

Driving the Mardie Project Towards Development

Corporate Presentation

21 March 2019

www.bciminerals.com.au

About BCI Minerals



- Based in Perth, Australia
- ASX listed as "BCI"
- Market cap of ~A\$60M
- A\$36M¹ cash and zero debt
- Wroxby Pty Ltd largest shareholder ~28%
- Key assets:
 - Mardie Salt & Potash: 100% owned project
 - Iron Valley Mine: royalty earnings





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 FMG as partner
 - Dividends paid to shareholders: A\$100M



- 2. Iron Valley Iron Ore:
 - Developed in partnership with Mineral Resources Ltd
 - Operations from 2014 to current
 - BCI royalty receipts to date: A\$170M revenue and A\$40M EBITDA



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



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



Rapidly developing the 100% owned Mardie Project will create substantial long-term value for all BCI stakeholders

Salt Facts



>300Mtpa of Salt produced and consumed globally

Salt production methods:

- 1. Solar evaporation of seawater or inland lakes
- 2. Mining of rock salt deposits via hard rock or solution mining methods

Salt Applications:

- 1. Industrial / chemical / pharmaceutical: including glass, PVC, paper, textiles, medicines, oils etc.
- 2. Water treatment: increases purity and removes elements harmful to equipment
- 3. Food & Feed: preserves & flavours human food; essential element of animal nutrition
- 4. De-icing: improves road transport safety in winter





Global Salt Applications

- Salt Pricing:
 - High-end chlor-alkali market requires high purity premium salt as feedstock
 - High purity salt of >99.5% NaCl has sold at prices of US\$40-75/t over last 10-years
 - Most of high purity salt into Asia is shipped from Australia, Mexico and India

Salt – Supply Deficit by 2027



Mardie will target the growing chemical sector in Asia which requires high purity salt



Sulphate of Potash (SOP) Facts



- Global agricultural industry depends on three primary fertilisers – 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) KCI
 - Sulphate of Potash (SOP) K₂SO₄

Global Potash Market (Product Tonnes)



Source: Integer Research 2017, BCI analysis.

- SOP is a premium fertiliser used on higher value crops (fruits, berries, vegetables)
- SOP (~US\$500/t) has large price premium over MOP (~US\$300/t)
- SOP has a strong long-term demand outlook



Australian Salt & SOP Landscape

- Mardie will produce from an inexhaustible seawater resource:
 - Salt as primary product; and
 - SOP as by-product
- Five large existing evaporative Salt operations in the Pilbara region of WA
 - Ideal climatic conditions
 - Total production capacity of 14Mtpa
 - Up to 5 decades old
- No existing SOP production in Australia with all planned projects based on extraction of brines from inland salt lakes





BCI MINERALS

Mardie Project Layout

- Vast area of mudflats with impermeable clay soils (130km² / 13,000ha)
- Site layout designed 3-5km inland to limit disturbance of coastal ecosystem
- 6 pumps with 10,000l/s total capacity
- 8 large ponds and 36 crystallisers over a 20km x 5km area (100km² / 10,000ha)
- Salt Plant and SOP Plant with modern technology
- Salt export jetty to reach >3m water depth
- Transhipping to large vessels anchored offshore



Approvals & Tenure Well Defined





Attractive PFS Economics to Improve in DFS **BCI** MINERALS

	PFS ¹	DFS OBJECTIVES ¹
Production	Salt: 3.5MtpaSOP: 75ktpa	Salt: 4.0MtpaSOP: 100ktpa
Capex	 A\$335M 	 A\$400M
Opex (FOB all-in cash cost basis)	Salt: A\$20/tSOP: A\$250/t	 Salt: A\$16/t SOP: A\$250/t
Financials ²	 NPV₁₀: A\$335M EBITDA: A\$102M/a IRR: 20% 	 NPV₁₀: A\$450M EBITDA: A\$130M/a IRR: 25%

1. Refer to BCI's PFS release dated 1 June 2018. All material assumptions and technical parameters underpinning the production target and forecast financial information continue to apply and have not materially changed. DFS numbers are aspirational aims

2. Financials based on a 30-year operating life; pre-tax basis; salt price of US\$30/t FOB; SOP price of US\$500/t FOB; AUD exchange rate of 0.75; ocean freight cost of US\$13/t to Asia

Mardie's Competitive Positioning





- Mexican salt into Asia is setting the marginal price
- Australia has ~US\$15/t ocean freight cost advantage to Mexico
- Mardie will be cost competitive with existing Australian operations

- 3Mt of MOP converted to SOP through the chemical Mannheim process at high cost - this underpins SOP pricing
- Mardie SOP is a by-product, with large % of capex & opex "sunk" against salt production
- Inland brine SOP projects ~1,000km further to port than Mardie (~US\$50/t additional transport cost),

Proposed Development Strategy





BCI is Well Funded to FID in Early 2020





Mardie – Unique Project Opportunity



- 1. Market: Strong market outlook for salt & SOP
- 2. *Project*: Tier 1 asset ideal location, long life, large scale & low costs
- **3. Sustainability:** Inexhaustible seawater resource and production utilising ~95% solar and wind energy
- 4. Company: BCI has a positive development track record and is well funded and supported to accelerate Mardie's development

Important Notices



This presentation has been prepared by BCI Minerals Limited ABN 21 120 646 924 ("BCI").

This document contains background information about BCI current at the date of this presentation. The presentation is in summary form, has not been independently verified and does not purport to be all inclusive or complete nor does it contain all the information that a prospective investor may require in evaluating a possible investment in BCI or its assets. Some of the diagrams and pictures in the presentation are artistic representations only and should not be construed as BCI assets or having any meaning for interpretation reasons.

Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this presentation.

This presentation is for information purposes only. Neither this presentation nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sale of securities in any jurisdiction. This document is not a prospectus and does not contain all of the information which would be required to be disclosed in a prospectus. This presentation may not be distributed in any jurisdiction except in accordance with the legal requirements applicable in such jurisdiction. Recipients should inform themselves of the restrictions that apply in their own jurisdiction. A failure to do so may result in a violation of securities laws in such jurisdiction.

This presentation does not constitute investment advice and has been prepared without taking into account the recipient's investment objectives, financial circumstances or particular needs and the opinions and recommendations in this presentation are not intended to represent recommendations of particular investments to particular persons. Recipients should seek their own professional, legal, tax, business and/or financial advice when deciding if an investment is appropriate. All securities transactions involve risks, which include (among others) the risk of adverse or unanticipated market, financial or political developments. To the fullest extent permitted by law, BCI and its related bodies corporate, its directors, officers, employees and representatives (including its agents and advisers), disclaim all liability, take no responsibility for any part of this presentation, or for any errors in or omissions from this presentation arising out of negligence or otherwise and do not make any representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of any information, statements, opinions, estimates, forecasts, conclusions or other representations contained in this presentation. This presentation may include forward-looking statements. These forward-looking statements are not historical facts but rather are based on BCI's current expectations, estimates and assumptions about the industry in which BCI operates, and beliefs and assumptions regarding BCI's future performance. Words such as "anticipates", "expects", "intends", "plans", "believes", "seeks", "estimates", "potential" and similar expressions are intended to identify forward-looking statements. Forward-looking statements are only predictions and are not guaranteed, and they are subject to known and unknown risks, uncertainties and assumptions, some of which are outside the control of BCI. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecast. Actual values, results or events may be materially different to those expressed or implied in this presentation. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward looking statements in this presentation speak only at the date of issue of this presentation. Subject to any continuing obligations under applicable law and the ASX Listing Rules, BCI does not undertake any obligation to update or revise any information or any of the forward looking statements in this presentation or any changes in events, conditions or circumstances on which any such forward looking statement is based.

BCI MINERALS

Driving Mardie Rapidly Towards Development



Appendix A:

Additional Corporate & Project Information

Corporate Information



Capital Structure

Ordinary Shares	397.6M
Share Price (20-Mar-19)	\$0.155
Market Capitalisation	\$61.6M
Cash (31-Dec-18)	\$36.6M
Debt (31-Dec-18)	Nil

Shareholding and Trading

Wroxby Pty Ltd	27.6%
Top 20 Shareholders	~50%
Number of Shareholders	~7,000
Ave Daily Volume (Last 6 Months)	~500,000

Board Management Brian O'Donnell Simon Hodge (Chief Financial Officer) (Non-Exec Chairman) Alwyn Vorster **Tony Chamberlain** (Managing Director) (Project Director) Jennifer Bloom Michael Klvac (Non-Exec Director) (GM Corporate Affairs) Michael Blakiston **Stephanie Majteles** (General Counsel) (Non-Exec Director)

Share Price and Volume



Board and Management

Brian O'Donnell

Non-Executive Chairman



Jennifer Bloom

Non-Executive Director

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

Extensive business background

> Senior positions in both the

private and public sector

and approvals

with experience in governance

Alwyn Vorster Managing Director



- Geology, Mining and MBA degrees
- Kumba; Rio Tinto; Iron Ore Holdings
- Experience across geology, mining, marketing, project studies and corporate management

> JP Morgan; Poynton & Partners:

Corporate finance and investment

Simon Hodge

➢ Finance degree

Quickflix

banking

Chief Financial Officer

Michael Blakiston

Non-Executive Director



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





- Resources lawyer
 - Freehills; Rio Tinto
 - Mining law, State Agreements & approvals, procurement

BCI MINERALS

Tony Chamberlain

Project Director



- Chemistry/Metallurgy degrees (PhD)
- > WMC; BHP; Vimy
- Feasibility study, construction, project funding and operational

Michael Klvac

General Manager - Corporate Affairs



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

Simplified Process Flow



Applying latest processing technology to produce high purity products







Final investment decision targeted by Q1-20, allowing first salt sales by late 2022

Activities	2019			2020		
ACTIVITIES	Q1	Q2	Q3	Q4	Q1	Q2
Environmental Surveys & Approvals						
Mardie Port – Gov't Endorsement						
Mardie Port – Leases						
Pond, Crystalliser & Plant Design						
Port Design						
DFS Report	I I			\star		
Offtake & Funding						
Early Construction Works						
Final Investment Decision (FID)						
Construction & Commissioning						

Iron Valley Mine – Royalty Earnings



- Quarterly earnings for BCI via royalty agreement with Mineral Resources Ltd (MIN)
 - BCI EBITDA of A\$3M in H1 FY19, A\$6M in FY18 and A\$18M in FY17
- 95Mt Reserves; 6-8Mtpa iron ore operation; 50% lump production; potential mine life of ~13 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 construction start in 2H CY19
 - Potential to double production rates to 15Mtpa (higher royalty payment to BCI)







Appendix B:

Salt Information

Salt and SOP Project Locations



What is Salt?

- Salt (NaCl) is 40% sodium (Na) and 60% chlorine (Cl)
- Essential for many aspects of modern living
- >300Mtpa of Salt produced and consumed globally
- Salt is extracted via two main methods:
 - 1. Solar evaporation of seawater or inland lakes
 - 2. Mining of rock salt deposits via hard rock or solution mining methods
- High purity salt of >99.5% NaCl has attracted prices of US\$40-75/t in the high-end chemical market



Source: Roskill 2017 Salt Market Report.



Salt Uses



Salt is an essential feedstock for thousands of products



- Industrial/chemical/pharmaceutical: including glass, PVC, paper, textiles, medicines, oils etc.
- Water treatment: increases purity and removes elements harmful to equipment
- Food & Feed: preserves & flavours human food; essential element of animal nutrition
- De-icing: improves road transport safety in winter



Australian Salt Projects



- Ideal climatic conditions for solar evaporation salt production
- Currently ~15Mtpa production capacity – 95% solar salt
- Key production region is the Pilbara/Mid-West coastline
 - Five major operations with a capacity of ~14Mtpa
 - Key players are Dampier Salt (Rio Tinto, Marubeni & Sojitz) and Shark Bay Salt (Mitsui)
- <1Mtpa producers including Cheetham Salt, Tellus and WA Salt
- BCI's Mardie Salt Project located in the centre of this region



WA Salt Operations



Mardie Salt Product and Target Markets



Mardie's salt will be a high-purity product ideal for use in the Asian chemical industry

Target Salt Product Specs	
NaCl	>99.7%
Са	<0.04%
Mg	<0.02%
SO4	<0.12%

- Chlor-alkali industry requires high purity salt
- High purity salt demand in the Asian chemical industry forecast to increase from **70Mtpa to 110Mtpa** over the next decade
- Mardie's location, climate and evaporation & processing flowsheet ideal for producing high purity salt



Salt – Supply Deficit by 2027



Mardie will target the growing chemical sector in Asia which requires high purity salt



Positive Dynamics in Asian High Purity Salt Market **BCI** MINERALS

Supply deficit of ~20Mtpa forecast in next decade (~5 Mardie sized projects)





Source: Roskill 2017 Salt Market Report, BCI analysis.

- Price range of US\$33/t to US\$70/t (CIF) over last decade
- Current market segment value: **US\$2.8 billion per year**
- 2027 market segment value: US\$4.5 billion per year

Positive Price Outlook for Asian Salt Market

- Downward pricing pressure in last 5 years – average CIF price of US\$43/t
 - Primarily driven by increase in low cost and low purity Indian production
- Pricing recovery commenced in late 2018
 - Asian salt market starting to price differentiate between high and low purity salt
 - Increasing demand for higher purity products (>99.5% NaCl)
- Favourable long term outlook
 - Strong demand forecast in Asia
 - Long lead time for new supply and ongoing rationalisation of Chinese coastal supply
- Roskill forecasting price increase to ~US\$50/t CIF by 2027

Average Import Values of Australian Salt (US\$/t CIF)







Appendix C:

SOP Information

Key Plant Nutrients





- Nitrogen from Urea fertilisers
- Phosphorus from Phosphate fertilisers
- Potassium from MOP and SOP
- Magnesium and Sulphur from Magnesium Sulphate fertiliser

What is Sulphate of Potash (SOP)?

 Global agricultural industry depends on three primary fertilisers – Nitrogen (N) Phosphate (P), and Potassium (K)



- Potassium improves crop yield & quality, and increases resistance to diseases
- Two main types of potassium fertilisers:
 - Muriate of Potash (MOP) KCI
 - Sulphate of Potash (SOP) –
 K₂SO₄

Global Potash Market (Product Tonnes)



Source: Integer Research 2017, BCI analysis.





- SOP is a premium fertiliser used on higher value crops (fruits, berries, vegetables)
- SOP (US\$500-600/t) has large price premium over MOP (US\$200-300/t)

Crop Value Index



For high value crops, a small yield increase from using quality fertiliser (i.e. SOP) delivers high financial benefits



Global Harvested Area

Positive SOP Market Dynamics



More food needed from less land..... increases need for premium quality fertilisers





Source: BCI analysis.

- Price range of US\$450/t to US\$1,000/t over last decade
- Current SOP market value: **US\$4 billion per year**
- Future SOP market value: **US\$5 billion per year**

SOP Price Forecast



SOP Price (US\$/t FOB Taiwan)



	FOB US\$/t
5-yr Historical Average	544
5-yr Forecast Average 2018-22	526
5-yr Forecast Average 2023-27	541
BCI Price Assumption (PFS)	500

BCI targeting SOP specs of >51% K₂O and <1.5% CI



T +61 8 6311 3400E info@bciminerals.com.auW www.bciminerals.com.au

Level 1, 15 Rheola St West Perth WA 6005 GPO Box 2811 West Perth WA 6872