

LAKE RESOURCES NL

Equity Research

17th December 2018

SPECULATIVE BUY

Price Target **\$0.400**

Share Price **\$0.090**

52-Week Range	\$0.073 - \$0.300
Market Capitalisation	\$32.9m
Shares Outstanding	365.6m
Listed Options (20¢, 15-Dec-2018)	42.8m
Unlisted Options (5¢, Oct 2019)	6.2m
Unlisted Options (28¢, Dec 2020)	9.5m
Cash (30 th Sep 2018)	\$0.3m
Enterprise Value	\$32.6m
Director/Major Shareholders:	
Lambrecht Investment	6.9%
Steve Promnitz	4.6%
Acuity Capital	4.9%
Stuart Crow	1.1%
Top 20 Shareholders	48%



Lake Resources NL is a lithium exploration and development company undertaking an aggressive programme to explore prime lithium basins and lithium pegmatites in Argentina.

Research Analyst: J-François Bertincourt

Market Value Disconnected from Potential Transaction Value

Strategic Landholding Position lead to Value: Lake Resources holds one of the largest lithium tenement packages in Argentina (in excess of 200,000 ha), controlled 100% by Lake. This land package is part of the Lithium Triangle from where about 50% of the world's lithium is produced at the lowest costs.

Kachi Mineral Resource: Lake Resources has recently defined a maiden mineral resource estimate of 4.4 million tonnes LCE at Kachi, while the Exploration Target remains in the range of 8 to 17 mt LCE. In terms of value, in May 2018 Galaxy Resources sold to POSCO for US\$280 million the northern tenements of the Sal de Vida project containing 2.54 million tonnes LCE (Galaxy released an updated Feasibility Study on Sal de Vida in May 2018). The derived transaction multiple amounts to US\$110m/t LCE. Kachi's grade is lower but if Kachi's mineral processing studies are successful, the project could attract a value in excess of US\$400m. LKE owns the entire basin, 100%.

Ion-Exchange Extraction: initial test work bodes well for lithium carbonate production at lowest quartile costs starting with the rapid concentration of lithium brines, reaching 25,000 mg/L from ~300 mg/L in three hours rather than 9-24 months, by using ion-exchange technology newly developed.

Cauchari: drilling is currently progressing on the Cauchari West leases next door to mineral properties owned by either:

- the Advantage Lithium (TSX-V:AAL, C\$90m)/Orocobre (75/25%) JV, which have been drilled and where a mineral resource in excess of 3 Mt LCE at 450 mg/L has been estimated and a PEA has been successfully completed; or
- the Lithium Americas (TSX:LAC, C\$440m)/Ganfeng Lithium (62.5/37.5%) JV where a resource in excess of 11.8 Mt LCE at 585 mg/L has been estimated.

Olaroz: drilling is currently planned on tenements located next door to the Olaroz resource owned by Orocobre currently in production.

News Flow: We anticipate a number of share price catalysts including drilling assays and flow rate results, reservoir characterisation, mineral resources estimates, mineral processing results and potential corporate transactions (joint venture, off-take, strategic investment) with further positive developments in the lithium market.

Tight register: The top 30 shareholders including LKE directors and management represent about 55% of the share register.

Funding: Beyond the exercise of the 5 cents Class D options expiring in October 2019, we assumed a capital raising of \$5 million at \$0.10, adding 50 million shares to the capital structure some time next year.

Valuation: Considering the highly strategic position of LKE's tenement holding across its portfolio of four projects, and subject to successful results from the 2019 drilling and lithium brine processing programs, we consider that LKE should reach a market value in the order of \$153 million within the next twelve months or \$0.40 per share (post funding assumed above).

Risks and Upside: Considering its portfolio approach and highly strategic position, any of LKE lithium projects could become a company maker. LKE has four projects.

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1. LKE Valuation

Tenement Summary

The following table summarises the tenement holding of Lake Resources NL:

Lake Resources Portfolio of Lithium Projects						
Project	Area	Type	Ownership	Province	Status	Work in Progress
Olaroz/ Cauchari	17,953 ha	Brine	100%	Jujuy	99% Granted	Drilling
Paso	29,626 ha	Brine	100%	Jujuy	90% Granted	Drill permitting
Kachi	69,047 ha	Brine	100%	Catamarca	73% Granted	Process test work
Total brines	116,626 ha					
Catamarca	95,386 ha	Pegmatite	100%	Catamarca	22% Granted	Exploration
Grand Total	212,012 ha					

Source: LKE, Terra Studio, Status indicates the % Granted by area

Large battery manufacturers are looking for large scale lithium plays to secure supply over the long term

By its size and location, LKE tenement position is highly strategic.

In the Jujuy Province, LKE holds one the largest holdings. It is owned 100% and it is adjoining Advantage Lithium/Orocobre and Lithium Americas/Ganfeng Lithium development projects including some current production wells just over the limit between LKE tenements and its neighbours.

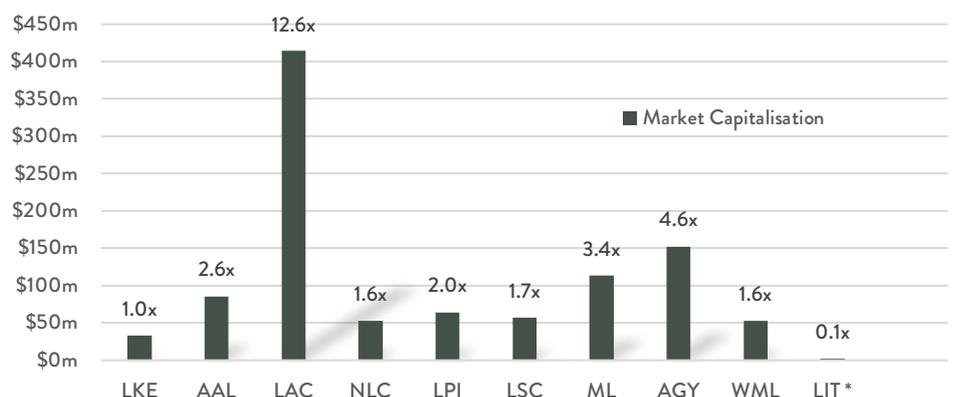
With Kachi in the Catamarca Province, LKE has managed to secure the quasi-totality of a salar through multiple transactions from what was previously a fragmented tenement holding. A JORC compliant maiden resource of 4.4 million tonnes LCE has been estimated at Kachi.

Beyond the brines and in the same province, LKE has also secured 150km of strike length with outcropping spodumene-pegmatites. The Catamarca hard-rock tenements cover an area of 95,386 ha.

Peer Comparison

The table on page 4 and Figure 1.1 provide a comparison of LKE against its peers listed on the Australian Securities Exchange (ASX), the Toronto Stock Exchange (TSX) or the TSX Venture Exchange (TVX). The focus is on exploration and development companies with brine projects in Argentina and Chile.

Figure 1.1 - Peer Comparison – Market capitalisation and ratio vs. LKE



Source: S&P Global Market Intelligence, Terra Studio. * Argentina Lithium & Energy Corp. LIT.TSX-V

Code	LKE	AAL	LAC	NLC	LPI	LSC	ML	AGY	WML	LIT*	
Exchange	Unit	ASX	TVX	TSX	TVX	ASX	TVX	ASX	TVX	TVX	
Name		Lake Resources	Advantage Lithium	Lithium Americas	Neo Lithium	Lithium Power Intl	LSC Lithium	Millennial Lithium	Argosy Minerals	Wealth Minerals	Argentina Lithium
Share Price	A\$/C\$	\$0.090	\$0.54	\$4.67	\$0.78	\$0.25	\$0.35	\$1.37	0.17	0.44	0.12
Asset 1 or Flagship Asset		Cauchari/Olaroz + Paso	Cauchari/Olaroz	Cauchari/Olaroz	Tres Quebradas	Maricunga	Pozuelos-Pastos Grandes	Pastos Grandes	Rincon	Atacama	Arizaro
Area	ha	47,579	28,500	70,796	30,000	4,463	21,425	8,664	2,794	46,200	33,500
Province		Jujuy	Jujuy	Jujuy	Catamarca	Atacama	Salta	Salta	Salta	Atacama	Salta
Ownership	%	100%	75%	62.5%	100%	51%	100%	100%	77.5%	100%	100%
JV partner		-	Orocobre	Ganfeng Lithium	-	Salar Blanco & Li3	-	-	-	-	-
Recent		Currently drilling	CAU15: 407 mg/l	-	-	-	-	-	-	-	-
Drilling		Results to be	CAU16: 619 mg/l	-	-	-	-	-	-	-	257 mg/l
Results		announced soon	CAU20: 629 mg/l	-	-	-	-	-	-	-	-
			CAU21: 607 mg/l	-	-	-	-	-	-	-	-
			CAU22: 549 mg/l	-	-	-	-	-	-	-	-
Resource	mt LCE	-	3 mt @ 450 mg/l	11.8 mt @ 585 mg/l	7 mt @ 601 mg/l	2.15Mt @ 1,160 mg/l	3.6 mt @ 493 mg/l	3 mt @ 452 mg/l	0.2 mt @ 325 mg/l	-	-
Reserve	mt LCE	-	-	1.5 mt @ 698 mg/l	-	-	-	-	-	-	-
Development Stage		Exploration drilling	Resource drilling	Construction	PEA	PEA	PEA	PEA	PEA	Exploration drilling	Exploration drilling
Expected production	tpa LCE	-	-	25,000 tpa	35,000 tpa	20,000 tpa	20,000 tpa	25,000 tpa	10,000 tpa	-	-
Project life	years	-	-	40 years	20 years	22 years	20 years	25 years	16.5 years	-	-
Asset 2		Kachi	Antofalla	Thacker Pass	-	Greenbushes	Rio Grande	Cauchari East	-	Laguna Verde	Incahuasi
Area	ha	69,047	10,653	15,233	-	40,000	26,865	11,000	-	8,700	13,711
Province/State		Catamarca	Salta/Catamarca	Nevada	-	Western Australia	Salta	Jujuy	-	Region III, Chile	Catamarca
Ownership	%	100%	100%	100%	-	100%	100%	100%	-	Option for 100%	100%
Resource	mt LCE	4.4 mt @ 211mg/l	-	8.3 mt @ 0.29% Li	-	-	2.2 Mt @ 374 mg/l	-	-	-	-
Other Assets		Pegmatite Catamarca	Incahuasi, Guayatayoc	RheoMinerals	-	Pilbara, WA	Salinas Grandes	-	-	Chile	-
Area	ha	95,386	31,119	-	-	20,300	176,954	-	-	9,600+	-
Market Capitalisation	\$m	\$33	\$85	\$414	\$52	\$64	\$57	\$113	\$152	\$52	\$2
Multiple to LKE	x	1.0x	2.6x	12.6x	1.6x	2.0x	1.7x	3.4x	4.6x	1.6x	0.1x

Source: company announcements, Terra Studio

Considering the intense corporate activity taking place over the Salars de Cauchari and Olaroz, in the Jujuy Province, we placed the tenure of Lake Resources over those salars as asset 1 in line with the flagship assets of the Advantage Lithium/Orocobre JV and the Lithium Americas/Ganfeng JV. We can note that:

- LKE landholding is significant in size
- LKE owns 100% interest in the tenements
- Recent drilling from LKE neighbours tend to validate the hydrogeological model whereby by higher lithium grades and flow rates can be found on the salars' margins vs. their central body.
- The lithium grades observed in the Cauchari/Olaroz salars are among the highest grade brines in Argentina

As asset 2, we placed Kachi, where we can note that:

- LKE landholding is highly significant in size. In this case, LKE actually controls the quasi-totality of the Kachi salar
- LKE owns 100%
- Kachi resource grade is lower than its peers, but this should not be an issue considering the processing route being developed (see section Processing Route on page 15).

Overall, all peers have market capitalisation well in excess of LKE's market capitalisation, except for Argentina Lithium & Energy Corp. (LIT.TVX). LIT holds, or has under application, over 13,000 hectares, and has the option to earn a 100% interest in an additional 20,500 hectares on the Arizaro Salar. To date sampling of brines from the subsurface (approximately 2 metres depth) by previous workers has returned lithium values, up to 160 mg/L, confirming the presence of lithium in the basin (USGS, 1987. "Geology and Resources of Salars in the Central Andes). At this time, there is no mineral resource estimated on the salar and no existing or planned production.

Financial

LKE cash balance stands at \$0.291m as at 30 September 2018. In the 1st week of October, delayed payment was received of \$1.8m for September options. The exercise of the Class C unlisted options which expired 30 Nov 2018, brought an additional \$250,000 cash to LKE. A short term debt facility of \$0.5m was also established.

Beyond the exercise of the 5 cents Class D options expiring in October 2019, we assumed a capital raising of \$5 million at \$0.10, adding 50 million shares to the capital structure some time in 2019.

Capital Structure

LKE Capital Structure				
Securities	Number	Price	Expiry	Notes
Shares (10 Dec 2018)	365,643,866	\$0.09		
Listed Options (LKEOA)	42,816,667	\$0.20	15-Dec-18	Not considered
Unlisted Options (D class)	5,550,000	\$0.05	21-Oct-19	Assumed to be exercised
Unlisted Options	9,500,000	\$0.28	31-Dec-20	Not considered
Total pre-financing	371,193,866			
Equity financing	50,000,000	\$0.10		\$5 million raising
Total post-financing	421,193,866			

Source: LKE, Terra Studio

LKE capital structure includes some in-the-money options, which are due to expire within the next 12 months. If all exercised, those options have the potential to bring \$0.28 million by the end of October 2019.

Valuation

Considering the highly strategic position and quality of LKE's tenement holding across its portfolio of four projects, and the 2018 drilling and exploration programs, we consider that LKE should reach a market value in the order of \$160 million within the next twelve months.

Assuming all in-the-money options being exercised, the resulting number of shares will be 421 million by the end of October 2019, resulting in a price target of \$0.40.

We also have derived a sum of the parts valuation for Lake Resources as follows:

LKE Valuation					
Asset	Area (ha)	Value Range	Preferred	\$/share	Basis
Cauchari/Olaroz brine project	17,953	US\$50-90m	\$80m	\$0.190	Market peers
Kachi brine project (4.4 mt LCE)	69,047	US\$20-440m	\$55m	\$0.131	Transactions
Paso brine project	29,626	US\$18-50m	\$20m	\$0.047	Transactions
Catamarca pegmatite project	95,386	\$15-60m	\$10m	\$0.024	Market peers
Cash			\$0.29m	\$0.001	
Exercised options (class C)			\$0.25m	\$0.001	
Exercise of options (class D)			\$0.28m	\$0.01	
New Equity			\$5.00m	\$0.012	
Corporate & exploration costs			(\$2.35m)	(\$0.006)	NPV
Total			\$168.4m	\$0.40	

Source: Terra Studio. Australian dollars, except otherwise indicated.

While highly subjective, the valuation is supported by the recent transactions in the area and the current value of market peers.

2. Recent Lithium Market Developments

Significant Transactions

This section focuses on transactions related to lithium companies and projects in Argentina.

The Ganfeng Lithium transaction values the mineral resource at US\$11.5/t LCE

SQM 2016 transaction valued the mineral resource at US\$4.2/t LCE.

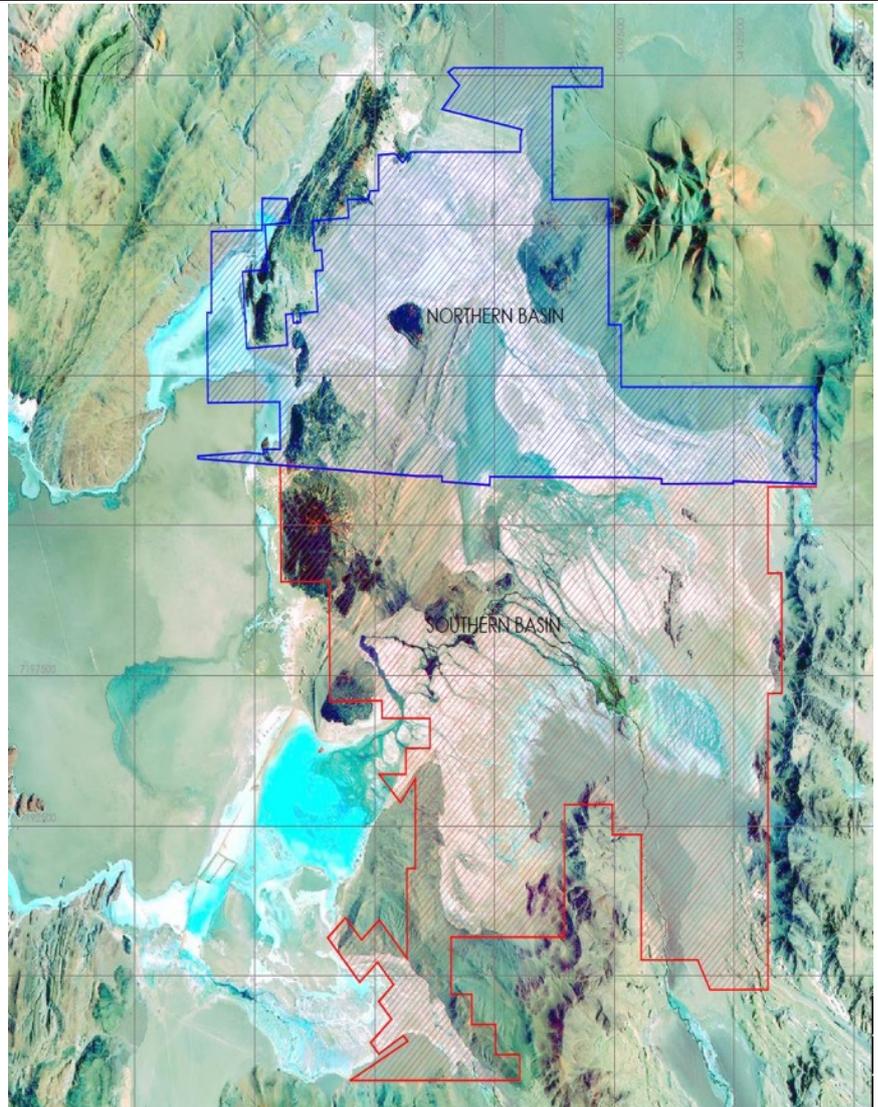
In August 2018, Ganfeng Lithium (SSE: 002460, market cap US\$4 billion) agreed to purchase SQM's interest in Cauchari-Olaroz. Lithium Americas (TSX/NYSE: LAC) increases its interest from 50% to 62.5% with Ganfeng holding the remaining 37.5% of Mineral Exar (the JV entity). The consideration is composed an aggregate of US\$85.5 million in cash and a deferred payment of US\$50 million. Ganfeng also agreed to provide a loan of US\$25 million to Minera Exar and a US\$100m loan to Lithium Americas. We note that SQM bought 50% of the Cauchari-Olaroz project for US\$25 million in March 2016. In 2012, a mineral resource was estimated to 11.8 million tonnes of LCE at an average grade of 585 mg/L. In March 2017, LAC released the results of Stage 1 DFS to produce 25,000 tpa Li₂CO₃ for 40 years, capex US\$425m, opex 2,495/t Li₂CO₃.

The purchase price of the Sal de Vida northern basin tenements represents a transaction multiple of US\$110 per tonne of LCE resource, with no reserve delineated on those tenements as yet.

Applying such transaction multiple to Kachi mineral resource of 4.4 million tonnes LCE would result in a valuation of US\$480 million

In May 2018, Galaxy Resources agreed to sell a package of tenements in the northern basin from the Sal de Vida project to POSCO. Cash consideration amounts to US\$280 million for a mineral resource of 2.54 million tonnes LCE. The transaction settled in November 2018. Galaxy retains 100% of the tenements in the southern basin where the total measured, indicated and inferred resource is 5.16 Mt LCE, including 1.14 million tonnes LCE of proven and probable reserves.

Figure 2.1 - Map of Salar del Hombre Muerto



Source: GXY. Tenements sold to POSCO (blue area) and tenements to be retained by Galaxy (red area).

In December 2017, Lithium X Energy Corp. (LIX.TVX) and Nextview New Energy Lion Hong Kong Ltd announced they had entered into a definitive agreement whereby Nextview acquires all the LIX shares for \$2.61 cash, valuing Lithium X at C\$265m, which closed in March 2018. LIX flagship asset is Sal de Los Angeles (8,156 ha) in the Salta Province, with a feasibility study on a 20,000 tpa LCE operation underway.

In July 2017, Lithium Americas closed a US\$113 million (US\$33m equity + US\$80m debt) strategic financing with Bangchak Corporation. The investment is to fund a portion of the construction costs for the Cauchari-Olaroz lithium project. Bangchak is a global emerging leader in the green energy industry. Bangchak is publicly listed on the Thailand Stock Exchange with a current market capitalization of approximately US\$ 1.3 billion.

In June 2017, Lithium Americas closed a US\$172 million (US\$47m equity + US\$125 million debt) strategic financing with Ganfeng Lithium. The investment was to fund a portion of the construction costs for the Cauchari-Olaroz lithium project. Ganfeng Lithium is the largest integrated lithium producer in China, with a total capacity of around 30,000 tonnes per annum of lithium carbonate equivalent. Ganfeng Lithium is listed on the Shenzhen Stock Exchange with a current market capitalization of approximately US billion.

In March 2017, Advantage Lithium announced a transaction to earn 50-75% equity in Orocobre’s Cauchari leases (28,500 ha) for approximately US\$37 million in shares, raising C\$20 million in the market.

In June 2017, LSC Lithium acquired LitheA and its Salar de Pozuelos (30,000 ha) for an aggregate purchase price of approximately US\$44 million.

Earlier that same month, LSC Lithium acquired tenements located in the Salinas Grandes Salar (25,027ha) from Orocobre for about US\$7 million and an option over 1,471ha in the same salar from Minera Santa Rita.

In March 2016, Lithium Americas announced an agreement with Sociedad Química y Minera de Chile (SQM) to enter a 50/50 joint venture on the Cauchari-Olaroz lithium project (70,000 ha), with SQM contribution US\$25 million.

Considering the number of corporate transactions and strategic financing undertaken by Lithium Americas, it is useful here to illustrate the value created for LAC shareholders.

Figure 2.2 - Lithium Americas Share Price over the Last Two Years in US\$



Source: company announcements, Terra Studio

While LAC has been very successful in sourcing financing for the Cauchari-Olaroz lithium project, the interest held by LAC in the project has been reduced to 50% before increasing again to 62.5%. Project development work and construction is currently underway with targeted 25,000 tpa LCE production from 2020.

Despite the retracement over 2018, LAC share price is still up 175% since January 2016, when it shared a market value similar to LKE today.

Lithium Carbonate and Spodumene Concentrate Prices

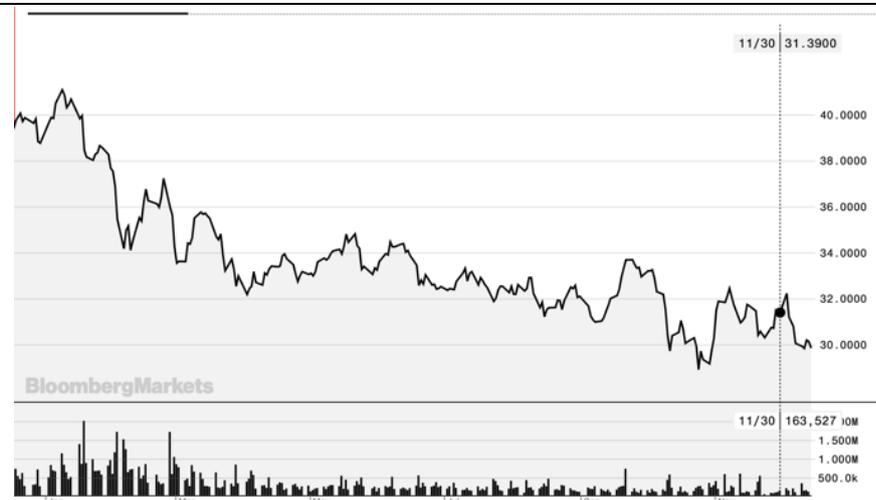
Here are some the publicly announced lithium prices realised by market participants:

- Average Free on Board (FOB) contract price received from South America averaged US\$13,500/tonne Li₂CO₃ YTD in 2018 with higher priced contracts reflecting firmer market conditions, currently \$14,375/t. Orocobre received US\$14,699/t for the Sept quarter 2018 with the December quarter expected to be slightly lower. Key suppliers to the contract market maintained an optimistic, long-term perspective with demand forecasts provided by South American producers SQM and Albemarle remaining in the range of 18% to 20% CAGR for 2018 to 2025 *Source: Orocobre Ltd September 2018 quarterly report; Benchmark Mineral Intelligence Nov 2018*. Those prices are realised at the Olaroz Lithium Facility, generating gross cash margins in excess of US\$6,000/t. This operation sits next door to LKE mineral properties.
- Average realized selling price (before royalties and marketing fees) of US\$875-890 per dmt sold. *Source: Galaxy Resources Ltd September 2018 quarterly report, Benchmark Mineral Intelligence Nov 2018*.

Global X Lithium & Battery Tech ETF

With the decrease of lithium products prices followed by the recent turmoil on global financial markets, most lithium producers and battery manufacturers have seen their share price decreased significantly over the last 11 months or so. Subject to no further degradation of the global financial markets, it appears that the sector has stabilised somehow as indicated by Figure 2.3.

Figure 2.3 – Global X Lithium & Battery Tech ETF (LIT:US)



Source: Bloomberg

The fund top holdings include FMC Corp (FMC:US), Albemarle Corp (ALB:US), Sociedad Quimica y Minera (SQM:US), Tesla Inc (TSLA:US), BYD Co (1211:HK) as the top holdings representing 55% of the fund and the top three representing 43% of the fund.

3. LKE Strategy

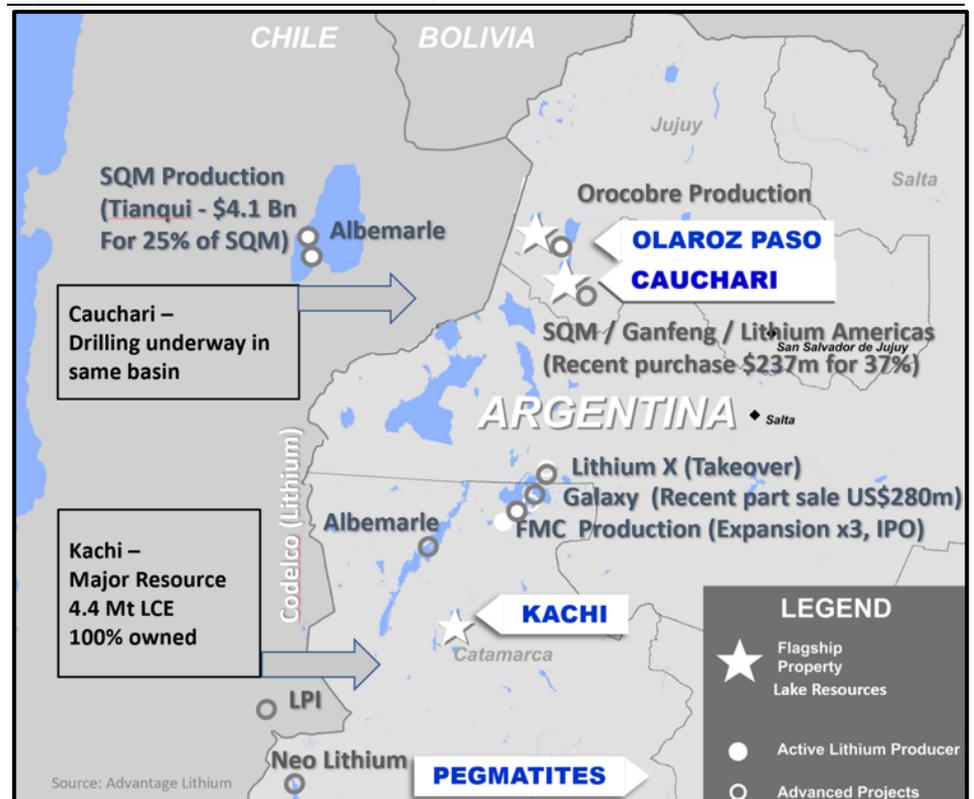
Lake Resources' mission is to develop a profitable lithium development business focused on South America. To this end, Lake Resources' focus is on:

- Exploration/development of a large portfolio of lithium projects in the most prospective areas in South America that will attract major downstream companies as strategic partners at an early stage.
- Use of the most cost-effective practices and technologies: for example, LKE is partnering with Lilac Solutions Inc, a processing technology company. Lilac Solutions has developed a new ion exchange technology to address the challenges face by lithium producers. Lilac's technology streamlines operations, boosts lithium recovery, and expands production into new resources. The process is modular and can be ramped in time with the market.

4. LKE Overview

Lake Resources NL (LKE.ASX) is a lithium exploration company undertaking an aggressive programme to explore prime lithium basins and lithium pegmatites in Argentina, among some of the largest players in the lithium sector. LKE holds one of the largest lithium tenement packages in Argentina (~212,000 ha), controlled 100% by LKE.

Figure 4.1 - Lake Resources Lithium Projects



Source: LKE

Mining leases and applications are located in the Lithium Triangle which accounts for 49% of current lithium production. Lake completed the acquisition of an early mover in Argentina, who had secured three prime lithium brine projects in an extensive strategic package of ~100,000 ha, prior to a significant ‘rush’ to secure projects by major companies in the sector. Recently an option agreement was completed for 100% ownership over lithium pegmatites in a 150km long belt covering 95,000 ha in Catamarca, next to Latin Resources (LRS.ASX).

Upcoming exploration in lithium brine basins, one which is adjacent to some of the leading lithium producers/developers, including Orocobre (ORE.ASX) in Olaroz, and the Cauchari development project of Lithium Americas (LAC.TSX-V) and Ganfeng Lithium (SSE: 002460), may provide several catalysts for growth as the areas are developed into new production centres.

Investors access optionality and scalable lithium projects – both brines and pegmatites - with considerable value to be unlocked as news flow delivers results in the near to medium term.

At Kachi, LKE has recently delineated a lithium resource of 4.4 million tonne LCE (lithium carbonate equivalent) and is now progressing metallurgical studies.

Beyond Kachi, each project has the potential to be a future operation with exploration and development success and adequate financing.

Lake Resources Projects Portfolio				
Project	Area	Type	Ownership	Province
Olaroz/ Cauchari	17,685 ha	Brine	100%	Jujuy
Paso	29,626 ha	Brine	100%	Jujuy
Kachi	69,047 ha	Brine	100%	Catamarca
Catamarca	95,386 ha	Pegmatite	100%	Catamarca
Total	212,012 ha			

100% ownership

5. LKE History

Established in 2009 the company covers a large acreage of over 2 million acres with 100% retained interests and the ability to farm down as a potential funding source in the future.

- Company founded in 1997
- Initial focus on Pakistan (Exploration for epithermal gold and porphyry copper-gold deposits in the Chagai region), Sweden and later Argentina
- 14 Nov 2016: acquisition of LithNRG Pty Ltd bringing three large packages of tenement applications (over 90,000 ha) over salt lakes in North West Argentina. The project portfolio built over a ten month period include the Olaroz-Cauchari and Paso projects in the Jujuy province and Kachi project in the Catamarca province
- 15 Nov 2016: appointment of Stephen Promnitz as Managing Director and Stu Crow as Non-Executive Chairman
- 21 Dec 2016: acquisition of an additional 3,900 ha of leases contiguous to LKE tenements, increasing the lease area either granted or under application to almost 50,000 ha
- 11 Nov 2017: Drilling underway at Kachi lithium brine project
- 22 Feb 2018: Additional rotary drill rig contracted to support the current rig and accelerate the drilling programme Kachi lithium brine project
- 1 Mar 2018: Landmark agreement with the Jujuy Province confirms tenure over Cauchari/Olaroz tenements

- 22 Mar 2018: \$4.5 million raised at 13.5 cents
- 14 Jun 2018: Major discovery - Kachi
- 18 Oct 2018: Drilling start at the Cauchari lithium brine project
- 5 Sep 2018: Partnership with Lilac Solutions to advance the Kachi project
- 7 Nov 2018: Expansion of leases to 69,000 ha at Kachi; Exploration Target 8-17 Mt LCE at Kachi
- 27 Nov 2018: Maiden 4.4 Mt LCE resource estimate for Kachi
- 10 Dec 2018: Lowest quartile costs of production using Lilac technology at Kachi

Figure 5.1 displays the location of LKE lithium brine project, with Cauchari/Olaroz and Kachi being the company’s main focus for the next twelve months.

Figure 5.1 - Lake Resources Lithium Brine Projects



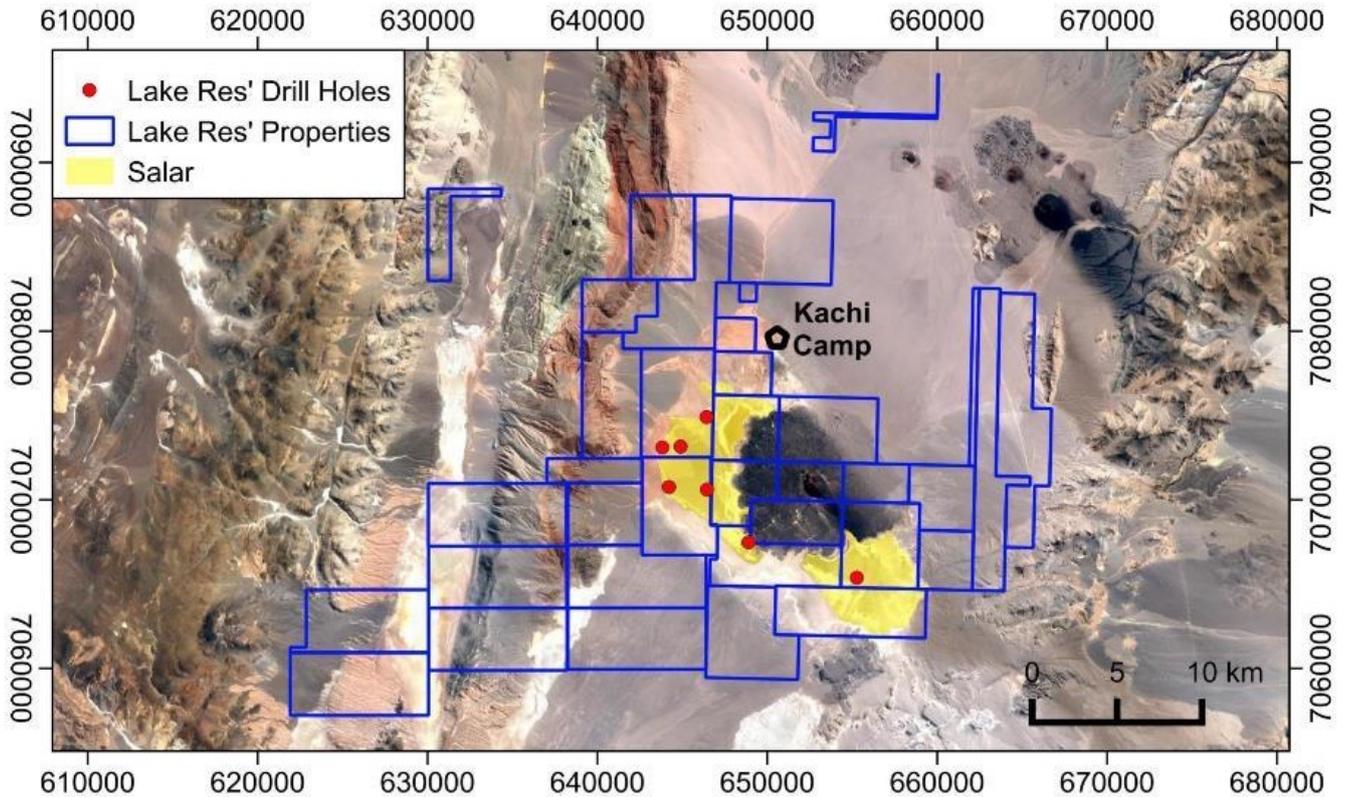
Source: LKE

6. Kachi Lithium Project

Location and infrastructure

The Kachi Lithium Brine Project (69,057 ha) is located in the Catamarca Province, approximately 100km south of FMC's Salar del Hombre Muerto lithium brine production operation. The Kachi Project overlies a large area of contiguous leases and lease applications, centred around a salt lake within a large basin almost 100km long.

Figure 6.1 - Kachi Lithium Brine Project



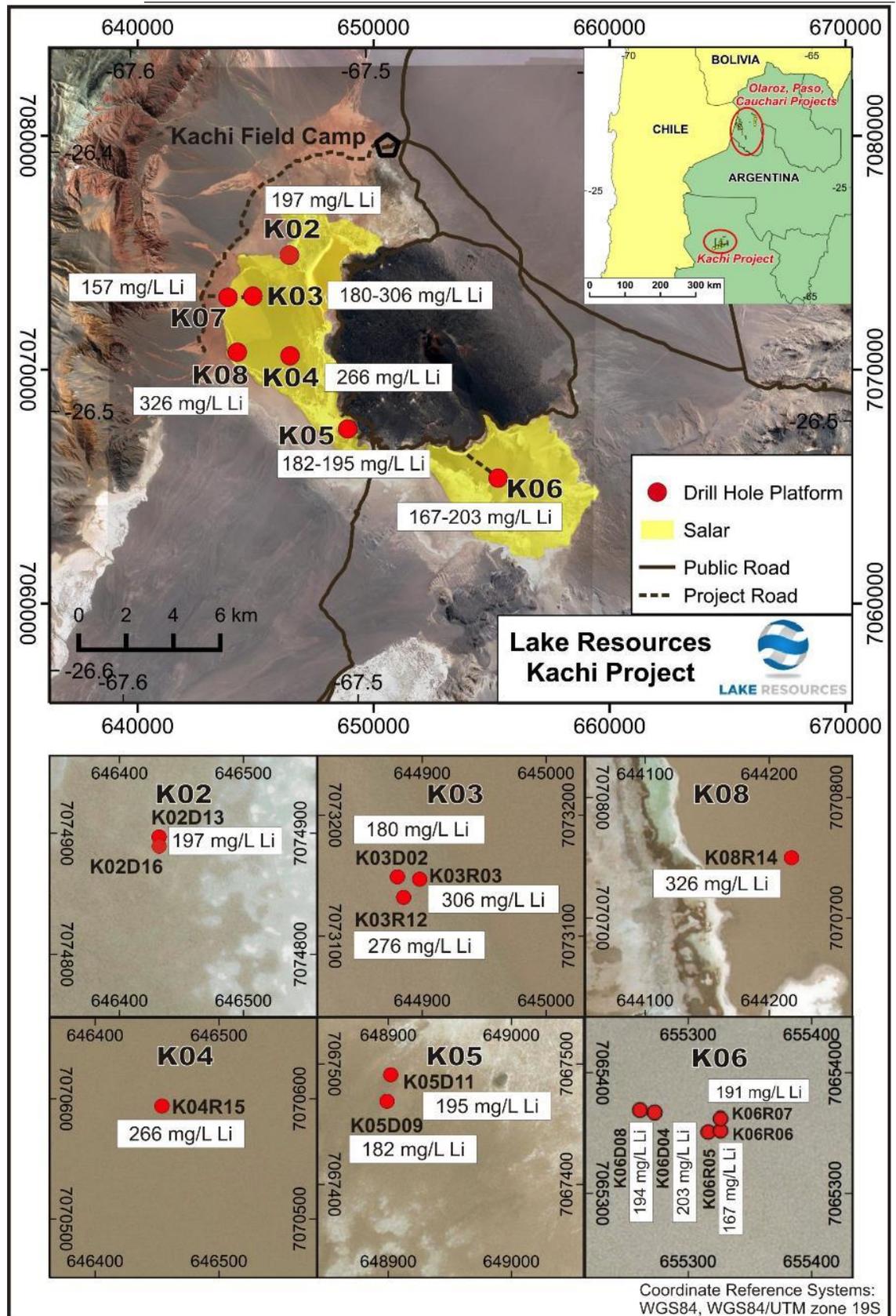
Source: LKE

The project has reasonable access by 20km of unsealed roads and tracks from a sealed road which leads to the nearby towns of Antofagasta de la Sierra, and El Penon, which also provides additional accommodation. Mobile phone coverage is available near the town, with communication on site by satellite phone and two-way radio. Camp logistics, and water supply are in place.

Drilling

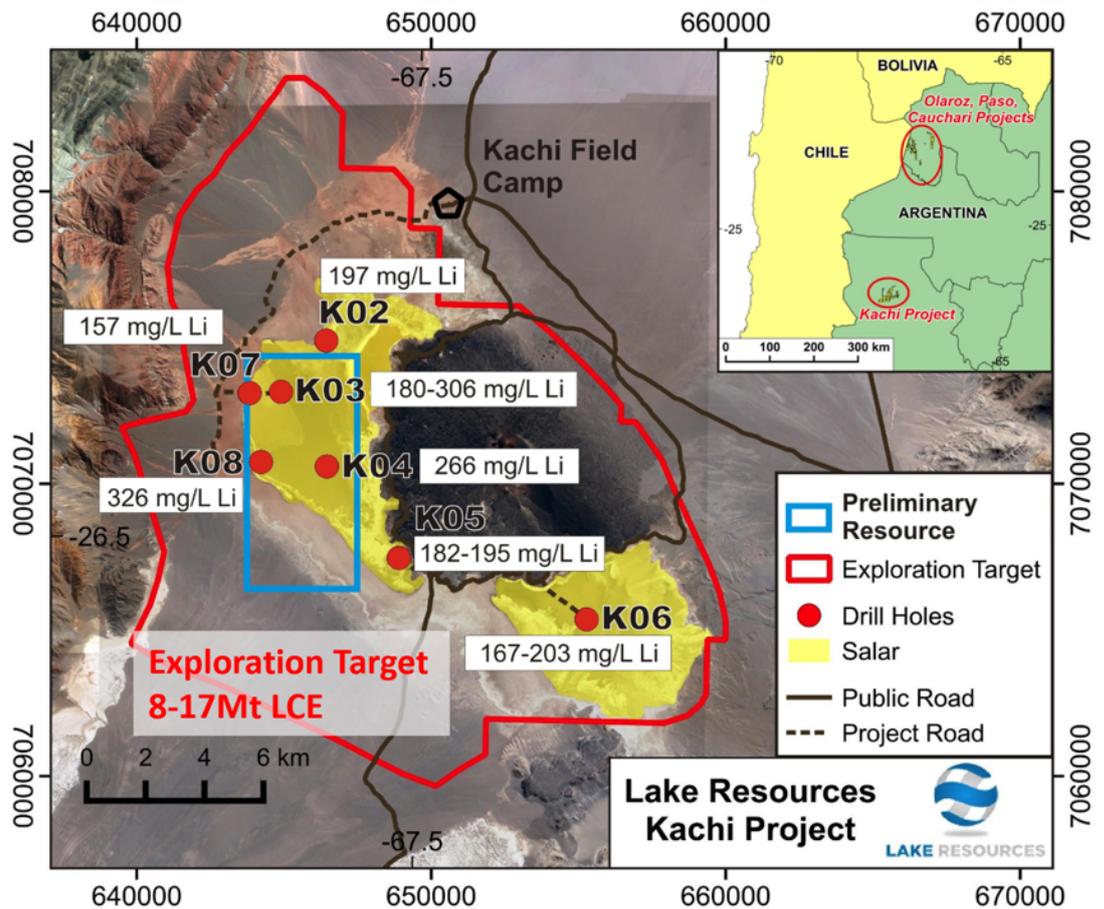
Figure 6.2 shows the location of test sites on the perimeter of the project area along with lithium results from this initial sampling program.

Figure 6.2 - Kachi Project Drilling Locations



Source: LKE. Details of the drilling platforms with averaged lithium concentrations for each drill hole.

Figure 6.3 - Details of the resource area and exploration target at Kachi



Source: LKE

The drilling campaign undertaken over 2018 has demonstrated that lithium brine is present in numerous horizons from near surface to at least 400m depth in drill holes spaced 11km apart (Figure 6.2). Drilling also confirms Kachi is a very large-scale covered salt lake over an area of around 25 x 15 kilometres (375 km²).

Beyond the grade, the purity of the brine is also key to deliver quality products free of deleterious elements.

LKE has to date drilled 15 brine investigation drill holes to depths of up to 403m across principal target areas of the Kachi salt lake. This has revealed thick permeable sand dominated sediments that are expected to continue below current drilling depth limits and beyond the surface dimensions of the salt lake. The ongoing 2017-2018 investigation program has completed a total of 3,150m of drilling to date, comprising diamond drill holes, rotary wells and installation of test production bores

Mineral Resource Estimate

On 27 Nov 2018, LKE announced a maiden mineral resource at Kachi as detailed in the table below.

The maiden resource estimate contains 1 Mt of lithium carbonate equivalent (LCE) as Indicated resources, and 3.4 Mt of LCE as Inferred resources, with a resource depth of 400m for both areas.

Kachi Mineral Resource Estimate (JORC Code 2012 Edition)

RESOURCE ESTIMATE KACHI						
	Indicated		Inferred		Total Resource	
Area km ²	17.10		158.30		175.40	
Aquifer volume km ³	6		41		47	
Brine volume km ³	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	4380
Resource tonnes	188,000	3,500,000	638,000	12,500,000	826,000	16,000,000
Lithium Carbonate Equivalent tonnes	1,005,000		3,394,000		4,400,000	
Potassium Chloride tonnes	6,705,000		24,000,000		30,700,000	

Source: LKE. Lithium is converted to lithium carbonate (Li₂CO₃) with a conversion factor of 5.32. Potassium is converted to lithium chloride (KCl) with a conversion factor of 1.91.

The mineral resource grade is relatively low, but it appears irrelevant considering the processing route tested quite successfully as described in the next section.

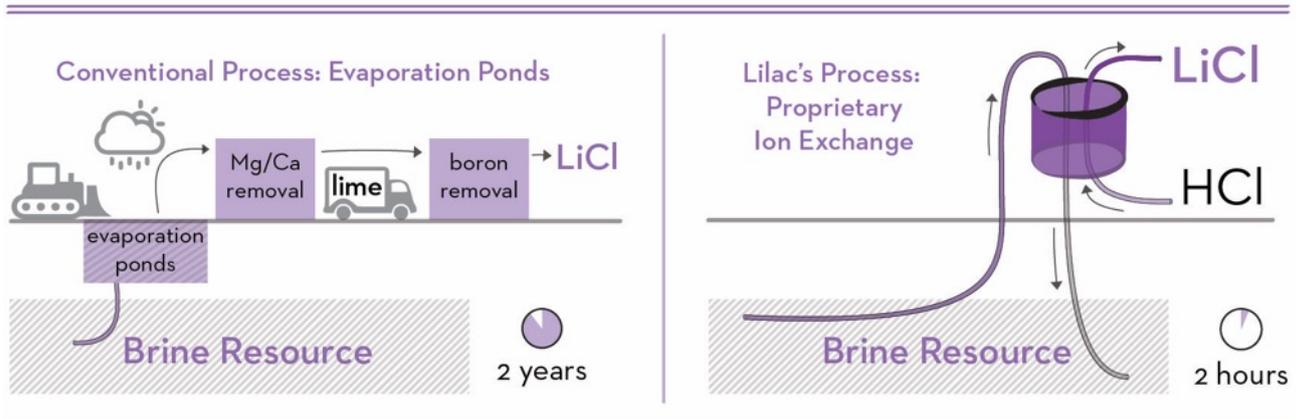
Processing Route

On 5 Sep 2018, LKE announced a partnership with Lilac Solutions. The aim of the partnership is to leverage Lilac’s proprietary ion exchange technology (the “Lilac Technology”) for the Kachi brine with the goal of establishing a rapid, robust, and low-cost process for producing lithium at Kachi.

Lilac Solutions is transforming lithium production with its innovative ion exchange technology for extraction of lithium from brine resources. Lilac deploys unique ion exchange media and related processes to extract lithium from a wide variety of brine resources with high recoveries, minimal costs, and rapid processing times.

Figure 6.3 shows the conventional process for lithium extraction of brines from evaporation ponds (left) versus Lilac’s innovative Ion Exchange method (right), which promises high recoveries in a few hours versus 9-24 months using the traditional method of evaporation to concentrate lithium. Lilac’s method allows for the reinjection of brines into the aquifer from where it is sourced, without significantly adjusting the water quality.

Figure 6.3 – Conventional Process vs Lilac Process



Source: Lilac Solutions

Using multiple brine samples from Kachi, the initial results released on 10 Dec 2018 showed high lithium recoveries of 85-90% from. Lithium brine concentrates were produced in just three hours using the Lilac process, with low impurities (Mg, Ca, Sr, B).

This compares favourably with conventional brine operations in South America, which have typical lithium recoveries below 50%, along with a lengthy 9 to 24 month waiting period for evaporation to produce a suitable lithium brine concentrate for further processing.

Lithium concentrations greater than 25,000 mg/L lithium were produced from ~300 mg/L lithium brine using the Lilac process, together with evaporative dewatering. Commercially, this could be undertaken using the Lilac process together with conventional reverse osmosis and further evaporative dewatering. This level of lithium concentration compares quite favourably with the levels required¹ for lithium carbonate or lithium hydroxide production typically:

No evaporation ponds means a capex saving in the order of US\$100-120 million in capital expenditure, as well as working capital savings to cover the evaporation waiting period.

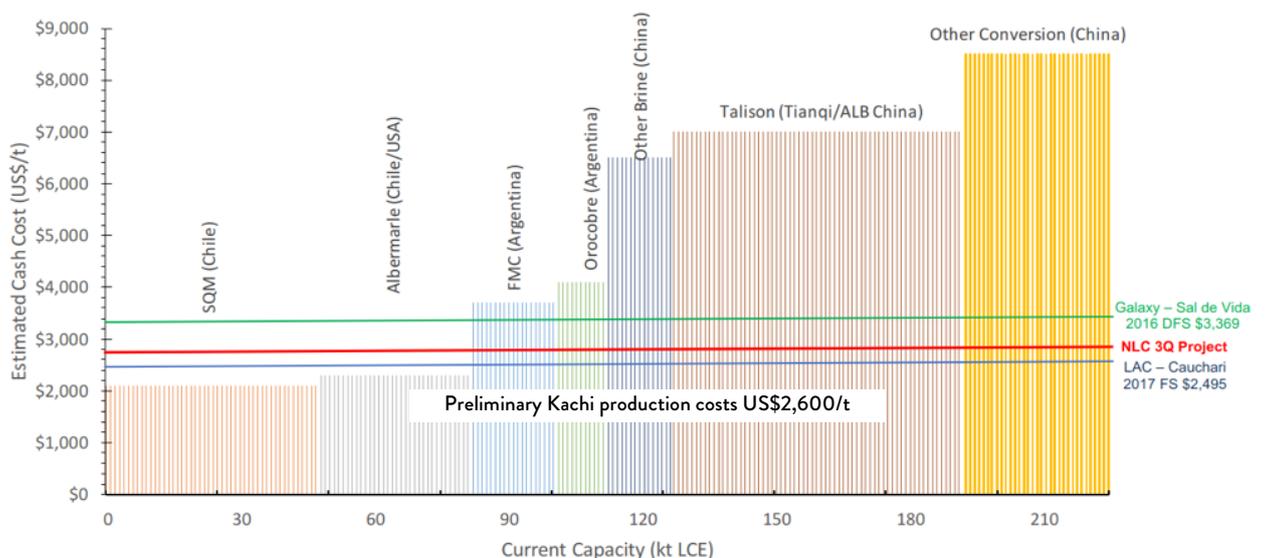
- Lithium concentration of 3,000 to 3,500 mg/L for the production of lithium carbonate, and
- Lithium concentration of 5,500 to 6,500 mg/L for the production of lithium hydroxide

The Lilac Technology has the potential to more than compensate for the lower lithium grade observed at Kachi, delivering an outstanding concentrated brine worthy of direct shipping.

This stream could then be processed downstream into battery-grade lithium carbonate product using conventional purification technologies in a conventional carbonate plant. Alternatively, this level of concentration can justify shipping this highly concentrated brine to Asia for further processing.

The study also showed that the process offers the potential for a globally-competitive cost of production, estimated to be US\$2,600/tonne (+/-30%) in the lowest cost quartile for lithium carbonate production. (Note: The estimated costs of production are preliminary estimates based on the Phase 1 Engineering study.)

Figure 6.4 – Global Lithium Cost Curve Estimate



Source: Roskill, Global Lithium LLC, Neo-Lithium Corp. SQM and Albermarle from the Salar de Atacama does not include CORFO royalty structure increasing costs

¹ The concentration of lithium ions in the brine is an economical hurdle rather than a technical one. For economic reasons, involving transport to processing facility, processing time and reagents consumption, the brine needs to reach a higher concentration than in the salt lake or aquifer prior to processing.

This approach eliminates the need for evaporation ponds, which are expensive to build, slow to ramp up, and vulnerable to weather fluctuations.

A significant environmental benefit comes from the removal of evaporation ponds as the footprint of the operation is significantly reduced. Further, the method allows for the remaining brine to be re-injected into the same aquifer from where it is sourced, without significantly adjusting the water quality, thereby preserving an aqueous resource in an arid environment.

Sustainability and Future Development

Lake Resources has a focus on an inclusive approach with local communities together with appropriate environmental management. The Kachi Project was selected by the State of Catamarca to be accelerated, together with a small group of energy and mining projects in the Province, to ensure appropriate development. A Letter of Intent was signed to facilitate the project through various permitting stages in exploration and development to production which bodes well for the future.

7. Olaroz/Cauchari Lithium Project

Lake holds granted mining leases of about 18,000 hectares in two areas in the Salar de Cauchari / Salar de Olaroz region in the Jujuy Province, in NW Argentina (Figure 7.1).

Lake originally secured the leases in early 2016 and is the only ASX junior exploration/development company with a large lease portfolio within this proven lithium brine province.

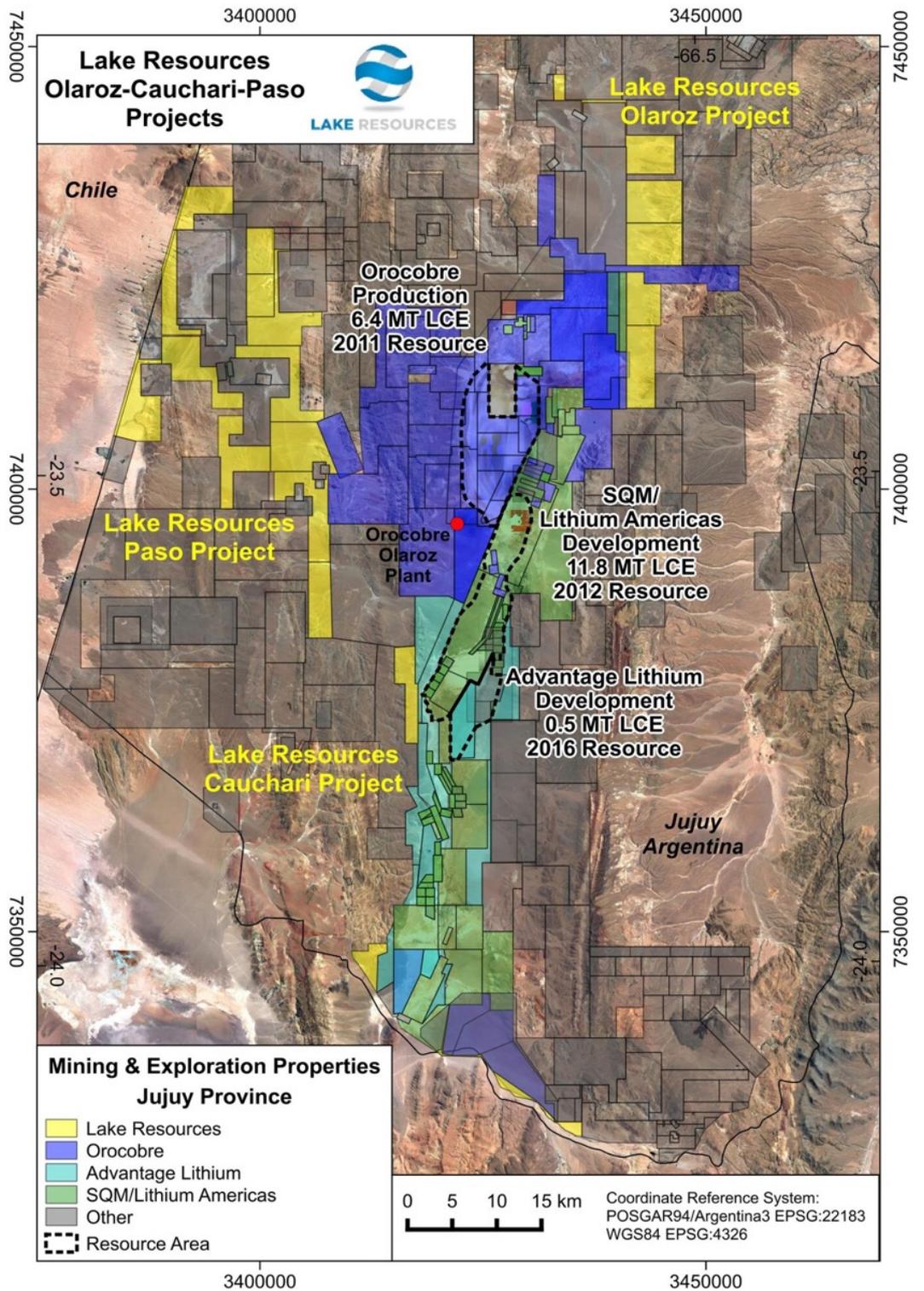
The leases cover areas in and around:

- Orocobre Limited, currently in production,
- Advantage Lithium, currently developing a project in joint venture (75/25) with Orocobre
- Lithium Americas Corporation, currently developing a project in joint venture (62.5/37.5) with the major lithium producer Ganfeng Lithium, in the Cauchari/Olaroz basin in the Jujuy Province.

Although data is limited within the LKE properties, the tenements may cover potential extensions to the Cauchari/Olaroz projects with potential extensions to aquifers.

Exploration will commence as soon as access is available to the areas. Substantial ground geophysics and drilling has been completed in the surrounding leases at Olaroz/Cauchari.

Fig. 7.1 - Olaroz/Cauchari Tenement Holding



Source: LKE. LKE tenements are displayed in yellow

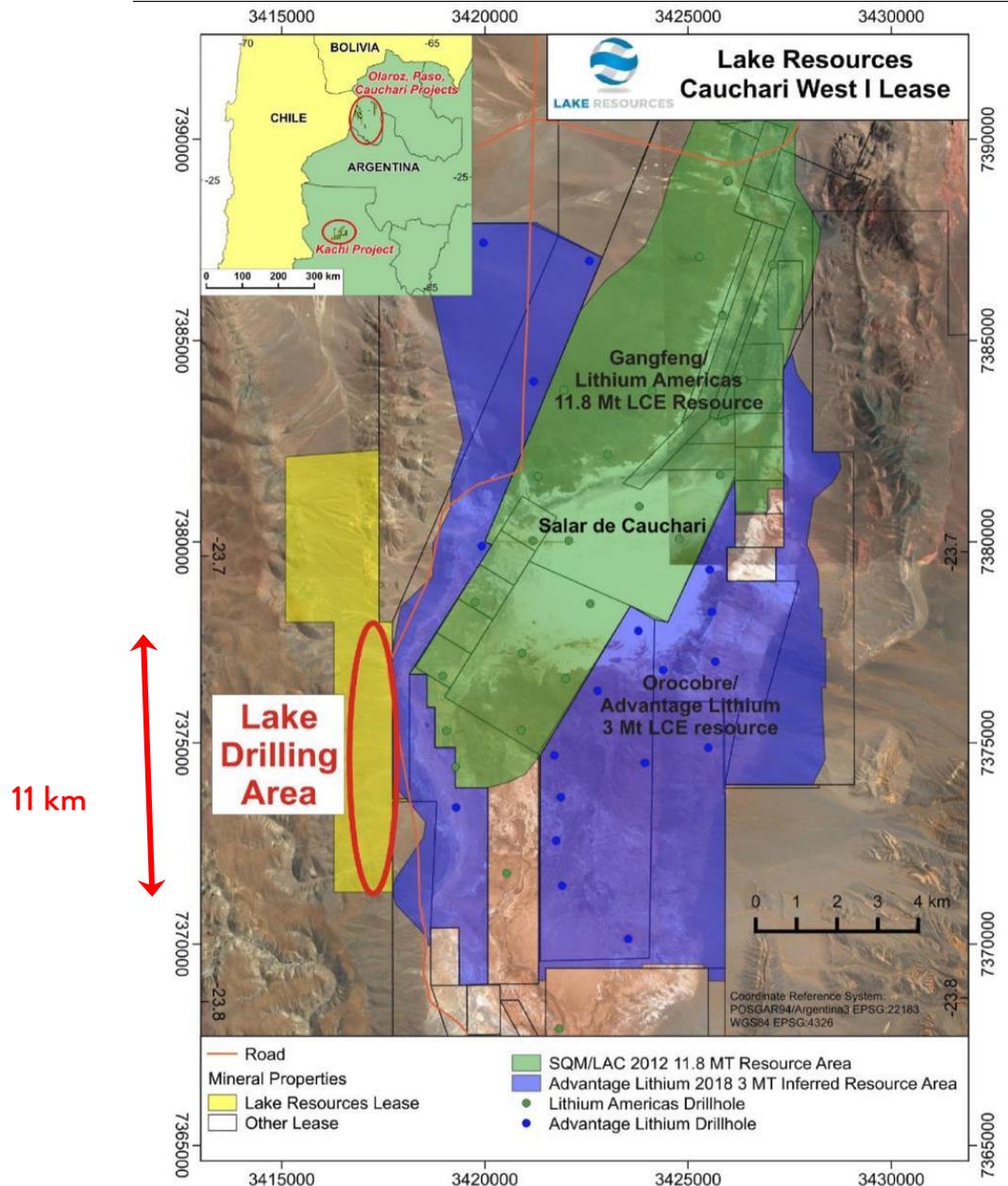
Cauchari Lithium Project

Lake Resources is currently drilling on the Cauchari West 1 lease (1,936 ha).

Four holes (1,500 metres) are planned with each drillhole initiated with a pre-collar well to 100 metres depth, except for drill hole #1. The second drillhole is located approximately 2,500 metres north of drill hole #1.

Drilling is anticipated to show a likely extension to the high grade lithium brines of Ganfeng Lithium/Lithium Americas and Orocobre/Advantage Lithium in adjacent properties (Figures 7.2 & 7.3). Third party drill results on the here include 600-705mg/L lithium with high flow rates close to the lease boundary. Based on recent seismic lines, Lake expects these high-grade lithium brines to extend into its leases and brine bearing sediments are estimated to extend to 300-400 metres deep, based on the interpretation of the seismic line completed by Lake.

Fig. 7.2 - Cauchari Lithium Brine Project



Source: LKE

Fig. 7.3 - Cauchari Brine Project Target

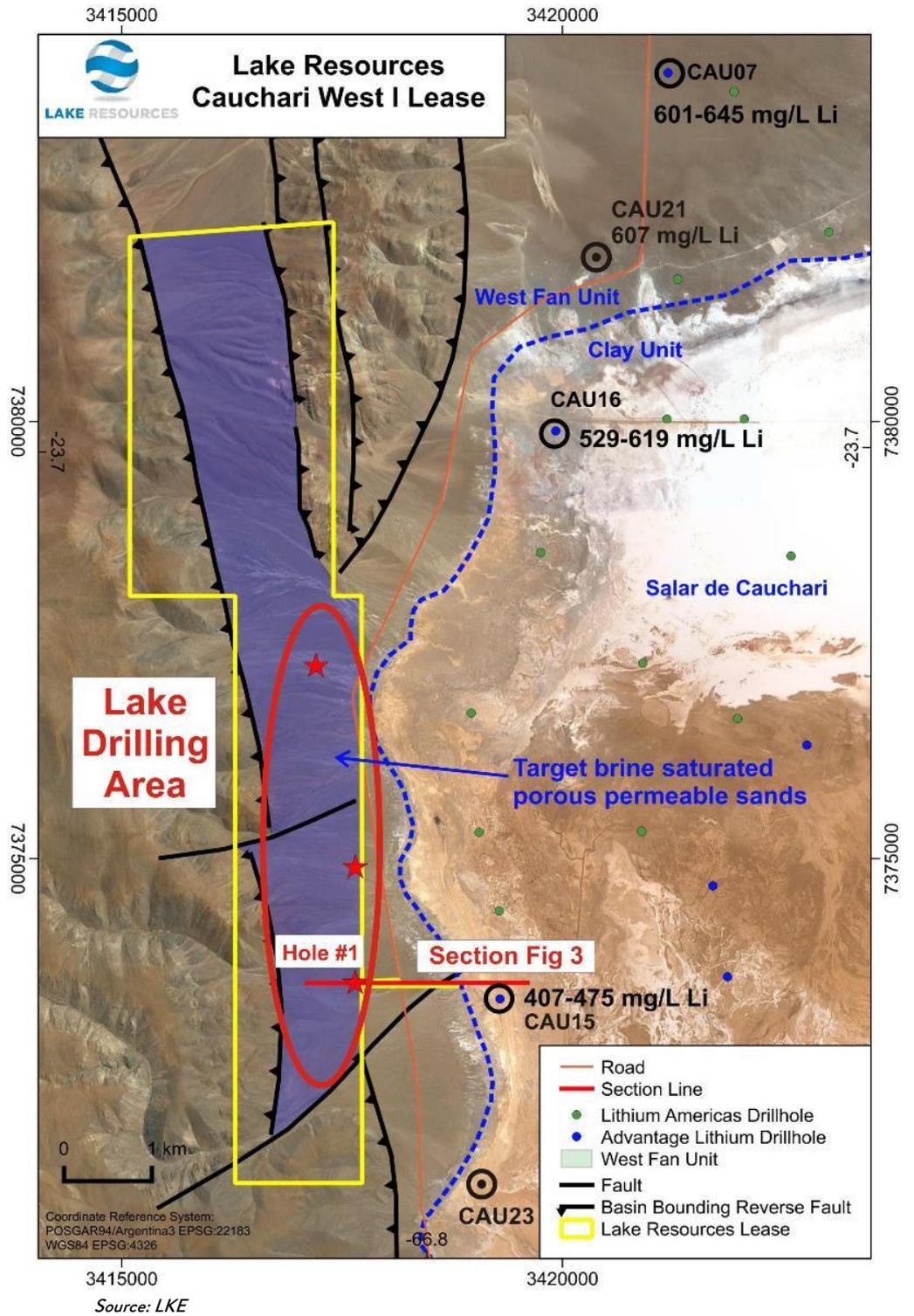
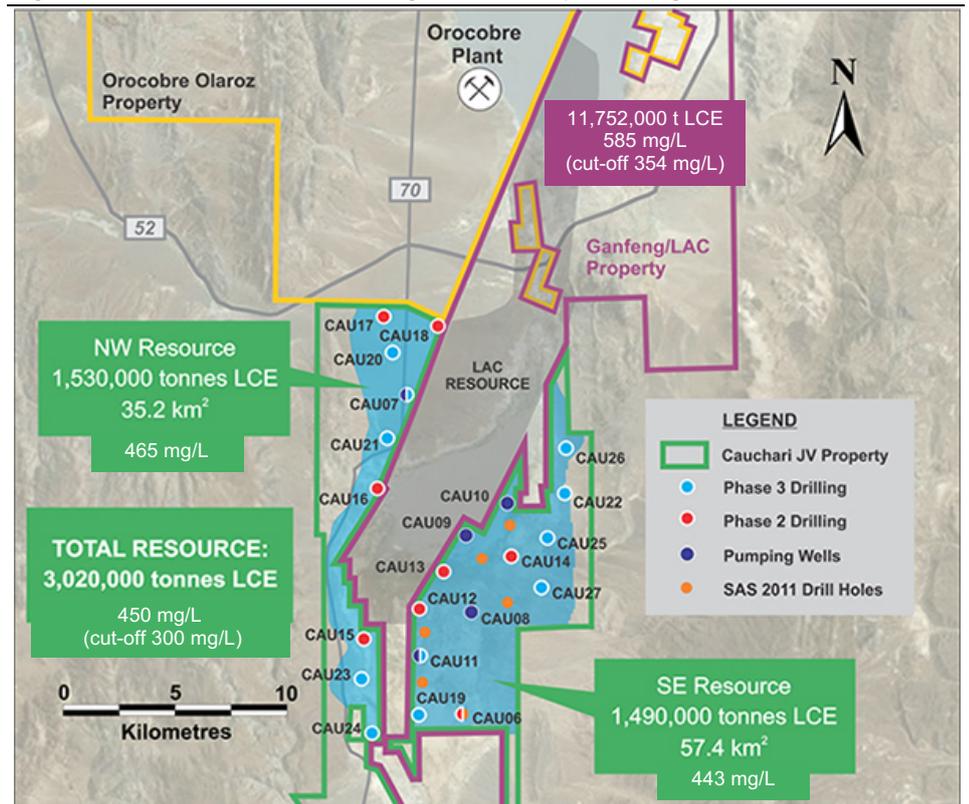


Fig. 7.4 - Location of Cauchari Drilling undertaken by Advantage Lithium



Source: AAL, LAC, Terra Studio

We note that the NW sector displays higher lithium concentrations. Then the recent drilling results part of the DFS and not considered in the mineral resource estimate include some significantly higher lithium (and potassium) concentrations.

Cauchari Recent Drilling Results from Advantage Lithium Close to LKE Cauchari West Tenement

Drilling Phase	Release Date	Drill Hole	Sector	Lithium mg/L	Potassium mg/L	Assay Interval	Mg/Li	SO ₄ /Li
2	5-Mar-18	CAU07	NW	601	4,853	135-343m	2.6	-
P	6-Feb-18	CAU08	SE	517	5,319	50-400m	2.4	-
P	< 2018	CAU09	SE	662	6,137	60-400m	-	-
P	< 2018	CAU10	SE	682	6,516	50-340m	-	-
P	6-Feb-18	CAU11	SE	515	4,577	50-476m	2.6	-
2	17-Apr-18	CAU12	SE	305	3,048	25-169m	2.5	-
2	17-Apr-18	CAU13	SE	435	4,088	39-281m	2.7	-
2	17-Apr-18	CAU14	SE	435	4,088	39-281m	-	-
2	17-Jan-18	CAU15	NW	407	3,196	102-234.5m	3.1	-
2	< 2018	CAU16	NW	436	3,608	14-298m	2.5	-
2	17-Apr-18	CAU17	NW	571	4,488	113-318m	2.3	-
2	9-Apr-18	CAU18	NW	476	3,727	165-320m	2.5	-
3	18-Sep-18	CAU20	NW	629	4,537	113-318m	2.1	2.4
3	18-Sep-18	CAU21	NW	607	4,691	125-265m	2.2	2.3
3	17-Oct-18	CAU22	SE	549	3,630	146.5-290.5m	2.4	-
3		CAU23	NW			Results pending		
3		CAU24	NW			Results pending		

Source: AAL. P= Pumping wells. Mg/Li ratios are similar to the producing Olaroz lithium resource at 2.3

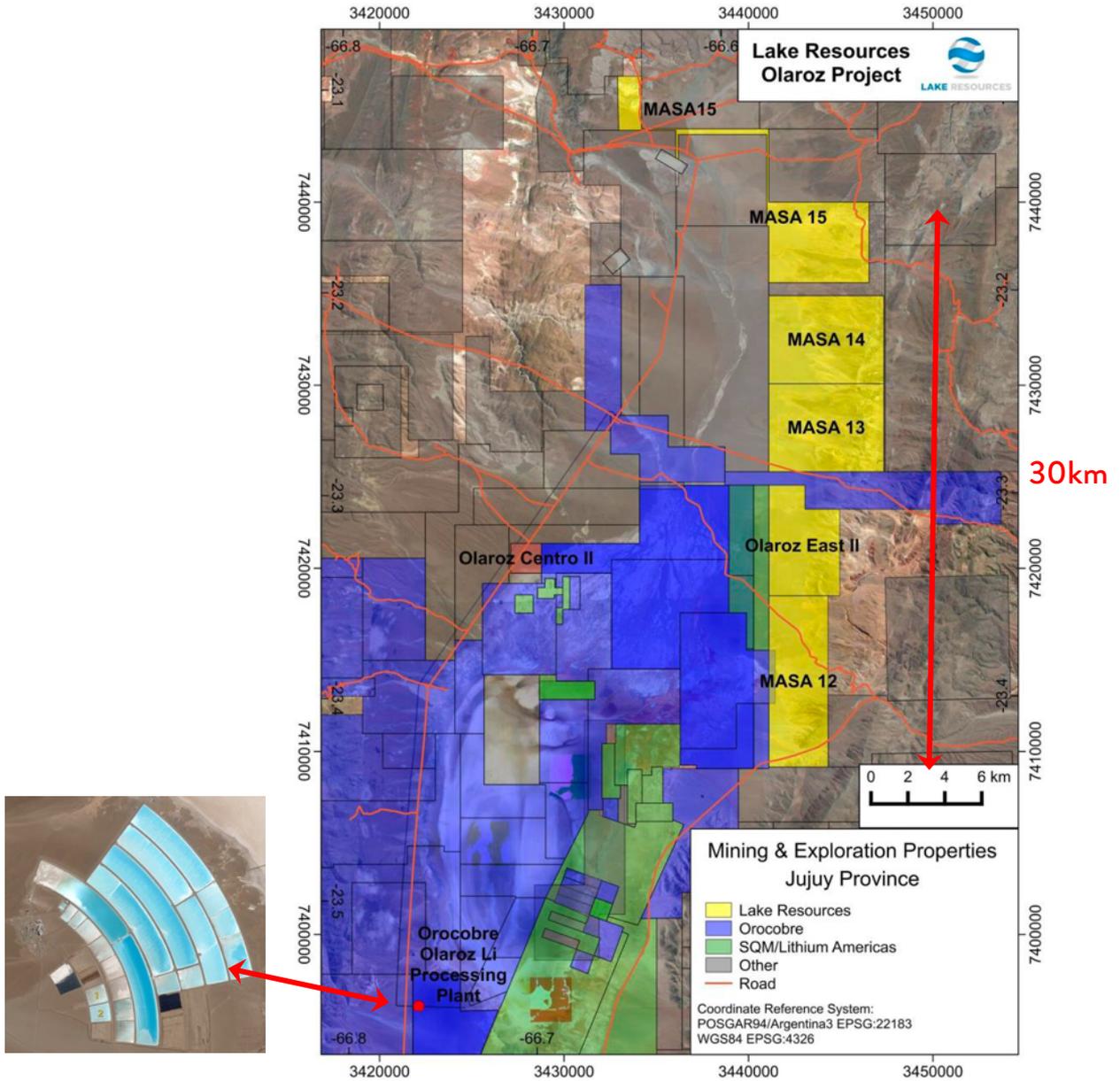
This bodes well for the upcoming drillings results on LKE Cauchari West tenements.

Olaroz Brine Project

The Olaroz Brine Project adjoins the Orocobre production area and the Lithium Americas/Ganfeng Lithium development project.

Lake is targeting the same aquifers on the basin margins along 30km where neighbours are extending the brine resource under the alluvial cover.

Figure 7.5 - Lake Resources Olaroz Lithium Brine Project



Source: LKE

Also LKE is pursuing the same geological model, where by higher lithium concentration can be found not only in the centre of the basin, but also at its margins, where hydrothermal fluids in fractured areas can further concentrate the brine, as shown on Fig. 7.6.

Figure 7.6 - Schematic Lithium Brine Geological Model

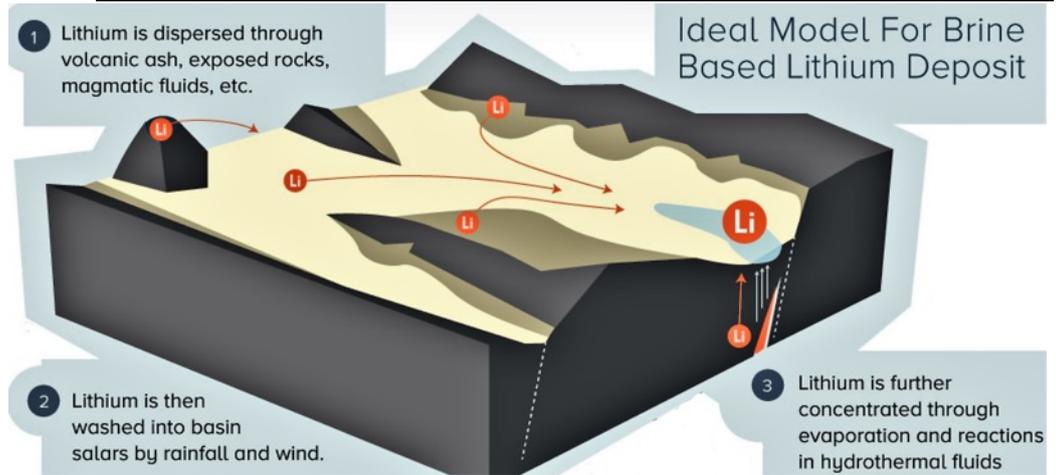
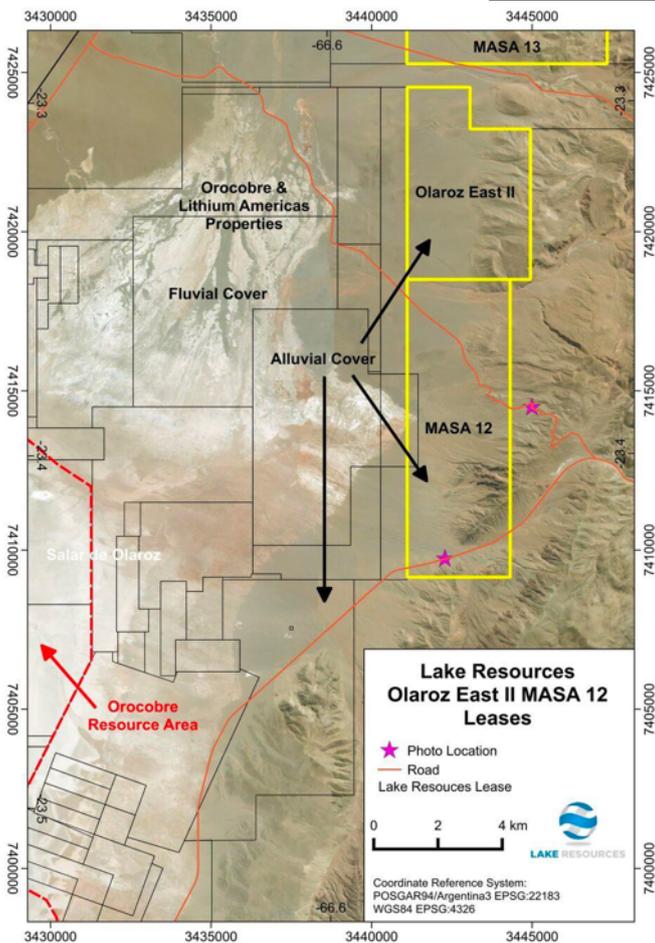


Figure 7.7 - Olaroz Brine Project Target



MASA12 looking N

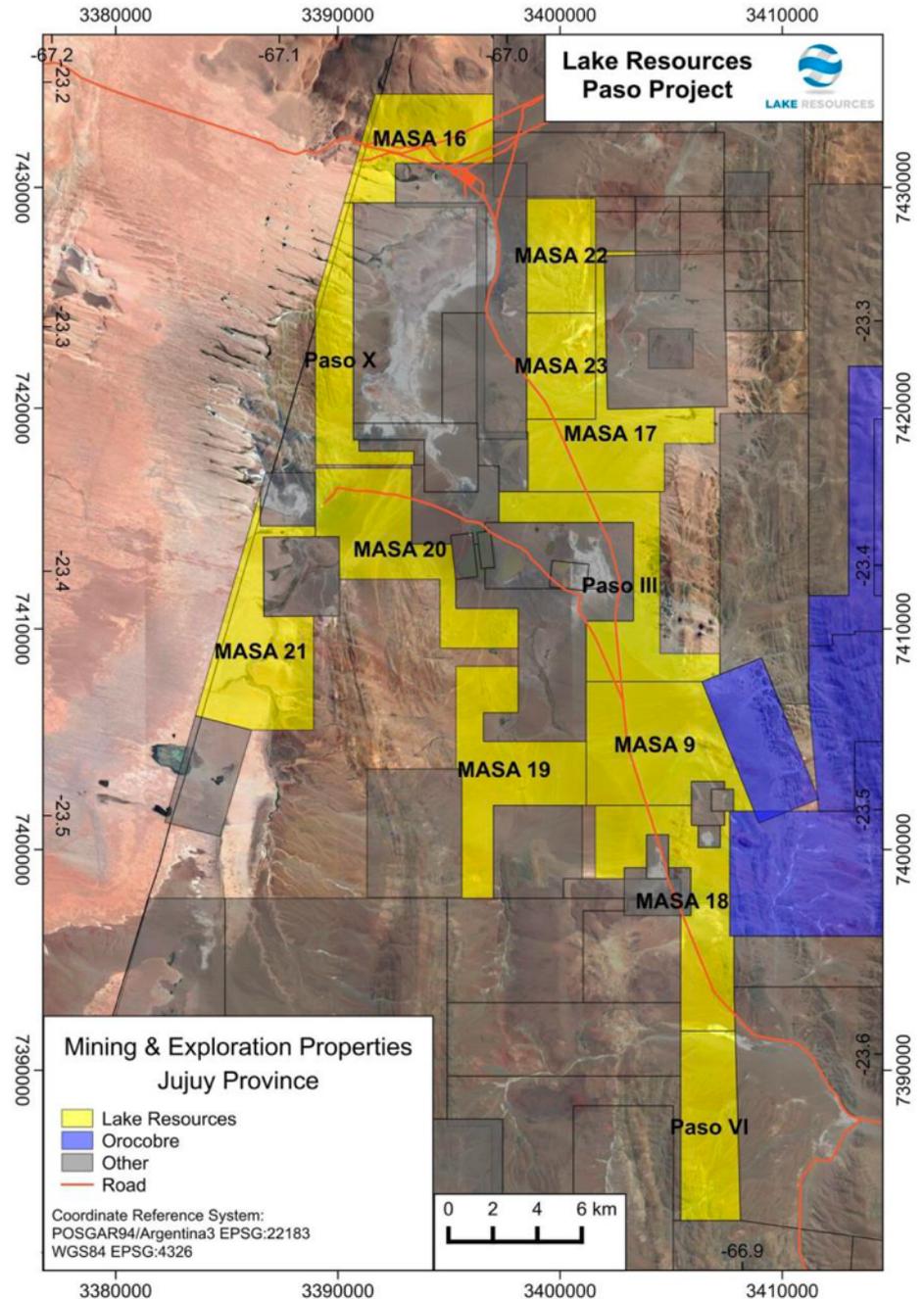


MASA 12 looking SW

8. Paso Lithium Project

The Paso Lithium Brine Project (~27,000 ha) is located in the Jujuy Province adjacent to the border with Chile, in the next salt lake immediately west of the Orocobre's Olaroz lithium brine production. Initial sampling indicated elevated results. Access is being sought for drilling to provide information and chemistry on potential lithium brine bearing aquifers.

Paso Lithium Brine Tenements



Source: LKE

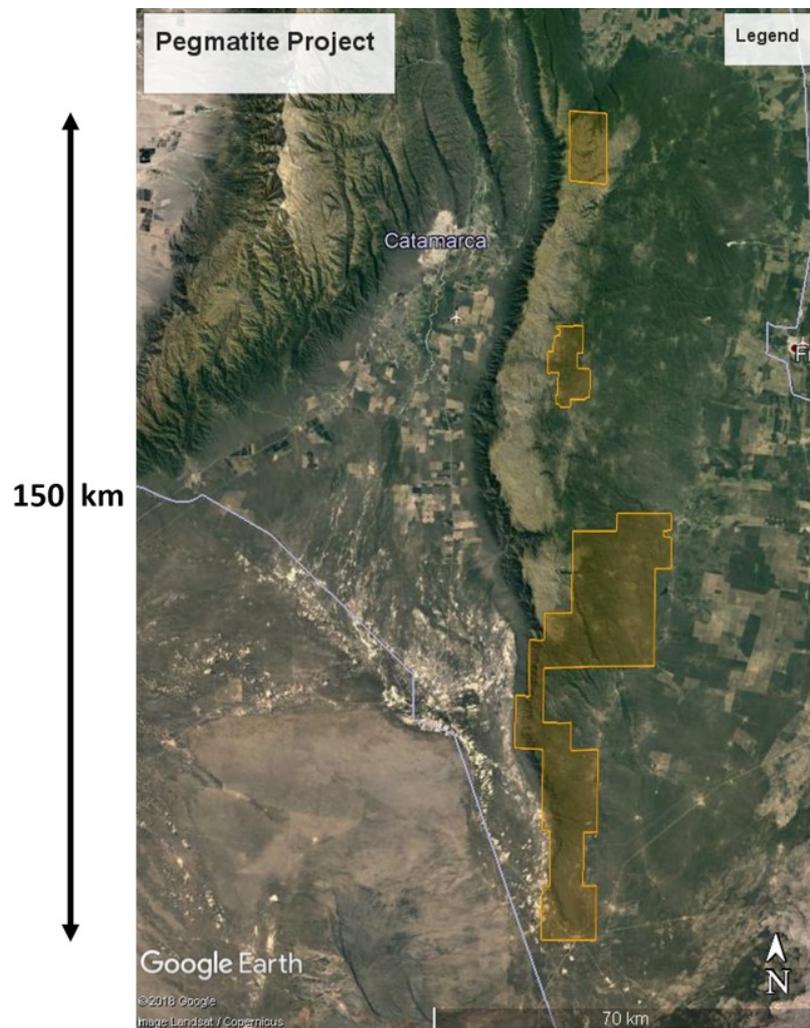
9. Catamarca Lithium Pegmatite Project

The Catamarca Pegmatite project (~795,000 ha) is located in Ancasti, Catamarca Province, approximately 50km east of the city of Catamarca, with good all-year road access at altitudes of 300-1,800m.

The area is known historically for small scale production from an area of lithium bearing spodumene pegmatites in the Ancasti Ranges. A technical review considered that the belt of pegmatites was substantially larger than the previously known areas. Literature reviews, satellite image studies and field visits helped identify a series of pegmatite swarms with lithium bearing potential over a belt of approximately 150km.

Lake Resources Catamarca Leases

In comparison Earl Grey deposit has a strike length of about two kilometres, with a mineral resource estimated over 1.4 km by 0.9 km



Source: LKE

Eight large cateos and nine smaller mining leases were applied for with a number now granted and others pending granting. Initial field visits by Lake personnel have demonstrated outcropping pegmatites with coarse grained spodumene crystals 30-70cm long in a number of locations. Although data is limited, an option agreement was considered a prudent way to further assess the potential. The option with Petra Energy SA has now been executed with LKE owning the leases 100% after providing 20 million LKE shares to the vendors. The Catamarca pegmatite project can be quickly developed to drill stage and a scoping or pre-feasibility study if results are encouraging.

Catamarca Leases - Outcropping Pegmatites



Source: LKE

Latin Resources (LRS.ASX) who hold adjoining leases (76,000 ha) in the same belt, announced drill intercepts such as: 3m @ 2.98% Li₂O, 5.2m @ 1.62% Li₂O, 6m @ 2.40% Li₂O, 7m @ 2.17% Li₂O, as part of its 2017 drilling campaign. LRS has a market capitalisation of \$8 million as at 10th December 2018.

10. Directors & Management Team

Stephen Promnitz, Managing Director

Stephen 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, Westpac) and held technical, corporate and management roles with major mining companies (Rio Tinto/CRA, Western Mining).

Stuart Crow, Chairman and Non-Executive Director

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

The Directors have strong backgrounds in mineral exploration, mining engineering, mine management, finance and accounting, with considerable international experience, particularly in Argentina where all LKE projects are located

Dr Nick Lindsay, Non-Executive Director

Nick has over 25 years' 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 and Materials Engineering 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. Mr Lindsay is currently CEO of Manuka Resources Ltd, an unlisted company, having previously held the position of President – Chilean Operations for Kingsgate Consolidated Ltd and is a member of the AusIMM and the AIG.

Andrew Bursill, Company Secretary

Mr Bursill is a qualified Chartered Accountant and has held the position of outsourced CFO and Company Secretary with numerous ASX listed, unlisted public and private companies, in a range of industries covering mineral exploration, oil and gas exploration, biotechnology, technology, medical devices and retail.

11. Investment Risks

LKE is exposed to a number of risks including:

- **Geological risk:** the actual characteristics of an ore deposit may differ significantly from initial interpretations.
- **Resource risk:** all resource estimates are expressions of judgment based on knowledge, experience and industry practice. Estimates, which were valid when originally calculated may alter significantly when new information or techniques become available. In addition, by their very nature, resource estimates are imprecise and depend to some extent on interpretations, which may prove to be inaccurate.
- **Commodity price risk:** the revenues LKE will derive through the sale of lithium carbonate, lithium hydroxide or spodumene concentrate expose the potential income to lithium price risk. The lithium price fluctuates and is affected by many factors beyond the control of LKE. Such factors include supply and demand fluctuations, technological advancements and macro-economic factors.
- **Exchange Rate risk:** The revenue LKE derives from the sale of lithium products exposes the potential income to exchange rate risk. International prices of various commodities are denominated in United States dollars, whereas the costs base is in Argentinian Peso and the financial reporting currency of LKE is the Australian dollar, exposing the company to the fluctuations and volatility of the rate of exchange between the USD, ARS and AUD as determined by international markets.
- **Mining risk:** A reduction in mine production would result in reduced revenue.
- **Processing risks:** A reduction in plant throughput would result in reduced revenue. In all processing plants, some metal is lost rather than reporting to the valuable product. If the recovery of metal is less than forecast, then revenue will be reduced.
- **Operational cost risk:** an increase in operating costs will reduce the profitability and free cash generation of the project.
- **Management and labour risk:** an experienced and skilled management team is essential to the successful development and operation of mining projects.

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