

# Developing the Tier 1 Mardie Salt & Potash Project

**Corporate Presentation** 

27 November 2019

www.bciminerals.com.au

## **About BCI Minerals**



- Based in Perth, Australia
- ASX listed as "BCI"
- Market cap of ~A\$70M
- A\$43M<sup>1</sup> cash and zero debt
- Australian Capital Equity group largest shareholder ~29%
- Key assets:
  - Mardie Salt & Potash: 100% owned project
  - Iron Valley Mine: royalty earnings (A\$12.3M EBITDA in FY19)





## **Iron Valley Mine**



- Quarterly earnings via royalty agreement with Mineral Resources Ltd (MIN)
- 6-8Mtpa production; 89Mt Reserves<sup>1</sup>
- Potential mine life of ~11 years
- 50% lump ore; 59% Fe average
- Since first production in 2014:
  - BCI Revenue: \$235M
  - BCI EBITDA: \$60M
- Quarter 1 FY20:
  - BCI Revenue: \$25M
  - BCI EBITDA: \$8M



## **The Mardie Opportunity**



#### Strong demand growth for Salt and Potash



## Salt Market



#### Increasing population requires more industrial products (with salt as primary input)



- Close correlation between GDP growth and salt demand
- Forecast for 40Mtpa salt demand growth in Asia by 2027 – primarily Chinese chemical industry



## **SOP Market**



#### More people needing more & better quality food driving SOP fertiliser demand

Global Potash Demand by Product (70Mt)





- Plant growth depends on three primary nutrients Nitrogen (N), Phosphate (P) and Potassium (K)
- Two main types of potassium fertilisers:
  - 1. Muriate of Potash (MOP) KCI (90% of market)
  - 2. Sulphate of Potash (SOP)  $K_2SO_4$  (10% of market)
- SOP is a soil friendly fertiliser used on higher value crops (fruits, berries, vegetables)
- SOP demand is driven by (i) population growth, (ii) increasing demand for high quality food and (iii) reducing arable land
- SOP demand 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 has ideal climate to produce high purity salt
  - o High temperature, high wind, low rainfall, low humidity
- Five large existing solar **Salt** operations in WA:
  - Controlled by Rio Tinto and Mitsui
  - No new large Australian salt project in 20 years
- No existing sulphate of potash (SOP) production in Australia:
  - Other projects based on inland lake brines
  - Other projects all have long distance road transport
- Mardie Salt & Potash Project:
  - Only Australian project with commercial Salt + SOP
  - Only Australian project to produce SOP from seawater
  - Only SOP producer located on coast lower cost

# salt





## **Mardie Project Footprint**



Site Conditions	<ul> <li>150km<sup>2</sup> clay soils – ideal to retain water in ponds</li> <li>Availability of construction materials</li> </ul>
Production Processes	<ul> <li>9 evaporation ponds</li> <li>42 salt &amp; 22 SOP crystallisers</li> <li>4Mtpa salt plant (up-current classifier technology)</li> <li>100ktpa SOP plant (flotation technology)</li> </ul>
Port Facilities	<ul><li> 3km trestle jetty</li><li> 3,000tph shiploader</li></ul>
Shipping	<ul> <li>Transshipping operation (5m water depth)</li> <li>Handymax, Panamax and Capesize vessels 25km offshore</li> </ul>



## Mardie DFS on Target for Q1 2020

Offtake: 7x MOUs for 2.5Mtpa salt and 10ktpa SOP



#### Flowsheet, pond and crystalliser design completed



Design of salt plant and SOP plant completed





\$5M land and marine geotechnical

programme completed



Port design completed



## **Small Scale Trial Ponds**

- 1:40,000 scale version (~1 hectare) of entire pond / crystalliser layout to produce lab-scale and customer samples
- First salt recently harvested from salt crystallisers

>20 pan evaporators for controlled evaporation tests at a range of densities





## Large Scale Trial Pond

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Construction of ~A\$15M early works programme commenced in October

Large trial pond with ~2km pond walls (capacity 175 Olympic pools)





Seawater pump station with 1 of 6 pumps installed (1 pump has 2,600l/s capacity)





## **Approvals & Tenure Well Defined**





## Mardie's Competitive Positioning



#### Potential lowest cost quartile salt producer



## Asian Salt Cost Curve –

- Mexican salt into Asia and Chinese rock salt sets the Asian salt floor price ~US\$35/t CIF
- Mardie salt will have similar cost to existing Australian salt operations (salt only)
- Mardie SOP will be the lowest cost globally
- When SOP margin treated as a by-product credit, Mardie becomes one of the lowest cost salt producers

#### Source: Roskill, SMM, Argus, BCI analysis.

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.

## Attractive Project Economics<sup>1</sup>



#### **Production (60 years)**

- Salt: 4.0Mtpa
- SOP: 100ktpa

#### Capex<sup>2</sup> (nominal)

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

#### **Opex<sup>2</sup> (FOB basis, real)**

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

#### **Prices (FOB basis, real)**

- Salt: US\$30/t
- SOP: US\$500/t
- FX: 0.70 US\$ per A\$

#### Financials<sup>2</sup> (pre-tax, ungeared, real)

- NPV<sub>10</sub>: A\$580M
- NPV<sub>8</sub>: 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)

## **Timeline to Production**



#### Targeting start of construction in 2H 2020 leading to first salt sales in 2H 2023



## **Preliminary Financing Structure Concepts**



#### Positive engagement with potential debt and equity providers



## Long Term Stakeholder and Public Benefits





Mardie is a unique opportunity to create long term value



- BCI current market capitalisation is ~A\$70M; Assets include:
  - 1. Cash: A\$43<sup>1</sup> and zero debt
  - 2. Iron Valley royalty NPV<sub>8</sub> ~A\$75M<sup>2</sup>
  - 3. Mardie Project: peer comparable valuation ~A\$100M<sup>3</sup>
- Current upside plus additional value potential as Mardie progresses

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

- 1. As at 31-Oct-19
- 2. At 7Mtpa production for 12 years and average FY18 realised prices (significant upside at FY19 and current realised prices). Refer to ASX announcement "Updated Mineral Resources and Ore Reserves" dated 25-Oct-19, including in relation to Iron Valley approval risks.
- 3. Peer valuation based on ~10% of Mardie's NPV<sub>8</sub>, 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



**Stephanie Maiteles** 

General Counsel

- 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

#### Michael Klvac

General Manager – Corporate Affairs

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

#### 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



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## **Mardie Project Team**







## **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% Fe<sup>1</sup>
- Feasibility Study completed in June 2014<sup>2</sup>
  - 8Mtpa mine at Bungaroo South for 15 yrs; 1:1 strip ratio
  - Independent infrastructure solution private haul road to new 20Mtpa transhipment port at Cape Preston East
  - NPV<sub>10</sub> 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\$130/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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