



**Breakaway
Research**

October 2018

Stephen Bartrop | Research Manager
sbartrop@breakawayinvestmentgroup.com

www.breakawayresearch.com

Company

ASX Code	GLN
Share Price (10th October 2018)	0.295
Ord Shares	95.2 m
Market Cap undiluted	28.1 m
Options (likely to be exercised)	44.8 m
Performance Rights	35.0 m
Market Cap undiluted	51.6 m
Est. Cash (27 Aug 2018)	1.2 m
Cash raised from option exercise	6.3 m
Total Debt	0.0 m
Enterprise Value	44.1 m

Directors

Chairman (non-exec)	Nathan McMahon
Managing Director	Juan Pablo (JP) Vargas de la Vega
Director (non-exec)	Christopher Chalwell
Director (non-exec)	Terry Gardiner
Director (Non-exec)	Jinyu (Raymond) Liu

Substantial Shareholders

Hongze Group Ltd	14.1%
Nathan McMahon	9.17%
Juan Pablo Vargas De la Vega	7.18%
Clive Bruce Jones	6.93%
Terry Gardiner	6.50%
Thomas F Corr	5.45%

Company Details

Address	Level 2, 38 Richardson Street WEST PERTH WESTERN AUSTRALIA 6005
Phone	+61 (0) 8 9322 6283
Web	https://galanlithium.com.au/

Price Chart

PRICE CHART



Source: Commsec

Galan Lithium (GLN)

A New Name, Great Lithium Project!

Recommendation: Speculative BUY

Key Points

- **Galan Lithium (formerly Dempsey Minerals) has refocused on lithium exploration and development by securing a significant lithium project in Argentina – the Hombre Muerto Lithium Project.**
- **The Hombre Muerto Salar (salar = salt lake) is a prestige location with neighbours including FMC, Galaxy and Posco. FMC has been producing lithium from the salar for 27 years and Galaxy recently announced the sale of a portion of its tenements to Posco for US\$280m to finance its own Sal de Vida project further south on the salar.**
- **Galan's tenement package includes the Candelas project covering the Los Patos Channel immediately south of Galaxy's Sal de Vida project and also a number of tenements in the Western Basin area which surround FMC's lithium operations.**
- **The Candelas project is a significant lithium target as the Los Patos channel is interpreted to have been the conduit for approximately 80% of the lithium present in the Hombre Muerto salar.**
- **Geophysics carried out by Galan on the Los Patos channel has identified substantial thicknesses (150m to +400m) of conductive sediments and volcanoclastics within the channel and which have independently interpreted to be saturated with lithium rich brines. With a 15 km channel length and 3 to 5 km wide the total prospective area is around 6,000 ha.**
- **Next steps involve drilling to test the sediments in the channel later in 2018. This is a major milestone as confirmation that saturated brines occur in this large target with economic lithium grades will drive a major re-rating in the Company.**
- **Overall, if the exploration is successful, Galan could provide an opportunity for a major new entrant into the lithium space in a proven lithium producing area.**

Galan has been successful in securing a strategic position in the Hombre Muerto salar – a low cost producer with neighbouring lithium heavy weights either in production or developing new projects. Galan's lithium targets are prospective and require drill testing to confirm that conductive zones identified from geophysical surveys are indeed lithium bearing saturated brines.

Hence the importance of the drilling planned before the end of 2018. Positive results from this drilling could be a game changer for the Company.

*Hence Breakaway's recommendation for Galan Lithium is a **Speculative Buy**.*



Company Overview

The Company's new project is at the Hombre Muerto salar in Argentina

....

Major lithium companies operate on the salar...

A recent transaction involved POSCO purchasing tenements for US\$280m from Galaxy....

Galan Lithium is an ASX listed (ASX: GLN) Company which has recently changed its name from Dempsey Minerals in August 2018 with a change in focus towards lithium exploration. In line with the name change, the Company has also recently acquired the rights to earn 100% interest in projects located in the Hombre Muerto salar.

Hombre Muerto salar is located at approximately 4,000m altitude in Catamarca province of Argentina within the South American Lithium Triangle. As noted by The Economist the lithium triangle overlays Argentina, Bolivia and Chile and holds 54% of the world's lithium resources (see Figure 1.).

The Hombre Muerto salar is the most important and prolific salt flat in Argentina. It hosts FMC's El Fenix lithium brine operation and Galaxy Resources' Sal de Vida project and boasts the highest lithium brine grades and lowest impurities within the Argentinian salars. Galaxy recently sold a portion of its Sal de Vida project to POSCO for US\$280M and will use the sale proceeds to finance the development of its own Sal de Vida project.

Galan has three projects associated with the Hombre Muertos salar and the lead project is the Candelas project which incorporates the Los Patos channel, the interpreted conduit of the lithium brines to the salar.

Overall, Galan's Hombre Muerto projects are divided into the Candelas Project and the separate West Basin Projects which surround the FMC project area. The Western Basin Projects comprise; Deceo, Rana del Sal, Pata Pila and Santa Barbara (see Figure 2).

This is within the Lithium Triangle

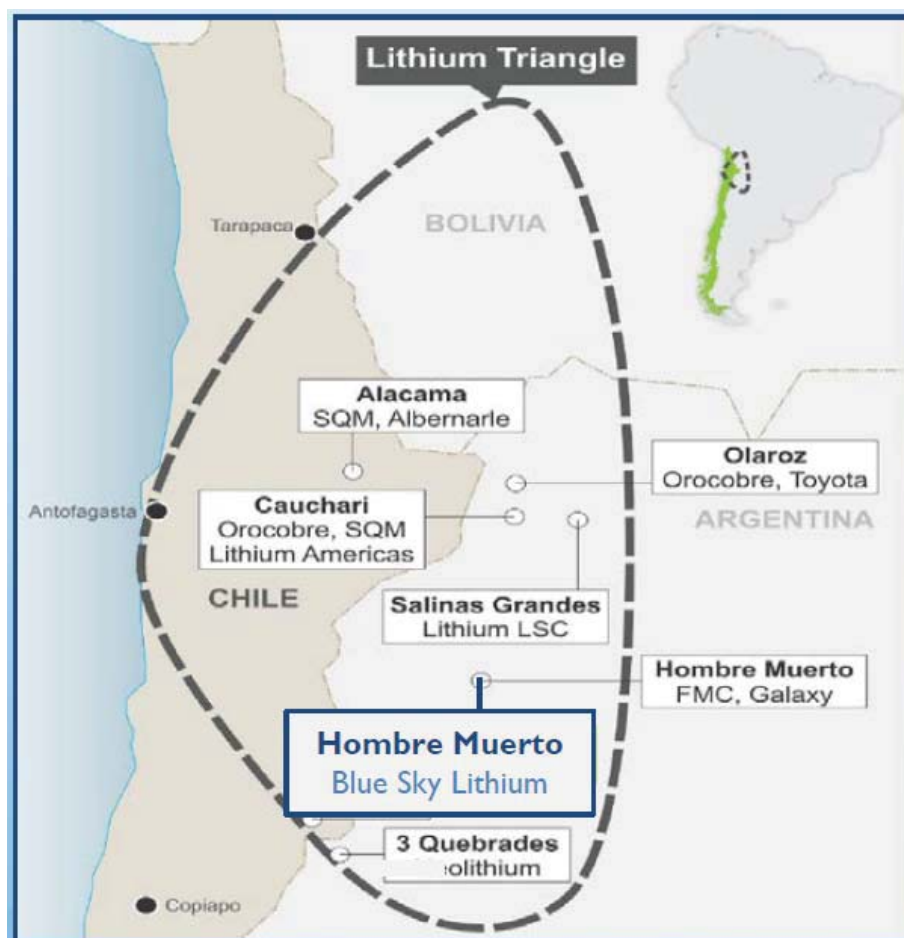


Figure 1. The Lithium Triangle and location of the Hombre Muertos salar.



Hombre Muerto Geology

A salar is a salt lake with restricted drainage....

A salar is a predominantly dry lake bed within a restricted drainage basin. The dry climate and lack of drainage results in the deposition and accumulation of salt and borate minerals along with sand and clay intervals. Water in the sediment pore space is brackish but below approximately two metres in depth the water is consistently very salty (brine). In addition to ordinary salt (sodium chloride), the brines also contain high concentrations of dissolved potassium chloride, lithium chloride and boron. High magnesium content can increase the production costs of lithium carbonate fortunately the Hombre Muerto salar brines are low in magnesium as well as having a low sulphate-lithium ratios. The brines at Galaxy's Sal de Vida average about 780mg/L Li.

Hombre Muerto producers have lower operating costs due to more favourable chemistry in the brines....

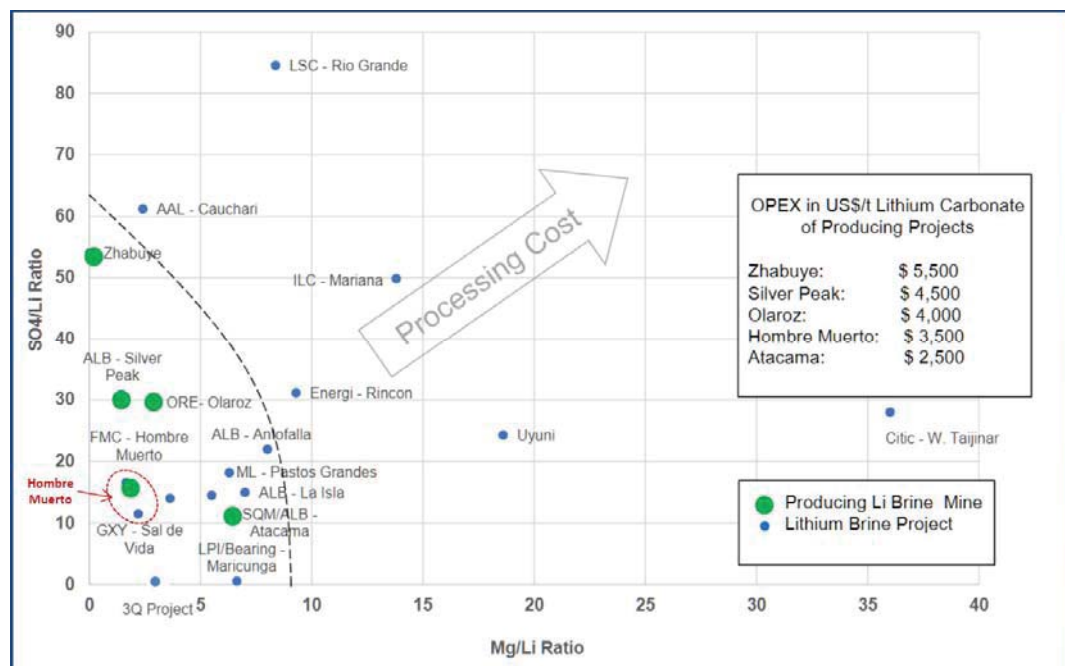


Figure 2. The Hombre Muerto brines have favourable operating costs from their low magnesium and sulphate to lithium ratios (Source Company).

The Salar del Hombre Muerto lies in the high altitude Puna, a plateau comprised of basins and ranges discrete from the much larger Cordillera-bounded Altiplano basin to the north reports Galaxy. The salar sits in an ideal environment for the development of lithium bearing brines. The basin is a closed basin, sits in an arid environment, sources lithium rich volcanic rocks, has hydrothermal activity and basement rocks that are highly faulted. An extensive magma chamber is interpreted to sit at depths of only ~4km and the Cerro Galan caldera (the fifth largest volcanic caldera in the world) drains into the salar.

Candelas Project

The Candelas project is the flagship and occurs immediately south of Galaxy's Sal de Vida project....

The Candelas Project has an area of approximately 17,000 ha covering the Los Patos channel and has ~6,000 ha under potential brine coverage (see Figure 2). The channel is estimated to have provided around 80% of the lithium rich waters feeding into Hombre Muerto salar. As evident on Figure 2, the project area is immediately south of the Galaxy's Sal de Vida project area.



Candelas encompasses the Los Patos channel which is interpreted to be the channel providing the conduit for the brines entering the salar

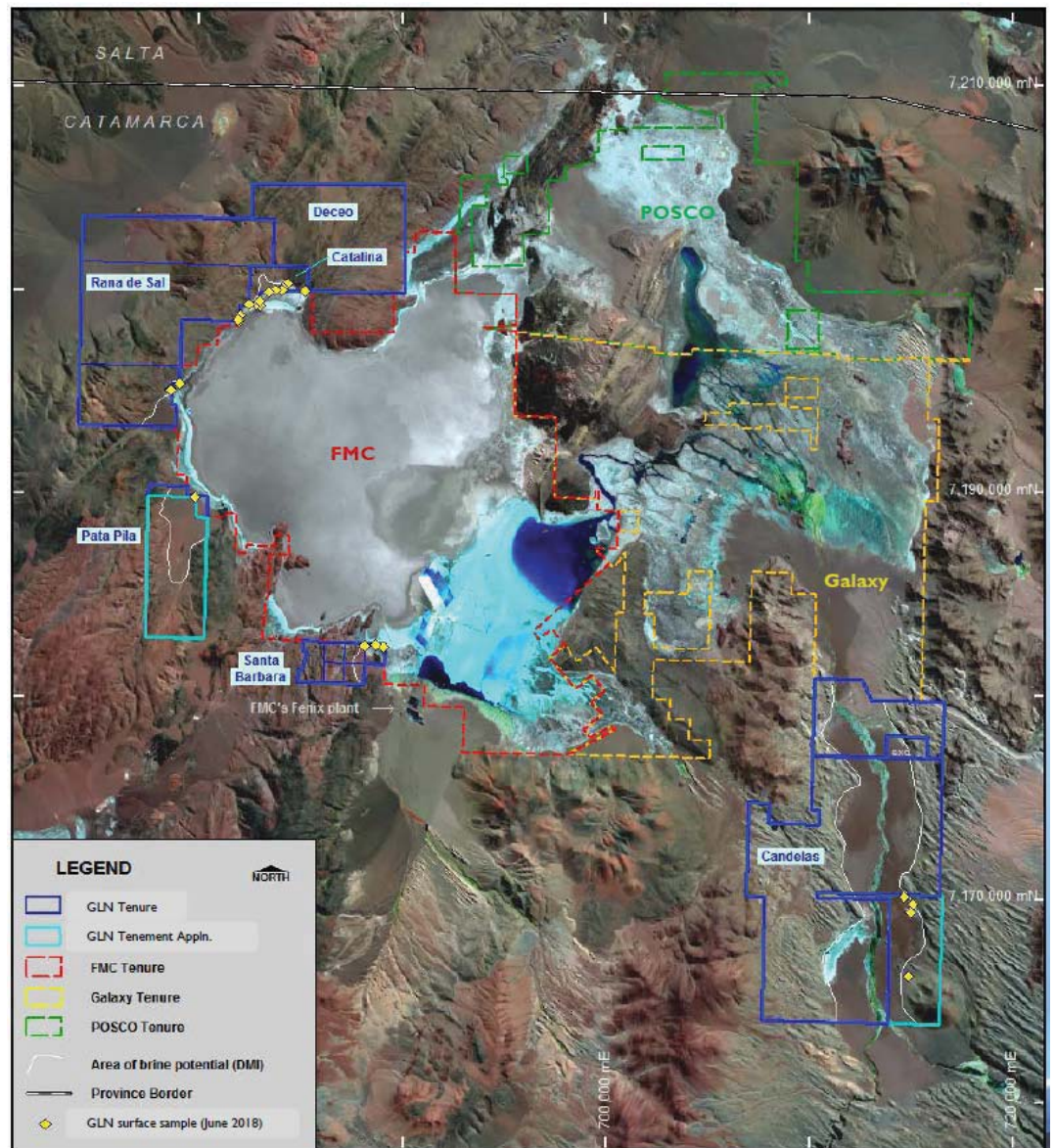


Figure 2. The location of Galan’s projects at Hombre Muerto salar including Candelas in the southeast (Source: Company).

The Los Patos channel is a structurally controlled channel which contains coarse sediments and volcaniclastics

The Los Patos channel lies within a structurally controlled graben formed into the Precambrian metamorphic rocks. This channel is filled with Tertiary ignimbrites which have been sourced from the nearby Cerro Galan volcano and overlain by more recent sediments and salar precipitates.

Galan has identified that this previously ignored area probably represents prospective salar covered by the darker coloured surficial alluvial sediments.

Recent geophysical work was conducted by independent consultants Quantec who have previously worked in the area for Galaxy. The results were very positive, and Galan discovered that the 15 km by 3-5 km wide channel was far deeper than expected (up to ~600m deep). Geophysics comprising Gravity & CSMAT surveys – see Figure 3) also indicated that, according to Quantec, “...show very conductive and shallow units that are compatible with units being saturated with brine which constitute great potential for further exploration” representing a large target for hosting lithium bearing brine material.



Geophysics across the channel has identified extensive conductive zones which may be lithium-rich brine saturated sediments and volcanic rocks ...

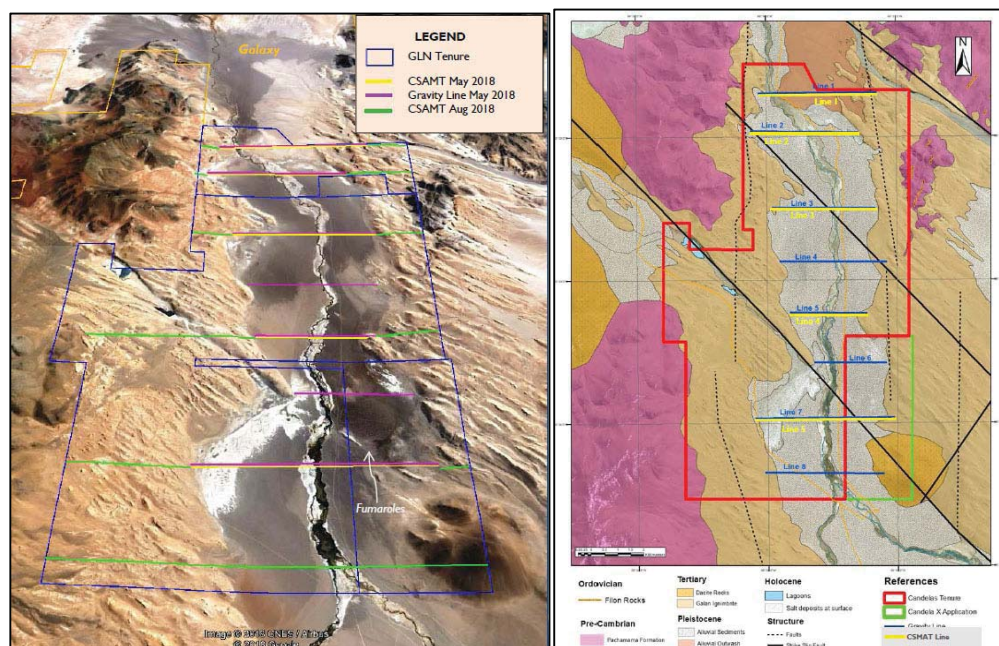


Figure 3. Geophysics lines across the La Patos channel (Source: Company).

In a recent announcement Galan provided the market with the results of the CSAMT lines outlining the interpreted geology from the geophysics looking northwards up the Rio Los Patos channel at Candelas. It suggests that the depths to potentially brine saturated sediments and volcanics are relatively shallow and range from approximately 150 m to +400 m in thickness over the 15 km channel length. The total area covering potential brines has increased to ~5,930 hectares. Galan therefore has an exploration target which is ~15 km long by 3-5 km wide with an indicative brine layer ~150 to 400 m+ thick.

The next exploration work involves drilling. The Company reports that maiden drilling permits have been applied for already and it expects that drilling will occur in Q4 2018.



The latest geophysical results confirm the extensive occurrence of these conductive zones ...

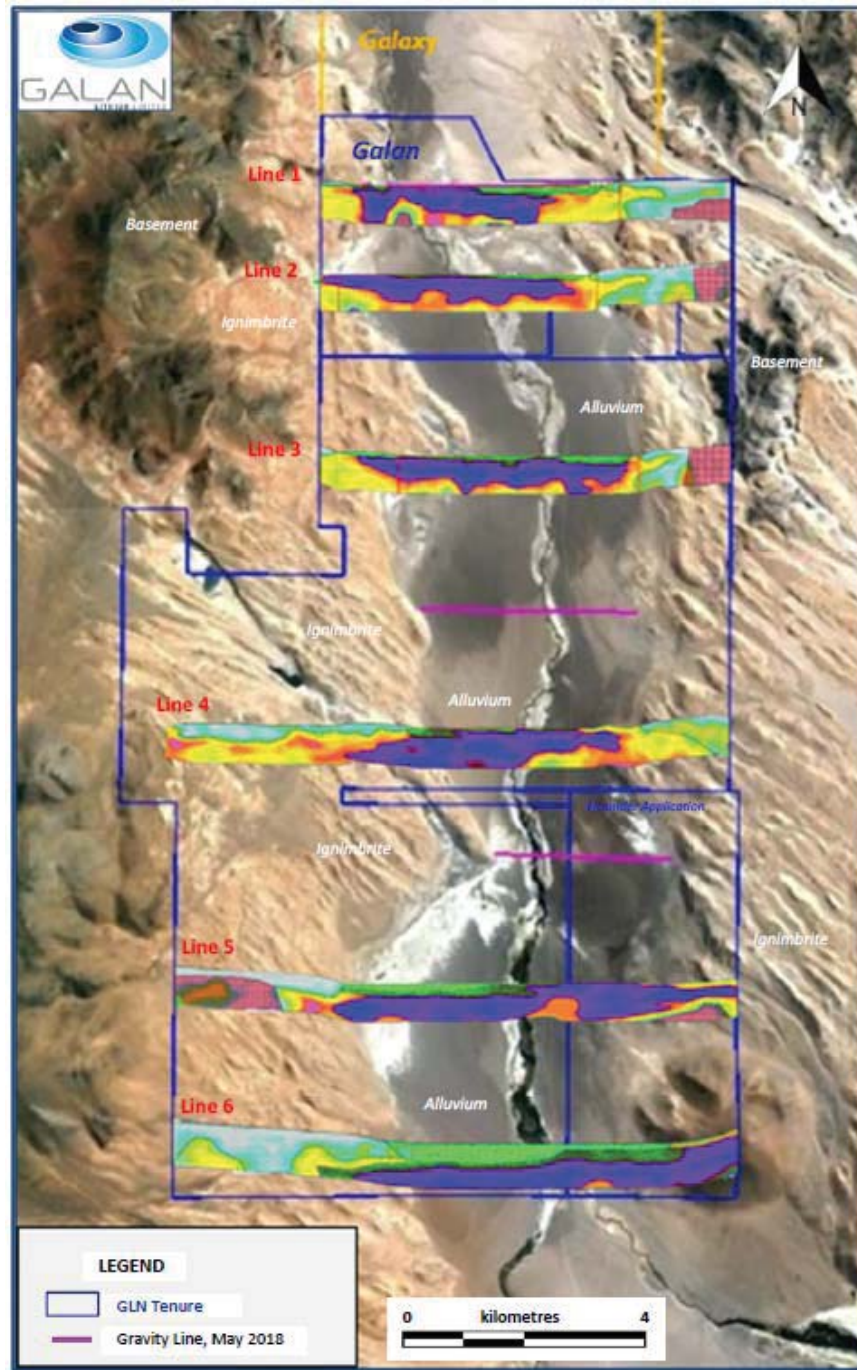


Figure 3. Resistivity geophysical lines across the La Patos channel. Purple/blue represents highly conductive layers interpreted as brine (Source: Company).

potential

Western Basin Projects

The Western Basin projects surround FMC's project in the western area of the Hombre Muerto salar. Several areas cover margins of the Hombre Muerto salar with the Company targeting alluvial fan covered salar targets.

The Western Basin tenements surround FMC's Fenix project

It reports that initial near surface water sampling has been highly encouraging with several samples reporting greater than 1,000 mg/t Li.

The Company has completed a geophysical CSAMT resistivity survey over some of these Western tenements to assist in identifying targets with the data currently being processed. It is likely that any targets identified from this processing will also be followed up with drill testing.



Geophysics has also been conducted on these tenements....

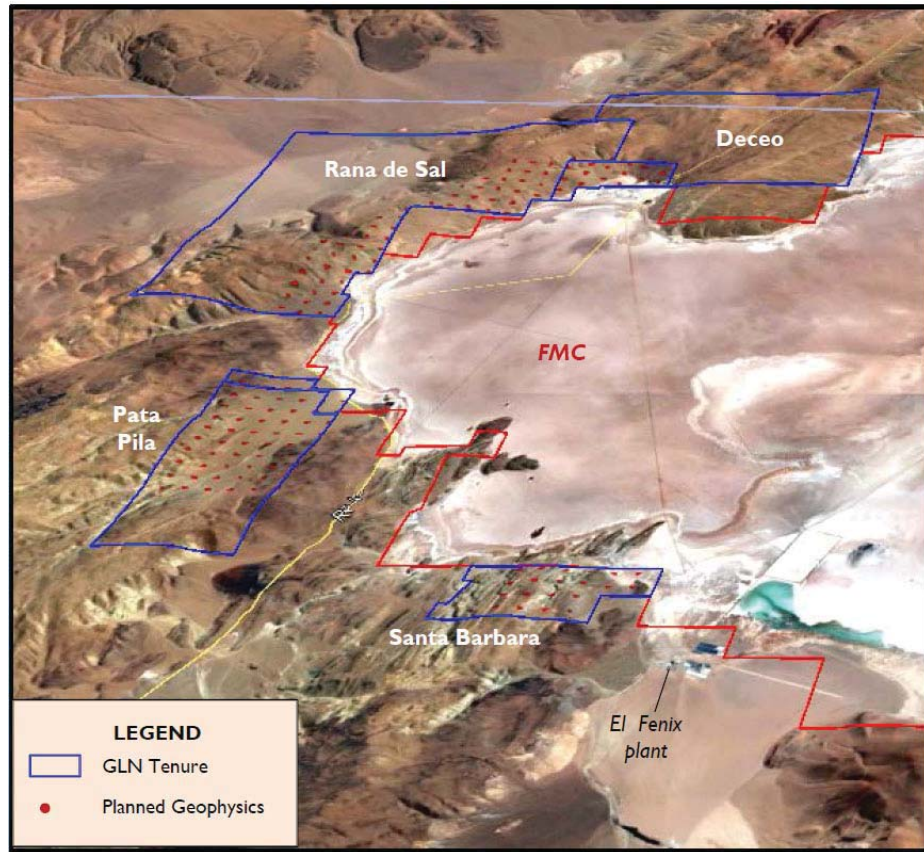


Figure 4. Galan’s Western basin projects on the Hombre Muerto salar (Source: Company).

Transaction Details

The Company signed an option agreement (Option Agreement) with Australian company, Blue Sky Lithium Pty Ltd (Blue Sky) to acquire 100% (royalty free) of Blue Sky’s interests in February 2018.

Blue Sky Lithium controlled the Hombre Muerto salar projects as its Managing Director and founder Mr. Juan Pablo Vargas de la Vega (“JP”), has had a long association in the mining industry in Australia and Latin America with time spent with BHP, Rio Tinto and Codelco on optimisation for plants for several commodities and working as a specialist lithium analyst for Australian brokers.

The Company exercised the Option Agreement in June 2018 and following extensive due diligence, acquired 100% of the issued capital of Blue Sky Lithium for 25M shares and 25M options. Additionally, there were a range of Performance Shares issued, as detailed in Figure 5, to the vendors and to JP as Managing Director of the Company.

The project was secured through agreements with Galan’s new managing director....

The transaction involves a number of share and performance share issues...

These have substantial milestones before they are issued...

Performance Shares	GLN Shares
Vendor Class A Shares Upon delineating a JORC compliant resource of at least 80,000t contained LCE	15,000,000
Vendor Class B Shares Upon the commencement of commercial production from a pilot plant	10,000,000
MD Performance Shares (subject to shareholder approval)	
i) Upon JORC Indicated/Measured Resource of 1Mt+ LCE	5,000,000
ii) Upon financial close for a commercial scale lithium production facility	5,000,000

Figure 5. Performance share terms for the Hombre Muerto projects (Source: Company).



Competitor operations on the Hombre Muerto salar

If Galan can prove the presence of economic quantities of lithium in brines on its tenements, then there is significant upside given the materiality of its neighbouring operations. As reported by FMC, the salar's location is convenient to major rail lines and power and while it covers a smaller area than most salars of the region, it contains lithium brines at depths much greater than its neighbours.

FMC Fenix Project

FMC acquired the Salar del Hombre Muerto project in 1995. The Fenix project uses a selective purification processing housed in modular units and can produce both lithium chloride and lithium carbonate. It is reported to be the only mine to metal production in the world (USGS).

First production (lithium carbonate) commencing in 1997. In 2011 it expanded production by 30% and is now implementing a further expansion of its lithium hydroxide production to 30,000 tpa.

FMC's Fenix Project was acquired in 1995....

First lithium production was in 1997.....



Figure 6. FMC's Hombre Muerto Operations (Source: Company).

Galaxy – Sal de Vida Project

Galaxy controls 100% of the brine mineral rights over more than 385 km² on the eastern half of the Hombre Muerto salar prior its agreed sale of the northern part of its holding to Posco.

In August 2016, Galaxy released an updated Sal de Vida (Salt of Life) Feasibility Study Report (FSR) outlining a low cost, long life lithium and potash operation including evaporation ponds, a battery grade lithium carbonate plant and a potash plant. The FSR estimated a post-tax net present value of US\$1.043 billion at 10% discount rate with the potential to generate operating cash flow before interest and tax of US\$273 million per annum at full production rates.

Galaxy has the Sal de Vida project in the eastern part of the Hombre Muerto salar

IN 2016 it completed a feasibility study.....

Galaxy has also considered low cost, scalable development options at Sal de Vida including modular designs which can provide flexibility to add units and scale up to the capacity of 25,000 tonnes per year of lithium carbonate and 95,000 tonnes of potassium chloride. The Sal de Vida has a maiden reserve of 1.1 million tonnes of retrievable lithium carbonate equivalent and 4.2 million tonnes of potassium chloride (potash or KCl) – enough to supply a 40 year period. The FSR has since been updated in May 2018 and the market is expecting a decision by the end of CY2018.

On the 28 August 2018 Galaxy announced that it had executed a binding agreement with POSCO for the sale of a package of tenements incorporating the northern portion of its Sal de Vida Project on the Salar del Hombre Muerto (See Figure 7).

The cash consideration is US\$280 m and will be directed towards advancing the Sal de Vida Project. Recently Galaxy has been evaluating strategic partners to assist in the development of project. In this recent announcement it reports that Galaxy and POSCO will continue to explore potential



cooperation to maximize future development and operational synergies for their respective projects.

In August 2018 it agreed to sell its northern tenements to Korean POSCO for US\$280m....

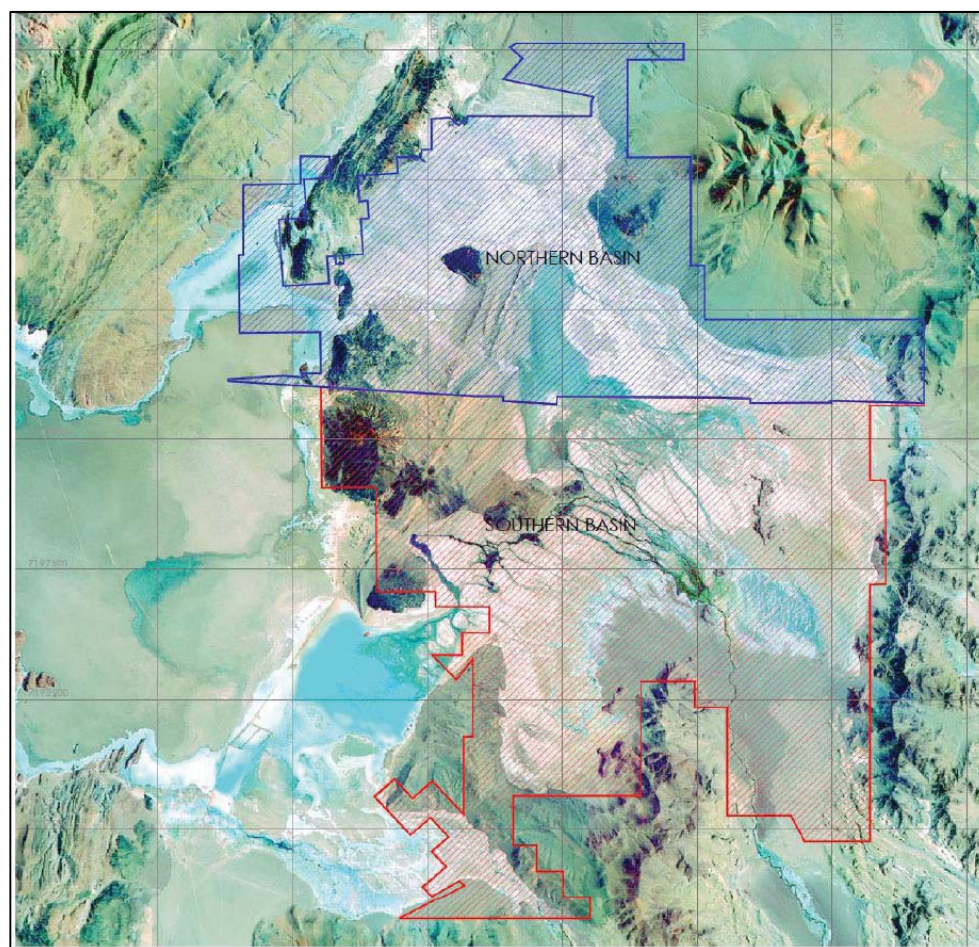


Figure 7. Galaxy's northern sale area to Posco (Source: Galaxy).

Argentina as a Jurisdiction

Argentina has introduced an export tax.....

Early in September 2018 Argentina's President Mauricio Macri announced an austerity program on the back of the peso having fallen 50% this year and inflation at 30% pa. The focus of the president is to fast track payments of US\$50 billion rescue package from the International Monetary Fund.

New austerity measures announced by President will apply an export tax of 4 pesos for each US dollar of value exported of primary products, including agricultural goods while other exports will be taxed at 3 pesos per US dollar.

Orocobre estimate that it will be equivalent to an 8% export tax.....

Orocobre (ASX Code: ORE) report that this equates to a duty of approximately 8% on export sales revenue from lithium products although this may vary with the Argentinian peso to US dollar exchange rate. However, it points out that a mitigating factor is that a weaker exchange rate lowers Argentinian dominated operating costs with the Argentinian peso already devaluing against the US dollar by approximately 90% since April 2018.

Mitigating factors include the depreciation in the Argentinian peso which reduces local operating costs.....

The Australian lithium companies operating in Argentina has underperformed on the back of the Argentinian export tax and it is pleasing that Orocobre has responded quickly by quantifying its potential impact. Our view is that the tax is likely to remain as Argentina will take some years to rebuild its economic position but it is now factored into the market and it is not a showstopper for



the lithium projects – particularly like those at Hombre Muerto salar which are lower cost due to favourable brine chemistries.

Lithium Juniors

Outside the majors, the market capitalisation of remainder of the sector is quite variable....

The Australian lithium sector is dominated by several major players including Mineral Resources (ASX Code: MIN, Market Cap: \$3 b, diversified), Pilbara Minerals (ASX Code: PLS, Market Cap \$1.6b), Orocobre (ASX Code ORE, Market Cap \$1.1b and Galaxy Resources (ASX Code: GXY, Market Cap \$1.1b). However, the remainder of the sector is relatively diverse with junior explorers generally in the sub \$50 m market cap range but then companies with more advanced projects rapidly increasing in market capitalisation to above \$150 m.

This value depends on the quality of the respective lithium projects....

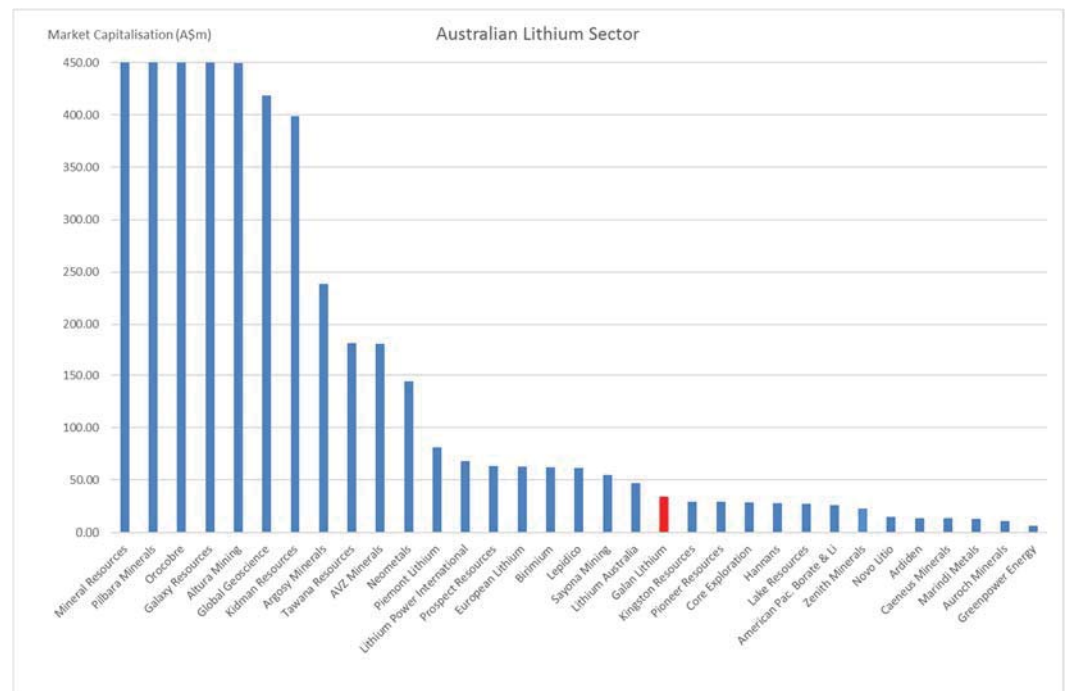


Figure 8. Market capitalisations of the Australian lithium sector.

Galan has significant upside if it can confirm economic lithium in its tenements.....

This structure bodes well for Galan given Galan’s potential to rapidly define the mineralisation potential on its tenements and its proximity to a major producer and advanced projects on the Hombre Muerto salar. If Galan can demonstrate a sizeable resource, particularly in the Los Patos Channel in its Candelas project, then this could provide an opportunity for a new entrant to finance the project to secure a major foothold in the lithium sector in a major, world class lithium producing region.

Market Capitalisation & Enterprise Value

The market capitalisation of Galan is a modest \$28m while the Enterprise Value is \$44.1m (see Figure 9). The Enterprise Value incorporates the issue of performance rights and the terms of the issue of these rights were outlined in Figure 5 and have been repeated in Figure 10.



Galan has a market capitalisation of ~\$28m.....

Parameter		Value
Share price	A\$	0.295
Shares issued	m	95.2
Market capitalisation	A\$m	28.1
Options (likely to be exercised)	m	44.8
Performance Rights	m	35.0
Market capitalisation (diluted)	A\$m	51.6
Less		
Cash at 27 August 2018	A\$m	1.2
Cash raised from option exercise	A\$m	6.3
Add		
Debt	A\$m	0.0
Enterprise value	A\$m	44.1

Its Enterprise Value is estimated at \$44.1m but this includes the issue of performance rights.....

Figure 9. Market capitalisations and Enterprise Value of Galan.

An important consideration is that the issue of performance rights is connected to substantial achievements being met by the Company. Hence while the performance rights are dilutive, as noted in a comparison with the rest of the Australian Lithium Sector, there is significant more upside from the achievements being met than by the dilution.

These performance rights only get issued if the Company achieves significant milestones.....

Expiry	Number issued	Exercise Price (\$)	Amount Raised (\$)	Performance shares
31-Dec-18	16,300,000	0.140	2,282,000	
29-Nov-19	3,500,000	0.15	525,000	
31-Dec-19	25,000,000	0.14	3,500,000	
Vendor Class A Shares Upon delineating a JORC compliant resource of at least 80,000t contained LCE				15,000,000
Vendor Class B Shares Upon the commencement of commercial production from a pilot plant				10,000,000
MD Performance Shares (subject to shareholder approval) i) Upon JORC Indicated/Measured Resource of 1Mt+ LCE				5,000,000
MD Performance Shares (subject to shareholder approval) Upon financial close for a commercial scale lithium production facility				5,000,000
Total	44,800,000	0.141	6,307,000	35,000,000

Figure 10. Galan options and performance rights (Source: Company).

An experienced Board with JP providing solid lithium project experience.....

Galan Lithium Director Backgrounds

Galan has an experienced Board which has been augmented with Managing Director JP (Juan Pablo) who brings significant lithium experience to the team. Nathan and his fellow non-executive directors bring a wealth of corporate and exploration experience to round out a solid team.

Mr Nathan McMahon Chairman (Non-executive)

Mr McMahon has provided commercial and corporate advice to the mining industry for over 30 years. Mr McMahon has specialised in native title negotiations, joint venture negotiations and project acquisition due diligence. Mr McMahon is a Director of several ASX listed companies. These include, joint Managing Director of Cazaly Resources Ltd and Chairman of Hodges Resources Ltd. Mr McMahon has had experience across a broad range of commodities including uranium, iron ore, gold, base metals and industrial minerals.

Mr Juan Pablo (JP) Vargas de la Vega Managing Director

JP is a Chilean/Australian mineral industry professional with 15 years broad experience in ASX mining companies, stockbroking and private equity firms and holds a Masters in Mineral Economics



from Curtin University, Perth. JP has been a specialist lithium analyst in Australia. JP has also operated a private copper business as in Chile and has also worked for BHP, Rio Tinto and Codelco.

Mr Christopher Chalwell

Non-Executive Director

Mr Chalwell's most recent role was Chief Operating Officer SKILLED Workforce Services Western Mining Region one of Australia's largest services organisation where he had operational responsibility across Australia for a business unit. This role demanded leadership and commercial management to ensure the organisation continued to grow at a strong rate year on year. Chris has been involved in several mergers and acquisitions and managed several brands under the SKILLED Group.

Mr Chalwell has been involved in a range of significant projects in including the gas to coal conversion of the Mica Creek Power station in Mt Isa and the Pasminco Century Mine in far north Queensland. Mr Chalwell has extensive experience with feasibility studies, commercial reviews for project funding, contract appraisal and award. He has lead mine-commissioning activities for new mineral plants both from a technical and management aspect.

Mr Terry Gardiner

Non-Executive Director

Mr Gardiner has been involved in capital markets, stockbroking & derivatives trading for 20 years and prior to that had many years trading in equities & derivatives for his family accounts. He has also started and operated numerous small business ventures and is currently a Director of stockbroking firm Barclay Wells Limited.

Mr Jinyu (Raymond) Liu

Non-Executive Director

Mr Liu is a qualified mining engineer with a commercial background and received his degree in Mining Engineering from University of Western Australia. He also holds a Master of Mineral Economics from Curtin University and a Western Australia Unrestricted Quarry Manager's licence. Mr Liu is the founding Managing Partner of Havelock Mining Investment, a Hong Kong investment company and has been involved with numerous investments in ASX listed companies and is currently a Director of Okapi Resources Ltd. Previously, he has served as a Director of Fosun International Australia, a Chinese conglomerate and investment company. Prior to this, he held technical roles at Rio Tinto, KCGM and Mt Gibson Iron.

Breakaway's View

Galan Lithium has secured a significant project in a world-class lithium province with substantial neighbours which are recognised names in the world lithium space.

Its projects are highly prospective and in particular, the Candelas Project which encompasses the Los Patos Channel – itself a potential conduit and host for the lithium brines within the Hombre Muerto salar. While this project is adjacent to Galaxy's tenements, it appears to have been overlooked previously as the salar has been covered by more recent, surficial alluvial sediments which does nothing to diminish its level of prospectivity.

Initial exploration has been encouraging by demonstrating the potential presence of lithium bearing brine saturated channel fill sediments and ignimbrites to a greater depth than previously thought. The next step is drilling to determine lithium grades through drilling and this is likely to be imminent once permitting has been achieved.

If the drilling is successful and Galan can prove a significant resource – a likely feat if the drilling is successful in intersecting economic brines – then the project may offer an opportunity for a new

Galan has secured a significant project.....

Geophysics has been encouraging and suggests a large target.....



*Recent transactions
potentially underpin this
value if exploration is
successful....*

entrant into the lithium industry from a known producing area. This could occur through assisting with project financing but the Galaxy US\$280m tenement sale to Posco does provide a benchmark price for transactions associated with the Hombre Muerto salar.

Overall with a current market capitalisation of around \$28m, Galan offers significant upside if its exploration drilling can corroborate the interpretation from the geophysics and demonstrate the presence of lithium mineralisation in the form of extensive brine saturated channel fill sediments.

Hence Breakaway's recommendation for Galan Lithium is a Speculative Buy at 29.5 cents.



Analyst Verification

I, Stephen Bartrop, as the Research Analysts, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

Disclosure

Breakaway Research Pty Ltd (AFSL 503622) may receive corporate advisory fees, consultancy fees and commissions on sale and purchase of the shares of Galan Lithium Limited and may hold direct and indirect shares in the company. It has also received a commission on the preparation of this research note.

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Breakaway Research Pty Ltd

AFSL 503622 ABN 39 602 490 906
T+612 9392 8010 F+612 9279 2727
PO Box H116 Australia Square
Sydney, NSW 2001
Suite 505, 35 Lime Street,
Sydney, NSW 2000