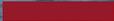




# **ALTURA LITHIUM NEW SIGNIFICANT SUPPLY TO THE BATTERY MARKET IN 2018**

  
August 2018

## **PILBARA 2018 CONFERENCE**

**RESOURCES DRIVING SUPPLY TO THE BATTERY REVOLUTION**

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Ideally located in the gateway to North Asian Markets



Section 1

# INTRODUCTION



# THE PILGANGOORA ADVANTAGE



## Feeding the lithium supply chain in H2 2018

- 100% ownership of the Pilgangoora Lithium Project (the “Project”)
- The Project is located in the Pilbara region of north west Western Australia, an established mining region that is well serviced by existing infrastructure
- Stage 1 of the Project is currently in production while completing full commissioning
- Stage 1 is expected to produce approximately 220,000 tpa of spodumene concentrate SC6 (circa 30,000 tpa LCE)\*
- Stage 2 of the Project (DFS complete) will double production to approximately 440,000 tpa spodumene concentrate SC6 (circa 60,000 tpa LCE) with expected construction time of 18 months\*
- Combined Stage 1&2 NPV (@10% discount rate) of A\$835m based on Stage 2 DFS assumptions and pricing on 34.2Mt ore reserve estimate\*
- Concentrate will be transported ~130kms by Qube Logistics via existing road infrastructure for export via an existing multi-user berth in Port Hedland
- A minimum of 200,000 tpa is contracted until 31 December 2022, with 100,000 tpa to each partner (Lionergy and J&R Optimum) on market-based terms with a pricing floor and cap for 3 years

## Project Location



\* Refer to ASX Announcements 26 September 2016, 24 October 2017 and 30 April 2018

Section 2

# PROJECT OVERVIEW



# PROJECT SNAPSHOT



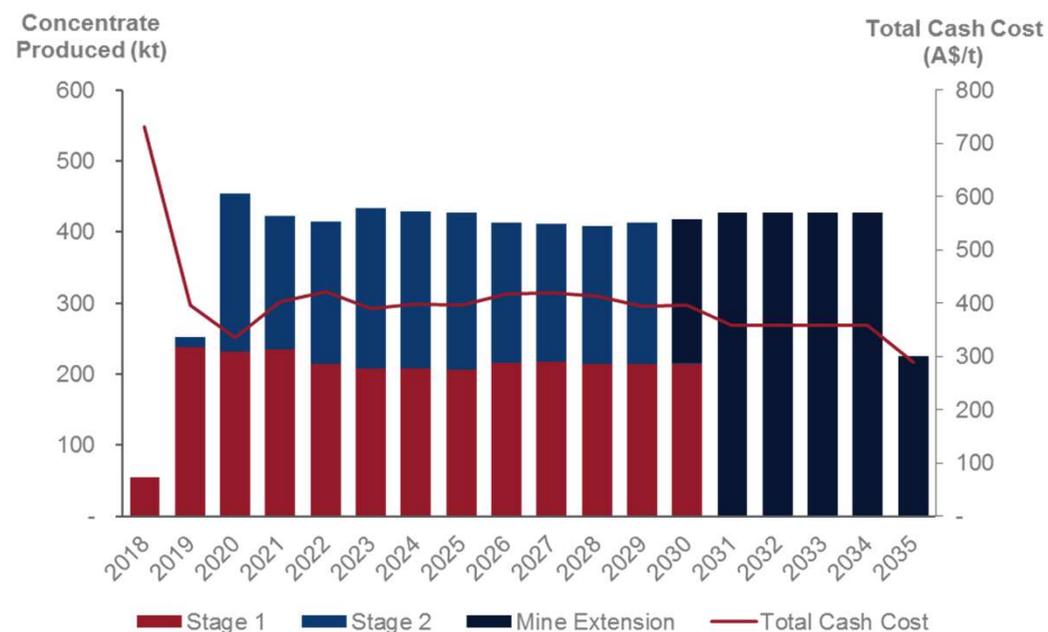
Altura's Pilgangoora project is fully permitted from mine to port with first shipment planned for Q3 2018

| Description                 | Units               | Stage 1 | Stage 1&2 <sup>(1)</sup> |
|-----------------------------|---------------------|---------|--------------------------|
| Run Rate Production         | SC6 kt p.a.         | 220     | 440                      |
| Mine Life (on Reserves)     | Years               | 23      | 13                       |
| Development Capex           | A\$m                | 151     | 119 <sup>(2)</sup>       |
| LOM Sustaining Capex (Real) | A\$m                | 31      | 31                       |
| LOM C1 Cost (Real)          | A\$/t               | 356     | 324                      |
| LOM Total Cash Cost (Real)  | A\$/t               | 428     | 400                      |
| Ore Mined (Reserves)        | Mt                  | 34.2    | 34.2                     |
| LOM Grade                   | % Li <sub>2</sub> O | 1.04%   | 1.04%                    |
| Waste                       | Mt                  | 106.2   | 106.2                    |

(1) Refer to ASX Announcement 30 April 2018

(2) Excludes Stage 1 Capex

## PRODUCTION PROFILE



Section 3

# CORPORATE



# COMPANY OVERVIEW

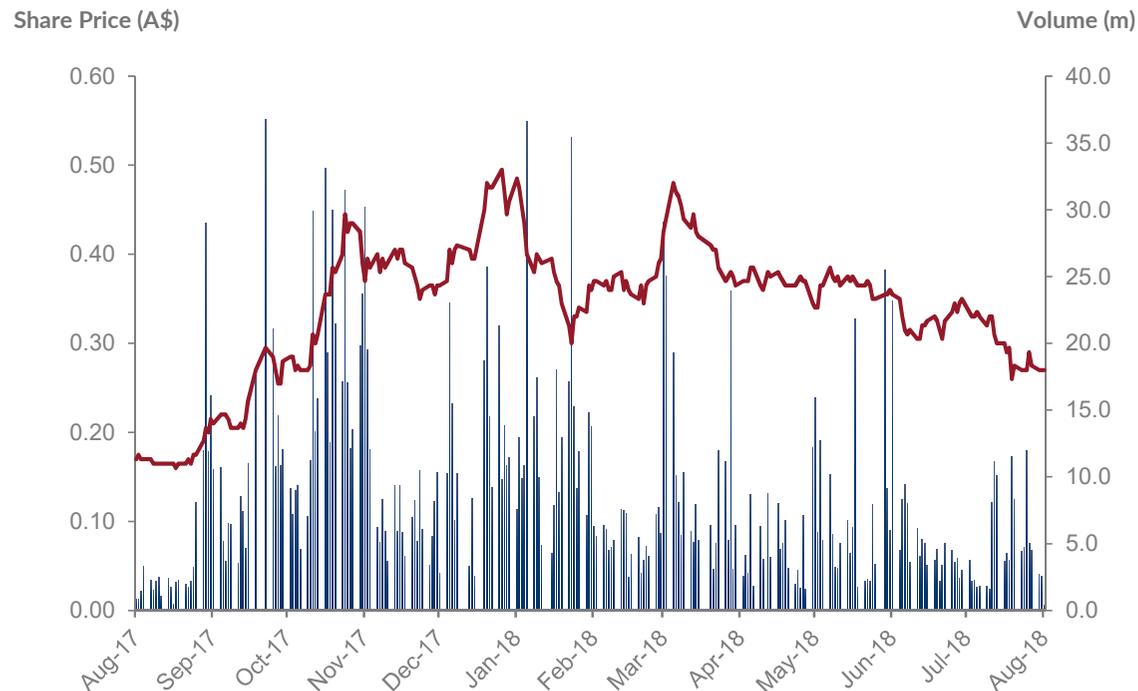


| Capital Structure (20 <sup>th</sup> August 2018) | AUD      |
|--|----------|
| Shares on Issue                                  | 1,819.9m |
| Share Price                                      | \$0.26   |
| Market Capitalisation                            | \$473M   |

| Major Shareholders                     | In Company (%) |
|--|----------------|
| Furui Holdings Limited (Shaanxi J&R)   | 16.81%         |
| Allan Buckler (Shazo Holdings Pty Ltd) | 10.71%         |
| Terry Smith                            | 10.15%         |
| Directors <sup>(2)</sup>               | 16.02%         |
| Top 20                                 | 61.9%          |

(2) Excludes J&R shareholding

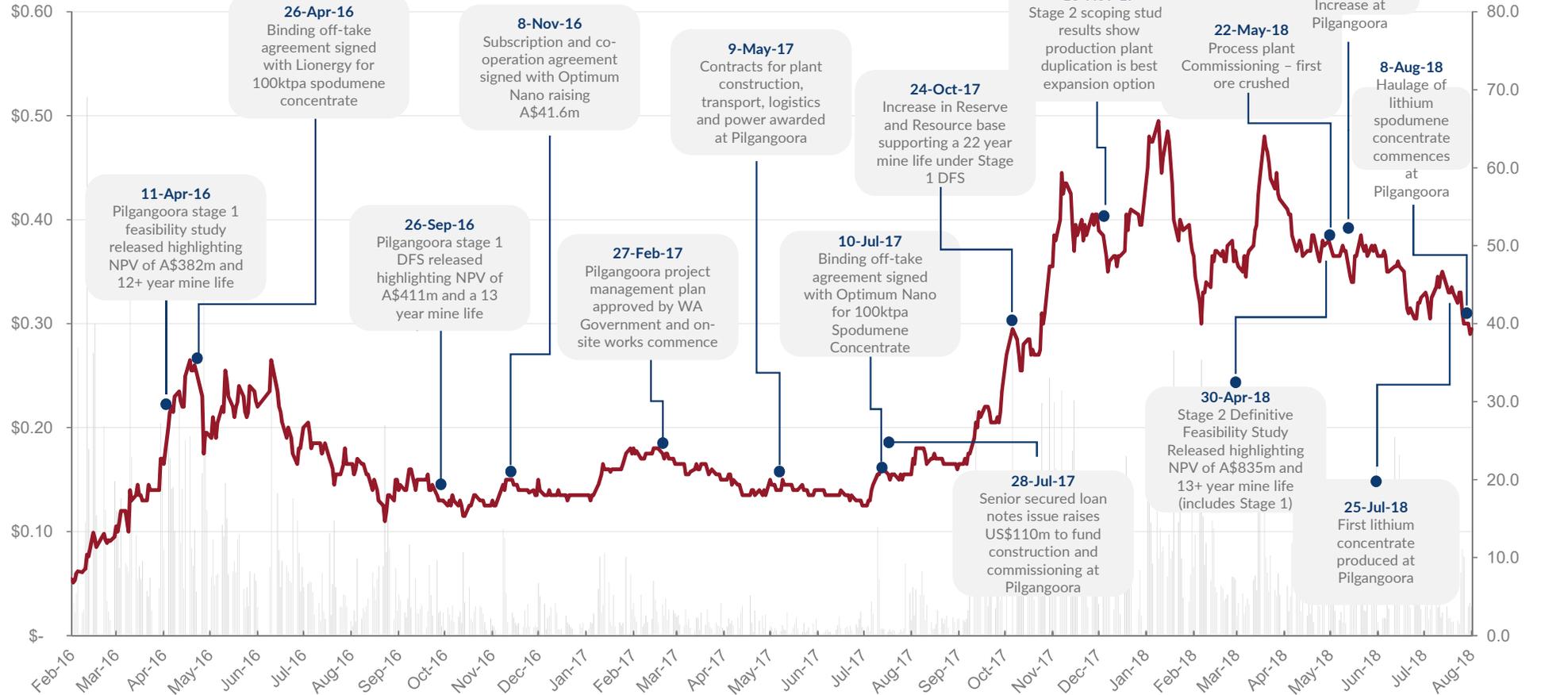
## 12 MONTH SHARE PRICE PERFORMANCE



# CORPORATE HISTORY



Share Price (A\$)



# BOARD & MANAGEMENT



Board and Management with a history of successful developments, strong operations and robust dividend returns

## BOARD

### **James Brown** Managing Director

Mr Brown is a Mining Engineer with extensive mining experience and operational development. Mr Brown has been Managing Director of Altura since September 2010, and previously was the Company's General Manager. Previous to his role at Altura Mr Brown spent 22 years at New Hope Corporation (ASX:NHC)

### **BT Kuan** Non-Executive Director

Mr Kuan has been a director of Altura since November 2007 and brings a wealth of experience in logistics, specifically the development and management of bulk handling and terminal operations. Mr Kuan is a qualified mechanical engineer

### **Paul Mantell** Executive Director, CFO

Mr Mantell is a qualified accountant and has in excess of 30 years in corporate experience in the mining and associated industries. This included 28 years at New Hope Corporation, with the last 12 years as the Company's Chief Financial Officer.

### **Allan Buckler** Non-Executive Director

Mr Buckler holds over 40 years experience in the mining industry which includes being a former Director and Chief Operations Officer at New Hope Corporation. Mr Buckler has been directly responsible for the commercialisation of several projects which begun from resource identification all the way through to production

### **Zhao Tong** Non-Executive Director

Mr Zhao Tong brings over 25 years experience in the international trade of metals and minerals. Mr Tong has been the director of the Lithium Division of J&R Optimum, an offtake partner of Altura since October 2016

### **Dan O'Neill** Non-Executive Director

As an exploration geologist and founding director of current lithium producer Orocobre Limited (ASX:ORE), Mr O'Neill brings over 30 years' experience in international mining across Australasia, Africa, Asia and North America. Mr O'Neill has served as a director of Altura since December 2008

Section 4

# PROJECT UPDATE



# PROJECT UPDATE



Rapid progress – Greenfield site to production

June 2017



June 2018



# PROJECT UPDATE

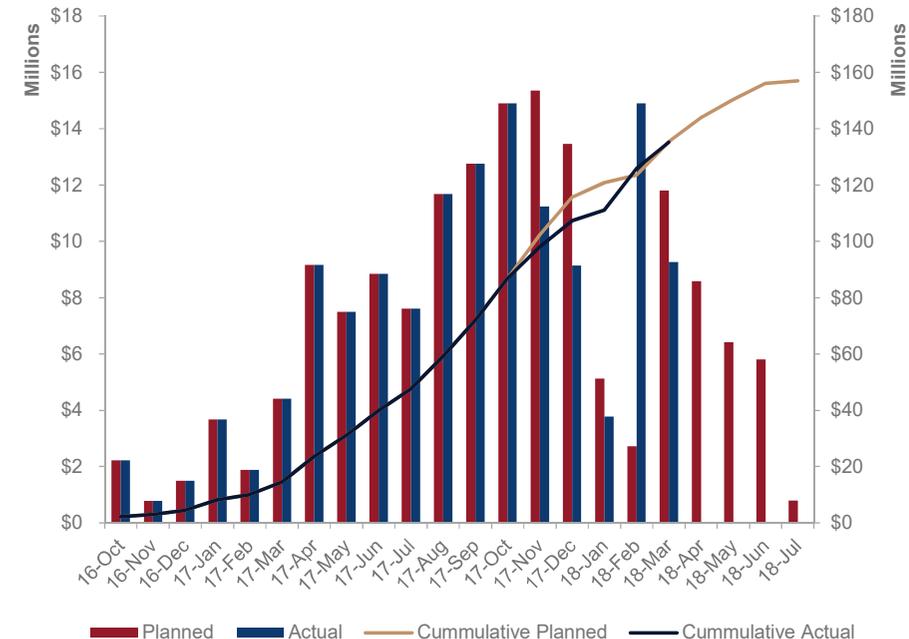


## Pilgangoora Stage 1 delivering to timetable and budget

### Operations and Maintenance Readiness – Progress

- Production and haulage commenced
- Power station energised
- Reverse Osmosis (RO) plant commissioned
- 8 mega litre raw water dam on line to supply water to process plant
- High Pressure Grinding Rolls (HPGR) and Dense Media Separation (DMS) systems complete
- On site laboratory operational and testing samples
- Commissioning and performance testing of the flotation circuit ongoing
- Product storage shed in Port Hedland has started receiving spodumene concentrate for shipment
- All key processing plant staff recruited – owner operator model
- Electrical installation works completed

### Development Capex Profile (A\$m)



# COMMISSIONING & RAMP UP



Commissioning & ramp up progressing well



# COMMENCEMENT OF PRODUCTION AND HAULAGE



Lithium concentrate produced 16 months after breaking ground



First lithium concentrate haulage to Port Hedland

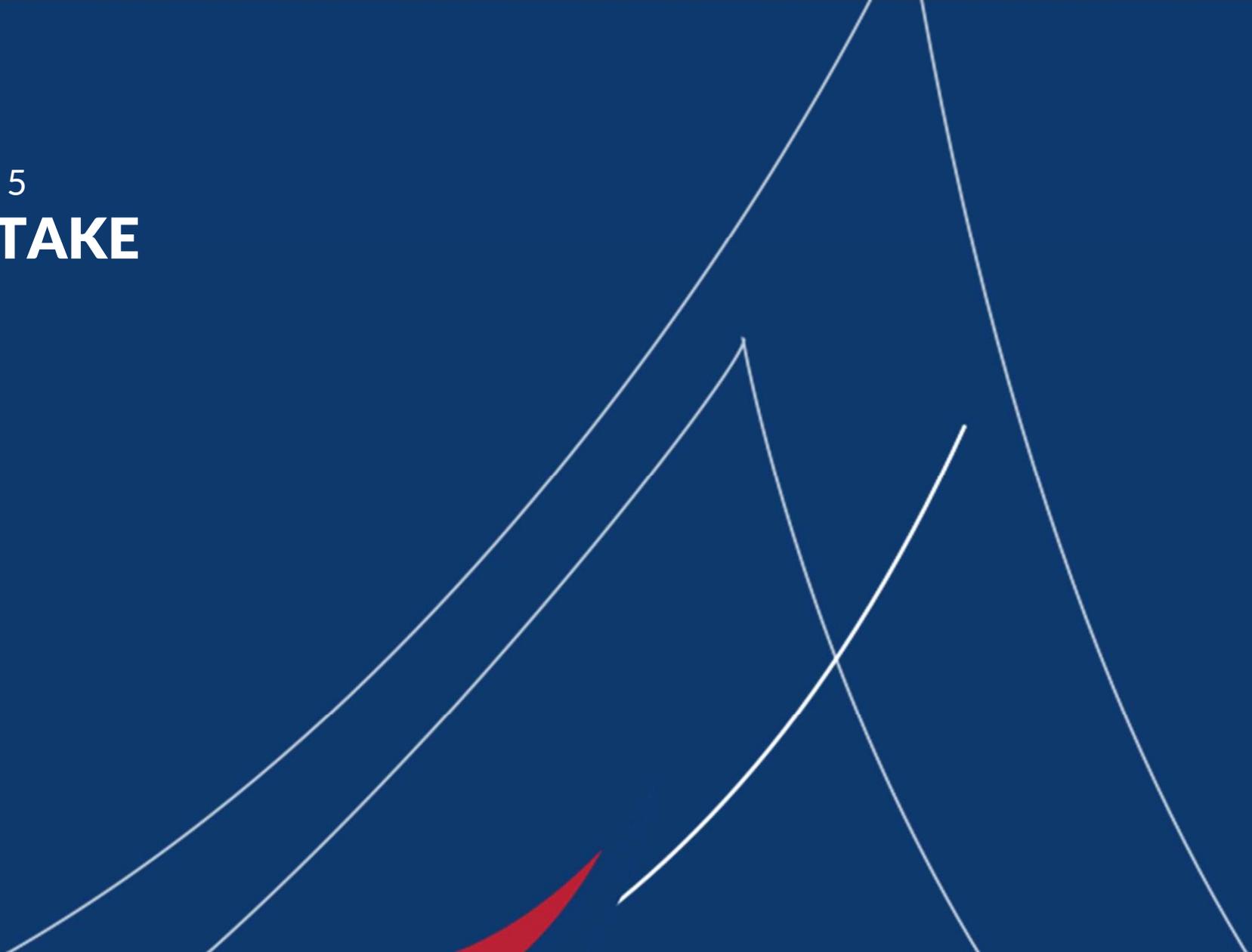


# PILGANGOORA



Section 5

# OFFTAKE



# OFFTAKE PARTNERS



Offtake agreements for a minimum of 200ktpa from Stage 1 for five years



- 100% owned subsidiary of Shenzhen-listed Shaanxi J&R Optimum Energy
- **Controls significant % Chinese battery market**
- Producer of lithium power battery systems for EV, large EV and static storage
- Customers include Dongfeng Motors, Sunlong Bus, Dayun Group, FAW Group, Haw Tai Motors
- Producing +100,000 battery sets in 2017
- 2017 production of 5.6GW of batteries, ranking No.3 in China
- Currently undergoing re-structuring to form larger New Energy entity covering raw material integration

## Lionergy

- **20+ years in Chinese lithium industry with excellent reputations and connections**
- Exploration, mine development, concentrate sales and distribution
- Li<sub>2</sub>CO<sub>3</sub> and LiOH manufacturing and sales, lithium metal & cathode manufacturing for Li-ion batteries
- Purpose built Li<sub>2</sub>CO<sub>3</sub> and LiOH conversion plant substantially under construction in Ulanqab, Inner Mongolia
- Stage 1 capacity 120ktpa SC6 concentrate
- Stage 2 capacity 240ktpa SC6 concentrate

# SUMMARY OFFTAKE TERMS

Minimum of 200,000 tpa of production contracted for five years, with floor and cap pricing for 3 years

## Term

- Five years from first shipment to occur after the mining commencement date

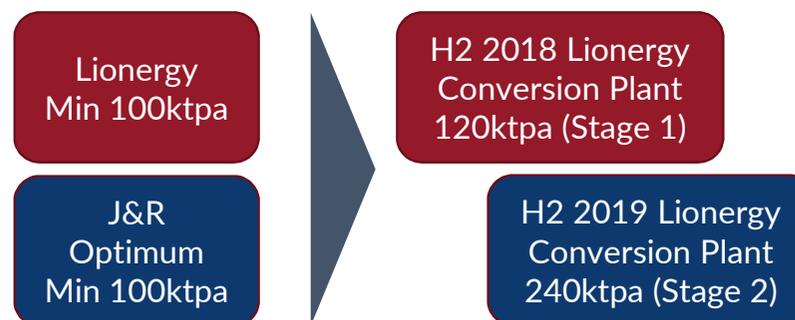
## Prices

- Prices to be mutually agreed annually by the Parties, having regard to:
  - Spodumene indices (if available)
  - Published company prices
  - Weighted average price of comparable lithium products shipped from Australian projects
  - Movements in lithium carbonate prices
- Price floor of **US\$550/t** and cap of **US\$950/t** for the first 3 years
- Price adjustment formulas in place if Li<sub>2</sub>O content is above or below 5.5% Li<sub>2</sub>O

## Volumes

- Minimum annual contracted volume of 100,000 tonnes for each offtake for a period of five years (200,000 tonnes minimum in total)
- Until the fifth anniversary of the first shipment, if Altura produces in excess of the confirmed annual quantity, then J&R agrees to buy and Altura agrees to sell that additional product on the same terms as this offtake

Stage 1 - 220ktpa SC6 (circa 30ktpa LCE)



Stage 2 - 440ktpa SC6 (circa 60ktpa LCE)



\* New offtake subject to J&R Optimum rights until 31 December 2022

Section 6

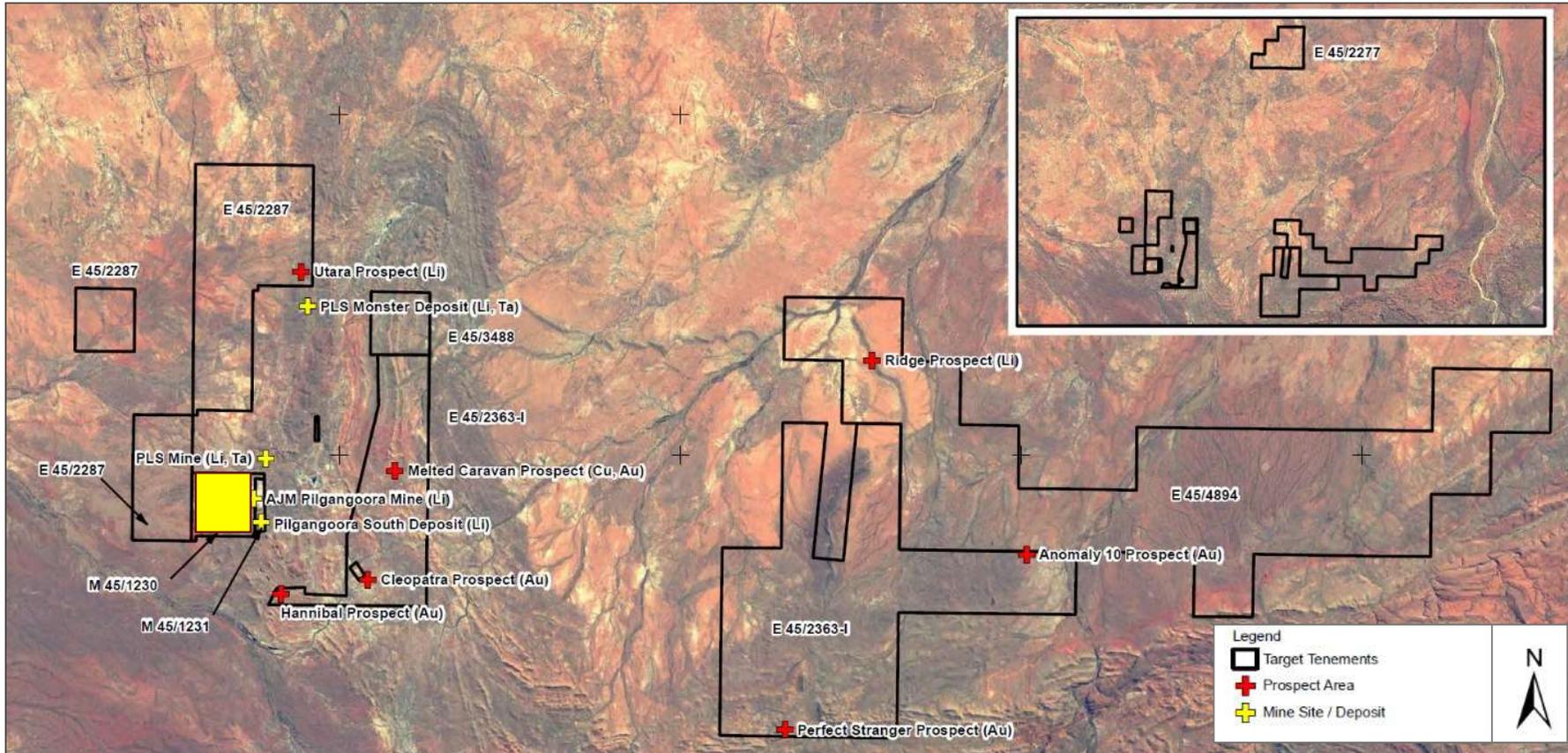
# REGIONAL EXPLORATION



# EXPLORATION TARGETS



Defined high-impact prospects identified within Altura's tenement package



Section 7

# LITHIUM MARKET FUNDAMENTALS



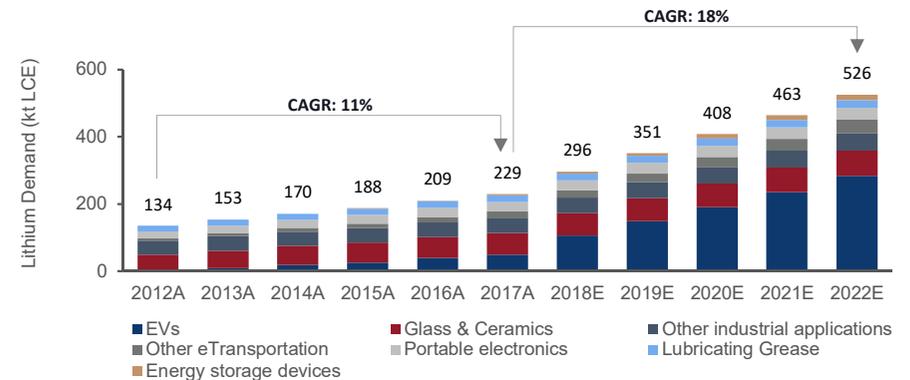
# DEMAND OUTLOOK



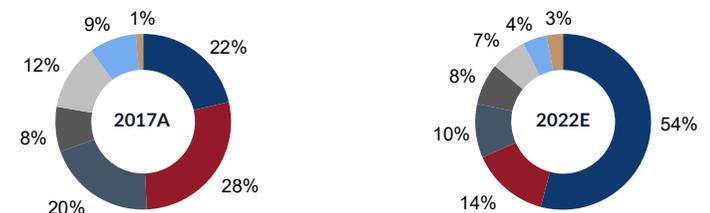
## Worldwide lithium compounds and metals consumption is expected to achieve an 18% CAGR between 2017 and 2022

- Between 2012 and 2017, global lithium demand increased from 134kt LCE to 229kt LCE, at a CAGR (Compound Annual Growth Rate) of 11%. CRU forecasts that the rate of growth will accelerate to 18% during 2017-2022, with global lithium demand more than doubling to 526kt LCE
- 93% of the total demand growth will be from battery applications and electric vehicles (EVs) alone will account for 80% of the total demand growth. By 2022, lithium consumption in EVs will reach 54% of total lithium consumption compared to just 3% in 2012
- Lithium demand from industrial applications and portable electronics is expected to increase at a relatively slow, but steady, CAGR of 2.8% and 4.8% respectively between 2017 and 2022

Global Lithium Compounds and Metals Demand, 2012-2022 (kt LCE)



Global Lithium Compounds and Metals Demand by End Use



Source: CRU estimates from Gangfeng IPO Documentation

# DEMAND OUTLOOK



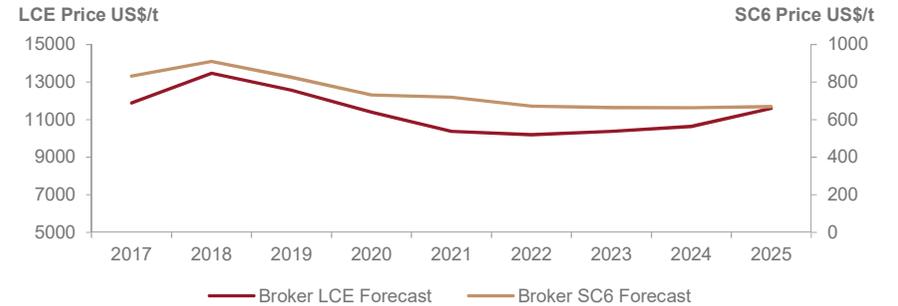
Market continues to misjudge and revise demand estimates upwards as true extent of EV mega trend becomes apparent

Deutsche Bank LCE Demand Forecast

| Year | 2016 Forecast | 2017 Forecast | % Increase |
|------|---------------|---------------|------------|
| 2016 | 209           | 214           | 2          |
| 2020 | 359           | 453           | 26         |
| 2025 | 534           | 778           | 46         |

By 2020, at Stage 2 forecast production rate of 56Kt LCE, Altura will be supplying in excess of 10% of the world Lithium demand, according to the above Deutsche bank forecast

Broker Consensus Pricing Outlook



Broker Global Demand and Supply Outlook



Source: Broker estimates from SC6 Citi, Bell Potter, Morgan Stanley, Macquarie, Canaccord, Hartleys, Bailieu Holst, CRU  
 Source: Broker Estimates for LCE UBS, Bell Potter, Deutsche Banke, Citi, Bailieu Holst, Canaccord, Cormark Securities, BMO, Roskill, JPM, Eith Capital, Numis, Macquarie, MorganStanley Hartleys

# LITHIUM SUPPLY



## The lithium market is predominantly served by 3 main countries – Australia, Chile and Argentina

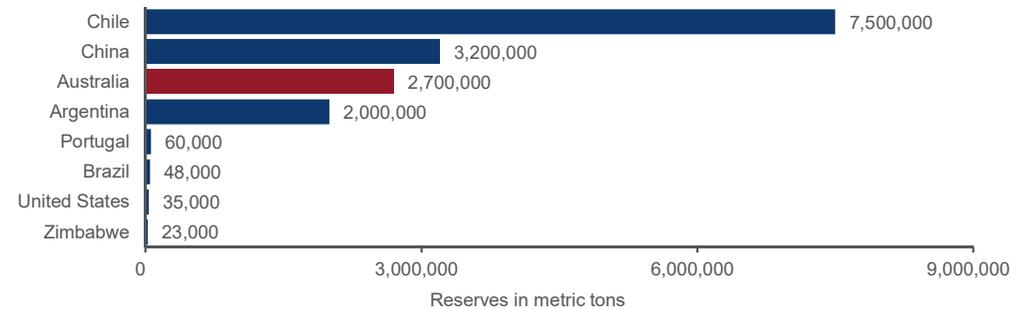
The lithium market is predominantly served by 3 main countries being Australia, Chile and Argentina. Australia is characterised by hard rock lithium and Chile and Argentina by brines. China has both brines and hard rock lithium.

Two-thirds of the world's lithium reserves are found in Chile (the world's largest lithium producer), Bolivia and Argentina, in what is known as the 'Lithium Triangle'. Bolivia has a number of large lithium salar deposits that have high Mg:Li ratios, making processing and lithium extraction uneconomic. Australia currently has a dominant hard rock presence globally.

About half of current lithium production stems from Western Australian open pit mines extracting spodumene, and then concentrating the ore via beneficiation (dense media separation, flotation, etc.). The end spodumene concentrate is then sold to converters (essentially in China) to further upgrade the raw concentrate to carbonate and hydroxide end lithium applications (7.5-8 tonnes of acceptable spodumene concentrate is typically required for one tonne of lithium carbonate or hydroxide).

Source: Company Reports, Industry Reports, Deutsche Bank

Resources by Country, 2017



Global Lithium Supply by Country (kt LCE)

| Country               | 2018E      | 2019E      | 2020E      | 2021E      | 2022E      | 2023E      | 2024E      | 2025E      |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Chile                 | 94         | 107        | 119        | 131        | 137        | 137        | 137        | 137        |
| Australia             | 159        | 252        | 315        | 336        | 346        | 345        | 345        | 342        |
| Argentina             | 37         | 38         | 59         | 83         | 106        | 136        | 153        | 173        |
| China                 | 37         | 42         | 45         | 47         | 48         | 50         | 50         | 55         |
| US & Mexico           | 6          | 6          | 6          | 6          | 16         | 21         | 29         | 36         |
| Others                | 13         | 17         | 26         | 31         | 46         | 51         | 66         | 71         |
| <b>Total (kt LCE)</b> | <b>346</b> | <b>461</b> | <b>570</b> | <b>633</b> | <b>698</b> | <b>739</b> | <b>779</b> | <b>814</b> |
| % Growth              | 35%        | 22%        | 17%        | 11%        | 11%        | 7%         | 5%         | 4%         |

Section 8

# **BENEFITS FOR THE PILBARA**



# A LONG TERM INVESTMENT IN THE PILBARA



|   |                       |  |
|---|-----------------------|--|
| 1 | Employment            | <ul style="list-style-type: none"><li>▪ Circa 1,000 personnel employed over the past 18 months</li></ul>   |
| 2 | Infrastructure        | <ul style="list-style-type: none"><li>▪ Public road upgrades and infrastructure in Port Hedland</li></ul>  |
| 3 | Indigenous Engagement | <ul style="list-style-type: none"><li>▪ Njamal employment &amp; business partnering</li></ul>  |
| 4 | Sponsorship & Support | <ul style="list-style-type: none"><li>▪ Working with local organisations to give back to the community</li></ul>   |
| 5 | Future Expansion      | <ul style="list-style-type: none"><li>▪ Exciting prospects for mine expansion based on stage 2 DFS results, giving more opportunity to benefit the Pilbara</li></ul> |

# COMPETENT PERSONS STATEMENT

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The information in this report that relates to the Ore Reserve for the Pilgangoora lithium deposit is based on information compiled by Mr Quinton de Klerk. Mr de Klerk is a Fellow of the Australasian Institute for Mining and Metallurgy. Mr de Klerk is a Director and Principal Consultant of Cube Consulting Proprietary Limited and has sufficient experience that is relevant to the activity of ore reserve estimation to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr de Klerk consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

The company confirms that it is not aware of any new information or data that materially affects the information included in the ASX announcements on 26 September 2016, 24 October 2017 and 30 April 2018.



# CHARGING AHEAD WITH ALTURA LITHIUM

An aerial photograph of a large industrial facility, likely a lithium processing plant, set in a vast, arid desert landscape. The facility features numerous buildings, conveyor belts, and large circular tanks. A prominent white geometric shape, resembling a stylized 'A' or a triangle, is overlaid on the image. The entire scene is tinted with a dark blue color. In the bottom right corner, the text 'ASX:AJM' is visible. A small red horizontal bar is located below the main title.

ASX:AJM