

# **GALAXY RESOURCES LIMITED**

LSM Conference - China's Role In The Battery Game

June 2017

**ASX: GXY** 



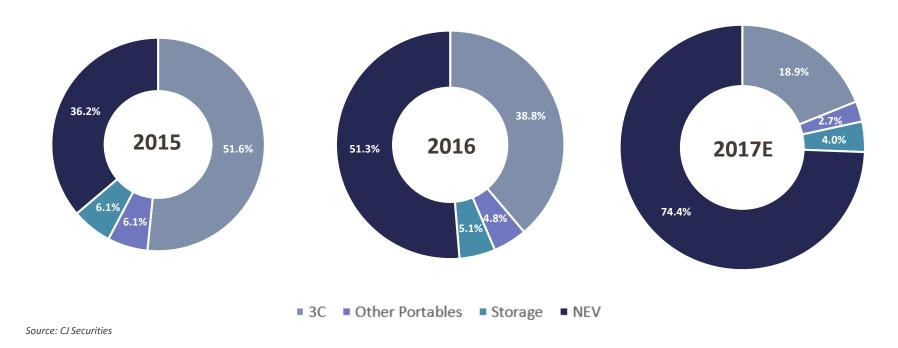
# **The Lithium Battery Market In China**

# **China Lithium Battery Consumption**



# The lithium-ion battery application mix is transitioning from being dominated by consumer electrics to new energy vehicle applications

**Lithium-Ion Battery Consumption Mix** 



Rapidly growing New Energy vehicle (NEV) segment becoming the increasingly dominant end use for lithium-ion batteries

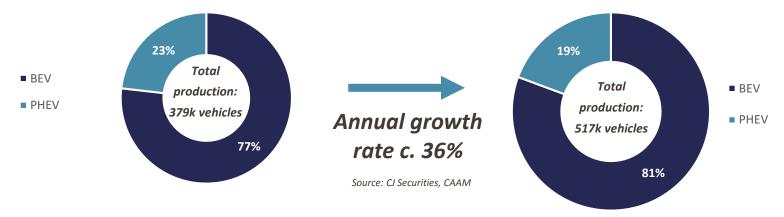
## New Energy Vehicle Growth In China



# Another record breaking year in 2016, with 517k New Energy Vehicles (NEV) produced in China, 80% of which were pure electric vehicles

2015 Breakdown of New Energy Vehicle Production in China

2016 Breakdown of New Energy Vehicle Production in China



### 2017 YTD NEV Unit Production<sup>1</sup>

NEV model	1Q 2017	Apr	
BEVs	47.9k	30.2k	YoY growth: +26.1%
PHEVs	10.3k	7.1k	YoY growth: +3.9%

- For passenger vehicles produced: Battery Electric Vehicle (BEV) YoY volume growth was 73% and Plug-In Hybrid Electric Vehicle (PHEV) YoY volume growth was 30%
- For commercial vehicles produced: BEV YoY volume growth was 50% and PHEV YoY volume growth was 23%

Projected 2017 NEV unit production of c. 730+k vehicles, equivalent to 41% YoY growth

Source: CAAM, CJ Securities

Note:

1. BEVs = Battery Electric Vehicles, PHEV = Plug-In Hybrid Electric Vehicles

## Electric Vehicles On The Road In China



## Over 170 models of passenger vehicles in the first four batches of typeapproved NEVs in 2017

**Largest NEV Passenger Vehicle Producers In China** 

Auto manufacturer	2015 PV units	2016 PV units	2017 PV units (as at 30 April)
BYD	60.2k	84.5k	11.5k
北京汽车 BAIC MOTOR	52.1k	46.0k	12.3k
GEELY	18.4k	46.2k	17.3k

c. 51% of total NEV passenger vehicles produced in 2016

Source: CAAM, CJ Securities

**BAIC EC180 electric vehicle** 



**BYD E6 electric vehicle** 



**Geely Emgrand electric vehicle** 



## **NEV Subsidies In China**



# A NEV quota trading scheme, economic incentives for the consumer and changes in consumer preferences countering subsidy reduction effect

### **Revised Subsidy Policy For NEVs For The Period 2016-2020**

- Subsidies for passenger NEVs reduced by ~20% in 2017 (compared to 2016 subsidies)
- Subsidies for large commercial vehicles reduced by ~40-70% in 2017 (compared to 2016 subsidies) depending on vehicle type and size
  - Subsidy ceilings introduced on commercial NEVs based on the length of vehicle
- Additional subsidies awarded by Local Governments restricted to 50% of the value of Central Government incentives
- Subsidy funding now awarded after the sale of NEVs, previously before changes to subsidy policies are expected to trigger a
  more transparent, efficient and competitive market in battery making and auto manufacturing
- Alternative economic incentives and technology thresholds are being introduced to continue to promote the uptake of NEVs

### **2017 Subsidies For Passenger NEVs**

### **Driving range (DR)**

Auto type	Energy density	DR ≥ 50km	100km ≤ DR < 150km	150km ≤ DR < 250km	DR ≥ 250km
BEV	90-120Wh/kg		RMB20k (US\$2.9k)	RMB36k (US\$5.2k)	RMB44k (US\$6.4k)
BEV	>120Wh/kg		RMB22k (US\$3.2k)	RMB39.6k (US\$5.7k)	RMB48.6k (US\$7.4k)
PHEV	na	US\$3.5k			

Source: Deutsche

## **NEV Adoption Not Reliant On Subsidies**



# China continues its leading investment into NEVs and has introduced a number of policy measures aimed at continuing to encourage uptake

### **Government Policy & Investment**

- Committed domestic investment Committed to build out of a nationwide charging infrastructure to support 5 million NEVs by 2020
- Mandatory NEV targets Government initiating credit system encouraging auto manufacturers to target NEV production percentages of 8%, 10% and 12% over the next 3 years
- Limiting ICE production Penalties for manufacturers exceeding certain production thresholds

### **China Licensing Restrictions**

- Certificate of entitlement (COE) required for car purchase
  - Cost of a COE (Shanghai) for an internal combustion engine (ICE) vehicle: US\$15k for an individual; US\$30k for a company
- In Beijing (BJ) and Shanghai (SH):
  - The right to purchase an ICE vehicle is subject to a lottery
  - Success rates: 4% (SH); 0.2-0.3% (BJ)
- Driving restrictions for ICE vehicles
- NONE OF THE ABOVE RESTRICTIONS FOR PROSPECTIVE NEV OWNERS

### Shanghai license plates used to distinguish between car types





Blue plates: ICE vehicles

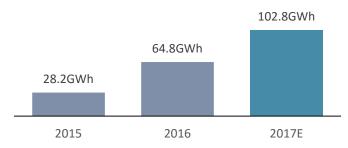
**Green plates: NEV vehicles** 

## China Battery Production Capacity



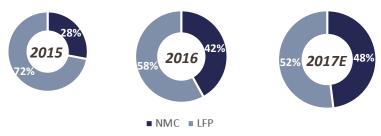
# Growth in lithium-ion battery (LiB) production capacity driven by expansion of NEV battery manufacturing facilities

## NEV Battery Manufacturing Capacity Expected To Grow Almost 4x Over 3 Years



Total planned NEV battery manufacturing capacity expected to double from 2017E levels by 2020

### **NEV Battery Cathode Mix Transitioning From LFP to Ternary**

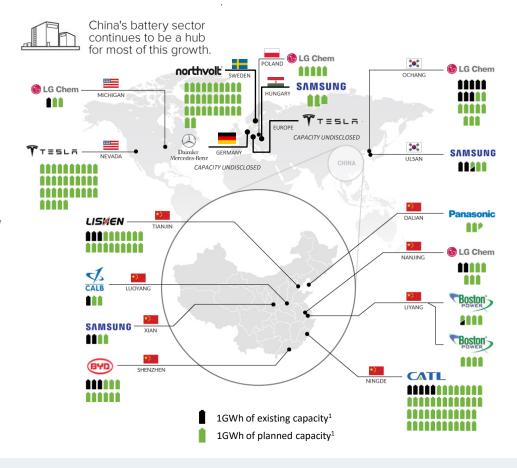


By 2020, projected NEV cathode mix to reach an estimated 85%/15% mix between ternary and LFP

Source: Benchmark Minerals, Company Disclosure, Bloomberg, CJ Securities Notes:

1. LFP = Lithium Iron Phosphate, NMC = Nickel Manganese Cobalt

### **Planned Construction/Expansion Of Selected Gigafactories**



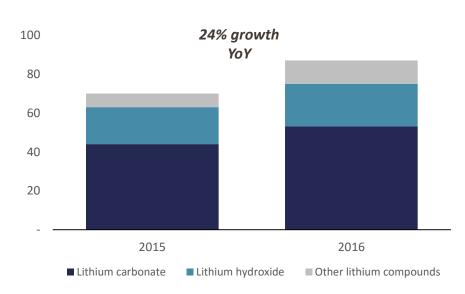
## Impact Of NEV Growth For Lithium



# China is currently the major producer and consumer of lithium chemicals with a focus on lithium-ion battery applications

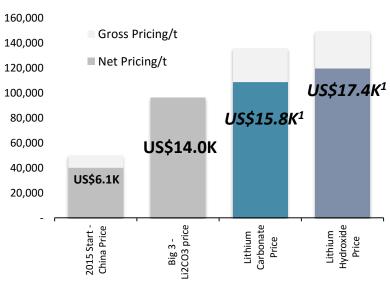
- 24% growth in demand for lithium chemicals throughout 2016, underpinned by significant expansion in NEV uptake in China
- Continued strength in lithium prices is a clear indication that demand growth is likely to be outpacing supply side growth
- After becoming the dominant single market consumer of lithium compounds, as well as the leading producer of the same, China
  has transitioned from previously being a price follower into being the price setter

### **Growth in demand for lithium chemicals in China (kt LCE)**



Source: CLA, Company Estimates, CJ Securities

### Lithium Carbonate Price Comparison (RMB/t)



Notes:

1. BG Li<sub>2</sub>CO<sub>3</sub> and LiOH prices are current as at May 2017

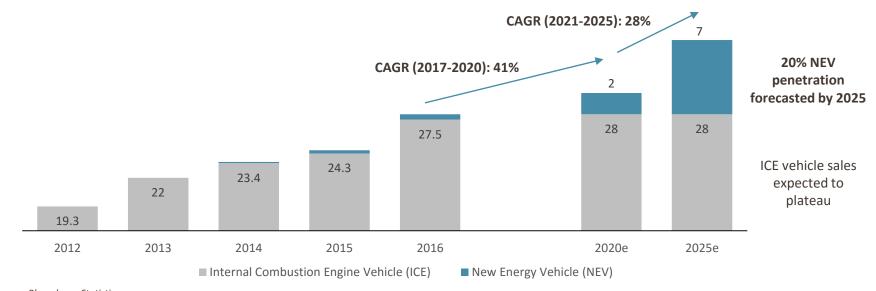
## China NEV Growth Projections



# NEV growth is a substantial component in China's evolving transportation market, as well as a major part of its international industrial policy

- "Medium to long term plan for the auto industry" (2025 plan) issued in April, detailing how China plans to strengthen its
  domestic auto industry and expand global exports of new energy vehicles
- Projected that sales of conventional ICE vehicles in China will stabilise, with all vehicle sales to come from NEVs
- Forecast sales of 2 million NEV in 2020 and total stock of 5 million NEVs on the road
- NEV sales of 7 million vehicles in a total of 35 million vehicles sold represents c. 20% penetration rate of NEVs in 2025

### **Projected China Vehicle Sales According to 2025 Plan (millions of vehicles)**



Source: Bloomberg, Statistica



# **Company Overview**

# **Company Highlights**



- One of the premier global lithium opportunities with existing production and a world class asset development pipeline
- Operations restarted at Mt Cattlin with expanded capacity to generate substantial, 100%-owned cash flows in 2017, positioning Galaxy as a major global supplier of high quality lithium
- Diversified project portfolio with hard rock and brine based lithium assets across Australia, Argentina and Canada
- Revised DFS at flagship Sal de Vida Project in Argentina supports low cost, long life project with robust economics; Development Team confirmed
- James Bay in Canada, is a top quality development asset, providing a valuable option for Galaxy to supply North American and European markets
- Highly credentialed Management and Board with a strong network of downstream and end-user customers in the global lithium markets
- Robust lithium macro trends with surging demand from lithium ion battery applications and a lagged supply-side response

Mt Cattlin Operations - Australia





En route to Sal de Vida lithium project - Argentina



## **Diverse Asset Portfolio**

and offtake discussions

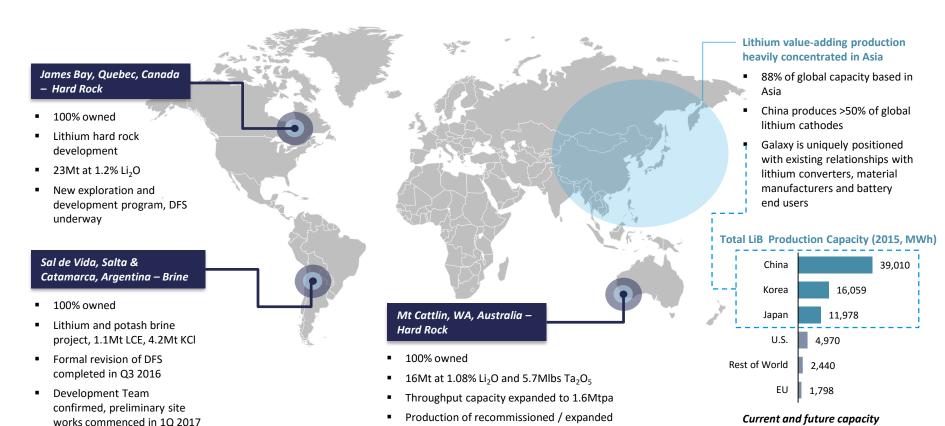
ongoing



dominated by North-East Asia

Source: CEMAC 2015

# With a portfolio of both hard rock and brine based lithium assets, Galaxy is also well networked with key customers in the Asian lithium market



spodumene

operation recommenced in 4Q CY2016

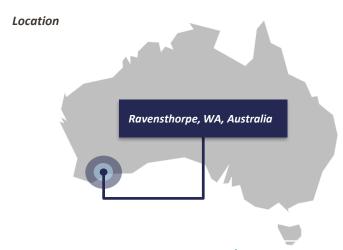
CY2017 planned production of 160kt of

## Mt Cattlin – Overview



# Mining and processing operations focused on ramp-up to nameplate capacity and plant optimisation to maximise production output

- Mt Cattlin is a spodumene (lithium concentrate) and tantalum mining operation, located in Ravensthorpe, Western Australia
  - 100% owned by Galaxy
- Only new independent producer and supplier of lithium concentrate in the market globally, since the recent large and sustained increases in lithium prices
- Improved flow sheet design and upgraded process equipment driving substantial efficiency gains and higher product quality
  - Expanded throughput capacity of 1.6Mtpa
  - Low mica content (<5% of total concentrate mass)</li>
  - Initial target of 50% production yield
- Significant expected cash flows to Galaxy from Mt Cattlin
  - Third shipment completed, and payment received from Mitsubishi
  - 2017 production guidance c. 160kt spodumene
  - **High margin operation** with current operating costs
  - Further revenue upside from tantalite production



### Resource and production capacity<sup>1</sup>

Resource category	Tonnes	Li <sub>2</sub> 0 %	Ta <sub>2</sub> O <sub>5</sub> ppm
Measured	2,540,000	1.20	152
Indicated	9,534,000	1.06	170
Inferred	4,343,000	1.07	132
Total	16,416,000	1.08	157
Production capacity	1.6Mtpa		

Source: General Mining Announcement (2015.08.04)

 Galaxy understands that all material assumptions underpinning the production target and financial information set out in the General Mining announcement released continue to apply and have not materially changed

## Mt Cattlin – Offtake & Production



# Three shipments of lithium concentrate completed since restart of production, throughput nameplate capacity achieved in early April

### Mt Cattlin Production Update

- Commissioning and ramp-up of processing plant continuing, throughput nameplate capacity achieved in early April
- Following recommissioning of processing plant, production YTD has totaled 42,000 tonnes of lithium concentrate
  - Production of 23,467dmt of lithium concentrate in 1Q CY2017, which was in line with ramp up forecasts
  - Sale of 23,455dmt at an average realised price of A\$719/dmt<sup>1</sup>
- Current production cash costs of A\$514¹/dmt of concentrate
  - Production unit costs expected to reduce in coming quarters, as operations continue to increase production rates

### **Production Statistics**

	March 2017	1Q CY2017
Ore mined (wmt)	138,346	233,193
Grade (%)	0.93	0.96
Input Grade (%)	1.03	1.02
Spodumene produced (dmt)	9,695	23,467
Spodumene sold (dmt)	13,700	23,455

#### Note:

### **Existing Offtake Agreements**

- Major Chinese customers established for spodumene offtake which is the preferred feedstock for lithium converters
  - Signed binding agreements for the sale of 120,000 tonnes of lithium concentrate in 2017 at U\$\$830/t (FOB, minimum 5.5% Li<sub>2</sub>O)
  - Customers will pay an additional US\$15/t for every 0.1% improvement in grade of Li<sub>2</sub>O delivered, resulting in an agreed price of up to US\$905/t for 6% lithium concentrate
- 2016 offtake supply obligations (45,000dmt at US\$600/dmt) wholly fulfilled as part of the 3rd concentrate shipment in April

### Mt Cattlin Operations



<sup>1.</sup> Excluding royalties and marketing fees

# Mt Cattlin – Operations Ramping Up



# With recommissioning complete the operational focus has shifted to plant optimisation, as well as an extensive exploration drilling program

Restart production and plant expansion

Upgrade and expansion of processing facility

Commissioning of expanded Mt Cattlin facility

Recommencement of spodumene production in 4Q 2016

First delivery and 2017 contracting

**Operational** 

ramp-up,

optimisation studies and

exploration

120kt of lithium concentrate sold at US\$830/t (FOB, 5.5%  $\text{Li}_2\text{O}$ , pricing of US\$905/t at 6.0%  $\text{Li}_2\text{O}$ ) for delivery in 2017

First shipment in January 2017 from Esperance Port

V

Second shipment completed on 1 March 2017

Plant throughput nameplate of 210tph achieved

Third shipment complete – fulfilling 2016 offtake obligations

Production ramp-up to meet targeted run-rate of 160kt

Optimisation studies to improve recoveries above the initial 50% targets

Extensive brownfield and greenfield exploration drilling campaign

Refurbishment of the mine's fixed crushing circuit to re-start in 3Q 2017

Mt Cattlin mining operational ramp-up



Fig. 1: Recommencement of mining operations following engagement of Piacentini & Sons as mining contractor

**Fig. 2**: Lithium Concentrate loading at Mt Cattlin for transport to the Esperance Port

Fig. 3: Mt Cattlin operations





## Sal de Vida – Overview



# One of the world's largest and highest quality undeveloped brine deposits with significant expansion potential

- A premier lithium and potash brine development project
  - 100% owned by Galaxy and fully permitted
  - Located between Salta and Catamarca Province in Argentina, in an area that is known as the 'Lithium Triangle'
- Lithium triangle home to >60% of global annual lithium production
  - Sal de Vida located on the same salar as FMC's Fenix operations
- Revised DFS reaffirms the technical superiority of Sal de Vida and potential for a highly profitable operation
  - Estimated post-tax NPV<sub>8% real</sub> of US\$1.4bn
  - Potential to generate average annual revenues of US\$354m
  - Potential to generate average operating cash flow of US\$273m pre-tax (US\$182m post-tax)
- Large mineral reserves to support annual production of 25ktpa of battery grade lithium carbonate and 95ktpa of potash
- Brine projects have the advantages of lower operational costs and greater ability to expand production facilities
- Discussions underway with offtakers and potential strategic partners



### Sal de Vida Reserve Estimates

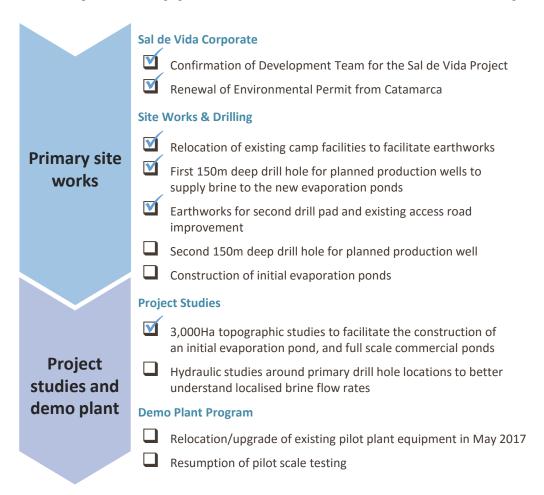
Reserve category	Time period	Tonnes Li total mass	Tonnes equivalent Li <sub>2</sub> CO <sub>3</sub>	Tonnes K total mass	Tonnes equivalent KCl
Proven	1-6	34,000	181,000	332,000	633,000
Probable	7-40	180,000	958,000	1,869,000	3,564,000
Total	40 years	214,000	1,139,000	2,201,000	4,197,000

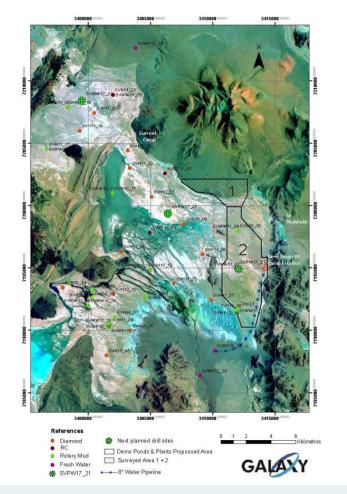
Source: Revised Sal de Vida DFS – August 2016. Assumes 500mg/L Li cut off

# Sal de Vida – Development Update



# Completing drilling for first two production wells, extensive topographic surveys to support construction of initial evaporation ponds





Galaxy Resources Limited (ASX:GXY)

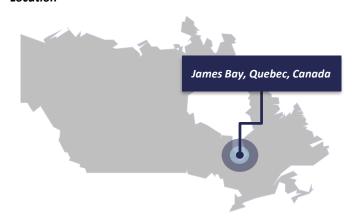
## James Bay – Overview



# The project provides a valuable option for capitalising on long term lithium demand growth, and the potential to supply the North American market

- Lithium pegmatite project located in James Bay, Québec, Canada and 100% owned by Galaxy
  - Strategically located in a mining friendly jurisdiction with a low cost of energy and good infrastructure
- Total indicated and inferred resources are 22.2Mt at 1.28% Li<sub>2</sub>O
- Extensive A\$3.5m exploration and development program commenced in 1Q CY2017
  - New diamond drill program will almost triple the aggregate 14,000m drilled so far on the project
  - Drilling expected to upgrade existing ore resources to reserves, explore identified pegmatites not previously drilled and to further understand resource geology
- Revised DFS, building on suspended 2012 study, to commence shortly
  - DFS work will take advantage of Mt Cattlin experience to draw synergies for engineering and process flow sheet design
  - Upon commencement, ongoing study work expected to be completed in 6 to 9 months
- DFS work will include pilot-plant scale metallurgical testing
  - Metallurgical test work conducted in 2012 produced spodumene grades of 6.53% Li<sub>2</sub>O at a 75% lithium recovery rate
  - Site evaluation study for potential downstream conversion facility in Québec





### **James Bay resource estimate**

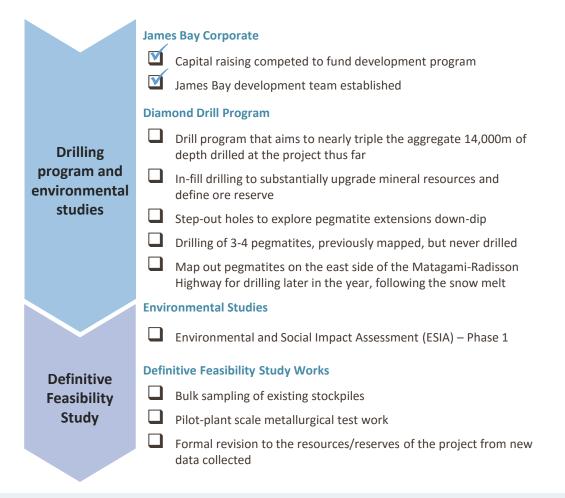
Resource category	Tonnes	Li <sub>2</sub> O %
Indicated	11,750,000	1.30
Inferred	10,470,000	1.20
Total	22,220,000	1.28

Refer Galaxy Resources Announcement (2012.07.05)

# James Bay – Development Program



# Drilling program, relevant environmental studies and DFS process underway, borrowing experience and learnings from Mt Cattlin



### Site works underway



Spodumene bearing outcrop



## Outlook



## Multiple catalysts should support a sustained market re-rating

### **MT CATTLIN Production &** ramp up

- Focus on production ramp up and processing optimisation to meet 2017 production guidance of 160kt of lithium concentrate
- Commencing extensive brownfield and greenfield exploration to targeting mine life extension

## Field work, offtake & project financing

### **SAL DE VIDA**

- Development Team confirmed, discussions ongoing with offtake and strategic partners
- Site works commencing, including commencement of demo plant program
- Commencing project financing evaluation and discussions

### **JAMES BAY Project** development

- Exploration and development program, including comprehensive diamond drill program to upgrade existing resource to reserves
- Revised DFS expected to commence shortly, drawing on Mt Cattlin experience for study acceleration

### **MACRO** Robust lithium demand

- Continued strong growth in demand for lithium, led by increase in NEV sales and adoption rates in China, as well as robust growth other markets
- Lagged response from supply side of both lithium compounds and concentrate feedstock, increased pricing levels being sustained



### **APPENDIX**

Board, Senior Management Team, Revised Sal de Vida DFS, Cost Curve, and Lithium Market

# Galaxy's Board



# Galaxy's Board provide high quality strategic, governance and financial oversight

- Martin Rowley and Anthony Tse have overseen over A\$500m of debt restructuring, M&A and financing for Galaxy within the last
   4 years, without the need for external advisors
- Recent additions to the Board have increased the depth and breadth of the Galaxy Board's skills and experience

### Martin Rowley – Independent Non-Executive Chairman

- Co-founder and Executive Director of First Quantum (TSX:FM)
- First Quantum is among the largest copper production companies in the world with a market cap of C\$8.2bn
- Non-Executive Chairman of Forsys Metal Corp (TSX: FSY)
- Previously Non-Executive Chairman of Lithium One Inc. (acquired by Galaxy in July 2012)

### **John Turner** – *Independent Non-Executive Director*

 Leader of Fasken Martineau's Global Mining Group, a leading international law and litigation firm that has been ranked #1 globally 8 times since 2005 (including 2016)

### Xi Xi – Independent Non-Executive Director

- Served the last 4 years as a Director of Sailing Capital, a private equity group with US\$2bn of assets under management
- Former portfolio manager at New York based Tigris Financial Group, focused on corporate opportunities in the natural resources sectors
- Former Non-Executive Director of Zeta Resources (ASX:ZER)

### **Anthony Tse** – Managing Director

- 20+ years corporate experience in high growth industries, including technology, media and resources
- Extensive senior management experience in corporate strategy and development, M&A, capital markets
- Former Director Corporate Development at Hutchison Whampoa's TOM Group (HKSE:2383), Deputy General Manager of TOM Online (NASDAQ:TOMO), President of CETV and CEO of CSN Corp.

### Jian-Nan Zhang – Independent Non-Executive Director

 Deputy General Manager of Fengli Group, a subsidiary of a leading private Chinese industrial group

### **Peter Bacchus** – *Independent Non-Executive Director*

- Chairman and CEO of Bacchus Capital Advisors, a M&A and merchant banking boutique based in London
- 20+ years' investment banking experience, as former Head of Investment Banking at Jefferies, Global Head of Metals & Mining at Morgan Stanley and Head of Investment Banking, Industrials and Natural Resources at Citigroup
- Non-Executive Director of NordGold (LSE: NORD), and Gold Fields (JSE: GFI)

# Galaxy's Senior Management



# Galaxy's senior management provides the skills, experience and passion required to develop lithium projects

 Senior management and key employees have successfully developed lithium projects into production and have established customer relationships in key Asian markets

Managing Director, Anthony Tse, is ably supported by the following senior corporate and in-country personnel:

Alan Rule Chief Financial Officer	<ul> <li>+20 years experience as a CFO in the mining industry, with considerable experience in international debt and equity financing</li> <li>Former CFO of Sundance Resources (ASX:SDL), Paladin Energy (ASX:PDN), Mount Gibson (ASX:MGX), and St Barbara (ASX:SBM)</li> </ul>
Mark Pensabene Chief Operating Officer	<ul> <li>+20 years experience in the mining operations and project management</li> <li>Former General Manager of Monadelphous Group, with key involvement in project operations and infrastructure construction</li> </ul>
Nick Rowley Director – Corporate Development	<ul> <li>Substantial experience in corporate advisory, M&amp;A and equity markets as a former Investment Advisor at Bell Potter</li> <li>Current Non-Executive Director of Cobalt One (ASX:CO1) and Titan Minerals (listing shortly)</li> </ul>

Sal de Vida Development Team Leaders – 200 years of combined industry experience, including with the leading global lithium producers, Galaxy hopes to build a team of similar quality and experience in Canada for the development of James Bay

Mr Vijay Mehta	Former head of Product and Process Development at FMC, producing a number of lithium products (e.g. Li <sub>2</sub> CO <sub>3</sub> , LiOH)
Mr Marcelo Bravo Veas	Extensive experience in plant construction and operation, including as Chief of Process Engineering at SQM's Salar de Atacama
Mr Daniel Chavez Diaz	Former Managing Director at FMC's operations in the Salar del Hombre Muerto
Mr Pedro Pavlovic Zuvic	Over 40 years of experience as a process expert in lithium and potassium extraction, including at Rockwood, SQM and FMC
Mr Mario Portillo	Extensive experience engineering large scale industrial projects, including FMC's Li <sub>2</sub> CO <sub>3</sub> plant at Salar del Hombre Muerto
Mr Rodolfo Garcia	28 years of experience modelling geology and hydrogeology of numerous lithium brine projects in Argentina

# Sal de Vida – World Class Development



# Revised DFS confirms low cost, long life and economically robust operation, with substantially improved economics compared to original study

- There were a number of catalysts for the revised DFS that have culminated in substantially improved project economics
- Improved lithium carbonate pricing environment
  - Base case price range of US\$11,000/t to US\$13,911/t,
     compared, to US\$5,895/t to US\$6,895/t in 2013 DFS
- Recent macro-economic/policy changes in Argentina
  - Elimination of export duties
  - Annual incentive rebate equivalent to 5% of Li<sub>2</sub>CO<sub>3</sub>
     export revenues due to operating in the Puna region
- Revised operating costs include updated prices and transportation costs for reagents, reduction of manpower and revision of transportation strategies for personnel and product/material onsite and out of the plant
  - Revised operating costs estimated to be US\$3,369/t before potash credits and US\$2,959/t after credits
- Option to defer capital investment on potash plant and related infrastructure, potential saving of US\$34m

### **Definitive Feasibility Study Financials Comparison**

Item	August 2016 <sup>1</sup>	April 2013 <sup>2</sup>	Change (%)
Lithium Carbonate Production	25,000tpa	25,000tpa	-
Potash Production	95,000tpa	95,000tpa	-
Project Life	> 40 years	> 40 years	-
Capital Costs <sup>3</sup>	US\$376m	US\$369m	+2%
Operating Costs	US\$3,369/t LC	US\$2,889/t LC	+17%
Internal Rate Of Return (post-tax)	34.6%	19%	+16% (absolute) +82% (relative)
Payback Period (post-tax)	2 years 10 months	4 years 7 months	Less 1 year 9 months
Average Annual Revenues <sup>4</sup>	US\$354m	US\$160m	+121%
NPV <sub>8% real</sub> (post-tax)	US\$1,416m	US\$565m	+151%
NPV <sub>10% real</sub> (post-tax)	US\$1,043m	US\$380m	+174%
NPV <sub>8% real</sub> (post tax) @ AUD/USD 0.75	A\$1,888m	A\$753m	+151%
NPV <sub>10% real</sub> (post-tax) @ AUD/USD 0.75	A\$1,391m	A\$506m	+174%

#### Notes:

- Original DFS released 12 April 2013
- 2. Revised DFS released 22 August 2016
- 3. Inclusive of capital costs associated with the potash production facility
- 4. Pricing scenarios assume the following ranges throughput the life of the project for battery grade lithium carbonate and potash: Li2CO3 US\$11,000 to US\$13,911 and KCI US\$220 flat

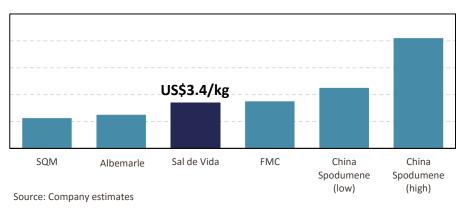
# Sal de Vida – Competitive Cost Position



# The premier lithium development globally, with a competitive cost position and one of the world's best brine chemistry and impurity profiles

- Leading brine chemistry that will produce 100% battery quality lithium carbonate
  - Low magnesium (Mg); a low Mg/Li ratio reduces costs and yields higher quality end product
- Very competitive positioning on the lithium producer cost curve, even with no potash credits assumed
  - High potassium yields significant potash credits, reducing operating costs
- Sal de Vida will adopt a conventional approach with evaporation ponds and processing
- SQM produces lithium as a by-product and thus some brine costs are charged to potash
- The processing of brine at Sal de Vida, SQM and ALB is similar with some adjustments in processing steps due to different brine composition
  - FMC has a different brine processing technology

Estimate of Sal de Vida operating costs vs. currently producing brine and hard rock projects (US\$/kg)<sup>1</sup>



### Sal de Vida resource and brine chemistry

Resource	7.2Mt LCE (lithium carbonate) 28.8Mt KCl (potassium chloria	(e) Potassium/lithium ratio
Reserve	1.1Mt LCE 4.2Mt KCI	provides for potash credits
Grade/Chemistry	810mg/l Li 9,100mg/l K 11.2 K/Li ratio 12.1 SO <sub>4</sub> /Li ratio 2.4 Mg/Li ratio	Low magnesium/lithium ratio yields higher quality end product

#### Notes:

1. China Spodumene (low) assumes cash cost of Talison, plus transportation and best China conversion costs

## Disclaimer



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# Competent & Qualified Persons' Statement



#### Sal de Vida

The information in this report that relates to relates to the estimation and reporting of the Sal de Vida Project Mineral Resources and Mineral Reserves is extracted from the report entitled "Sal de Vida: Revised Definitive Feasibility Study Confirms Low Cost, Long Life and Economically Robust Operation" created on 22 August 2016 which is available to view on <a href="www.galaxylithium.com">www.galaxylithium.com</a> and <a href="www.asx.com.au">www.asx.com.au</a>. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the Mineral Resources and Mineral Reserves estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

#### James Bay

The information in this report that relates to Mineral Resources at the James Bay Project is based on work completed by Mr James McCann, who is a Member of a Recognised Overseas Professional Organisation. Mr McCann is a full time employee of McCann Geosciences, and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr McCann consents to the inclusion in the report of the matters based on his information in the form and context it appears. This information was prepared and first disclosed under the JORC Code 2004 it has not been updated since to comply with JORC code 2012 on the basis that the information has not materially changed since it was last reported.

#### Mt Cattlin

The information in this report that relates to relates to the estimation and reporting of the Mt Cattlin Project Mineral Resources and Mineral Reserves is extracted from the report entitled "Mt Cattlin Update: Revised Resource & Reserve Statement" created on 4 August 2015 published by General Mining Limited (ASX: GMM) which is available to view on <a href="https://www.asx.com.au">www.asx.com.au</a>. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement made by GMM. The Company understands that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

#### **Production Targets and Financial Information**

Information in relation to the Sal de Vida Revised Definitive Feasibility Study, including production targets and financial information, included in this report is extracted from the report entitled "Sal de Vida: Revised Definitive Feasibility Study Confirms Low Cost, Long Life and Economically Robust Operation" created on 22 August 2016 which is available to view on <a href="https://www.galaxylithium.com">www.galaxylithium.com</a> and <a href="https://www.asx.com.au">www.asx.com.au</a>. The Company confirms that all material assumptions underpinning the production target and financial information set out in the announcement dated 22 August 2016 continue to apply and have not materially changed.