

20<sup>th</sup> July 2017

ASX via Electronic Lodgement

## Company Presentation

Plymouth Minerals Limited (ASX: PLH) (Plymouth or the Company) releases to the ASX a Company Presentation that provides combined information on both of the Companies projects. For further information and to read full presentations for the specific projects both Lithium and Potash please review on the Company web site.

For more information, visit [www.plymouthminerals.com](http://www.plymouthminerals.com)

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***The Next Player in European Lithium Production  
+ a Globally Significant Potash Project***

**Investor Presentation July 2017**

# Disclaimer

## For Consideration

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## Competent Persons Statement

Competent Person Statement: The information in this report related to Exploration Results, Exploration Targets, Mineral Resources or Ore Reserves is based on information compiled by Mr A Byass, B.Sc Hons (Geol), B.Econ, FSEG, MAIG an employee of Plymouth Minerals Limited. Mr Byass has sufficient experience 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 2012 Edition of the Australasian Code for Reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves. Mr Byass consents to the inclusion in the report of the matters based on this information in the form and context in which it appear.

# Corporate Overview

**Kevin Tomlinson**  
(Chairman)

+30 years experience in mining and finance within the Toronto, Australian and London stock markets. Chairman of Medusa Mining and NED with Centamin Plc and Orbis Gold . Currently on Boards of Cardinal Resources (ASX.CDV, TSX.CDV) and Xanadu Mines (ASX.XAM)

**Adrian Byass**  
(Managing Director)

Wide industry-experience, debt & equity raising success, mine development specialist

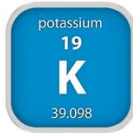
**Humphrey Hale**  
(Director, Country Manager)



### Manager Spain - Lithium

Extensive European permitting, funding and mine experience, MD (Wolf Minerals)

**John Sanders**  
(Country Manager)



### Manager Gabon - Potash

Resources expert, extensive African Potash experience, ex MD of Elemental (Now Kore Potash)

**Eric Lilford**  
Non Executive Director

Mining Engineer, African operational experience, Banking and mining professional +20 years

**Christian Cordier**  
Non Executive Director

Accountant with extensive private and public company experience in Africa

**Rob Orr**  
Company Secretary

Company Secretary and Chief Financial Officer

## Shareholders

<b>Board &amp; Management</b>	<b>12.6%</b>
<b>Institutions</b>	<b>5.6%</b>
<b>Top 50 Holders</b>	<b>59.1%</b>

## Capital Structure

<b>ASX code</b>	<b>PLH</b>
<b>Share price</b>	<b>22c</b>
<b>Shares on issue*</b>	<b>138m</b>
<b>Options on issue**</b>	<b>22.5m</b>
<b>Market Capitalisation</b>	<b>\$30m</b>
<b>Cash balance (31 March 2017)</b>	<b>\$5.3m</b>
<b>Debt</b>	<b>Nil</b>
<b>Enterprise Value</b>	<b>~\$25 million</b>

### Notes

(\*) A further 25 million Performance Shares related to Potash asset milestones. See ASX release October 2015

(\*\*) Options exercise range from \$0.14 to \$0.35 per share

(\*\*) includes 2 million options awaiting shareholder approval for Chairman Mr K Tomlinson strike price \$0.32

# Plymouth – Maximising Value – Splitting Assets

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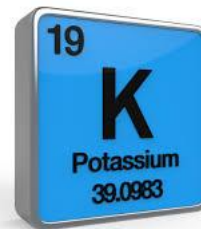
High quality lithium and potash assets

- Earning 75% of San Jose lithium deposit
- 100% of Gabonese potash Projects

Plymouth has successfully de-risked both through drilling and technical studies.

Plymouth believes that the opportunities to deliver greater value to shareholders could be delivered through demerger.

Plymouth is investigating this opportunity.



# Experience in Financing & Developing in Europe and Globally

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Hemerdon Tungsten-Tin mine England  
(Founding Directors)



Extensive capital markets experience  
(Currently on ASX, AIM, TSX Boards)



Operational and mining management  
experience  
(Board of operating mining companies)



Extensive experience in;

- Capital raising
  - Debt finance
- Combined +\$1,000 million

Specialist skills in;

- Permitting
- Metal off-take
- Mine development
- Mining Operations
- Markets AIM, ASX, TSX
- In Spain since 2013

**mines and money**  
LONDON

Deal of the year



# Lithium/Tin in Spain

## Earning 75% of San Jose (Sacyr 25%)



@SpainLithium

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# San Jose Lithium and Tin project – the opportunity

- Major lithium deposit (1.3 Mt LCE) open-ended and expanding
- Highly advanced project, positive historic feasibility study completed
- Joint venture with Plymouth earring 75% with top tier partners
- Regional and Federal government support
- Mining Licence Application to be submitted in October – short lead time

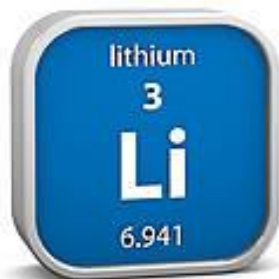


# Sacyr - Top Tier Partner – Local Advantage

**Plymouth**  
minerals limited

- **2 stages earning up to 75%**
- Submit Mining Licence Application
- Complete feasibility study
- Spend 4m Euro

## San Jose Lithium-Tin



100%



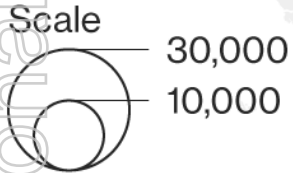
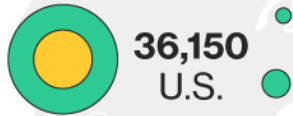
Diluting to 25%  
Will be a contributing partner

### Valoriza

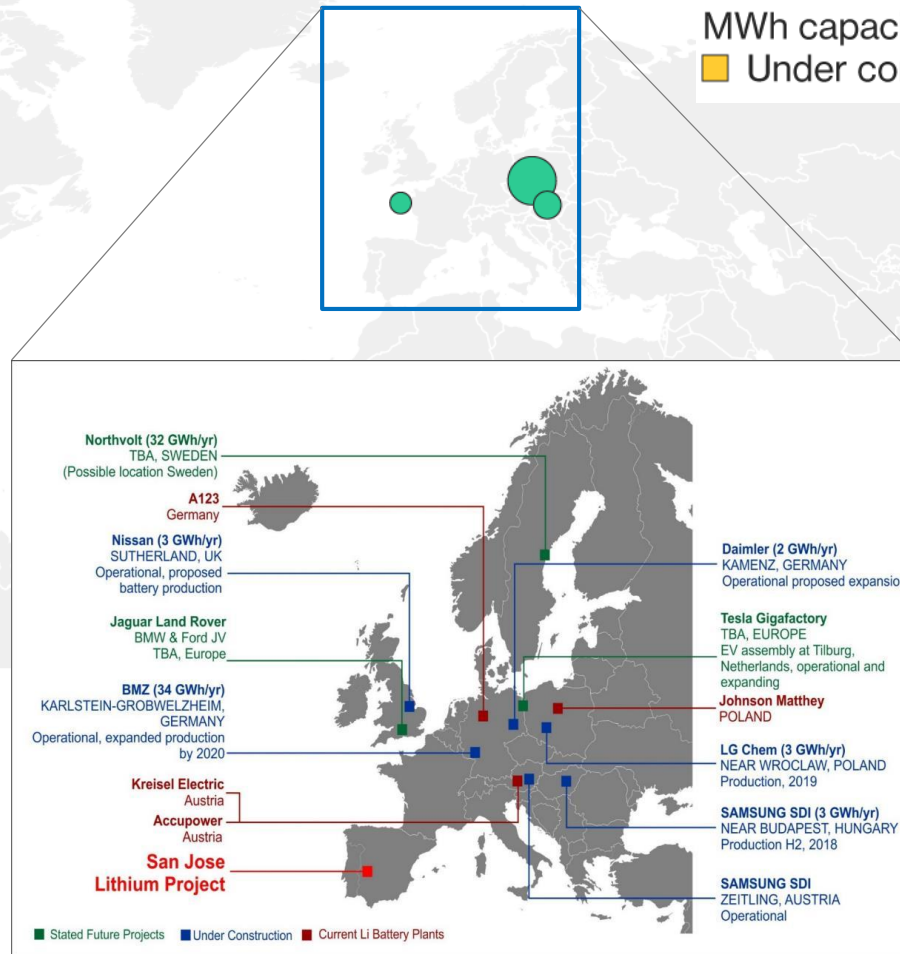
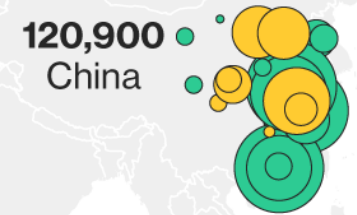
- Partnering with Plymouth
- 100% Subsidiary of Listed construction and engineering company +\$billion market capitalisation
- Winner of Public Government Tender for the development of the San Jose lithium deposit.
- **\$200 million facility** with Macquarie Bank for project development

# Lithium – How to Feed the Battery Factories

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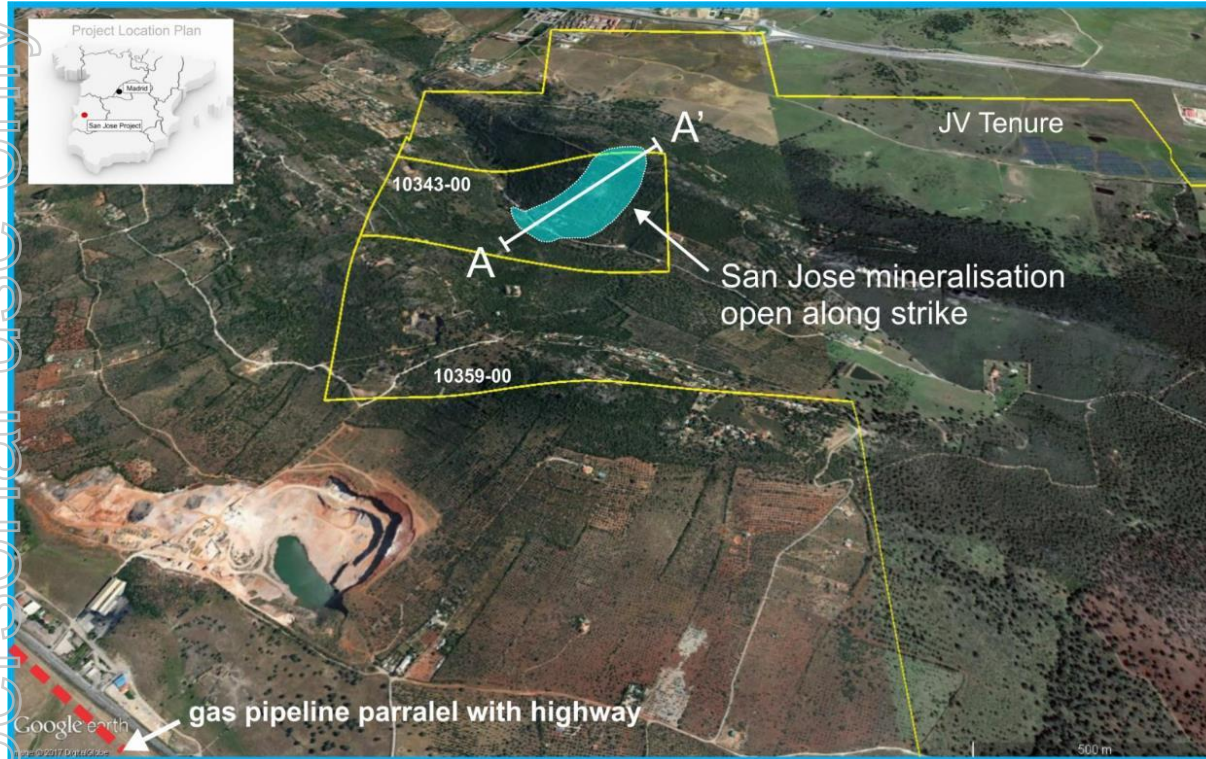


MWh capacity of manufacturing factories  
■ Under construction    ■ Announced



- Europe 30% of lithium carbonate (LCE) demand, 2% supply
- Planned battery production needs AT LEAST 4 x San Jose projects to come on stream quickly

# San Jose Lithium Deposit



San Jose deposit highlighted in blue within project tenure (yellow outline).  
Operation in the foreground is not part of San Jose JV.

Plymouth is not aware of any new information or data that materially affects the information included in this ASX release, and Plymouth confirms that, to the best of its knowledge, all material assumptions and technical parameters underpinning the Resource estimates in this release continue to apply and have not materially changed.

## San Jose

### Maiden JORC Resource

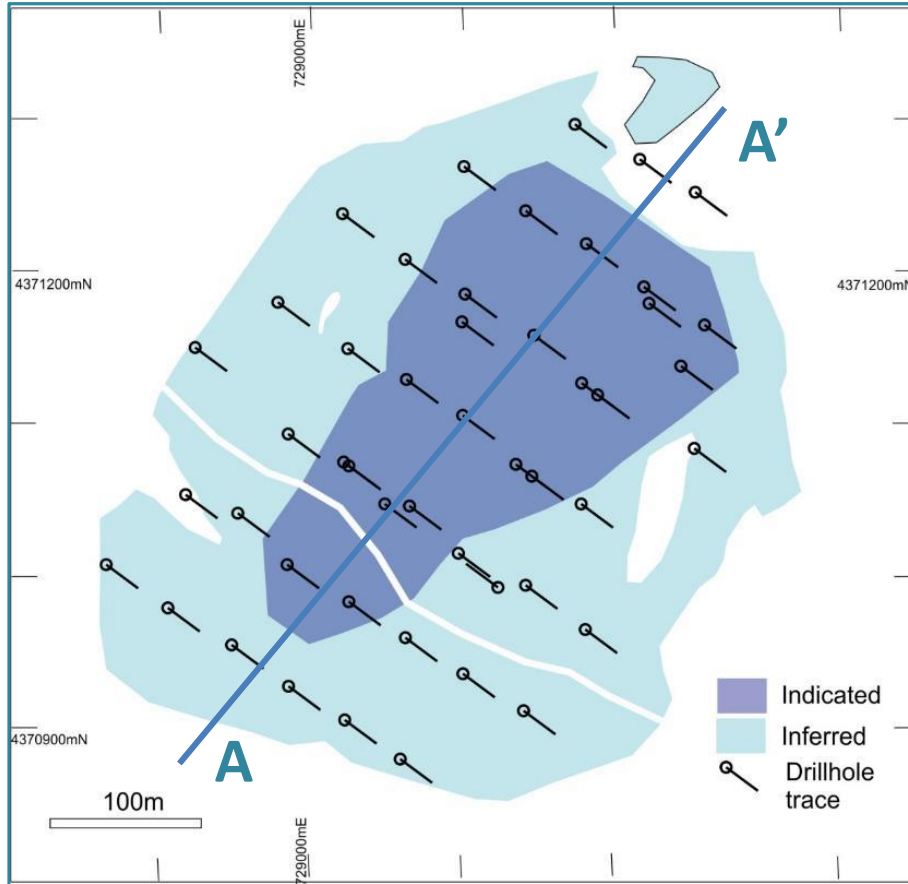
- 1.3 million tonnes of LCE
- 92.6Mt @ 0.60% Li<sub>2</sub>O and 0.03% Sn (0.10% Li cut off)

### With higher-grade core

- 16.5Mt @ 0.9% Li<sub>2</sub>O and 0.04% Sn (0.35% Li cut off)
- With additional Exploration Target
- Full details ASX release May 26th 2017
- Historic mining project in mining friendly region
- Extensive and ample tenure position
- Open-ended lithium mineralisation
- Well supported by infrastructure including adjacent reticulated gas pipeline
- Development supported by regional and federal government

# Outcropping JORC Resources

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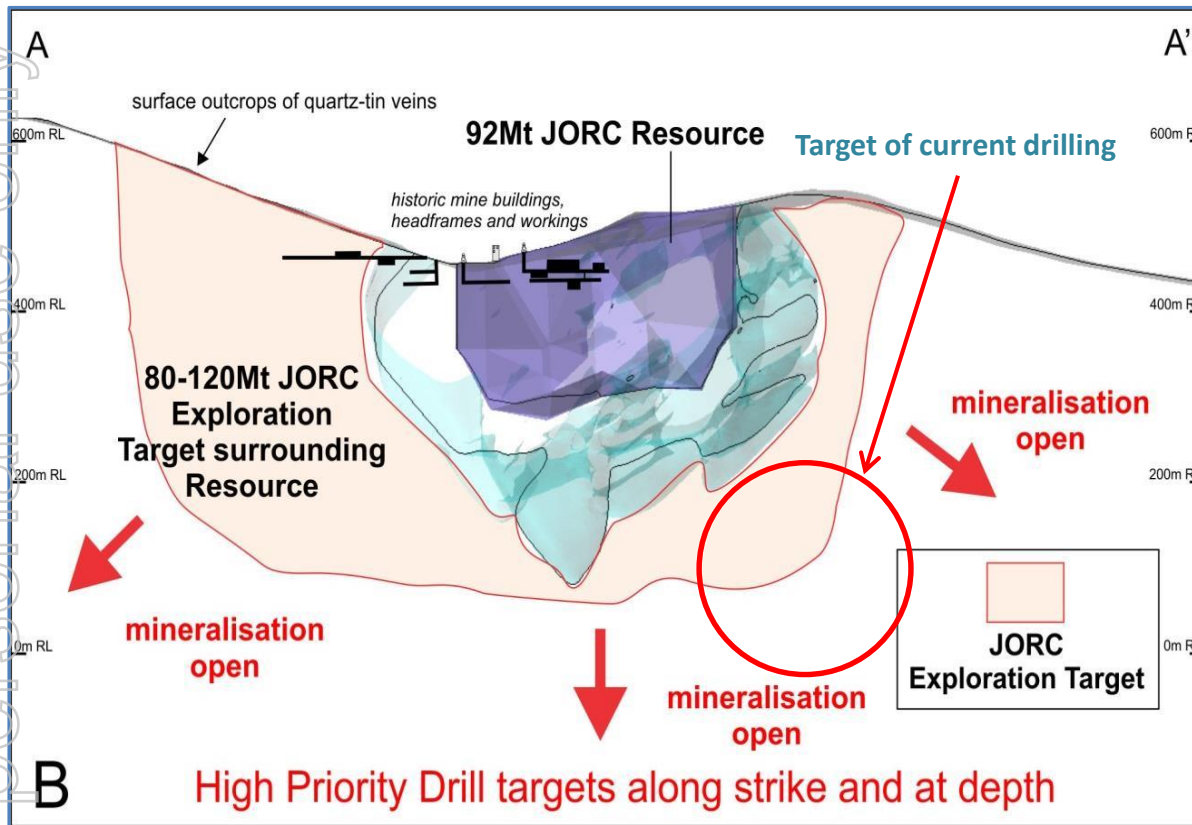
Section A-A' as shown on next slides and in the preceding aerial photograph slide

- Extensive work and highly advanced
- +10,000m of drilling
- Historic feasibility study 1991
- Outcropping mineralisation
- Increasing lithium and tin grade at depth
- Open at depth and along strike
- Drilling underway to increase resource size and confidence



# Cross Section - Wide, High Grade Lithium at San Jose

## Big and Getting Bigger - Exploration Target is in addition to JORC Resource



San Jose is high-grade relative to other mica

### Exploration Target

- Drilling underway to convert to additional resources
- 80-120 Mt Exploration Target at 0.5-0.6% Li<sub>2</sub>O in addition to 92Mt JORC resource

Cross section A-A' (see previous slide) showing Indicated, Inferred Resources and surrounding exploration Target and location of current drilling

Plymouth is not aware of any new information or data that materially affects the information included in this ASX release, and Plymouth confirms that, to the best of its knowledge, all material assumptions and technical parameters underpinning the Target estimates in this release continue to apply and have not materially changed.

Disclaimer: The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration completed to date to estimate a Mineral Resource in accordance with the JORC 2012 Edition Guidelines. It is uncertain if further exploration will result in the delineation of a Mineral Resource.

# Mica as a LCE Source

- Lithium carbonate was first produced on an industrial scale in Europe using lithium micas as the ore source
- Metallgesellschaft AG used lithium mica (zinnwaldite) to produce lithium carbonate
- San Jose's lithium mineral is zinnwaldite
- Mica has a long history of LCE production and is analogous to brine in that large reserves occur globally but the extraction and end processing of these assets can only be economically achieved in the right strategic locations that support onsite processing to an end LCE product (i.e. solar for brine evaporation, or energy and transport infrastructure for mica)
- San Jose enjoys all of the necessary advantages



San Jose is an easy to mine surface deposit in a safe European mining region with access to infrastructure, labour, affordable energy and end-product LCE customers.

# Mica as a LCE Source – San Jose is a Standout

- Production of lithium carbonate from mica sources is a proven and well understood process
- Mica as an ore source requires the deposit to enjoy advantages of infrastructure and energy supply such as seen in Europe
- The majority of Australian deposits do not enjoy good infrastructure or proximity to cheap energy and as a result, spodumene is the only effective production (export) source
- San Jose enjoys all of the advantages of low sovereign risk, mining friendly region with excellent infrastructure to support the development of an outstanding deposit
- Hard rock deposits (mica and spodumene) can be brought into production quicker than brines



San Jose enjoys excellent infrastructure access including nationwide gas network which runs within 1000m of the tenement boundary

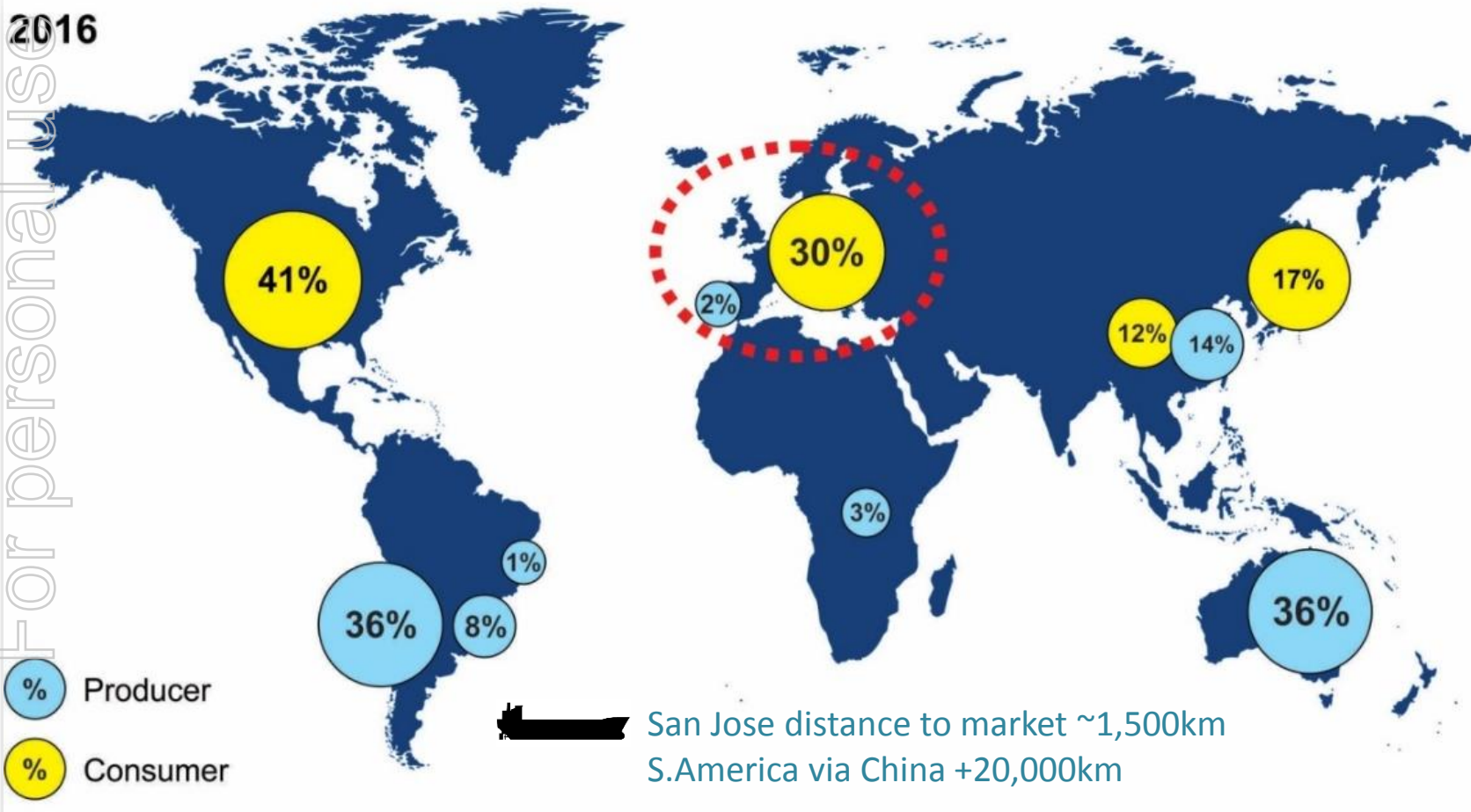


# Lithium World & Europe Overview

- Europe consumes 30% of world lithium production but only supplies 2% of world lithium
- European consumption is predicted to double by 2020 and triple by 2025
- Multiple San Jose sized projects are required every year

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2016



San Jose distance to market ~1,500km  
S.America via China +20,000km

# Mica - A Current and Valuable Source of Raw Material for LCE Production

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	 <b>Brine</b>	 <b>Mica</b> incl. Lepidolite	 <b>Pegmatite</b>
Established Grade Range Low v High	<b>0.1 - 0.2% Li<sub>2</sub>O</b>	<b>0.4 - 0.6% Li<sub>2</sub>O</b> <i>(San Jose 0.6 – 1.6%)</i>	<b>0.9 - 1.5% Li<sub>2</sub>O</b>
End Sale Product	<i>Lithium Carbonate (Li<sub>2</sub>CO<sub>3</sub>)</i>	<i>Lithium Carbonate (Li<sub>2</sub>CO<sub>3</sub>)</i>	<i>Spodumene Concentrate (5-6% Li<sub>2</sub>O)</i>
Intermediate product price (US\$/t)	<i>N/A</i>	<i>N/A</i>	<b>500-600</b> <i>(For 6% Li<sub>2</sub>O concentrate)</i>
Long Term Price (US\$/t)	<b>10,000 – 11,000</b> <i>Lithium carbonate</i>	<b>10,000 – 11,000</b> <i>Lithium carbonate</i>	<i>Market less convertor margin</i>
Est. Cash Cost Range (US\$/t Li <sub>2</sub> CO <sub>3</sub> )	<b>2,000 – 3,500</b>	<b>3,000 – 6,000</b>	<b>5,000 – 7,000+</b>
Dominant High-Grade & Scale Location	<i>South America</i>	<i>Europe, China, USA, Mexico</i>	<i>Australia / Africa</i>

Most lithium mica deposits are economical at 0.4-0.6% Li<sub>2</sub>O.  
 San Jose is a high-grade (core) 16.5Mt @ 0.9% Li<sub>2</sub>O and 0.04% Sn (0.35% Li cut off)

The three main sources of lithium each have different typical grade ranges and (C1) costs

# LCE Source Material Process Comparison

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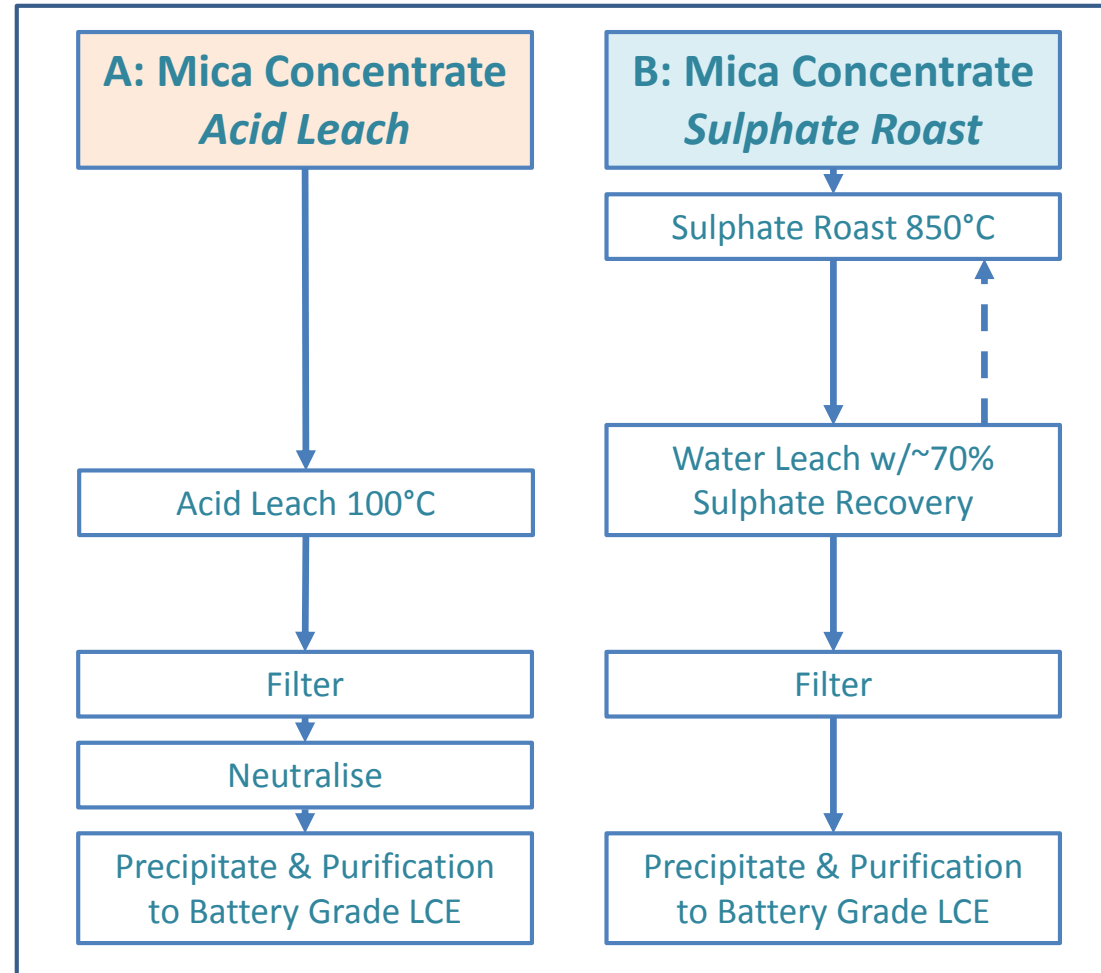
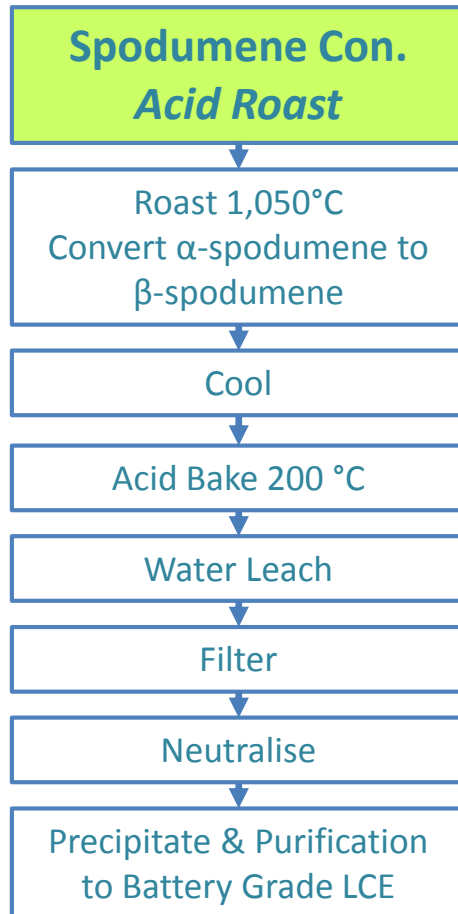
	Brine Salars	Mica Concentrate	Spodumene Concentrate
Uses a Mining Process to Create Li <sub>2</sub> O	✓	✓	✓
Can be Brought into Production Quickly	✗	✓	✓
Resource Sensitive to Minerology, Location, Strip Ratio etc.	✓	✓	✓
Usually Treated Onsite not Trucked + Shipped to Foreign Conversion Destination	✓	✓	✗
Low Energy Conversion Requirements	✓ (Solar Evap.)	✗	✗
Requires Purification Process of Li <sub>2</sub> O to LCE Chemicals for Battery Use	✓	✓	✓
Production is Not Sensitive to Weather/ Ambient Conditions	✗	✓	✓
<b>Lower C1 (based on complexity and transport)</b>	✓	✓	✗

Each source can, and does, produce battery grade LCE subject to the right mix of sovereign risk, mineralogy, transport economics and access to energy inputs. San Jose has these features.

# Hard Rock Processing Comparison

Spodumene requires high temperature roasting and treatment with acid

San Jose (lithium mica) has two proven, simpler process options



- **Mica processing is simpler with lower temperature treatment (energy saving)**
- A process known as fractional crystallisation similar to lithium recovery from brines is the preferred method for lithium recovery from mica leaches

# Mica to LCE – Acid Leach Case Study

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## Established production - acid leach

Mine & Crush  
& Beneficiation



Acid Digest  
Processing



LCE  
Precipitation



LCE Sales



Jiangxi process facility China

**A: Mica Concentrate**  
*Acid Leach*

Acid Leach 100°C

Filter

Neutralise

Precipitate & Purification  
to Battery Grade LCE



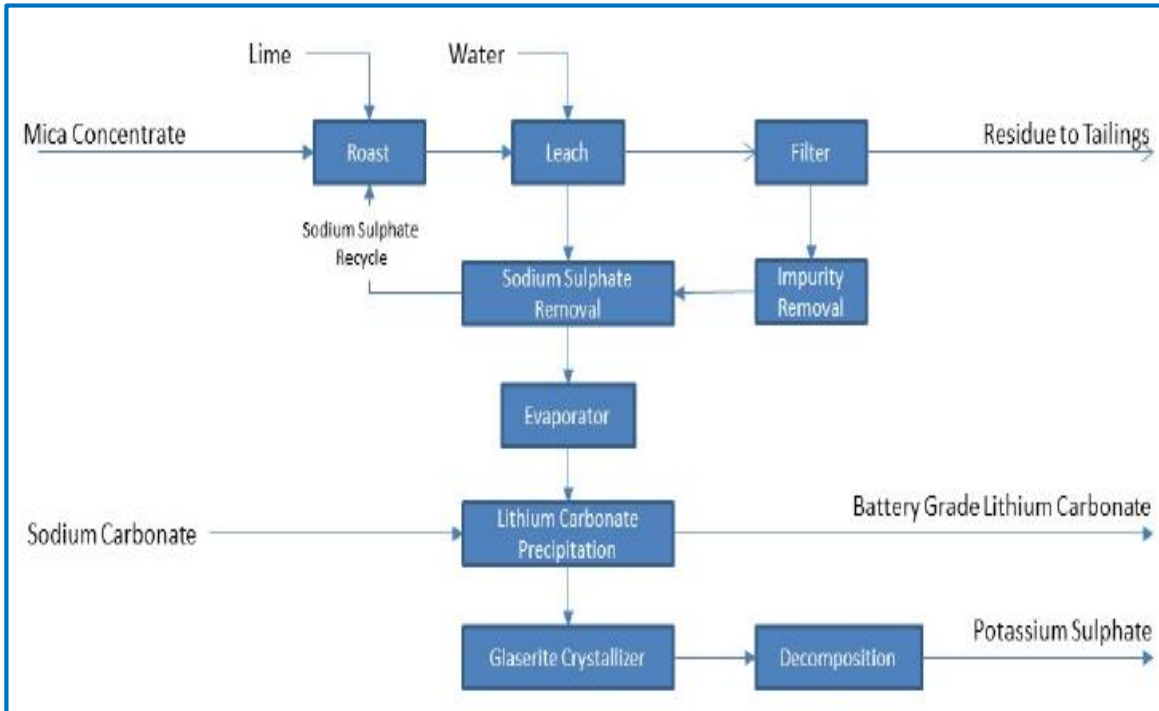
**Jiangxi Special**

**Electric Motor Co., Ltd**

Commercial production of LCE  
from acid leach of lithium mica

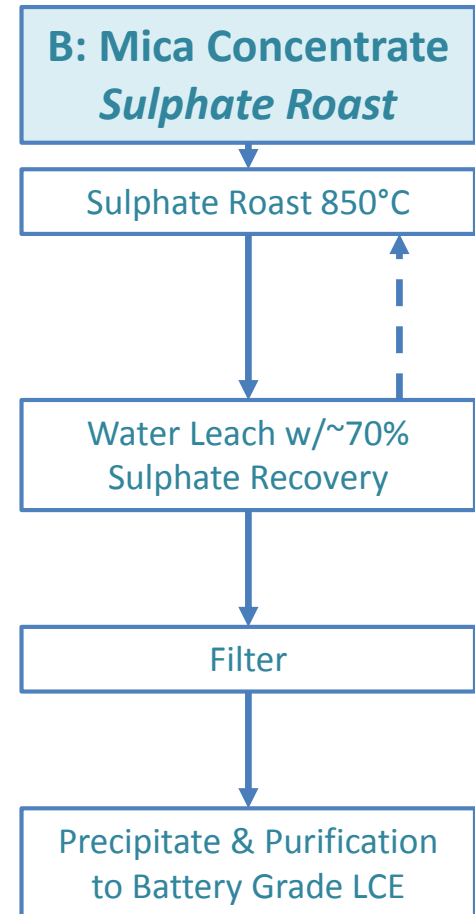
# Mica to LCE – Sulphate Roast Case Study

## Established flow-sheet - sulphate leach



European Metals ASX:EMH (ASX and AIM) market cap +\$100 million

<b>ASX:EMH Market Cap:</b>	<b>A\$115,000,000</b>
<b>PFS:</b>	<b>Complete</b>
<b>Mining:</b>	<b>Underground</b>
<b>C1 Cost (pre credits):</b>	<b>US \$5,211/t LCE</b>
<b>ROM Li<sub>2</sub>O grade:</b>	<b>0.65%</b>
<b>LCE Production:</b>	<b>20ktpa / 21yr</b>



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# Confirmation Test-Work Rapidly Progressing

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Test / Result	San Jose
Minerology	✓
JORC Resource	✓
Sulphate Roast	✓
Acid Leach	✓
Bond	✓
Beneficiation	underway
Carbonate	underway



San Jose test work underway in Spain

## Confirming and Improving known Chemical Processes

- The Historic (1987-91) Tolsa Feasibility Study conducted extensive metallurgy process test-work on the lithium mica at San Jose.
- Plymouth has refreshed these with a focus on acid or sulphate calcine process to produce Lithium Carbonate (LCE) on site.
- Historical study delivers +95% recovery of lithium into leach\* and +80% overall as a lithium carbonate  $\text{Li}_2\text{CO}_3$ \*\*

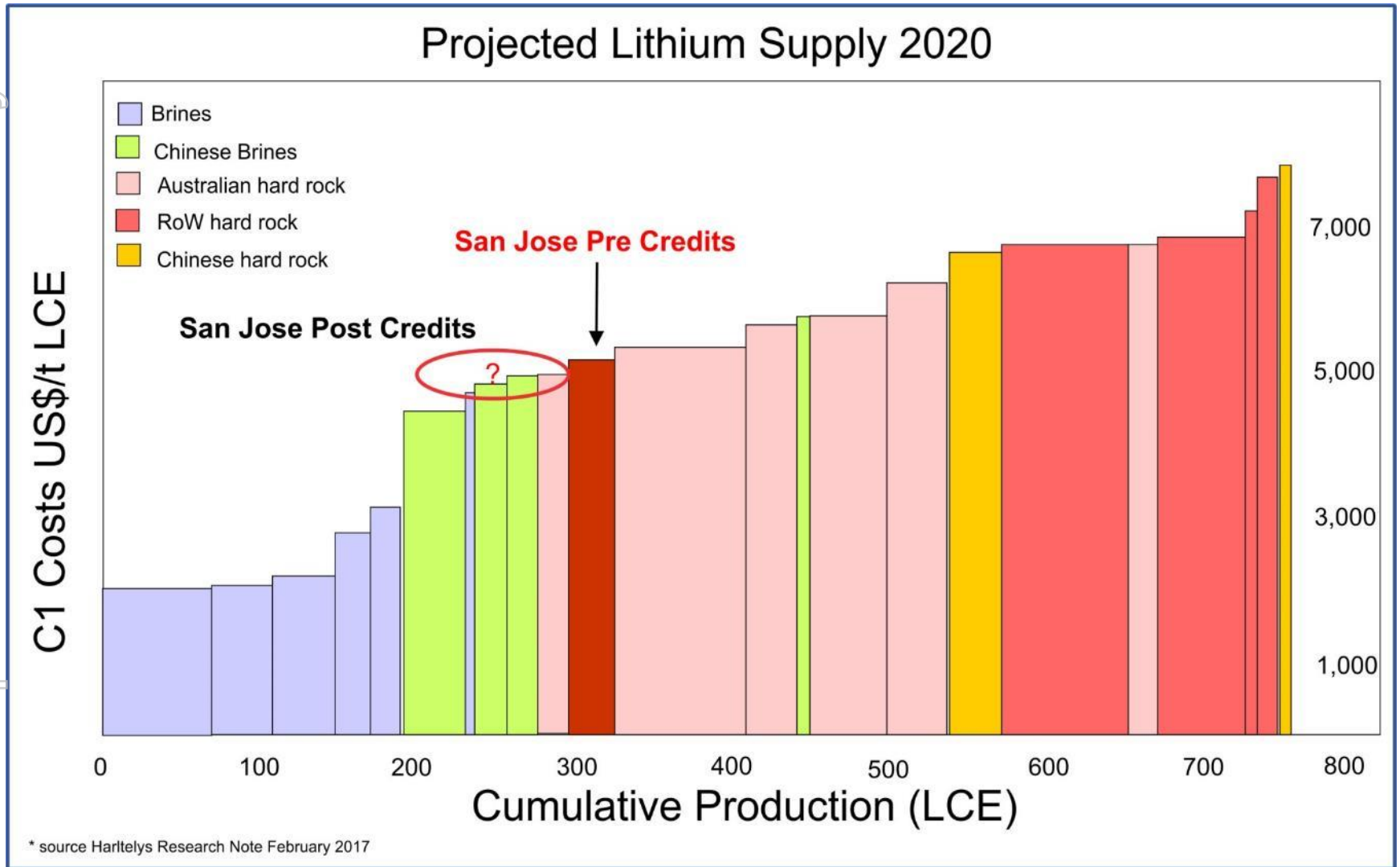
\*Plymouth confirmation and historic work (ongoing)

\*\*Historic feasibility study



# Mica – Hard Rock with Brine Advantages

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Mica can provide shorter lead time than brines and at a lower unit cost than other hard rock (i.e. spodumene) when the conditions enable processing onsite

# Peer Comparatives – Lithium

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Company	Deposit	Location	Host Mineral	Mining Style	Resource	Mkt Cap*
Plymouth Minerals (ASX: PLH)	San Jose	Spain	Mica	Open pit	92.3Mt at 0.6% Li <sub>2</sub> O	\$30m
Tawana Resources (ASX: TAW)	Bald Hill	Western Aust.	Pegmatite	Open pit	Exploration Target 30Mt-50Mt at 0.9-1.4% Li <sub>2</sub> O	\$82m
European Metals (ASX/AIM: EMH)	Cinovec	Czech Republic	Mica	Underground	~650Mt at ~0.4% Li <sub>2</sub> O	\$110m
Bacanora Minerals (AIM/TSX: BCN)	Zinnwald	Germany	Mica	Underground	39.4Mt at 0.79% Li <sub>2</sub> O	GBP 96m \$165m
Bacanora Minerals (AIM/TSX: BCN)	Sonora	Mexico	Clay	Open pit	420Mt at 0.68% Li <sub>2</sub> O	
Global Geoscience (ASX: GSC)	Rhyolite Ridge	Nevada	Clay	Open pit	393Mt at 0.34% Li <sub>2</sub> O and 0.51% boron	\$175m

\* Approximate market capitalisations in 16 July 2017 (GBPAUD 1.75)  
Source: Company announcements on ASX and AIM

# Peer Comparatives – Lithium

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Market Capitalisation A\$ millions



**Expand JORC Resource**

**Finalisation of Process Met Q3 2017**

**Mining Lease Application to be lodged Q3 2017**

**Complete Stage 1 – Earning 50%**

**Begin Stage 2 – Earning 75% by completing  
Feasibility Study**

# Potash in Gabon

## 100% of a major potash project on the coast

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# Potash – The Opportunity

- 100% ownership of **drill proven**, major potash projects in a past producing basin
- Infrastructure solution and access to market
- Drilling confirms vast historic drill and seismic data set
- Low enterprise value
- Top tier team in place
- Ready to have value unlocked – work ongoing, results pending

## Potash



Ticks the boxes

- Size
- Grade
- Depth
- Access to port
- Access to market
- **Potential to be globally significant**
- **Drilling validates model**

### Banio

- Right basin geology, see through value on nearology with ASX.K2P (formerly ELM)
- Drilled – potash bearing
- **Shallow and high grade**
- Sylvite and carnallite
- **Seismic data interpreted – multi billion tonne exploration target \***
- Excellent location, uninhabited, infrastructure solution , on coast

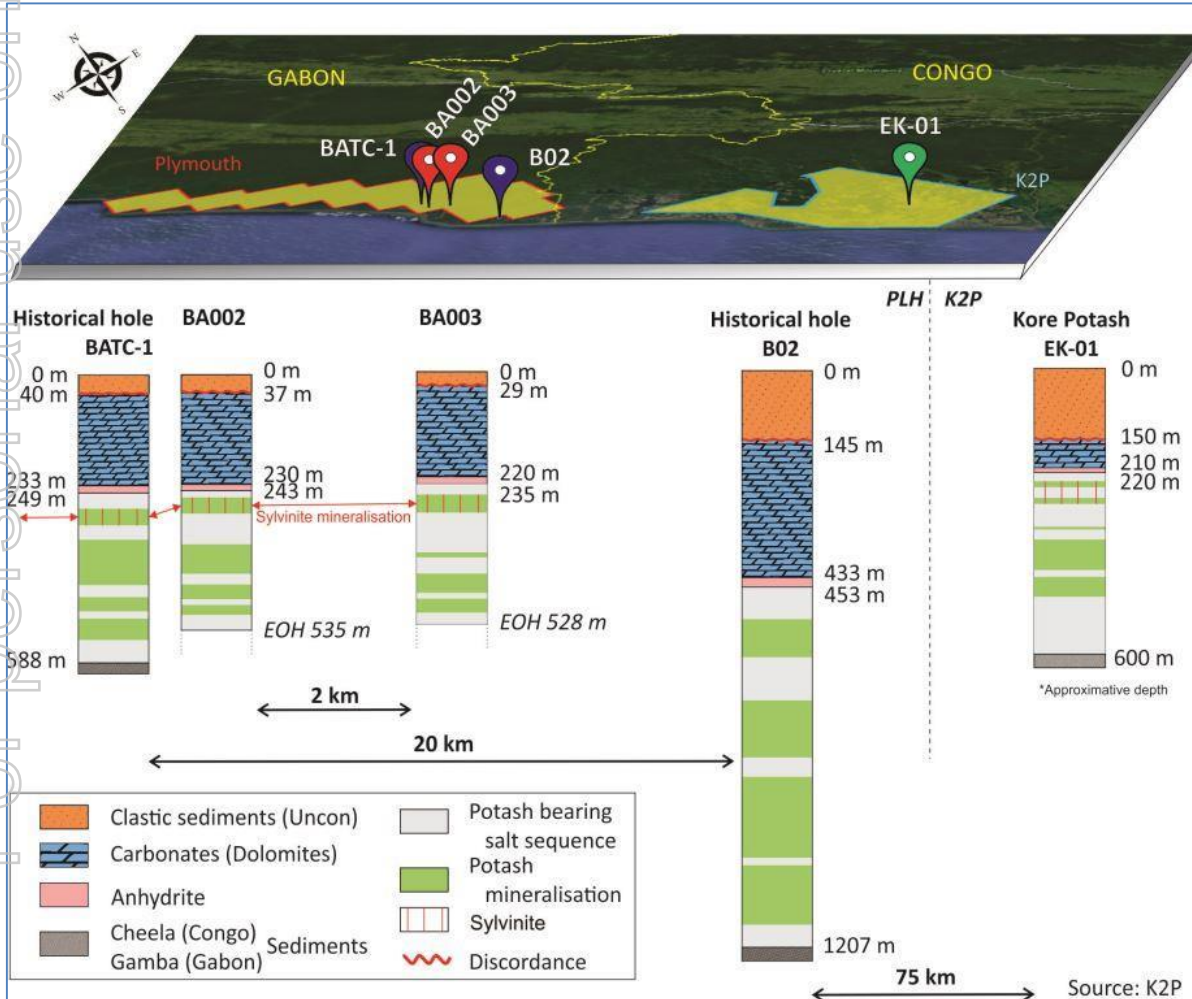
### Mamana

- +6,000m historical drilling
- Shallow and high-grade
- Intercepts such as **4.35m @ 29% K<sub>2</sub>O**
- Infrastructure pathway to deep-water port

\* Disclaimer: The potential quantity and grade of the Exploration Target is conceptual in nature. There has been insufficient exploration completed to date to estimate a Mineral Resource in accordance with the JORC 2012 Edition Guidelines. It is uncertain if further exploration will result in the delineation of a Mineral Resource.



## Drill proven - Along strike of a giant and on the coast



- Hole BA-002 (only one assayed to date) incl;
- **2.55m at 32.90% KCl** from 324.55m, including 2.15m at 35.28% KCl and
- **0.90m at 44.67% KCl** from 324.55m
- 1.85m at 29.52% KCl, including 1.45m at 32.43% KCl
- 1.35m at 34.87% KCl from 280.95m including 0.60m at 42.84% KCl
- 0.95m at 29.70% KCl from 263.90m including 0.30m at 38.73% KCl
- 7.15m at 18.78% KCl from 409.66m, including 4.35m at 21.42% KCl
- **28.81m at 16.08% KCl** from 438.71m, 19.40m at 17.03% KCl from 448.12m and 1.90m at 23.15% KCl from 457.37m

**Continue drilling Banio  
Resource as early as Q4 2017 or Q1 2018  
Proceed to Scoping Study**

**Grant of Mamana  
Drill Mamana  
As little as 1-2 holes required for resource  
on Mamana**

**Potash - Advancing a major project under the  
radar against a backdrop of strengthening prices  
and consistent demand growth**

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# Plymouth – Unlocking Significant Value

- Entry into Plymouth today is effectively “**a ground floor entry**” – given the enterprise valuation of \$25 million today with lithium project as well
- Potentially splitting of assets to unlock value
- Resources, economic studies and upside all within months
- Banio Potash – world class, see through value, top quality African management

Enterprise Value A\$m

-----  
\$120

\$100

\$80

\$60

\$40

\$20

\$0

San Jose Lithium

- Large
- Lithium in Mica
- Open pit
- European

Banio Potash

- Large
- African Potash
- Neighbouring Kore Potash

- African Potash
- Neighbouring project
- Extension of potash

\$25

100

**Plymouth**  
minerals limited

**KORE POTASH**  
FROM THE GROUND UP



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