

Company	Rating	Price	Target
EV Materials			
GLN-ASX	Spec Buy	A\$1.10	A\$2.60
LKE-ASX	Spec Buy	A\$0.77	A\$1.15

Priced as of close of business 21 October 2021

Canaccord Genuity (Australia) Limited has received a fee as Lead Manager to the Galan Lithium Limited Capital Raising announced 12 August 2021.

Reg Spencer | Analyst | Canaccord Genuity (Australia) Ltd. | rspencer@cgf.com | +61.2.9263.2701
Timothy Hoff | Analyst | Canaccord Genuity (Australia) Ltd. | THoff@cgf.com | +61.2.9263.2745
James Farr | Associate Analyst | Canaccord Genuity (Australia) Ltd. | jfarr@cgf.com | +61.2.9263.2714

Some fine Argentinian brine

The case for lithium brines: Brines are a very important part of the lithium supply equation, in our view, estimated to account for ~45% of global LCE supply in 2021. Lithium brine deposits are typically characterised by large resource bases/ultra-long projects lives, production costs at the bottom of the global cost curve, and superior sustainability credentials (i.e. much lower CO₂ intensity based on solar evaporation concentration) compared to converted hard rock sources.

Recent sector M&A leaves few opportunities: We highlight a significant increase in M&A activity in the lithium sector in 2H'21, with most activity centered around large, undeveloped Resources in South America and Africa (Figure 3). In our view, this signifies a 'scramble' for Resources by predominantly Chinese groups, but more interestingly, highlights how few advanced brine projects now reside in the hands of independent/small cap companies.

Uncommitted projects now highly strategic from an offtake perspective: With few advanced brine projects remaining in the hands of independent companies, we further highlight that even fewer brine projects remain uncommitted with respect to offtake. As such, we see any advanced project free of offtake commitments as holding significant strategic value in the current climate (high prices, rapidly increasing competition for battery raw material supply, etc.). Our research suggests only Lake Resources' Kachi, and Galan Lithium's Hombre Muerto West projects remain free of offtake commitments.

Lake Resources (LKE-ASX | market cap A\$908m): Initiating coverage with SPEC BUY rating and \$1.15 target price - Direct lithium extraction (DLE) key in opening opportunities for more sustainable lithium production: LKE's primary asset is the Kachi brine project, located in Catamarca, Argentina. Kachi is being developed in partnership with lithium processing technology group Lilac Solutions (earning 25%), whose proprietary DLE process has been shown to be able to produce high purity Li₂CO₃ from low grade brines. DLE's advantages over conventional brine processing include smaller physical footprint, faster production process, higher recoveries/product purity, more capital efficient scalability, and comparable operating costs. LKE expects to complete a DFS for Kachi in late 2021/early 2022 for an initial 25ktpa LCE project, with studies due in 2022 to assess the potential to lift capacity to ~50ktpa. Timelines suggest first production from late 2024. Our \$1.15 target price is based on a risked NPV_{10%} for our modelled development/production scenario (LT Li₂CO₃ US\$15k/t). At 'spot' pricing (~US\$27k/t), our risked NAV increases to \$2.60/share.

Galan Lithium (GLN-ASX | market cap A\$320m): Initiating coverage with SPEC BUY rating and \$2.60 target price - Where grade (and chemistry) is king... GLN is advancing its high grade (2.3Mt at 946ppm Li) Hombre Muerto West (HMW) lithium project in Catamarca Province, Argentina. HMW's key point of difference is its superior brine chemistry (high lithium concentration, low impurities) which allow for comparably low operating costs and potential for high quality final product (6% LiCl, >99.7% Li₂CO₃). With final feasibility studies expected in the 2H'22, we envisage a 23.5ktpa conventional Li₂CO₃ operation from 2026, with a long mine life (+40 years) and EBITDA margins of >200% on our LT price deck (US\$15k/t). Our \$2.60 target price is based on risked NPV_{10%} for HMW, which increases \$6.00/share at spot pricing.

Contents

Investment highlights	3
Lake Resources: DLE opening up opportunities for more sustainable lithium production	6
Initiate coverage at SPEC BUY, \$1.15 target	6
LKE asset overview: Kachi brine project	10
Other LKE projects	21
Galan Lithium: Where grade (& chemistry) is king	23
Initiate coverage at SPEC BUY, \$2.60 target price	23
GLN asset overview: Hombre Muerto West	27
Other GLN projects	34
Appendix: Lithium brine project comps	37

Figure 4: Brine development projects showing timeline to production, strategic and offtake partners

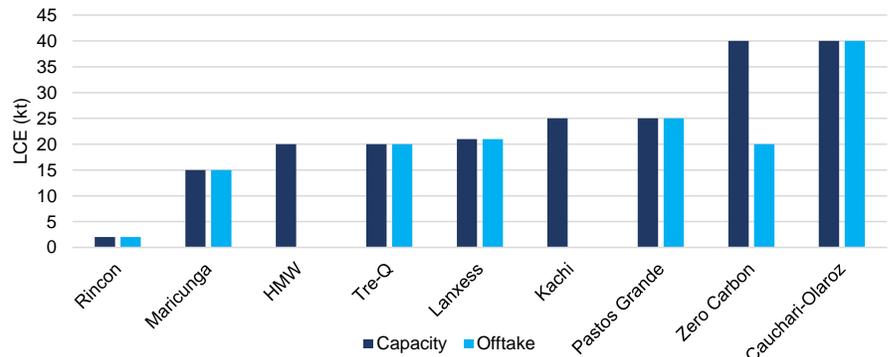
Project	Owner	Type	Capacity (LCE)	2022e	2023e	2024e	2025e	Strategic partner	Offtake
Cauchari-Olaroz	Lithium Americas (LAC.TSX)	Brine	40	█				Ganfeng - China	Ganfeng - China
Rincon	Argosy Minerals (AGY.ASX)	Brine	2	█				Na	Mitsubishi* - Japan
Lanxess	Standard Lithium (SLI.TSX)	Brine	20		█			Lanxess - Germany	Lanxess - Germany
Pastos Grande**	Millennial Lithium (ML.TSX)	Brine	25			█		CATL - China	CATL - China
Maricunga	Lithium Power Int (LPI.ASX)	Brine	15				█	Mitsui - Japan	Mitsui* - Japan
Tre-Q**	Neo Lithium (NLV.TSX)	Brine	20				█	Zijin Mining - China	Zijin Mining - China
Zero Carbon	Vulcan Energy (VUL.ASX)	Brine	40				█	Na	Renault, LG Chem, Umicore - EU, S Korea
Hombre Muerto West	Galan Lithium (GLN.ASX)	Brine	20				█	Na	Na
Kachi	Lake Resources (LKE.ASX)	Brine	25				█	Lilac Solutions	Na

Source: Company reports, Canaccord Genuity estimates;*- non binding ** - under takeover offer

Uncommitted projects now likely to be highly strategic from an offtake standpoint

With few advanced brine projects remaining in the hands of independent companies, we further highlight that even fewer of these projects remain uncommitted with respect to offtake. As such, we see any advanced project free of offtake commitments as holding significant strategic value in the current climate (high prices, deficit market condition, strong demand growth expectations). As illustrated in Figure 5, our research suggests only Lake Resources’ Kachi, and Galan Lithium’s Hombre Muerto West projects are yet to commit to offtake.

Figure 5 Brine development projects showing capacity vs offtake commitments



Source: Company reports, Canaccord Genuity estimates. Note, Pastos Grande – under takeover offer from CATL, Tre-Q – under takeover offer from Zijin Mining

Lake Resources (LKE-ASX): Initiating coverage with a SPEC BUY rating and \$1.15 target price

Direct lithium extraction (DLE) technology the key in opening up new opportunities for more environmentally sustainable lithium production

LKE’s primary asset is the Kachi brine project, located in Catamarca, Argentina. The project is being developed in partnership with lithium processing technology group Lilac Solutions (earning 25%), whose proprietary DLE process has been shown to be able to produce high purity lithium carbonate from low grade brines. DLE, while still a relatively immature technology, carries numerous benefits over conventional solar evaporation. These include smaller physical footprint (i.e. no evaporation ponds), faster production process, higher recoveries and product purity, and more capital efficient scalability. We think Kachi’s sustainability credentials will make the project attractive to offtakers, noting also that the project has attracted indicative funding support from UK and Canadian export credit agencies (ECAs) for up to 70% of capex requirements.

LKE expects to complete a DFS for the project in late 2021/early 2022 for an initial 25ktpa LCE project, with studies due in 2022 to assess the potential to lift capacity to ~50ktpa. Timelines suggest first production from late 2024. Our \$1.15 target price is based on a risked NPV10% for our modelled development/production scenario (LT Li₂CO₃ US\$15,000/t).

Galan Lithium (GLN-ASX): Initiating coverage with a SPEC BUY rating and \$2.60 target price

Where grade (and chemistry) is king...

GLN is advancing its high grade Hombre Muerto West (HMW) lithium project in South America's Lithium Triangle on the Hombre Muertos salar in Argentina. The projects point of difference is its superior brine chemistry (low impurities) which allow for comparably low operating costs and high quality final product (6% LiCl, 99.98% Li₂CO₃). GLN expects to release its final feasibility studies for the project in 2H'22 which we understand will utilise recently acquired concessions to support an increased production scenario of 25ktpa over project life of 40 years. GLN has also highlighted the potential for the alternate development of a lithium chloride project which may present as a lower capex, faster path to market. Our \$2.60 target price is based on a risked NPV10% for our modelled development/production scenario (LT Li₂CO₃ US\$15,000/t).

Lake Resources: DLE opening up opportunities for more sustainable lithium production

Initiate coverage at SPEC BUY, \$1.15 target

Overview

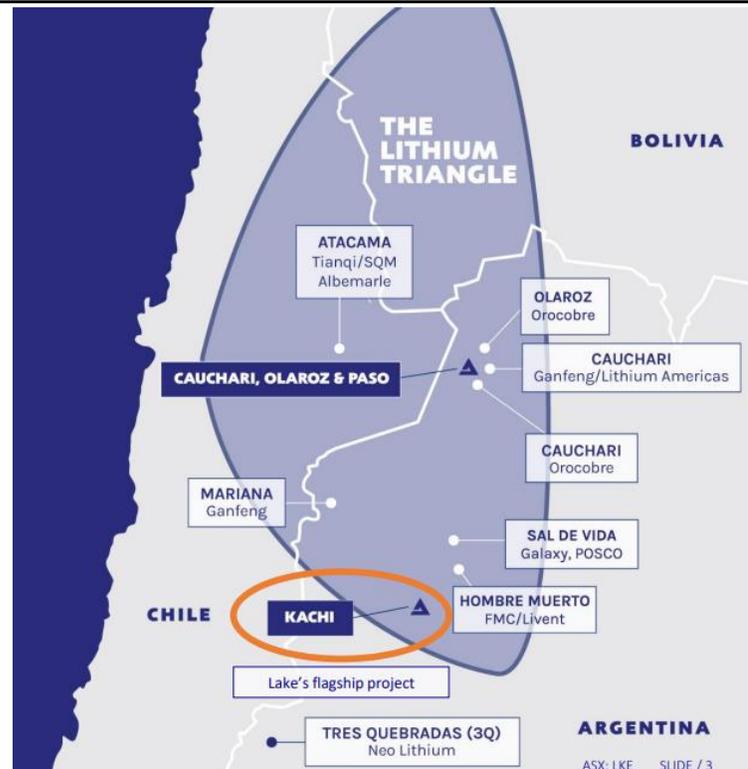
Lake Resources' key assets are the pre-DFS Kachi lithium brine project (in JV with process technology group Lilac Solutions who are earning up to 25%) in Catamarca province, NW Argentina, and the earlier stage Cauchari, Olaroz and Paso brine projects located proximal to Orocobre's (ORE-ASX: \$9.02 | BUY, TP \$12.00 | Reg Spencer) Olaroz operation and Lithium America/Ganfeng's Cauchari development in Jujuy province.

LKE completed a PFS for the Kachi project in 2020, which was based on the use of Lilac's Solutions proprietary DLE process to produce 25.5ktpa Li₂CO₃ over an initial 25-year project life. DLE, while relatively novel, is considered to have superior sustainability credentials compared to conventional evaporation-based brine operations.

The potential of the Lilac DLE process can be evidenced through expressions of interest from UK and Canadian ECAs to fund up to 70% of project development costs (based on the Lilac DLE process), in addition to Lilac having recently completed a US\$150m Series B financing including investment from BMW, SK Materials and Sumitomo.

LKE and Lilac formalised their partnership (with Lilac set to earn 25% direct interest in Kachi via execution milestones) in September 2021, with the partners due to complete a DFS for Kachi in DecQ'21, ahead of assessment for the potential of expansion of capacity to 50ktpa LCE during 2022. Based on indicative project timelines, first production from Kachi could be achieved in 2025.

Figure 6: LKE project location map



Source: Company reports. Note: Galaxy acquired by Orocobre in 2021.

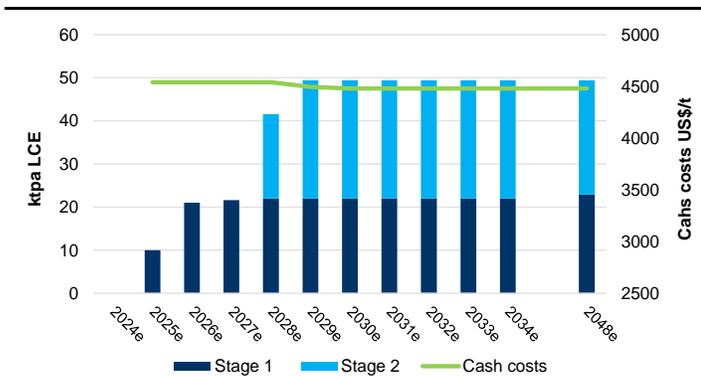
Forecasts and valuation

CG production scenario

Our NAV is based on our modelled production scenario for Kachi (see CG development/production scenario), comprising an initial 22ktpa LCE DLE project, increasing to 49ktpa from Year 3 of production (CGe 2027E). Other key assumptions include Stage 1 capex of US\$600m and average cash costs of US\$4,485/t (vs LKE 2020 PFS US\$540m and US\$4,178/t LCE respectively), over a modelled project life of 25 years (total production of 1.1Mt LCE vs Mineral Resources of 4.4Mt LCE).

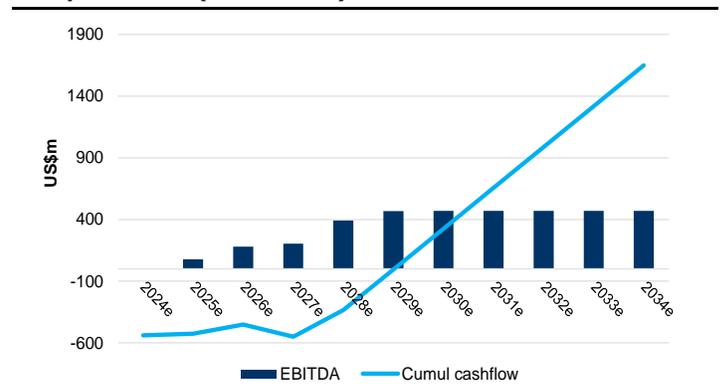
Based on our LT lithium price deck (US\$15,000/t Li₂CO₃ from 2025), we estimate the project is capable of generating average annual EBITDA of ~US\$200m from Stage 1, increasing to US\$460m from our assumed Stage 2 expansion (capex US\$360m, from 2027E). At spot prices of US\$27,000/t, this increases to ~US\$440m under Stage 1, and ~US\$1bn at Stage 2 run rates.

Figure 7: CG production scenario (2024E-48E)



Source: Canaccord Genuity estimates

Figure 8: EBITDA and cumulative cash flow forecasts on CGe price deck (2024E-34E)



Source: Canaccord Genuity estimates

Net asset valuation

We value the Kachi lithium project (risked NPV10%) at US\$1.8bn, which is based on our modelled development/production scenario (see CG development/production scenario) and Li₂CO₃ price assumptions (LT from 2025E US\$15,000/t). Our sum-of-the parts valuation for LKE comprises LKE's 75% equity share of the project, a nominal figure ascribed to other, earlier stage exploration projects, and is adjusted for corporate costs, current cash, and ITM money options. We dilute our NAVPS for ITM options and derive an initial target price of A\$1.15 (rounded).

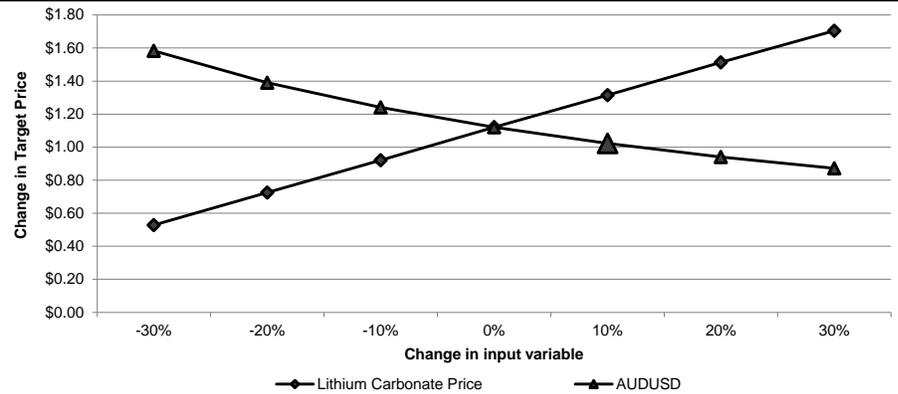
We have not made any assumptions for project financing, and as such, have risk adjusted our valuation for the KV project to 75%.

Figure 9: Sum-of-parts valuation for LKE

	US\$m	A\$m	RISK ADJ.	EQUITY	A\$m	PER SHARE DILUTED
Kachi	1767.79	2360.89	75%	75%	1328.00	\$0.97
Exploration & Projects	65.00	86.81			86.81	\$0.06
Corporate		-37.50			-37.50	\$0.03
Cash		47.76			47.76	\$0.03
ITM options		98.80			98.80	\$0.08
TOTAL	1941.86	2556.77			1523.88	A\$1.13
					Rounded	A\$1.15

Source: Canaccord Genuity estimates

Figure 10: NAV sensitivity to Li₂CO₃ pricing and AUD:USD



Source: Canaccord Genuity estimates

Investment risks

Financing risks

Our analysis suggests that LKE will require additional capital to fund the development costs for the Kachi project. As a pre-cash flow company, LKE is reliant on equity/debt/external capital to fund capital commitments, and there is no guarantee that accessing these markets will be achieved without dilution to shareholders. Furthermore, accurate estimates of capital costs for the project remain subject to completion of final engineering, which may see capital requirements exceed our model assumptions.

Permitting and construction risks

Permitting delays may result in risks of delivery of the Kachi project. Construction risks also exist, and while an EPCM contract will be sought there may be risks of delay, cost overruns and scope changes.

Operational risks

Once in production, the company will be subject to risks such as plant/equipment breakdowns, metallurgical (meeting design recoveries within a complex flowsheet), materials handling and other technical issues. An increase in operating costs could reduce the profitability and free cash generation from the operating assets and negatively impact valuation. Further, the actual characteristics of an ore deposit may differ significantly from initial interpretations, which can also materially impact forecast production from original expectations.

Resource risks

The resource is subject to a number of risks and may require a high rate of capital expenditure or changes to cost structures. Risks can also be associated with exploration and lack of accuracy in interpretation of geochemical, geophysical, drilling and other data. Our model assumptions include an amount of Indicated and Inferred Resources, which may or may not ultimately be proven to be economic and converted into Reserves.

Commodity price and currency fluctuation

The company is exposed to commodity price and currency fluctuations, often driven by macro-economic forces including inflationary pressure, interest rates and supply and demand of commodities. These factors are external and could reduce the profitability, costing and prospective outlook for the business.

Corporate and finance

Balance sheet and liquidity

LKE disclosed a cash position of A\$26m as at 30 June 2021, and no long-term debt. We note that the exercise of options (see below) in the intervening period will have delivered a further ~A\$25m in cash, leaving LKE with estimated liquidity at end 2021 of ~A\$48m. Prior to this, LKE completed a A\$20.6m placement at A\$0.165/share in Jan'21.

Based on our modelled development scenario, total capital costs for Stage 1 are assumed at US\$600m, LKE and its JV partners will require additional funding to development the project. However, we highlight that LKE has received expressions of interest from various Export Credit Agencies to fund a significant portion of development costs:

- UK Export Finance (Aug'21) – “strong” Expression of Interest to support approximately 70% of total finance required, subject to standard project finance conditions. Indicative terms include a principal repayment period of 8.5 years post construction, with the EOI also indicating that funding could be increased to cover 70% of development costs for an expanded scenario to >50ktpa LCE.
- Export Development Canada (Sep'21) – letter of interest to potentially work alongside UKEF to support ~70% of total finance required for the Kachi project. EDC has indicated direct lending of up to US\$100m, subject to sourcing requirements.

While the EOI's are not binding (subject to standard project finance terms, due diligence, suitable structured offtakes, completion of the DFS, environmental permitting etc), we see interest from such ECA's as providing some level of third party verification of the technical and economic merits of the Kachi project. Moreover, ECA backing is a source of low cost (fixed <2% p.a. based on current OECD CIRR), long tenure project finance, and if progressed to binding funding arrangements, dramatically reduces the projects funding risk, in our view.

Assuming 70% of our modelled capex is covered by ECA funding, LKE's attributable share of equity funding (less 25% equity attributable to JV partner Lilac Solutions) would be ~US\$135m (vs LKE's current A\$916m market cap).

Capital structure

LKE's capital structure is shown in Figure 11 below. In Aug'21, LKE announced a Bonus Issue to existing shareholders comprising 10 options, exercisable at A\$0.35 each to 15 Oct 21, for every 10 shares held. For every Bonus Option exercised, holders received an Additional Option, exercisable a \$0.75 until 15 Jun 22.

Figure 11: LKE Capital structure

Issued Shares	m	1,178.63	Price \$0.76	Date
Options 1	m	67.303	0.30	9 Mar 2023
Options 2	m	11.250	0.300	9 Mar 2023
Options 3	m	1.000	0.165	27 Jan 2023
Options 4	m	1.500	0.30	24 May 2023
Bonus Option 1	m	73.830	0.75	15 Jun 2022
Options 6	m	35.000	0.55	31 Dec 2024
<i>Total Options</i>	<i>m</i>	<i>189.88</i>	<i>0.23</i>	
Fully Diluted	m	1,368.51		

Source: Company reports

Substantial shareholders

There are no disclosed substantial shareholders.

Directors and management

Chairman – Stuart Crow

Mr Crow has extensive global experience in financial services, corporate finance and investor relations. Other directorships include Non-Executive Director at Todd River Resources and Non-Executive Director at AIM-listed lithium/gold company Iron Ridge Resources.

Managing Director/CEO – Stephen Promnitz

Mr Promnitz was appointed Managing Director of LKE in 2016, having had extensive mining industry and finance experience with companies including WMC, Rio Tinto and Citigroup.

Executive Technical Director – Nick Lindsay

Dr Lindsay has over 25 years' experience in Latin America, including technical and commercial roles for mid-tier and major Resources companies. Other directorships include CEO of Manuka Resources.

Non-Executive Director – Robert Trzebski

Mr Trzebski was appointed Non-Executive Director in December 2019, having held operational, technical and commercial positions in global mining markets including Argentina, over a 30 year career. He is currently COO of Austmine.

Non-Executive Director – Amalia Sáenz

Sra Sáenz was appointed Non-Executive Director in July 2021, and is an experienced energy and natural resources lawyer based in Buenos Aires. A leading member of the Association of International Petroleum Negotiators, she has extensive experience in merger and acquisition, financing, joint venture and operating agreements in Argentina. She has also worked in Central Asia and the United Kingdom, gaining experience in exploration and production development across international borders and cultures.

CFO/Company Secretary – Peter Neilsen

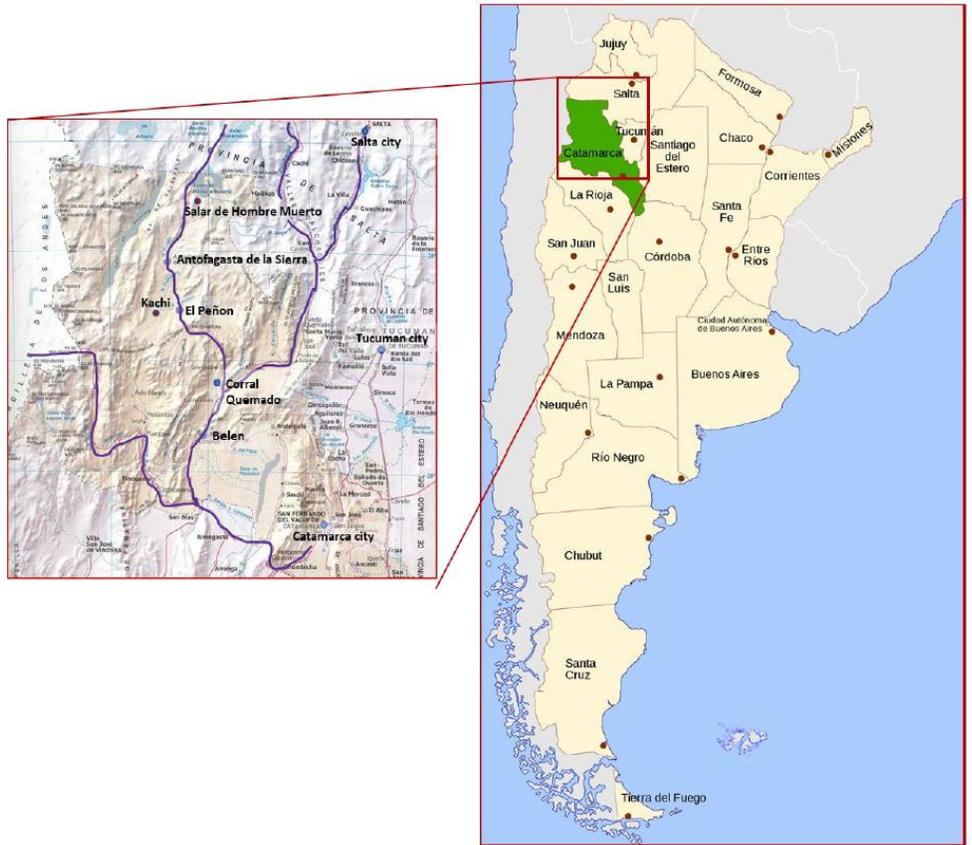
Mr Neilsen is a Chartered Accountant with >20 years' experience in financial and asset management. Prior roles include CFO, Company Secretary, finance manager and other senior executive positions for listed and unlisted natural resources companies including Barrick, Xstrata and Round Oak.

LKE asset overview: Kachi brine project

Location and access

The Kachi project is located on the Salar de Carachi Pampa in Catamarca Province, within the Puna region of NW Argentina, 22km west of the small town of El Penon, and 650km NW of the major provincial city of Cordoba (Figure 12). Salar de Carachi Pampa is located approximately 100km south of Salar de Hombre Muerto, which is home to Livent's >20ktpa lithium brine operation, Orocobre's Sal de Vida development, and Galan Lithium's Hombre Muerto West project.

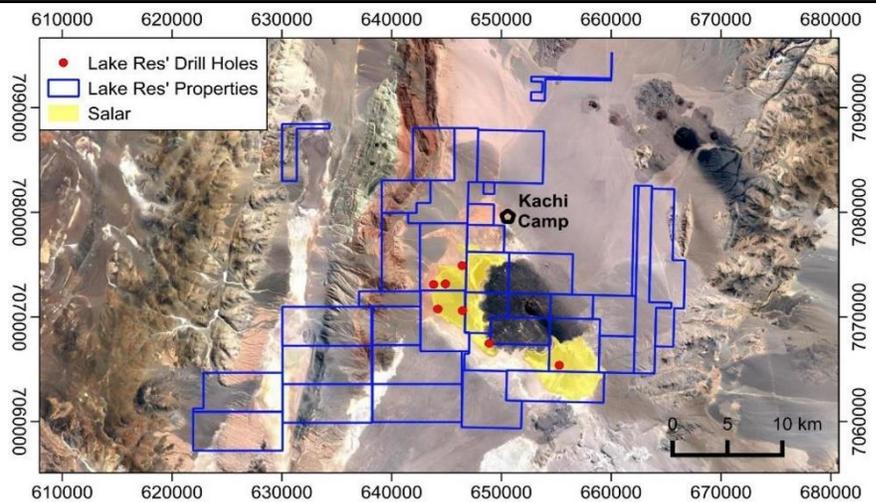
Figure 12: Project location map



Source: Company reports

The project covers ~74,000ha within granted concessions, and is situated at an elevation of 3,000m. Access to the project is by road from Catamarca City (~490km) via El Peñon. The project is relatively remote, with little existing infrastructure.

Figure 13: Project concession plan



Source: Company reports

Geology and Mineral Resources

The project area is located within a large hinterland drainage basin covering 6,800km², with the Kachi salt lake itself covering ~135km². The basin is interpreted to drain the lithium bearing volcanic rocks of the Cerro Galan (also the interpreted source of lithium bearing brines at Hombre Muerto). Basin infill sediments have been shown by drilling to comprise predominantly of sands with intercalated silts and clays, which play host to lithium bearing brines. Halite has been noted to be variable (and limited to near surface depths). Initial hydraulic testing indicates high permeabilities for sandy lithologies, which are to be further tested with production bores as part of the demonstration production. Geophysics have suggested the basin extends to a depth of ~700m.

Mineral Resources

LKE defined a maiden Mineral Resource estimate for Kachi in 2018, comprising 4.4Mt LCE at an average Li concentration of 211ppm, including Indicated Resources of 1Mt LCE at an average 290ppm Li. We note that the Resource has been defined from 50m (excluding halite) to 400m below surface.

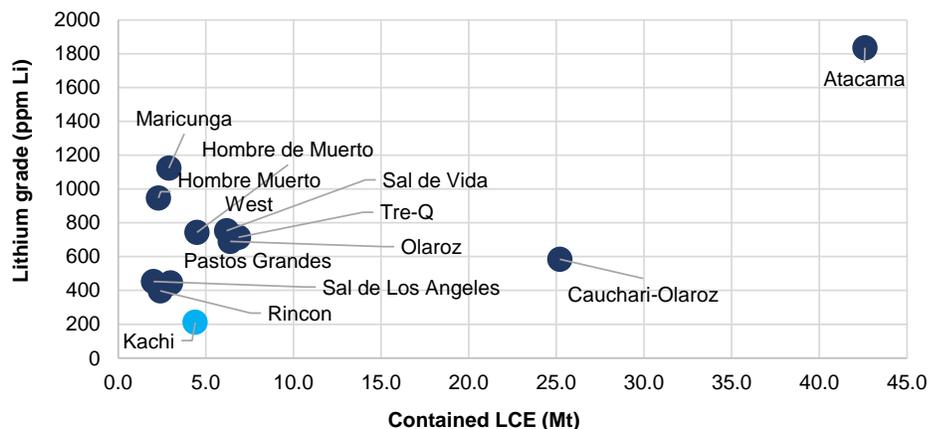
Figure 14: Kachi Mineral Resource estimate (2018)

MINERAL 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	4,380
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: Company reports

As illustrated in Figure 15 below, Kachi currently ranks as mid-range (among South American operations/development projects) with respect to contained lithium resources. As noted below, we see good potential for significant increases in project Resources, however, Kachi's lithium concentration of ~211ppm Li does see it rank as the lowest grade deposit in the peer group.

Figure 15: South American lithium brines – resource comparisons

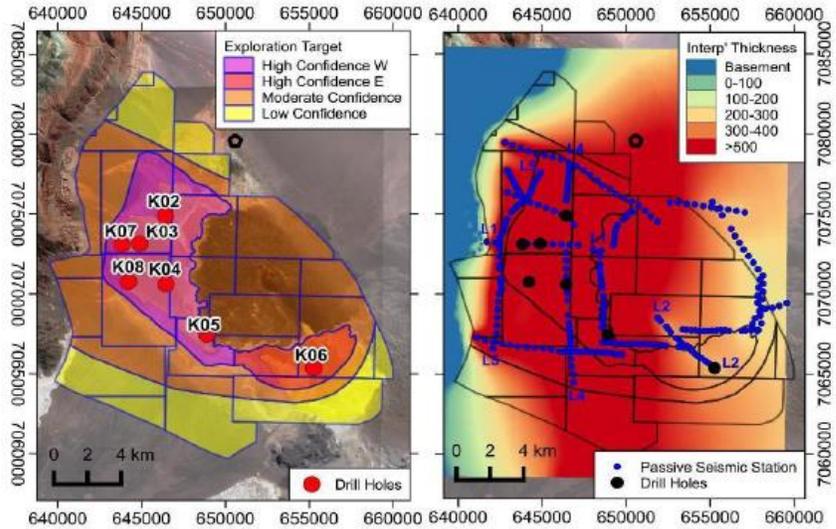


Source: Company reports, Canaccord Genuity estimates

Exploration potential

Noting that the basin is interpreted to extend to a depth below surface of >700m, and with seismic surveys suggesting continuity of brine bearing sediments beyond the boundaries of defined Mineral Resource, LKE has also published an exploration target for Kachi of between 8-17Mt LCE at 210-310ppm Li.

Figure 16: Plan view of project showing exploration target



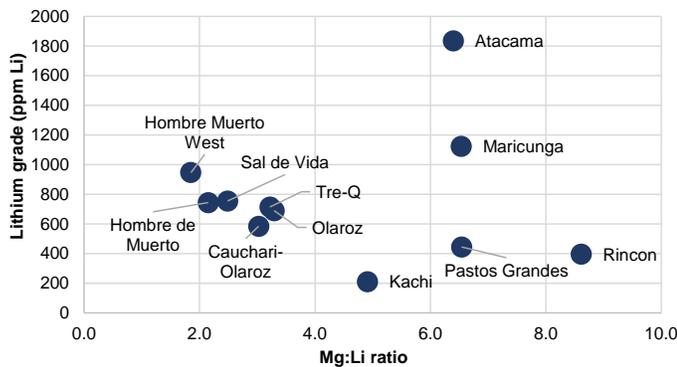
Source: Company reports

Why brine chemistry matters...

Figures 17 and 18 rank South American brine deposits according lithium concentrations and key impurity levels (i.e. magnesium, boron). High impurity levels impact operating costs for conventional solar evaporation projects through higher reagent consumption (used to precipitate out impurities).

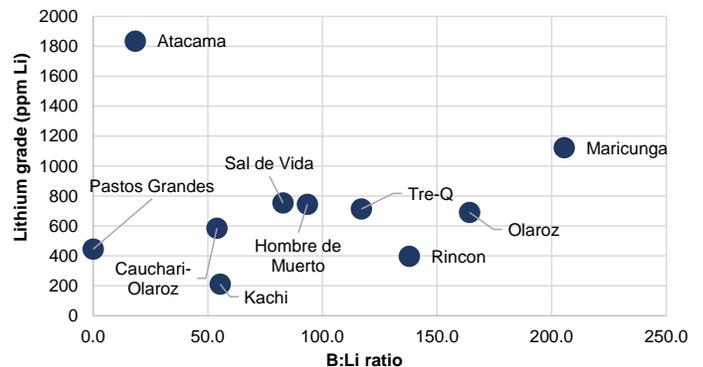
Kachi brines have been shown to have a relatively high density (~1.2g/cm³), with brine chemistry analysis suggesting moderate to high impurity levels (i.e. Mg:Li ratio of ~5:1, Ca:Li 1.3:1, B:Li 55:1).

Figure 17: South American brine Resources – Mg:Li ratio



Source: Company reports, Canaccord Genuity estimates

Figure 18: South American brine Resources – B:Li ratio



Source: Company reports, Canaccord Genuity estimates

...or might not matter as much when using DLE processing

While Kachi is a comparatively lower grade Resource with moderate impurity levels, the planned application of DLE processing means that lithium grades and impurity concentrations have a significantly lower importance to development potential and project economics.

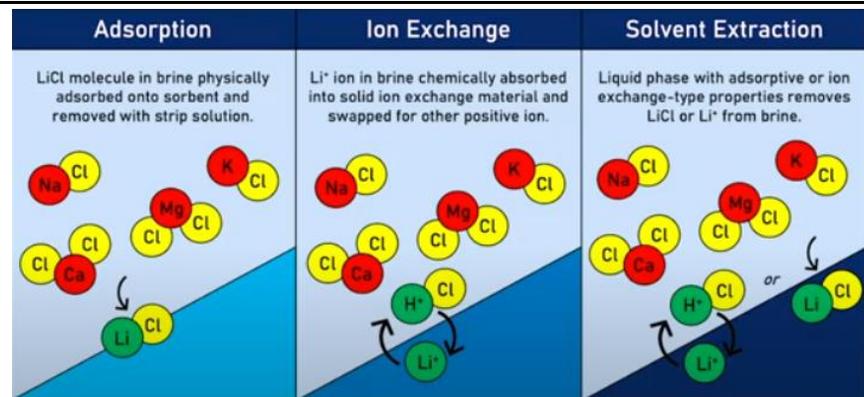
Direct lithium extraction – an emerging technology solution with potential to unlock ‘untapped’ lithium resources

What is DLE?

DLE describes a group of chemical processing technologies that selectively remove lithium from a brine-based mineral resource to produce a concentrated solution. The concentrate can then be refined into various lithium products such as lithium carbonate, lithium hydroxide or lithium metal, i.e. it does not produce finished lithium compounds but is a tool in the broader extraction, processing and refining of lithium chemicals.

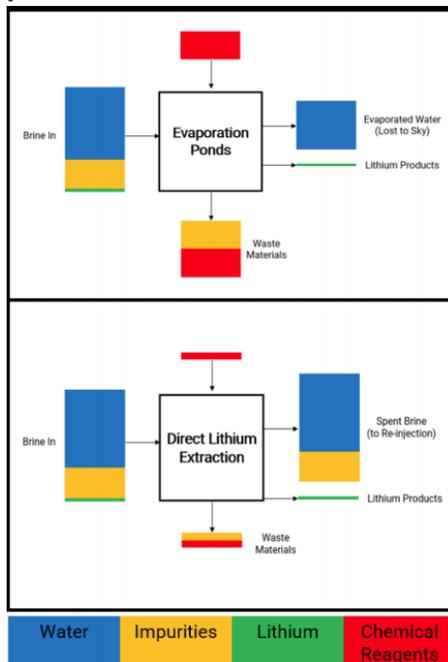
DLE-based processes are typically suited to lithium brine deposits with lower lithium concentrations and/or higher impurity levels (but not necessarily limited to brine deposits with such characteristics), with prevailing technologies typically classified into three main categories (Figure 19).

Figure 19: Three key DLE technologies



Source: Jade Cove Partners

Figure 20: Stylised input and output differences between evaporation ponds and DLE



Source: Jade Cove Partners

How does DLE differ from ‘conventional’ lithium brine processing?

Current technology for lithium production focuses on pre-enrichment from a primary source (evaporation of brines, or spodumene concentration) and then refining/separation from gangue (brine refining or spodumene conversion). In both cases, energy and reagents are consumed to enrich and refine, and waste is generated. These models have historically worked for high-grade deposits; however, there are limitations to expansion of conventional resources, including increasing consumption, and poor economics in developing lower-grade deposits.

In the case of lithium brine operations, ‘conventional’ solar evaporation-based processing is premised on the removal (precipitation) of impurities from brines through the application of reagents as a means of concentrating lithium grades ahead of refining. Lower lithium concentrations and/or higher impurities typically result in higher production costs from increased reagent consumption.

This compares to DLE-based methods, which seek to preferentially extract lithium with impurities remaining in the ‘spent’ brine and re-injected into the brine aquifer. Against conventional processing, advantages of DLE include:

- improved economics of exploiting lower grade/higher impurity lithium resources;
- lower reagent consumption;
- reduced fresh-water consumption;
- significantly shorter production lead times (vs typical 12-18 month residence times in evaporation ponds) ;
- higher purity product; and
- smaller physical footprint (i.e. no evaporation ponds, waste disposal).

We note that DLE is unlikely to present as a 'one-size-fits-all' solution, with suitability of DLE processing somewhat specific to resource/brine chemistry characteristics, water and power requirements, technology used and delivery partners.

Examples of lithium projects where DLE processing is being used, or planned to be used include the following:

- **Adsorption** – Zero Carbon Lithium Project, Germany, Vulcan Energy Resources (VUL-ASX: \$13.46 |SPEC BUY, TP \$21.00 | Tim Hoff); and Hombre Muerto, Argentina, Livent.
- **Ion-exchange** – Kachi, Argentina, LKE/Lilac – see below; Lanxess brine project, Arkansas, Standard Lithium (SLI-TSX: C\$13.42 | SPEC BUY, TP C\$14.00 | Katie Lachapelle, Canaccord Genuity Corp. (Canada)); Salton Sea geothermal brine, California, Controlled Thermal Resources (unlisted); and Clearwater brine project, Alberta, E3 Metals Corp.

Teaming up with a leading DLE technology partner – Lilac Solutions

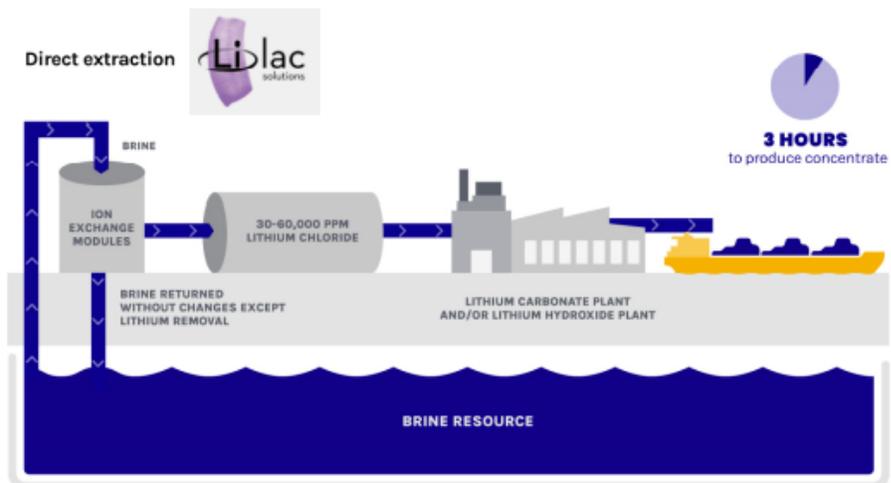
Lilac Solutions is a US-based technology group which has developed and patented a DLE technology based on ion-exchange processing. The company secured the backing of Breakthrough Energy Ventures (investors include Bill Gates) in 2020, and in early October 2021 completed a US\$150m Series B financing with investment from BMW, SK Materials and Sumitomo Corporation.

Lilac's process explained

Lilac's proprietary process is based on specially designed ion exchange resin beads, which when contacted with lithium bearing brine (under ambient temperature), sees the lithium ions preferentially bond to the resin. The resin beads are stripped using hydrochloric acid resulting in a highly concentrated lithium chloride (LiCl), which can then be further processed into a lithium carbonate and/or lithium hydroxide (see Figure 21).

Under an operating scenario, this process negates the need for large evaporation ponds (no need for pre-concentration of brine via solar evaporation), with spent brine re-injected into the brine aquifer (Figure 21).

Figure 21: Stylised flow sheet illustrating DLE process at Kachi



Source: Company reports

Lilac has operated a pilot plant in California where it has reportedly tested its process on numerous lithium brines. In 2020, Lilac entered into a strategic partnership with unlisted Controlled Thermal Resources to apply Lilac's process to its Salton Sea geothermal brine project in California, and in September 2021, entered into a partnership with LKE for the development of Kachi.

Kachi Project Partnership

The Lilac/Lake partnership will see Lilac earn up to a 25% direct equity stake in the Kachi project through the contribution of its technology, engineering teams, supply of its proprietary ion exchange materials, and delivery of an on-site demonstration plant. Specific earn-in milestones include:

- initial 10% on funding the completion of testing of its technology for the Kachi project;
- an additional 10% deemed to be earned on satisfying agreed testing criteria using the on-site demonstration plant; and
- final 5% on Kachi lithium product achieving agreed qualification standards with certain offtakers.

In our view, the partnership with Lilac now sees an alignment of interests between LKE and its key technology provider, as well as offsetting LKE's near-term funding requirements. Moreover, Lilac's investors include numerous LiB supply chain participants (BMW, SK Materials), which could present as potential offtake partners for the project, in our view.

Project development – Lilac DLE provides key to unlocking potential for scalable lithium production (with a small environmental footprint)

LKE completed a pre-feasibility study for the Kachi project in 2020, which assessed the development of a 25-year, 25.5ktpa Li₂CO₃ project, based on the application of Lilac's DLE technology.

LKE expects to complete a definitive feasibility study for the project in DecQ'21, which is expected to be followed by construction and operation of an on-site demonstration plant (test process design, provide product samples) scheduled for Q1'22, ahead of further studies to assess the potential to expand production capacity to >50ktpa LCE (potentially including LiOH production).

2020 pre-feasibility study...robust economics

Key outcomes of LKE's 2020 PFS for Kachi is shown in Figure 22 below, with the study demonstrating the economic viability of a 25.5ktpa Li₂CO₃ operation, with the assessed 25-year project life based on Indicated Resources of 1Mt LCE at an average grade of 290ppm Li (vs total project Resources of 4.4Mt LCE). LKE released the outcomes of the PFS using updated lithium pricing assumptions in March 2021.

Figure 22: 2020 PFS outcomes

Parameter	Unit	Prior PFS	Updated PFS
Sale Price Assumption	US\$/t LC	11,000	15,500
Capex	US\$m	540	540
Average LOM C1	US\$/t	4178	4,178
Design production rate	tpa LC	25,500	25,500
Project Life	Years	25	25
Recovery Li	%	83.2	83.2
Paypack period	Years	5	3
Post-tax NPV	US\$m	748	1,580
Annual EBITDA	US\$m	155	257

Source: Company reports

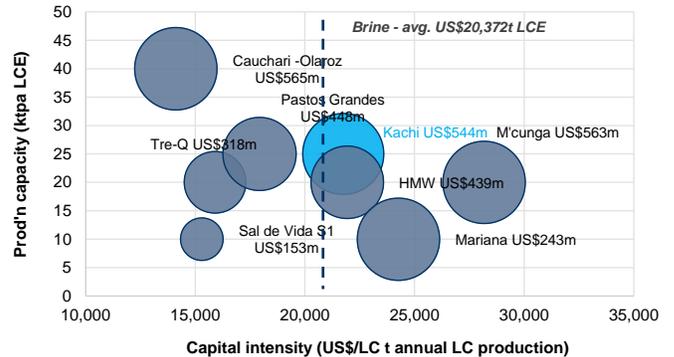
- **Capital costs:** Total development capex was estimated at US\$544m (to -20%/+30% accuracy, Figure 23), consisting of wellfield (extraction and re-injection wells), processing plant and infrastructure, site works and EPCM costs. We estimate a capital intensity of US\$21,300/t, which is in line with industry averages of US\$20.5/t. We note that these capital estimates are based on preliminary studies with actual capital costs typically exceeding those in feasibility estimates.

Figure 23: 2020 PFS Capital cost estimate

Capital Cost area	US\$M	%
Direct Costs:	399	73%
Wellfield	25	5%
Processing	161	30%
Site infrastructure	18	3%
Site works (construction)	195	36%
Indirect Costs:	145	27%
EPCM	54	10%
Owner's costs	Excluded	
Contingency	91	17%
Total	544	

Source: Company reports

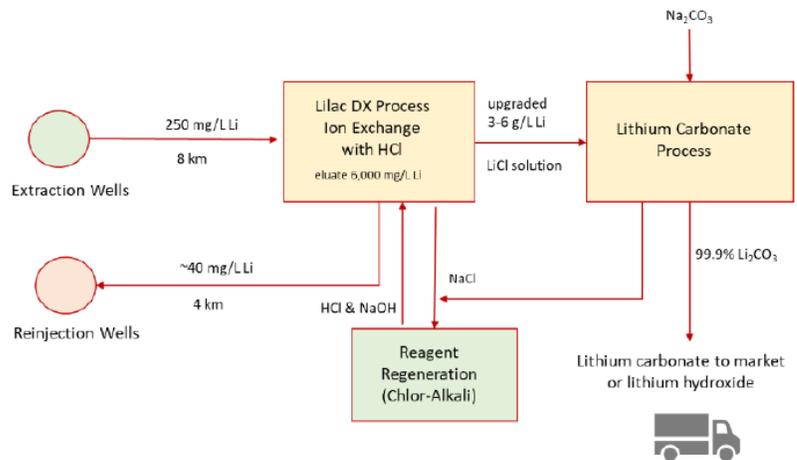
Figure 24: Greenfield South American lithium brine development capital intensities



Source: Company reports, Canaccord Genuity estimates

- Processing plant design and lithium extraction:** The PFS considered a plant design targeting capacity of 25.5ktpa of 'battery grade' Li_2CO_3 (i.e. >99.7% Li), based on ion exchange direct lithium extraction. A summary process flow sheet is shown in Figure 25, and consists of the following steps:
 - Brine extraction via well field and piped to storage ponds.
 - Brine is filtered to remove suspended solids before treatment in ion-exchange vessels, with HCl acid (acid regen via on site chlor-alkali plant) used to strip lithium from the resin to produce concentrated LiCl solution ('spent' brine returned to aquifer via re-injection wells).
 - Further concentration of LiCl via reverse osmosis ahead of application of soda ash in carbonate plant to precipitate lithium into lithium carbonate.
 - Filtration, drying, milling and packing for product transport.

Figure 25: Basic schematic of Kachi process flow sheet



Source: Company reports

Testwork suggests overall process recoveries of 83.2% (vs conventional brine projects of ~55-70%) and final Li_2CO_3 product grades of up to 99.9% Li.

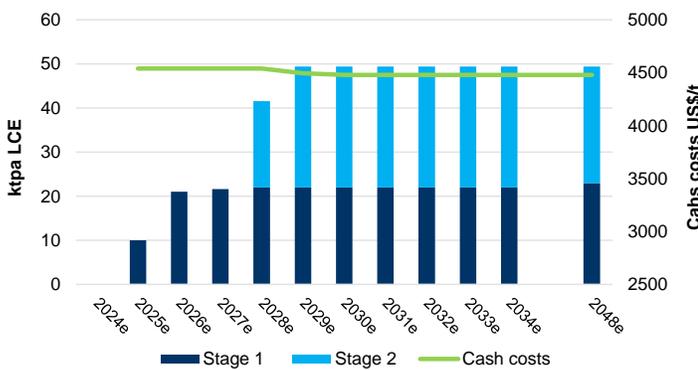
As noted earlier, DLE processing means the process avoids extended production lead times and reduced vulnerability to weather variations as might impact conventional solar evaporation-based projects (12-18 months from extraction to product vs 3-5 hours via DLE), the often technically challenging stages of product purification (i.e. removing trace impurities via solvent extraction increases production costs, most impurities remain within the spent brine and are re-injected).

Figure 28: CG development case vs LKE 2021 PFS

Parameter	Unit	CG development case	LKE 2021 PFS
Mine Life	years	25	25
Stage 1 Capex	US\$m	600	540
Stage 1 production	ktpa LC	22	25
Cash costs	US\$/t	4,485	4,178
Project start		2,025	
Stage 2 capex	US\$m	360	n/a
Stage 2 total prod'n	ktpa LC	49	n/a
Cash costs	US\$/t	4,485	n/a
Stage 2 start		2,027	n/a

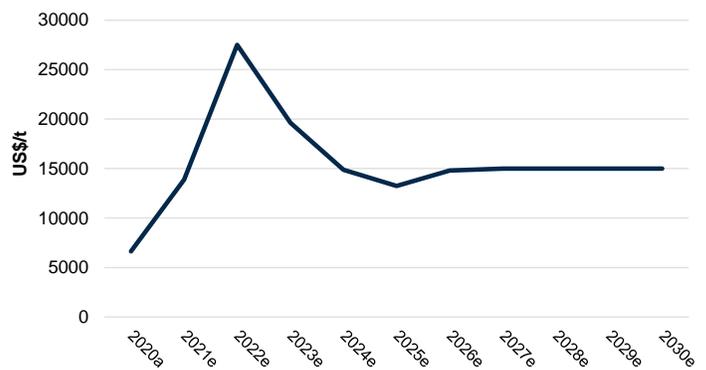
Source: Company reports, Canaccord Genuity estimates

Figure 29: CGe modelled production vs cash costs



Source: Canaccord Genuity estimates

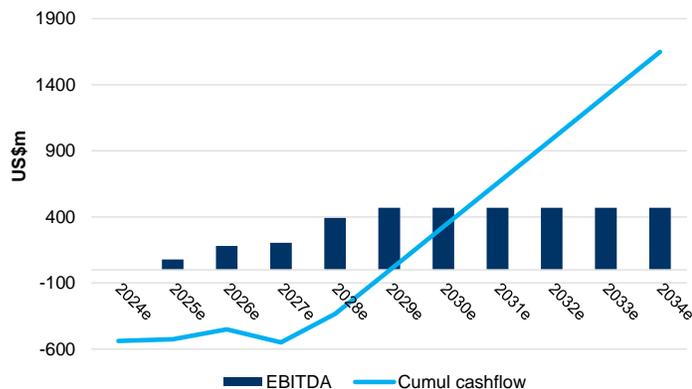
Figure 30: CGe Li2CO3 price forecasts



Source: Canaccord Genuity estimates

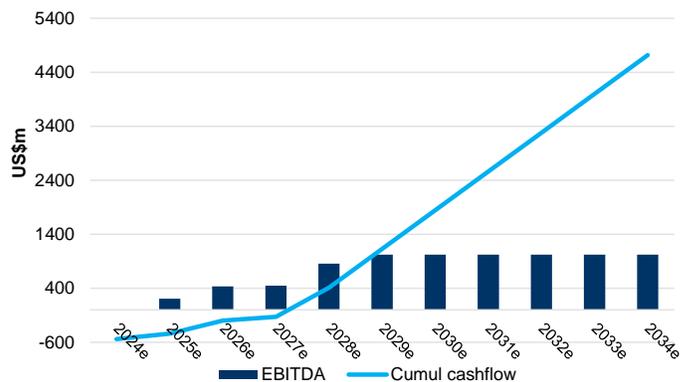
Based on our lithium price deck (see [Lithium prices go exponential](#); Figure 2) and our modelled production scenario, we estimate the Kachi project (100% basis) can generate average annual EBITDA of ~US\$240m from Stage 1, increasing to ~US\$460m from a Stage 2 expansion from 2028. At spot prices (~US\$27k/t Li2CO3), we estimate steady state Stage 1 EBITDA of US\$440m pa, increasing to ~US\$1bn p.a. on our expanded case. On our base case pricing, we estimate Kachi can generate cumulative after-tax net cash flow (2025E-34E) of US\$1.65bn.

Figure 31: EBITDA and cumulative cash flow forecasts on CGe price deck



Source: Canaccord Genuity estimates

Figure 32: EBITDA and cumulative cash flow forecasts at spot prices



Source: Canaccord Genuity estimates

Project timetable

LKE’s project timeline is shown in Figure 33 below. Key near-term project milestones include DFS and ESIA (DecQ’21/MarQ’22), initial product from on-site demonstration plant (late 2021/early 2022), approvals/financing/FID (1H 2022), and construction (2H’22).

Figure 33: Indicative project development milestones

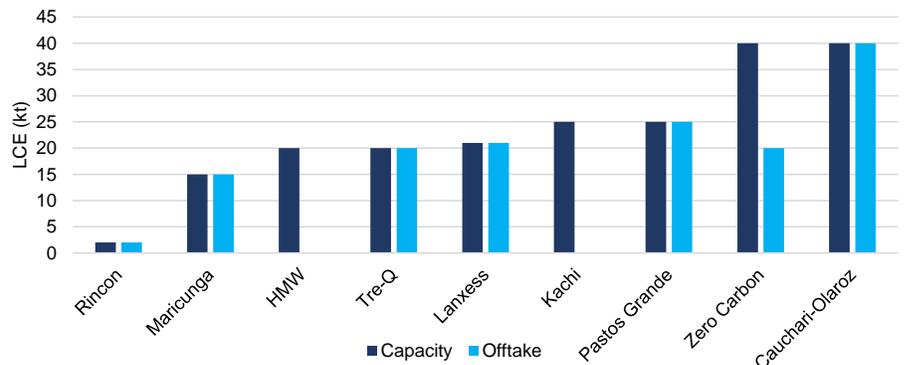


Source: Company reports

Product marketing and offtake

Based on our research, LKE’s Kachi project is one of the few, advanced lithium development projects where either production remains uncommitted under offtake or where the project is independent of an existing lithium chemical producer (Figure 34). In addition to the project’s sustainability credentials, we see its uncommitted (offtake) status as significantly enhancing Kachi’s strategic value.

Figure 34: Brine development projects showing capacity vs offtake commitments



Source: Company reports, Canaccord Genuity estimates. Note: Under takeover offer from CATL, Tre-Q – under takeover offer from Zijin Mining.

Moreover, we note a number of high-profile companies active in the battery/EV supply chain, which have invested into LKE’s technology partner Lilac. These include BMW, SK Materials and Sumitomo. In our view, their investment into Lilac (and having already completed due diligence on the technology) could see these groups (among others) emerge as potential offtakers for the project.

CGe Kachi project valuation

Based on our modelled development and production scenario (and CGe lithium price deck – [Lithium prices go exponential](#); Figure 2), we estimate a risked (70%) post tax NPV10% for Kachi of US\$1.7bn, with an IRR of 37% and post-tax capex payback of ~4 years (Stage 2; total Stage 1 + expansion payback of ~6 years).

At ‘spot’ prices of ~US\$27,000/t Li2CO3 (China EXW price/Asia CIF, Source: Asian Metals) our 70% risked NPV10% increases to US\$4.4bn, with an IRR of 52% and payback (stages 1 + 2) of four years.

Figure 35: Project NPV (un-risked) estimates at various pricing scenarios

NPV10% (un-risked)	US\$m
@ Bear case US\$10,000/t Li2CO3	652
@ CGe base case (US\$15k/t LT)	1,767
@ US\$18,500/t Li2CO3	2,575
@ Bull case US\$22,000/t Li2CO3	3,374
@ Spot US\$27,000/t Li2CO3	4,499

Source: Canaccord Genuity estimates

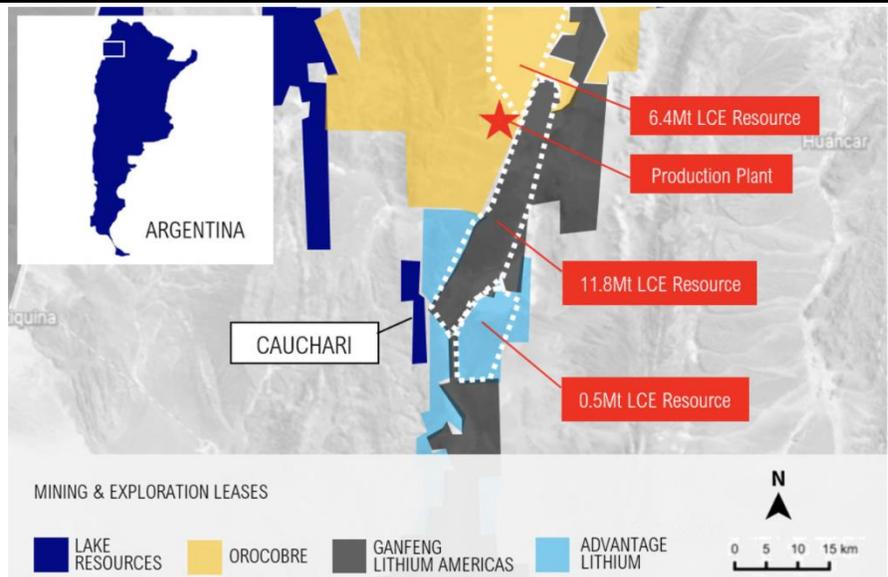
Other LKE projects

Cauchari

LKE's 100% owned Cauchari project is located in the Jujuy Province, adjacent to the Lithium America/Ganfeng 40ktpa Cauchari development (first production 2022), and Orocobre's 17.5ktpa (increasing to 42.5ktpa LCE) Olaroz operation.

LKE completed drilling in 2019 which identified high grade brine (up to 540ppm Li). Further drilling is required for Resource estimation, in addition to providing data for characterisation of the suitability of brines for use with Lilac's DLE process. LKE plan to undertake further drilling at Cauchari over the coming 6-9 months.

Figure 36: Cauchari project location map



Source: Company reports. Note: Advantage Lithium acquired by Orocobre in 2019.

Olaroz/Paso (LKE 100%)

The Olaroz and Paso projects are located adjacent to Orocobre's Olaroz operation in Jujuy province, but remain at early stage. Both projects are yet to be drilled, but given the proximity of LKE's concessions to Olaroz, we note the potential for the identification of Mineral Resources within the project area.

Catamarca (LKE 100%)

The Catamarca hard rock lithium project covers 720km², and is located in Northern Catamarca province. The project is considered prospective for the identification of hard rock lithium Resources, with initial work identifying series of pegmatite swarms over a 150km long belt. Drilling by operators of adjoining properties in old mine workings confirmed the presence of spodumene bearing pegmatites with intercepts between 3-7m at grades up to 2.98% Li₂O.

Figure 37: LKE financial summary

FINANCIAL SUMMARY

Lake Resources N.L.

Analyst : Reg Spencer
Date: 21/10/2021
Year End: June

LKE:ASX

Rating: **SPEC BUY**
Target Price: **\$1.15**

Market Information

Share Price	A\$	0.77
Market Capitalisation	A\$m	907.5
12 Month Hi	A\$	0.84
12 Month Lo	A\$	0.05
Issued Capital	m	1178.6
Options	m	189.9
Fully Diluted	m	1368.5

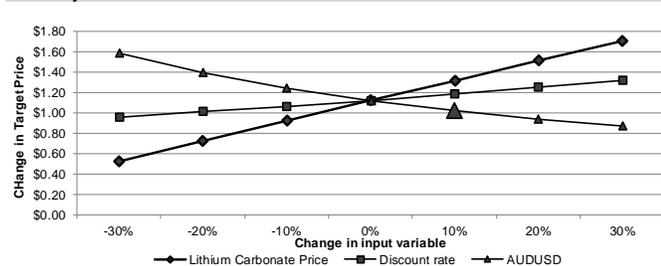
Valuation

	A\$m	Risk adj	Equity	A\$m	A\$/share
Kachi NPV10%	2,362.6	75%	75%	1,328.9	0.97
Exploration & Projects	86.9			86.9	0.06
Corporate	(37.5)			(37.5)	(0.03)
Cash	47.8			47.8	0.03
ITM options	98.8			98.8	0.07
TOTAL	2,558.5			1,524.9	1.11
P/NAV					0.69x
Price Target					1.15

Assumptions

	2021a	2022e	2023e	2024e
Lithium carbonate min 99% Li (US\$/t)	6,921	23,850	23,875	17,000
AUD:USD	0.75	0.76	0.76	0.76

Sensitivity



Production Metrics

	2021a	2022e	2023e	2024e
Kachi (100%)				
Lithium Carbonate (kt)	0.0	0.0	0.0	0.0
Cash Costs (US\$/t)	0	0	0	0

Reserves & Resources

	Area km ²	Thickness metres	Volume km ³	Grade ppm Li	LCE(Mt)
Project 1 (100%)					
Measured					
Indicated	17.1	350.0	0.65	289	1.00
Inferred	158.3	265.0	3.15	209	3.40
TOTAL	175.4	307.5	3.80	211	4.40

Directors & Management

Name	Position
Stuart Crowe	Chairman
Stephen Promnitz	Managing Director
Nick Lindsay	NED
Robert Trzebski	NED
Amalia Sanz	NED
Peter Nielsen	CFO/Co. Sec

Company Description

Lake Resources (LKE:ASX) is an Australian company focused on the exploration and development of lithium projects in Argentina. Its key asset is the advanced Kachi project in the Catamarca Province, where in JV with lithium processing technology group Lilac Solutions, it is assessing the application of environmentally sustainable Direct Lithium Extraction as part of development of a 25-50ktpa LCE project.

Profit & Loss (A\$m)

	2021a	2022e	2023e	2024e
Revenue	0.0	0.0	0.0	0.0
Operating Costs	-2.9	0.0	0.0	0.0
Corporate & O'heads	0.0	-4.0	-4.0	-5.0
Exploration (Expensed)	0.0	0.0	0.0	0.0
EBITDA	-2.9	-4.0	-4.0	-5.0
Dep'n	0.0	0.0	0.0	0.0
Net Interest	0.0	0.3	-3.2	-13.4
Tax	0.0	0.0	0.0	0.0
NPAT (reported)	-5.8	-7.4	-14.5	-36.8
Abnormals	0.0	0.0	0.0	0.0
NPAT	-5.8	-7.4	-14.5	-36.8
<i>EBITDA Margin</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>
<i>EV/EBITDA</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>
<i>EPS</i>	<i>-\$0.01</i>	<i>-\$0.01</i>	<i>-\$0.01</i>	<i>-\$0.03</i>
<i>EPS Growth</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>
<i>PER</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>
<i>Dividend Per Share</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>
<i>Dividend Yield</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>

Cash Flow (A\$m)

	2021a	2022e	2023e	2024e
Cash Receipts	0.0	0.0	0.0	0.0
Cash paid to suppliers & employees	-4.0	-4.0	-4.0	-5.0
Tax Paid	0.0	0.0	0.0	0.0
Net Interest	0.0	0.3	-3.2	-13.4
+/- Working cap change	-0.3	0.0	0.0	0.0
Operating Cash Flow	-4.2	-3.7	-7.2	-18.4
Exploration and Evaluation	-3.3	-2.0	0.0	0.0
Capex	0.0	0.0	-197.8	-337.4
JV Divs & Other	0.0	0.0	0.0	0.0
Investing Cash Flow	-3.3	-2.0	-197.8	-337.4
Debt Drawdown (repayment)	0.0	0.0	451.3	0.0
Share capital	34.4	44.8	154.2	0.0
Dividends	0.0	0.0	0.0	0.0
Financing Expenses	-1.4	0.0	-6.5	0.0
Financing Cash Flow	33.0	44.8	599.0	0.0
Opening Cash	0.6	26.2	65.2	459.2
Increase / (Decrease) in cash	25.5	39.0	394.0	-355.8
FX Impact	0.1	0.0	0.0	0.0
Closing Cash	26.2	65.2	459.2	103.4
<i>Op. Cashflow/Share</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>-\$0.01</i>	<i>-\$0.01</i>
<i>P/CF</i>	<i>-188.7x</i>	<i>-244.7x</i>	<i>-143.2x</i>	<i>-56.4x</i>
<i>EV/FCF</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>
<i>FCF Yield</i>	<i>-1%</i>	<i>-1%</i>	<i>-23%</i>	<i>-39%</i>

Balance Sheet (A\$m)

	2021a	2022e	2023e	2024e
Cash + S/Term Deposits	25.7	64.7	458.6	102.9
Other current assets	1.4	0.0	0.0	0.0
Current Assets	27.0	64.7	458.6	102.9
Property, Plant & Equip.	0.1	0.1	197.9	535.2
Exploration & Develop.	20.8	22.8	22.8	22.8
Other Non-current Assets	0.0	0.0	0.0	0.0
Payables	0.8	0.0	0.0	0.0
Short Term Debt	0.0	0.0	0.0	66.4
Long Term Debt	0.0	0.0	0.0	0.0
Other Liabilities	0.3	3.4	455.4	407.4
Net Assets	46.9	84.2	223.9	187.1
Shareholders Funds	65.7	110.5	264.7	264.7
Reserves	3.3	3.4	3.4	3.4
Retained Earnings	-22.2	-29.7	-44.1	-80.9
Total Equity	46.9	84.2	223.9	187.1
<i>Debt/Equity</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>
<i>Net Debt/EBITDA</i>	<i>6.2x</i>	<i>17.6x</i>	<i>63.4x</i>	<i>2.0x</i>
<i>Net Interest Cover</i>	<i>nm</i>	<i>nm</i>	<i>-1.0x</i>	<i>-0.3x</i>
<i>ROE</i>	<i>-12%</i>	<i>-9%</i>	<i>-6%</i>	<i>-20%</i>
<i>ROIC</i>	<i>-25%</i>	<i>-32%</i>	<i>-7%</i>	<i>-7%</i>
<i>Book Value/share</i>	<i>\$0.05</i>	<i>\$0.07</i>	<i>\$0.17</i>	<i>\$0.14</i>

Source: Company reports, Canaccord Genuity estimates

Galan Lithium: Where grade (& chemistry) is king Initiate coverage at SPEC BUY, \$2.60 target price

Overview

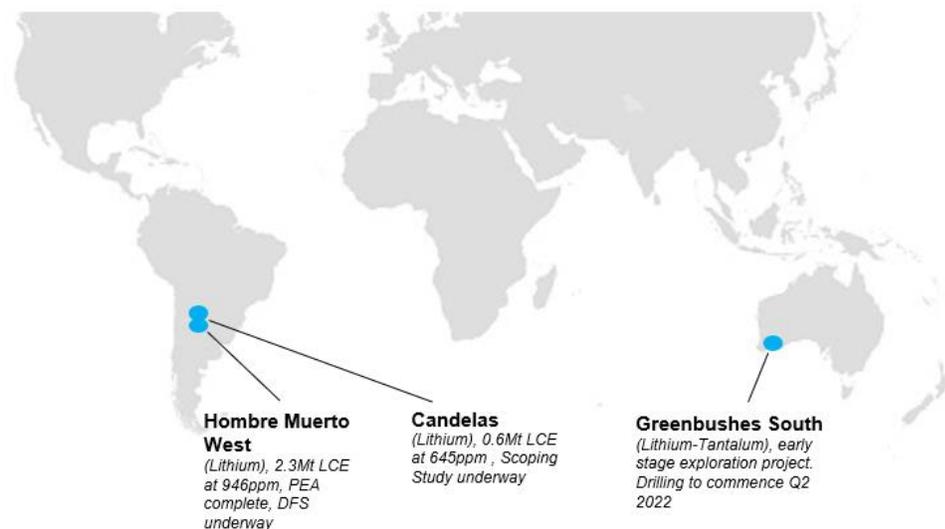
Galan Lithium is an exploration and development company focused on the exploration and development of two lithium brine projects hosted within South America's Lithium Triangle on the Hombre Muertos salar in Argentina. Hombre Muerto has been shown to have the highest grade and lowest impurity lithium brines in Argentina, and is home to Livent Corporation's Hombre Muerto operation and Orocobre's and POSCO's Sal de Vida projects.

GLN's flagship asset is the Hombre Muerto West (HMW) lithium project, which hosts high grade brines Resources of 2.3Mt at 946ppm Li. In 2020, GLN completed a PEA for the development of a +40 year, 20ktpa Li₂CO₃ operation, with a PFS/DFS scheduled for completion in 2H'22. GLN has also highlighted the potential for the alternate development of a lithium chloride project, which is the feedstock for the production of lithium carbonate, lithium hydroxide and lithium metal.

In addition to HMW, GLN also owns the Candelas Lithium Project, located on east of the Hombre Muertos salar. Mineral Resources comprise 685kt LCE at 672ppm Li, with GLN having commenced a scoping study (results expected in DecQ'21).

While both HMW and Candelas projects are GLN's primary focus, the company also owns an 80% interest in the early stage, Greenbushes South Lithium Project located 200 km south of Perth, Western Australia.

Figure 38: Project locations



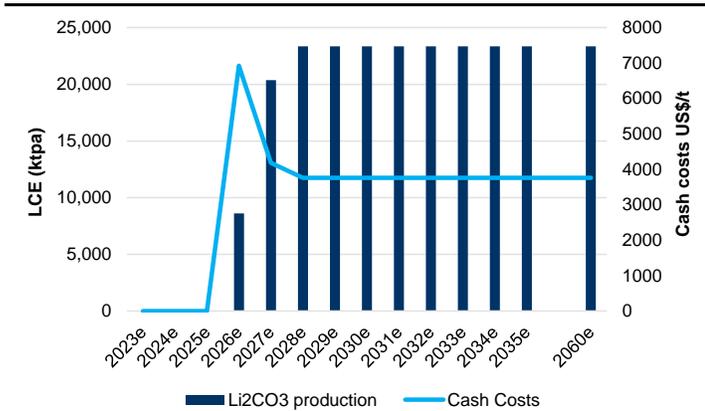
Source: Company reports, Canaccord Genuity estimates

Forecasts and valuation

CG production scenario

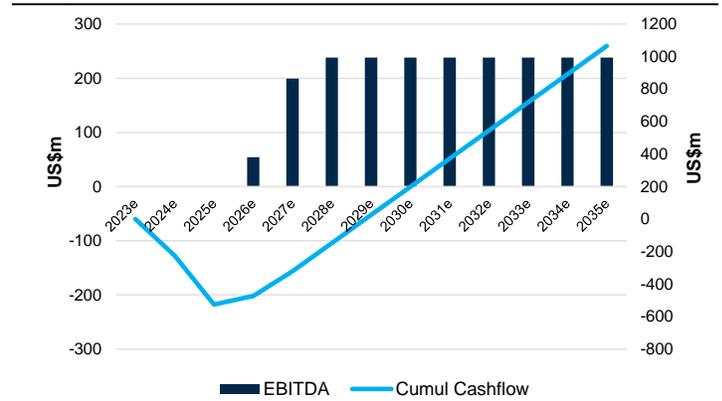
Our NAV is based on our modelled development and production scenario at the Hombre Muerto West project, comprising a 40-year 23.5ktpa lithium carbonate project, with modelled capex and direct opex of US\$520m and US\$3,750/t respectively.

Figure 39: CG production scenario (Li2CO3)



Source: Canaccord Genuity estimates

Figure 40: EBITDA and cumulative cashflow forecasts on CGe price deck



Source: Canaccord Genuity estimates

Net asset valuation

We value the Hombre Muerto West project (risked NPV_{10%}) at A\$642m (US\$479m), which is based on our modelled development/production scenario and Li₂CO₃ price assumptions (Figure 41). Our sum-of-the-parts valuation includes an ascribed valuation for un-modelled Resources at HMW and the separate Candelas and Greenbushes South projects, adjusted for corporate costs, current cash and ITM options.

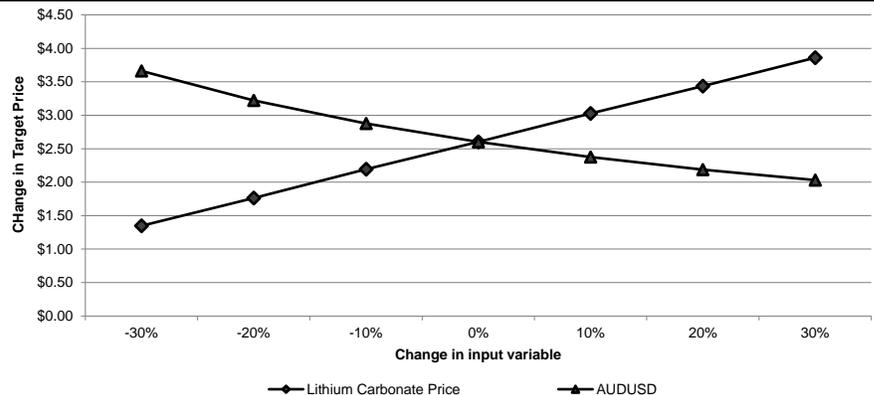
We have not made any assumptions for project financing, and as such, have risk adjusted our valuation for the MMW project to 65%.

Figure 41: Sum-of-parts valuation for GLN

DCF DISCOUNT RATE		10%				
Spot AUD:USD		0.7490 <td>Shares</td> <td>289.146</td>		Shares	289.146	
				ITM options	21.479	
				Fully diluted	310.625	
	US\$m	A\$m	RISK ADJ.	EQUITY	A\$m	PER SHARE
Hombre Muerto West	738	985	65%	100%	640	\$2.06
Other projects & Eploration	100	134			134	\$0.43
Corporate		-27			-27	\$0.09
Cash		60			60	\$0.19
ITM options		5			5	\$0.02
TOTAL	880.09	1164.27			818.48	A\$2.61
					Rounded	A\$2.60

Source: Canaccord Genuity estimates

Figure 42: NAV sensitivity to Li2CO3 pricing and AUDUSD



Source: Canaccord Genuity estimates

Investment risks

Financing risks

Our analysis suggests that GLN will require additional capital to fund the development costs for the Hombre Muerto West project. As a pre-cash flow company, GLN is reliant on equity/debt/external capital to fund capital commitments, and there is no guarantee that accessing these markets will be achieved without dilution to shareholders. Furthermore, accurate estimates of capital costs for the project remain subject to completion of final engineering, which may see capital requirements exceed our model assumptions.

Permitting and construction risks

Permitting delays may result in risks of delivery of the HMW project. Construction risks also exist, and while an EPCM contract will be sought there may be risks of delay, cost overruns and scope changes.

Operational risks

Once in production, the company will be subject to risks such as plant/equipment breakdowns, metallurgical (meeting design recoveries within a complex flowsheet), materials handling and other technical issues. An increase in operating costs could reduce the profitability and free cash generation from the operating assets and negatively impact valuation. Further, the actual characteristics of an ore deposit may differ significantly from initial interpretations, which can also materially impact forecast production from original expectations.

Resource risks

The resource is subject to a number of risks and may require a high rate of capital expenditure or changes to cost structures. Risks can also be associated with exploration and lack of accuracy in interpretation of geochemical, geophysical, drilling and other data. Our model assumptions include an amount of Indicated and Inferred Resources, which may or may not ultimately be proven to be economic and converted into Reserves.

Commodity price and currency fluctuation

The company is exposed to commodity price and currency fluctuations, often driven by macro-economic forces including inflationary pressure, interest rates and supply and demand of commodities. These factors are external and could reduce the profitability, costing and prospective outlook for the business.

Corporate and finance

Balance sheet and liquidity

We estimate GLN has a cash position of A\$60m (post the recent equity raise) and currently holds no long-term debt as at 30 June 2021. The company's most recent capital raising was in August 2021, where it raised A\$50m at A\$1.15.

Capital structure

GLN's capital structure is shown in Figure 43 below. The outstanding options have a weighted average exercise price of A\$0.24, resulting in a fully diluted (including performance rights) issued capital of 316m shares.

Figure 43: GLN capital structure

Issued Shares	m	289.15	Price \$1.17	Date
Options 1	m	2.000	0.25	1 Dec 2021
Options 2	m	8.792	0.25	31 Mar 2021
Options 3	m	10.037	0.21	8 Oct 2023
Options 4	m	0.500	0.60	4 Feb 2024
Options 5	m	0.150	0.90	7 May 2024
Options 6	m	5.000	0.00	Performance rights
Total Options	m	26.48		
Fully Diluted	m	315.63		

Source: Company reports

Substantial shareholders

There are no disclosed institutional holders of GLN however Havelock Mining (90% owned by Ganfeng Lithium) own 6.6%. GLN's Managing Director JP Vargas de la Vega holds 6.4% of the company, with total Board and Management holdings amounting to ~18%.

Directors and management

Non-Executive Chairman – Richard Homsany

Mr Homsany is an experienced corporate lawyer and has extensive board and operational experience in the resources and energy sectors. In addition to GLN, Richard hold board positions at Toro Energy, Mega Uranium, Redstone Resources, Central Iron Ore Limited and Brookside Energy.

Managing Director – Juan Pablo Vargas de la Vega

Mr Vargas de la Vega is a Chilean/Australian mineral industry professional with 15 years of broad experience in ASX-listed mining companies, stockbroking and private equity firms. He has been a specialist lithium analyst in Australia, has operated a private copper business as in Chile and worked for BHP, Rio Tinto and Codelco.

Non-Executive Director – Christopher Chalwell

Previously COO SKILLED Workforce Services Western Mining Region, Mr Chalwell has been involved in the gas to coal conversion of the Mica Creek Power station in Mt Isa and the Pasmenco Century Mine in North Queensland. He has extensive experience with feasibility studies, commercial reviews for project funding, contract appraisal and award.

Non-Executive Director – Terry Gardiner

Mr Gardiner has over 20 years' experience in capital markets, stockbroking and derivatives trading, and prior to that had many years trading in equities and derivatives for his family accounts. He is currently a Director of stockbroking firm Barclay Wells and a Non-Executive Director of Cazaly Resources.

Non-Executive Director – Jinyu (Ramond) Liu

Mr Liu is a mining executive with 13 years of experience in the resources sector, and possesses a results-oriented track record developed in the areas of deal origination, project evaluation, negotiation, due diligence, and capital raising. He is founding Managing Partner of Havelock Mining Investment, a Hong Kong investment company, and has been involved with numerous investments in ASX-listed companies. Mr Liu was formerly a director of Okapi Resources and has previously held technical roles at Rio Tinto, KCGM, and Mt Gibson.

Non-Executive Director – Daniel Jimenez

A civil industrial engineer, Mr Jimenez has worked for world leader in the lithium industry Sociedad Química y Minera de Chile for 28 years, based in Santiago, Chile. His last position was as Vice President of Sales of Lithium, Iodine and Industrial Chemicals where he formulated the commercial strategy and marketing of SQM's industrial products and was responsible for over US\$900 million worth of estimated sales in 2018.

Company Secretary – Mike Robbins

Mr Robbins has over 20 years of resource industry experience gathered at operational and corporate levels, both within Australia and overseas. During that time, he has held numerous project and head office management positions and is currently Company Secretary for three other listed entities.

GLN asset overview: Hombre Muerto West

Location and access

The Hombre Muerto West (HMW) Project is part of the Hombre Muerto basin, located in the Argentinean Puna plateau of the high Andes mountains at an elevation of approximately 4,000m above sea level. The project is in the geological province of Puna, 90 km north of the town of Antofagasta de la Sierra, province of Catamarca, Argentina as shown in Figure 44. The HMW Project is located to the West and South of the Salar del Hombre Muerto.

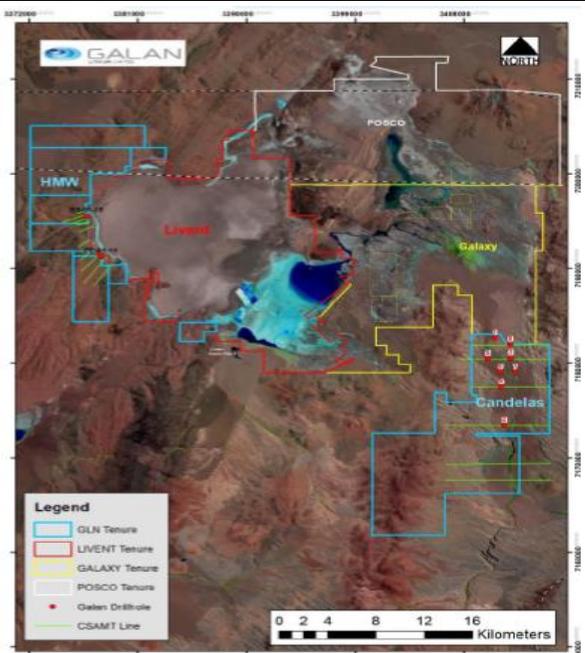
The HMW Project is made up of eight concessions covering an area of ~11,300 hectares which is in close proximity to other lithium projects owned by Orocobre, POSCO and Livent (see Figure 45). It is around 1,400 km northwest of the capital of Buenos Aires and 170 km west-southwest of the city of Salta.

Figure 44: Project location map



Source: Company reports

Figure 45: Hombre Muerto basin (Galaxy now Orocobre)



Source: Company reports

Geology and Mineral Resources

The HMW project areas are located along the western shores of the Hombre Muerto salar covering a total estimated polygon area of 7.5km strike, up to 2.5km in width and ~700m in depth. The Salar is a closed drainage basin, structurally controlled and bounded by normal faults. The basin is interpreted to drain the lithium bearing volcanic rocks of the Cerro Galan. Basin infill sediments have been shown by drilling to comprise predominantly of sands, gravel and Halite which play host to lithium bearing brines.

Mineral Resources

GLN completed its resource evaluation program during 2019/2020, consisting of exploration drilling across predominately the Del Condor, Deceo III, Pata Pila and Rana de Sal concessions. The program resulted in a Mineral Resource estimate of 2.2Mt LCE at an average concentration of 946 Li mg/l. Key resource inputs include:

- Drainable porosities of 10% (in the sand domain), 4% (in the gravel domain), and 3% in the Halitite domain; and
- Defined to a depth of ~700m.

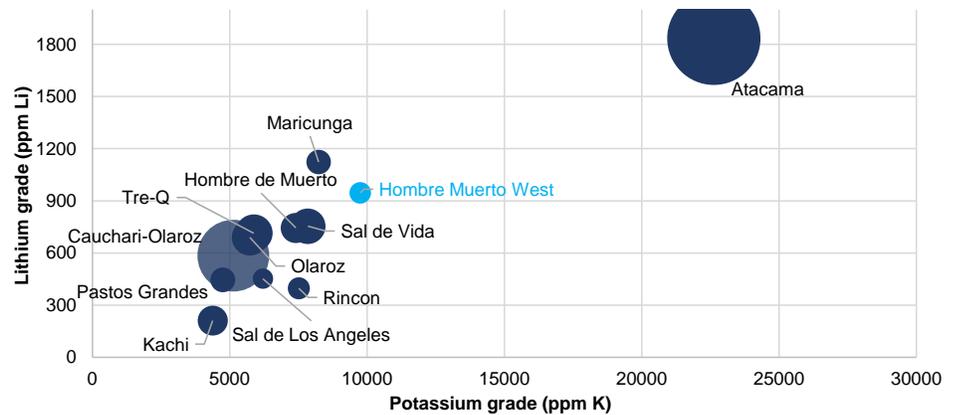
Figure 46: HMW project resources

Resource category	Brine vol (km ³)	Li (Kt)	Li (mg/l)	LCE (kt)	K (mg/l)	K (Kt)
Sand Domain Indicated	430	407	945	2,166	8,720	3,753
Gravel Domain Indicated	12	12	947	61	8,804	107
Halitite Domain Indicated	8	8	946	40	8,846	70
Total		426	946	2,267	8,725	3,931

Source: Company reports

Based on the average resource grade, HMW ranks as the third-highest grade lithium brine deposit known, behind Maricunga and the famous Salar de Atacama (Figure 47).

Figure 47: South American lithium brines – resource comparisons (bubble size denotes contained LCE)



Source: Company reports, Canaccord Genuity estimates

Reserve conversion and exploration potential

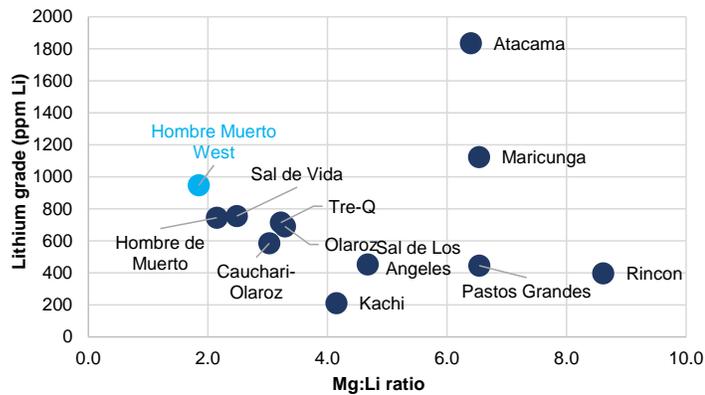
There are no Ore Reserves defined at HMW; however, drilling is currently underway within the Pata Pila and Rana de Sal concessions with the aim to expand current Resources and test brine flow rates. With drill holes at Rana de Sal remaining open at depth and with no drilling yet to be undertaken at Catalina and Santa Barbera concessions we see further Resource upside at HMW (GLN exploration target of 0.5-1.0Mt LCE).

Given the current PEA (see Preliminary Economic Assessment (December 2020)) only utilises 1.37Mt LCE (or 60%) of the current mineral resource, we view any resource increase as supporting the potential to increase production rates or extend project life.

Brine chemistry – high-grade resource with low impurities

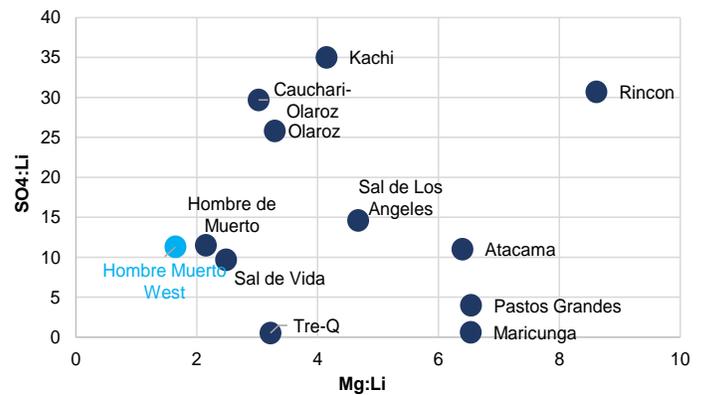
Chemical analysis of the brine at HMW shows a relatively high lithium content of +950 ppm Li, as well as low levels of impurities such as sulphates and magnesium. High impurity levels typically result in higher operating costs (increased reagent consumption to precipitate out impurities), with comparisons with other brine deposits showing HMW to compare very favourably (i.e. high lithium concentration, low Mg, SO₄, etc.).

Figure 48: Lithium grades vs Magnesium (impurity) content



Source: Company reports

Figure 49: Mg:Li ratio vs SO4:Li ratio



Source: Company reports

Project development – high quality lithium resource provides development optionality

GLN has completed a PEA in 2020 for HMW, with the study outlining the potential for a long life 20ktpa Li₂CO₃ development opportunity (see below).

GLN expects to complete its more detailed feasibility studies for HMW in 2H'22, which we understand will incorporate the recently acquired Del Condor concessions. This has the potential to allow the construction of additional evaporation ponds, which in turn could support increased production rates.

Additionally, testwork undertaken by GLN has shown that HMW is capable of producing a high grade LiCl concentrate (up to 6%), which has the potential to be sold to third parties for conversion into lithium compounds or lithium metal. The production of an intermediate product could allow an accelerated market entry through lower technical/ramp-up risk as well as offering lower upfront capex/opex.

Preliminary Economic Assessment (December 2020)

GLN completed an initial PEA for HMW in December 2020, which assessed the development of a 40-year solar evaporation operation producing 20ktpa Li₂CO₃. Key outcomes of the study are detailed in Figure 50.

Figure 50: 2020 PEA outcomes

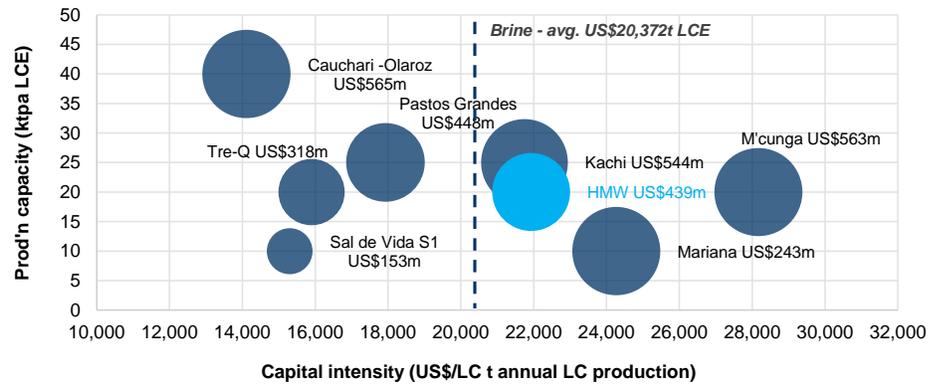
Parameter	Value	Parameter	Value
Mineral Resources (Mt LCE)	2.3	Li ₂ CO ₃ Selling Price (US\$/LCE)	11,687
Grade (Li ppm)	946	LOM Average EBITDA (US\$m)	172
Mine life (yrs)	40	Post-tax NPV 8% (US\$m)	684
Development Capex (A\$m)	439	Post-tax IRR (%)	19%
Plant recovery (%)	59%	Payback period (yrs)	4.3
Li ₂ CO ₃ Production (ktpa)	20		
Cash costs ex royalties (US\$/t)	3,518		

Source: Company reports

Key project design considerations include:

- Capital costs:** The total investment cost of the project is estimated at US\$ 439m which is broken down into direct, indirect and contingency costs. Direct capital costs make up a total of 68.4%, indirect costs such as make up 8.5%, and contingency costs are equivalent to 23.1%. We have benchmarked capital intensity profiles across greenfield brine developers which we estimate to be US\$/20.5kt LCE, HMW is in line with its peer group. We note that these capital estimates are based on preliminary studies with actual capital costs typically exceeding those in feasibility estimates.

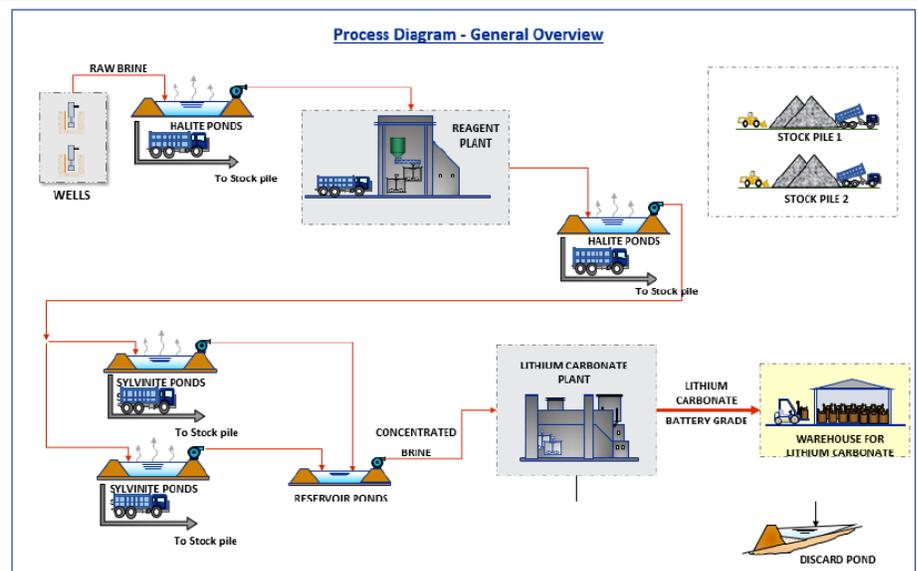
Figure 51: Greenfield South American lithium brine development capital intensities



Source: Company reports, Canaccord Genuity estimates

- Brine extraction:** The brine extraction will be conducted through seven production wells. The raw brine will be pumped directly to the first pond of the evaporation ponds system. The total average raw brine flow required to feed the evaporation ponds system is 203 l/s.
- Processing:** The process defined and designed for HMW is mainly based on conventional evaporation ponds and a lithium carbonate plant. The process considers obtaining brine from wells located both in the Rana de Sal and Pata Pila areas. This brine will be pumped through a series of pre-concentration and concentration ponds with reagents added throughout to increase the lithium concentration of the brine. Once the lithium reaches suitable concentration it will be stored in reservoir ponds to be available to feed the Li_2CO_3 plant. The Li_2CO_3 Plant initially removes all remaining Ca and Mg. When all contaminants are removed, brine will feed a lithium precipitation stage, through the use of soda ash. Production of battery grade Li_2CO_3 , purification is carried out through stages of bicarbonation and crystallisation.

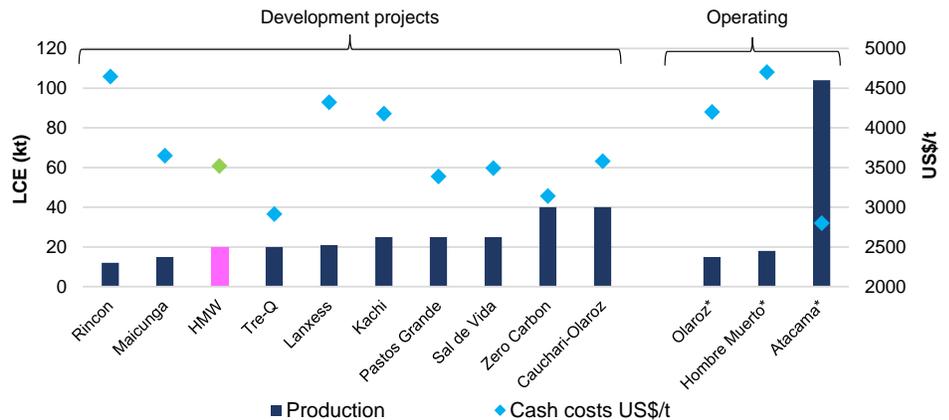
Figure 52: Process flow sheet



Source: Company reports

- **Operating costs:** LOM cash operating costs as per the PEA average US\$3,510/t LCE. Based on the PEA estimates, HMW ranks among the lower cost development projects in the peer group (Figure 53). This is primarily a result of low level of impurities present at HMW thus reducing reagent consumption.

Figure 53: LCE capacity and cash costs comparisons for selected brine projects/operations



Source: Company reports, Canaccord Genuity estimates. *2020 Actuals

Testwork completed to date confirms the potential for both a high-grade LiCl concentrate, or Li₂CO₃ products

Post the completion of the PEA, GLN undertook studies to test for production of a high-grade lithium concentrate for commercial and plant optimisation reasons.

Through adding reagents (lime) at different stages of the evaporation process to avoid the precipitation of salts containing lithium, results showed that GLN's brine was amenable to the production of LiCl up to 6% Li. This was later confirmed at a lab in Chile under a controlled evaporation process. As part of piloting programs, GLN aims to confirm testwork results under real world operating conditions.

In July 2021, GLN released the results of the further testwork that the high grade LiCl can be refined into a high-grade lithium carbonate product grading 99.88% Li (minimum battery grade specifications require >99.5% Li). GLN expects product testwork from field trials to be concluded in Q4 CY22.

Lithium chloride – lower capex, lower technical/ramp-up risk, faster path to market?

LiCl is an intermediate lithium product (typically produced via concentration of lithium brines), and is used as a feedstock for the production of lithium compounds such as Li₂CO₃ and LiOH, as well as lithium metal.

As noted above, GLN is assessing the development of a LiCl operation at HMW, as an alternative to the traditional lithium carbonate production route. LiCl pricing is based largely on prevailing Li₂CO₃/LiOH pricing adjusted for processing costs and conversion recovery factors. While LiCl attracts substantial discounts versus refined products, advantages of this production route include:

- 1) Lower upfront capital costs:** While a large proportion of the initial capital costs are attributable to production wells and evaporation ponds (typically 45-55%), lithium carbonate plants are also big ticket items (typically representing ~25% of average brine development capital costs). Production of LiCl negates the requirement for construction of additional processing plant, thereby lowering overall project establishment costs.

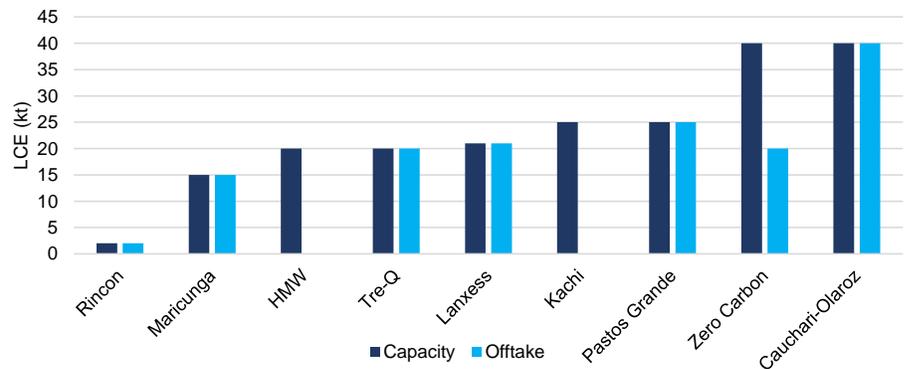
- 2) Lower technical risk:** Producing battery quality lithium carbonate (>99.5% Li) can be technically challenging, with product purity specifications demanded by the LiB industry continuing to tighten for high performance applications (i.e. EVs). Moreover, product qualification lead times can extend from 12-24 months. As such, production of an intermediate product such as LiCl significantly reduces technical and product acceptance risk associated with production of high purity lithium products.
- 3) Faster path to market:** Avoiding extended production ramp-up times and meeting high product purity standards permits an accelerated path to market, notwithstanding that the LiCl market is a comparatively small (albeit potentially growing) market. As noted above, LiCl is the precursor product to the production of lithium metal, which is used on the production of next generation solid state batteries.

Offtake, marketing and sales

GLN has yet to enter into binding offtake agreements for production from HMW, with the company having publicly stated it will continue to seek maximum flexibility on offtake and the benefits this might afford for product pricing and project development/funding options.

We highlight that GLN's HMW project is one of the very few lithium brine development projects (not currently being developed by an existing producer or under takeover by Chinese groups – i.e. Tre-Q, Pastos Grande, Figure 54) where planned production is uncommitted under any offtake or supply agreements. Noting current market conditions and our strong demand forecast for the lithium sector, we think this makes HMW a potentially strategic asset.

Figure 54: Brine development projects showing capacity vs offtake commitments



Source: Company reports, Canaccord Genuity estimates. Note: Sal de Vida - Orocobre, Pastos Grande – under takeover offer from CATL, Tre-Q – under takeover offer from Zijin Mining.

CG development/production scenario

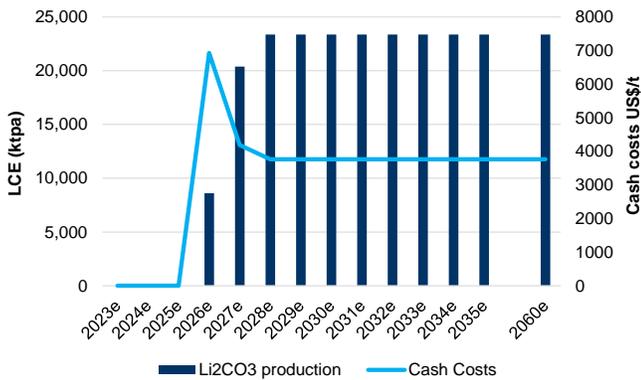
Our modelled development scenario for HMW is based on the 2020 PEA. We assume GLN utilises the recently acquired Del Condor concession and builds additional evaporation ponds to the north, increasing production capacity to 23.5ktpa LCE over a modelled project life of ~40 years. We assume construction commences SepQ'23, with first lithium production occurring in the SepQ'25 with a 24-month ramp-up to full production rates. Key operating and economics assumptions are outlined below.

Figure 55: CGe development scenario vs GLN 2020 PEA

Parameter	Unit	CG development case	GLN 2020 PEA
Mine Life	Years	40	40
Capex	US\$m	520	439
Production Capacity	ktpa LC	23.5	20
Cash costs	US\$/t	3,763	3,518
Project start	Years	SepQ'25	MarQ'25
Ramp-up	Months	24	18
Recovery	%	58%	59%

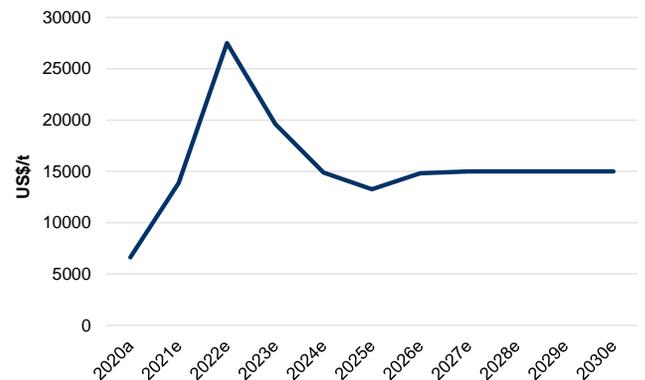
Source: Company reports, Canaccord Genuity estimates

Figure 56: CGe modelled production vs cash costs



Source: Canaccord Genuity estimates

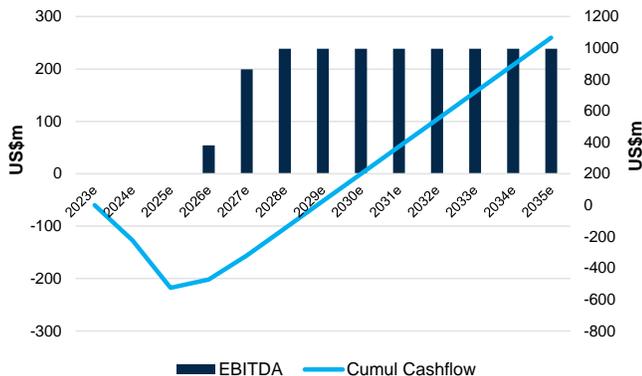
Figure 57: CGe Li2CO3 price forecasts



Source: Asian Metal, Canaccord Genuity estimates

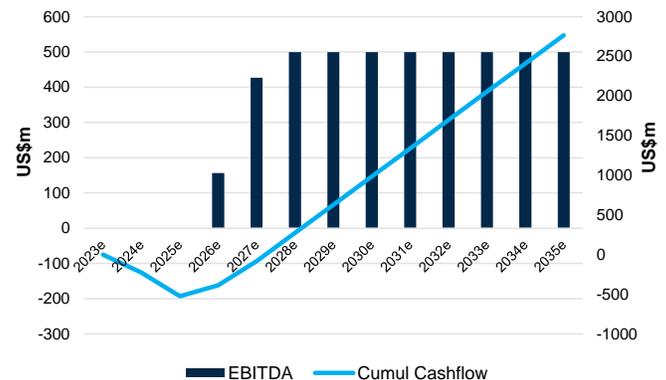
Based on our lithium price deck (see [Lithium prices go exponential](#); Figure 2) and our modelled production scenario, we estimate HMW could generate average annual EBITDA of ~US\$235m, and cumulative after tax cashflow of US\$1,065m over 2025E-35E. At spot prices (~US\$27,000/t Li2CO3), this would increase to US\$500m in annual EBITDA, with 2025-2035 cumulative cashflow increasing to US\$2,766m.

Figure 58: EBITDA and cumulative cashflow forecasts on CGe price deck



Source: Canaccord Genuity estimates

Figure 59: EBITDA and cumulative cashflow forecasts @ spot prices



Source: Canaccord Genuity estimates

Project timetable

GLN's indicative project timeline calls for updated Mineral Resource estimates (DecQ'21/MarQ'22), and piloting and feasibility studies in 2H'CY22. Following the completion of project assessment, we anticipate approvals/financing/FID in late 2022/early 2023, with first production possible in 2025.

CGe project valuation

We estimate a 65% risked (owing to early stage of development) post tax NPV10% for HMW of A\$641m, with an IRR of 14% and post-tax capex payback of 4 years.

At 'spot' prices of ~US\$27,000/t Li₂CO₃ (China EXW price/Asia CIF, Source: Asian Metals) our risked NPV10% increases to A\$1.7bn, with an IRR of 43% and payback of 2.5 years.

Figure 60: Project NPV (un-risked) estimates at various pricing scenarios

NPV10% (un-risked)	US\$m
@ Bear case US\$10,000/t Li ₂ CO ₃	242
@ CGe base case (US\$15k/t LT)	737
@ US\$18,500/t Li ₂ CO ₃	1,094
@ Bull case US\$22,000/t Li ₂ CO ₃	1,443
@ Spot US\$27,000/t Li ₂ CO ₃	1,950

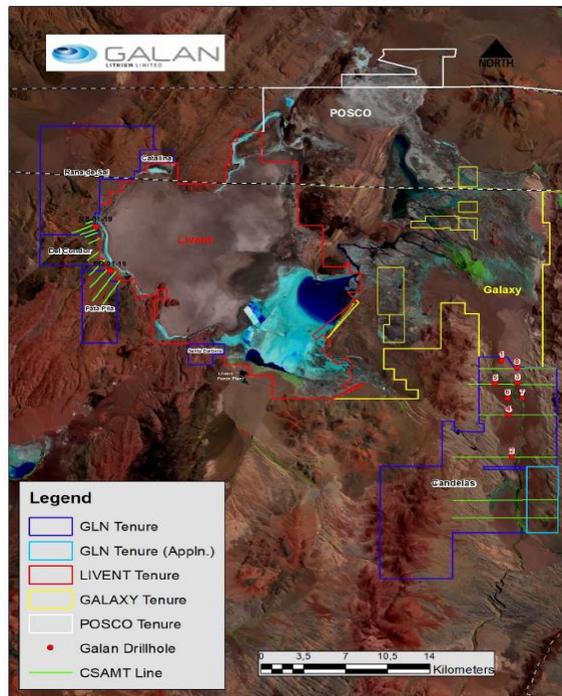
Source: Canaccord Genuity estimates

Other GLN projects

Candelas (100%)

The Candelas Project is located on the south eastern boundaries of the Hombre Muerto basin, and covers ~15km of the Los Patos Channel at the south-eastern end of the salar. The project area comprises nine exploration permits, covering an area of ~17,750 hectares.

Figure 61: Candelas project location



Source: Company reports

Geology and Mineral Resources

The geology of the Candelas project is interpreted as a structurally controlled basin which forms a feeder channel to the Hombre Muerto basin to the north.

In 2019, a Mineral Resource estimate was undertaken by GLN which was based upon the results from a total of eight holes drilled in the North and Central zones at Candelas. The Resource is categorised for the North Zones as Indicated and the Central Zone as Inferred, totalling 684kt LCE at an average lithium concentration of 672ppm to a depth of 660m.

Figure 62: Candelas Mineral Resource estimate

Resource category	Li (mg/l)	Li (kt)	LCE (t)
Candelas North Indicated	496	166	888
Candelas Central Indicated	130	50	270
Cut-off (Li mg/l)			
400	639	147	786
450	653	140	748
500	672	128	684

Source: Company reports

Project development – earlier stage, but provides increased basin footprint and offers potential for additional production centre

GLN are currently completing a scoping study for the project with results expected in Q4 2021. The study will be performed by Galan’s in-house engineering team whilst Ad-Infinity in Chile will oversee the chemical processing and other relevant study sections.

While earlier stage compared to HMW, and subject to study outcomes/permitting and financing, Candelas may present as a second potential production centre at Hombre Muerto.

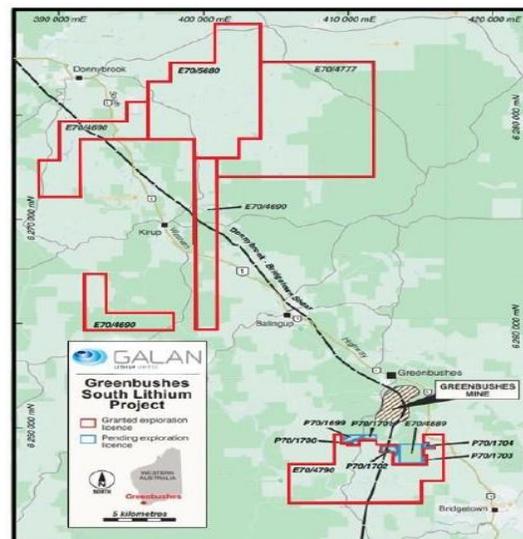
Greenbushes South (80%)

In early 2021, GLN acquired 80% of the Greenbushes South Lithium Project from Lithium Australia.

The project is located 200km south of Perth, Western Australia and covers an area of 353km². Greenbushes South was acquired by GLN due to its proximity to the Greenbushes lithium mine given the project covers an interpreted southern strike projection of the geological structure that hosts the world class Greenbushes mine.

Since the acquisition, GLN has completed initial exploration sampling and mapping with aim to identify and map the surface expression of the Donnybrook-Bridgetown Shear Zone (DBSZ) that hosts the Greenbushes deposit. Initial results have been promising, with GLN expecting the project to be drill-ready by 2H’2022.

Figure 63: Greenbushes South Lithium Project location



Source: Company reports

Figure 64: GLN financial summary

Galan Lithium Ltd		GLN:ASX				
Analyst :	Reg Spencer				Rating:	SPEC BUY
Date:	21/10/2021				Target Price:	\$2.60
Year End:	June					
Market Information						
Share Price	A\$	1.11				
Market Capitalisation	A\$m	319.5				
12 Month Hi	A\$	1.34				
12 Month Lo	A\$	0.11				
Issued Capital	m	289.1				
Options	m	26.5				
Fully Diluted	m	315.6				
Valuation						
	Us\$m	Risk adj	Equity	A\$m	A\$/share	
Hombre Muerto West	737.7	65%	100%	640.2	2.06	
Other projects	100			133.5	0.43	
Corporate	(26.9)			(26.9)	(0.09)	
Cash	60.0			60.0	0.19	
ITM options	5.2			5.2	0.02	
TOTAL	876.1			812.1	2.61	
P/NAV					0.42x	
Price Target					2.60	
Assumptions						
	2021a	2022e	2023e	2024e		
Lithium carbonate min 99% Li (US\$/t)	6,921	23,850	23,875	17,000		
AUD:USD	0.75	0.73	0.73	0.73		
Sensitivity						
Production Metrics						
	2021a	2022e	2023e	2024e		
Project 1 (100%)						
Lithium Carbonate (kt)	0.0	0.0	0.0	0.0		
Cash Costs (US\$/t)	0.0	0.0	0.0	0.0		
Resource Category						
	Brine Vol (km3)	Li (Kt)	Li (mg/l)	LCE (kt)		
HMW: Sand Domain						
Indicated	430	407	945	2,166		
HMW: Gravel Domain						
Indicated	12	12	947	61		
HMW: Halite Domain						
Indicated	8	8	946	40		
HWW Total	450	426	946	2,267		
Directors & Management						
Name	Position					
Richard Homsany	Non-Executive Chairman					
Juan Pablo ('JP') Vargas de la	Managing Director					
Christopher William Chalwell	Non-Executive Director					
Terry James Gardiner	Non-Executive Director					
Daniel Jimenez	Non-Executive Director					
Jinyu (Raymond) Liu	Non-Executive Director					
Company Description						
Galan Lithium (GLN:ASX) is an Australian company focused on the exploration and development of lithium projects in Argentina. Its key asset is the Hombre Muerto West project, a +40 year, 20ktpa Li2CO3 operation, with a PFS/DFS scheduled for completion in 2H22. GLN also owns the Candales project also located within Hombre Muerto salar and the Greenbushes South exploration project located 200km south of Perth, Western Australia.						
Profit & Loss (A\$m)						
	2021a	2022e	2023e	2024e		
Revenue	1.5	0.0	0.0	0.0		
Operating Costs	-1.1	0.0	0.0	0.0		
Corporate & O'heads	-1.7	-4.5	-7.5	-1.5		
Exploration (Expensed)	0.0	0.0	0.0	0.0		
EBITDA	-1.3	-4.5	-7.5	-1.5		
Dep'n	0.0	0.0	0.0	0.0		
Net Interest	0.1	1.0	2.5	10.5		
Tax	-0.2	0.0	-0.3	-2.2		
NPAT (reported)	-1.4	-3.5	-5.3	6.7		
Abnormals	0.0	0.0	0.0	0.0		
NPAT	-1.4	-3.5	-5.3	6.7		
<i>EBITDA Margin</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>		
<i>EV/EBITDA</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>		
<i>EPS</i>	<i>-\$0.02</i>	<i>-\$0.01</i>	<i>-\$0.02</i>	<i>\$0.02</i>		
<i>EPS Growth</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>-227%</i>		
<i>PER</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>47.4x</i>		
<i>Dividend Per Share</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>		
<i>Dividend Yield</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>		
Cash Flow (A\$m)						
	2021a	2022e	2023e	2024e		
Cash Receipts	1.5	0.0	0.0	0.0		
Cash paid to suppliers & employees	-2.3	-1.5	-1.5	-1.5		
Tax Paid	-0.2	0.0	-0.3	-2.2		
Net Interest	0.1	1.0	2.5	10.5		
+/- Working cap change	-0.2	0.0	0.0	0.0		
Operating Cash Flow	-1.1	-0.5	0.7	6.7		
Exploration and Evaluation	-1.5	-0.9	0.0	0.0		
Capex	0.0	0.0	0.0	-308.5		
JV Divs & Other	-0.4	0.0	0.0	0.0		
Investing Cash Flow	-1.9	-0.9	0.0	-308.5		
Debt Drawdown (repayment)	0.0	0.0	0.0	400.0		
Share capital	18.9	50.0	270.0	0.0		
Dividends	0.0	0.0	0.0	0.0		
Financing Expenses	-0.6	-3.0	-6.0	0.0		
Financing Cash Flow	18.3	47.0	264.0	400.0		
Opening Cash	1.6	15.6	61.2	325.8		
Increase / (Decrease) in cash	15.3	45.6	264.7	98.2		
FX Impact	0.0	0.0	0.0	0.0		
Closing Cash	15.6	61.2	325.8	424.0		
<i>Op. Cashflow/Share</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.00</i>	<i>\$0.02</i>		
<i>P/CF</i>	<i>-279.1x</i>	<i>-616.6x</i>	<i>470.2x</i>	<i>47.4x</i>		
<i>EV/FCF</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>		
<i>FCF Yield</i>	<i>-1%</i>	<i>0%</i>	<i>0%</i>	<i>-94%</i>		
Balance Sheet (A\$m)						
	2021a	2022e	2023e	2024e		
Cash + S/Term Deposits	15.6	61.2	325.8	424.0		
Other current assets	0.0	0.0	0.0	0.0		
Current Assets	15.6	61.2	325.8	424.0		
Property, Plant & Equip.	0.1	0.1	0.1	308.6		
Exploration & Develop.	23.4	24.3	24.3	24.3		
Other Non-current Assets	0.0	0.0	0.0	0.0		
Payables	0.4	0.0	0.0	0.0		
Short Term Debt	0.0	0.0	0.0	0.0		
Long Term Debt	0.0	0.0	0.0	0.0		
Other Liabilities	0.3	0.7	0.7	400.7		
Net Assets	38.3	84.8	349.5	356.3		
Shareholders Funds	44.4	94.4	364.4	364.4		
Reserves	0.0	0.7	0.7	0.7		
Retained Earnings	-6.8	-10.3	-15.6	-8.9		
Total Equity	38.3	84.8	349.5	356.3		
<i>Debt/Equity</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>	<i>0%</i>		
<i>Net Debt/EBITDA</i>	<i>14.5x</i>	<i>118.0x</i>	<i>-479.5x</i>	<i>-62.9x</i>		
<i>Net Interest Cover</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>	<i>nm</i>		
<i>ROE</i>	<i>-4%</i>	<i>-4%</i>	<i>-2%</i>	<i>2%</i>		
<i>ROIC</i>	<i>-6%</i>	<i>-14%</i>	<i>-22%</i>	<i>2%</i>		
<i>Book Value/share</i>	<i>\$0.14</i>	<i>\$0.29</i>	<i>\$1.21</i>	<i>\$1.23</i>		

Source: Company reports, Canaccord Genuity estimates

Appendix: Lithium brine project comps

Figure 65: Lithium brine development project comps

	Galan Lithium Limited	Lake Resources	Lithium Power International	Vulcan Energy Resources	Millennial Lithium Corp.	Neo Lithium Corp	Argosy Minerals Limited	Lithium Americas Corp	Standard Lithium Ltd
Market Data									
Ticker	GLN-ASX	LKE-ASX	LPI-ASX	VUL-ASX	ML-TSX	NLC-TSX	AGY-ASX	LAC-TSX	SLI-TSX
Reporting Currency	AUD	AUD	AUD	AUD	CAD	CAD	AUD	CAD	CAD
Share price	\$1.11	\$0.77	\$0.43	\$13.46	\$3.85	\$6.50	\$0.26	\$32.22	\$13.42
Basic O/S (M)	272	1124	349	124	98	141	1250	120	134
M/Cap	\$320	\$917	\$150	\$1,667	\$356	\$919	\$319	\$3,864	\$1,800
Cash	\$53	\$25	\$6	\$114	\$54	\$59	\$27	\$600	\$32
Debt	\$0	0	0	0	0	0	0	200	0
Enterprise Value	\$267	\$892	\$144	\$1,553	\$302	\$860	\$292	\$3,464	\$1,768
Liquidity (M, 30d Avg Daily Value Traded)	\$2	\$8	\$1	\$22	\$3	\$7	\$2	\$28	\$4
Project Data									
Project	Hombro Muerto West	Kachi	Maicunga	Zero Carbon	Pastos Grande	Tre-Q	Rincon	Cauchari-Olaroz	Lanxess
Asset Ownership	100%	75%	51%	100%	100%	100%	90%	45%	30%
Location	Argentina	Argentina	Chile	Germany	Argentina	Argentina	Argentina	Argentina	USA
Study Date	2020	2020	2019	2021	2019	2019	2018	2020	2018
Status	PEA	PFS	DFS	PFS	FS	PFS	PEA	DFS	PEA
Permitted	No	No	Yes	No	No	No	Yes	Yes	No
Resources (MT LCE)	2.3	4.4	2.8	15.85	3.3	7	2.4	24,5754	3.14
Lithium grade (ppm Li)	946	211	980	181	450	790	325	592	168
Production Method	Solar Evaporation	DLE	Solar Evaporation	DLE	Solar Evaporation	Solar Evaporation	Solar Evaporation	Solar Evaporation	DLE
Primary Product(s)	Li2CO3	Li2CO3	Li2CO3	LiOH	Li2CO3	Li2CO3	Li2CO3	Li2CO3	Li2CO3
Capex (US\$m)	\$438	\$544	\$505	\$2,169	\$448	\$319	\$141	\$565	\$437
Capex (attrib)	\$438	\$408	\$258	\$2,169	\$448	\$319	\$127	\$253	\$131
Capacity (ktpa LCE)	20	25	15	40	25	20	12	40	21
Cash costs (US\$/t LCE)	\$3,519	\$4,178	\$3,649	\$3,141	\$3,387	\$2,914	\$4,644	\$3,578	\$4,319
Project Life	40	25	20	40	41	35	16.5	40	25
Discount Rate (WACC) used %	8%	8%	8%	8%	8%	8%	0%	8%	8%
NPV (After-tax)	\$684	\$1,580	\$908	\$2,636	\$1,030	\$1,144	\$0	\$1,781	\$989
IRR (After-tax)	19%	35%	21%	21%	24%	50%	0%	32%	36%
Strategic partner	No	Lilac Solutions	Mitsui	No	Ganfeng	CATL	No	Ganfeng	No
Offtake	No	No	Mitsui	Renault/ LG Chem	Ganfeng	No	No	Ganfeng	No
Capex/Market cap (US\$m)	1.8x	0.6x	2.3x	1.7x	1.6x	0.4x	0.6x	0.1x	0.1x
EV/LCE Resource tonne (attributable) US\$m/t	87	202	75	73	74	100	101	255	1521
Market Cap (US\$m)/ NPV (After-tax)	0.3x	0.4x	0.1x	0.5x	0.3x	0.7x	Na	1.8x	1.5x
Capital Intensity (US\$/t LCE)	\$21,910	\$21,764	\$33,667	\$54,225	\$17,929	\$15,940	\$11,767	\$14,113	\$20,817

Source: FactSet, Company reports, Canaccord Genuity estimates

Appendix: Important Disclosures

Analyst Certification

Each authoring analyst of Canaccord Genuity whose name appears on the front page of this research hereby certifies that (i) the recommendations and opinions expressed in this research accurately reflect the authoring analyst's personal, independent and objective views about any and all of the designated investments or relevant issuers discussed herein that are within such authoring analyst's coverage universe and (ii) no part of the authoring analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the authoring analyst in the research, and (iii) to the best of the authoring analyst's knowledge, she/he is not in receipt of material non-public information about the issuer.

Analysts employed outside the US are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity LLC and therefore may not be subject to the FINRA Rule 2241 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Sector Coverage

Individuals identified as "Sector Coverage" cover a subject company's industry in the identified jurisdiction, but are not authoring analysts of the report.

Investment Recommendation

Date and time of first dissemination: October 21, 2021, 21:30 ET

Date and time of production: October 21, 2021, 21:16 ET

Target Price / Valuation Methodology:

Orocobre Limited - ORE

Our target price is based on a 50:50 blend of our NPV10% based NAV, and 15x multiple applied to our fwd five-year avg EBITDA.

Vulcan Energy Resources Limited - VUL

Our price target is set in line with our NAV with a 60% risk weighting. We use US\$15,000/t LiOH prices, 1.58 EUR/AUD exchange rates and discount rates of 8% for the lithium business and 5% for the energy business.

Standard Lithium Ltd. - SLI

Our 12-month target price is based on our fully risked NAV measured as at October 1, 2022

Lake Resources N.L. - LKE

Our \$1.15 target price is based on a risked NPV_{10%} for our modelled development/production scenario (LT Li₂CO₃ US\$15k/t).

Galan Lithium Limited - GLN

Our \$2.60 target price is based on a risked NPV10% for our modelled development/production scenario (LT Li₂CO₃ US\$15,000/t).

Risks to achieving Target Price / Valuation:

Galan Lithium Limited - GLN

Financing risks

Our analysis suggests that GLN will require additional capital to fund the development costs for the Hombre Muerto West project. As a pre-cash flow company, GLN is reliant on equity/debt/external capital to fund capital commitments, and there is no guarantee that accessing these markets will be achieved without dilution to shareholders. Furthermore, accurate estimates of capital costs for the project remain subject to completion of final engineering, which may see capital requirements exceed our model assumptions.

Permitting and construction risks

Permitting delays may result in risks of delivery of the HMW project. Construction risks also exist, and while an EPCM contract will be sought there may be risks of delay, cost overruns and scope changes.

Operational risks

Once in production, the company will be subject to risks such as plant/equipment breakdowns, metallurgical (meeting design recoveries within a complex flowsheet), materials handling and other technical issues. An increase in operating costs could reduce the profitability and free cash generation from the operating assets and negatively impact valuation. Further, the actual characteristics of an ore deposit may differ significantly from initial interpretations, which can also materially impact forecast production from original expectations.

Resource risks

The resource is subject to a number of risks and may require a high rate of capital expenditure or changes to cost structures. Risks can also be associated with exploration and lack of accuracy in interpretation of geochemical, geophysical, drilling and other data. Our model assumptions include an amount of Indicated and Inferred Resources, which may or may not ultimately be proven to be economic and converted into Reserves.

Commodity price and currency fluctuation

The company is exposed to commodity price and currency fluctuations, often driven by macro-economic forces including inflationary pressure, interest rates and supply and demand of commodities. These factors are external and could reduce the profitability, costing and prospective outlook for the business.

Lake Resources N.L. - LKE

Financing risks

Our analysis suggests that LKE will require additional capital to fund the development costs for the Kachi project. As a pre-cash flow company, LKE is reliant on equity/debt/external capital to fund capital commitments, and there is no guarantee that accessing these markets will be achieved without dilution to shareholders. Furthermore, accurate estimates of capital costs for the project remain subject to completion of final engineering, which may see capital requirements exceed our model assumptions.

Permitting and construction risks

Permitting delays may result in risks of delivery of the Kachi project. Construction risks also exist, and while an EPCM contract will be sought there may be risks of delay, cost overruns and scope changes.

Operational risks

Once in production, the company will be subject to risks such as plant/equipment breakdowns, metallurgical (meeting design recoveries within a complex flowsheet), materials handling and other technical issues. An increase in operating costs could reduce the profitability and free cash generation from the operating assets and negatively impact valuation. Further, the actual characteristics of an ore deposit may differ significantly from initial interpretations, which can also materially impact forecast production from original expectations.

Resource risks

The resource is subject to a number of risks and may require a high rate of capital expenditure or changes to cost structures. Risks can also be associated with exploration and lack of accuracy in interpretation of geochemical, geophysical, drilling and other data. Our model assumptions include an amount of Indicated and Inferred Resources, which may or may not ultimately be proven to be economic and converted into Reserves.

Commodity price and currency fluctuation

The company is exposed to commodity price and currency fluctuations, often driven by macro-economic forces including inflationary pressure, interest rates and supply and demand of commodities. These factors are external and could reduce the profitability, costing and prospective outlook for the business.

Orocobre Limited - ORE

The key investment risks for ORE include: Geological risk - the actual characteristics of an ore deposit may differ significantly from initial interpretations and expectations. We note however the resource is extremely large relative to the forecast extraction rates and mine life, somewhat mitigating geological risk. Technical risk - the construction and operation of brine based lithium carbonate projects although proven is still in its relative infancy and therefore construction and operating risks are inherently elevated. Mitigating this risk is a pilot plant has been operating on site for in excess of 18 months, producing battery grade lithium carbonate. Financing risk - the ability of ORE to fund its portion of the development of the Olaroz project should also be considered a key investment risk. Equity and credit markets may not be conducive to securing the required funds to complete construction of the project although we consider with the Capital expenditure and operating risk - the risk that capital and or operating costs exceed budget and/or exhaust available funding before project completion, and reduce the profitability and free cash generation of the project. Commodity price and exchange rate risk: As with all mining and mineral exploration companies, commodity price and exchange rate risk should also be considered. In particular lithium and lithium carbonate are not exchange-traded commodities and are relatively small markets. Small and illiquid markets can be more susceptible to wild fluctuations in prices.

Standard Lithium Ltd. - SLI

Lithium price and market risk

Our estimates and valuation are extremely sensitive to the price of lithium and we can make no assurances that the future price trajectory of the metal will be in line with our estimates. A weaker-than-expected battery grade Li_2CO_3 price will impact our cash flows and could materially impact our valuation for SLL.

Project risk

The Lanxess Project is at a PEA level, with work currently being completed in preparation for a definitive Feasibility Study. Accordingly, the project is subject to changes in operational parameters including estimates of initial capital and operating costs that could impact our assessed valuation. To be conservative we have escalated our capital and operating costs estimates and applied a higher discount rate.

Financing risk

As an exploration and development company with no operating cash flow, Standard Lithium is reliant upon the capital markets to remain a going concern. Although our estimates currently assume project financing is provided by LANXESS via the completion of a formal Joint Venture, there is no guarantee that this will be the case. Furthermore, a potential change in market sentiment and/or pricing could impact SLL's ability to access capital markets on a go-forward basis. If the price of lithium does not improve, the company could face further dilution.

Permitting risk

Our estimates and valuation assume the successful receipt of new permits and modifications to LANXESS' existing permits where required. However, there is no guarantee that this will be the case (although we view it as very likely).

Vulcan Energy Resources Limited - VUL

Risks include pricing, delivery, resource size and grades, capex and opex estimates and production schedules.

Distribution of Ratings:

Global Stock Ratings (as of 10/21/21)

Rating	Coverage Universe		IB Clients
	#	%	%
Buy	643	69.07%	44.63%
Hold	138	14.82%	27.54%
Sell	8	0.86%	37.50%
Speculative Buy	137	14.72%	61.31%
	931*	100.0%	

*Total includes stocks that are Under Review

Canaccord Genuity Ratings System

BUY: The stock is expected to generate risk-adjusted returns of over 10% during the next 12 months.

HOLD: The stock is expected to generate risk-adjusted returns of 0-10% during the next 12 months.

SELL: The stock is expected to generate negative risk-adjusted returns during the next 12 months.

NOT RATED: Canaccord Genuity does not provide research coverage of the relevant issuer.

"Risk-adjusted return" refers to the expected return in relation to the amount of risk associated with the designated investment or the relevant issuer.

Risk Qualifier

SPECULATIVE: Stocks bear significantly higher risk that typically cannot be valued by normal fundamental criteria. Investments in the stock may result in material loss.

12-Month Recommendation History (as of date same as the Global Stock Ratings table)

A list of all the recommendations on any issuer under coverage that was disseminated during the preceding 12-month period may be obtained at the following website (provided as a hyperlink if this report is being read electronically) <http://disclosures-mar.canaccordgenuity.com/EN/Pages/default.aspx>

Required Company-Specific Disclosures (as of date of this publication)

Galan Lithium Limited, Orocobre Limited, Standard Lithium Ltd. and Vulcan Energy Resources Limited currently are, or in the past 12 months were, a client of Canaccord Genuity or its affiliated companies. During this period, Canaccord Genuity or its affiliated companies provided investment banking services to Galan Lithium Limited, Orocobre Limited, Standard Lithium Ltd. and Vulcan Energy Resources Limited.

In the past 12 months, Canaccord Genuity or its affiliated companies have received compensation for Investment Banking services from Galan Lithium Limited, Orocobre Limited, Standard Lithium Ltd. and Vulcan Energy Resources Limited.

In the past 12 months, Canaccord Genuity or any of its affiliated companies have been lead manager, co-lead manager or co-manager of a public offering of securities of Galan Lithium Limited and Vulcan Energy Resources Limited or any publicly disclosed offer of securities of Galan Lithium Limited and Vulcan Energy Resources Limited or in any related derivatives.

Canaccord Genuity or one or more of its affiliated companies intend to seek or expect to receive compensation for Investment Banking services from Lake Resources N.L., Galan Lithium Limited, Orocobre Limited, Standard Lithium Ltd. and Vulcan Energy Resources Limited in the next three months.

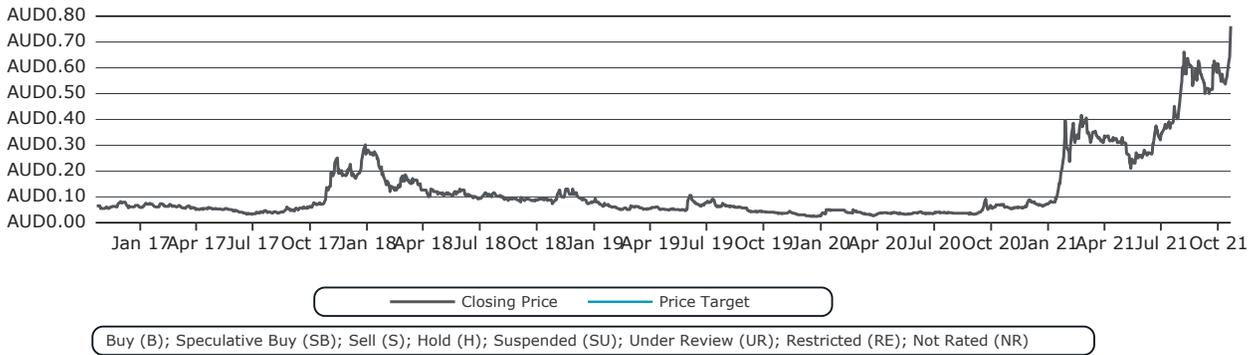
The primary analyst, a member of primary analyst's household, or any individual directly involved in the preparation of this research, has a long position in the shares or derivatives, or has any other financial interest in Orocobre Limited, the value of which increases as the value of the underlying equity increases.

Canaccord Genuity (Australia) Limited has received a fee as Joint Lead Manager to the Vulcan Energy Resources Limited Capital Raising announced 2 February 2021.

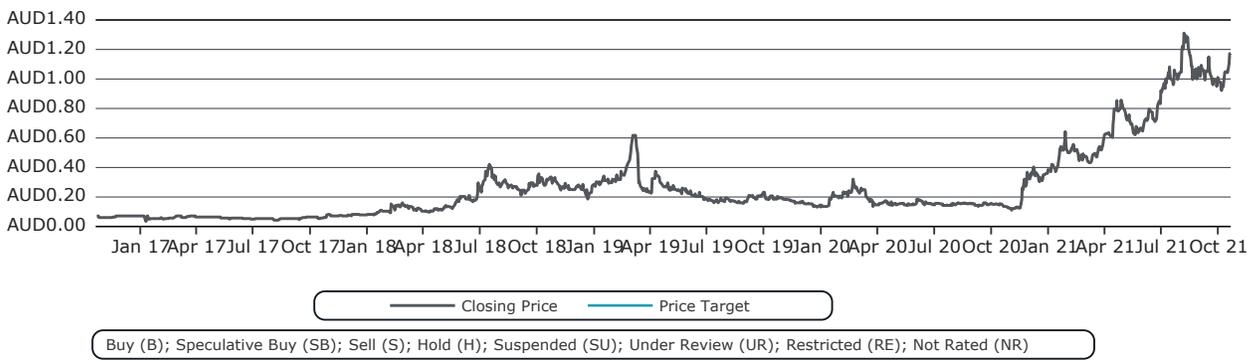
Canaccord Genuity (Australia) Limited has received a fee as Joint Lead Manager to the Vulcan Energy Resources Limited Capital Raising announced 14 September 2021.

Canaccord Genuity (Australia) Limited has received a fee as Lead Manager to the Galan Lithium Limited Capital Raising announced 12 August 2021.

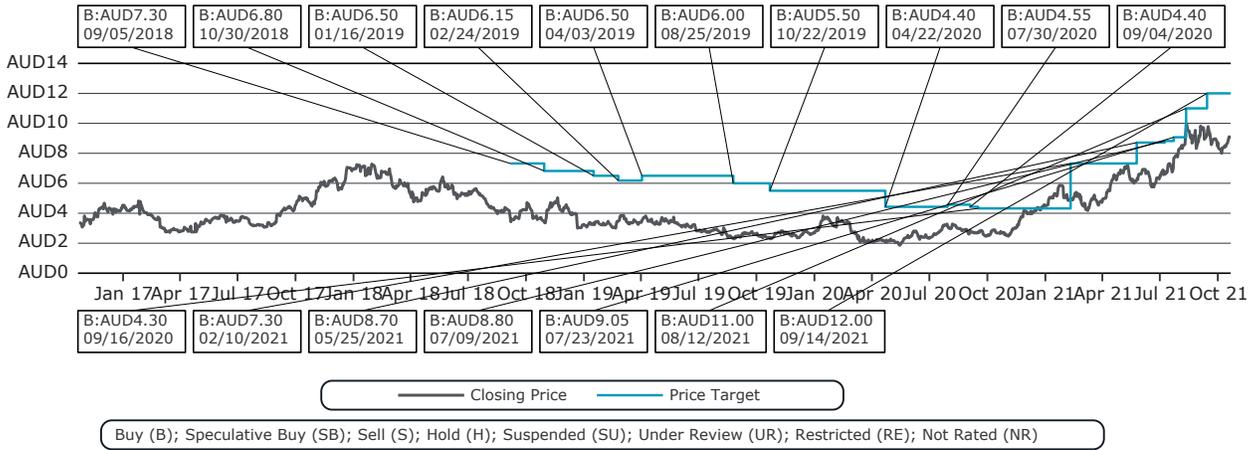
Lake Resources N.L. Rating History as of 10/20/2021



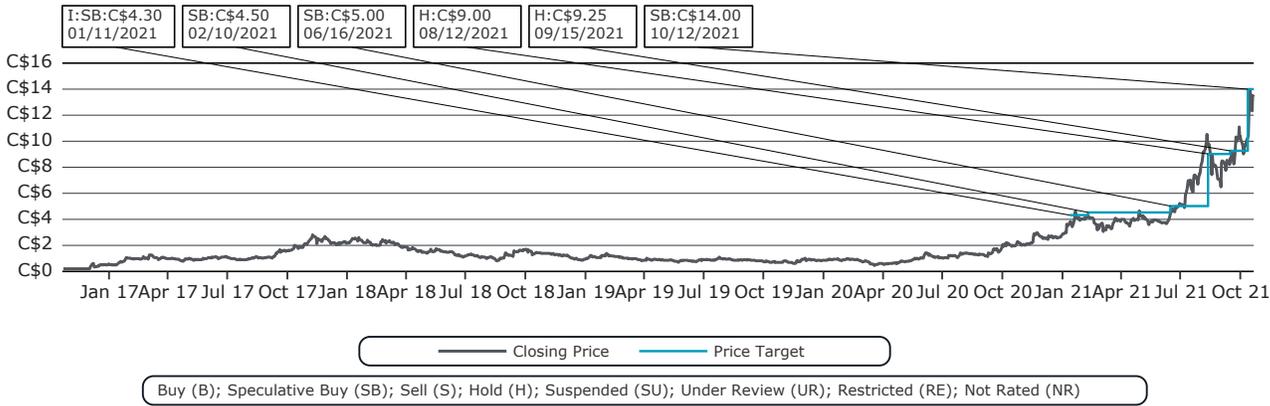
Galan Lithium Limited Rating History as of 10/20/2021



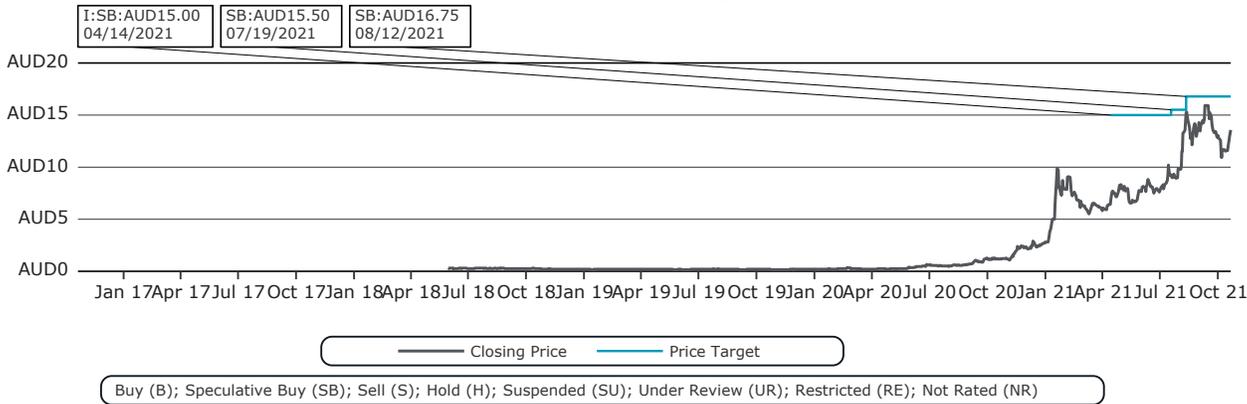
Orocobre Limited Rating History as of 10/20/2021



Standard Lithium Ltd. Rating History as of 10/20/2021



Vulcan Energy Resources Limited Rating History as of 10/20/2021



Required Company-Specific Disclosures (as of date of this publication)

Past performance

In line with Article 44(4)(b), MiFID II Delegated Regulation, we disclose price performance for the preceding five years or the whole period for which the financial instrument has been offered or investment service provided where less than five years. Please note price history refers to actual past performance, and that past performance is not a reliable indicator of future price and/or performance.

Online Disclosures

Up-to-date disclosures may be obtained at the following website (provided as a hyperlink if this report is being read electronically) <http://disclosures.canaccordgenuity.com/EN/Pages/default.aspx>; or by sending a request to Canaccord Genuity Corp. Research, Attn: Disclosures, P.O. Box 10337 Pacific Centre, 2200-609 Granville Street, Vancouver, BC, Canada V7Y 1H2; or by sending a request by email to disclosures@cgf.com. The reader may also obtain a copy of Canaccord Genuity's policies and procedures regarding the dissemination of research by following the steps outlined above.

General Disclaimers

See "Required Company-Specific Disclosures" above for any of the following disclosures required as to companies referred to in this report: manager or co-manager roles; 1% or other ownership; compensation for certain services; types of client relationships; research analyst conflicts; managed/co-managed public offerings in prior periods; directorships; market making in equity securities and related derivatives. For reports identified above as compendium reports, the foregoing required company-specific disclosures can be found in a hyperlink located in the section labeled, "Compendium Reports." "Canaccord Genuity" is the business name used by certain wholly owned subsidiaries of Canaccord Genuity Group Inc., including Canaccord Genuity LLC, Canaccord Genuity Limited, Canaccord Genuity Corp., and Canaccord Genuity (Australia) Limited, an affiliated company that is 80%-owned by Canaccord Genuity Group Inc.

The authoring analysts who are responsible for the preparation of this research are employed by Canaccord Genuity Corp. a Canadian broker-dealer with principal offices located in Vancouver, Calgary, Toronto, Montreal, or Canaccord Genuity LLC, a US broker-dealer with principal offices located in New York, Boston, San Francisco and Houston, or Canaccord Genuity Limited., a UK broker-dealer with

principal offices located in London (UK) and Dublin (Ireland), or Canaccord Genuity (Australia) Limited, an Australian broker-dealer with principal offices located in Sydney and Melbourne.

The authoring analysts who are responsible for the preparation of this research have received (or will receive) compensation based upon (among other factors) the Investment Banking revenues and general profits of Canaccord Genuity. However, such authoring analysts have not received, and will not receive, compensation that is directly based upon or linked to one or more specific Investment Banking activities, or to recommendations contained in the research.

Some regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of research. This research has been prepared in accordance with Canaccord Genuity's policy on managing conflicts of interest, and information barriers or firewalls have been used where appropriate. Canaccord Genuity's policy is available upon request.

The information contained in this research has been compiled by Canaccord Genuity from sources believed to be reliable, but (with the exception of the information about Canaccord Genuity) no representation or warranty, express or implied, is made by Canaccord Genuity, its affiliated companies or any other person as to its fairness, accuracy, completeness or correctness. Canaccord Genuity has not independently verified the facts, assumptions, and estimates contained herein. All estimates, opinions and other information contained in this research constitute Canaccord Genuity's judgement as of the date of this research, are subject to change without notice and are provided in good faith but without legal responsibility or liability.

From time to time, Canaccord Genuity salespeople, traders, and other professionals provide oral or written market commentary or trading strategies to our clients and our principal trading desk that reflect opinions that are contrary to the opinions expressed in this research. Canaccord Genuity's affiliates, principal trading desk, and investing businesses also from time to time make investment decisions that are inconsistent with the recommendations or views expressed in this research.

This research is provided for information purposes only and does not constitute an offer or solicitation to buy or sell any designated investments discussed herein in any jurisdiction where such offer or solicitation would be prohibited. As a result, the designated investments discussed in this research may not be eligible for sale in some jurisdictions. This research is not, and under no circumstances should be construed as, a solicitation to act as a securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. This material is prepared for general circulation to clients and does not have regard to the investment objectives, financial situation or particular needs of any particular person. Investors should obtain advice based on their own individual circumstances before making an investment decision. To the fullest extent permitted by law, none of Canaccord Genuity, its affiliated companies or any other person accepts any liability whatsoever for any direct or consequential loss arising from or relating to any use of the information contained in this research.

Research Distribution Policy

Canaccord Genuity research is posted on the Canaccord Genuity Research Portal and will be available simultaneously for access by all of Canaccord Genuity's customers who are entitled to receive the firm's research. In addition research may be distributed by the firm's sales and trading personnel via email, instant message or other electronic means. Customers entitled to receive research may also receive it via third party vendors. Until such time as research is made available to Canaccord Genuity's customers as described above, Authoring Analysts will not discuss the contents of their research with Sales and Trading or Investment Banking employees without prior compliance consent.

For further information about the proprietary model(s) associated with the covered issuer(s) in this research report, clients should contact their local sales representative.

Short-Term Trade Ideas

Research Analysts may, from time to time, discuss "short-term trade ideas" in research reports. A short-term trade idea offers a near-term view on how a security may trade, based on market and trading events or catalysts, and the resulting trading opportunity that may be available. Any such trading strategies are distinct from and do not affect the analysts' fundamental equity rating for such stocks. A short-term trade idea may differ from the price targets and recommendations in our published research reports that reflect the research analyst's views of the longer-term (i.e. one-year or greater) prospects of the subject company, as a result of the differing time horizons, methodologies and/or other factors. It is possible, for example, that a subject company's common equity that is considered a long-term 'Hold' or 'Sell' might present a short-term buying opportunity as a result of temporary selling pressure in the market or for other reasons described in the research report; conversely, a subject company's stock rated a long-term 'Buy' or 'Speculative Buy' could be considered susceptible to a downward price correction, or other factors may exist that lead the research analyst to suggest a sale over the short-term. Short-term trade ideas are not ratings, nor are they part of any ratings system, and the firm does not intend, and does not undertake any obligation, to maintain or update short-term trade ideas. Short-term trade ideas are not suitable for all investors and are not tailored to individual investor circumstances and objectives, and investors should make their own independent decisions regarding any securities or strategies discussed herein. Please contact your salesperson for more information regarding Canaccord Genuity's research.

For Canadian Residents:

This research has been approved by Canaccord Genuity Corp., which accepts sole responsibility for this research and its dissemination in Canada. Canaccord Genuity Corp. is registered and regulated by the Investment Industry Regulatory Organization of Canada (IIROC) and is a Member of the Canadian Investor Protection Fund. Canadian clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity Corp. in their particular province or territory.

For United States Persons:

Canaccord Genuity LLC, a US registered broker-dealer, accepts responsibility for this research and its dissemination in the United States. This research is intended for distribution in the United States only to certain US institutional investors. US clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity LLC. Analysts employed outside the US, as specifically indicated elsewhere in this report, are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity LLC and therefore may not be subject to the FINRA Rule 2241 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

For United Kingdom and European Residents:

This research is distributed in the United Kingdom and elsewhere Europe, as third party research by Canaccord Genuity Limited, which is authorized and regulated by the Financial Conduct Authority. This research is for distribution only to persons who are Eligible Counterparties or Professional Clients only and is exempt from the general restrictions in section 21 of the Financial Services and Markets Act 2000 on the communication of invitations or inducements to engage in investment activity on the grounds that it is being distributed in the United Kingdom only to persons of a kind described in Article 19(5) (Investment Professionals) and 49(2) (High Net Worth companies, unincorporated associations etc) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended). It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. This material is not for distribution in the United Kingdom or elsewhere in Europe to retail clients, as defined under the rules of the Financial Conduct Authority.

For Jersey, Guernsey and Isle of Man Residents:

This research is sent to you by Canaccord Genuity Wealth (International) Limited (CGWI) for information purposes and is not to be construed as a solicitation or an offer to purchase or sell investments or related financial instruments. This research has been produced by an affiliate of CGWI for circulation to its institutional clients and also CGWI. Its contents have been approved by CGWI and we are providing it to you on the basis that we believe it to be of interest to you. This statement should be read in conjunction with your client agreement, CGWI's current terms of business and the other disclosures and disclaimers contained within this research. If you are in any doubt, you should consult your financial adviser.

CGWI is licensed and regulated by the Guernsey Financial Services Commission, the Jersey Financial Services Commission and the Isle of Man Financial Supervision Commission. CGWI is registered in Guernsey and is a wholly owned subsidiary of Canaccord Genuity Group Inc.

For Australian Residents:

This research is distributed in Australia by Canaccord Genuity (Australia) Limited ABN 19 075 071 466 holder of AFS Licence No 234666. To the extent that this research contains any advice, this is limited to general advice only. Recipients should take into account their own personal circumstances before making an investment decision. Clients wishing to effect any transactions in any financial products discussed in the research should do so through a qualified representative of Canaccord Genuity (Australia) Limited or its Wealth Management affiliated company, Canaccord Genuity Financial Limited ABN 69 008 896 311 holder of AFS Licence No 239052.

For Hong Kong Residents:

This research is distributed in Hong Kong by Canaccord Genuity (Hong Kong) Limited which is licensed by the Securities and Futures Commission. This research is only intended for persons who fall within the definition of professional investor as defined in the Securities and Futures Ordinance. It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. Recipients of this report can contact Canaccord Genuity (Hong Kong) Limited. (Contact Tel: +852 3919 2561) in respect of any matters arising from, or in connection with, this research.

Additional information is available on request.

Copyright © Canaccord Genuity Corp. 2021 – Member IIROC/Canadian Investor Protection Fund

Copyright © Canaccord Genuity Limited. 2021 – Member LSE, authorized and regulated by the Financial Conduct Authority.

Copyright © Canaccord Genuity LLC 2021 – Member FINRA/SIPC

Copyright © Canaccord Genuity (Australia) Limited. 2021 – Participant of ASX Group, Chi-x Australia and of the NSX. Authorized and regulated by ASIC.

All rights reserved. All material presented in this document, unless specifically indicated otherwise, is under copyright to Canaccord Genuity Corp., Canaccord Genuity Limited, Canaccord Genuity LLC or Canaccord Genuity Group Inc. None of the material, nor its content, nor any copy of it, may be altered in any way, or transmitted to or distributed to any other party, without the prior express written permission of the entities listed above.

None of the material, nor its content, nor any copy of it, may be altered in any way, reproduced, or distributed to any other party including by way of any form of social media, without the prior express written permission of the entities listed above.