Cobalt Blue Holdings Limited: DFS Update

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Sydney, Australia - Cobalt Blue Holdings Ltd. (ASX:COB) (FRA:COH) (OTCMKTS:CBBHF) provide an update on the Definitive Feasibility Study, on track for completion.

- The Broken Hill Cobalt Project (BHCP) Definitive Feasibility Study (DFS) remains on track for completion by end-3Q.

- Demonstration Plant: The Concentrator Circuit has completed operations and the concentrate is being treated through the kiln to convert pyrite into pyrrhotite and elemental sulphur. The leaching circuit is now operational and first MHP production has been achieved. Large scale commercial samples (up to 100kgs each) will be released shortly.

- Mineralisation and waste rock studies: Resource definition, geotechnical and waste rock characterisation drilling programs were completed in February 2023.

- Permitting: Substantial progress has been made to assess the Project footprint, including soils and ecology.

- Commercial Partner Update: Partner discussions continue.

- Cobalt Market Update: Signs of price recovery have appeared amid improved liquidity as market transactions normalise following China's re-opening.

Commenting on recent achievements, Cobalt Blue's Chief Executive Officer, Joe Kaderavek said: "We are proud of the achievements made by all the contributing teams into the DFS. The results from the Demonstration Plant have largely exceeded our expectations in terms of operations and outcomes, and we continue to optimise performance across the flow sheet. Overall technical studies continue to progress and de-risk the project, with initial independent engineering reviews now underway. These reviews are a key stepping stone to eventual project funding."

Demonstration Plant Update

Concentrate

The Concentrator Circuit has now completed operations, with a total of 4200 t of ore processed to produce 680 t of wet concentrate (typical moisture 5-10%) concentrate (for more detail, see: ASX Announcement: Demonstration Plant Update: High Grade Concentrate Results, 9 December 2022).

During optimum conditions, the total combined recovery from the demonstration gravity circuit and benchscale scavenger float tests on the gravity tails, was typically 93-95% cobalt into concentrate from the ore. This was inline with expectations from previous testing on drill core and RC chips, as reported in ASX announcement: Concentrate Circuit (Pilot Trial) Program Successfully Completed, 24 June 2019.

Pyrolysis circuit

The concentrate is being treated through the Demonstration Plant kiln to convert pyrite into pyrrhotite and elemental sulphur. The typical feed rate is approximately 150-300 kg/hr. Ongoing optimisation of the kiln parameters has included changing temperature, feed rate, nitrogen flowrate, and residence time. Analysis of the samples by x-ray diffraction, has confirmed conversion of pyrite to pyrrhotite across the particle size range. Elemental sulphur is being stored, ahead of bulk processing into commercial prill form later in the test campaign.

Leaching and MHP production

Approximately 5 t of kiln calcine was leached as part of circuit commissioning. The pilot plant leach size has been significantly upgraded from 200 L to 450 L, and thereby increasing the throughput rate from 35 kg/hr to 100 kg/hr. Additional upgrades included modifications to the feed pumping system, and the flash let down system to improve reliability and continuity of operations. The circuit is now being geared to complete dedicated trials for the DFS detailed engineering requirements.

The leach liquor is treated for iron removal, ahead of cobalt and nickel recovery as a mixed hydroxide

precipitate (MHP). The first large scale MHP production has recently been achieved from the Demonstration Plant. Expected production rates are approximately 100kg/48 hours (based on 100 kg/hr leach feed rate).

Resource Definition, Geotechnical and Waste Rock

Characterisation Drilling

A resource definition, geotechnical and waste rock characterisation drilling program was completed in February 2023. The program included:

- Dedicated geotechnical drilling to inform pit slope stability analysis for mine design and optimisation at the Big Hill and Railway deposits;

- Investigation of zones of potential resource extension at the Big Hill and Railway deposits;

- Infill drilling targeting improved resource classification at the Big Hill deposit; and

- Drilling for waste rock characterisation at the Pyrite Hill, Big Hill and Railway deposits, to inform detailed design criteria for the Integrated Waste Landforms.

A total of seventy-eight (78) drill holes were completed for 12,281.25m inclusive of 8,738m reverse circulation and 3,543.25m diamond core. Sample processing is continuing with final assays expected to be received during April for the commencement of geological modelling and resource estimation.

About Integrated Waste Landforms

The mine waste management strategy for the Project considers the progressive development of several Integrated Waste Landforms (IWLs) where both mine waste rock and process plant tailings are combined in a single facility for establishment of long-term physically and chemically stable landforms.

Permitting

Environmental Impact Statement

Substantial progress has been made in defining the disturbance footprint for the Project. Our DFS mining consultant, SRK, has completed the "Approvals Case" mining study which in turn has largely determined the scope and scale of the Project. A map of the Project layout is shown below, with the location of open cut pits, Integrated Waste Landforms, processing plant and non-process infrastructure all having been determined.

The additional surveys include the lands associated with the access road to the site from the Barrier Highway, the utilities corridor from Broken Hill to the site, and revised locations of site infrastructure and Integrated Waste Landforms.

As discussed above, a significant drilling campaign has been successfully completed to provide samples of waste rock for the determining of acid and metal leachate generation characteristics of the waste rock and tailings, as well as the installation of 19 new piezometers to measure groundwater characteristics at the site. These results will be used to design the Integrated Waste Landforms (and in-pit backfill options) and to assess the potential groundwater impacts of both the open cut pit and waste management strategies.

A site inspection with officers from a number of NSW Government departments and Broken Hill City Council was held on 21 February 2023. The inspection included a comprehensive tour of the BHCP site as well as the Demonstration Plant. This inspection provided the opportunity for government agencies to gain a first-hand appreciation of the scope and scale of the Project, as well as the environmental, social and economic aspects of the Project.

Cobalt in Waste Streams Project (CWSP) update

COB has previously executed a Memorandum of Understanding with the State of Queensland, acting through the Department of Resources, to assess opportunities for the recovery of cobalt (and any coexisting base and precious metals) from mine waste.

Testing of the first sample from the Queensland Department of Resources was finalised in 3Q22. A second sample test work with a private company is currently in process. Ongoing commercial discussions supporting the development of CWSP opportunities continue with prospective partners. CWSP represents a significant commercial option for our business with test work to date supportive of the potential to commercialise large mine waste deposits.

Commercial Partner Update

Multiple project partner and offtake discussions continue with the BHCP seen as both commercially attractive and compliant with the respective Inflation Reduction Act (US) and Critical Raw Material (CRM) Acts (EU). The (very) recent market guidance from US Treasury and EU Commission respectively (delivered March 2023) is highly supportive of Australian extracted and processed cobalt.

The sheer commercial and financial scale of these US and EU focussed global policies will likely shape significant industry responses. It remains our belief that geopolitical legalisation backed by strong financial incentives will build out entire integrated and sustainable production chains, including critical minerals extracted and processed in Australia. Whilst the battery industry digests these recent guidelines, we expect project partner negotiations to continue into Q2.

Funding

- During December 2022 COB executed the Critical Minerals Accelerator Initiative (CMAI) grant agreement for the BHCP with the Australian Government. The grant totals $15m and is payable over time - instalments are to be made between December 2022 and March 2025. In December 2022, COB received the initial grant instalment of $1.5m and a $6m progress payment is anticipated to be received in June 2023. The CMAI funding will enable COB to accelerate the development of the BHCP by expanding the scope of the DFS, bring forward infrastructure and services work packages, and decrease start-up commissioning risks.

- The BHCP was further awarded $0.5m through the Critical Minerals Activation Fund (CMAF) provided by the NSW Government. The funding agreement was executed in February 2023. The CMAF funding will be used for the environmental studies required in the Environmental Impact Statement. This grant is payable in instalments, with the first instalment of $0.25m paid in March 2023, with the balance expected to be paid in Q3 and Q4 2023.

- COB has also been awarded $20,000 from Austrade's Export Market Development Grant, a program that helps Australian businesses grow their exports in international markets.

*To view tables and figures, please visit:
https://abnnewswire.net/lnk/6OON15Y8

About Cobalt Blue Holdings Limited:

Cobalt Blue Holdings Ltd. (ASX:COB) (FRA:COH) (OTCMKTS:CBBHF) is an exploration and project development company. Work programs advancing the Broken Hill Cobalt Project in New South Wales continue. Our ambitious goals are subject to funding availability. Cobalt is a strategic metal in strong demand for new generation batteries, particularly lithium-ion batteries now being widely used in clean energy systems.

Source:
Cobalt Blue Holdings Ltd.

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