

Quarterly Report

14 April 2020

Highlights

Cobalt Blue Holdings Limited
A Green Energy
Exploration
Company



ASX Code:

COB

Commodity Exposure:

Cobalt & Sulphur

Directors & Management:

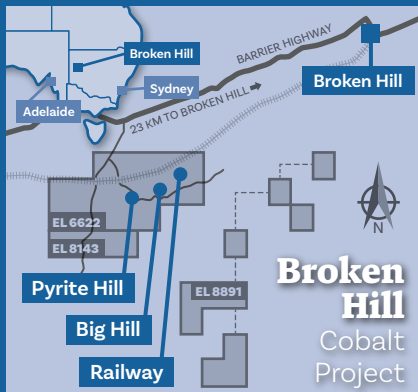
Robert Biancardi Non-Exec Chairman
Hugh Keller Non-Exec Director
Robert McDonald Non-Exec Director
Joe Kaderavek CEO & Exec Director
Robert Waring Company Secretary

Capital Structure:

Ordinary Shares at 14/04/2020: **160.0m**
Options (ASX Code: COBO): **29.6m**
Market Cap (undiluted): **\$15.0m**

Share Price:

Share Price at 14/04/2020: **\$0.094**



Cobalt Blue Holdings Limited

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[in cobalt-blue-holdings](#)

Cobalt Blue March Quarterly Report

BROKEN HILL COBALT PROJECT

- State Significant Development (SSD) application process commences.
- Project and Future Battery Industries CRC success.
- Pilot Plant update.
- Cobalt Product and Sulphur Sample Program.

COBALT TRENDS

- How does the Broken Hill Cobalt Project fit into the Lithium ion (Li ion) battery industry?
- The Volkswagen view – Hydrogen vs Li ion battery passenger vehicles.

CORPORATE NEWS

- Completion of the acquisition of BPL's interests in the Broken Hill Cobalt Project.
- COVID-19: COB taking steps to preserve cash until early 2021.

Broken Hill Cobalt Project

State Significant Development (SSD) Process

(28 January 2020, 31 March 2020)

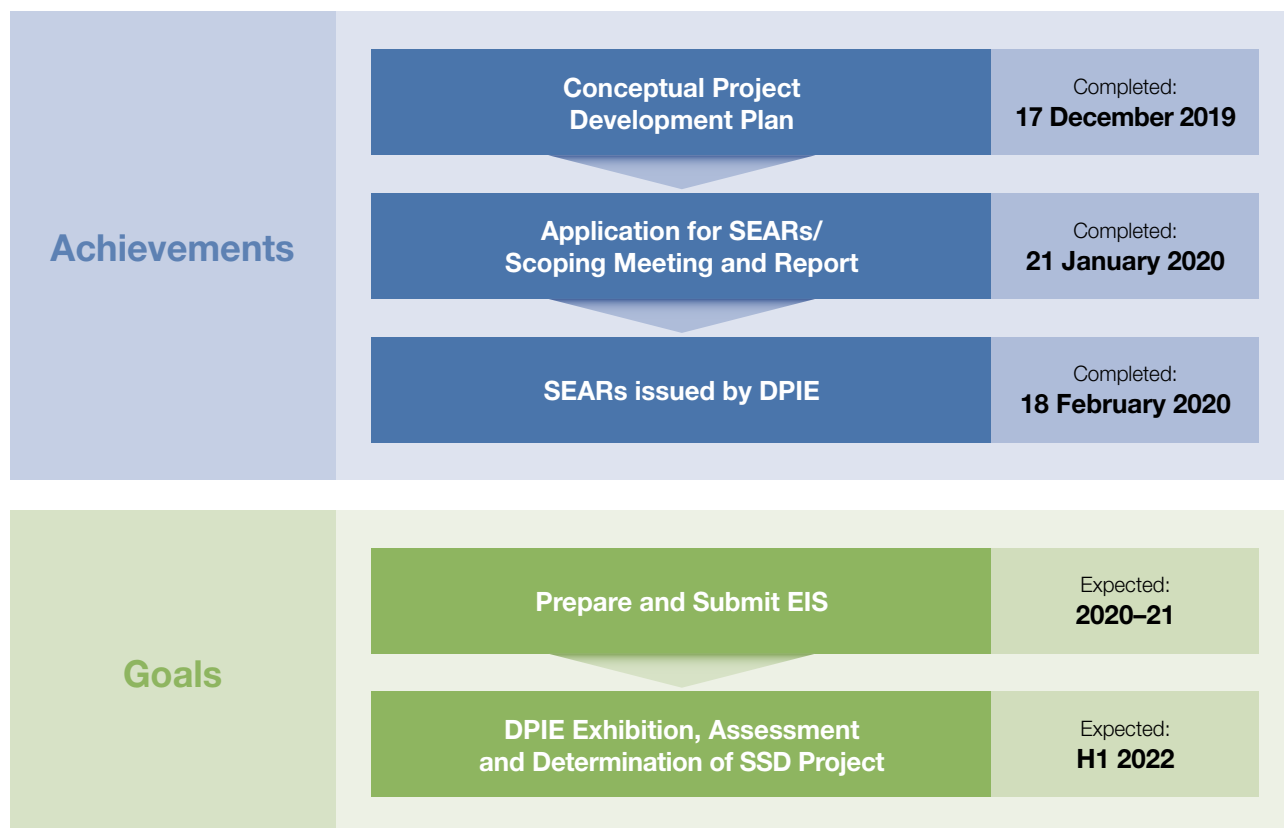
During the quarter COB held a Scoping Meeting with the Department of Planning, Industry and Environment (DPIE) presenting the Broken Hill Cobalt Project (BHCP).

Development consent will be sought under Part 4 of the NSW Environmental Planning and Assessment Act, 1979. The BHCP will be an SSD as its purpose and size (capital value in excess of \$30 million) qualify. SSD approval provides an integrated assessment pathway and minimises the number of secondary environmental approvals that must be attained for a project.

The Scoping Meeting follows substantial consultation with government, community and infrastructure stakeholders in respect of the various environmental, socio-economic, and infrastructure / logistical considerations that must be considered by the Project. The subsequent Scoping Report (lodged 21 January 2020) provides a comprehensive overview of the nature, scale and planning issues associated with the BHCP. The Scoping Report facilitates the preparation of the Secretary's Environmental Assessment Requirements (SEARs), which forms the basis of the EIS.

During the quarter the SEARs were issued for the BHCP and preparation work has now begun towards delivering a BHCP EIS. The status of the SSD application can be tracked at the DPIE Major Projects Portal: <https://www.planningportal.nsw.gov.au/major-projects>. A flowchart with the major steps in the SSD application process with indicative timeframes is shown in the figure below, along with their current completion status.

Figure 1 – SSD Application major steps flowchart



COB expects that the EIS will be lodged with DPIE for exhibition and assessment during 2H 2021, however delivery will be influenced by technical and optimisation studies undertaken during the Feasibility Study.

The overall BHCP development timeline is shown in the figure below.

Figure 2 – The BHCP Development Timeline

	2017	2018	2019	2020	2021	2022
Business Achievements	IPO	LGI – Cobalt First Mover	Mitsubishi – Sulphur Agreement 100% Project Ownership	Global cobalt sample program – Q4 2020		Final Investment Decision – H1 2022
Technical Studies	Resource upgrade Drilling: +8,000m Resource: 55Mt Scoping Study	Resource upgrade Drilling: +12,500m Resource: 72Mt Pre Feasibility Study	Resource upgrade Drilling: +9,500m Resource: 111Mt	Ore Reserve Update – Q2 2020		Feasibility Study and Approvals – Q1 2022
Metallurgical Studies			Concentration – Pilot Scale Testwork	Pilot Plant – Q4 2020	Demonstration Plant – Q1 2021	
Environmental Approvals			CPDP Submitted	Scoping Report – Jan 2020 SEARs issued – Feb 2020	EIS Submission – H2 2021	SSD Determination – H1 2022
	ACHIEVEMENTS			GOALS		

Project and Future Battery Industries CRC success (10 February 2020)

During the quarter, COB was awarded \$2.4 million of total 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. The grant will be paid in stages over the life of the program, subject to satisfactory progress on the program. COB will receive \$1.57 million for the development and operation of its planned Demonstration Plant, with the remainder being allocated to the University of New South Wales (UNSW) and the Australian Nuclear Science and Technology Organisation (ANSTO) for applied research on the pyrolysis state of the metallurgical process.

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 innovate 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 by a select team of chemists and minerals analysis experts at UNSW Sydney, ANSTO and COB, and include 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 150kg of pyrite concentrate have been undertaken at a throughput rate of 4–8 kg/h.

COB is now planning a pilot trial at ANERGY to treat up to 10 tonnes 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 with 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 the facility during 2020/21 to confirm that the process can be scaled up and continuously operated. The Demonstration Plant is intended to continuously process several thousand tonnes of ore extracted from the BHCP.

Cobalt sulphate produced at the Demonstration Plant will be provided to battery manufacturers for acceptance testing as a battery precursor material.

By undertaking the CRC-P grant program, COB will achieve the following outcomes:

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

Pilot Plant update (31 March 2020)

During the quarter, COB took delivery of Pilot Plant equipment in Broken Hill. Pilot Plant long-lead items (leaching tanks and filter equipment) were ordered in September 2019 (well ahead of the outbreak of COVID-19). Remaining Pilot Plant equipment will be largely sourced domestically. However, supply chains are anticipated to be slower than normal due to the economic effects of COVID-19, as well as hiring of shift personnel required to operate the facility. COB currently expects a Q4 commissioning of the Pilot Plant.

Cobalt Product and Sulphur Sample Program (10 March 2020)

During the quarter, COB announced it had launched a mixed-hydroxide and cobalt sulphate product sample program, aiming to provide samples for technical and market assessments to top-tier groups in the cobalt-for-battery supply chain. From late-2020, COB expects to ship samples to 10 partners, including cobalt trading groups and battery precursor manufacturers.

During the quarter, COB also announced that it intended to produce up to 100 tonnes of elemental sulphur from bulk metallurgical testwork trials over the period to 31 December 2020 and provide this to Mitsubishi Corporation to conduct marketing trials.

Cobalt Trends

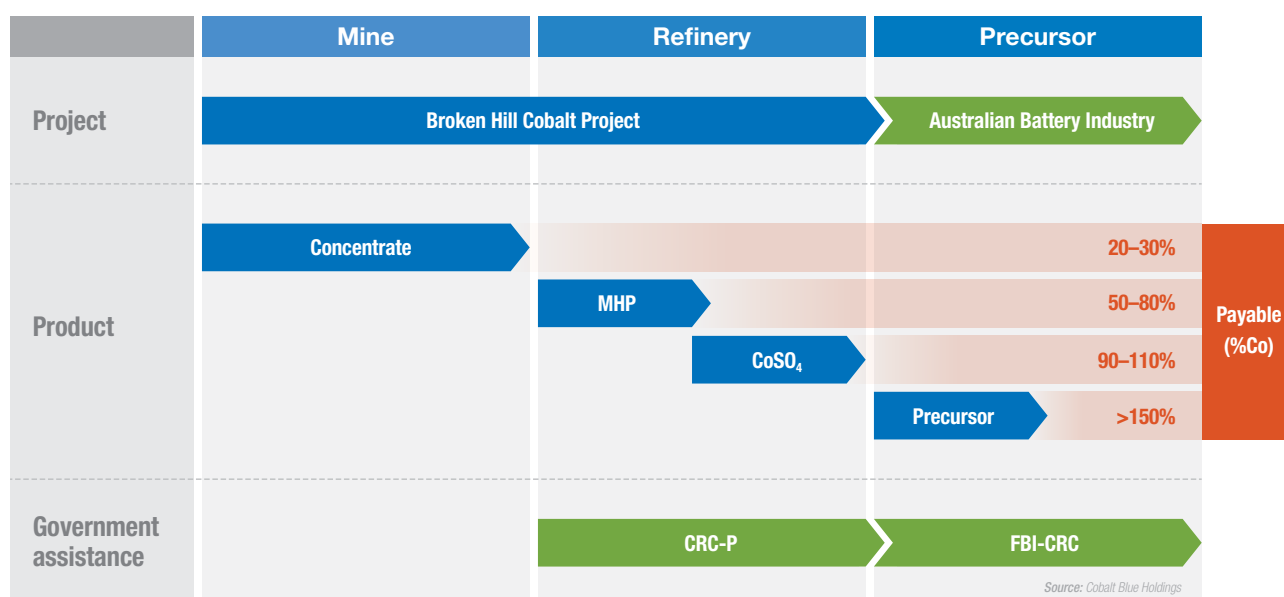
How does the BHCP fit into the Lithium ion (Li ion) battery industry?

COB takes this opportunity to examine how the BHCP will fit into the global battery value chain and where the Australian Government is assisting the development.

Low value cobalt concentrates (20–30% cobalt payable) need significant further refining. Larger cobalt miners have thus adopted an integrated mine/refinery approach with cobalt hydroxide (approximately 75% of all intermediate cobalt is sold in this form) or Mixed Hydroxide Product (MHP = mixed nickel and cobalt hydroxide) being typical intermediate mine/refinery products. Both these products command a 50–90% cobalt payable. COB's strategy (supported by research being part funded by the Cooperative Research Centre – Project or CRC-P Scheme) is for the BHCP to produce a higher value cobalt sulphate (90–110% cobalt payable). COB's cobalt sample program will ensure product samples are delivered to key global precursor manufacturers. Aside from developing commercial relationships, this program will ensure that BHCP development will be informed from this comprehensive technical feedback.

Looking forward, COB is committed to working with the Australian Government and key industry participants (58 industry, academic and government partners including (including BHP (NiWest), Tianqi Lithium, Independence Group, Lynas Corporation and Syrah Resources) to understand whether the BHCP could fit into an Australian Battery (Pre Cursor) Industry and therefore command significantly higher cobalt payables for COB's product. Ultimately, this initiative will explore whether Australian industry can manufacture a competitive cathode. This cooperation is being conducted under the Future Battery Industries Co-operative Research Centre (FBI-CRC) scheme.

Figure 3 – BHCP and the cobalt value chain



The Volkswagen view – Hydrogen vs Lithium ion (Li ion) battery passenger vehicles

The debate concerning whether hydrogen fuel cells or Li ion batteries are superior for passenger vehicles continues. To date, several global automakers have decided to back Li ion battery technology. Toyota, on the other hand, continues to insist that Fuel Cell Vehicles (FCVs) will someday overtake battery-electric vehicles (BEVs). Other automakers, including Hyundai and BMW, continue to research both powertrain options.

Now Volkswagen, which currently has the most promising electrification strategy of the large automakers, has released an article (<https://www.volkswagen-newsroom.com/en/stories/battery-or-fuel-cell-that-is-the-question-5868>) explaining in detail why it has abandoned hydrogen in favour of Li ion batteries.

Firstly, hydrogen fuel cells possess a higher energy density than Li ion batteries and thus will always have an inherent advantage for larger, heavier vehicles such as trucks and buses, as well as rail, air and sea transport.

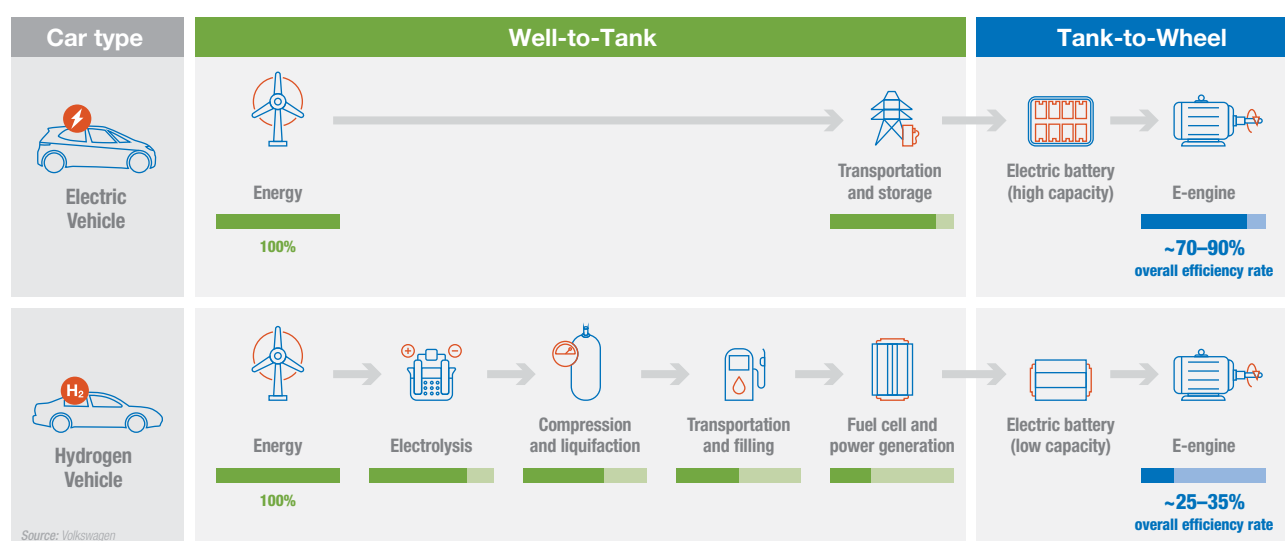
For passenger vehicles both technologies provide sufficient energy density, then which energy storage system has the best efficiency and is the most cost-effective?

With batteries, only eight percent of the energy is lost during transport before the electricity is stored in the vehicle's batteries. When the electrical energy is converted to drive the electric motor, another 18 percent is lost. Depending on the model, the battery-powered car thus achieves an efficiency of between 70 to 80 percent.

In the case of the hydrogen-powered car, the losses are much greater – 45 percent of the energy is lost during the production of hydrogen through electrolysis. Of this remaining 55 percent, 30 percent is lost when converting hydrogen into electricity within the vehicle. This means that the hydrogen-powered car only achieves an overall efficiency of between 25 to 35 percent, depending on the model. For the sake of completeness: the efficiency is even worse with alternative fuels. The overall efficiency is only 10 to 20 percent.

Volkswagen's key conclusion was that a hydrogen car consumes two to three times more electricity for the same distance than a battery car.

Figure 4 – **Hydrogen fuel cells vs Li ion Batteries – efficiencies compared**



COB acknowledges contributions from Roskill Consultants and Volkswagen AG in the Cobalt Trends section above.

Corporate News

Completion of the acquisition of Broken Hill Prospecting Limited's (ASX: BPL) interests in the Broken Hill Cobalt Project (25 February 2020)

During the quarter COB and its wholly owned subsidiary, Broken Hill Cobalt Project Pty Ltd, executed final agreements for the assignment of BPL's interests (including legal title) in the BHCP. Upon the processing of the relevant transfer applications by the NSW Department of Planning & Environment, COB will hold 100% legal title to the tenements.

On 25 February 2020 COB announced that completion of the assignment, as defined in the agreements, had occurred. As part of the assignment, the COB group paid/issued to BPL:

- \$500,000 cash
- 9,000,000 COB fully paid ordinary shares.
- A \$1,000,000 three-year Convertible Note (CN), with interest of 6% per annum payable annually in arrears.
- A \$3,000,000 five-year Promissory Note (PN) from BHCP, with interest of 6% per annum payable annually in arrears (interest free for years 1, 2 and 3).

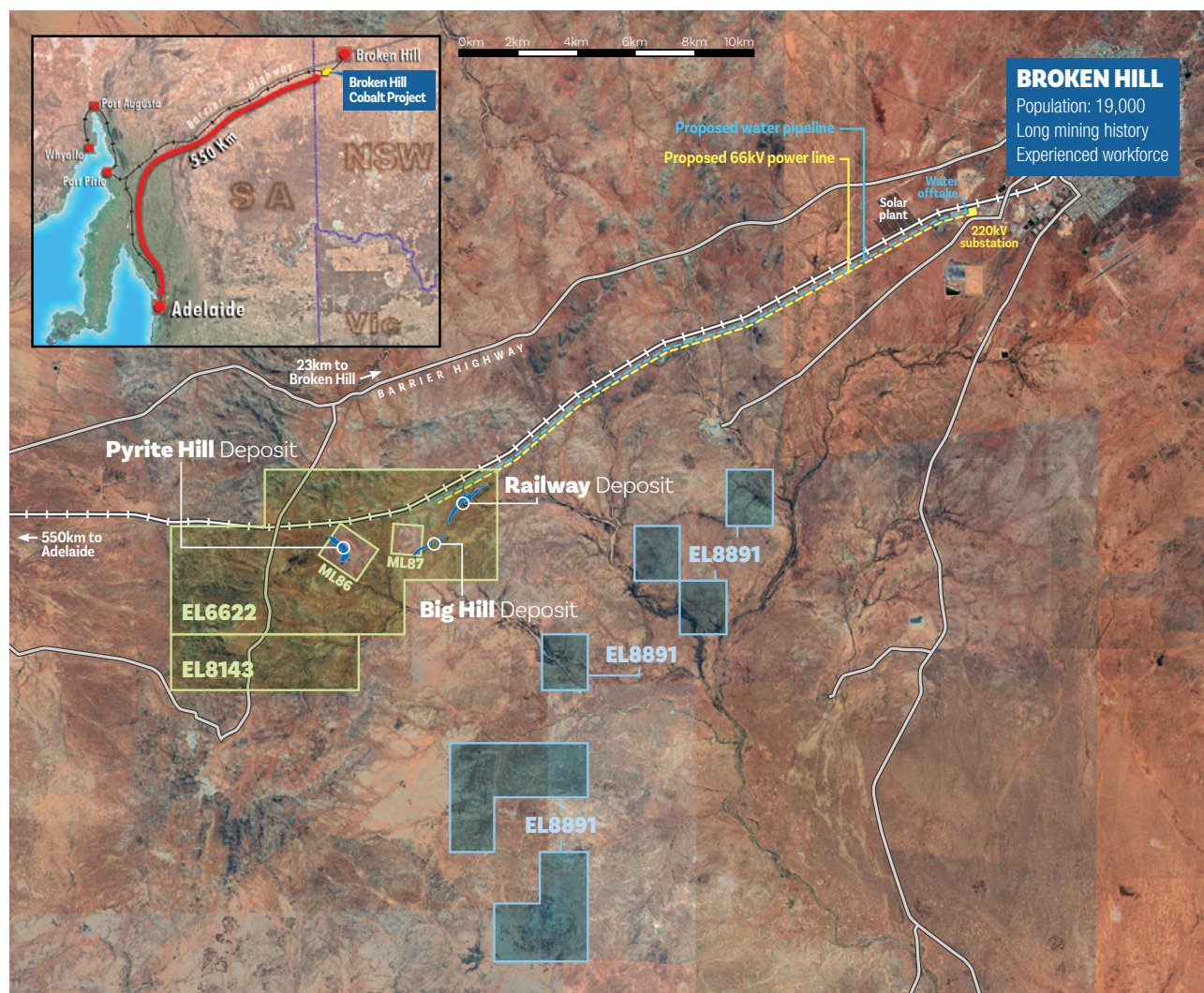
COVID-19 Pandemic

COB is currently taking steps to preserve cash until early 2021. These measures will primarily affect the timeline to Pilot Plant commissioning with Q4 our current estimate, which is subject to further changes as may be required.

The Broken Hill Cobalt Project

The Broken Hill district map shows the proximity of the BHCP to Broken Hill, the supporting rail line and road network, as well as the availability of both power and water utilities to support future production.

Figure 5. **Broken Hill District Map.**



COB's activities primarily relate to exploration and evaluation of the BHCP. There were no activities related to production or development. During the quarter COB incurred¹ \$615,000 on exploration and evaluation activities (excluding tenement acquisition costs) primarily relating to technical services.

Finance

During the quarter COB's daily share price fluctuated between 7.6 cents and 17.5 cents.

COB anticipates shortly receiving an R&D tax rebate, refund of government security deposits and the next CRCP grant instalment, totalling approximately \$1,200,000.

During the quarter COB paid \$60,500 to related parties, comprising director fees and salary.

¹ Refers to expenditure incurred on an accounting accruals basis as distinct from expenditure reported in the Appendix 5B, which refers to expenditure on a cash basis. The amounts were extracted from the unaudited accounts of the COB Group.

Cobalt Blue Background

Cobalt Blue Holdings Limited (ASX: COB) is an exploration and project development company. Work programs advancing the BHCP in New South Wales continue. Cobalt is a strategic metal in strong demand for new generation batteries, particularly Li ion batteries now being widely used in clean energy systems.

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



Joe Kaderavek

Chief Executive Officer

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Authorised 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>.

- 31 March 2020: Project Update and Business Impacts of COVID-19 discussed
- 10 March 2020: Cobalt Product and Sulphur Sample Program
- 10 February 2020: Project and Future Battery Industries CRC success
- 28 January 2020: Broken Hill Cobalt Project – State Significant Development (SSD) Application Commences
- 17 January 2020: Execution of Final Agreements to acquire Broken Hill Prospecting Limited's (BPL) interest in the Broken Hill (Thackaringa) Cobalt Project

COB confirms it is not aware of any new information or data that materially affects the information included in the original market announcements and where applicable 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 any Competent Person's findings presented have not been materially modified from the original market announcement.

Tenement Holding

The COB Group held the following mining tenements at the end of the quarter:

Tenement	Location	Interest at end of quarter
EL 8891	Broken Hill Region, New South Wales	■ 100% legal and beneficial interest
EL 6622	Broken Hill Region, New South Wales	■ 100% beneficial interest*
EL 8143	Broken Hill Region, New South Wales	■ 100% beneficial interest*
ML 86	Broken Hill Region, New South Wales	■ 100% beneficial interest*
ML 87	Broken Hill Region, New South Wales	■ 100% beneficial interest*

No tenements or farm-in or farm-out agreements were disposed of during the quarter.

* On 17 January 2020 COB announced that it had entered into Final Agreements to acquire BPL's interests in the Broken Hill Cobalt Project including legal title.

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

COBALT BLUE HOLDINGS LIMITED

ABN

90 614 466 607

Quarter ended ("current quarter")

March 2020

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation (if expensed)	-	-
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(184)	(663)
	(e) administration and corporate costs	(142)	(944)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	1	12
1.5	Interest and other costs of finance paid	(7)	(24)
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material)	-	-
1.9	Net cash from / (used in) operating activities	(332)	(1,619)
2.	Cash flows from investing activities		
2.1	Payments to acquire:		
	(a) entities	-	-
	(b) tenements	(500)	(500)
	(c) property, plant and equipment	(1)	(3)
	(d) exploration & evaluation (if capitalised)	(551)	(1,466)
	(e) investments	-	-
	(f) other non-current assets	(59)	(59)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (Government Grants)	396	396
2.6	Net cash from / (used in) investing activities	(715)	(1,632)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	(47)	(153)
3.10	Net cash from / (used in) financing activities	(47)	(153)

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	2,431	4,741
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(332)	(1,619)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(715)	(1,632)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(47)	(153)
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	1,337	1,337

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	1,337	2,431
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	1,337	2,431

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1.	61
6.2	Aggregate amount of payments to related parties and their associates included in item 2.	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

7.	Financing facilities available <i>Note: the term 'facility' includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	Total financing facilities	-	-
7.5	Unused financing facilities available at quarter end		
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		
On 17 January 2020, the COB group executed Final Agreements with Broken Hill Prospecting Limited (ASX:BPL) to acquire 100% ownership and legal title of the Broken Hill (Thackaringa) Cobalt Project (including all tenements). The consideration for the acquisition included a \$1,000,000 three-year unsecured Convertible Note (CN), with interest of 6% per annum payable annually in arrears. BPL is able to convert the CN to fully paid ordinary shares at maturity or on 18 January 2021 or 17 January 2022 (using a conversion price of \$0.20). COB can redeem the CN early. The consideration also included a five-year \$3,000,000 secured promissory note (PN) issued to BPL, with interest of 6% per annum payable in years 4 and 5. The PN can be repaid by COB at any time in whole or in part without penalty. Once the PN is repaid in full, the security will be extinguished.			

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (Item 1.9)	(332)
8.2	Capitalised exploration & evaluation (Item 2.1 (d))	(592)
8.3	Total relevant outgoings (Item 8.1 + Item 8.2)	(924)
8.4	Cash and cash equivalents at quarter end (Item 4.6)	1,337
8.5	Unused financing facilities available at quarter end (Item 7.5)	-
8.6	Total available funding (Item 8.4 + Item 8.5)	1,337
8.7	Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	1.45

8.8 If Item 8.7 is less than 2 quarters, please provide answers to the following questions:

1. Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer: Yes.

2. Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: The Company anticipates shortly receiving an R&D tax rebate, refund of government security deposits and the next CRCP grant instalment, totalling approximately \$1,200,000.

The Company maintains dialog with the investment community regarding its planned activities and believes that, when the Board forms the view on when the timing is appropriate, a capital raising would be supported.

3. Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer: The Company expects to be able to continue its operations and to meet its business objectives, based on its response to question 2 above.

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 14 April 2020

Authorised by: By the Board

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's Corporate Governance Principles and Recommendations, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.