

Galan Lithium (GLN AU)

Initiation: Last remaining conventional Li brine on proven salar

RECOMMENDATION: BUY

PRICE TARGET: A\$3.00/sh

RISK RATING: HIGH

SHARE DATA	A\$0.99/sh
Shares (basic, FD)	307 / 338
52-week high/low	0.92 / 1.74
Market cap (A\$m)	303.8
Net cash (debt) (US\$m)	19
1.0xNAV8% @ spot (US\$m)	1,723
1.0xNAV8% FD (A\$/sh)	A\$7.65
P/NAV (x)	0.09x
Average daily value (A\$000, 3M)	800.46

FINANCIALS (June YE)	FY24E	FY25E	FY26E
6% LiCl conc. produced (kt)	--	7,833	34,467
LCE produced (kt)	--	--	--
Revenue (A\$m)	-	55	242
Mine EBITDA (A\$m)	-	40.2	108.8
EBITDA (A\$m)	(3.2)	37.0	105.6
EBITDA margin (%)	-	67%	44%
EV/EBITDA (x)	(57.0)	(138.1)	7.0x
Income (A\$m)	(3.2)	(23.5)	(35.6)
EPS (A\$/sh)	(0.01)	(0.04)	(0.06)
PER (x)	(131.6)	(23.2)	(15.3)
CFPS (A\$/sh)	0.02	(0.02)	0.04
P/CF (x)	(168.8)	32.4x	7.4x

NAV over time	Jun '22	Jun '23	Jun '24
1xNAV8% FD (A\$/sh)	8.19	8.40	7.14
ROI to 1xNAV (% pa)	727%	191%	93%

SOTP 1xNAV8%	US\$m	A\$/sh
HMW NPV 2Q23	1,268	3.38
Candelas NPV 2Q23	530	0.47
Australia (Greenbushes) nominal	20	0.02
Central SG&A & fin costs 2Q23	(114)	(0.30)
Net cash + options	19	0.05
TOTAL	1,723	3.61



Source: SCPe, Factset market data

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ASX-listed conventional lithium brine developer on proven salar

Galan is an ASX-listed lithium developer with 7.3Mt LCE at its flagship projects on the Salar de Hombre Muerto in Catamarca, Argentina. Its flagship Hombre Muerto West (HMW) project is targeting 2H23 construction of a 4Ktpa pilot plant producing 6% Li chloride, commercial Li chloride production in 2025, and Li carbonate production at 20ktpa funded from cash flow in SCPe 2031. Management is committed, aligned and experienced with 25% of shares owned by insiders: CEO and MD JP Vargas staked the licences and vended them into Galan in 2018 and is joined by a team of ex SQM and Orocobre Li veterans.

HMW: 6.6Mt LCE at good grades, low impurities and consistent

Most proven salars have been consolidated by majors, leaving a developer space full of science projects – Galan is the exception. HMW is located on a proven salar with adjacent majors Livent and POSCO producing lithium carbonate. The 6.6Mt at 880mg/L Li resource is high grade, low in Mg and Al impurities, and remarkably spatially consistent, all key for a low-cost operator. While there are hilly areas on the licence, terraced ponds work here, and we'd rather have proven met and higher cost earthworks than the reverse.

M&A potential: surrounded by producers on a proven salar

Consolidation of available brine salars has been furious including 2022 transactions: Zijin acquisition of Neolithium (2022, US\$960m), Ganfeng-Litica (2022, US\$962m), LAC-Millennial (2022, US\$400m), LAC-Arena (US\$227m) and the 2021 Orocobre-Galaxy merger into Allkem. The average multiple of US\$138/t LCE equates to US\$773m mcap implied value for Galan, which doesn't even account for HMW's superior brine grade and low Mg:Li ratio. While we think Galan is capable to building and ramping up standalone, M&A and asset scarcity are major reasons we like Galan.

Staged Li-chloride strategy optimizes balance sheet

The plan here is to i) commence a 4ktpa LCE pilot project producing 6% Li chloride brine in 2H23, ii) scale to 20ktpa LCE (as LiCl) commercial operation in 2025, iii) then build a lithium carbonate (LiCO₃) processing plant on site funded by cash flow. The strategy delays the processing plant construction (SCPe ~US\$250m), instead funding from cash flow rather than up-front finance. Longer term, Galan is targeting 60ktpa production – 40ktpa from HMW and 20ktpa from Candelas.

Initiate with Buy rating and A\$3.00/sh PT based on 0.6xNAV_{8%-20k}

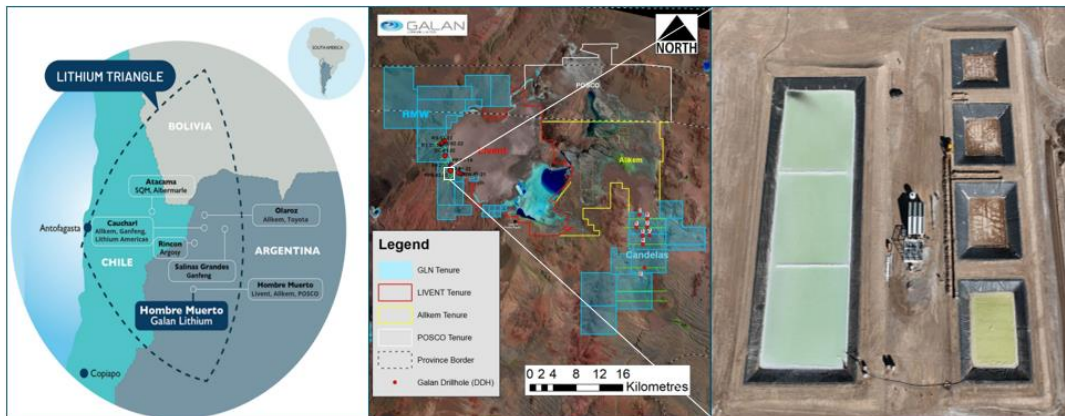
We value Galan on a SOTP DCF basis at a US\$20k/t LT LCE price, which generates our US\$1.9bn NAV_{8%}. We assign a 0.6x NAV multiple for HMW and 0.2x for Candelas to FD/FF NAVPS to generate our A\$3.00/sh PT. We think this is reasonable given that Galan has 7.3Mt LCE of a proven salar with the lowest impurities/highest grade, and a high quality and aligned management team.

Investment case

Overview of company

Galan Lithium (ASX:GLN) is a lithium exploration and development company with two 100%-owned lithium brine projects, Hombre Muerto West (HMW) and Candelas, totalling 7.3Mt at 852ppm Li, located in Argentina's lithium triangle. HMW has proven to host high-grade lithium brine deposits with low impurity levels and is neighbouring the established El Fenix lithium operations (Livent Corporation), Sal de Vida (Allkem) and Sal de Oro (POSCO) lithium projects. In October 2022, the HMW Mineral Resource estimate increased 2.5 times to 5.8Mt LCE, and now stands at 6.6Mt at @ 880mg/L Li (excl. Candelas). Galan is also exploring its 100% owned Greenbushes South hard-rock lithium project in Western Australia, with a diamond drilling campaign that commenced in March 2023.

Figure 1: Location map, tenement map of Salar de Hombre Muerto, pilot ponds at site



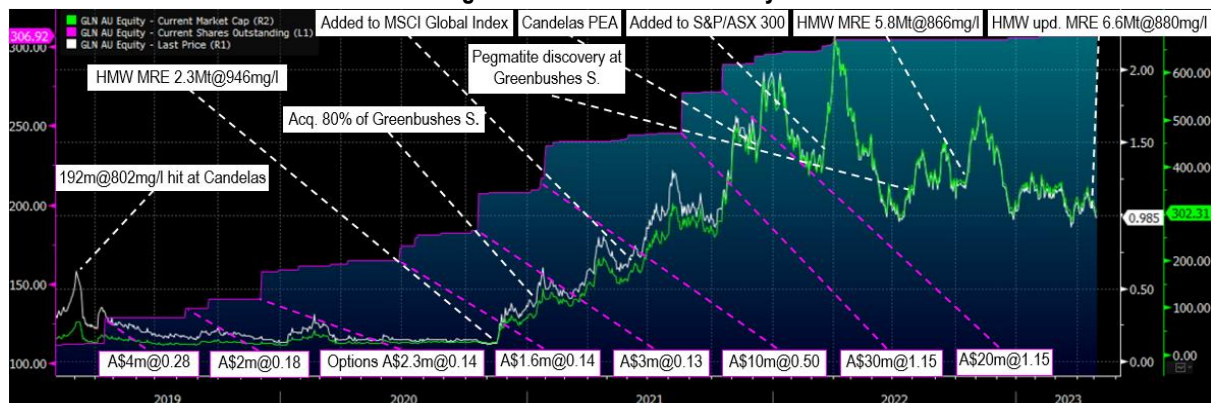
Source: Galan Lithium

History

Background: The Salar de Hombre Muerto has been producing lithium carbonate since the 1997 when FMC (now Livent) commenced operations at Fenix. Galaxy Resources started operations at Sal De Vida in 2016 and sold a portion of their licences containing 2.5Mt LCE to POSCO for US\$280m in 2018.

Galan: In 2018, Galan's MD JP Vargas De La Vega staked the HMW and Candelas licences and vended them into Galan. In 2019 drilling started first at Candelas, due to permits, with immediate success, leading to an initial 0.7Mt LCE at 672mg/L Li maiden resource while initial drilling at HMW intersected three brine horizons, confirming that both tenements hosted low impurity lithium brines. In March 2020, Galan delivered a 1.1Mt LCE at 946mg/L MRE at HMW, which increased to 2.3Mt @ 946mg/L, followed by a PEA outlining a 40Y 20ktpa LCE mine life generating US\$684m NPV_{8%} / 19.1% IRR at US\$11.7k/t LCE. In 2021 Galan acquired the pre-MRE Greenbushes South hard rock project in WA, raised ~A\$50m, delivered PEA results for Candelas (25yr LOM @ 14ktpa LCE = US\$660m NPV_{8%} / 21% IRR @ US\$18.6k/t), issued an updated 5.8Mt LCE at 866mg/L MRE for HMW (2.5x prior MRE), and HMW PEA (US\$1.3bn NPV_{8%} / 33% IRR). 2022 saw the installation of test wells and 5,000m² of test ponds as well as the build-out of the management team. At present, Galan is preparing to commence construction on a 4,000tpa LCE production ramp up, with an updated MRE of 6.6Mt at 880mg/L at HMW.

Figure 2: Price chart and history

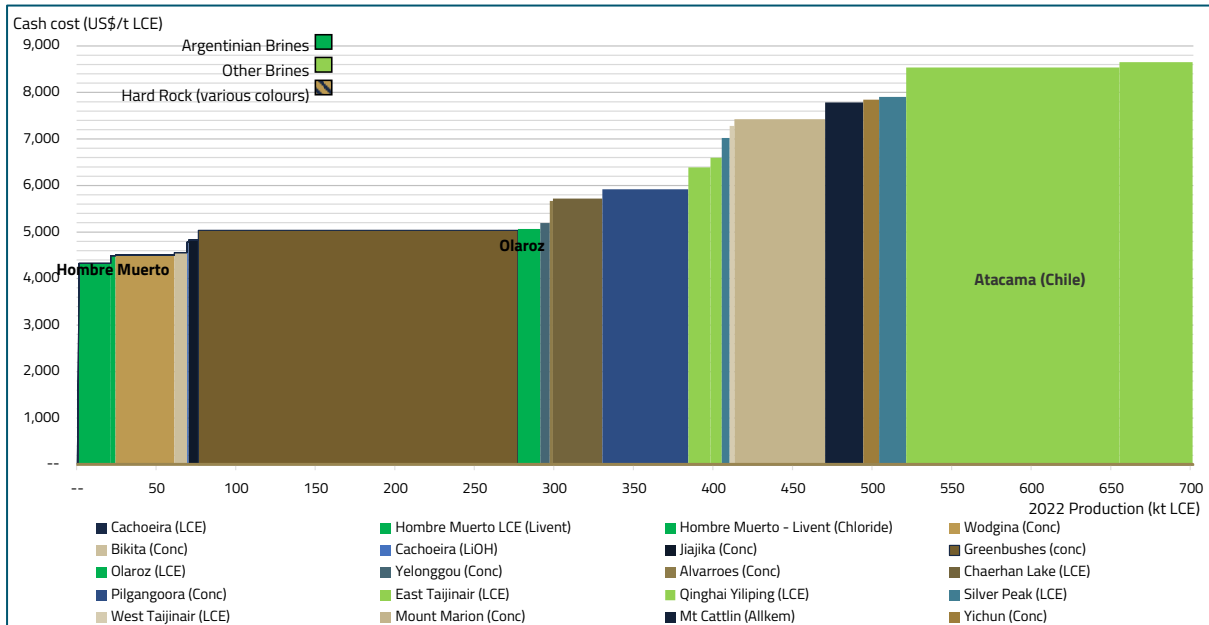


Source: Galan Lithium, SCPe, Bloomberg market data

Argentinian brines still the lowest cost assets

Brines are still the lowest cost producers for battery precursors lithium carbonate and hydroxide thanks to (i) low energy requirements of pumping brine vs blasting/hauling rock, (ii) solar/wind evaporation vs crush/grind for hard rock, and (iii) lower temperature conversion for brines vs spodumene refineries. Below we show the 2022 lithium cost curve as sourced from S&P mineral intelligence. Adjusting for conversion costs (SCPe US\$3000/t LCE for spodumene concentrate), brines are still the lowest cost assets, particularly Argentinian brines which have low impurities Mg and K, and lower royalties than Chile. Salar de Atacama tops the cost curve at US\$8.5k/t which, excluding US\$3.7k/t of royalties, would otherwise be one of the lower cost assets on a like-for-like basis.

Figure 3: 2022 LCE cost curve

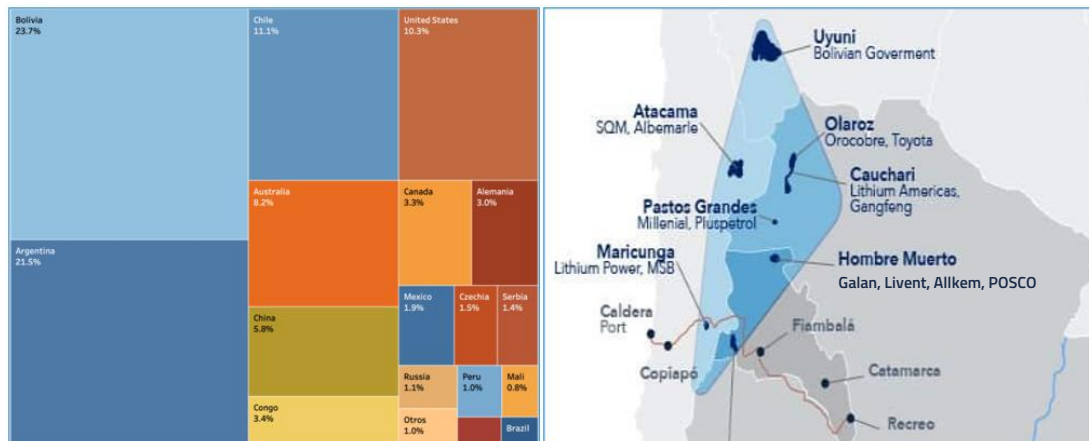


Source: S&P Mineral Intelligence; modified by SCPe – added US\$3,000/t conversion cost to concentrate producers to generate like-for-like cost curve with LCE and LiOH

Lithium triangle geopolitics – Argentina wins the lithium race

Argentina is the clear early winner of the three ‘Lithium Triangle’ countries, projected to supply 16% of the world’s lithium by 2030, overtaking Chile. Why Argentina? Argentina offers an attractive investment regime – 35% corporate tax rate, 30-year fiscal stability (taxes cannot be increased) from the date of the feasibility study, a 3% royalty rate, and accelerated depreciation treatment. Argentina has favoured private ownership of lithium assets and permitting has been driven by the provinces, which has been favourable in Salta and Jujuy. Chile, by contrast, has pursued a nationalized strategy and 40% strategic mineral royalty, which has stifled new projects, while Bolivia has already nationalized the lithium sector and is now seeking partners after a lack of development.

Figure 4: (A) Global Lithium resources per country and (B) salars within the Lithium triangle



Source: US Geological Survey (2022), Neo Lithium

Presence on a proven salar with met that works sets Galan apart from other developers

Galan’s assets combine size (7.3Mt LCE resource base) with good metallurgy, both key to returns as size speaks to mine life and investment harvest, while metallurgy speaks to time to cash flow, both very important to investors financing a build or acquirers targeting returns. The metallurgy for us stands out especially thanks to (i) high grade at 880mg/L for HMW (top quartile among developers), and (ii) low Mg:Li ratio at 1.8x at HMW and 2.7x at Candelas, less than half the peer average. Moreover, Galan is the fourth asset on a proven salar with Livent, Allkem and POSCO all producing from Salar de Hombre Muerto, which indicates good porosity, permeability and evaporation rates – key for pond performance, and metallurgy for recovery and product spec. We think this combination means that Galan is the standout best brine asset left standing.

Figure 5: Lithium brine peer developer comps

Company	Lithium Power	Galan	Allkem	Lithium South	Galan	LAC	Argosy	Lake	E3 Lithium
Project	Maricunga	HMW	Sal de Vida	HMN	Candelas	Pastos Grandes	Rincon	Kachi	Clearwater
Type	Salar	Salar	Salar	Salar	Salar	Salar	Salar	DLE	DLE
Ownership	100%	100%	100%	100%	100%	100%	77.5%	90%	100%
Country	Chile	Argentina	Argentina	Argentina	Argentina	Argentina	Argentina	Argentina	Canada
Stage	2022 DFS	2021 PEA	2022 DFS	2019 PEA	2021 PEA	2019 DFS	2018 PEA + pilot	2020 PFS	2021 PEA
Market Cap (US\$m)	130	202	5,060	46	202	3,020	384	455	124
Net Cash (US\$m)	14	25	430	6	25	-13	25	133	9
Grade (mg/L)	953	880	756	756	672	427	325	200	73
LCE Contained (Mt)	1.9	6.6	6.9	0.6	0.7	4.9	0.2	5.3	16.9
Impurities ratio (Mg/Li)	6.5	1.8	2.3	2.6	2.7	6.2	12.3	4.2	undisclosed
Production (ktpa LCE)	15	20	15	5	14	24	10	26	23
Project Life (years)	20	40	40	30	25	40	17	25	20
Overall recovery %	65%	59%	70%	46%	62%	60%	undisclosed	83%	58%
Pre-prod. CAPEX (US\$m)	626	439	308	93	408	448	215	544	602
C1 Cost (US\$/t LCE)	3,864	3,518	3,612	3,122	4,277	3,388	4,645	4,178	3,221

Source: SCPe, Company disclosure, market data from Bloomberg

M&A exit potential high with nearly all Argentinian salars consolidated by majors

We use the phrase “best brine left standing” because of the furious consolidation of Argentinian lithium brine salars over the last 15 months, which has seen five transactions at an **average transaction value of US\$143/t of contained LCE, 4.3x Galan’s current valuation. The same multiple would imply US\$1.04bn. Why have Argentinian brines been in such high demand?** We think three factors, all of which we see continuing. These are i) good geology – simply put the lithium triangle of Argentina-Chile-Bolivia have the best size-grade-metallurgy of any district ii) of these countries, Argentina enables foreign beneficial ownership, offtake, and has reasonable permitting times making it the most attractive. Chilean permitting uncertainty has blown out in recent years, as the country contemplates a national lithium policy, while Bolivia maintains state ownership of lithium assets and, iii) there is demand pull – both from global demand (projected 25% CAGR 2020-2030 per McKinsey) and increasing supply chain nationalism in the EV space has created a ‘land grab’ for quality lithium brines between US-EU-Chinese-Japanese-Korean suppliers.

Figure 6: Recent lithium brine M&A transactions

Target	Acquirer	Date	Flagship asset				Total LCE	Transaction value		
			Name	Country	LCE	Grade (ppm)		Total (US\$m)	Premium (%)	US\$/t LCE
Arena Minerals	Lithium Americas	Dec-22	Sal De la Puna	Argentina	0.6	460	0.6	227	28%	405
Lithea Inc.	Ganfeng Lithium	Jul-22	PPG	Argentina	11.1	459	11.1	962	Private	87
Rincon Mining	Rio Tinto	Mar-22	Rincon	Argentina	11.8	undisclosed	11.8	825	Private	70
Millennial Lithium	Lithium Americas	Jan-22	Pastos Grandes	Argentina	4.9	427	4.9	400	27%	82
NeoLithium	Zijin Mining	Jan-22	Tres Quebradas (3Q)	Argentina	7.6	614	7.6	770	18%	102
Galaxy Resources*	POSCO	May-18	Hombre Muerto	Argentina	2.5	732	2.5	280	Asset sale	110
Average							38.4	3,464	24%	143
Galan Implied					5.8	839	6.5	933		

Source: Company filings; SCPe; *denotes asset sale rather than a corporate takeover

What does this mean for Galan? We think HMW is the best take out target left. Met tests indicate similarly low impurities and high grade as its neighbouring producers. The main risk here is topography – HMW has less flat area for ponds than its neighbours which occupy the salars, thus terraced ponds will be required here – slightly more capex for a given pond surface area but by no means a deal breaker. In terms of timing, the most logical point is initial production into ponds (4ktpd build out to commence in 2H23) as that will significantly further de-risk flow rates, evaporation rates, and specifications of the brine produced.

Targeting first production in 2025, reach 20ktpa by 2027, self-fund carbonate plant thereafter

Galan is targeting first production of lithium chloride in 2025 at 4ktpa LCE run rate, with permits already submitted for anticipated 2H23 build start. The plan is to ramp up producing and selling a 6% Li chloride concentrate, starting at 4tpa in 2025 and scaling up to 20ktpa by the end of 2026. Selling Li chloride is not a novel concept – Li chloride salts (purified at a chloride plant) are exportable from Argentina with precedents Livent and Ganfeng (planned). Li chloride concentrate (Galan’s strategy) is the concentrated brine feedstock for a lithium carbonate plant. SQM sold (exported) Li chloride concentrate from Salar de Atacama at much lower prevailing lithium prices – i.e. the economics are strong enough for the material to travel. Galan also has plans to target production of up to 60ktpa including 40ktpa at Hombre Muerto and 20ktpa from Candelas, although the initial focus is on scaling up to 20ktpa and then determining next steps, either the carbonate plant (which is what we model) or a higher production rate in the form of Li chloride.

Payability: Plant conversion costs are ~US\$3,000/t LCE (main reagent is lime) + toll processor profit margin (we assume 20%) + 10% recovery loss = ~US\$5,300/t LCE treatment charges at an US\$20k/t LCE price = ~75% payability. Payability increases with LCE price as the fixed treatment charge declines as a % of revenue.

Specs and technical considerations: The benefit for HMW is that the Salar de Hombre Muerto has been producing for ~30 years, and has low impurities, low variability, and high grades. From a technical perspective, offtakers would need to run lab tests to confirm compatibility with their existing feeds and recovery process, but given the low Mg and sulphates at HMW, a consistent feed from HMW would likely increase yields for the toll processor. We think this would be a saleable product in country to one of the other processing plants, or abroad if export permits could be arranged.

Economics: We forecast three years of chloride production from 2025-2027 producing 32.5kt of LCE, generating US\$317m of cash flow, prior to our modelled build of a carbonate plant in 2028 for US\$250m capex. The benefits of self-funding the plant (reduces SCPe equity dilution by 38%) more than makes up for the foregone revenue on lower payability (73.5% payability on <2% of LOM production) making this a preferred development path.

Figure 7: Analysis of cash flow, dilution reduced, and lost revenue impact of chloride sales strategy

Payability - sensitivity to LCE price and toll treatment charge (\$/t LCE)					
	Toll treat: \$2,000/t	\$2,500/t	\$3,000/t	\$3,500/t	\$4,000/t
LCE price: \$15,000/t	75.3%	71.7%	68.0%	64.3%	60.7%
\$20,000/t	79.0%	76.3%	73.5%	70.8%	68.0%
\$25,000/t	81.2%	79.0%	76.8%	74.6%	72.4%
\$30,000/t	82.7%	80.8%	79.0%	77.2%	75.3%
\$35,000/t	83.7%	82.1%	80.6%	79.0%	77.4%

Source: SCPe; Assumptions: US\$3,500/t own processing cost to 6% chloride, Li content of Li2CO3 = 18.8%

Payability - sensitivity to LCE price and toll treatment charge (\$/t LCE)					
	LCE recovery: 90%	92%	94%	96%	98%
Toll treat: \$2,000/t	79.0%	79.0%	79.0%	79.0%	79.0%
\$2,500/t	76.3%	76.3%	76.3%	76.3%	76.3%
\$3,000/t	73.5%	73.5%	73.5%	73.5%	73.5%
\$3,500/t	70.8%	70.8%	70.8%	70.8%	70.8%
\$4,000/t	68.0%	68.0%	68.0%	68.0%	68.0%

Source: SCPe; Assumptions: US\$1,674/t own processing cost, Li content of Li2CO3 = 18.8%

Cash flow (US\$m) per year selling 6% Li chloride - assumed 20ktpa LCE production rate					
	Toll treat: \$2,000/t	\$2,500/t	\$3,000/t	\$3,500/t	\$4,000/t
LCE price: \$15,000/t	146.3	135.7	125.0	114.3	103.6
\$20,000/t	233.6	223.0	212.3	201.6	190.9
\$25,000/t	320.9	310.3	299.6	288.9	278.2
\$30,000/t	408.2	397.6	386.9	376.2	365.5
\$35,000/t	495.5	484.9	474.2	463.5	452.8

Source: SCPe; Assumptions 20ktpa production rate, 3% royalty, 25% tax, US\$3,500/t LCE cash cost for chloride production, US\$145/t sustaining capex

Share dilution reduced by producing chloride					
	Toll treat: \$2,000/t	\$2,500/t	\$3,000/t	\$3,500/t	\$4,000/t
LCE price: \$15,000/t	36%	35%	33%	31%	29%
\$20,000/t	38%	38%	38%	38%	38%
\$25,000/t	38%	38%	38%	38%	38%
\$30,000/t	38%	38%	38%	38%	38%
\$35,000/t	38%	38%	38%	38%	38%

Source: SCPe; Assumptions: 32.5ktpa production 2025-2026 before Carbonate plant build, assumes cash flow produced reduces dilution, dilution assumes issuance at current share price and FX (A\$1.08/s) and 1 AUD = USD 0.69, calculated against base case SCPe 565m FD FF share count

Potential offtakers for chloride: Our base case assumption is that the material is treated in Argentina by one of the other producers including Hombre Muerto neighbours Livent, POSCO and Allkem; or another lithium carbonate producer in country – Rio Tinto (Rincon), Allkem (Olaroz), Zijin (3Q), Lithium Americas (Cauchari), or Ganfeng (Pozuelos/Pastos Grandes). If Galan is able to get an export permit (Li chloride concentrate export is not banned but export requires Government endorsement), the market would open up significantly to include Chilean, Japanese, Korean, European, US, or even Chinese offtakers. Economics would likely improve as well, as despite higher transport costs, the higher recovery achieved at dedicated chemical plants than at remote Argentinian brine operations could likely add several percentage points to payability.

What’s next: Galan has already submitted its permit applications for 4ktpa, and intends to commence construction in 2H23 if permitted, with a DFS also expected this year. The application to permit production above 4ktpa will be submitted later this year, using many of the same baseline studies for 4ktpa, and the intention is to continue to build out pond capacity and ramp up production to 20ktpa by the end of 2026.

Delivered by an experienced team full of SQM and Orocobre veterans with skin in the game

We like the jurisdiction and the asset, but great assets are nothing without great teams delivering them, and we think Galan excels here. First, we look for ‘skin in the game’ and Galan’s management certainly have that – CEO JP Vargas de la Vega is a 5.7% shareholder, and staked the licences and vended them into Galan in 2018, plus the board and management own 9.9% of shares outstanding, and insiders (inclusive of the board) own 24.7% of shares. Second, in an asset class as technically precise as brines, we look for experience, and it’s here that Galan shines – with an operational and technical advisory team that includes NED Daniel Jimenez (ex SVP VP Sales), project consultant JC Barrera (ex SQM COO), project director Boris Caro (Orocobre project manager), geology manager Alvaro Henriquez (SQM and WSP hydrogeologist), exploration manager Francisco Lopez (ex Orocobre, Neolithium and Lake Resources).

Figure 8: Management and Board

Name	Role	Equity Ownership (%)	Background
Board of Directors			
Richard Homsany	Non-exec Chairman	0.31%	Australian lawyer, currently Exec Chair of Toro Energy (ASX:TOE) and EVP of Mega Uranium (TSX:MGA)
JP Vargas de la Vega	Founder & MD	5.55%	20-years experience in mining, lithium analyst, and ex Rio, BHP, Codelco. Original vendor of assets.
Daniel Jimenez	NED	0.80%	Civil engineer, 28-years experience, ex VP of Sales at SQM, >US\$900m worth of sales
Christopher Chalwell	NED	0.68%	Metallurgist, >25-years experience in feasibility studies and project funding. Ex Chairman of Minera Gold
Terry Gardiner	NED	2.14%	25-years experience in capital markets. NED at Cazaly Resources (ASX:CAZ) and Charger Metals(ASX:CHR)
Claudia Pohl	NED	undisclosed	Civil engineer, >23-years experience at SQM. Currently GM at Ad-Infinium process engineering consulting
Operations team			
Juan Carlos Barrera	Project Advisor/Board consultant	undisclosed	33-years of experience in Chile, Argentina and Australia with SQM and Exxon. Led >50 DD studies
Boris Caro	Project Advisor/Director	undisclosed	Mining engineer, >20 years of experience. Ex Study Manager at Orocobre for the Olaroz Lithium project in Argentina
Alvaro Henriquez	Group Geo Manager	undisclosed	20-years experience working at HMW & Salar de Atacama, ex Hydrogeology Superintendent at SQM
Francisco Lopez	Exploration Manager	undisclosed	15 years of experience in lithium exploration in Argentina with Orocobre, Neolithium and Lake Resources
Pablo Sanz	BD and permitting	undisclosed	25-years experience of prospecting in Argentina and tenement management

Source: Galan Lithium, share ownership from Bloomberg

Valuation

What we model: We model 6% Li chloride concentrate production beginning in 2025 at 7.8ktpa ramping to steady state 62.7ktpa production by the end of 2026. Upon completion of a self-funded carbonate plant in 2029, Li chloride brine ends and the project transitions to produce saleable LCE product at a run rate of 20,000tpa LCE beginning in 2031 until 2066. To get there we model US\$400m of capex (based on assumed US\$20m/1000t LCE capital intensity) for well and pond infrastructure beginning in 2023, with self-funded US\$250m capex for carbonate plant construction beginning in 2028. At steady state, we estimate an average US\$162m per year of FCF from LCE production for a 65% EBITDA margin. At a corporate level, we see healthy 62% EBITDA margins that we think could support a US\$1.0-1.3bn valuation at steady state, including up to US\$246m/year EBITDA, average US\$168m FCF/year until 2066, and ~US\$0.31/sh EPS (with 337m FD shares o/s, 552m shares including SCPe funding assumptions).

Figure 9: Summary of SCPe Galan Lithium estimates

Year (to 30 Jun)	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Price 6% LiCl conc. (US\$/t)	17,033	16,598	4,691	4,691	4,691	4,691	4,691	4,691	4,691	4,691	4,691	4,691	4,691	4,691	4,691	4,691	4,691	4,691	4,691
Price LCE (US\$/t)	53,369	53,331	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
6% LiCl conc. production (kt)	--	--	--	7.8	34.5	59.5	62.7	62.7	--	--	--	--	--	--	--	--	--	--	--
LCE production (kt)	--	--	--	--	--	--	--	--	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
LCE eq sales (kt)	--	--	--	3	11	19	20	20	20	20	20	20	20	20	20	20	20	20	20
C1 costs (US\$/t)	--	--	--	3,444	7,585	4,500	4,500	4,500	4,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500
Revenue (US\$m)	--	--	--	37	162	279	294	294	400	400	400	400	400	400	400	400	400	400	400
EBITDA (US\$m)	(4)	(3)	(3)	24	70	176	185	185	244	244	244	244	244	244	244	244	244	244	244
Net income (US\$m)	(4)	(3)	(3)	(16)	(24)	(17)	33	32	34	154	156	157	159	160	161	162	162	163	164
EPS (US\$/sh)	(0.01)	(0.01)	(0.00)	(0.03)	(0.04)	(0.03)	0.06	0.06	0.06	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.30
EBITDA margin (%)	--	--	--	66%	43%	63%	63%	63%	63%	61%	61%	61%	61%	61%	61%	61%	61%	61%	61%
Cash flow from ops (US\$m)	(1)	(2)	8	(9)	15	169	153	160	162	142	159	160	162	163	164	165	165	166	167
Cash flow from investing (US\$m)	(8)	(10)	(120)	(160)	(123)	(3)	(128)	(128)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
FCF (US\$m)	(9)	(12)	(112)	(169)	(108)	166	26	32	159	139	156	157	159	160	161	162	162	163	164
FCFPS (US\$/sh)	(0.03)	(0.04)	(0.20)	(0.31)	(0.20)	0.30	0.05	0.06	0.29	0.25	0.28	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.30

Source: SCPe; *includes 6% LiCl conc. discount to LCE

Valuation build-up: We value Galan on a sum-of-the-parts basis. We value the HMW project on a DCF methodology using a discount rate of 8% and forecast sales prices of US\$20,000/t LCE and US\$ 4,691/t of 6% Li chloride concentrate (including a discount to LCE of US\$5,300/t); these are 57-68% below 1Q23 average prices. This generates an NPV of US\$1.27bn. We then add US\$530m for the Candelas project, determined from an asset level DCF, nominal US\$20m for Australian assets (Greenbushes), and include 1Q23 cash of A\$26m (US\$19m) plus US\$1m from ITM options. Finally, we subtract US\$117m for SG&A at an 8% discount rate. This generates a FD NAV of US\$1.72bn or A\$7.65/sh. Adding in our funding assumptions (incl. SCPe US\$160m of equity), we generate a fully diluted and funded NAV of US\$1.9bn or A\$4.75/sh at 1x NAV.

Figure 10: SCPe SOTP NAV build-up

Group-level SOTP valuation	1Q23	2Q23				Commodity price	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26
		US\$m	O/ship	NAVx	A\$/sh						
HMW NPV 2Q23		1,268	100%	1.00x	5.63	LCE price (US\$/t)	53,369	53,331	20,000	20,000	20,000
Candelas NPV 2Q23		530	100%	1.00x	2.35	6% LiCl conc. price (US\$/t)	17,033	16,598	4,691	4,691	4,691
Australia (Greenbushes) nominal		20	100%	1.00x	0.09	Share data					
Central SG&A & fin costs 2Q23		(114)	-	1.00x	(0.50)	Basic shares (m):	306.9	FD + options (m):	337.7	FD/FF	579.9
Cash and restr. cash 1Q23		17	-	1.00x	0.08						
Cash from options		1	-	1.00x	0.01						
Debt 1Q23		-	-	1.00x	-						
1xNAV8% spot fully diluted, pre-funded		1,723			7.65						
Assumed equity raised		160		1.00x	0.28						
1xNAV8% spot fully funded		1,883			4.75						

Source: SCPe

Initiate with BUY rating and A\$3.00/sh price target based on 0.6xNAV_{8%-\$20k/t}

We think Galan is simply too good to miss – nearly all the viable lithium salars have been consolidated and Galan has a large resource on the salar with the best brine characteristics for grade, low impurities and consistency. Both i) fundamental valuation (SCPe US\$1.3bn NPV8% for HMW / US\$1.7bn NAV at corporate level) and ii) M&A precedent multiples (US\$143x 7.3Mt LCE = US\$1.04bn implied takeout value) suggest >US\$1bn valuation potential vs Galan’s current ~A\$300m market cap.

What’s more, we think the recent leg down in lithium prices presents an excellent entry point as evidenced by the continued appetite for M&A in the lithium space, including Albemarle’s US\$3.7bn bid for Lontown. Below we show the lithium majors valuations – trading at an average of 8x EV/EBITDA and a 5% FCF yield. With steady state EBITDA of A\$350m and FCF of A\$225m at US\$20k/t LCE, this would put Galan on a ~A\$2.8bn EV by SCPe 2030 or ~A\$8.20/sh based on 5% FCF yield (on fully diluted + fully funded share count to calculate FCF per share), a 30% annualized return from the current share price. We think this is conservative as these estimates are on a fully funded share count, with build finance at the current share price, at running an LCE price below current spot.

Figure 11: Lithium majors valuation comp table

Ticker	Sh Px	Market Cap	EV	P/NAV	EV/EBITDA			Price/CFPS			FCF yield			
					2022e	2023e	2024e	2022e	2023e	2024e	2022e	2023e	2024e	
Allkem	ASX:AKE	8.02	5,113	4,815	1.4x	8.8x	5.1x	4.6x	14.4x	8.0x	7.7x	5%	7%	8%
Livent	TSX:NGD	22.56	4,052	4,101	2.5x	11.2x	7.4x	6.0x	10.1x	11.8x	9.8x	2%	1%	2%
Albemarle	NYSE:ALB	179.34	21,043	22,938	2.1x	6.6x	5.5x	5.6x	11.9x	9.0x	6.7x	1%	2%	6%
Ganfeng	HK:1772	6.86	17,883	20,341	na	6.4x	8.1x	8.2x	6.5x	6.9x	5.2x	4%	7%	7%
Pilbara	ASX:PLS	2.83	8,481	7,183	4.3x	11.3x	3.2x	4.2x	16.1x	4.5x	6.8x	5%	20%	9%
Lithium Americas	TSX:LAC	18.62	2,969	2,983	3.4x	neg	17.9x	7.2x	neg	36.5x	24.2x	-7%	-5%	-12%
Mean					2.7x	8.9x	7.9x	6.0x	11.8x	12.8x	10.1x	2%	5%	3%
Weighted Average					1.8x	7.4x	6.7x	6.2x	10.4x	9.2x	7.4x	3%	6%	6%
Average excluding high and low					2.7x	8.9x	6.5x	5.9x	12.1x	8.9x	7.7x	3%	4%	6%
Median					2.5x	8.8x	6.4x	5.8x	11.9x	8.5x	7.2x	3%	5%	6%

Source: Bloomberg market data

Compared to the producers, we assign significantly more conservative target multiples of 0.6x NAV for HMW, 0.2x NAV for Candelas, and a nominal US\$20m for Greenbushes, which assumes build funding at the spot share price, a flat US\$20k/t LCE price, and US\$20kt. This generates our A\$3.00/sh price target. At our A\$3.00/sh price target, we calculate annualized returns of 15% per year if Galan achieves our A\$225m/year FCF forecast and re-rates to the peer average 5% FCF yield. We think this is reasonable given that Galan has 7.3Mt LCE of a proven salar with the lowest impurities/highest grade, and a team of ex SQM and Orocobre veterans to execute the build, if M&A doesn’t happen first.

Risks

Geology: The main risk here is brine grade, impurities and consistency. For a brine asset we think HMW is lower than most peers as it is on a proven salar known for low impurities and consistent brine, which has been demonstrated over ~30-years at Livent's operations. Test work to date confirms similarly low impurities and consistency for HMW.

Topography: HMW is situated on the west side of the salar, and much of the tenements are on basin and range terrain with ~500ha of more gradual nearly flat areas. This constrains the area available for ponds which limits production to ~20-25kt. Expansions beyond this are possible but would require more expensively terraced ponds. If brine grade is lower than anticipated it would be more expensive to expand pond area, though we think brine quality risk is lower in Galan's case than most of its peers.

Inflation: Capex and opex inflation has been significant for Argentinian brines – we model US\$650m capex and US\$6,500/t opex for 20ktpa for HMW vs US\$432m and US\$3,517/t in the PEA. While a factor, this is mitigated by our conservative modelling and management has been quite transparent about cost inflation in our discussions.

Third party processing: Galan's current strategy involves third-party processing of 6% lithium brine concentrate in the early years of the operation. If export permits can be obtained (current laws require export of finished lithium carbonate, hydroxide or salts), we think the 6% Li chloride product would be saleable abroad. If export permits cannot be obtained, a domestic Argentinian producer would need to commit to optimizing its flowsheet for blended material. We expect HMW's brine to have very low impurities (notably Mg and sulphates) which should improve yield for third-party processors, however the strategy still involves risk associated with finding a toll processor and the payability discount that may apply.

Permitting: Construction and operation permits are at the state level which reduces risk in our view. The application for 4ktpa permits have been submitted and the permit is expected in time for 2H23 construction. The documents for >4ktpa permits are being completed, but have not been submitted and the permits have not yet been obtained. Permits for export are handled at the Federal Level and are perceived to be more challenging to obtain.

Catalysts

- 2H23: Construction of 150ha of pond capacity to support 4ktpa LCE production as 6% Li chloride
- 2024-2026: Buildout of pond capacity
- 1Q25: First production at 4ktpa LCE run rate
- End 2026: Production reaches 20ktpa run rate
- 2027: Construction of Lithium Carbonate processing plant on site
- 2028-1H29: Commissioning and qualification of lithium carbonate plant
- Mid-2029: Production and sales of battery grade lithium carbonate

Ticker: GLN AU	Price / mkt cap: A\$0.99/sh, A\$304m	Market P/NAV: 0.09x	Assets: HMW/Cand's/Gm. S.
Author: J Chan / E Magdzinski/ K Korpmpis	Rec / PT: BUY / A\$3.00	1xNAV FD: A\$7.65/sh	Country: Argentina/Australia

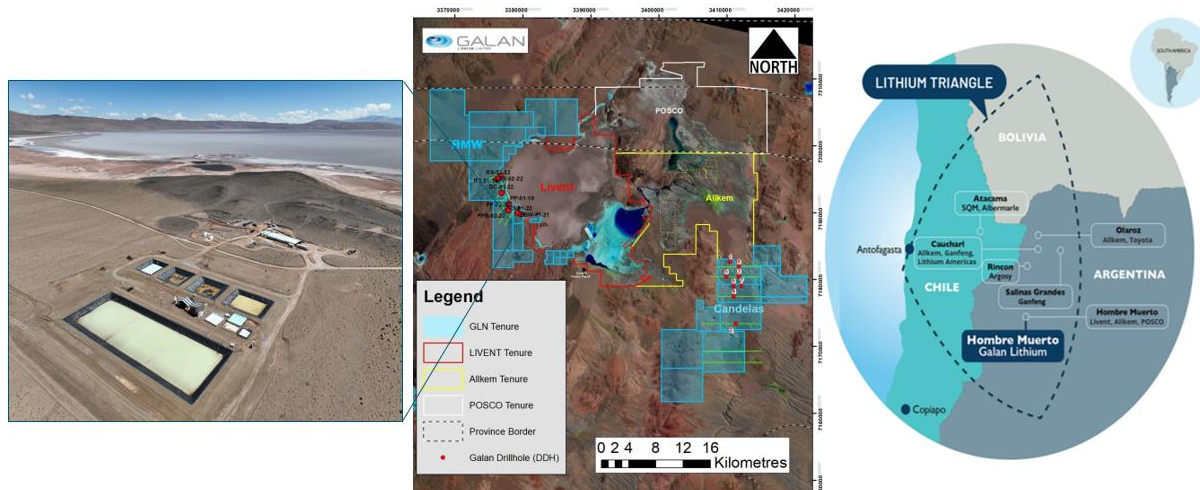
Group-level SOTP valuation		1Q23	2Q23	Resource / Inventory			000t LCE	mg/L Li	Li in situ	\$m insitu	EV/insitu	
		US\$m	O/ship	NAVx	A\$/sh	Measured, ind. & inf.	7,267	852	1,366	145,340	0.13%	
HMW NPV 2Q23		1,268	100%	0.60x	3.38	SCPe Mine Inventory	1,731	880	325	34,615	0.55%	
Candelas NPV 2Q23		530	100%	0.20x	0.47	Commodity price	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26	
Australia (Greenbushes) nominal		20	100%	0.20x	0.02	LCE price (US\$/t)	53,369	53,331	20,000	20,000	20,000	
Central SG&A & fin costs 2Q23		(114)	-	0.60x	(0.30)	6% LiCl conc. price (US\$/t)	17,033	16,598	4,691	4,691	4,691	
Cash and restr. cash 1Q23		17	-	0.60x	0.05	Share data						
Cash from options		1	-	0.60x	0.00	Basic shares (m): 306.9	FD + options (m):	337.7	FD/FF	579.9		
Debt 1Q23		-	-	0.60x	-	Ratio analysis						
1xNAV8% spot fully diluted, pre-funded		1,723			3.61	FD shares out (m)	305	307	549	549	549	
Assumed equity raised		160		0.60x	0.28	EPS (A\$/sh)	(0.02)	(0.01)	(0.01)	(0.04)	(0.06)	
1xNAV8% spot fully funded		1,883			3.00	CFPS before w/c (A\$/sh)	(0.01)	(0.01)	0.02	(0.02)	0.04	
1x fully funded NAVPS sensitivity to LCE price and discount / NAV multiple						CFPS pre growth (A\$/sh)	(0.01)	0.08	0.03	(0.02)	0.04	
Valuation (A\$/sh)	\$10000/t	\$15000/t	\$20000/t	\$25000/t	\$30000/t	FCF/sh (A\$/sh)	(0.04)	(0.09)	(0.30)	(0.46)	(0.29)	
0.40xNAV	neg	1.00	2.00	3.00	4.00	FCF yield pre growth (A\$/sh)	(1%)	8%	3%	(2%)	4%	
0.60xNAV	neg	1.25	3.00	4.50	6.00	FCF yield (%)	(4%)	(9%)	(31%)	(47%)	(30%)	
0.80xNAV	neg	1.75	4.00	6.00	8.00	EBITDA margin (%)	-	-	-	67%	44%	
1.00xNAV	neg	2.25	4.75	7.25	9.75	FCF margin (%)	-	-	-	(459%)	(66%)	
HMW NPV8% (US\$m)	\$10000/t	\$15000/t	\$20000/t	\$25000/t	\$30000/t	ROA (%)	(6%)	(5%)	(1%)	(3%)	(6%)	
12% discount	(258)	225	666	1,094	1,518	ROE (%)	(6%)	(5%)	(1%)	(8%)	(14%)	
10% discount	(209)	371	908	1,434	1,956	ROCE (%)	(6%)	(6%)	(1%)	(0%)	(1%)	
8% discount	(130)	589	1,268	1,935	2,600	PER (x)	(53x)	(72x)	(132x)	(23x)	(15x)	
6% discount	(2)	932	1,830	2,718	3,604	P/CF (x)	(126x)	(130x)	(169x)	32x	7x	
4% discount	218	1,507	2,767	4,020	5,271	EV/EBITDA (x)	(49x)	(57x)	(138x)	16x	7x	
HMW/Candelas 1xNAV sensitivity to chloride discount to LCE and payability						Income statement						
HMW NPV8% (US\$m)	\$3300/t	\$4300/t	\$5300/t	\$6300/t	\$7300/t	Revenue (A\$m)	--	--	--	55	242	
Payability: 60%	(449)	(473)	(496)	(519)	(543)	COGS (A\$m)	--	--	--	(15)	(134)	
Payability: 70%	(14)	(40)	(67)	(94)	(122)	Gross profit (A\$m)	--	--	--	40	109	
Payability: 80%	403	372	340	309	277	Expenses (A\$m)	--	--	(3)	(3)	(5)	
Payability: 90%	857	821	783	745	707	Impairment & other (A\$m)	(0)	--	--	--	--	
Payability: 100%	1,354	1,311	1,268	1,225	1,180	Net finance costs (A\$m)	0	1	--	(20)	(32)	
						Tax (A\$m)	--	--	--	--	--	
						Minority interest (A\$m)	--	--	--	--	--	
						Net income attr. (A\$m)	(0)	1	(3)	17	71	
						EBITDA (A\$m)	(5)	(5)	(3)	37	106	
						Cash flow						
						Jun '22	Jun '23	Jun '24	Jun '25	Jun '26		
Valuation over time	Jun '22	Jun '23	Jun '24	Jun '25	Jun '26	Profit/(loss) after tax (A\$m)	(5)	(4)	(3)	(23)	(36)	
HMW NPV (US\$m)	1,169.1	1,285.5	1,517.8	1,783.2	1,980.0	Add non-cash items (A\$m)	3	2	--	40	109	
Candelas NPV (US\$m)	460.0	496.8	536.6	579.5	625.9	Less wkg cap / other (A\$m)	0	--	17	(30)	(50)	
Australia (Greenbushes) nominal	20.0	20.0	20.0	20.0	20.0	Cash flow ops (A\$m)	(2)	(2)	13	(13)	23	
Cntrl G&A & fin costs (US\$m)	(107.8)	(114.7)	(133.5)	(106.0)	(52.9)	PP&E (A\$m)	(0)	(5)	(180)	(240)	(184)	
Net cash (US\$m)	19.0	25.4	98.8	(34.5)	(195.0)	Other (A\$m)	(2)	(0)	--	--	--	
1xNAV (US\$m)	1,560	1,713	2,040	2,242	2,378	Cash flow inv. (A\$m)	(11)	(26)	(180)	(240)	(184)	
P/NAV (x)	0.12x	0.12x	0.14x	0.16x	0.15x	Debt draw (repayment) (A\$m)	--	--	--	360	--	
1xNAV share px FD (A\$/sh)	8.19	8.40	7.14	6.12	6.49	Equity issuance (A\$m)	51	0	240	--	--	
ROI to equity holder (% pa)	727%	191%	93%	58%	46%	Other (A\$m)	--	--	--	--	--	
Sources and uses of cash						Cash flow fin. (A\$m)						
SCPe evaluation costs	US\$7m	SCPe current cash + options	US\$19m	Total uses US\$455m			Total proceeds US\$455m			Net change post forex (A\$m)		
SCPe capex	US\$400m	Phase 1 debt package	US\$240m	Total uses US\$455m			Total proceeds US\$455m			FCF (A\$m)		
SCPe contingency	US\$1m	Phase 1 equity Raised	US\$140m	Total uses US\$455m			Total proceeds US\$455m			Balance sheet		
SCPe G&A + fin. cost to prodn	US\$9m	Phase 1 cashflow	US\$56m	Total uses US\$455m			Total proceeds US\$455m			Jun '22		
SCPe working capital	US\$38m			Total uses US\$455m			Total proceeds US\$455m			Jun '23		
				Total uses US\$455m			Total proceeds US\$455m			Jun '24		
				Total uses US\$455m			Total proceeds US\$455m			Jun '25		
				Total uses US\$455m			Total proceeds US\$455m			Jun '26		
				Total uses US\$455m			Total proceeds US\$455m			Cash (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Accounts receivable (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Inventories (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			PPE & exploration (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Other (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Total assets (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Debt (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Other liabilities (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Shareholders equity (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Retained earnings (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Minority int. & other (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Liabilities+equity (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Net cash (A\$m)		
				Total uses US\$455m			Total proceeds US\$455m			Net debt to NTM EBITDA (x)		

Source: SCP estimates

Hombre Muerto West (HMW), Catamarca, Argentina – 100% Galan

Galan Lithium's 100%-owned HMW project is located in Catamarca, Argentina, near the border with Salta province, ~4,000m above sea level. The project is located 900km NE of Buenos Aires, and 400km NE of Salta (pop 600k). The drive from Salta to HMW is ~6 hours by road, which is well maintained as one of the main trucking routes between Northern Argentina and Chile. The nearest town is Antofagasta de la Sierra (pop 1.5k) which is 90km to the south. The project is 100% owned by Galan and consists of 19 exploration permits covering 116km² located on the western edge of the Salar de Hombre Muerto, which is Argentina's longest producing lithium salar (since 1966), well known for its very low impurities. The project is near DFS completion (expected 2Q23) and pilot plant operations, including a 5,000m² evaporation pond are underway.

Figure 12 Asset location



Source: Galan Lithium

Infrastructure and logistics: While remote, the project is accessed using well serviced roads that service the Lithium Triangle and trucking routes over the border to Chile. The nearest railway connection is 99km by road at Salar do Pocitos. We expect power to initially be sourced via diesel generators given the location, with potential to add solar capacity financed from cash flow. Neighbouring Livent is planning expansions to up to 100ktpa by 2030 from current 20ktpa, indicative of our view that the location/setting can permit large scale operations. Compared to its neighbours, the limiting factor on expansions at HMW is topography with ~500ha of flat land. For this reason, we believe 20ktpa is achievable but expansions beyond this would be more expensive due to costs establishing flat terraced ponds in hillier terrain.

Current plan: Galan is targeting production ramp up to 20ktpa LCE, with stage one producing a 7.8ktpa 6% Li chloride concentrate in 2025 (SCPe build commence in 2H23), followed by a ramp up to 62.7ktpa 6% Li chloride concentrate by the end of 2026. Using cash flows from brine sales, Galan will then fund the construction of a carbonate plant at HMW in SCPe 2028-2029, enabling stage two production of 20ktpa LCE product from 2031-2076.

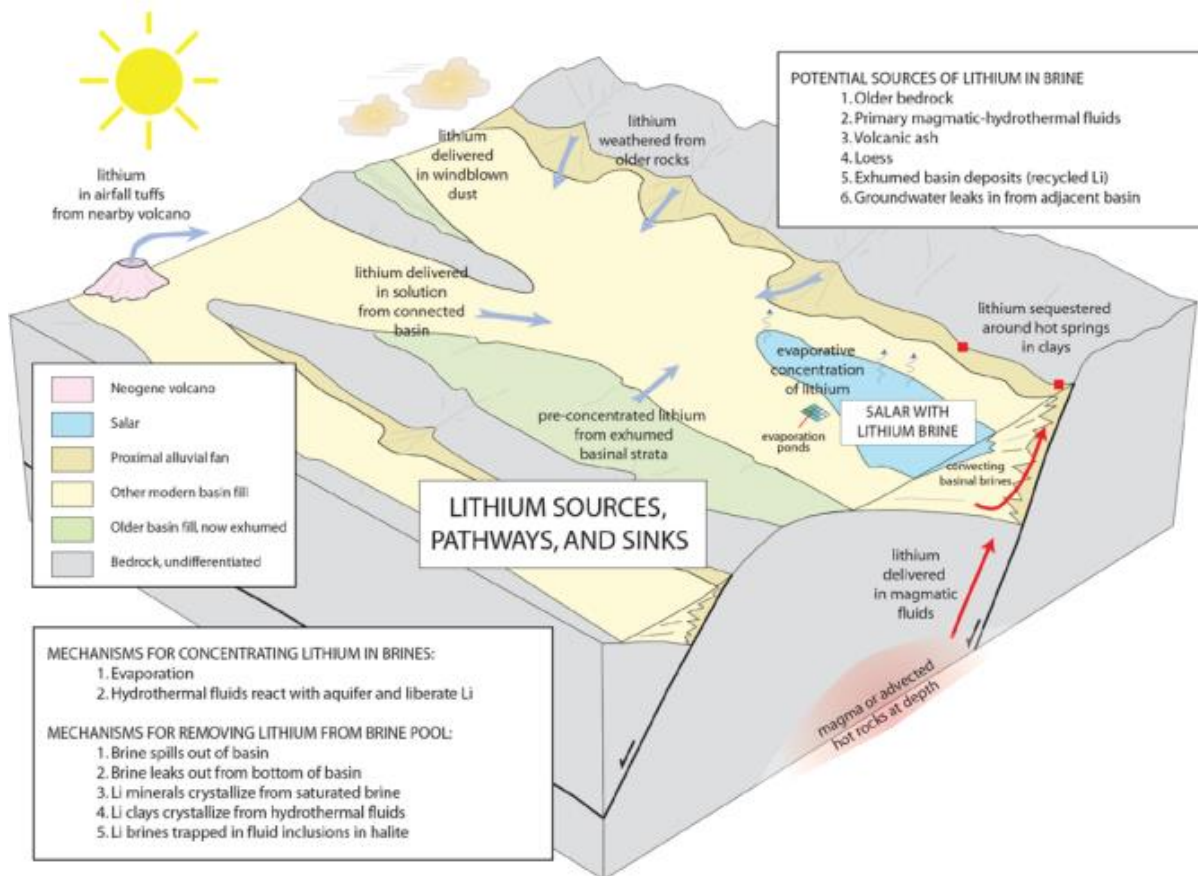
Permitting: Permits covering production up to 4ktpa have been submitted and are expected to be received in time to enable 2H23 construction start. The operational permitting process is governed by the state of Catamarca, which was scored 66.8 (ranked 44 out of 84 jurisdictions rated) in the 2021 Fraser Institute Survey of Mining Companies 2021 and higher than Brazil, Mexico, and Peru. The submission documents for permitting production above 4ktpa are advanced and are guided for submission this year; much of the baseline studies were completed as part of the 4ktpa permitting submission.

Geology

The Salar de Hombre Muerto is located in the Southern Puna de Atacama plateau. The plateau consists of basins and ranges, receiving just enough rainfall to occasionally be covered by a thin layer of water. The system is considered typical of a mature salar with lithium bearing brine sourced from Li-rich source rocks and local geothermal waters associated with Andean volcanic activity. The Hombre Muerto basin has an evaporate core dominated by halite, which is characteristic of those systems, with brine as the main aquifer fluid in the centre and lower parts of the aquifer system. The low vertical permeability of the salar sediments and higher density of the deep brine vs lower density of surface water restricts the vertical circulation of fresh water entering the salar (i.e. preserves Li grade). Brine density and chemistry is consistent below a depth of 80m with brine density increasing at depth. Current resources carry depth from 80m to up to 718m below surface.

Key takeaways: Hombre Muerto's is high grade with consistent brine and low impurities. The system fits the classical abstract deposit model for lithium salars with ideal local characteristics for maintaining high grade / low impurities due to high brine density and low vertical permeability.

Figure 13: Generalized lithium brine deposit model



Source: USGS

Resource

HMW has a JORC-compliant MRE of 6.6Mt LCE at 880mg/L including 4.8Mt at 873mg/L of measured resources. The MRE was based on 236 brine assays from 15 drill holes (4,384m). The polygon area covers 7.5km strike, up to 7.5km width and up to 718m depth. Specific yields (porosity) were 23.9% for sand, 21.7% for gravel, 8.0% for breccia and 3.0% for underlying halite. HMW's overall yields are high due to low clay content; most of the area is coarse sands or gravels. A zero cut-off grade was used – this is to ensure that the resource model incorporates the total brine area since unlike hard rock mines, it is very difficult if not impossible, to selectively extract the resource.

Key takeaways: HMW has a large, high-grade resource, with enough contained LCE for ~194 years of production, assuming 59% recovery, 20ktpa LCE production and 100% extraction rate, although we model 50-years of steady state. The zero cut-off grade used is an important conservative measure – it ensures the resource model accurately accounts for all the brine within the resource area, which is key because selective extraction is not possible. The drill density is in line with peers – we note Orocobre / Galaxy completed 40 holes for 5,570m at neighbouring Sal de Vida to support a 6.8Mt LCE resource.

Figure 14: HMW MRE as at May 2023

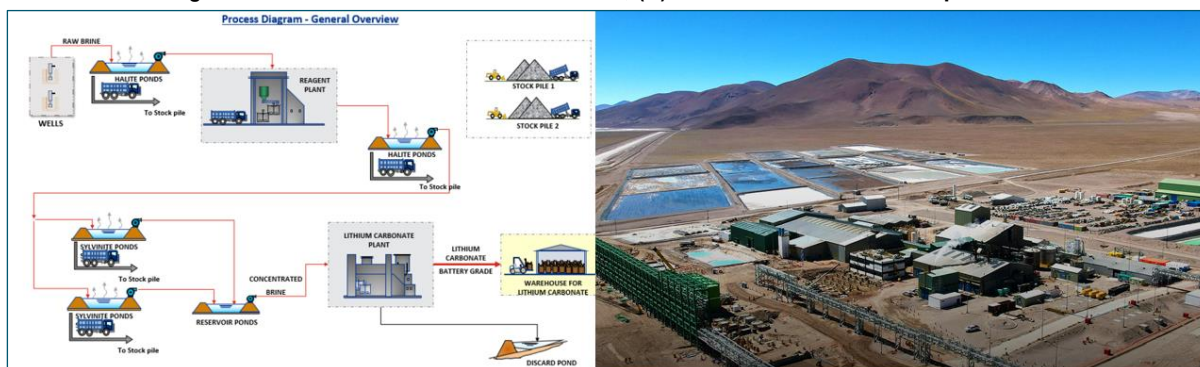
	May 2023 MRE						
	Brine	In situ Li	Li Grade	Li ₂ CO ₃ eq	K Grade	In situ K	KLC eq
	Mm ³	(kt)	(mg/L)	(kt)	(mg/L)	(kt)	(kt)
Measured	1,020	890	873	4,737	7,638	7,782	14,841
Indicated	205	185	904	986	7,733	1,585	3,022
Inferrred	182	161	887	859	7,644	1,391	2,653
HMWTotal	1,407	1,237	880	6,582	7,563	10,758	20,516

Source: Galan Lithium Limited. HMW as at 1 May 2023, Candelas as at 1 October 2019 MRE

Mining and processing

The PEA assumes an average 203 L/s flow rate in total or 29 L/s per well – from our site visit the flow rates at the current test wells are 18-25 L/s and 13-15 pumping wells are currently being contemplated. The PEA assumed a total of 19 ponds followed by the lithium carbonate processing plant, which removes remaining impurities (Ca, Mg, sulphates), followed by lithium carbonate precipitation using soda ash. Evaporation rates on the salar are ~5.5mm/day (2,000mm/year) and average annual rainfall is 86.4mm/year. Solving for a 6% brine product, we calculate required pond requirements of at least 410ha or a 2km x 2km area – this fits within the usable footprint of the flatter portion of the licences, thus we don't currently expect Galan to need to terrace the hillier areas (more expensive than building on flatter ground).

Figure 15: Process overview from 2020 PEA; (B) Livent's Hombre Muerto operations



Source: Galan December 2020 HMW PEA; Livent 2022 sustainability report

Takeaways: In our view there are two key challenges for brine operations: i) ensuring enough lithium is available for the processing plant and ii) managing reagent consumption which is usually a function of impurities. At the well and pond level, the key drivers are grade, consistency and flowrate, to ensure that a sufficient quantity of brine at targeted grades are fed into the ponds. Secondly, impurities like Mg and sulphates require more reagents (sodium carbonate and lime) to precipitate, therefore are major cost drivers. Galan is fortunate because Hombre Muerto is known for low impurities, and consistent brine in terms of grade.

Economics

We model HMW production at a LT steady state production rate of 20ktpa with US\$650m of total capex and US\$6,500/t LCE opex. Our model assumes production commences first at 4,000tpa LCE run rate starting in 2025, ramping up to 20,000tpa run rate by the end of 2026. We have modelled Li chloride production and sales in the early years, transitioning to lithium carbonate production from mid-2030. We model initial construction starting in 2H23 for 4,000tpa, with pond construction continuing through 2025, totalling US\$400m over that period. We assume higher opex and capex than the December 2021 PEA due to industry cost inflation. This generates a US\$1.25bn NPV8% and 31% IRR at an SCPe LT lithium carbonate price of US\$20,000/t, similar to but slightly lower than the December 2021 with a 7% increase in the lithium price offset by our higher cost and capex assumptions.

Figure 16: SCPe modelling assumptions vs December 2021 PEA

Metric	2021 PEA	SCPe	Metric	2021 PEA	SCPe
Mine life (years)	40	52	LCE price (US\$/t)	18,594	20,000
LOM production (kt LCE)	800	1,013	Steady state EBITDA (US\$m/yr)	287	256
Steady state production (Kt LCE)	20	20	NPV8% (US\$m)	1,388	1,285
Steady state opex (US\$/t LCE)	3,518	6,500	IRR (%)	33%	28%
Initial Capex (US\$/t LCE) ⁽¹⁾	439	671	Payback (years)	2.75	3.50

Source: Galan Lithium December 2021 PEA, SCPe; (1) Includes US\$250m plant capex which we assume is built from cash flow

Throughput: We model ramp up from 4ktpa LCE in early 2025 to 20ktpa LCE in the form of 6% Li concentrate (i.e. 63ktpa of 6% Li chloride) by the end of calendar 2026, followed by lithium carbonate plant construction (self-funded build) in 2028-2029. We then model 20ktpa LCE in the form of lithium carbonate sales from 2031 to 2066.

Op costs: We estimate higher operating costs than Galan’s 2021 PEA (US\$3,518/t LCE) due to cost inflation. We assume US\$4,000/t pond, US\$2,000/t plant, and US\$500/t G&A costs per tonne of LCE for a total of US\$6,500/t for lithium carbonate production.

Capex: We model US\$400m of pond capex (based on a US\$20m per 1,000t LCE capital intensity) for initial ramp up to steady state 62.7kt 6% Li chloride concentrate production through to 2030, followed by self-funded US\$250m for carbonate plant to allow for 20kt LCE production from 2031 onwards for the remaining LOM (46 years). Additionally, we assume a US\$145/t LCE sustaining capex and US\$25m closure cost. While sustaining and closure figures were derived from Galan’s 2020 HMW PEA, we raised capital costs +48% to account for inflation and contingency, which we believe are conservative and quite achievable.

6% Li chloride concentrate to LCE production: We estimate an initial 7.8ktpa 6% Li chloride concentrate production beginning in 2025, ramping up to a steady state ~62.7ktpa by 2028 and then transitioning to LCE production in 2031 following the construction of a self-funded carbonate plant. This generates US\$14,700/t of revenue from the 6% Li chloride concentrate and US\$20,000/t of revenue from the LCE with C1 costs of ~US\$3-7,500/t over the LOM. The key operating costs are US\$90-130m for facility(pond/plant)/staff/G&A costs. Our estimates drive a 65% EBITDA margin at steady state, ~US\$166m annual FCF at steady state, NPV_{8%} of US\$1.25bn and 31% IRR.

Figure 17 Economic summary: HMW production

Year (to 30 June)	LOM	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
6% LiCl conc. production (kt)	289.8	--	--	--	7.8	34.5	59.5	62.7	62.7	62.7	--	--	--	--	--
LCE production (kt)	720.0	--	--	--	--	--	--	--	--	--	20.0	20.0	20.0	20.0	20.0
LCE eq sales (kt)	813	--	--	--	3	11	19	20	20	20	20	20	20	20	20
Revenue (US\$/t)	19,397	--	--	--	14,700	14,700	14,700	14,700	14,700	14,700	20,000	20,000	20,000	20,000	20,000
C1 costs (\$/t)	6,311	--	--	--	3,444	7,585	4,500	4,500	4,500	4,500	6,500	6,500	6,500	6,500	6,500
Capex (US\$m)	815	--	21	120	160	123	3	128	128	3	3	3	3	3	3
Revenue (US\$m)	15,760	--	--	--	37	162	279	294	294	294	400	400	400	400	400
Site cash costs (US\$m)	(5,128)	--	--	--	(9)	(83)	(86)	(90)	(90)	(90)	(130)	(130)	(130)	(130)	(130)
EBITDA	10,081	--	--	--	27	73	184	194	194	194	256	256	256	256	256
EBITDA margin (%)	64%	0%	0%	0%	73%	45%	66%	66%	66%	66%	64%	64%	64%	64%	64%
FCF (US\$m)	6,013	--	(21)	(120)	(133)	(50)	181	48	43	168	165	165	165	165	165

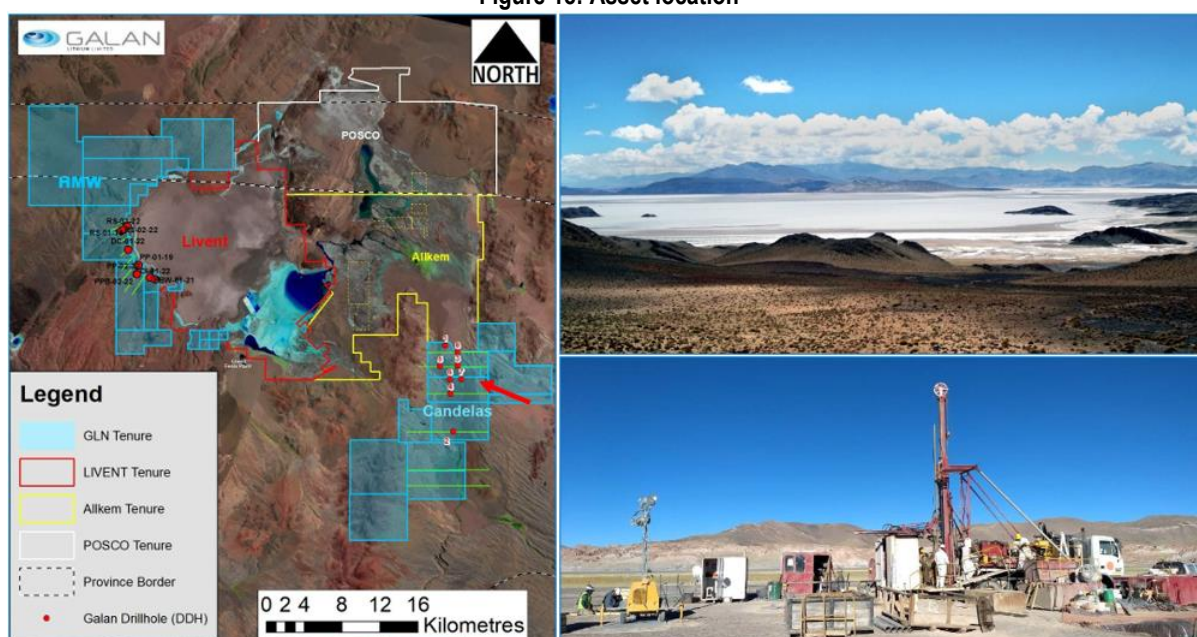
Source: SCPe

Candelas, Catamarca, Argentina – 100% Galan

In February 2018, Galan acquired 100% interest of Blue Sky Lithium interest in HMW and Candelas in Argentina, both located within the Hombre Muerto salar, adjacent to Galaxy Resources' Sal de Vida project and FMC's Fenix lithium operating brine. The project covers an area >240km², and is located 170km SW of Salta city and less than 40km from Hombre Muerto West, talking to potential cost synergies, especially on downstream where a big central plant could be envisaged, where brines from both projects will be processed. Exploration drilling started in January 2019, and 8 months later Galan delivered the current resource of 685kt LCE @ 672mg/L of Li, with a very low 2.7 Mg:Li impurities ratio.

Infrastructure and logistics: Very similar to HMW, while the location is remote, existing road provide access to the project and only a 5km main road will be required to be built from the wells to the main industrial facilities (evaporation ponds, lithium plant, offices etc). Diesel generators will provide the electrical energy required, while access to water will be facilitated from a nearby area of Candelas South. On the logistics, equipment and supplies will be shipped via the port of Antofagasta in Chile. A rail facility exists 130km north of the project at Pocitos city.

Figure 18: Asset location



Source: Galan Lithium

Next steps: HMW is larger and higher grade, therefore has been Galan's development focus. In our view, Candelas provides a good growth option but current activity on the project is limited as Galan dedicates its focus to advancing HMW into production. The 2020 PEA delineated a 25-year 14ktpa operation, so there is the resource base to back a long-life meaningful operation here, which we expect to become a development priority once HMW is in production and cash flowing.

Resource / Geology

Candelas is interpreted to be a continuation of the same brine system as Salar de Hombre Muerto, with test work showing similarly consistent brine with low impurities (avg 2.7 Mg:Li) and good grades. The resource was based on 8-holes for 3,537m. The resource below is shown at a 500mg/L cut-off grade; at a zero cut-off the MRE is 0.89Mt LCE at 496mg/L.

Figure 19: Candelas MRE

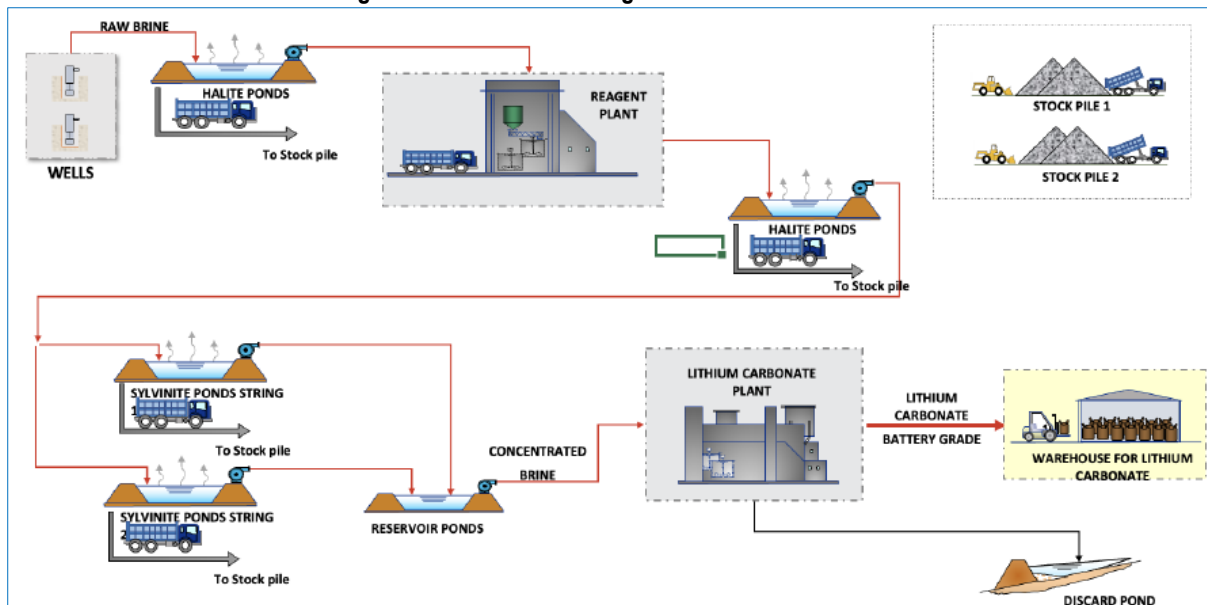
	Brine	In situ Li	Li Grade	Li ₂ CO ₃ eq	K Grade	In situ K	KLC eq
	Mm ³	(kt)	(mg/L)	(kt)	(mg/L)	(kt)	(kt)
Indicated	196	129	672	685	5,193	1,734	3,307
Candelas Total	196	129	672	685	5,193	1,734	3,307

Source: Galan Lithium as at 1 October 2019 MRE

Mining and processing

The 2021 PEA envisages a 14ktpa LCE 25-year LOM. The PEA assumes 11 wells with an average 204l/s flow rate. The recovery process includes conventional evaporation ponds for pre-concentration and purification, followed by processing in a lithium carbonate plant. Two separate agents will enhance the precipitation of impurities as salts, without generating lithium losses. Once this brine reaches a lithium concentration (~2.5% to ~5.5% depending on pond availability) suitable for treatment in the lithium plant, will get stored in the ponds as available feed to the lithium carbonate plant. During the first stages of processing in the plant, impurities left such as Ca and Mg will be removed via precipitation and finally through the use of soda ash (Na₂CO₃), to finally produce battery grade lithium carbonate (6% conc.) – with overall lithium recovery at 61.6%.

Figure 20: Process flow diagram / General overview



Source: Galan Lithium

Economics

We model Candelas with production matching the 2021 PEA, but with capital intensity (US\$20m per 1,000tpa LCE production) and operating costs (US\$6,500/t LCE) matching our estimates for HMW. We do not include Candelas in our base case financial assumptions for Galan, but have modelled the asset with build commencing in 2031 and first production in 2033. We assume a standalone plant is built for Candelas but flag that this may be subject to a future optimization study.

Throughput: We model a 14ktpa LCE production rate from 2033-2057, in line with the PEA.

Op costs: We match our cost estimates for HMW with US\$4,000/t pond, US\$2,000/t plant, and US\$500\$/t G&A variable, totalling US\$6,500/t LCE. This is 52% higher per tonne of LCE than the prior PEA.

Capex: We model a US\$420m self-funded two-year build beginning in 2031, to allow for 14ktpa production beginning in 2033 sufficient for the LOM ending in 2057. This includes US\$280m for the ponds, and US\$140m for a 14ktpa lithium carbonate plant. This is a slight (+3%) lift to study estimates of US\$408m that includes provisions for wells, infrastructure, and carbonate plant which could in theory be used to increase capacity at HMW if required. Additionally, we assume a US\$99/t LCE sustaining capex and US\$25m closure cost. While sustaining was derived from Galan’s 2021 Candelas PEA, closure was excluded from the study, and thus was estimated based on figures reported in Galan’s 2020 HMW PEA.

LCE production: At a 58.5% recovery we achieve 14ktpa LCE steady-state production beginning in 2033 through to 2057. This generates US\$20,000/t of revenue with C1 costs of US\$6,500/t over the LOM. The key operating costs are US\$91m for facility(pond/plant)/staff/G&A costs. Our estimates drive a 65% EBITDA margin, ~US\$119m annual FCF at steady state, NPV_{8%} of US\$440m and 25% IRR.

Figure 21 Economic summary: Candelas production

Year (to 30 June)	LOM	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
LCE production (kt)	504.0	--	--	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
LCE sales (kt)	504	--	--	14	14	14	14	14	14	14	14	14	14
Revenue (US\$/t)	20,000	--	--	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
C1 costs (US\$/t)	6,500	--	--	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500
Capex (US\$m)	747	210	210	2	2	2	2	2	2	2	2	2	2
Revenue (US\$m)	10,080	--	--	280	280	280	280	280	280	280	280	280	280
Site cash costs (US\$m)	(3,276)	--	--	(91)	(91)	(91)	(91)	(91)	(91)	(91)	(91)	(91)	(91)
EBITDA	6,451	--	--	179	179	179	179	179	179	179	179	179	179
EBITDA margin (%)	64%	0%	0%	64%	64%	64%	64%	64%	64%	64%	64%	64%	64%
FCF (US\$m)	3,599	(210)	(210)	119	119	119	119	119	119	119	119	119	119

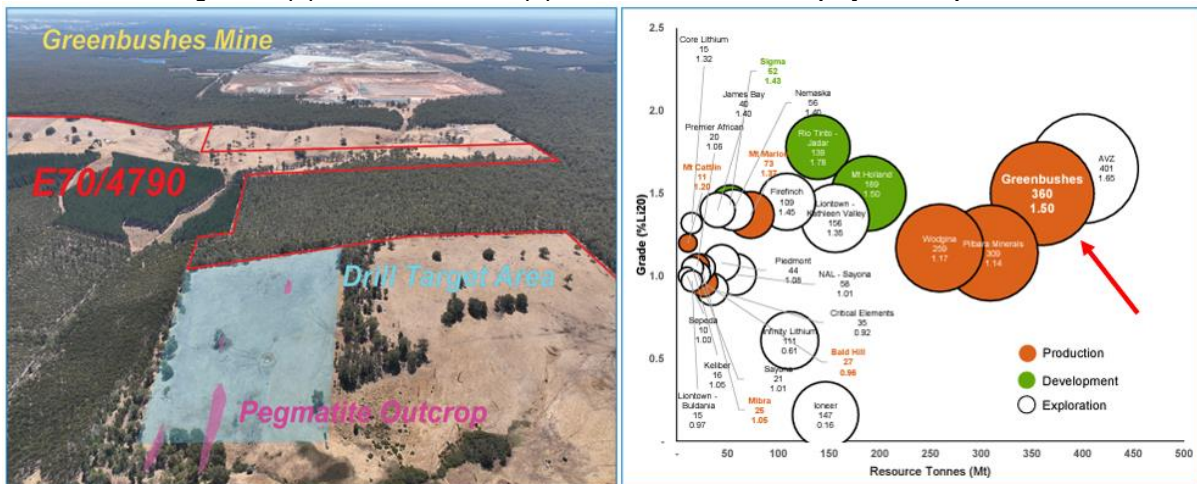
Source: SCPe

Greenbushes South, Western Australia – 100% Galan

Galan owns 100% of the Greenbushes South project, covering an area of 315km². The project is located 250km south of Perth in Western Australia. The project is located less than 3km south of the Greenbushes lithium open pit mine, which is amongst the largest and highest grade hard-rock spodumene deposits in the world – suggesting near-ology potential for new pegmatite discoveries and M&A optionality, as the production capacity at Greenbush mine is expected to more than double in its future expansion plans. The Greenbush lithium mine has been operating since 2014 by Talison Lithium – a JV between Tianqi Lithium, IGO and Albemarle, currently producing 1,350-1,450kt of spodumene concentrate, with a planned ramp up bringing total production to over 2,000kt. In June and August 2022, Galan announced the discovery of two outcropping pegmatite lenses (500m x 400m and 200m x 40m) over a strike length of >500m, as a result of the field (soil sampling, rock chipping) and lab (geochem) studies. Currently, there is an on-going 2,500m drill program testing the identified pegmatite lenses.

Infrastructure and logistics: The project is ideally located almost adjacent to one of the largest hard-rock lithium mines, with direct road access though the South Western Highway and grid power supply. In our view, initial capex would likely be significantly reduced by infrastructure already in place at Greenbushes.

Figure 22: (A) Asset location and (B) Global hard-rock lithium projects comparison



Source: Galan Lithium, IGO

Valuation: We assign Greenbushes South a nominal valuation of US\$20m.

Corporate and Financial Summary

Share structure: As at February 2023, Galan Lithium Ltd had 306.9m shares outstanding with 6.9m options outstanding at a weighted average exercise price of US\$0.23/sh and 23.8m performance shares/rights outstanding. We assume a total of US\$160m of equity (242m shares) for well and pond infrastructure for the production of 6% Li chloride concentrate. We base our per share valuation on a fully-diluted, fully-funded assumed share count of 579.9m fully diluted, fully funded shares outstanding.

Funding assumptions: As the end of March 2023, Galan Lithium Ltd had A\$26m of cash and no debt. Funding HMW 6% Li chloride concentrate production: We estimate US\$400m of capex and US\$55m of G&A, working capital and standby costs, and US\$28m of contingency, for a total funding requirement of US\$486m. This assumes that the US\$250m lithium carbonate processing plant (SCPe 2028 build) is funded from cash flow from LiCl sales. We assume this is financed through US\$160m of equity, US\$240m of debt at 10%, US\$28m of cash + options, and US\$56m of cash flows generated until the build is complete.

Financials: We forecast steady state EBITDA margins of 62% over our modelled operating horizon. We estimate an average steady state FCF per year of ~US\$168m, which we think could justify a US\$1.0-1.3bn valuation, assuming 4-6% FCF yield or 6-8xEBITDA multiple. Returns on capital are attractive at 20-30% ROCE in the first ten years with greater than 20% ROE.

Figure 23: SCPe cash flow and balance sheet estimates

Year (to 30 Jun)	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E	2038E	2039E	2040E
Revenue (US\$m)	--	--	--	37	162	279	294	294	294	400	400	400	400	400	400	400	400	400	400
EBITDA (US\$m)	(4)	(3)	(2)	25	70	176	185	185	185	244	244	244	244	244	244	244	244	244	244
Net income (US\$m)	(4)	(3)	(2)	(16)	(24)	(16)	20	32	34	154	156	157	159	160	161	162	162	163	164
EPS (US\$/sh)	(0.01)	(0.01)	(0.00)	(0.03)	(0.04)	(0.03)	0.04	0.06	0.06	0.28	0.28	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.30
EBITDA margin (%)	--	--	--	67%	44%	63%	63%	63%	63%	61%	61%	61%	61%	61%	61%	61%	61%	61%	61%
Cash flow from ops (US\$m)	(1)	(2)	9	(9)	16	169	161	160	162	142	159	160	162	163	164	165	165	166	167
Cash flow from investing (US\$m)	(8)	(17)	(120)	(160)	(123)	(3)	(128)	(128)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)
FCF (US\$m)	(8)	(19)	(111)	(169)	(107)	166	33	32	159	139	156	157	159	160	161	162	162	163	164
FCFPS (US\$/sh)	(0.03)	(0.06)	(0.20)	(0.31)	(0.20)	0.30	0.06	0.06	0.29	0.25	0.28	0.29	0.29	0.29	0.29	0.29	0.30	0.30	0.30
Net cash (US\$m)	54	25	99	(154)	(315)	(65)	(15)	32	271	480	713	949	1,187	1,283	1,380	1,477	1,574	1,672	1,770
ND/NTM EBITDA (x)	16.6	11.8	(4.0)	2.2	1.8	0.4	0.1	(0.2)	(1.1)	(2.0)	(2.9)	(3.9)	(4.9)	(5.3)	(5.7)	(6.1)	(6.5)	(6.9)	(7.3)
Debt borrowed (repaid) (US\$m)	--	--	--	240	--	(80)	(80)	(80)	--	--	--	--	--	--	--	--	--	--	--
Equity Raised (US\$m)	37	0	160	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total assets (US\$m)	65	60	229	456	428	328	268	220	254	412	568	725	884	948	1,013	1,077	1,142	1,207	1,273
Total liabilities (US\$m)	2	3	14	257	253	169	89	9	9	13	13	13	13	13	13	13	13	13	13
Total equity (US\$m)	63	57	215	199	175	159	179	211	245	399	555	712	871	935	1,000	1,064	1,129	1,195	1,260
Ending shares out (m)	305	307	549	549	549	549	549	549	549	549	549	549	549	549	549	549	549	549	549
ROCE (%)	(6%)	(6%)	(1%)	(0%)	(1%)	(3%)	20%	27%	23%	60%	43%	34%	28%	26%	24%	23%	21%	20%	19%
ROIC (%)	(16%)	(8%)	(1%)	(1%)	(1%)	(6%)	25%	30%	89%	304%	304%	304%	304%	304%	304%	304%	304%	304%	304%
ROE (%)	(6%)	(5%)	(1%)	(8%)	(14%)	(10%)	11%	15%	14%	39%	28%	22%	18%	17%	16%	15%	14%	14%	13%

Source: SCPe

Government and stakeholders:

Ownership: Galan owns 100% of HMW, Candelas and Greenbushes South. There are no third party royalties on the HNW or Candelas.

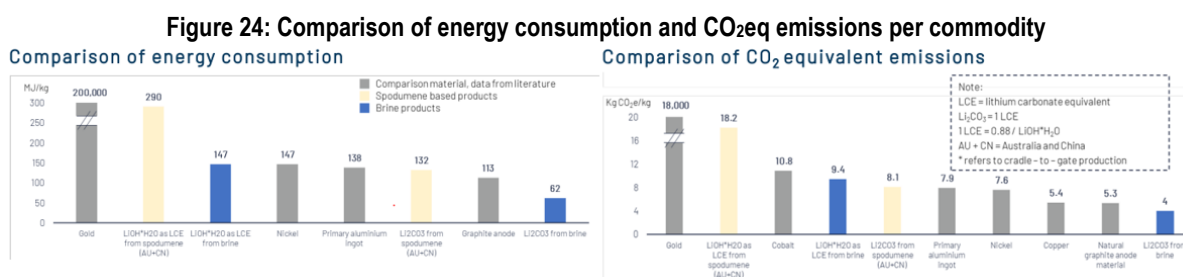
Tax: The corporate profit tax rate in the Argentina is 35%, and a 7% withholding tax on dividends. There is a 3% royalty that is payable to the province of Catamarca.

Permitting: While there is some involvement by both levels of Government, the Province of Catamarca has primary jurisdiction and responsibility over permitting the operation. The Federal Government of Argentina has jurisdiction over granting of export licences and repatriation of capital from Argentina.

ESG Considerations

In our view, Galan Lithium rank highly in ESG-friendly portfolios for both industrial and societal/community reasons. Lithium is core to the energy transition and brines are the lowest carbon-intensity source of lithium. Livent, Galan's neighbor in the Salar de Hombre Muerto, has received a gold rating for sustainability three years consecutively from Ecovadis, a leading supply chain sustainability consultant whose clients include companies Johnson & Johnson, Nestle, and LVMH. Galan, has an active engagement with a third-party provider to help future market products to meet sustainability objectives for ethical sourcing, CO₂ emissions transparency and overall ESG performance based on industry specific metrics (e.g. water consumption). We think with the right reporting and goal setting, Galan could be a perennial Gold ESG-rated company, as evidenced by Livent's achievement.

Environmental: Brines cause the least environmental disturbance compared to other mining methods and as shown below, brines have the lowest CO₂ emissions and energy requirements, compared not only to spodumene, but almost to every metal required for the energy transition. Since 2021, Galan has been proactively engaged with Circular, to monitor and track the ESG performance for its Argentinian lithium brine assets.



Source: Galan Lithium from Benchmark Mineral Intelligence

Social: Galan has been actively involved in health (donating supplies and equipment, including five ventilators, during COVID-19), education and local employment with the local communities. The prospect of building a mining project in the area is particularly of high importance given its remote location and the lack of employment in the area. Furthermore, we think another successful development contributes towards a positive development model for critical resources in the region, compared to other models which have stalled resource development (Bolivia's lithium nationalization and Chile's recent political instability). The lithium projects contribute towards improvement/development of modern infrastructure such as solar power facilities and maintenance of major roads, with the regional communities benefiting not only from Galan, but from other majors already there as Livent, while this lithium-brine production hub is being built.

Governance: The board currently consists of six members, including a non-Executive Chairman (Richards Homsany, lawyer and current Chairman at ASX listed uranium company Toro Energy), Juan Pablo Vargas de la Vega as Managing Director and four non-executive Directors, (i) Daniel Jimenez (ex VP of lithium Sales at SQM), (ii) Christopher Chalwell (engineering background), (iii) Terry Gardiner (capital markets background, current NED in other ASX listed companies) and (iv) Claudia Pohl (lithium/engineering background). Moreover, the company has engaged a third-party ESG expert – Socialsuite, to assist Galan with strengthening its corporate focused ESG strategy.

APPENDIX: SITE VISIT

We visited site in early April 2023. We flew from Buenos Aires to Salta (~2hr flight time) and drove (~6h) to site. The roads are well maintained as they are on a major trucking route to northern Chile – once in the mountains the roads are laterite but in good condition, and speeds of ~100km in straight portions are achievable. The cutback backs are not severe and most areas are wide enough for cars to pass in both directions.

Figure 25: Looking south (topography of well and future pond area)



Source: SCP

Figure 26: Test pond 1 (3000m²) – Brine pumped to next pond when it reaches ~0.4% Li



Source: SCP

The site currently houses ~50 people and includes a camp (mess hall, accommodation, medical facility), 5,000m² test ponds, a test scale reagent plant, seven test wells and an evaporation testing location. There are three pumping wells completed which are monitored for flow rates, grades, and impurities. Three of the test plants are filled with brine and thus far concentrations are in line with expectations. The key activities going forward are completion of additional pumping wells (~7 targeted for 4tpa production), and the construction of a larger 200-person camp to house all required personnel for construction and commercial production. Construction for the 4ktpa piloting stage is guided to begin in 2H23 assuming permits are received for that timeline (application submission was in Nov 2022).

Figure 27: Pond 2 (300m²), starting at 0.4%Li



Source: SCP

Figure 28: Reagent plant – uses Ca₂O to lift pH from 6.2 to 10.5-11.0 to precipitate impurities



Source: SCP

Our view: Our key concerns pre-visit were confirming flow rates, brine specs, and assessing the topography. Flow rates of 18-25L/s are sufficient to enable commercial scale production in conjunction with the 13-15 wells planned. The brine specifications thus far support low impurities and consistent brine and we are comfortable here given Livent’s long operating history, and test work confirmation of similar grades + low impurities by Galaxy/Allkem and POSCO in addition to Galan. Finally, our concerns on topography were ameliorated. There is sufficient flat ground

to support 20ktpa production rates if grades are high enough. Anecdotally the site is well maintained and in good order, and morale, quality of work and knowledge/experience of the team on site left a positive impression.

Figure 29: Pond 4 (238m²), starting at 0.4%Li



Source: SCP

Figure 30: Pumping station (Pata Pila licence)



Source: SCP

Figure 31: Evaporation test facility – brine (right) and salt water (left)



Source: SCP

Figure 32: Drilling (Rana de Sal licence)



Source: SCP

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TENDER: The analyst recommends tendering shares to a formal tender offering

UNDER REVIEW: The stock will be placed under review when there is a significant material event with further information pending; and/or when the research analyst determines it is necessary to await adequate information that could potentially lead to a re-evaluation of the rating, target price or forecast; and/or when coverage of a particular security is transferred from one analyst to another to give the new analyst time to reconfirm the rating, target price or forecast.

NOT RATED ((N/R): The stock is not currently rated

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Summary of Recommendations as of May 2023	
BUY:	54
HOLD:	1
SELL:	0
UNDER REVIEW:	1
TENDER:	1
NOT RATED:	0
TOTAL	57

¹ As at the end of the month immediately preceding the date of issuance of the research report or the end of the second most recent month if the issue date is less than 10 calendar days after the end of the most recent month