Li</b>	<b>100.00</b>	<b>Metal</b>
<b>Lithium Oxide</b>	<b>Li<sub>2</sub>O</b>	<b>46.46</b>	<b>Spodumene ore lithium content</b>
<b>Lithium Carbonate</b>	<b>Li<sub>2</sub>CO<sub>3</sub></b>	<b>18.79</b>	<b>Battery input</b>
<b>Lithium Hydroxide</b>	<b>LiOH</b>	<b>28.98</b>	<b>Battery input</b>

It was significant that Orocobre's Olaroz lithium brine operation was the first new such facility in over 20 years and most earlier facilities were in fact potassium brines with lithium as a byproduct.

Consequently the high quality lithium chemicals are a relatively new product.

Early lithium carbonate products were intended for industrial uses in glass and lubricants at >96% and higher grade 99% regarded as Technical Grade for ceramics, lubricants and Tier 2 batteries.

Tier 1 batteries for EVs now require 99.5% Battery Grade and LKE hopes to provide a product with 99.9% Lithium purity to achieve a further premium.

## 7.1 Lithium Supply and Demand

### 7.1.1 Supply

Australia is the largest producer of primary lithium content through its spodumene mines

According to the USGS global annual lithium production is around 100,000 tonnes with Australia the largest producer with around 50% and from spodumene whilst nearly all other lithium production being from Chile, Argentina and China from brines.

Global Contained Lithium Production (tonnes)					
USGS	2015	2016	2017	2018	2019
Argentina	3600	5800	5700	6400	6400
Australia	14100	14000	40000	58800	42000
Chile	10500	14300	14200	17000	18000
China	2000	2300	6800	7100	7500
Canada	0	0	0	200	240
Zimbabwe	900	100	800	1600	1600
Other	400	1500	1500	3900	1260
<b>Total</b>	<b>31500</b>	<b>38000</b>	<b>69000</b>	<b>95000</b>	<b>77000</b>

Source: USGS data

As noted above in the geological distribution of lithium is limited to brines and to pegmatites. Lithium brine resources are focussed in the Lithium Triangle of Bolivia, Argentina and Chile with some in Tibet. Some additional minor recoverable lithium can come from lithium bearing clays. Pegmatites can come from anywhere.

Purity matters

The end uses of lithium though are showing dramatic changes as this useful element evolves from being a low specification industrial input for glass, ceramics, lubrication and a wide range of minor uses to a specialised high purity high performance material for batteries for Electric Vehicles (EVs).

Lithium supply into Batteries increased from 21% to 65% in the past decade.

Up to around 85% by 2025

Global End uses of Lithium			
	2009	2019	2025E
Batteries	21%	65%	86%
Ceramics	30%	18%	7%
Lubrication	10%	5%	2%
Polymer	7%	3%	2%
Other	32%	9%	5%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>tonnes</b>	<b>18000</b>	<b>78000</b>	<b>200000</b>

Source: USGS data Albermarle estimates

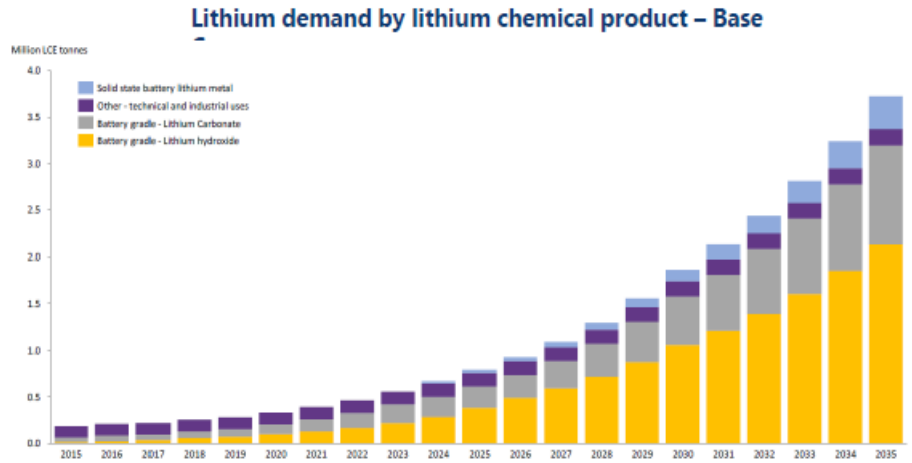
In just a decade, use of lithium in batteries has jumped from 21% to 65% and by 2025 this use should take it to over 85%.

Market forecasts suggest as much as 1,000,000 tonnes of LCE, which is almost 200,000 tonnes of contained lithium, will be required in just five years.

Numerous lithium projects are lining up to provide this near term supply but the current mismatch between insufficient available spodumene processing plants outside of China and oversupply of mine output has depressed prices causing deferral of some key mine projects. Current producers have also curtailed output.

Battery minerals specialist Benchmark Minerals forecasts over 3.5mtpa LCE by 2035 with most being +95.5% battery grade material.

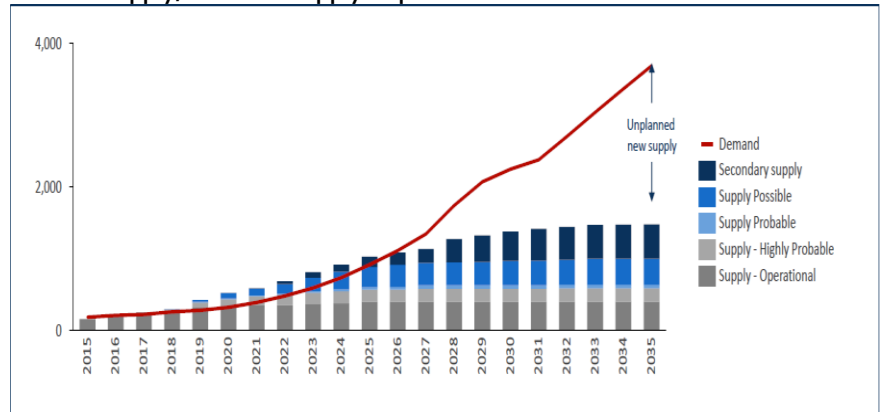
Major growth in battery grade material is projected



Source: Altura Minerals

Again, according to Benchmark Minerals it is obvious that this strong demand for lithium does not yet have sufficient planned new supply capacity to meet it after 2025.

**Lithium Supply/Demand Supply Gap - Benchmark Minerals**



Source: Benchmark Minerals

Benchmark sees far larger demand than projected supply capacity

Importantly, lithium batteries should prove to be effectively fully recyclable, with lithium being highly soluble, and might provide around 25% of lithium supply.

EV batteries are likely to be repurposed into energy storage facilities before being recycled.



Source: SQM

Longer term forecasts are far higher

### 7.1.1.1 Lithium Carbonate and Lithium Hydroxide

Lithium carbonate has been the main product from brines and spodumene as an important industrial chemical for most low tech lithium uses for 96% and 99% Lithium purity. It forms low-melting point fluxes with silica and other materials and is useful in ovenware and it is commonly used in ceramic glazes. It is also widely used in cement, adhesives and lubricants to improve material performances.

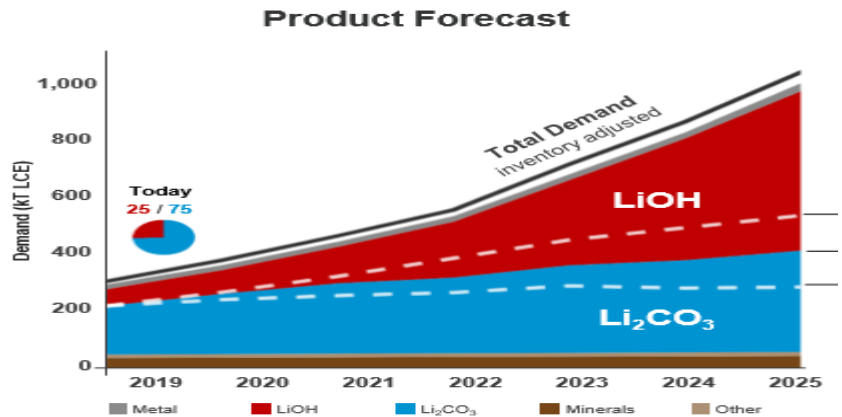
Market evolution from lithium carbonate to lithium hydroxide

The more stringent technical and purity requirements for EV batteries and the expansion of spodumene treatment plants has increased the production of lithium hydroxide.

The changes in cathode composition for batteries has encouraged this product evolution.

Over time, lithium hydroxide will achieve a large market share

Albermarle sees >50% lithium hydroxide by 2025



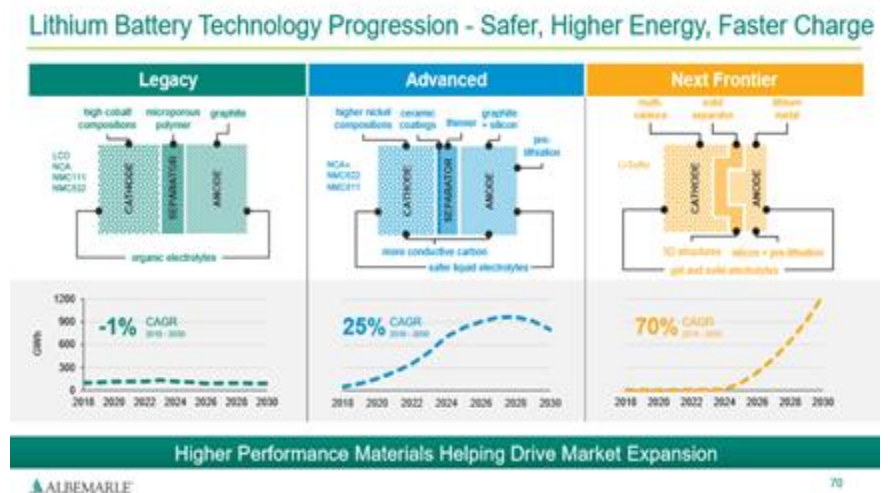
Source: Albermarle

The anticipated increase in demand for lithium hydroxide is the push toward nickel-rich NCM 811 cathodes based, which include eight parts nickel, one part cobalt and one part manganese. These cathodes have a higher density, a longer lifespan and provide a better driving range when used in EVs.

Evolution in cathodes to nickel rich NCM varieties

Longer term should see further evolution in batteries to include solid state technologies that use lithium metal alloys as the anodes and should provide as much as a 100% increase in energy density of Wh/kg.

The evolution will continue with high purity materials needed.



Source: Albermarle

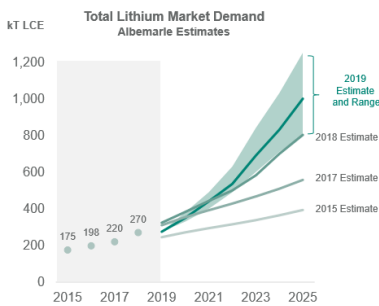
## 7.1.2 Demand

The evolution of the lithium ion battery from just powering mobile devices and hand tools to providing energy storage for EVs, buses and trucks and also for domestic and grid energy storage and management has seen dramatic growth.

These Albermarle figures shown the growth from around the current 270,000t LCE to 1,000,000 tonnes by 2025. EVs will have 8x the level of 2018.

Batteries will make up over 85% by 2025

Midpoint of Albermarle's 2019 forecast for 2025 is 1.5x the estimate made in 2015



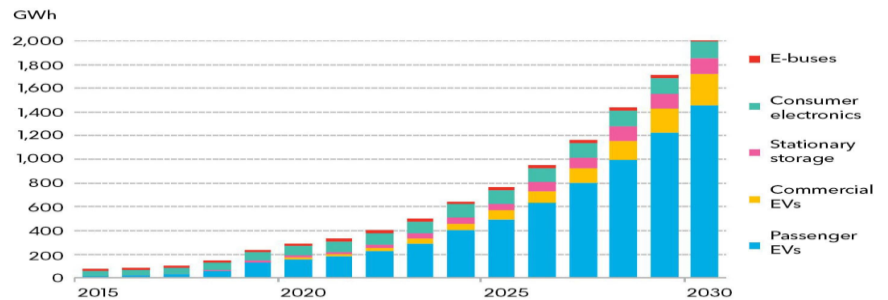
Albermarle sees strong growth in EVs.

Kt LCE	2018	2018-25	2025	
Albermarle data	Share	CAGR	Share	
<b>EVs</b>	<b>70</b>	<b>26%</b>	<b>610</b>	<b>61%</b>
<b>Busses and Trucks</b>	<b>25</b>	<b>9%</b>	<b>100</b>	<b>10%</b>
<b>Consumer electronic:</b>	<b>45</b>	<b>17%</b>	<b>90</b>	<b>9%</b>
<b>Grid storage</b>	<b>10</b>	<b>4%</b>	<b>60</b>	<b>6%</b>
<b>Other</b>	<b>120</b>	<b>44%</b>	<b>140</b>	<b>14%</b>
<b>Total</b>	<b>270</b>	<b>100%</b>	<b>1000</b>	<b>100%</b>

Source: Albermarle

And importantly, the forecasts in total demand keep rising. Again the Albermarle figures on forecast end lithium demand are more 150% higher than those envisaged in 2015.

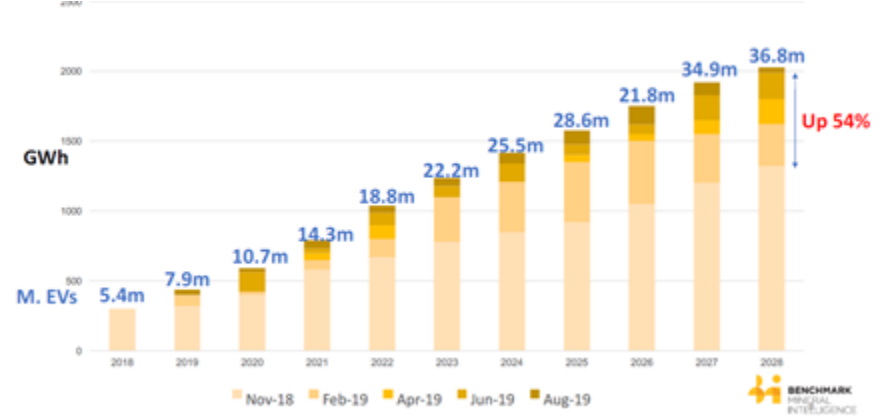
### Annual lithium-ion battery demand



Source: Albermarle

The demand for batteries for EVs will push the requirement for lithium to great heights. Activity in battery manufacturing capacity saw a 54% increase to 36.8m GWh with substantially more expected by 2025.

### Global build out of lithium ion battery capacity up 50% over end 2018



Source: Benchmark

Battery manufacturers will be wanting much more lithium.

### 7.1.3 Batteries for EVs

The declining cost of batteries will make EVs economically competitive against ICE vehicles

**Tesla 3 cost structure is:-**

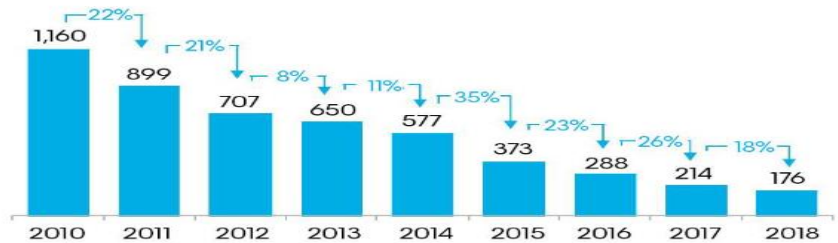
**20% battery and**

**80% body, computers, interior, wheels and transmission**

The key to EVs has always been the cost of the batteries. At current battery prices, the Tesla 3 cost structure is around 20% battery and 80% body, computers, interior, wheels and transmission.

This history shows a relentless reduction in lithium-ion battery sales price.

**Volume-weighted Average Li-ion Battery Pack US\$/kWh**  
Real 2018 USD



Source: BNEF

The EVs themselves have far fewer moving parts and hence a surprisingly low cost of construction and low cost of maintenance so battery costs are currently formidable.

EVs have very low maintenance from far fewer operating components .....and far fewer parts

Costs are declining rapidly from US\$250/kWh as recently as 2018 to US\$170/kWh in 2020 and should be at US\$100/kWh by 2023. Cost should continue to fall as bigger plants are built and manufacturing costs are reduced and the capital amortised over far greater volumes.

With the next frontier for batteries incorporating solid state operation and including lithium alloys as anodes the energy density of Wh/kg could double and provide even lower cost batteries below US\$100/kWh capacity.

**CD 2014 - Projected cost of Li-ion Battery \$/kWh**



Source: Clean Disruption

EVs vs ICE will be an obvious choice.

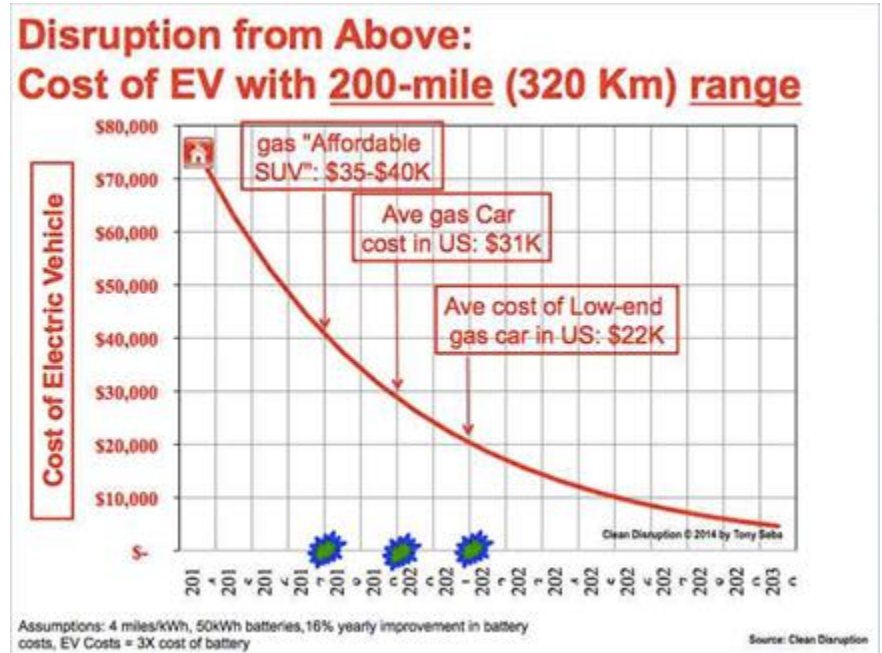
Of course these EVs will still need the electricity generation

Placing this in perspective, batteries are already competitive against higher priced ICE SUVs but by 2023 should be competitive against low end ICE cars around US\$22,000.

This pricing point that comes with far lower maintenance so for urban drivers the EV becomes an economic choice.

EVs are now computers on wheels.

By 2023 low end EVs will be economically far superior to ICE vehicles



Source: Clean Disruption

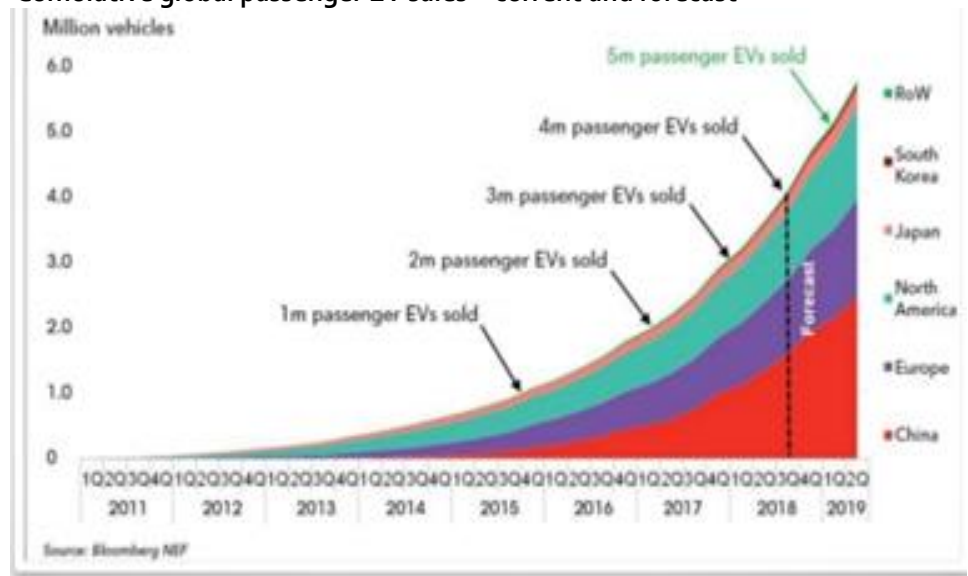
EV sales numbers are miniscule at present against a global fleet of >1,000m

The effect of this should be to push demand for EVs very much higher.

But a +30%pa growth rate gets the numbers up very quickly

Consumer demand is likely to be very strong and fleet purchases for GoGet, Uber, Apple, Google etc are likely to push demand much higher very quickly.

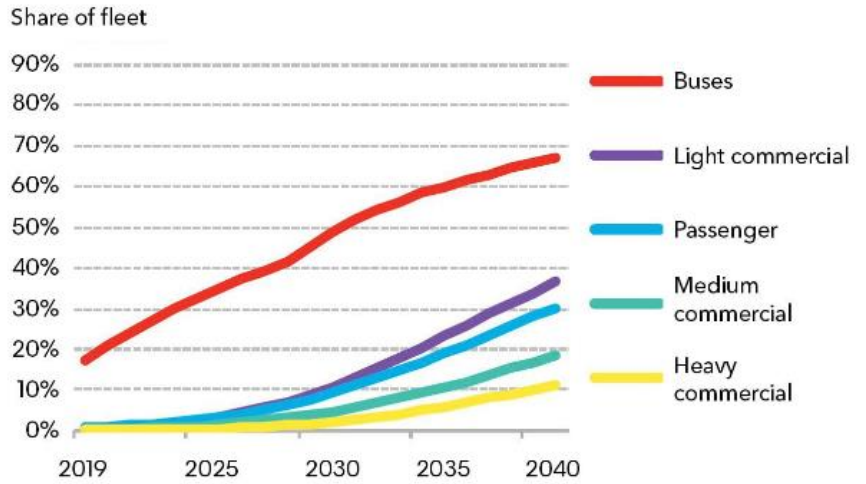
### Cumulative global passenger EV sales - current and forecast



Source: GEM Royalty

Busses are obvious markets for EV operation and their purchase as fleets has the effect of showing rapid uptake.

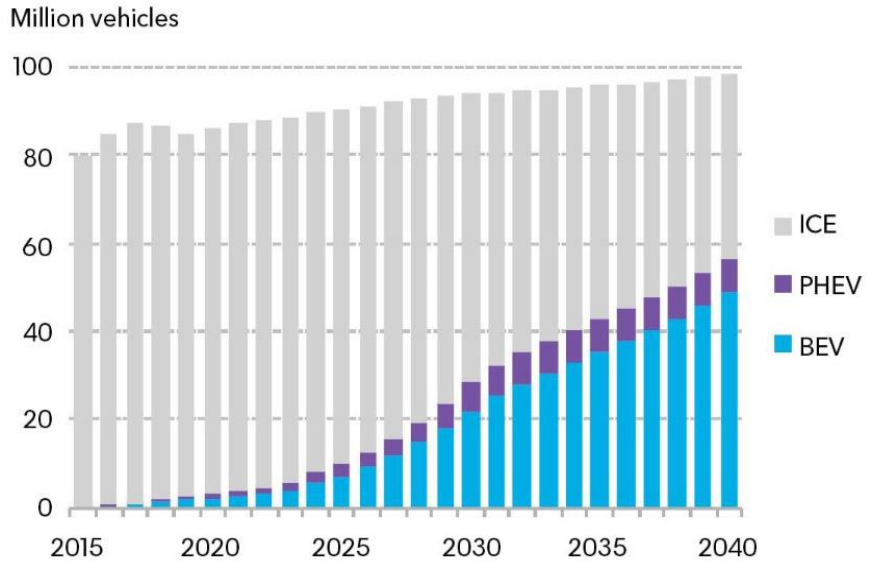
### EV share of global vehicle fleet by segment



Source: BNEF

Bloomberg NEF sees 50% of sales as EVs by 2040

### Global long-term passenger vehicle sales by drivetrain

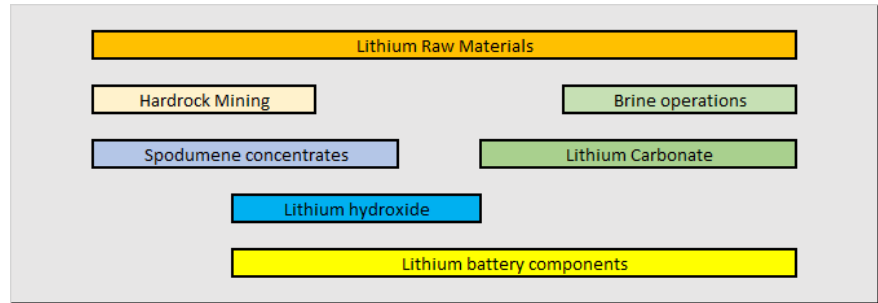


Source: BNEF



## 8.0 Raw Materials - Brines vs Hard Rock - Spodumene/Lepidolite

*Brines are salts in solution*



Brines are salt solutions in water and here are assumed to be naturally formed.

Brines mostly are solutions of the Alkali Metals (in order of decreasing reactivity and increasing mass - lithium (Li), sodium (Na), potassium (K)) and also the Alkaline Earth Metals in Group II (magnesium (Mg), calcium (Ca), strontium (Sr) and Barium (Ba)) as the cations in solution.

*Common salt is sodium chloride but most inland evaporites have sodium, potassium, magnesium and calcium .....*

*.....as chlorides, sulphates, carbonates, nitrates and phosphates*

The anions in solution can be Group III (borates), Group IV (carbonates), Group V (nitrates or phosphates), Group VI (sulphates) and Group VII as chlorides or rare bromides and iodides).

A typical evaporite might be sea salt and mostly just sodium chloride. Other evaporites can be sodium/potassium/calcium/magnesium chlorides or sulphates. Fertilizers are usually potassium with chlorides (potash), sulphates or phosphates.

### Lithium Brines - Where and Why

Lithium's #3 on the Periodic Table means it is very light, low density and very active in geochemistry.

It will be part of the most volatile components in active fluid flows in the earth as part of volcanic or magmatic rocks.

So it will occur in the most active volcanics which are the acid rhyolites and andesite explosive volcanics. Think Mt Vesuvius, Mt St Helens or Krakatoa (as opposed to the benign flows of basalt in Hawaii).

*Lithium is volatile so will be in active volcanics and magmatic rocks.*

Lithium can also be associated with acid felsic granitic materials and will be part of the volatile fluids that are late stage and travel in fractures in the cooling granitic magmas to form pegmatite style rocks with quartz, feldspars, micas, tantalite and tin and also lithium rich minerals like spodumene and lepidolite

*In andesitic volcanic rocks*

The lithium ion is very small, and it does not readily substitute in other minerals.

*And in magmatic granites*

As a result, it is usually one of the last ions to form minerals during the crystallization of a subsurface magma. As other ions are deposited and depleted, the residual fluids of magma crystallization become progressively enriched with lithium.

The large scale accumulations of lithium in solution are mostly associated with recent volcanics. Nature has restricted these in the current geological of the last few million years to South America in the Andes where the mountain uplifts are associated with seafloor subduction zones. The concentration in lakes with low rainfall and high evaporation again limits them to the high plains of Chile, Argentina and Bolivia. Some minor deposits are in the Sierra Nevada's Basin and Range in the US and Mexico. Zhabuye and Qaind in China are also in high tectonically active areas in Tibet.

In South America there are just two regions and just four important basins.

Lakes are in tectonically active regions and so sediments are 'young' and in dynamic environments so can be coarse or highly porous.

These basins are young, quite large and represent lakes that have been filled with coarse fractions such as gravels and sands and also volcanic ash sediments that are relatively light and are full of internal porosity and have highly uneven shapes that allow for high porosity.

The sediments in these basins can vary greatly but they can be very deep with over 1000m depth. The basins can create lakes that are many hundreds of metres deep with layers of high permeability sediments and also thick sequences of precipitated evaporites.

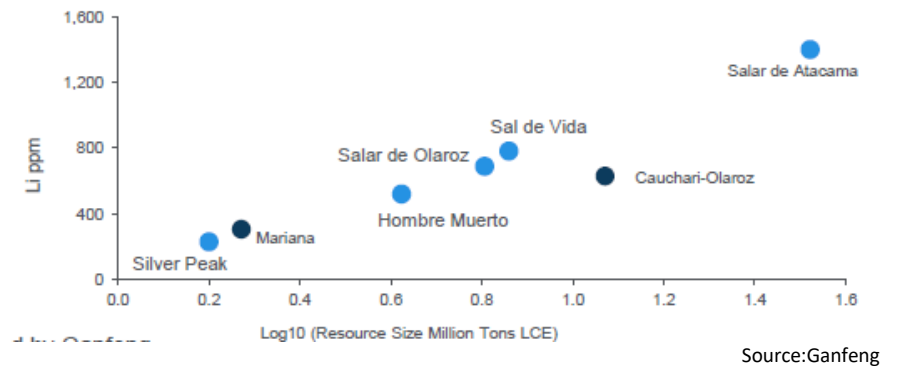
These lakes can be very large. The actual characters can vary but the highest grade lithium brines at Salar de Atacama in Chile where Albermarle and SQM operates.

Typical grade in Argentina are around 700-800mgLi/Litre

The size and grades of these deposits in Chile and Argentina are very significant.

Salar de Atacama grade is much higher

### Resource Estimates for Lithium Brine Deposits<sup>5</sup>



The rapid weathering and erosion in these geologically active basins can produce alternate layers of evaporite and sediment from inflowing rivers. Consequently, the evaporite layers can extend well back under more recent alluvial sediments.

Currently, the Salar de Atacama in Northern Chile and the Salars del Hombre Muerto and de Olaroz in Northwestern Argentina are the only actively producing salars on a commercial scale. Of these, the Salar de Atacama exhibits the highest lithium concentration and the most favorable extraction conditions of any brine resource in the world.

Current global output split between brines and hard rock is roughly 45/55.

### Brine Extraction and Processing

Brine containing high concentrations of lithium is extracted from aquifers by pumping from wells. Typically, the brine is delivered in an evaporation pond system and through solar evaporation is concentrated through a series of ponds to a sufficiently high level of lithium for conversion to lithium carbonate or lithium hydroxide.

Whilst solar evaporation requires no energy input (it would be uneconomic to use energy to heat the brine) the concentration process can take 12 to 18 mths.

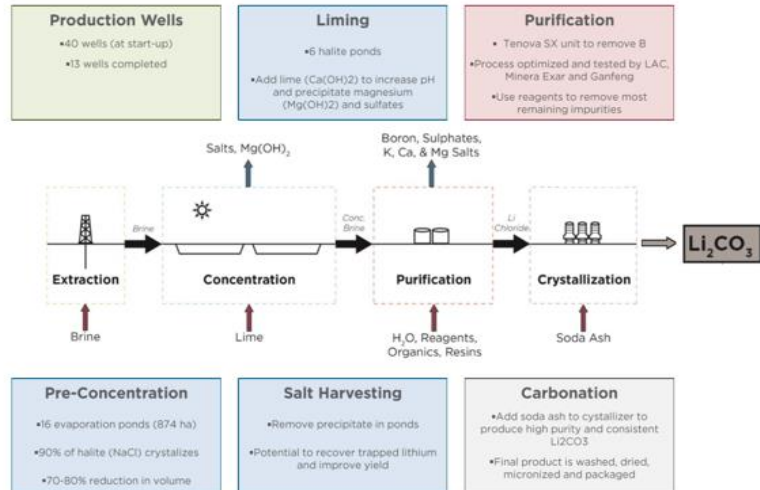
During evaporation the other minerals, typically containing sodium, potassium, magnesium and calcium, precipitate from the brine, leaving higher concentrations of the highly soluble lithium chloride (LiCl) in the solution. Sodium is one of the first elements to precipitate as sodium chloride

The concentrated LiCl brine is then processed and converted to lithium carbonate, lithium hydroxide or lithium chloride.

### CONVENTIONAL BRINE PROCESS

MineraExar

Optimized process expected to produce consistent and low impurity battery-quality lithium carbonate



Source: Ganfeng

The conventional Brine Process has

- Extraction
- Concentration
- Purification
- Crystallisation

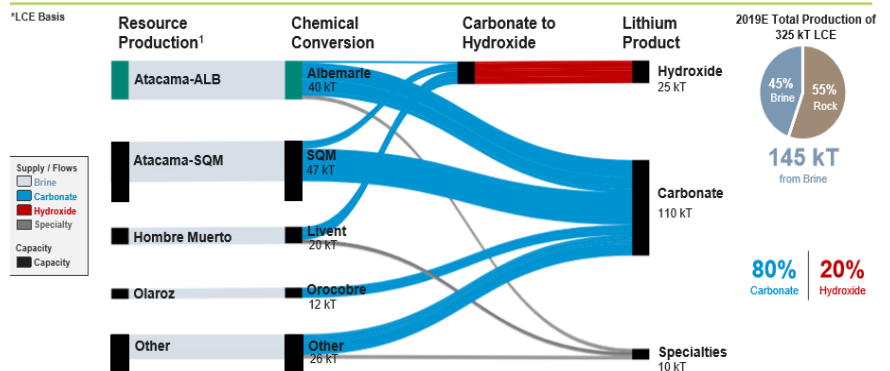
Total global brine production in 2019 was 145kt from the four major producers in Sth America with some from China.

Brine produced 145kt in 2019 with 80% as lithium carbonate

Of this 145kt, 80% was produced as lithium carbonate.

Albermarle provides this excellent flow sheet for brine output in 2019.

### 2019 Brine Supply Chain: 45% of Projected LCEs and Largely Carbonate



Source: Albermarle

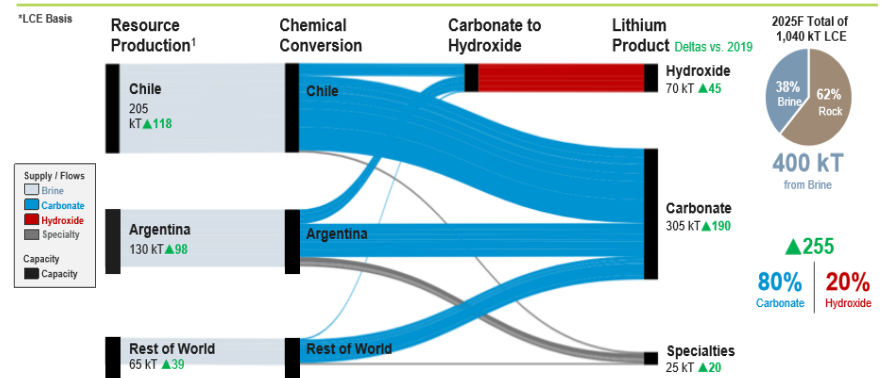
The same analysis for 2025 gives a 175% rise in brine output to 400kt with lithium carbonate share remaining at 80%.

Global Brine Production	2019	2025
<b>000t LCE</b>		
<b>Chile</b>		
Albermarle	40	
SQM	47	
<b>Total Chile</b>	<b>87</b>	<b>205</b>
<b>Argentina</b>		
Livent	20	
Orocobre	12	
<b>Total Argentina</b>	<b>32</b>	<b>130</b>
<b>Other</b>	<b>26</b>	<b>65</b>
<b>Total</b>	<b>145</b>	<b>400</b>

Source: Albermarle

Brine output to rise 175% to 400kt for 2025.

### 2025 Brine Supply Chain: Grows 2.7x with Continued Carbonate Alignment



Source: Albermarle

## Mineral Extraction and Processing of Spodumene

Granites are more common geologically

Typical grades are ~1-1.2% lithium as Li<sub>2</sub>O and are prepared as spodumene concentrates with ~6% Li<sub>2</sub>O

Most of the expansion in primary lithium production will be from Australian spodumene mines.

Almost all spodumene treatment is in China but new lithium hydroxide plants are being built in Western Australia

Unlike lithium in brines that need recent tectonism, lithium in spodumene can occur anywhere with 'old' granites and late stage fluids that form pegmatites.

Pegmatites are typically quartz, feldspars and micas with a few exotic minerals like spodumene and tantalite.

Ore is mostly from open pit deposits and mostly spodumene (lithium pyroxene - lithium alumina silicate – LiAl(SiO<sub>3</sub>)<sub>2</sub>). Lepidolite is a lithium mica but is less important than spodumene. Ores are crushed and milled then floated to remove the quartz, feldspars and micas. Typical spodumene concentrates will run at about 6% Li.

This results in the formation of a spodumene concentrate which can be either sold for direct application in the manufacture of glass and ceramics or chemically processed to create lithium carbonate or lithium hydroxide.

Processing of spodumene concentrates involves roasting at about 600°C then treatment with sulphuric acid to produce Li<sub>2</sub>SO<sub>4</sub> in solution.

Treatment with lime ( calcium hydroxide) converts to liquor to LiOH and the conversion to Li<sub>2</sub>CO<sub>3</sub>.

Australia has six mines in production with others lined up as market take up grows. Current production levels are below mine capacity.

Australia Lithium Resources			Resource Grade		LCE
Mine	Owners	Status	Mt	Li <sub>2</sub> O	Mt
Greenbushes	Albermarle/Tianqi	Producer	120.5	2.40	7.15
Mt Holland	Wesfarmers/SQM	FID deferred to 2021	189.0	1.50	7.03
Wodgina	MinRes/Albermarle	Suspended	233.0	1.21	7.00
Pilgangoora	Pilbara Mins/Lithium Aust	Producer	156.3	1.25	4.83
Kathleen Valley	Liontown Resources	DFS due Q1 2021	139.0	1.33	4.57
Mt Marion	MinRes/ Gangfeng	Producer	77.8	1.37	2.64
Bald Hill	Tawana Res/Alliance	Producer	18.9	1.18	0.55
Mt Cattlin	Galaxy Res	Producer	11.6	1.20	0.34
Pilgangoora	Altura	Producer	44.0	1.00	1.09

China has been the only major spodumene processor so mine output has been dependent on its processing capacity but plants are now being built in other places.

The Tianqi 48ktpa plant in Kwinana Western Australia is the newest and the worlds largest with the first of two 24ktpa trains commissioned in 2019. New plants will also be built at Kwinana ( Wesfarmers/Ganfeng) and at Kemerton (MinRes/Albermarle).

Australia Lithium Chemicals			Li <sub>2</sub> OH Capacity
Project	Owners	Status	000tpa
Kwinana	Tianqi	First Train Commissioned	48
Kwinana	Wesfarmers/SQM	DFS awaiting FID	45
Kemerton	MinRes/Albermarle/Tianqi	Construction	50

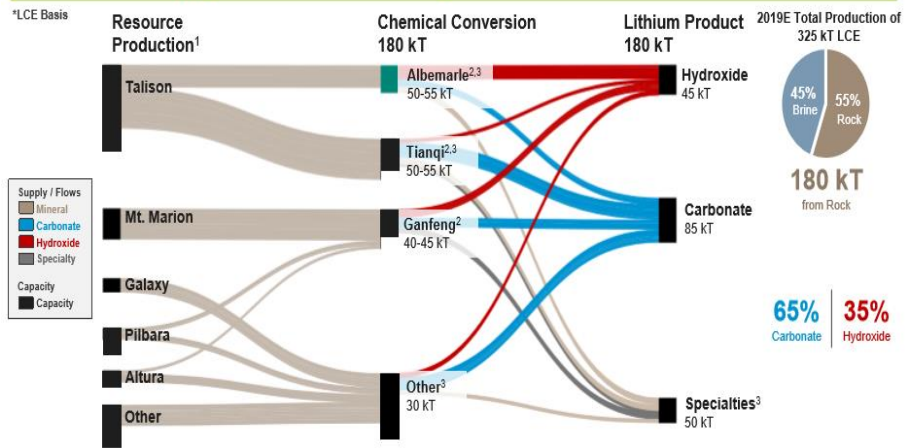
These flow charts from Albermarle are very helpful in showing product flows.

Lithium products for hard rock to see 255% increase.

Global Hard Rock Production		2019	2025
000t LCE			
<b>Australia</b>			
Talison		110	
Mt Marion		40	
Pilbara Minerals		15	
Mt Caittlin		55	
Altura		5	
Other			
<b>Total Australia</b>		<b>225</b>	<b>615</b>
<b>Other</b>		<b>5</b>	<b>25</b>
<b>Total</b>		<b>230</b>	<b>640</b>

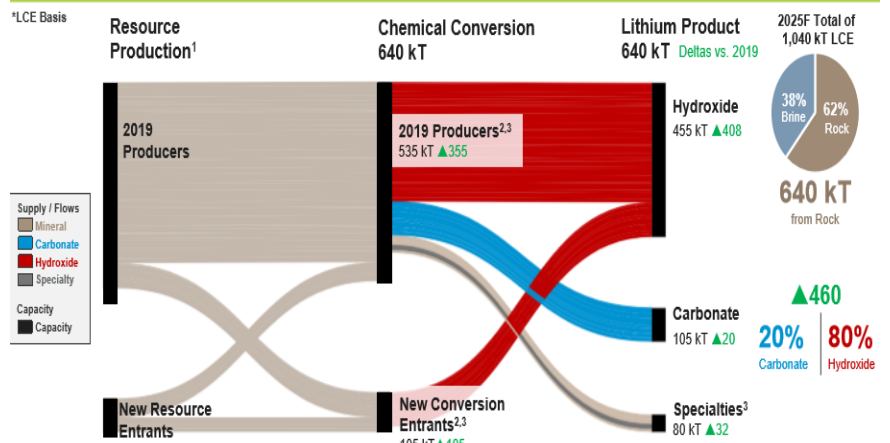
Source: Albermarle

### 2019 Rock Supply Chain: 55% of Projected LCEs and Lower Total Utilization



Existing mine capacity should provide over 90% of 2025 output of 640kt. 80% will be produced as lithium hydroxide.

### 2025 Rock Supply Chain: Grows 3.6x with Strong Hydroxide Focus

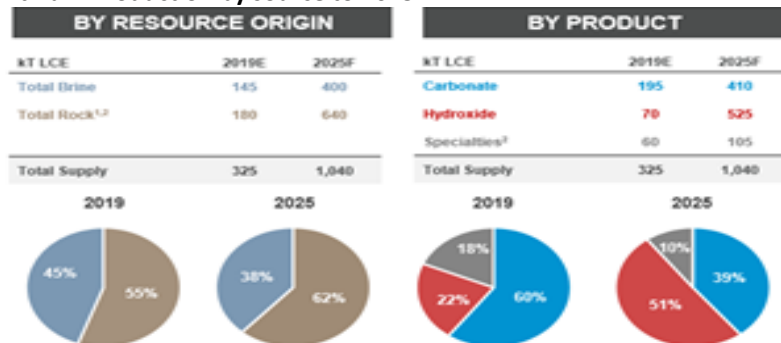


Lithium hydroxide increases from 35% to 80% of output

Total production from brines and hardrock is expected to exceed 1,000,000tpa LCE by 2025.

Albermarle sees over 1mtpa LCE

### Lithium Production by source to 2025



China currently treats almost all spodumene and imports most of the lithium brine products

China also has 7 of the top 10 battery manufacturing plants

Brines do have important environmental issues where evaporation ponds are involved

Over 70% of lithium requirements are imported from Australian spodumene concentrates or as brine products  $\text{Li}_2\text{OH}$  and  $\text{Li}_2\text{CO}_3$

### 9.1 Importance of China

China plays a dominant role in the world lithium industry. It is the biggest producer and user and has the 5th largest lithium reserves.

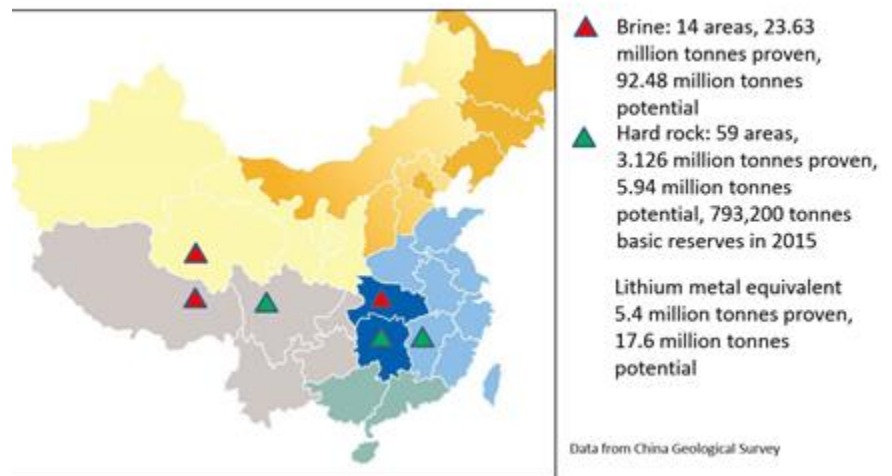
It is the dominant player in lithium battery manufacture and adoption of EVs.



Source: Kiril Kilip

Most sources of lithium have environmental issues and China is no different.

### 1. Lithium Resources in China



Almost 90% of China's lithium brine reserves and 60% of hard rock is are in the Qinghai Tibet Plateau with most of the rest in equally ecologically sensitive cold highlands in west Sichuan and the Qaida Basin. Despite the large reserves, lithium brines in China make up less than 10% of global production.

Consequently, China is reliant on imports of lithium in the form of spodumene concentrates and also of lithium hydroxide or carbonate which have made up around 70% of China's lithium requirements and this figure will only increase.

China lithium reserves among the highest in the world but only a small proportion is economic. The resources are salt lake brine( 80% ) with hard rock (spodumene and lepidolite). Brines are from salt lakes in Qinghai and Tibet including Zhabuye salt lake (Tibet), East Taigener salt lake (Qinghai) and West Taigener salt lake (Qinghai).

Spodumene is mainly mined in Ganzi Tibetan Autonomous Prefecture and Aba Tibetan Autonomous Prefecture.

China produces only about 10% of global primary lithium but produces over 80% of global lithium products such as Li<sub>2</sub>OH, Li<sub>2</sub>CO<sub>3</sub> and lithium metal.

Brines are on the Tibetan Plateau west of Chengdu

Brine reserves are large but not much is commercially or operationally viable

China produces around 40,000 tonnes of LCE as primary output from brines and hard rock.

China is the biggest producer of lithium and its integrated industries make China the largest processor producing over 80% of global lithium products in the form of lithium hydroxide, lithium carbonate and much of all global lithium metal.



Source: <http://lithium.today/lithium-supply-china/>

About 50% of primary lithium production in China is from the brines from the high altitude 4400m asl lake deposits in Tibet at Zhabuye Lakes which hold China's largest reserves. Lithium grades are a high 1,400mg/l but have high levels of other salts. Additional lithium lakes are in the Qaida Basin (at 2700m asl) in nearby Qinghai Province potential but these undeveloped brines have very high Mg:Li ratios.

The other 50% of China's primary lithium is from spodumene and lepidolite. Each of brines and mining provides about 20,000t LCE.

Most of China's requirements now come from imports of spodumene from Australia. It is also the world's largest user of lithium product with input into batteries.

## 9.2 China Lithium Companies

Four companies dominate China's lithium industry with two very large players

China is the world's leading lithium-processing centre. Lithium concentrate, mostly from Australia, is now the major source of raw materials used in the production of lithium carbonate and lithium hydroxide.

Tianqi Lithium, Ganfeng Lithium, Sichuan Yahua Lithium and Shandong Ruifu, the major producers, are rapidly adding new units of lithium chemicals to the global market by converting lithium concentrate from hard rock.

The two key companies are **Tianqi Lithium** and **Ganfeng Lithium**.

These two companies have global footprints and are integrated with mining, brines, conversion, lithium products and even into batteries and recycling.

Four companies dominate but Tianqi and Ganfeng are by far the largest

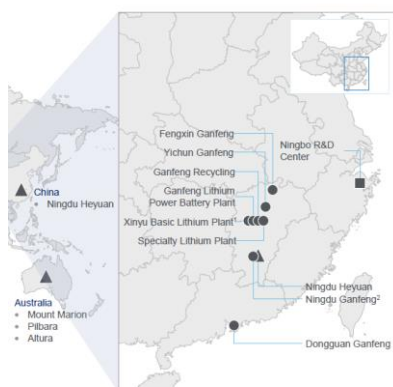
Tianqi owns 50% of the world's largest mine at Greenbushes in WA with Albermarle.

And it has interests in Argentina lithium brines and other Australian spodumene

Tianqi's Kwinana lithium hydroxide plant will become the world's largest when the second 24ktpa train is commissioned

Ganfeng also owns 5% of Pilbara Minerals  
And has a 10 year offtake agreement from the Pilbara Minerals

Ganfeng assets



## Tianqi Lithium

Tianqi Lithium has a global integrated business model and has a large presence in China. It is one of the largest lithium producers in China, producing close to 60,000 tpa of LCE in 2019 and was aiming to boost total LCE production further. Tianqi sources much of its spodumene from Greenbushes.

Tianqi's processing facilities in Sichuan and Jiangsu in China treat hard rock lithium concentrates (mostly spodumene).

### Tianqi Lithium Operations

Tianqi Operations		Ownership %	Partner	Product	Output tpa LCE
<b>Country</b>	<b>Province</b>				
<b>China</b>					
Tonglian	Chongqing	100		Li metal	600
Anju	Sichuan	100		Li carbonate	20000
Shehong	Sichuan	100		Li2OH, Li2CO3	24000
Zhanfngjiagang	Jiangsu	100		Li carbonate	20000
Cuola	Sichuan	100		Spodumene	??
<b>Australia</b>					
Talison	Greenbushes	51	Albermarle	Spodumene	180000
Kwinana	New plant	100		Li hydroxide	48000
Kwinana	Share of WES/SQM	17	WES/SQM	Li hydroxide	45000
Kemerton	Share of MIN/ALB	24	Albermarle	Li hydroxide	50000
<b>Chile</b>					
SQM	Chile	24		Diversified	

Source: Tianqi Lithium

Tianqi has invested significantly in Australia with mining and has commissioned the first 24ktpa train of its 48ktpa lithium hydroxide plant at Kwinana in Western Australia. This is the largest lithium hydroxide plant in the world and is state of the art fully automated technology.

Tianqi also acquired a 24% holding in SQM.

## Ganfeng Lithium

Ganfeng has a strategy of integrating mine ownership with lithium chemicals production and has a global spread with significant interest in Australian mines. Ganfeng also has a 10-year supply agreement with Australia Pilbara Minerals for 160,000 tpy of lithium spodumene

The upstream interests in brines and mines is augmented with downstream activities in batteries and battery recycling.

### Ganfeng Lithium Operations

Ganfeng Operations		Ownership %	Partner	Product	Output tpa LCE
<b>Country</b>	<b>Province</b>				
<b>China</b>					
Fengxin	Jianxi	100		Li metal	1500
Xinyu	Jianxi	100		Li2OH, Li2CO3	16300
Xinyu	Jianxi	100		Li2OH, Li2CO3	50000
Ningdu Heyuan	Jianxi	100		Spodumene	??
Ningdu	Jianxi	100		Li carbonate	16300
Ganfeng Power battery	Jianxi	100		Batteries	
<b>Australia</b>					
Mt Marion	WA	50	MinRes	Spodumene*	400000
Pilgangoora	WA	4.3	Pilbara Mins	Spodumene*	160000
Pilbara Minerals	WA	9.5	Pilbara Mins	Spodumene*	180000
<b>Argentina</b>					
Mariana	Jujuy	82.75		Brines	Expl Project
Cauchi/Olaroz	Jujuy	50	LAC	Brines	40000
<b>Mexico</b>					
Sonora	Sonora	22.5	BNC	Lithium clays	17500
Bacanora Minerals (BNC)	Sonora	29.9		Lithium clays	
<b>Ireland</b>					
Avalonia	Carlow	55	Int Lithium	Spodumene*	Expl Project

Source: Ganfeng Lithium



Albermarle is a key player in lithium with 270ktpa of spodumene capacity and 110ktpa of brine capacity ready for increases in lithium demand

Albermarle Resource	2019 Operating Capacity (kTa LCE)	Available Resource Capability (kTa LCE)	% Utilization
Atacama CORFO Lease	40	100	40%
50% Greenbushes Interest <sup>1</sup>	40	120	33%
Wodgina <sup>2</sup>	0	100	0%
Silver Peak	5	10	50%
Kings Mountain	-	50	0%
Antofalla	-	TBD	0%
<b>Total<sup>3</sup></b>	<b>85</b>	<b>&gt; 380</b>	<b>&lt; 28%</b>

~30% capacity utilisation for its 2025 targets

### 9.3 Lithium producers ex-China

Outside of China are the four major lithium chemical producers in the world - **Albermarle Corporation, SQM, Livent and Orocobre** - stand out due to their size and role within the global lithium market and produce ~32% of global primary lithium and about 20% of all lithium products.

**Albermarle Corporation** has been the world's largest producer of lithium carbonate and lithium hydroxide for many years with about 17% of global output. It has a 40ktpa of lithium carbonate out of Salar de Atacama in Chile.

As with Ganfeng, Albermarle has adopted an integrated mining/chemicals strategy. It holds 50% of Greenbushes with Tianqi and with Tianqi and Wesfarmers is building a lithium hydroxide plant in two phases with a production capacity of up to 100,000 tpa in Kemerton in Western Australia, which should start commissioning by 2021. Albermarle has a joint venture with Mineral Resources for a 50% interest in all lithium mineral concentrate produced from the Wodgina mine in Western Australia.

**SQM, (Sociedad Quimica Y Minera)**, Albermarle's neighbour at the Salar de Atacama in Chile, is the second largest lithium producer in the world outside of China. It produces 47ktpa from Sala de Atacama. It has brine expansion plans at Cauchari-Olaroz with a 48kpa JV with Lithium Americas. It has also teamed up with Wesfarmers to develop the Mt Holland mine and to construction a 50,000tpa lithium hydroxide plant. Tianqi acquired a 24.5% holding in SQM in late 2018 for US\$4bn.

**Livent** is the lithium spinout from FMC Corporation in early 2019. Livent is an integrated producer with 17ktpa lithium carbonate brine production from Hombre Muerto (near LKE's Kachi project) in Argentina and 22ktpa lithium hydroxide production from plants in China and the US.

**Orocobre** is the newest brine producer from 13ktpa plant at Olaroz with a Stage 2 expansion to 42.5ktpa for US\$295m. It also now has 100% of a 4.8mt LCE M&I Resource at Cauchari adjacent to LKE's Cauchari project after acquiring its 75% JV partner Advantage Lithium through scrip at a price that valued the resource at A\$122m.

Orocobre has a 75% interest in a US\$86m 10ktpa lithium hydroxide plant in Japan which should commence commissioning in H1 of 2021.

## 10.0 Kachi Plant Construction Project

Development of Kachi will depend upon the success of the Lilac Solutions technology but it is expected that capital and operating costs will be lower than comparative lithium brine development projects under consideration.

*LAC/Ganfeng 40ktpa LCE at Cauchari-Olaroz Argentina has a capital cost of US\$565m and NPV of US\$1.3bn*

*LPI 20,000tpa Maricunga project in Chile has capital cost of US\$563m NPV of US\$1.286bn*

*In comparison, Kachi will be without the evaporation ponds but will have the Lilac Solutions plant*

LKE's PFS is expected to be available in March 2020 so the best comparisons are against the DFS data for two comparable brine projects in Chile and Argentina.

Lithium America (49%) (LAC.TSX) is developing a 40ktpa lithium brine project at Cauchari-Olaroz in JV with Ganfeng(51%) at a capital costs of US\$565m. LAC increased its size from 25ktpa in 2017 to 40ktpa in 2019. This Project has an NPV<sub>10</sub> of US\$1.3bn at 100% equity.

ASX-listed Lithium Power International (LPI.ASX) is developing a 20,000tpa lithium brine project with Codelco at Maricunga in Chile for capital cost of US\$563m. This Project has an NPV of US\$1.286bn at 100% equity.

Orocobre is increasing its capacity from 17,000tpa to 42,500tpa for commissioning in mid 2021 at capital cost of US\$295m.

Taking these capital cost and operating cost figures and replacing them with key changes a rough capital and operating cost structure could be formulated for a Kachi project.

The capital costs for LKE firstly do not require the evaporation ponds which have costs of US\$140-180m for 25,000tpa capacity but this is somewhat offset by the yet to be determined cost of the Lilac plant.

Capital costs comparison	Lithium America Cauchari/Olaroz Argentina		Lithium Power Maricunga Chile
	2017	2019	2019
Date tpa LCE	25000	40000	20000
<b>Capital costs US\$m</b>			
Well costs	15	61	39
Evaporation Ponds	129	146	182
Lithium Carbonate Plant	122	155	72
<b>Lilac Plant</b>			
On site infrastructure	26	76	60
On site Services	41	20	103
Indirect costs	37	67	45
<b>Sub Total</b>	<b>370</b>	<b>526</b>	<b>501</b>
Contingencies	55	39	63
<b>Total</b>	<b>425</b>	<b>565</b>	<b>563</b>
<b>Cost/Annual tonne</b>	<b>16988</b>	<b>14118</b>	<b>28155</b>

Source: various company reports

It is assumed that the well costs would be in line with Lithium America in Argentina and not in Chile and various on site and indirect costs would be similar.

LKE is also considering having an intermediate product of lithium sulphate that could reduce the cost of a lithium carbonate plant which would be the single largest cost component.

Operating costs in the brine sector have been rising so that Kachi could be considered to be at the low point for conventional evaporation.

Orocobre regards itself as one of the lowest cost producers and its unit costs in the Dec Half of 2019 were US\$4643/tonne.

The most recent data from Albermarle shows the cash cost structure of new LCE capacity being US\$7,000/tonne LCE and a rebound is expected.

Orocobre is at the lowest part of the cost curve but Albermarle sees new capacity having cash costs of US\$7,000/tonne

Orocobre is at the lowest part of the cost curve but Albermarle sees new capacity having cash costs of US\$7,000/tonne



Kachi should still be a low cost producer despite its low grade because it is extracting only the lithium from the brine.

LKE expects to gain a premium over 99.5% product to at least US\$12-13,000/tonne against current US\$11,000 for lithium hydroxide

MPS estimated cash costs of US\$3480 plus 3% royalty to give US\$3890/tonne LCE

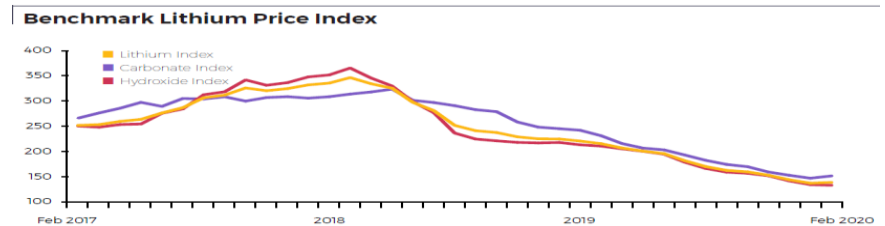
The cost structure for these two projects also gives comparison for Kachi.

Operating costs comparison		Lithium America Cauchari/Olaroz Argentina	Lithium Power Maricunga Chile
Date		2017	2019
tpa LCE		25000	40000
<b>Operating costs US\$m</b>			
Reagents		24.8	72.6
Maintenance		5.3	12.1
Electric Power		4.7	8.9
<b>Pond Harvesting</b>		<b>8.6</b>	<b>14.8</b>
Water treatment		1.0	1.6
Natural gas		2.1	5.8
Manpower		4.2	11.3
Services		2.4	2.4
Consumables		1.3	2.1
Diesel		1.7	0.7
Product transportation		4.3	5.1
G&A		2.2	5.6
<b>Total</b>		<b>62.4</b>	<b>143.0</b>
<b>Op costs/US\$ tonne</b>		<b>2495</b>	<b>3576</b>

Source: various company reports

LKE's recent market soundings have suggested that the high 99.95 purity product from the Lilac Solutions extraction process should achieve a significant premium and that prices should rebound from current US\$11,000/tonne for lithium hydroxide to at least US\$12-13,000/tonne for its Kachi product.

Lithium prices have shown the first uptick since March 2018 with lithium hydroxide prices at US\$11,000 FOB Nth America but lithium carbonate selling around US\$550/t for technical grade and battery grade at US\$8,875.



The MPS earnings model shows a very strong operating margin of 70% at the high prices and an MPS estimated cost of US\$3890 after 3% royalty.

Kachi Project				
Profit and Loss				
	2023	2024	2025	2026
Price US\$/t	13000	13000	13000	13000
Sales 000t LCE	10000	15000	25000	25000
Revenue US\$m	130	195	325	325
Operating costs	39	58	97	97
EBITDA	91	137	228	228
Deprec & Amort	21	28	42	43
Pretax	70	109	186	185
Tax	0	0	0	56
Net	70	109	186	129
Cashflow	91	137	228	172
Cash costs/Tonne	3890	3890	3890	3890
Total Costs/tonne	5990	5757	5570	5610
Cash margin %	70%	70%	70%	70%

Whilst LKE has yet to announce its PFS it is worthwhile to reinforce the NPVs of Lithium America's Cauchari-Olaroz 45ktpa plant in Argentina being US\$1.3bn and Lithium Power's 25ktpa at the more remote Maricunga in Chile has a NPV of US\$1.286bn.

## 11 Lake Resources Financial Data

LKE had expended ~A\$6m on exploration and development on its Argentinian assets

LKE is an explorer and developer and has a continuing need for capital to upgrade and derisk its projects.

The exploration results from efforts to date is impressive and shows how Lake turned early stage mineralisation quickly into a major resource at Kachi.

Balance Sheet	A\$000				
	30-Jun	2016	2017	2018	2019
<b>Current assets</b>					
Cash		74	1,397	1,744	1,727
Receivables		0	-	33	100
Other		1	13	48	68
<b>Total Current</b>		<b>75</b>	<b>1,410</b>	<b>1,825</b>	<b>1,895</b>
<b>Non Current</b>					
Exploration expenditure		0	1,887	4,901	6,100
Other assets		0	0	2	500
<b>Total Non Current</b>		<b>-</b>	<b>1,887</b>	<b>4,903</b>	<b>6,600</b>
<b>Total Assets</b>		<b>75</b>	<b>3,297</b>	<b>6,728</b>	<b>8,495</b>
<b>Liabilities</b>					
Current liabilities		7	69	225	315
<b>Total liabilities</b>		<b>7</b>	<b>69</b>	<b>225</b>	<b>315</b>
<b>Net assets</b>		<b>68</b>	<b>3,228</b>	<b>6,503</b>	<b>8,180</b>
Equity					
Issued capital		8,946	12,346	18,342	27,759
Equity Reserves		5	936	1,757	1,508
Accum losses		(8,883)	(10,054)	(13,594)	(16,825)
<b>Total Equity</b>		<b>68</b>	<b>3,228</b>	<b>6,505</b>	<b>12,442</b>

Source: Lake Resources

Lake has kept focus on the development of onground expenditures and on the work towards the completed PreFeasibility Study due out in March Qtr 2020.

Funds of over A\$3m were raised in a recent placement and SPP.

Cash Flows Statement				
A\$000	2016	2017	2018	2019
<b>Cashflows from operating activities</b>	-56	-646	-1480	-3182
Other net			0	0
<b>Total</b>	<b>-56</b>	<b>-646</b>	<b>-1480</b>	<b>-3182</b>
<b>Cashflows from investing activities</b>				
Property Plant and equipment		2	0	
Exploration		-478	-3674	-5127
<b>Total</b>	<b>0</b>	<b>-476</b>	<b>-3674</b>	<b>-5127</b>
<b>Cashflows from financing activities</b>				
Capital raising		2600	4044	6436
Proceeds from borrowings			1665	2347
Repayment of borrowings		-156	-175	-439
Interest on borrowings			-32	-53
<b>Total</b>	<b>0</b>	<b>2444</b>	<b>5502</b>	<b>8291</b>
<b>Net cashflows</b>	<b>-56</b>	<b>5044</b>	<b>348</b>	<b>-18</b>
<b>Opening cash</b>	<b>130</b>	<b>74</b>	<b>1397</b>	<b>1745</b>
<b>Closing</b>	<b>74</b>	<b>1397</b>	<b>1745</b>	<b>1727</b>

Source: Lake Resources

### **Stuart Crow - Non-Exec Chairman**

Mr Crow has global experience in financial services, corporate finance, investor relations, international markets, and stock broking. Stuart is passionate about assisting emerging listed companies to attract investors and capital and has owned and operated his own businesses.

### **Steve Promnitz - Managing Director**

Mr Promnitz has considerable technical and commercial experience in Argentina, a geologist fluent in Spanish, and a history of exploring, funding and developing projects.

Mr Promnitz has previously been CEO and 2IC of mid-tier listed mineral explorers and producers (Kingsgate Consolidated, Indochine Mining), in corporate finance roles with investment banks (Citi/Salomon, Westpac) and held technical, corporate and management roles with major mining companies (Rio Tinto/CRA, Western Mining).

### **Dr Nick Lindsay - Non-Executive Director**

Experience and expertise: Nick has extensive experience in Argentina, Chile and Peru in technical and commercial roles in the resources sector with major and mid-tier companies, as well as start-ups. Nick has an BSc (Hons) degree in Geology, a PhD in Metallurgy as well as an MBA. A fluent Spanish speaker, he has successfully taken companies in South

America, such as Laguna Resources which he led as Managing Director, from inception to listing, development and subsequent acquisition. Dr Lindsay is currently CEO of Valor Resources, and previously held the position of President – Chilean Operations for Kingsgate Consolidated Ltd and is a member of the AusIMM and the AIG

### **Dr Robert Trzebski - Non-Executive Director**

Dr. Trzebski is currently Chief Operating Officer of Austmine Ltd and holds a degree in Geology, PhD in Geophysics, Masters in Project Management and has over 30 years professional experience in project management and mining services.

He has considerable operating and commercial experience in Argentina and Chile, as a Non-Executive Director of Austral Gold since 2007 (ASX: AGD), listed on the ASX and TSX-V and is Chairman of the Audit and Risk Committee. His role with Austmine has allowed him to develop considerable contacts across the operating and technology space of the global resources industry. Dr. Trzebski is also a fellow of the Australian Institute of Mining and Metallurgy and is fluent in Spanish, French and German as well as English.

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Barry Dawes, as the author of this report, and as Head of Resources of Martin Place Securities, hereby certifies that the views expressed in this research accurately reflect his personal views about the subject securities or issuers. No part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research. The analyst principally responsible for the preparation of this research has received compensation based on overall revenues, including investment banking revenues, of Martin Place Securities. The Analyst has taken reasonable care to achieve and maintain independence unbiased objectivity in making any recommendations.

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**The author of this report holds shares mentioned in this report. This position may change at any time.**

**Lake Resources Ltd has commissioned this report for a fee.**

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