



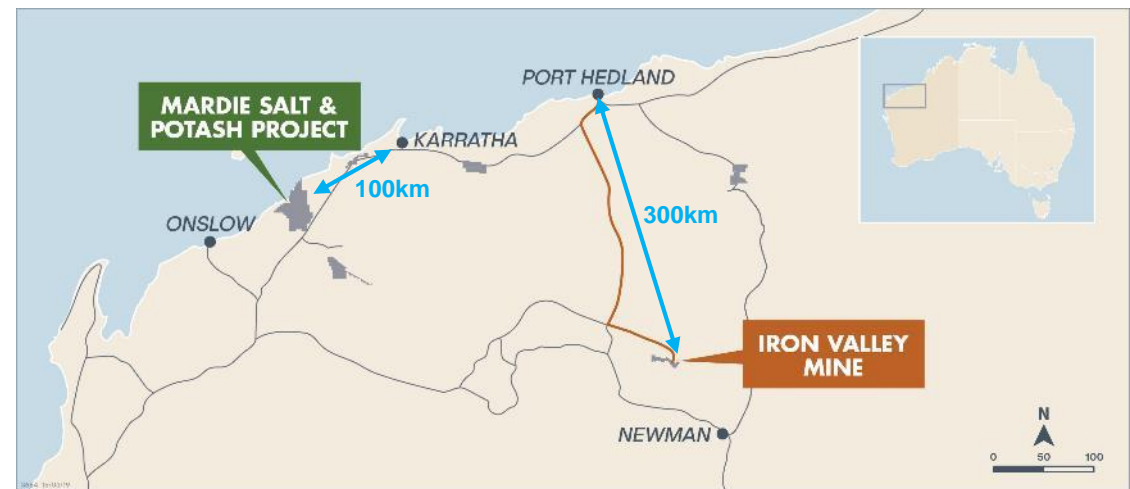
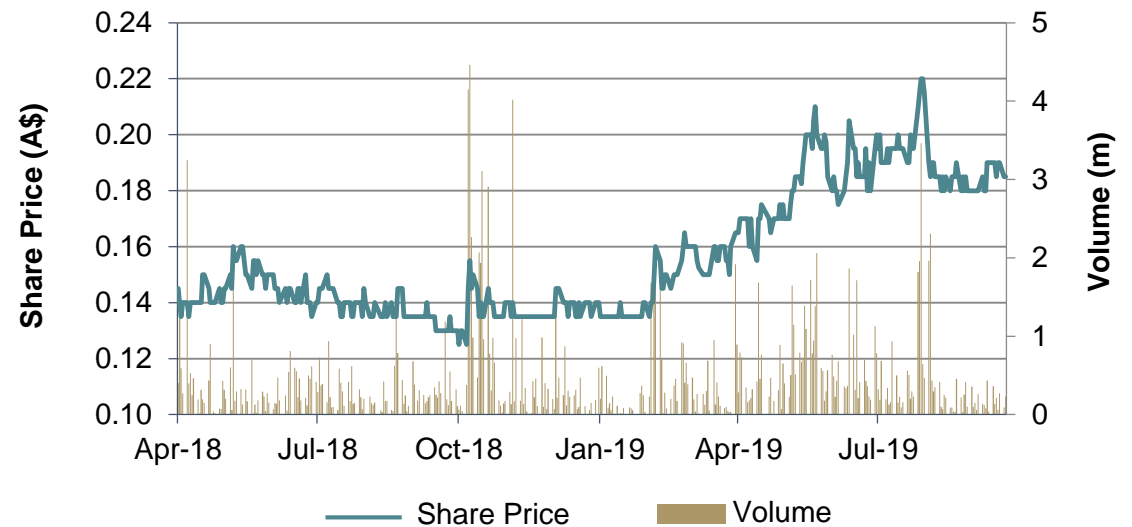
Developing the Tier 1 Mardie Salt & Potash Project

Corporate Presentation

About BCI Minerals



- Based in Perth, Australia
- ASX listed as “BCI”
- Market cap of ~A\$75M
- A\$36M¹ cash and zero debt
- Wroxby Pty Ltd – largest shareholder ~29%
- Key assets:
 - **Mardie Salt & Potash:** 100% owned project
 - **Iron Valley Mine:** royalty earnings (A\$12.3M EBITDA in FY19)



The Mardie Opportunity

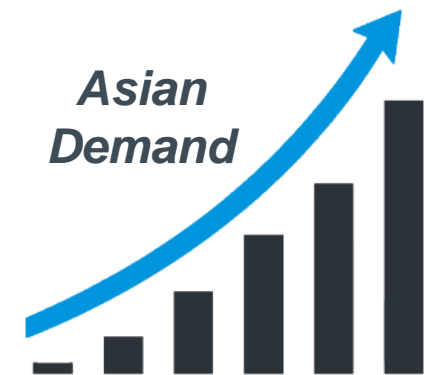
Mardie is a Tier 1 long life project that can supply the Salt and Potash growth markets in Asia



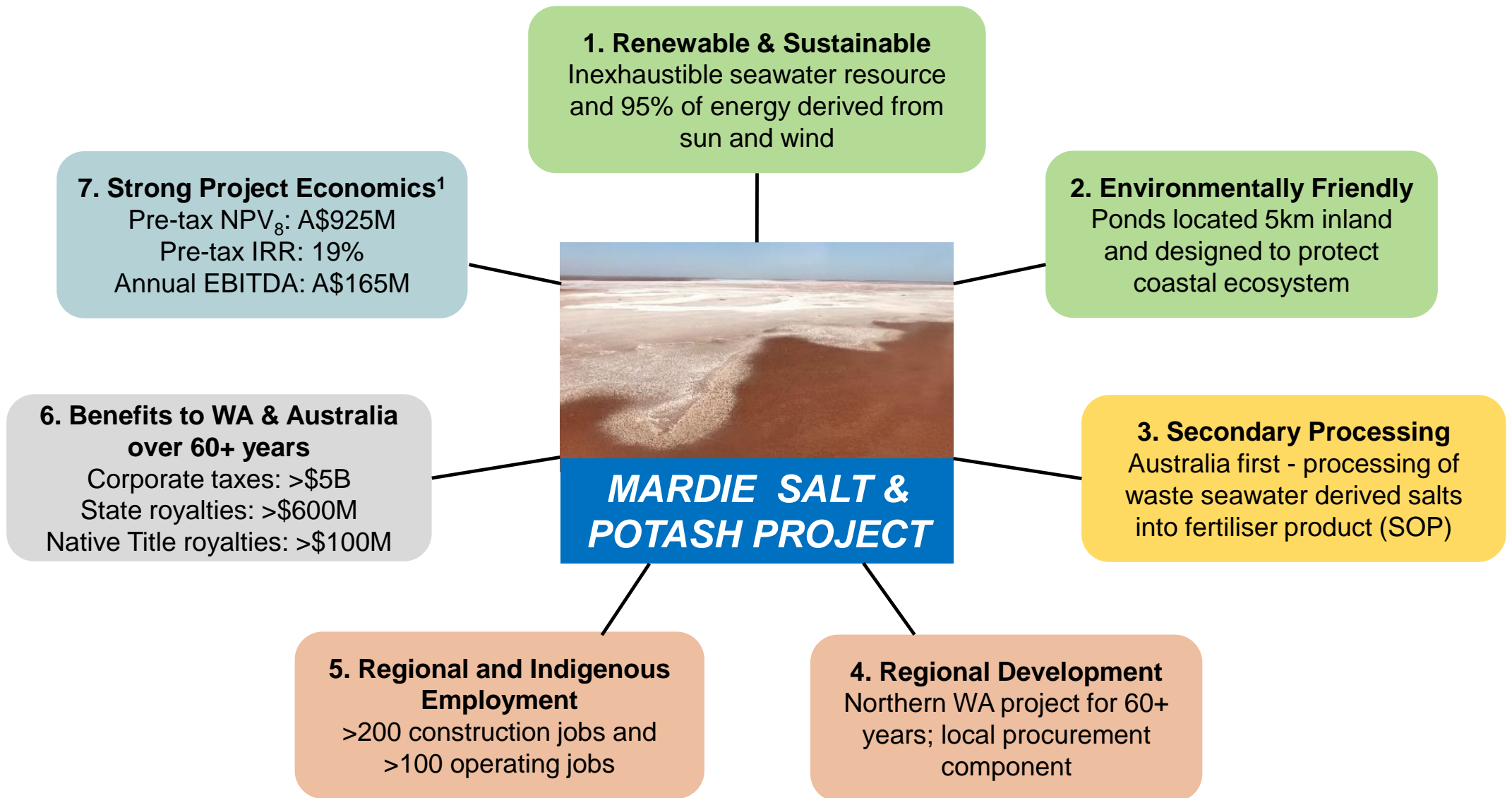
4Mtpa



100ktpa



Mardie – Long Term Benefits for all Stakeholders

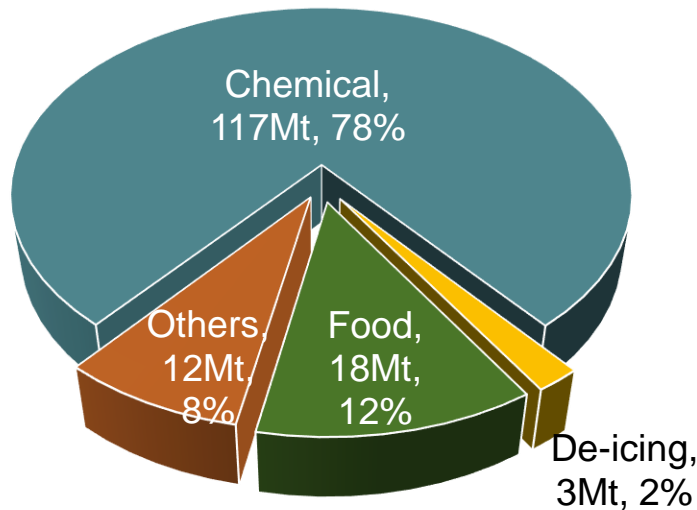


1. Refer to slide 10 for more details

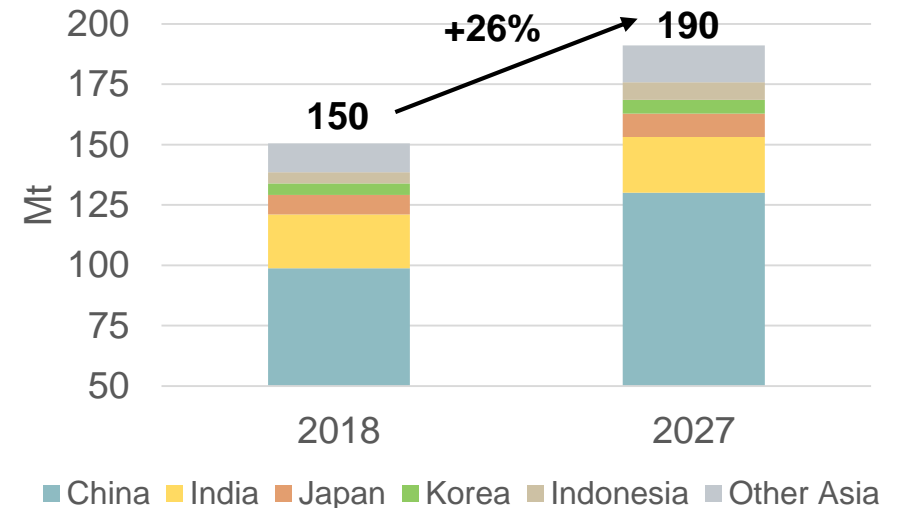
Salt Market

Strong salt demand growth forecast in Asia

Salt Uses in Asia, 2018 (150Mt)



Salt Demand Growth in Asia (Mt)



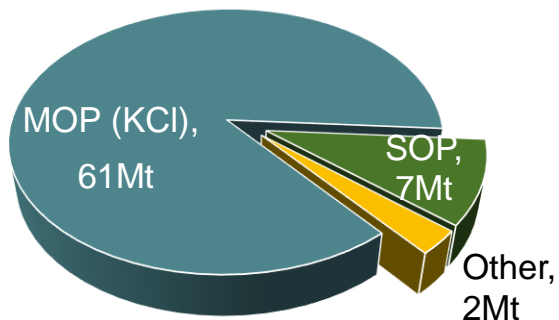
- Asia demand ~150Mtpa; 40% of 350Mtpa global salt consumption
- Asian chemical industry is the major user of salt (~80%)
- Salt is a key raw material in production of alumina, PVC, glass, paper, pharmaceuticals, water treatment and food products
- Close correlation between GDP growth and salt demand (reflecting industrial activity)
- 40Mtpa of new salt demand growth forecast in Asia by 2027 – primarily China
- Australian salt prices have ranged from US\$35-75/t CIF over the last 10 years

Sulphate of Potash (SOP) Market

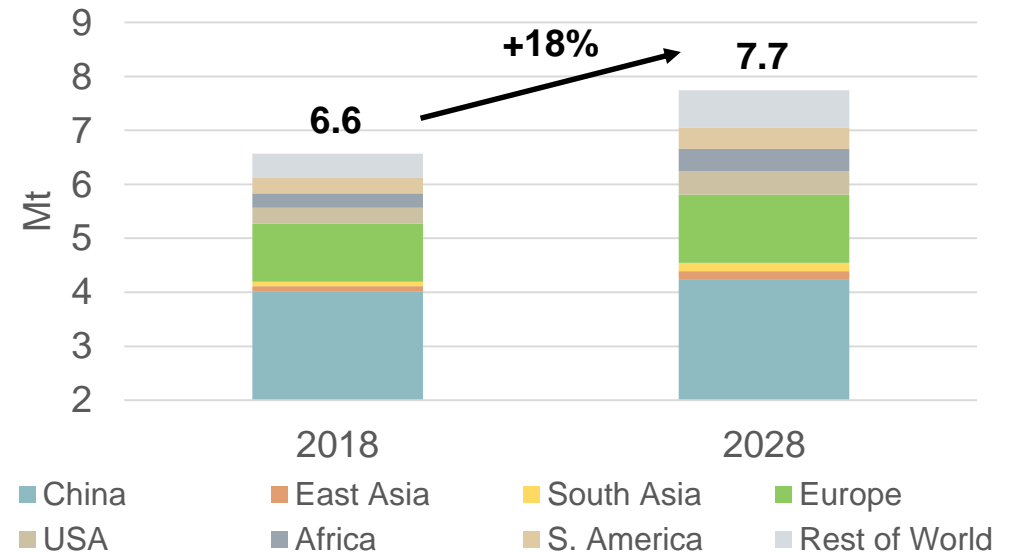
More people needing more and better quality food

- Plant growth depends on three primary nutrients – Nitrogen (N), Phosphate (P) and Potassium (K)
- Potassium improves nutrient flow through plants and increases resistance to diseases
- Two main types of potassium fertilisers:
 - Muriate of Potash (MOP) – KCl
 - Sulphate of Potash (SOP) – K_2SO_4
- SOP produced from primary sources (e.g. brines) or converted from MOP via chemical Mannheim process (secondary)
- SOP is a soil friendly fertiliser used on higher value crops (fruits, berries, vegetables)

Global Potash Demand by Product (70Mt)



Global SOP Demand Growth (Mt)



- SOP has a strong long-term demand outlook driven by population growth, preference for high quality food and reducing arable land
- SOP demand is forecast to increase from 6.6Mtpa to 7.7Mtpa by 2028
- SOP (~US\$500/t FOB) has a large price premium over MOP (~US\$300/t FOB)

Australian Salt & SOP Landscape

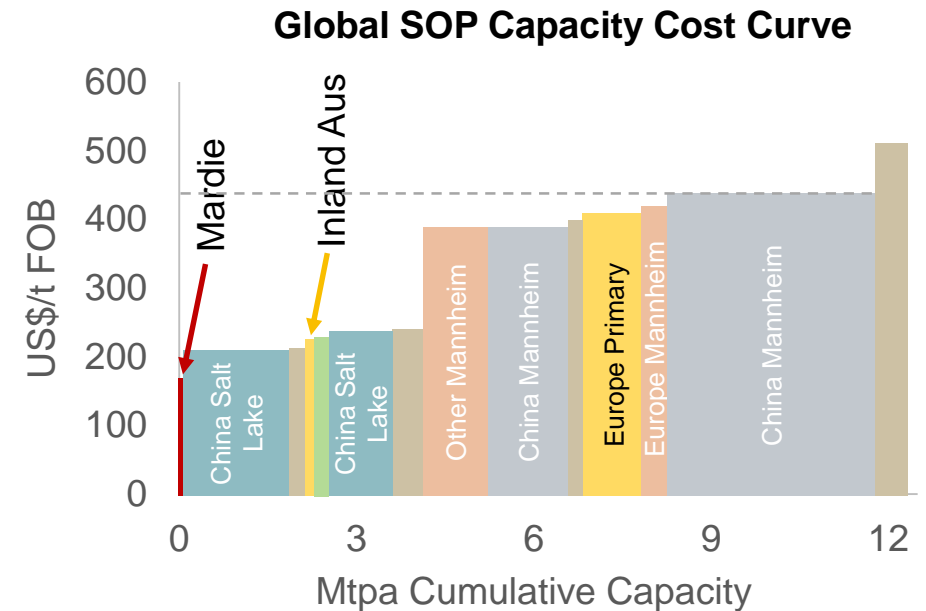
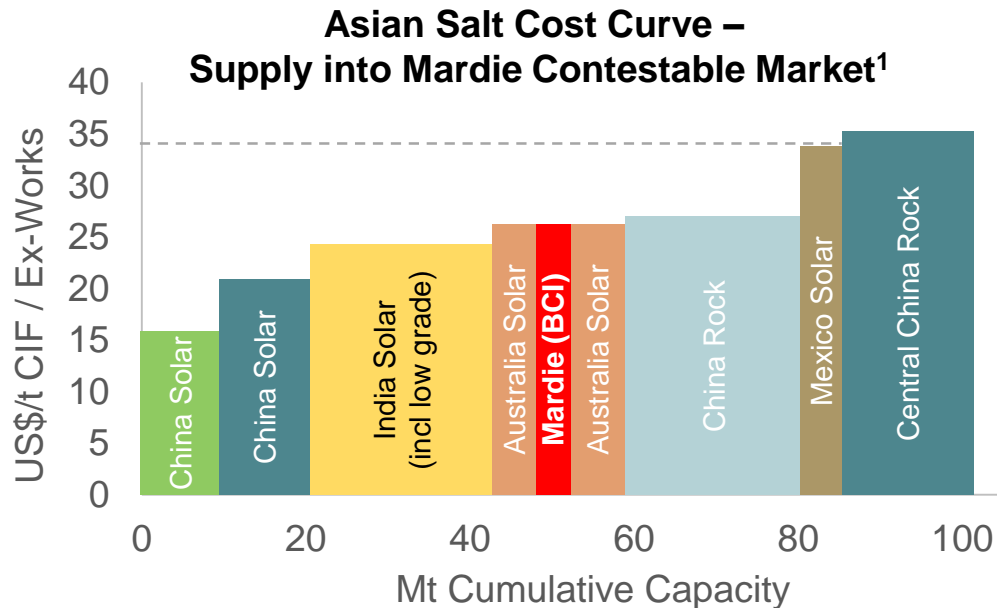
Mardie has ideal location to produce high purity salt

- Pilbara region of Western Australia has optimum climate conditions to produce high purity salt with consistent quality via solar evaporation
- Five large existing solar **Salt** operations in the Pilbara – controlled by Rio Tinto and Mitsui
 - Total production capacity of 14Mtpa
 - Operations up to 5 decades old
 - Setting the salt quality standard globally
 - Mardie located in the centre of these operations
- No existing **SOP** production in Australia. Numerous inland located projects with higher risks:
 - All based on extraction of underground brines
 - Resource size unknown and quality risks
 - Located 800-1,000km from port; higher road transport cost
 - Limited road, gas and support infrastructure



Mardie's Competitive Positioning

Competitive salt costs; lowest SOP cost globally



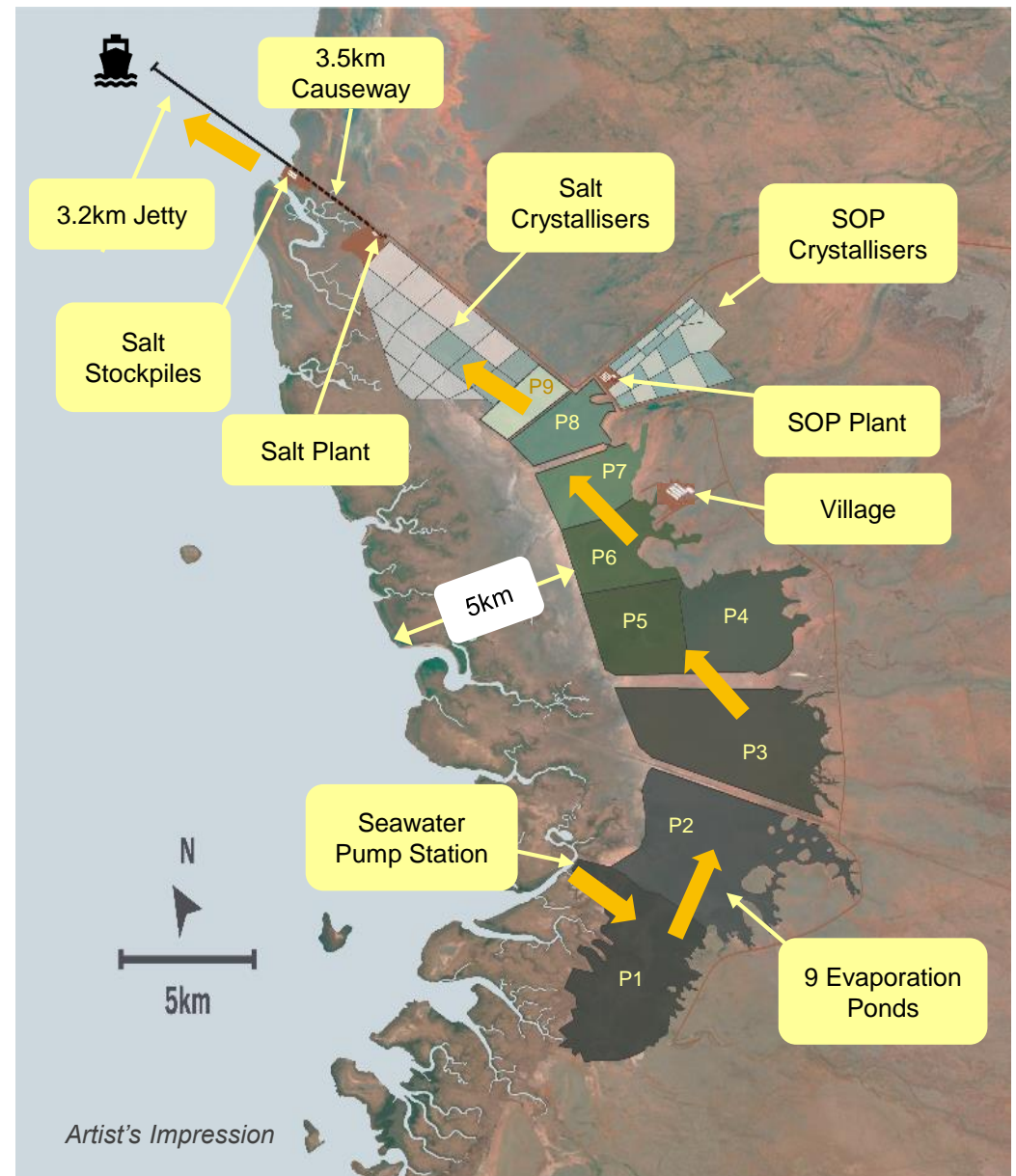
- Mexican salt into Asia and Chinese rock salt sets the Asian salt floor price ~US\$35/t CIF
- Australia has ~US\$10-15/t freight cost advantage to Mexico
- Mardie will have similar cost to existing Australian operations
- Secondary SOP (Mannheim process) sets the SOP floor price >US\$400/t FOB
- Mardie SOP is a by-product, with large % of capex & opex “sunk” against salt production
- Other Aus inland SOP projects 800-1,000km further to port than Mardie with limited roads (~US\$40-70/t additional transport cost)

Source: Roskill, SMM, Argus, BCI analysis.

1: Contestable market is where Mardie salt can be delivered at a competitive cost to other suppliers. Costs for seaborne producers shown on CIF basis, costs for Chinese domestic producers shown on an ex-works basis.

Mardie Project Overview

Key Parameters	
Production Rate	<ul style="list-style-type: none"> 4.0Mtpa Salt (>99.5% NaCl) 100ktpa SOP (>51% K₂O) (plus upside potential)
Operating Life	<ul style="list-style-type: none"> +60 years
Site Conditions	<ul style="list-style-type: none"> Low rainfall, high temp and high wind 150km² clay soils to retain water in ponds Availability of construction materials
Environmental Approvals	<ul style="list-style-type: none"> 3 years surveys & studies; ERD submitted Approval targeted by Q2 2020
Production Processes	<ul style="list-style-type: none"> 9 evaporation ponds 12 primary & 50 secondary crystallisers Salt plant and SOP plant
Port Facilities	<ul style="list-style-type: none"> 3.2km trestle jetty 3,000tph shiploader
Shipping	<ul style="list-style-type: none"> Transshipping operation (5m water depth) Handymax, Panamax and Cape Size vessels 25km offshore
Schedule	<ul style="list-style-type: none"> DFS – Q1 2020 FID – Q2 2020 Construction start – Q3 2020 First salt sales – 2H 2023



Attractive Project Economics¹

Production (60 years)

- Salt: 4.0Mtpa
- SOP: 100ktpa

Capex² (nominal)

- Salt & Port: A\$470M
- SOP: A\$100M

Opex² (FOB basis, real)

- Salt: A\$14/t
- SOP: A\$200/t

Prices (FOB basis, real)

- Salt: US\$30/t
- SOP: US\$500/t

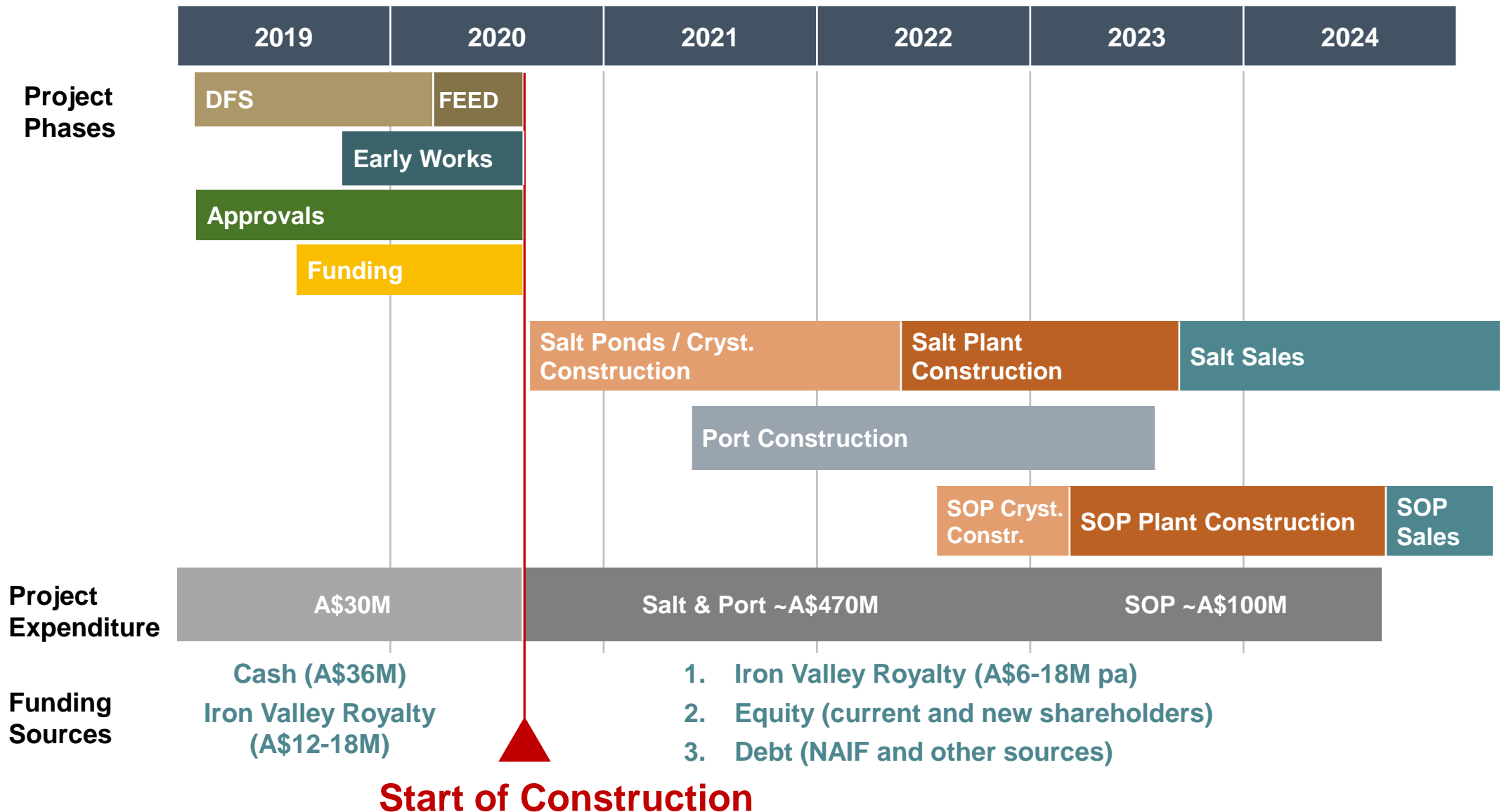
Financials^{2,3} (pre-tax, ungeared, real)

- NPV₁₀: A\$580M
- NPV₈: A\$925M
- EBITDA: A\$165M/a
- IRR: 19%

1. Refer to BCI's PFS Optimisation Study released on 17 May 2019. All material assumptions and technical parameters underpinning the production target and forecast financial information continue to apply and have not materially changed
2. Case presented on this page assumes BOO/T items from PFS Optimisation Study (power, accommodation, transhipper) are brought back on balance sheet, increasing capex and reducing opex. Increase in capex is ~A\$50M for BOO/T items and ~A\$20M from converting to nominal (2% inflation)
3. Financials based on a 60-year operating life; pre-tax basis; salt price of US\$30/t FOB; SOP price of US\$500/t FOB; AUD exchange rate of 0.70

Project Timeline – to Production

Targeting start of construction by mid 2020



Mardie DFS Progress



Marketing & Offtake

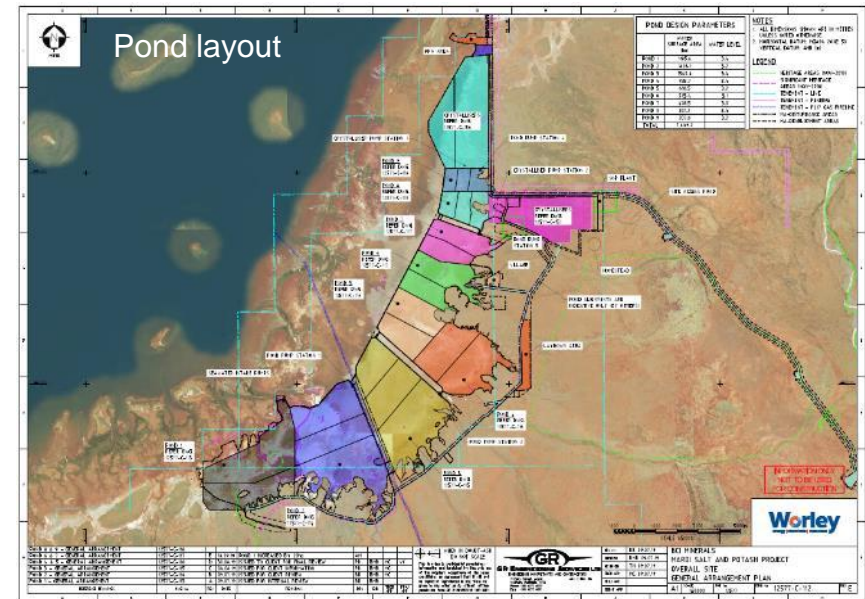
Positive progress with market development programme

- BCI is developing an experienced salt marketing team with decades of sales experience
- Placement of both Salt and SOP will be primarily across Asian countries
- **5x non-binding MOUs agreed with large Asian salt buyers which could develop into more than 2Mtpa salt sales**
- Additional discussions being progressed for salt and SOP offtake support in all markets
- Considering merits and potential to involve offtake parties as investors in BCI and/or the Mardie Project

BCI Minerals and [REDACTED]		
BCI [REDACTED]		
Memorandum of Understanding		
理解备忘录		
1.0	This Memorandum of Understanding (MOU) is entered into between	本意向书由以下双方共同订立
1.1	BCI Minerals Limited (ACN 120 646 924) of Level 1, 15 Rheola Street, West Perth, Western Australia (BCI); and [REDACTED] [REDACTED]	BCI 矿物有限公司 (ACN 120 646 924), 二层, Rheola 大街 15 号, 西佩斯, 西澳大利亚 (简称 BCI); 和 [REDACTED] [REDACTED]
2.0	Background	背景
2.1	BCI Minerals is seeking to develop its Mardie Industrial Salt and Potash Project (Mardie Project). The project is located on the West Pilbara coast of Western Australia, 70km south of Karratha. The Project will produce up to 4.0mtpa of high purity solar salt and up to 100ktpa of sulphate of potash through secondary crystallizers and processing plant. (Appendix A)	BCI 矿物公司, 目前正在寻求开发工业盐和硫酸钾项目 (马迪项目)。该项目位于西澳大利亚皮尔巴拉地区西海岸, 距离卡拉萨 70 公里。该项目设计年产 400 万吨高纯度工业盐, 并通过二次结晶和加工工艺生产每年 10 万吨硫酸钾 (附件 A)
2.3	The target specification of the salt product as set out in Appendix B and the target salt production profile for the first 5 years is as set out in Appendix C.	该项目工业盐产品的典型指标见附件 B, 投产前 5 年的产量见附件 C。
2.4	The Mardie Project key milestone dates and objectives are as follows:	马迪项目主要节点和目标如下:
	Feasibility Study complete	Nov. 2010 完成可研; 2010 年 11 月
	EPA Assessment report	Dec. 2010 完成环保局报告; 2010 年 12 月

Ponds & Crystallisers

- Pond and crystalliser layout finalised – Worley consultants
- Flowsheet and mass balance finalised – Worley consultants
- GR Engineering as overall DFS lead engineer consolidating pricing quotations
- Ramp-up schedule being finalised
- Wall designs well progressed – significant detail in support of early construction works programme
- Additional geotechnical programme underway along final pond wall alignment to confirm ground conditions and clay soil permeability



Processing Plants

▪ Salt plant

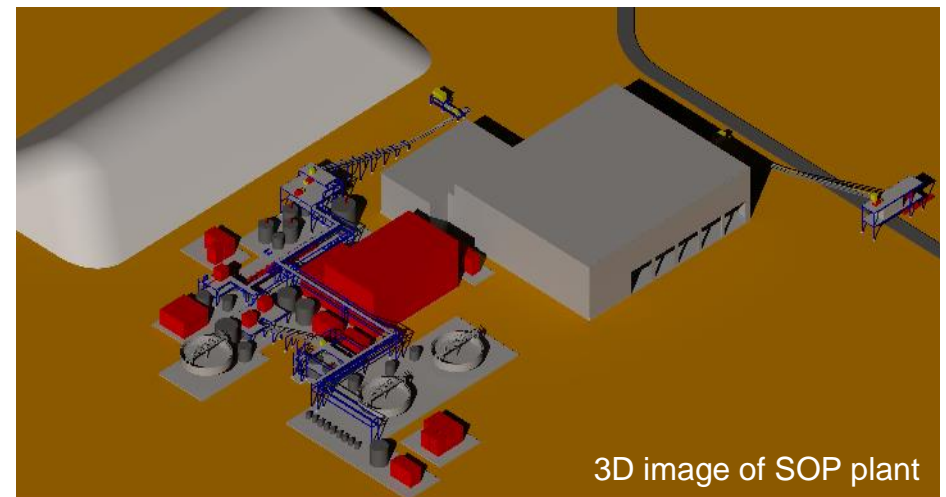
- Salt Partners (Switzerland) provided basic engineering package
- GR Engineering completing detailed design and engineering
- 700tph nameplate capacity washing plant
- Counter-current washing technology to achieve high purity product and minimise processing losses



3D image of salt plant

▪ SOP plant

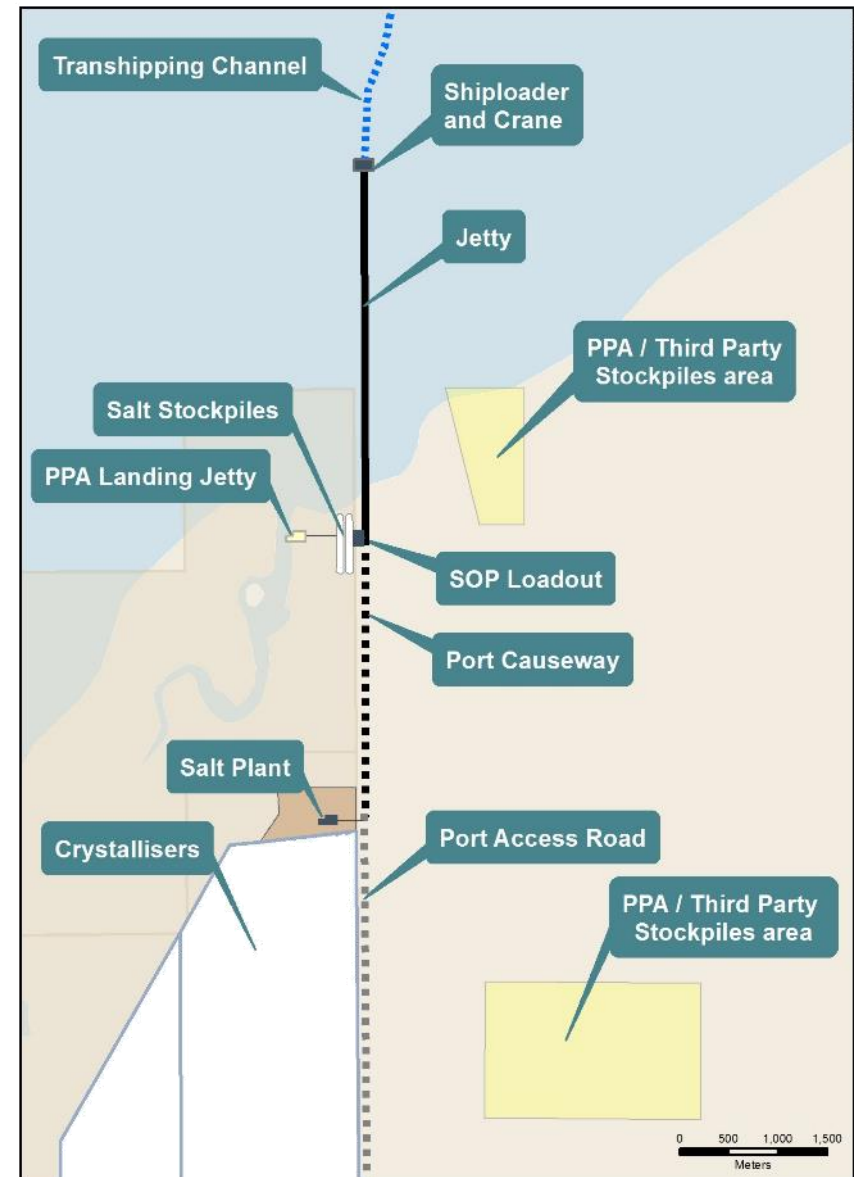
- Worley responsible for detailed design and engineering
- Flowsheet finalised – mechanical flotation technology to extract schoenite for conversion to SOP



3D image of SOP plant

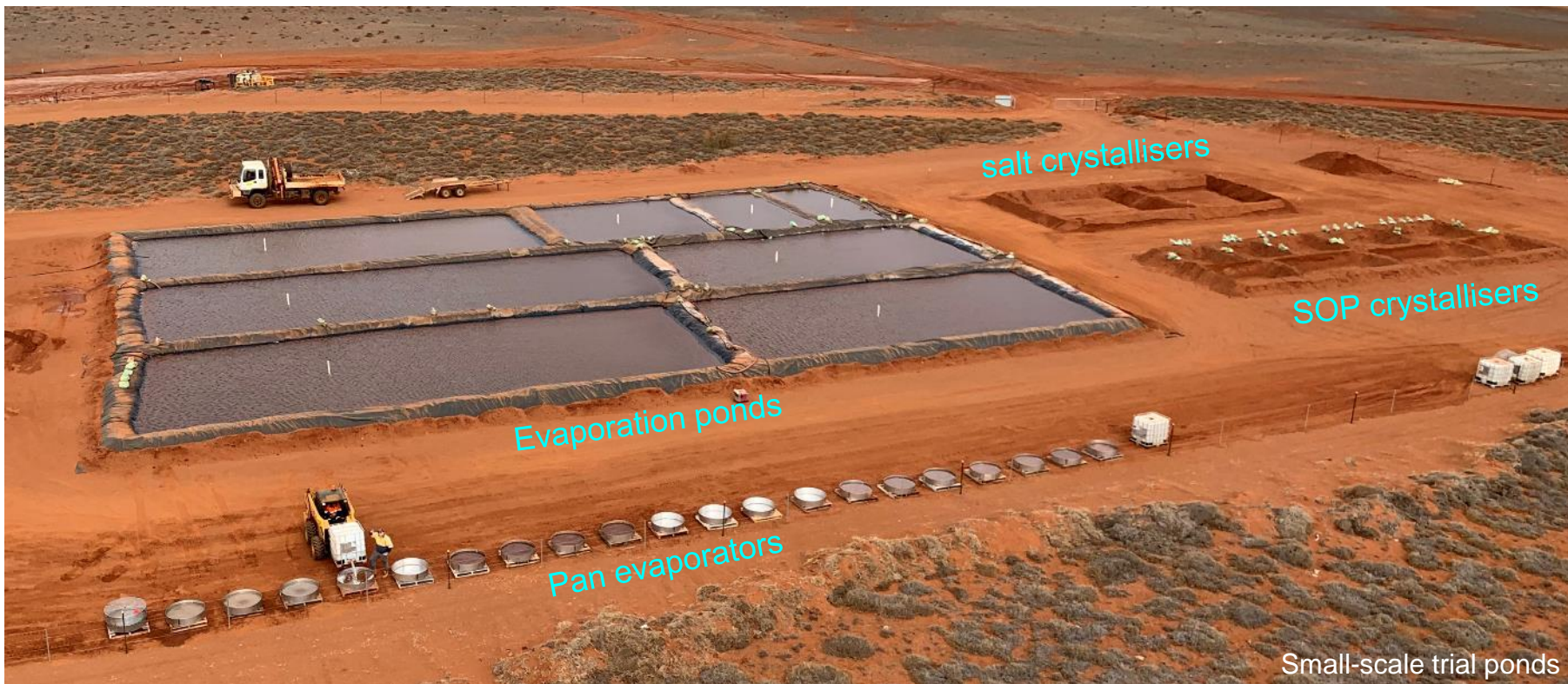
Port Facilities

- Worley responsible for design and engineering
- 0.6Mt salt stockpile capacity
- 3.2km jetty to reach ~5m water depth
- 3,000tph shiploader for bulk salt and SOP loading
- Port lease will provide for 3rd party access to BCI facilities
- Transshipping to large vessels anchored 25km offshore



Small Scale Trial Ponds

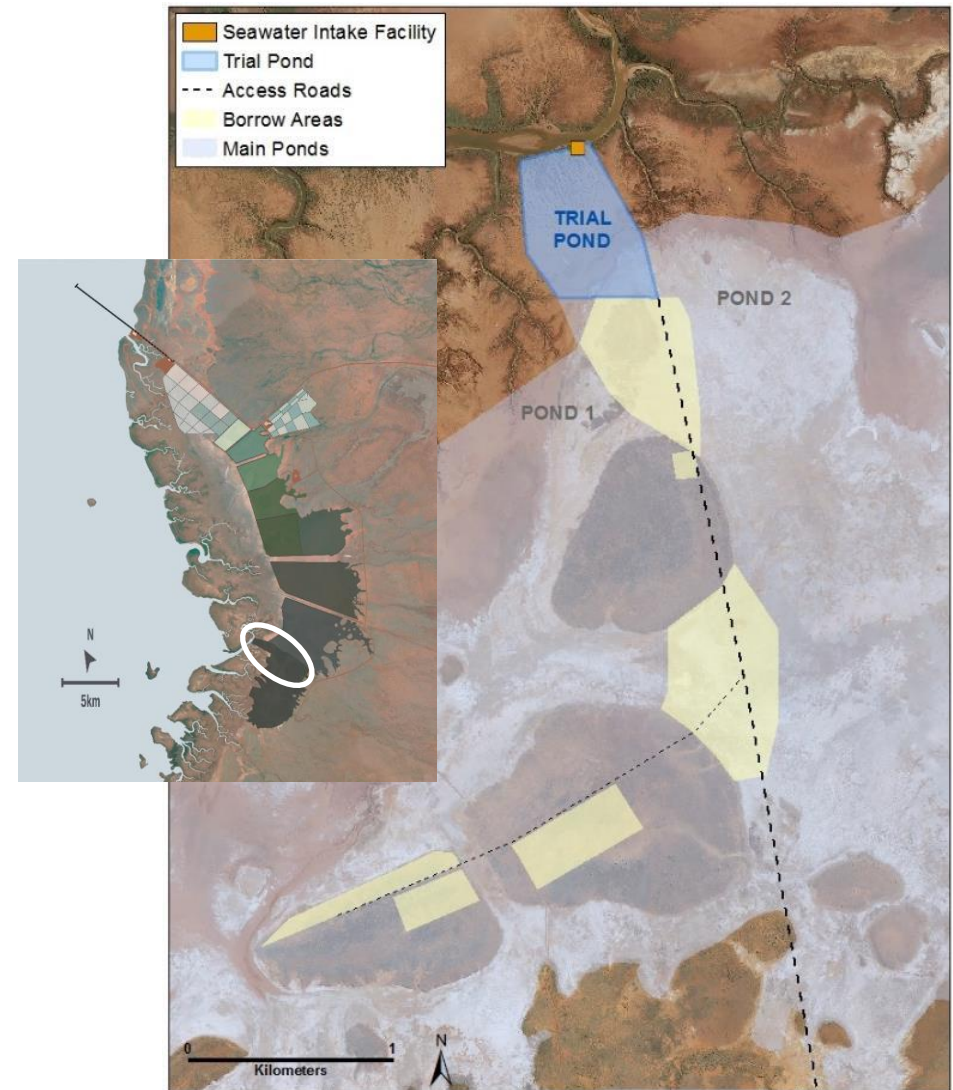
- 1:40,000 scale version (~1 hectare) of entire pond / crystalliser layout producing raw NaCl salt and Kainite-type mixed salts (KTMS) for:
 - Continuous pilot test work (SOP); and
 - Customer samples (salt & SOP)
- >20 pan evaporators for controlled site specific evaporation tests at a range of densities



Large Scale Trial Pond Programme (1)

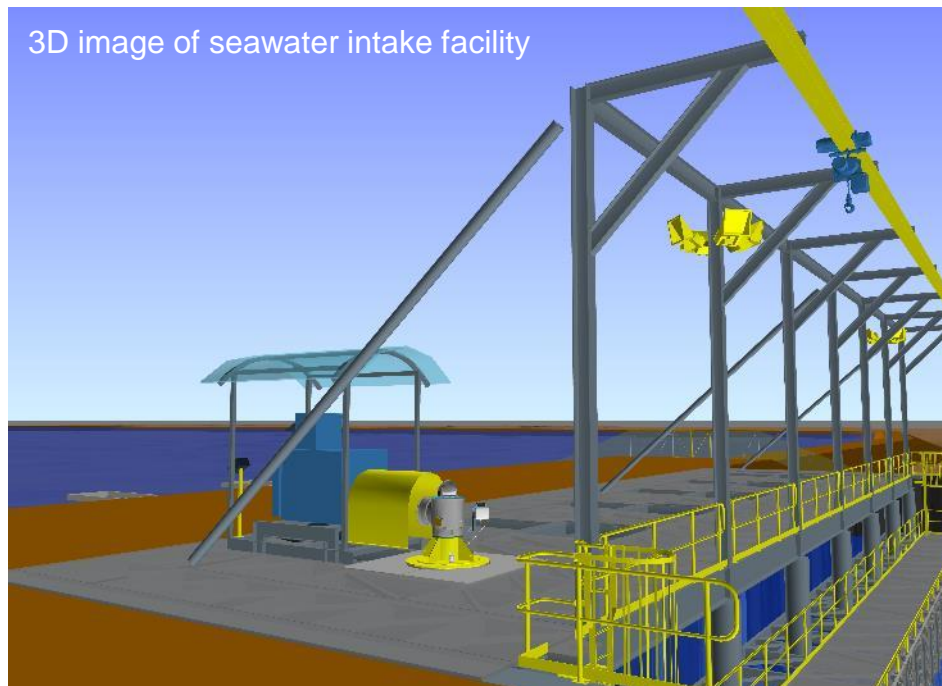
- Construction of ~A\$15M programme to commence in Q4 2019 which includes:
 1. Large-scale trial pond
 2. Seawater intake facility with 1 out of 6 pumps installed
 3. Road access and supporting infrastructure
 4. 36-bed camp

- Objectives of this program include:
 - Test construction materials and construction methodology for final application
 - Validate low permeability of clay soil on pond floors over large area
 - Validate evaporation assumptions over a large area
 - Validate pump rates and capabilities



Large Scale Trial Pond Programme (3)

- Seawater intake facilities
 - Complete civil pad and overall seawater intake infrastructure
 - Install and commission 1 of 6 pumps (2,660L/s capacity out of 16,000L/s)



Approvals & Tenure Well Defined

Environmental



- 3 years of surveys completed and no material issues identified
- Environmental review document (ERD) submitted
- EPA approval expected by Q2 2020

Heritage



- Land use agreements for production secured with Native Title claim groups
- Heritage surveys successfully completed

Tenure



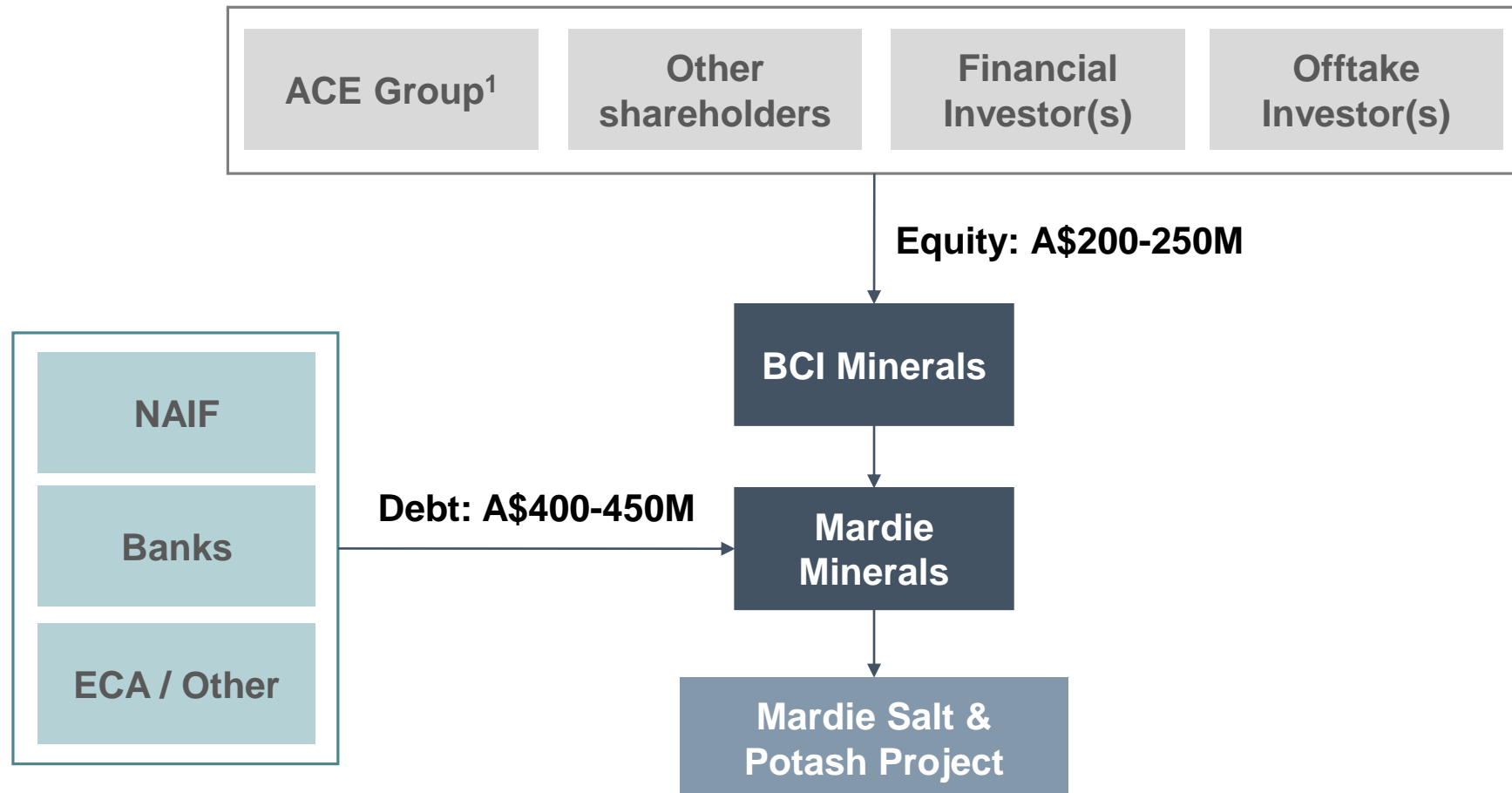
- Mining Act tenure on competitive terms with other WA salt projects
- Government support secured for Mardie port – lease terms to be settled



Preliminary Financing Structure Concepts



Excellent progress with initial engagements with debt and equity providers



1. ACE Group's 100% owned subsidiary Wroxby Pty Ltd is currently a 29.2% shareholder

Mardie is a unique opportunity to create long term value



- **BCI current market capitalisation is ~A\$75M; Assets include:**
 1. **Cash: A\$36M¹ (zero debt)**
 2. **Iron Valley royalty NPV₈ ~A\$75M²**
 3. **Mardie Project: peer comparable valuation ~A\$100M³**

- **Current upside plus additional value potential as Mardie progresses**

BCI is well positioned to develop Mardie into a globally significant Tier 1 salt and SOP project

1. *As at 31-Aug-19*

2. *At 7Mtpa production for 12 years and average FY18 realised prices (significant upside at FY19 and current realised prices)*

3. *Peer valuation based on ~10% of Mardie's NPV₈, which is a conservative ratio compared to the value to NPV ratios of other companies at similar stages of development*

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Appendix



BCI Board and Management



Brian O'Donnell
Non-Executive Chairman



- Director, Finance and Investments for Australian Capital Equity group
- Numerous current and previous board positions on ASX-listed and private companies

Alwyn Vorster
Managing Director



- Geology, Mining and MBA degrees
- Kumba; Rio Tinto; Iron Ore Holdings
- Geology; Mining; Marketing; Project studies; Funding; Corporate management

Tony Chamberlain
Project Director



- Chemistry/Metallurgy degrees (PhD)
- WMC; BHP; Vimy
- Feasibility studies, Construction, Project funding; Operations

Jennifer Bloom
Non-Executive Director



- Extensive business background with experience in governance and approvals
- Senior positions in both the private and public sector

Simon Hodge
Chief Financial Officer



- Finance degree
- JP Morgan; Poynton; Quickflix
- Corporate finance; Investment banking

Stephanie Majteles
General Counsel



- Resources lawyer
- Freehills; Rio Tinto
- Mining law, State Agreements, Approvals, Procurement

Michael Blakiston
Non-Executive Director



- Partner in Gilbert + Tobin's Energy + Resources group
- Has served on numerous ASX and not-for-profit boards

Michael Klvac
General Manager – Corporate Affairs



- Science and Economics degrees
- Rio Tinto; BHP; Iron Ore Holdings
- Environmental approvals; Native Title and Stakeholder management

Mardie Project Team

External Support

Lead DFS Engineer



Ponds & Crystallisers



Salt Plant



Salt Partners
Turning salt into gold

SOP Plant



Port



Multiple others: market, shipping, approvals, tenure and engineering

Internal Mardie Team

Tony Chamberlain

Project Director

- Chemistry / Metallurgy degrees (PhD)
- WMC; BHP; Vimy
- Feasibility studies; Construction; Operations

Laurie Huck

Eng Manager Port

- B Eng Elec
- SKM, PDC, HBH
- Feasibility studies; Design; Construction

Warwick Jones

Manager Operations

- B Eng Mining
- Barrick, BC Iron
- Mine operations; Construction; Projects

Andrew Wydler

Eng Manager Plants

- B Eng Chem
- WMC, Sherritt, BHP, Worley
- Plant design; Studies; Construction; Operations

Matt Gurr

Marketing Manager

- B Eng Chem
- Rio Tinto
- 20-years Asia marketing; Rio Tinto Korea Country Manager

Tony Cattalini

Superintendent Ops

- B Sc Chem
- Dampier Salt
- Salt operations; Construction; Gas pipeline certification

Michael Klvac

GM Corporate Affairs

- B Sc & B Comm
- Rio Tinto, BHP, IOH
- Approval; Heritage; Tenure

Takashi Kawada

Marketing Executive

- MBA, Insead Marketing
- Dampier Salt
- 15-years Asia salt marketing; GM Marketing for Dampier Salt

Brad Milne

Commercial Manager

- B Comm
- Azure Capital
- Project financing; Financial modelling

Kevin Yu

China Representative

- B Eng
- Rio Tinto
- China sales & marketing

BCI Project Development History

BCI has a track record of funding, developing and operating mining projects



1. Nullagine Joint Venture – Iron Ore:

- Developed from greenfields and operated from 2010-2015
- BCI as manager with Fortescue as 25% partner
- BCI paid A\$100M dividends to shareholders during this period



2. Iron Valley – Iron Ore:

- Developed in partnership with Mineral Resources Ltd in 2014
- BCI annual net royalty between \$6M and A\$18M
- 95Mt Reserves; 12 year mine life at current production of 8mtpa
- Significant royalty upside if BOSS light rail is developed



3. BCI is now focused on developing the 100% owned Mardie Salt & Potash Project

Iron Valley Mine – Royalty Earnings

- Quarterly earnings for BCI via royalty agreement with Mineral Resources Ltd (MIN)
 - BCI EBITDA of A\$12M in first FY19, A\$6M in FY18 and A\$18M in FY17

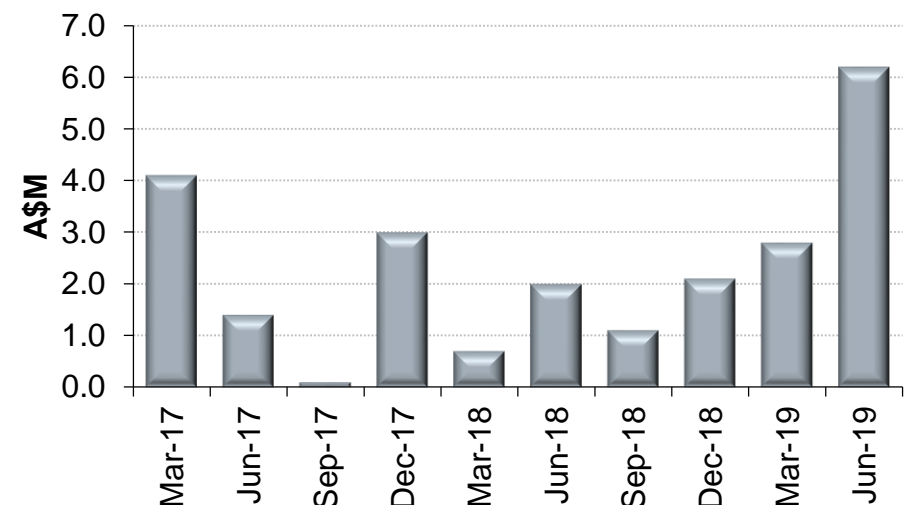
- 95Mt Reserves; 6-8Mtpa iron ore operation; 50% lump production; potential mine life of ~12 years

- Average ore grade: Lump 60% Fe; Fines 58% Fe

- Upside for BCI from MIN’s Bulk Ore Shuttle System (BOSS)¹
 - Lightweight, narrow gauge rail system with fully autonomous operation
 - Lower opex improves financial viability
 - Potential to double production rates to 16Mtpa (**higher royalty payment to BCI**)



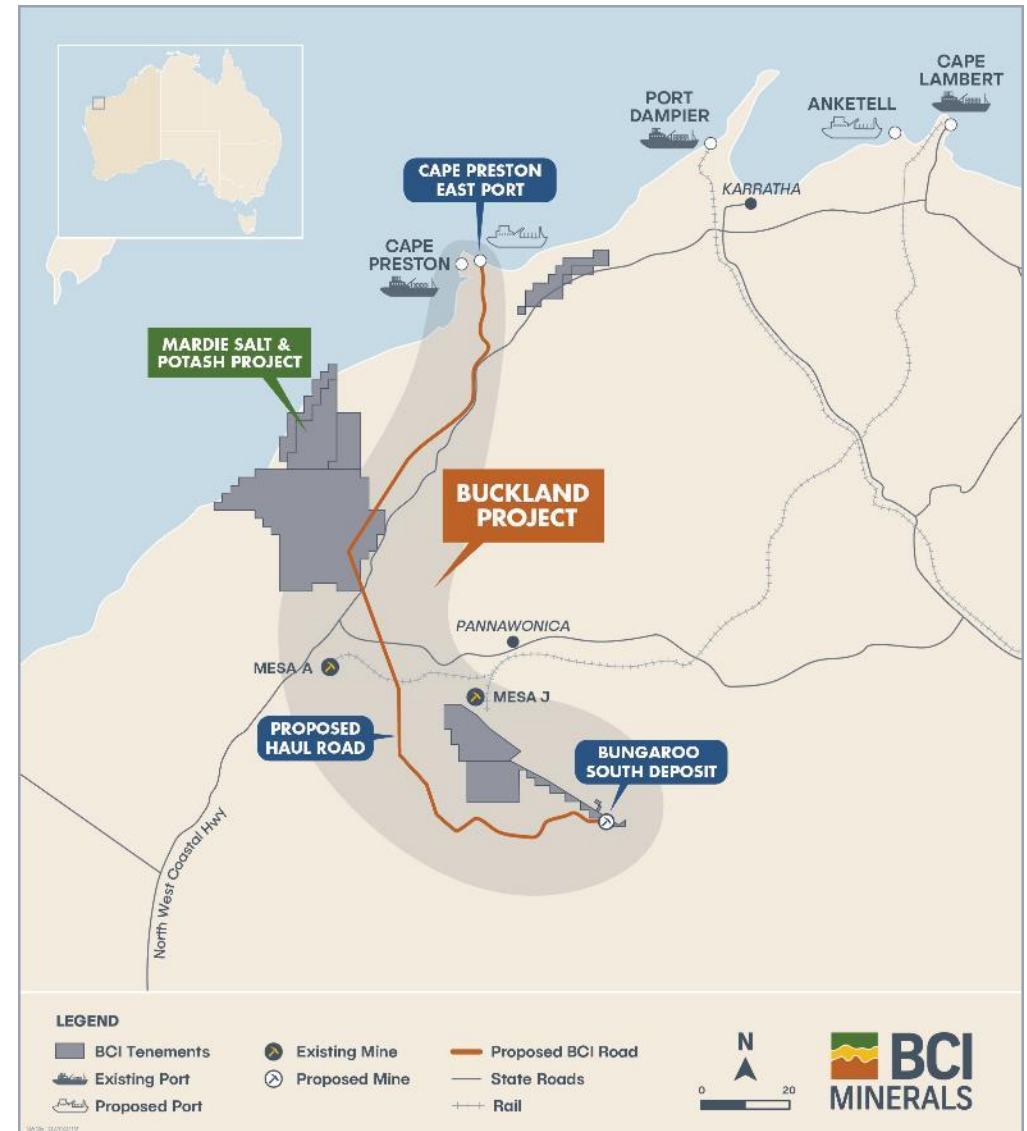
Iron Valley Quarterly EBITDA



1. Refer to MIN’s Macquarie Australia Conference Presentation (1-May-19) and FY19 Half-Year Results Presentation (21-Feb-19) for further details

Buckland Iron Ore Project

- Shovel-ready, iron ore development project in the West Pilbara
- Close proximity to other significant undeveloped West Pilbara deposits (numerous APIJV deposits, MinRes' Kumina deposit and Flinders' Pilbara Iron Ore Project)
- Ore Reserve of 134.3Mt at 57.6% Fe and Mineral Resource of 283.2Mt at 56.5% Fe¹
- Feasibility Study completed in June 2014²
 - 8Mtpa mine at Bungaroo South for 15 yrs; 1:1 strip ratio
 - Independent infrastructure solution – private haul road to new 20Mtpa transshipment port at Cape Preston East
 - NPV₁₀ of A\$990M, IRR of 24% and annual EBITDA of A\$260M
 - Upfront capex of A\$744M and C1 cash opex of A\$48.4/t
- Key tenure, approvals and agreements in place for the mine, road and port
- Current 62% Fe spot price of ~A\$135/t vs long term price assumption in Feasibility Study of ~A\$115/t
- BCI considering a sale of Buckland for appropriate value



1. Refer to Iron Ore Holdings Ltd ASX announcement "Buckland Project Updated Ore Reserve" dated 4-Jun-14
 2. Refer to Iron Ore Holdings Ltd ASX announcement "Buckland Project Positive Feasibility Study Results" dated 4-Jun-14



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