

## JUNE 2019 QUARTERLY REPORT

- **Iron Valley Mine:**
  - **Q4 FY19: High iron ore price and strong operational result by MIN delivers BCI an EBITDA of A\$6.2M from 1.9Mt shipments;**
  - **FY19 full-year: EBITDA of A\$12.2M from 7.4Mt shipments.**
- **Pre-Feasibility Study (“PFS”) Optimisation Study concluded for the Mardie Salt & Potash Project, delivering improved project economics of \$875M pre-tax NPV<sub>8</sub>.**
- **Mardie Definitive Feasibility Study (“DFS”) positive progress:**
  - **DFS engineering design and costing approximately 30% complete at end of June 2019;**
  - **Basis of design for the Mardie Port finalised. Revised port configuration comprises a 3.5km causeway to the shoreline and a 3.2km trestle jetty;**
  - **Construction of the small-scale (1:40,000) trial ponds completed and the evaporation trial now operational;**
  - **Mardie advances to the due diligence phase (Stage 3) of the Northern Australia Infrastructure Facility’s (“NAIF”) funding assessment process;**
  - **Non-binding MOUs entered into with credible salt end-users in Asia, covering 30% of Mardie’s planned salt output for an initial 3-year period.**
- **Cash balance at 30 June 2019 of A\$33.7M and zero debt.**

BCI Minerals Limited (ASX:BCI) (“BCI” or the “Company”) presents its quarterly activities report for the period ended 30 June 2019.

### MARDIE SALT & POTASH PROJECT

The 100% owned Mardie Project will produce salt and sulphate of potash (“SOP”) from seawater on the northwest coast of Western Australia, one of the world’s premium locations for solar evaporation operations. Mardie is a unique and sustainable opportunity, which will use an inexhaustible seawater resource and apply mainly natural solar and wind energy to drive production of salt and SOP. These products will be supplied into the Asian growth markets over a potential project life of 50+ years.

A Definitive Feasibility Study (“DFS”) on a 4Mtpa salt and 100ktpa SOP project is due to be completed in the March 2020 quarter.

## *Optimisation Study*

A Pre-Feasibility Study (“PFS”) Optimisation Study was concluded during the June 2019 quarter, delivering an enhanced development case with improved project economics.<sup>1</sup>

Key changes to the development case for the PFS Optimisation Study relative to the PFS include:

- Salt production increased from 3.5Mtpa to 4.0Mtpa;
- SOP production increased from 75ktpa to 100ktpa;
- Salt and SOP now exported via a new port at Mardie, eliminating all road haulage costs;
- Operating life increased from 30 years to 60 years.

The key economic outcomes from the PFS Optimisation Study include a pre-tax NPV<sub>10</sub> of A\$560M, pre-tax IRR of 20% and annual EBITDA of A\$155M. Pre-tax NPV increases to A\$875M at a discount rate of 8%.

The PFS Optimisation Study development case is forming the basis of the DFS, with other project optimisations being included as work on the DFS progresses.

## *DFS Activities*

The DFS is progressing well across all key areas, with engineering approximately 30% complete as at the end of June 2019.

The project mass balance has been completed by Worley and the evaporation pond and crystalliser layout has been finalised. Optimisation work has resulted in a nine-pond layout being adopted for the DFS (as opposed to eight ponds in the PFS Optimisation Study) to maximise production from the available pond area.

Detailed design and pricing of the salt plant is nearing completion. For the SOP plant, the lower risk and more economic mechanical flotation has been selected as the preferred processing option (as opposed to the cold conversion option in the PFS Optimisation Study).

The basis of design for the Mardie Port now includes a 3.5km causeway to span the landside area from the salt plant to the salt stockpiles at a new elevated location near the shoreline. A 3.2km trestle jetty spans the marine area from the salt stockpiles to the ship loading infrastructure and berth pocket offshore. This revised configuration is expected to have a lower capital cost and reduced execution risk compared to the PFS Optimisation Study configuration of a 7km trestle jetty spanning both the landside and marine areas.

BCI is completing additional geotechnical drilling during the second half of 2019 in the pond and port areas to significantly de-risk construction and operations. Geotechnical drilling and testwork in the pond areas will build on previous drilling to establish ground conditions along the final pond wall alignment and confirm continuity of the impermeable clay layer over the entire pond footprint. Marine geotechnical drilling in the port area will inform the piling design for the trestle jetty and establish preferred methods and expected costs for dredging the berth pocket and shallow sections of the transhipper channel.

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<sup>1</sup> Refer to BCI's PFS Optimisation Study announcement 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.

Figure 1: Marine Geotechnical Drilling Vessels & Equipment at Mardie



### *Evaporation Trials*

BCI is conducting evaporation trials at site over an area of one hectare, which comprises 21 pan evaporators plus a 1:40,000 scale version of the entire project layout (evaporation ponds, salt crystallisers and SOP crystallisers). The trial will provide site-specific evaporation data at a range of densities and simulate the full evaporation process at a reduced scale. The trial will also produce raw NaCl salt and kainite-type mixed salts (“KTMS”) for salt and SOP processing test work and marketing samples.

Construction of the small-scale trial ponds was completed during the June 2019 quarter and they are now operational. The evaporation ponds have been filled with Mardie seawater and the SOP crystallisers have been filled with potassium-rich bitterns secured from a nearby salt operation to fast-track this part of the trial. The salt crystallisers will be filled with brine once the density of evaporated seawater reaches sufficient levels.

Figure 2: Small-scale Trial Ponds



Design of the large-scale trial pond covering 40 hectares is at an advanced stage. Key objectives will be to test preferred pond wall construction methods and confirm permeability of the Mardie mudflats over a large area.

### *Tenure and Approvals*

BCI continued to advance the required tenure and approvals for the Mardie Project during the June 2019 quarter.

Mining Lease applications and supporting documents for the evaporation ponds, crystallisers and production plants areas have commenced and will be submitted later in 2019. BCI is working closely with the Pilbara Ports Authority (“PPA”) and other Government departments to establish tenure and agreements required for development of the Mardie Port.

The Environmental Review Document (“ERD”) for the Mardie Project was submitted to the WA Environmental Protection Authority (“EPA”) in April 2019 and review by the EPA and other relevant Government departments and agencies is underway, with EPA endorsement targeted by early 2020.

### *Heritage*

BCI has secured the required native title agreements and traditional owners consents to allow production at Mardie.

### *Funding and Offtake*

BCI is actively working on funding and offtake solutions for Mardie in parallel with the DFS and approvals workstreams, to facilitate timely development of the Project.

During the quarter, the Northern Australia Infrastructure Facility (“NAIF”) completed its strategic assessment of the Mardie Project and advised BCI that Mardie has progressed to the due diligence phase of NAIF’s formal assessment process. BCI will work closely with NAIF during the due diligence phase to develop an acceptable investment case.

Securing suitable product offtake support will be an essential requirement of raising debt and equity, and BCI is making solid progress in this area. Three non-binding MOUs were signed with credible Chinese chloralkali producers (buyers of salt). These MOUs cover 30% of Mardie’s planned salt output for three years and define an engagement process for the parties to achieve offtake agreements in the future.

Positive discussions are ongoing with a number of other salt end-users in Asia and BCI is aiming to secure additional salt MOUs in the second half of 2019. Discussions are also progressing with SOP end-users and traders.

## IRON VALLEY MINE

Iron Valley is a mine in the Central Pilbara region that is operated by Mineral Resources Limited (“MIN”) and has Ore Reserves of 95Mt at 58.4% Fe as at 30 June 2018.<sup>2</sup> BCI receives a quarterly royalty from MIN and from this, BCI pays WA State Government royalties, Native Title royalties and a private royalty.

Iron Valley is benefiting from current iron ore prices, which have increased significantly over the first half of 2019 due to supply constraints in Brazil and Australia coupled with healthy steel demand. The Platts CFR 62% Fe iron ore price averaged US\$100/t during the June 2019 quarter and has remained strong, with the current spot price of ~US\$120/t at the highest levels seen in 5 years. Discounts for lower grade iron ore production like Iron Valley are at multi-year lows.

MIN shipped 1.9 million wet metric tonnes (“M wmt”) from Iron Valley during the quarter. Existing stockpiles of lower-priced fines product were drawn down further, with fines accounting for ~70% of product shipped during the quarter. This compares to an overall product mix of 45% fines and 55% lump since operations commenced in 2014.

BCI’s revenue from Iron Valley for the quarter was A\$18.4M and EBITDA was A\$6.2M, which included a positive prior quarter adjustment of A\$1.4M. This represents the second highest quarterly EBITDA from Iron Valley since operations commenced in 2014 and the highest since the December 2016 quarter, which delivered A\$8.1M EBITDA.

Figure 3: Iron Valley Quarterly Shipments (M wmt)

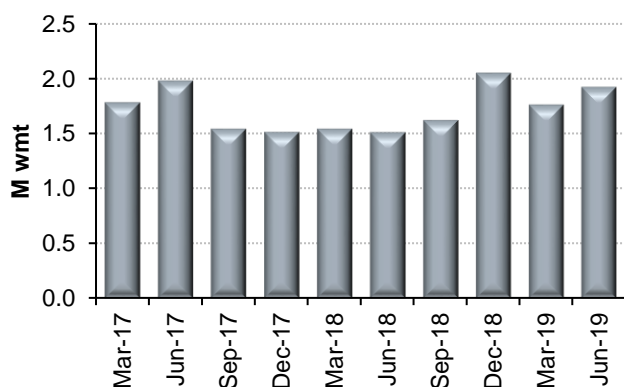
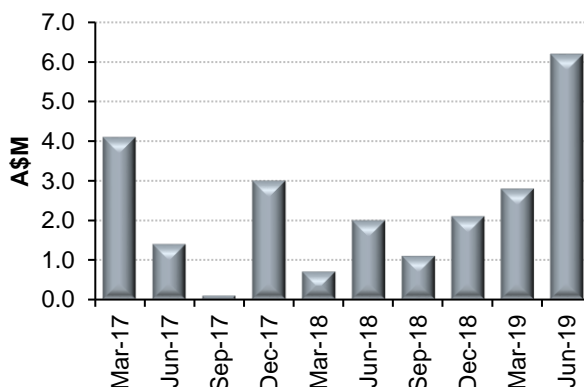


Figure 4: Iron Valley Quarterly EBITDA (A\$M)



For FY19, BCI’s revenue from Iron Valley was A\$50.6M and EBITDA was A\$12.2M from 7.4M wmt of shipments.

If the iron ore market and MIN’s production levels remain strong, FY20 will be another positive year for BCI’s Iron Valley royalty. Excluding the prior quarter adjustment, the underlying June 2019 quarter EBITDA of A\$4.8M implies an annualised run-rate of A\$19.2M, with upside if iron ore prices remain at current levels and/or the proportion of higher-priced lump product shipped from Iron Valley increases towards life-of-mine average levels.

<sup>2</sup> Refer to BCI’s announcement “Updated Mineral Resources and Ore Reserves” dated 18 October 2018 for further details. BCI is not aware of any new information or data that materially affects the information included in that document.

## ASSET DIVESTMENT PROCESS

BCI continues to divest its iron ore assets and exploration tenements, with the aim of providing additional funding for and focusing management time on the Mardie Project. During the quarter, BCI completed a sale of its Marble Bar tenements to a private group for total cash consideration of A\$2.25M, of which A\$0.5M was received upon completion.

## CORPORATE

### *Cash and Debt Position*

BCI's cash balance as at 30 June 2019 was A\$33.7M (31 March 2019: A\$35.4M) and the Company remains debt free. With a market capitalisation of A\$77.5M on 31 March 2019, this implies an enterprise value of only A\$43.8M, including the value of the Iron Valley royalty and the 100% owned Mardie Project.

Expenditure on the Mardie Project will increase during the current quarter onwards as DFS activities ramp-up, however this will be partially offset by strong current Iron Valley earnings (including the June 2019 quarter EBITDA of A\$6.2M which will be received in July 2019).

### *Health & Safety*

BCI's lost time injury ("LTI") free period now exceeds 4 years, which is an outstanding result given material exploration and other site-based activities have occurred during this time. BCI is committed to providing a safe working environment for its staff and contractors, which will be a key focus for the Company as on-site activities increase at Mardie during 2019.

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## ABOUT BCI MINERALS

BCI Minerals Limited (ASX:BCI) ("BCI") is an Australian-based company that is developing a salt and potash business supported by iron ore royalty earnings.

BCI is focused on rapidly advancing its 100% owned Mardie Salt & Potash Project, a potential Tier 1 project located on the West Pilbara coast in the centre of Australia's key salt production region.

Mardie will produce high-purity salt (typically >99.5% NaCl) and sulphate of potash ("SOP") (typically >51% K<sub>2</sub>O) via solar evaporation of seawater. Using an inexhaustible resource and a production process driven mainly by natural solar and wind energy, Mardie is a sustainable opportunity to supply the salt and potash growth markets in Asia over many decades.

The long-term demand outlook for both salt and SOP is positive. Salt, or NaCl, is an essential mineral used extensively in modern life. High purity salt produced at Mardie will be used in chemical and industrial processes that create thousands of everyday products. Demand in this market segment, particularly in Asia, is expected to grow strongly over the next decade and result in a supply deficit.

Increasing population and urbanisation requires more and better-quality food to be produced from less arable land. SOP is a premium fertiliser providing two key nutrients – potassium and sulphur – which improves plant growth and makes it drought resistant. SOP is mostly used on high value crops where yield increases deliver larger financial benefits.

Following a positive Pre-Feasibility Study in 2018, a Definitive Feasibility Study on a 4Mtpa salt and 100ktpa SOP operation is underway and due to be completed by late 2019. Key approvals are expected to be in place by early 2020 and a Final Investment Decision (FID) is targeted by Q1 2020.

BCI receives quarterly royalty earnings from Iron Valley, an iron ore mine located in the Central Pilbara region of Western Australia which is operated by Mineral Resources Limited (ASX:MIN) (95Mt JORC Ore Reserve<sup>1</sup>). BCI's EBITDA from Iron Valley has ranged from A\$5.6-18.3M per annum, with FY19 delivering A\$12.2M.

## KEY STATISTICS

<b>Shares on issue:</b>	397.6 million	
<b>Cash and cash equivalents:</b>	\$33.7 million	as at 30 June 2019
<b>Board:</b>	Brian O'Donnell	Non-Executive Chairman
	Alwyn Vorster	Managing Director
	Michael Blakiston	Non-Executive Director
	Jenny Bloom	Non-Executive Director
<b>Major shareholders (&gt;5%):</b>	Wroxby Pty Ltd	29.3%
<b>Website:</b>	<a href="http://www.bciminerals.com.au">www.bciminerals.com.au</a>	

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