Market Update

10 February 2020

Cobalt Blue Holdings Limited

A Green Energy Exploration Company

ASX Code: **COB**

Commodity Exposure:

Cobalt & **Sulphur**

Directors & Management:

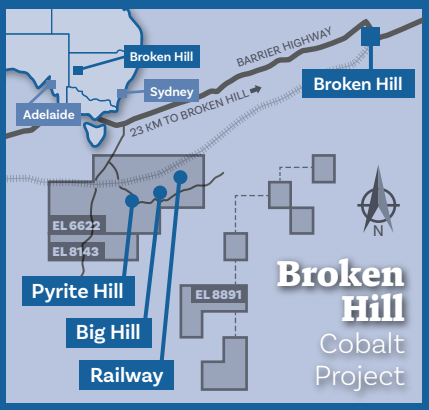
Robert Biancardi	Non-Exec Chairman
Hugh Keller	Non-Exec Director
Robert McDonald	Non-Exec Director
Joe Kaderavek	CEO & Exec Director
Robert Waring	Company Secretary

Capital Structure:

Ordinary Shares at 10/02/2020:	**150.9m**
Options (ASX Code: COBO):	**29.6m**
Market Cap (undiluted):	**$20.4m**

Share Price:

Share Price at 10/02/2020:	**$0.14**



Cobalt Blue Holdings Limited

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Highlights

Project and Future Battery Industries CRC success

KEY POINTS

- Cobalt Blue Holdings Limited (ASX:COB) is proud to announce that it has been awarded A$2.4 million of Cooperative Research Centre (CRC) – Project Round 8 Funding from the Australian Government for applied research and development of the processing of cobalt-pyrite ore to generate battery ready cobalt sulphate over the next three years.
- COB will receive A$1.57 million for the development and operation of its Demonstration Plant, with the remainder being allocated to the University of New South Wales and the Australian Nuclear Science and Technology Organisation for applied research on the pyrolysis stage of the metallurgical process.
- COB is a participant in the Future Battery Industries CRC that was recently granted A$25m by the Australian Government. The FBI-CRC is a A$136 million industry and research collaboration that will further develop all aspects of the value chain for battery manufacture in Australia.

Cobalt Blue's Chief Executive Officer, Joe Kaderavek said:

"We are delighted to secure $2.4 million funding from the Australian Government's CRC-Projects Program to develop and optimise the processing of our cobalt-pyrite ore to battery grade cobalt sulphate and elemental sulphur products."

COB looks forward to working with our research and development partners University of New South Wales (UNSW), Australian Nuclear Science and Technology Organisation (ANSTO), and Anergy Australia over the next three years to undertake applied processing and larger scale test work to demonstrate and optimise the processing of our ore to generate battery ready cobalt sulphate.

COB is also a participant in the Future Battery Industries CRC which was granted A$25 million from the Australian Government in May 2019. Future Battery Industries CRC has a six-year plan to fix gaps identified by industry in the value-chain from mining, processing, manufacture, deployment and recycling. COB will participate in the Battery Minerals, Metals and Materials Program that aims to develop sustainable, traceable, cost-effective production pathways for refined battery metals and materials from their primary (natural) and secondary (recycled) resources.

Together, the CRC-Project and the Future Battery Industries CRC, provide an exciting opportunity for COB to validate and optimise the technology for the processing of its cobalt-pyrite ore to generate cobalt sulphate for battery manufacture and the production of elemental sulphur for use in Australian agriculture and metal processing industries.

CRC – Project: Innovative processing of cobalt-pyrite ore to produce battery ready cobalt sulphate

COB has been awarded A$2.4 million over a three year period under the CRC-Project Program administered by the Australian Government. In partnership with the UNSW, ANSTO and furnace manufacturer Anergy Australia, COB will further develop and optimise at larger scale the processing of cobalt-pyrite ore at Broken Hill to produce battery grade cobalt sulphate and elemental sulphur products.

The Broken Hill Cobalt Project (BHCP) contains cobalt present as a cobalt-pyrite mineral. The aim of the BHCP is to become a long life cobalt producer (producing approximately 4% of the global supply per annum) whilst satisfying ~25% of Australian elemental sulphur trade deficit. The Australian Government is developing a national strategic goal to become a globally significant battery materials supplier.

The overall development timeline for the Broken Hill Cobalt Project is shown below:

Figure 1: **The BHCP Development Timeline**

2017	2018	2019	2020	2021	2022
■ IPO ■ Resource upgrade Drilling: +8,000m Resource: 55Mt ■ Scoping Study	■ Resource upgrade Drilling: +12,500m Resource: 72Mt ■ LGI – Cobalt First Mover ■ Pre Feasibility Study	■ Mitsubishi – Sulphur Agreement ■ Concentration – Pilot Scale Testwork ■ Resource upgrade Drilling: +9,500m Resource: 111Mt ■ 100% Project Ownership ■ CPDP Submitted	■ Pilot Plant – Q2 2020 ■ Ore Reserve Update – Q2 2020 ■ Scoping Report – Jan 2020 ■ SEARs issued – Q2 2020	■ Demonstration Plant – Q1 2021 ■ EIS Submission – H2 2021	■ Feasibility Study and Approvals – Q1 2022 ■ Final Investment Decision – Q1 2022 ■ SSD Determination – H1 2022
ACHIEVEMENTS			GOALS		

Project Scope

The innovative COB process has two key components, firstly, the thermal decomposition of pyrite to produce pyrrhotite and elemental sulphur, and secondly, the leaching of artificial pyrrhotite to reclaim the cobalt.

The first of these processes will be researched and improved by a select team of chemists and minerals analysis experts at UNSW Sydney, ANSTO and COB, and includes a team of two post-graduate researchers.

COB has worked with equipment vendor ANERGY to scale up from batch tests undertaken at ALS Metallurgy in a small furnace designed by COB, to a continuous equipment system. To date, trials comprising 150 kg of pyrite concentrate have been undertaken at a throughput rate of 4-8 kg/h.

COB is now planning a pilot trial plant at ANERGY to treat 10 t of Broken Hill cobalt-pyrite concentrate to form pyrrhotite and sulphur.

The pilot research will investigate:

- Material handling systems for the solids.
- Off-gas handling and recovery of sulphur to ensure no unintended cooling and deposition of sulphur within the system.
- Energy requirements for steady state operation.
- Better understanding of steady state conditions including bed temperature in the furnace, residence time and bed rotation.

The outcomes of the pilot research will inform the design and operation of the Demonstration Plant. COB is planning to construct, commission, and operate a Demonstration Plant during 2020 to confirm that the process can be scaled up and continuously operated. The Demonstration Plant will continuously process several thousand tonnes of ore extracted from the Broken Hill Cobalt Project. Cobalt sulphate produced at the Demonstration Plant will be provided to battery manufacturers for acceptance testing as a battery precursor material.

Outcomes

By undertaking the CRC-P grant and participating in the FBI CRC, COB will achieve the following outcomes:

- Trained personnel that can be employed in future operations.
- De-risk technical aspects of minerals processing to produce battery ready cobalt sulphate.
- Ability to apply technology to other projects in Australia.
- New method for elemental sulphur production in Australia.

Purpose of CRC-Projects

CRC-P grants support short term industry-led collaborations to develop important new technologies, products and services that deliver tangible outcomes. Whilst Round 8 was open to all industry sectors, it included A$10 million in funding for CRC Projects with a specific focus on critical minerals. Developing Australia's critical minerals capability through CRC-Ps will support the Australian Government's national critical minerals strategy by enabling Small to Medium Enterprises to develop and leverage new technologies, products, processes and services, ensuring that Australia is well positioned to take advantage of new market opportunities.

Future Battery Industries Co-operative Research Centre

The FBI CRC builds on the strengths of industry and researchers across Australia. The centre will research areas including value chain development, sourcing of materials and the wider deployment of batteries in homes, infrastructures and society.

The research partnership of 58 industry, academic and government partners will address industry-identified gaps in the battery industries value chain. The aim is to expand battery minerals and chemicals production, develop opportunities for specialist battery manufacture; support battery deployment; and optimise the circular economy for the use and re-use of battery systems, delivering an estimated $2.5 billion benefit to the Australian economy over the next 15 years.

The CRC will generate knowledge that will expand Australia's competitive advantages, support research-based policies and help build the necessary skills for emerging battery industries. It will also support the development of hubs and precincts of globally competitive battery industries.

See www.fbicrc.org.au for further information.

Cobalt Blue Background

COB is developing the Broken Hill Cobalt Project (100% COB) as well as commercialising its proprietary cobalt in pyrite extraction technology. This strategic metal is in strong demand for new generation batteries, particularly lithium-ion batteries now being widely used in clean energy systems.

Looking forward, we would like our shareholders to keep in touch with COB updates and related news items, which we will post on our website, the ASX announcements platform, as well as social media such as Facebook (f) and LinkedIn (in). Please don't hesitate to join the 'COB friends' on social media and to join our newsletter mailing list at our website.

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Approved by the COB Board of Directors

Previously Released Information

This ASX announcement refers to information extracted from the following reports, which are available for viewing on COB's website http://www.cobaltblueholdings.com

- 9 December 2019: Pilot Plant Update
- 24 June 2019: Concentrate Circuit (Pilot Trial) program successfully completed
- 31 May 2019: COB-Mitsubishi Sulphur Agreement
- 26 February 2019: Testwork Update
- 04 July 2018: Thackaringa Pre Feasibility Study Announced

COB confirms it is not aware of any new information or data that materially affects the information included in the original market announcement, and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. COB confirms that the form and context in which the Competent Person's findings presented have not been materially modified from the original market announcement.