Market Update

CobaltBlue
green energy technology

06 October 2022

Cobalt Blue Holdings Limited

A Green Energy Exploration Company

ASX Code: **COB**

Commodity Exposure:

Cobalt & **Sulphur**

Directors & Management:

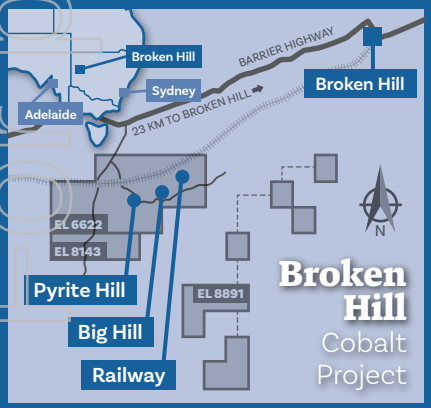
Robert Biancardi	Non-Exec Chairman
Hugh Keller	Non-Exec Director
Robert McDonald	Non-Exec Director
Joe Kaderavek	CEO & Exec Director
Danny Morgan	CFO & Company Secretary

Capital Structure:

Ordinary Shares at 06/10/2022:	**330.6m**
Unlisted options/rights:	**9.1m**
Market Cap (undiluted):	**$240m**

Share Price:

Share Price at 06/10/2022:	**0.73**



Cobalt Blue Holdings Limited

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Highlights

Demonstration Plant – Ore Processing Update

KEY POINTS

- As previously reported, underground mining has been completed with 4,500 t of ore extracted.
- Concentrator circuit has subsequently completed phase one of testwork on 500 t of ore. We expect a further 2,500 – 3,000 t of ore to be concentrated over the next 4 weeks.
- Gravity circuit upgraded cobalt in ore to ~4,300 ppm in concentrate (with 75% mass rejection). Cobalt in ore varied from low grade ~500 ppm to >1,000 ppm with consistency of upgrade confirmed.
- Kiln circuit commissioned, with leach and MHP production circuits to follow shortly.

Commenting on recent events, Cobalt Blue's Chief Executive Officer, Joe Kaderavek said: *"The (approximate) 5x grade improvement from concentration is a key project enabler, with phase one of this large scale work continuing to confirm expectations".*

Concentrator Operations

The concentrator has completed the first phase of testwork. In this program, the focus was on gravity separation of cobalt-pyrite from the ore. The ore was milled from 4 mm top size to a target of 1.5 mm top size using a roller mill. This simulated the use of a High Pressure Grinding Roll (HPGR) mill in the circuit.

In this initial program, a total of 500 t of ore has been processed, to produce 125 t of concentrate. The average grade of gravity circuit concentrate was 4,360 ppm cobalt across the first phase of testwork, and a mass rejection of 75% to tailings.

In phase two of the testwork program, a ball mill will be used to prepare finer feed material to the circuit (target p80 600-800 um). Additionally, a float circuit will be used to recover the fine fractions of pyrite (<75 um). Overall target recoveries of >90% are expected with these inclusions. These recoveries and upgrades are in line with our earlier technical studies.

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Figure 1 – **Ore feed hopper to concentrator circuit.**

Figure 2 – **Concentrate receival at Broken Hill Demonstration plant.**

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Figure 3 – **Pyrite concentrate.**

Concentrate Treatment

The treatment of cobalt-pyrite involves two key steps. The first is conversion of pyrite into pyrrhotite and elemental sulphur, followed by leaching of the pyrrhotite. The solubilised cobalt is then recovered by precipitation as a mixed hydroxide with grades of 30% cobalt and 7% nickel (typical Pilot Plant results from 2021).

The Demonstration Plant kiln was successfully commissioned in September, with the first 5 tonnes of concentrate being processed. Feed rates to the kiln are 150–200 kg/hr. Further work is ongoing to improve off-gas handling for recovery of the sulphur.

The next unit block for operations are the leach and Mixed Hydroxide Precipitate (MHP) production circuits during October.

Figure 4 – **Commissioning of kiln with concentrate.**

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COB Timeline

The expected development schedule for the Broken Hill Cobalt Project ('**BHCP**') is shown below.

Figure 5 – **BHCP development schedule.**

	PRE-2021	2021	2022	2023	2024	2025
Business Achievements	100% Project Ownership CRC-P Grant	Global Cobalt Sample Program Major Project Status and CMAI grant	Offtake Cobalt Qualification Program – 2022 Major Project Status and CMAI grant	Final Investment Decision	Construction Period Mine Development EPC Renewable Power Contracts	Refinery Commissioning First Commercial Production
Technical Studies	Project Update 2020 PFS 2018	Feasibility Study	Feasibility Study	Definitive Feasibility Study and Approvals		
Process Testing	Pilot Scale Testwork	Pilot Plant – 30 Tier 1 Partners Offtake Contract Negotiations (begin)	Larger scale (24/7) Operations Commercial Qualification Samples Bulk Sample			First On Specification Production
Environmental Approvals		EIS Field Studies	EIS Field Studies	EIS Submission SSD Determination	ESG/CO_2 Reporting	ESG/CO_2 Reporting Operating Permits (approved)
	PRE-2022		MILESTONES			

Cobalt Blue Background

Cobalt Blue (ASX:COB) is a mining and mineral processing company focussed on the development of the Broken Hill Cobalt Project in New South Wales, Australia. The portfolio of four granted tenements in a total area of 63km^2 containing large-tonnage cobalt-bearing pyrite deposits are located 23 km west of Broken Hill and 400 km by rail from Port Pirie. COB has developed a patented minerals processing technology for treating pyrite feedstocks targeting 85-90% recovery of cobalt from ore to product (as Mixed Hydroxide Precipitate or Cobalt Sulphate).

The Broken Hill Cobalt Project has a targeted project life of +20 years and will be a significant employer in Regional NSW with around 400 full-time jobs generated. COB will become a global top 10 producer of cobalt, a key critical mineral with strong demand growth from lithium-ion batteries widely used in electric vehicles and energy storage systems.

The expected timeline for the BHCP is subject to various risks, some of which are outside the control of the Company and which include successful and timely completion of project milestones, funding availability, government and other third party approvals.

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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This announcement was approved by the Board of Directors.

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

- 01 September 2022: Demonstration Plant – Ore Extraction Completed
- 26 July 2022: Demonstration Plant Transitioning to Operations
- 20 June 2022: Demonstration Plant – Ore Extraction Underway, Commissioning Continues
- 12 May 2022: COB advances Demonstration Plant Commissioning
- 23 March 2022: COB commences underground development to support Demonstration Plant
- 10 September 2021: Premium cobalt samples finalised
- 05 July 2021: Transition to Demonstration Plant

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.

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