

# Northern Territory's Lithium and Battery Industry

Lithium Mine to Market

Perth Feb 2019

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Ltd



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# Disclaimer



The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Stephen Biggins (BSc(Hons)Geol, MBA) as Managing Director of Core Lithium Ltd who is a member of the Australasian Institute of Mining and Metallurgy and is bound by and follows the Institute's codes and recommended practices. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities being undertaken 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. Biggins consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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There is a low level of geological confidence associated with the inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised.

# Important and Cautionary Notes



## **Cautionary Statement:**

The PFS results are based upon the updated Grants Mineral Resource announced on 8 May 2018. The Mineral Resource contains Indicated and Inferred material (63% Indicated material and 37% Inferred material) and does not contain any material in the Measured classification. Whilst there is sufficient Indicated Mineral Resources to complete the production schedule during the 12-month payback period, there is a reliance on Inferred Mineral Resources for the full PFS schedule. There is a low level of geological confidence associated with the inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated Mineral Resources or that the production target itself will be realised. The inferred Mineral Resource is not the determining factor in determining the viability of the Finniss Lithium Project as the inferred Mineral Resource represents 14% of the production during the 12 month pay-back period. The PFS has targeted a well-defined mineralised pegmatite envelope where it is considered that there are reasonable grounds for the conversion of Inferred to Indicated or Measured Resource status. Which will then reasonably allow the production target to be achieved in both the grade and size which has been outlined in this PFS. This PFS development option considers the Grants Mineral Resource alone. The PFS does not rely upon additional Mineral Resources from the company's other prospects.

## **Competent Person Statements:**

Core confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in the announcements "Over 50% Increase in BP33 Lithium Resource to Boost DFS" dated 6 November 2018, "Grants Lithium Resource Increased by 42% ahead of DFS" dated 22 October 2018, "Maiden Sandras Mineral Resource Grows Finniss to 6.3Mt" dated 29 November 2018, "Maiden Mineral Resource at Carlton Grows Finniss to 7.1Mt" dated 18 December 2018 and "Finniss Mineral Resource Grows to 8.6Mt with Hang Gong" dated 31 January 2019 continue to apply and have not materially changed. The Mineral Resources underpinning the production target have been prepared by a Competent Person in accordance with the requirements of the JORC code. Core confirms that all material assumptions underpinning production target and forecast financial information derived from the product target announced on 25 June 2018 continue to apply and have not materially changed.

## **Forward-looking Statements:**

This release contains "forward-looking information" that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the pre-feasibility and feasibility studies, the Company's business strategy, plan, development, objectives, performance, outlook, growth, cashflow, projections, targets and expectations, Mineral Resources, results of exploration and relations expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this news release are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information. Forward-looking information is developed based on assumptions about such risks, uncertainties and other factors set out herein, including but not limited to general business, economic, competitive, political and social uncertainties; the actual results of current exploration activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of scandium and other metals; possible variations of ore grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accident, labour disputes and other risks of the mining industry; and delays in obtaining governmental approvals or financing or in the completion of development or construction activities. This list is not exhaustive of the factors that may affect our forward-looking information. These and other factors should be considered carefully, and readers should not place undue reliance on such forward-looking information. The Company disclaims any intent or obligations to or revise any forward-looking statements whether as a result of new information, estimates, or options, future events or results or otherwise, unless required to do so by law. Statements regarding plans with respect to the Company's mineral properties may contain forward-looking statements in relation to future matters that can be only made where the Company has a reasonable basis for making those statements.

## **Currency:**

Unless otherwise stated, all cashflows are in Australian dollars, are undiscounted and are not subject to inflation/escalation factors, and all years are calendar years.

## **Accuracy:**

The PFS has been prepared to an overall level of accuracy of approximately +/-25%.

# On a pathway to lithium production



01

## High grade lithium Mineral Resources

Located 30km from capital city of Darwin

04

## Best logistics chain

Excellent infrastructure and located close to Asian customers

02

## Low risk

Conventional open pit mining with simple metallurgy

05

## Offtake and funding

Offtake and pre-payment from Yahua and Ruifu\* for up to US\$55M

03

## Excellent economics

High margins and rapid payback on investment

06

## DFS by Q1 2019

DFS on track for completion by end Q1 2019

# Finniss Lithium Project

The **Finniss Lithium Project** has potentially the best logistics chain to Asia of any Australian lithium project.



## High grade

One of the highest grade lithium projects in Australia



## Large tenement area

Over 500km<sup>2</sup> with over 100 historic pegmatite occurrences



## Excellent infrastructure

Close to grid power, gas and rail infrastructure



## Widespread pegmatites

Wide intersections at multiple prospects



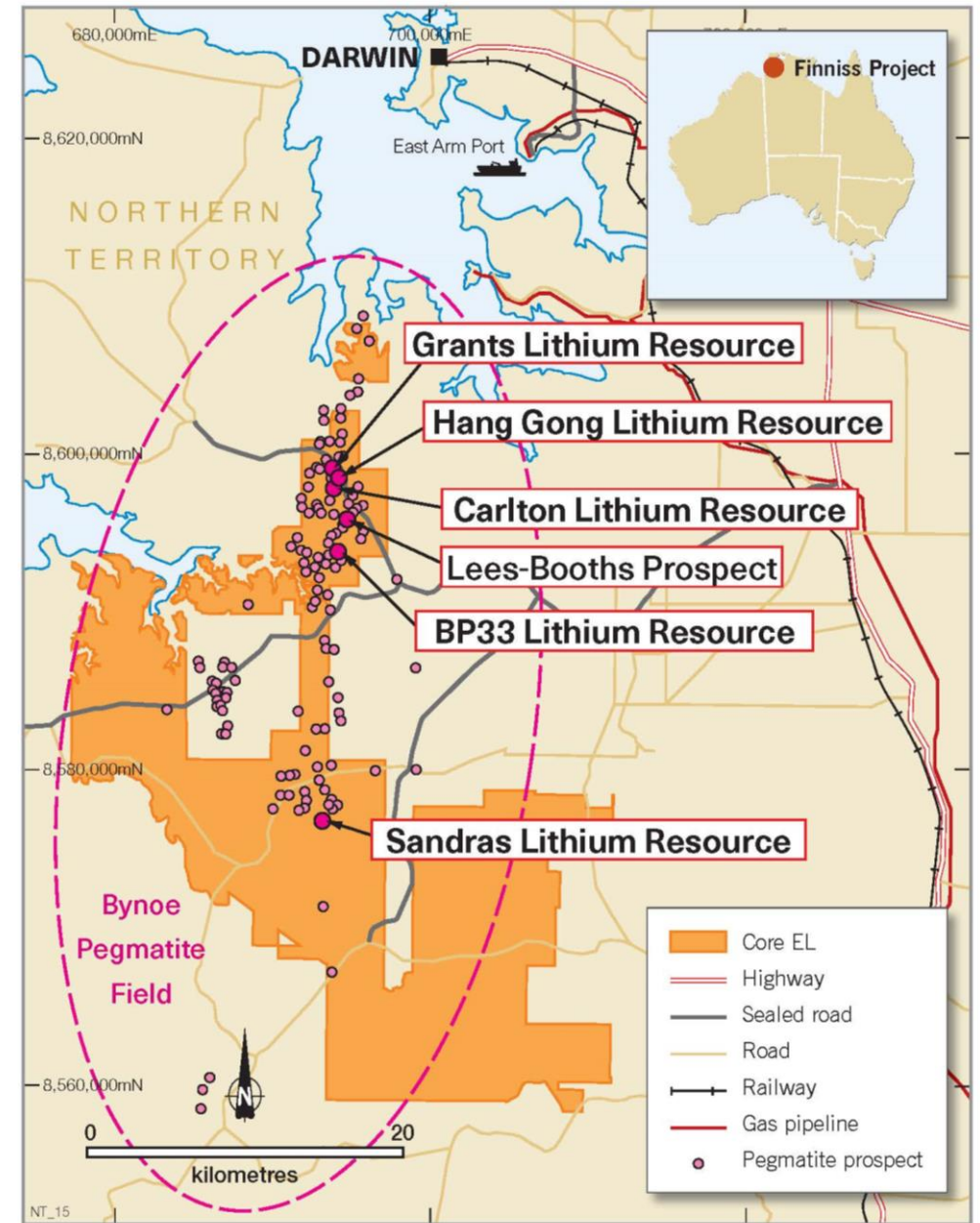
## Sealed access road

88km sealed road from mine to port = low cost transport route

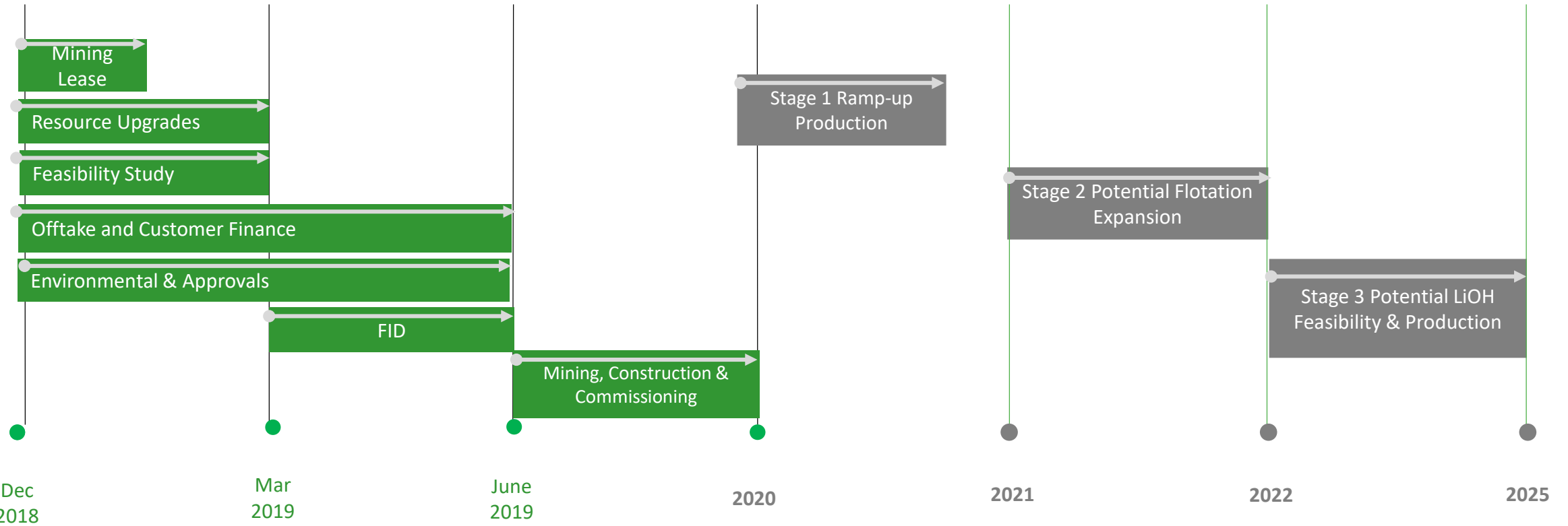


## Upside potential

Significant potential to materially increase Mineral Resources



# Countdown To Production



# Corporate Information



## Shares

Price A\$	~6¢
Shares on issue	~694M
Market cap	~\$40M
Cash at 31/12/2018	~\$4.4M
Enterprise Value	~\$35M

## Directors

**Stephen Biggins**  
Managing Director ex SAU, IVR

**Greg English**  
Non-Executive Chairman AXE, LCK

**Heath Hellewell**  
Non-Executive Director DKM, ex CMM, DRM

**NEW Appointment TBA**  
Non-Executive Director

## Management

**Blair Duncan** ex BCI  
General Manager Development

**Simon Iacopetta** ex TZN, RMS  
Chief Financial Officer

**Recruiting**  
Marketing Commercial Manager

**Noel O'Brien** ex TAW, BRG  
Metallurgy

**Dr David Rawlings**  
Exploration Manager

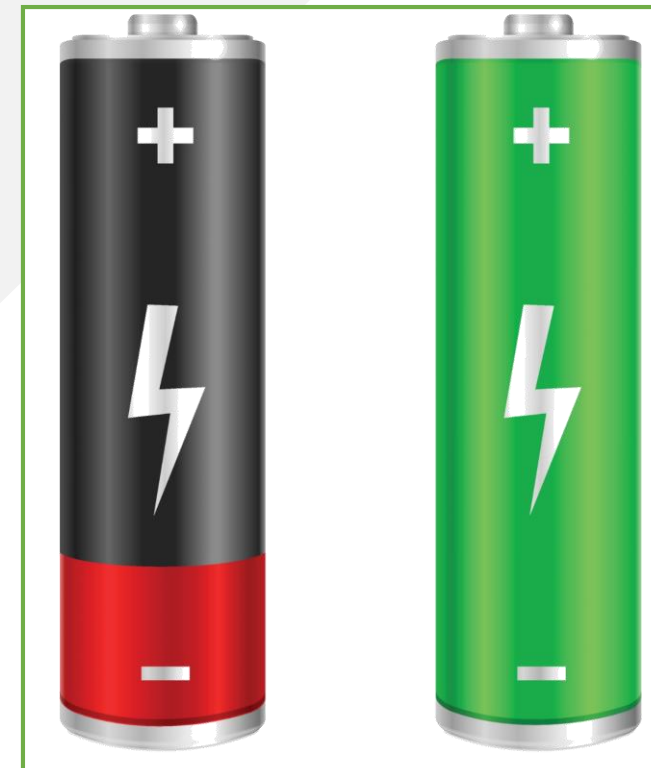
**Jarek Kopias**  
Company Secretary

## Preferred Contractors

**Primero**  
FEED Studies & EPC

**Lucas TCS**  
Mining

**Qube**  
Transport/Haulage



# Pre-Feasibility Study Outcomes

The **Pre-Feasibility Study** only modelled the development of the Grants deposit.



## Strong cashflow

\$168 million generated over initial 26 month project life



## Rapid payback

Project payback in ~12 months



## Excellent NPV

\$140 million pre-tax NPV<sub>10</sub>



## Low capital cost

\$53.5 million for mine development, process plant and infrastructure



## High rate of return

IRR shows high profitability for shareholders



## Low operating cost

US\$279/t concentrate delivers 57% operating margin



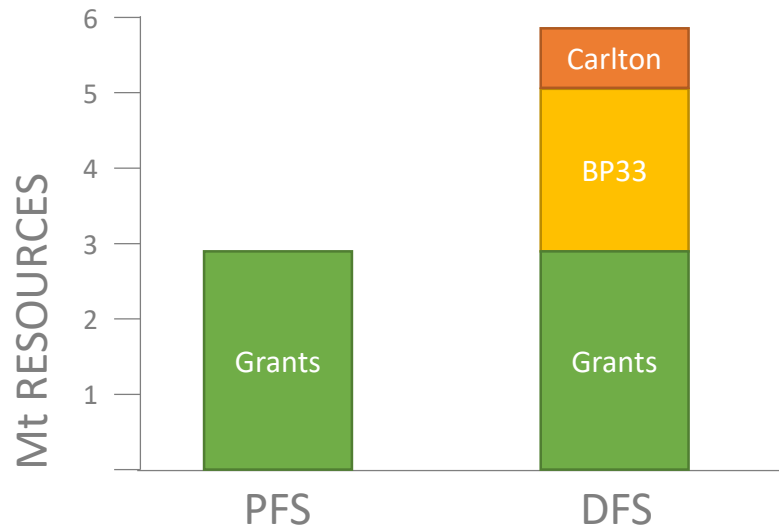


## Pre-Feasibility Study

- Grants deposit only
- Mine-life of 2.5 years

## Definitive Feasibility Study

- Grants, Carlton and BP33 deposits
- Mine life set to materially increase



### Finniss Lithium Project Resources

Deposit		Tonnes (Mt)	Li <sub>2</sub> O %	Li <sub>2</sub> O (t)	LiCO <sub>3</sub> (t)
Grants	Measured	1.09	1.48	16,100	39,815
	Indicated	0.82	1.54	12,600	31,160
	Inferred	0.98	1.43	14,000	34,622
	<b>Total</b>	<b>2.89</b>	<b>1.48</b>	<b>42,700</b>	<b>105,597</b>
BP33	Indicated	0.63	1.39	9,000	22,257
	Inferred	1.52	1.56	24,000	59,352
	<b>Total</b>	<b>2.15</b>	<b>1.51</b>	<b>33,000</b>	<b>81,609</b>
Sandras	Inferred	1.30	1.00	13,000	32,149
Carlton	Inferred	0.79	1.30	10,000	24,730
Hang Gong	Inferred	1.42	1.20	17,000	42,041
Finniss Lithium Project	Measured	1.09	1.48	16,100	39,815
	Indicated	1.45	1.47	21,600	53,417
	Inferred	6.01	1.29	78,000	192,894
	<b>Total</b>	<b>8.55</b>	<b>1.35</b>	<b>115,700</b>	<b>286,126</b>

## Definitive Feasibility Study - Objectives

- Confirm Finnis Lithium Project as robust, high-margin low-capex lithium project
- De-risk and provide certainty for investors and project implementation
- Confirm low processing, mine, haulage and port costs
- EPC Design, Mining, Haulage and Crushing Pricing Tenders designed to be rolled into binding service contracts as required
- Life of Project targeting a material extension from the current 2 years (PFS) with inclusion of expanded Mineral Resource from Grants and new resources at Carlton and BP33
- Potential extensions to Life of Project expected from substantial increases in Project Mineral Resources

## Offtake and Prepayment with some of China's Largest Lithium Converters

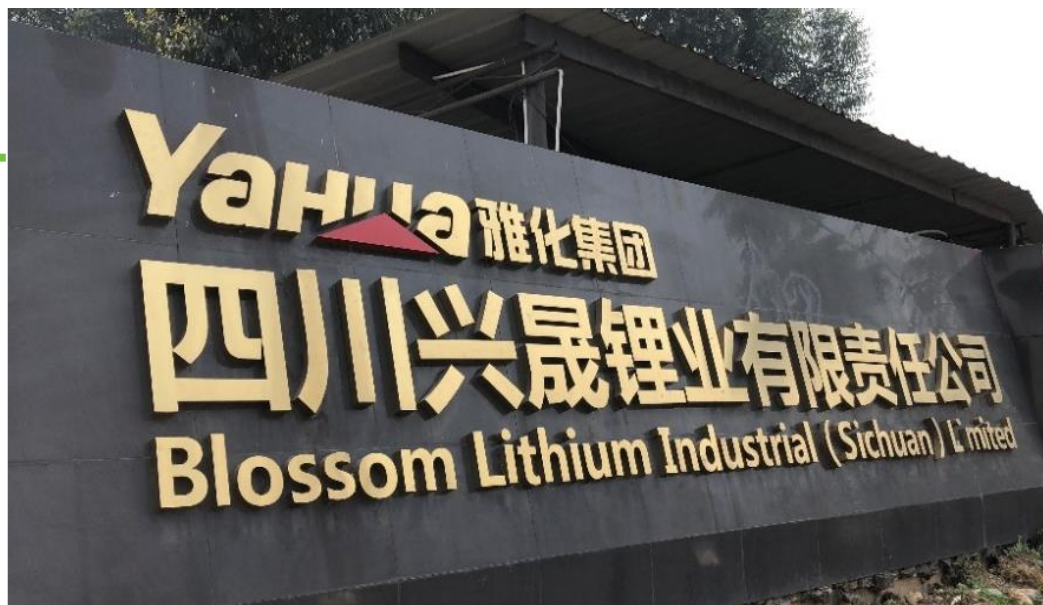
Core has signed a binding offtake and US\$20 million prepayment agreement with **Yahua**:

- **Offtake agreement**
- **US\$20 million conditional prepayment facility**, to be repaid through the supply of future concentrate

Core has also signed a non-binding Term Sheet for Offtake and Prepayment with Shandong **Ruifu** Lithium Co Ltd.

- Core and Ruifu are currently negotiating terms toward binding agreements.

Parties associated with both **Yahua** and **Ruifu** were cornerstone investors in Core's recent financing.



## High Quality Spodumene Concentrate

Recent DMS metallurgical testwork from Grants produces:

- 6.0%  $\text{Li}_2\text{O}$  concentrate at +65% net recoveries
- 5.5%  $\text{Li}_2\text{O}$  concentrate at +70% net recoveries
  - Low Fe <0.5%
  - Low Mica <1%
  - Low  $\text{K}_2\text{O}$  <1%
  - Coarse product <1% <0.5mm, max 10mm



# Huge Exploration Upside

Targeting substantial Mineral Resource growth

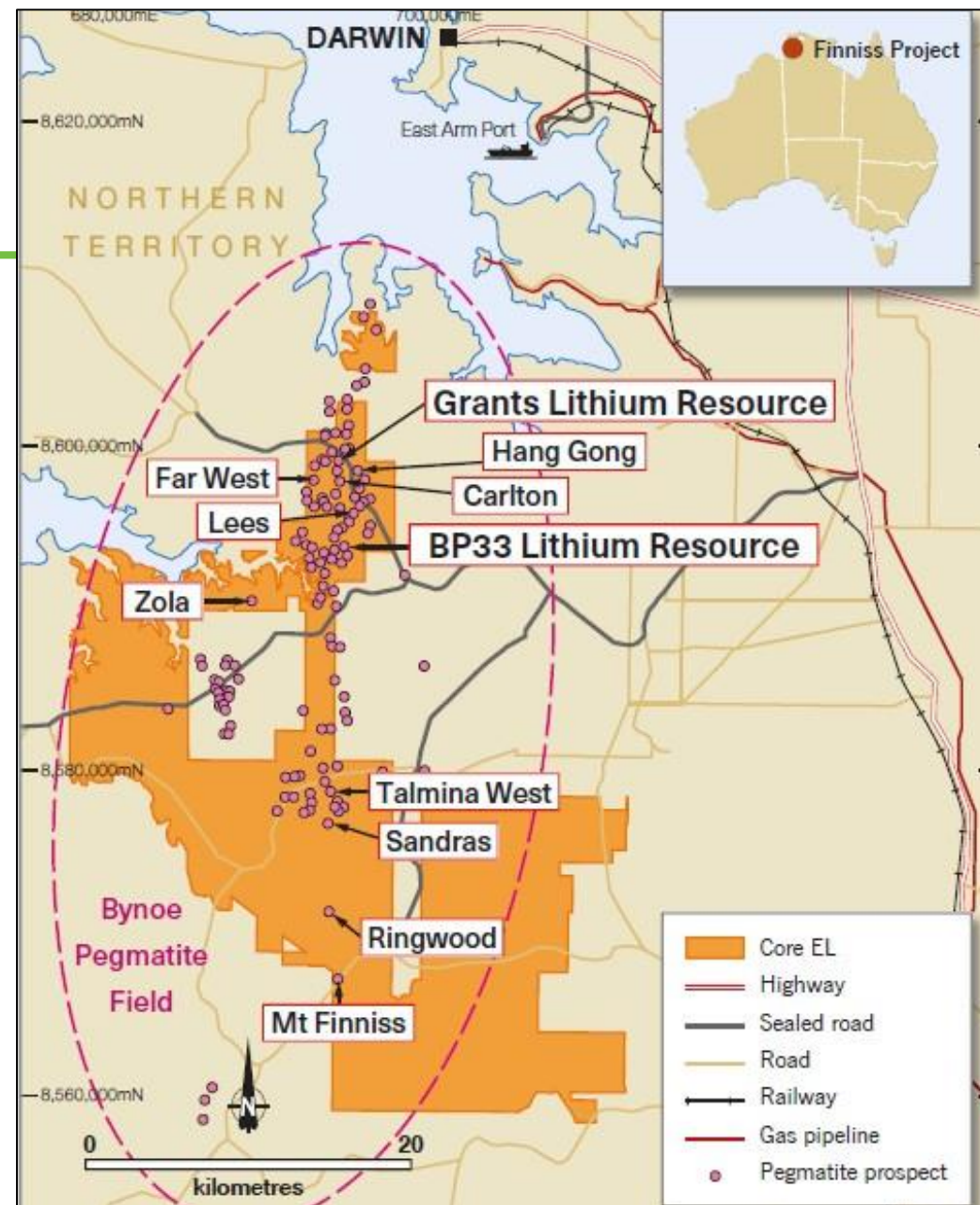
**Upcoming exploration** and aggressive drill programs in 2019 to target growth in the resource base to support a long-life lithium production hub at Finnis

**Discoveries** - Core's exploration has discovered some of the highest-grade lithium in Australia, capable of producing quality spodumene concentrate

**Numerous high-grade** lithium pegmatite targets already identified

**High potential** for additional resources from 500km<sup>2</sup> covering hundreds of pegmatites

**Drilling results** over coming weeks and months leading to multiple Mineral Resource increases and upgrades



# Darwin Port

## Heads of Agreement

### **Core has agreement with Darwin Port to ship 250,000tpa of spodumene concentrate**

Darwin Port is Australia's nearest port to China

East Arm Wharf facilities at Darwin Port are well suited to handle potential future production from Core's lithium projects

Heads of Agreement signed with Darwin Port in respect of potential export of lithium products from Grants

Agreement provides Core with capacity to export up to either:

- 250ktpa of spodumene concentrate; or
- 1Mtpa of spodumene Direct Shipping Ore (DSO)

## NT Lithium Valley Infrastructure Supports Lithium Downstream Processing

- ✓ Lithium Mining and Processing
- ✓ Middle Arm Industrial Precinct
  - ✓ Power
  - ✓ Gas
  - ✓ Water
  - ✓ Land
- ✓ Darwin Port – Australia's closest port to Asia
- ✓ Suburban workforce in capital city
- ✓ Supportive NT and Fed Government
- ✓ Lithium Battery Manufacturing
- ✓ Future downstream processing of CXO spodumene to LiOH – ideal fit



## Northern Territory Government Critical Minerals Plan

The Territory Government recognises the strategic importance of lithium and other critical minerals to the global economy and their use in important high tech commodities and batteries

The Territory hosts key critical mineral resources and is well positioned to increase its contribution to the industry's value chain – though producing, processing and manufacturing

The Territory Government is supporting the development of the critical minerals industry by:

- investing in exploration stimulus programs
- project facilitation for major critical minerals projects
- funding support for investment in critical minerals





## Northern Territory Government **Critical Minerals Plan**

The Northern Territory Government has a number of support mechanisms to grow private sector investment in critical minerals and lithium projects and create jobs including:

### **\$26 million Resourcing the Territory Initiative**

- Provide pre-competitive geoscience, investment attraction and exploration stimulus programs.

### **\$89 million Local Jobs Fund**

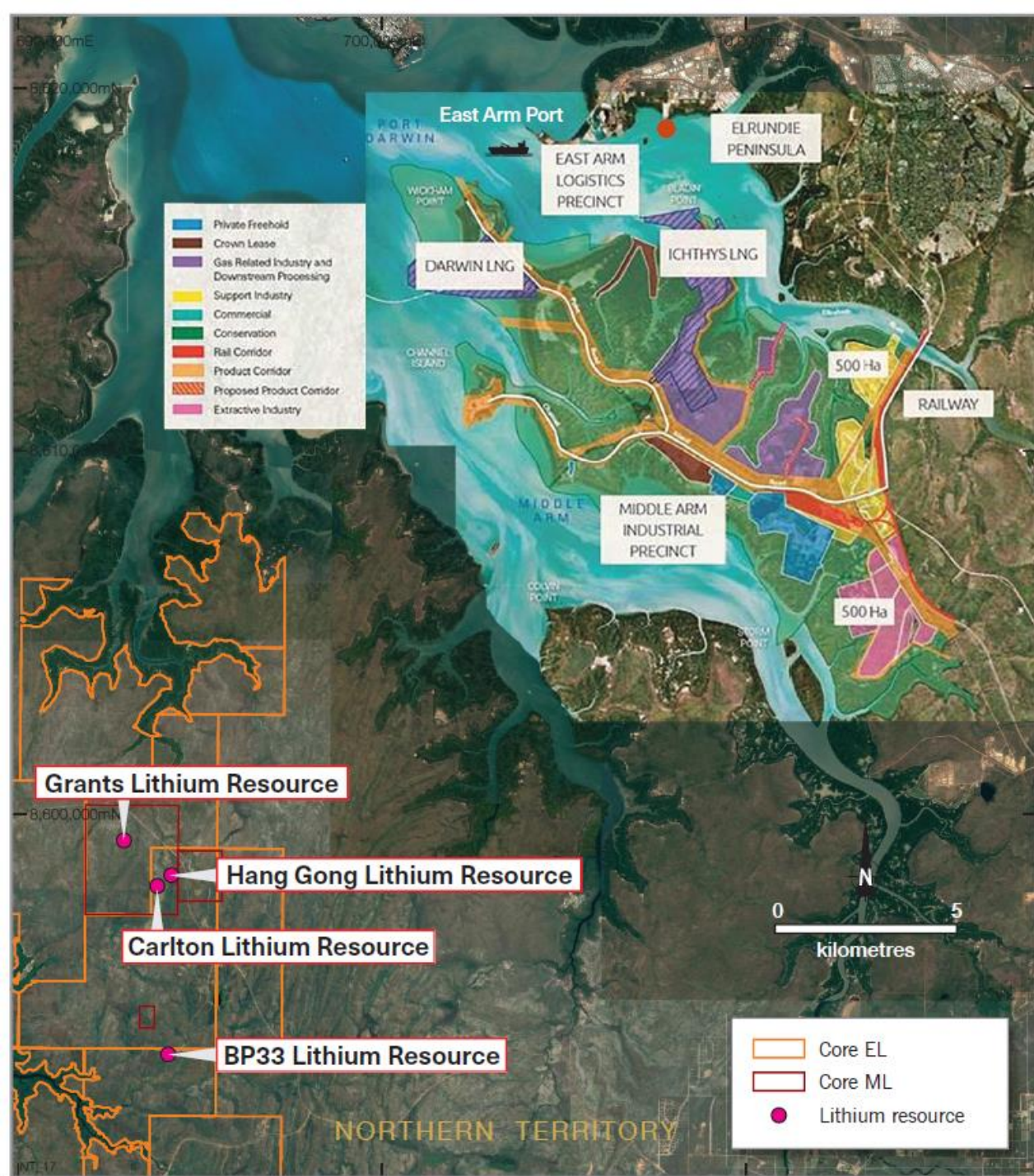
- Co-investment fund to accelerate significant projects through loan guarantees, business investment confessional loans, equity co-investment and grants.

### **Industrial land**

- Middle Arm Industrial Precinct for the processing, refining and manufacturing industry.

# Middle Arm Industrial Precinct

- Located on the Middle Arm Peninsula in Darwin Harbour
- Middle Arm Industrial Precinct accommodates a range of industries including:
  - Industrial – oil and gas, chemical
  - Utilities – power generation
  - Logistics – rail
- Middle Arm ideally positioned between Core’s Lithium proposed mine and concentrate facility and Darwin Port (export)
- Middle Arm is already home to :
  - Darwin LNG Plant
  - \$40B INPEX Icthyus Onshore LNG Plant
  - 3 gas fired power stations



## Lithium Battery Manufacturing in the NT Energy Renaissance

Energy Renaissance (ER) with support of the Northern Territory Government has partnered with a world leading lithium ion battery innovator with aim to manufacture high-performance lithium ion batteries in Darwin



ER is planning a 1.3Gigawatt facility in Darwin to manufacture and sell lithium-ion batteries optimised for hot climates

Production will take place in an advanced manufacturing facility committed to Australian resources that will include a specialised R&D facility focused on growing and promoting Australian talent.

## Core targeting spodumene production in 2019

### Q1 2019

- Resource upgrades
- DFS

### Q2 2019

- Full Regulatory Approval
- FID

### Q3 2019

- Commence Mining
- DMS Plant construction

### Q4 2019

- DMS Plant commissioning
- First Concentrate Produced





Thank you

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Cannings Purple

