

COBALT BLUE HOLDINGS LIMITED (COB)

DEMO PLANT: PERFORMING AHEAD OF EXPECTATIONS...

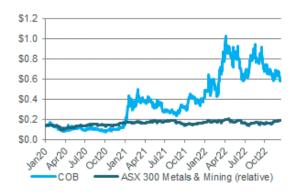
Analyst Date Carlos Crowley Vazquez 15 December 2022



SHARE	TARGET	IMPLIED
PRICE	PRICE	RETURN

\$0.58 \$1.35 133%

SHARE PRICE CHART - LAST 2 YEARS



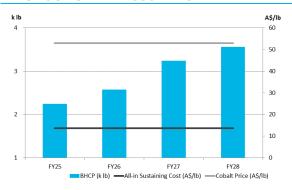
COMPANY DATA & RATIOS

Share Price (\$ per share)	0.58
Risk Adjusted NAV (\$ per share	1.35
Implied Return (%)	133%
Enterprise Value (\$m)	189
Diluted MCap (\$m)	219
Diluted Shares (m)	378
Avg Daily Value (\$m)	1.29
Free Float (%)	100%
GICS	Metals & Mining
Commodity	Cobalt & Sulphur

MAJOR SHAREHOLDERS

Board & Management	5.2%	
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PRODUCTION AND COST PROFILE



BHCP'S DEMO PLANT IS SHAPING UP NICELY!

We attended a recent site visit to observe progress on COB's Demonstration Plant. Our key takeaways: (i) mining operations to obtain representative samples of ore across the Pyrite Hill deposit have concluded with mass recovery at 17% (a key outcome to minimise capex for the commercial scale processing plant), (ii) mine to concentrate cobalt recoveries of 95% are materially higher than expected (vs PFS of 90%), (iii) concentrator produced a consistent grade concentrate (average 4,400 ppm Co) across the representative bulk sample (key to provide a consistent feed grade to the processing circuit), (iv) kiln and leaching autoclaves commissioned and optimised with first MHP expected shortly and continuous operations expected from January 2023, (v) we expect total cobalt recoveries (from mine to MHP/CoSO4) to be 91% (or higher) which would more than offset capex inflation from updated PFS (2020) to DFS (2023) expected at 34% and (vi) BOEQ understands COB will seek scale up performance guarantees (i.e. recoveries of 91% from Demo Plant to Commercial Plant) which would materially de-risk BHCP from a development finance perspective (both debt and equity).

CAPITAL RAISING

Cobalt Blue recently strengthened its balance sheet via an institutional placement, a 1:10 non-renounceable entitlement issue and a shortfall placement which raised \$22.3m. The entitlement issue was well supported with an 85% take-up from existing shareholders. In addition, COB made a \$2m shortfall placement to a sophisticated investor. COB is well funded to complete BHCP's DFS, strategic/offtake arrangements, development financing process and reach FID on BHCP in addition to progress Queensland waste streams opportunities.

OTHER UPDATES: DO NOT UNDERESTIMATE THE US IRA

Cobalt prices have been weak for the most part of 2H CY22, mainly due to China-centric lockdowns and lower consumer demand. However, we expect that the re-opening of China combined with the US Inflation Reduction Act will result in stronger cobalt prices from 2024. In particular, the US IRA is already having a major structural impact on the US automotive industry and will have material repercussions on the critical minerals supply chain for FTA countries such as Australia.

NEAR TERM MILESTONES

We expect the next few months to deliver key milestones as the Demo Plant is completed, samples are sent to end users, commercial/strategic discussions culminate in offtakes/strategic agreements and the Definitive Feasibility Study is completed. CY23 will be a key year for COB as it materially derisks the BHCP and it brings together commercial, strategic and funding parties to support its development.

RETAIN BUY RECOMMENDATION, TARGET PRICE \$1.35

We have updated our model to reflect shares issued, capex inflation, higher recoveries, lower Fx and sulphur prices. We expect Co prices to firm up medium term (when BHCP gets into production). Following our model update, we have reduced our price target from \$1.45 to \$1.35 per share and expect a rerating post key commercial and financial milestones and upside from the commercialisation of COB's IP on waste streams.



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INVESTMENT HIGHLIGHTS

MACRO – STRONG OUTLOOK FOR COBALT, STRONGER FOR ETHICAL COBALT

- +\$500 billion have been invested over the last few years on planning and construction of over 300 gigafactories, while only a fraction has been invested in developing new supply of key EV minerals to support production at such scale.
- Benchmark Mineral Economics forecasts that cobalt supply will be in a deficit of over 75,000 tonnes by the end of the decade this figure represents over 50% of current supply!
- Roskill (now part of Wood Mackenzie) forecasts that cobalt demand will roughly double by 2030, with a deficit close to 30% for that year this figure is roughly comparable to Benchmark's.
- CRU forecasts 50% higher cobalt prices by 2025 and Fastmarkets notes that high cobalt prices, along with other EV raw materials, are already having an impact on the potential "unconstrained" demand for EVs.
- The misallocation of capital in EV materials is magnified by the relatively long timeframe required to bring new projects into production (including product certification within LIB/EV supply chains) and is resulting in emerging demand/supply deficits across key EV minerals, including cobalt.
- LIB manufacturers are seeking to fill larger (i.e. gigafactory quantities) orders for cobalt products BHCP, a Top 5 cobalt project (ex-Africa), can only supply 50% of a single 40 GWh facility and seek to engage in longer duration offtake to support EV production, typically up to 7–8 year duration.
- Furthermore, cobalt's concentration in DRC, Russia and other "high risk" jurisdictions will continue to pose serious ESG, supply security and supply chain traceability issues to OEMs.
- Non-African, sustainably sourced cobalt is becoming a premium material as EV manufacturers react to their consumer and legislative requirements and seek to influence upstream sourcing.
- The US Inflation Reduction Act is one of the most important pieces of legislation passed this year (in the USA and with global ramifications) due to the speed of implementation and its "go hard and fast" approach as it drives structural change to the automotive industry (i.e. processing and manufacturing in the US) and focuses on securing critical minerals supply from countries like Australia.
- Australia has 18% of global cobalt resources but produces only 4% of supply.

STOCK SPECIFIC: WHY COBALT BLUE?

Cobalt Blue Holdings Limited (Cobalt Blue or the Company) (ASX:COB) is a ~A\$220m market cap cobalt developer through its flagship 100%-owned Broken Hill Cobalt Project (BHCP) located 23km west of Broken Hill in NSW, Australia. At the end of September 2022, Cobalt Blue had A\$8.1m in cash and A\$3m in debt. In addition, in April 2022 COB secured a \$15m grant from the Australian Government that can be used towards de-risking BHCP and in November 2022 raised an additional \$22.3m. COB is fully funded through completion of DFS.

Our investment thesis for COB is summarized below:

- LARGE-SCALE, LOW-COST ETHICALLY DERIVED COBALT: COB's 100%-owned BHCP is one of very few cobalt projects globally that is not located in the DRC (~70% of supply) and is not a HPAL operation (~25% of supply). With forecast cobalt production of ~3.55ktpa at an all-in-sustaining cost of ~US\$12-13/lb (under US\$10/lb including nickel credits) for at least 17 years, the BHCP represents a potential large-scale, low-cost source of ethically sourced cobalt. BHCP is on track to become one of the largest global integrated cobalt mine/refinery projects ex-Africa and is therefore becoming a strategic asset to a range of potential end-users, particularly Western EV OFMs.
- **SUPERIOR CAPITAL INTENSITY:** Outside the DRC, cobalt is significantly less abundant than most other battery metals. However, the majority of large-scale cobalt sources outside the DRC are



nickel/cobalt laterite projects which normally require High Pressure Acid Leaching (HPAL). HPAL operations liberate the cobalt (and nickel) using high pressure at high temperature in a highly acidic environment. COB's proprietary process liberates cobalt at low pressure and low temperature (the opposite of HPAL). As a result, most of COB's peers outside the DRC require 3-4x the upfront capex per unit cobalt produced. In our view, for end users looking to secure cobalt, COB represents a more attractive option than most peers.

- **FLEXIBLE PRODUCTION STRATEGY:** The BHCP is being designed to produce an intermediate Mixed Hydroxide Product (MHP) and final (battery ready) cobalt sulphate. This allows COB to sell product based on market price of the day and take advantage of either higher price intermediate or end products.
- **BEST-IN-CLASS COBALT LEVERAGE WITH OVER 80% OF REVENUE FROM COBALT:** Over 90% of the world's cobalt supply is a by-product credit from copper mines (~60%) or nickel mines (~30%). As a result, most listed cobalt exposures have cobalt as a credit rather than direct cobalt revenue. The BHCP is expected to generate 80-85% of its revenue from cobalt, giving COB superior leverage to rising cobalt prices than most peers.
- POTENTIAL FOR ADDITIONAL REVENUE STREAMS BY LEVERAGING PROPRIETARY PROCESSING TECHNOLOGY: COB has developed its own patented processing technology to extract cobalt from cobalt-bearing pyrite and hopes to leverage this technology into other projects to create additional revenue streams. In our view, this is a very exciting component of Cobalt Blue's business model. Once BHCP is in production, we expect COB's IP to materially increase in value by unlocking a range of "stranded assets". COB is working with the Queensland Government and third parties to unlock these opportunities, particularly on waste streams where the Queensland Government and the third parties may have additional incentives to remediate environmental liabilities.
- MAJOR PROJECT STATUS GRANTED, FEDERAL FUNDING RE-CONFIRMED: Cobalt Blue has been granted Major Project Status by the Government to support the project through its development phase. In addition, the Federal Government has awarded a \$15m grant through the Critical Minerals Accelerator Initiative assist in getting the project to an "Execution Ready Status" and reduce implementation risks by expanding the scope of the DFS. This grant has been reviewed and re-confirmed by the Albanese Government.
- **CATALYST RICH:** Cobalt Blue is approaching one a defining moment from a de-risking perspective through its Demonstration Plant to prove at a commercial scale continuous and consistent production of cobalt within specification. This key milestone is expected to crystalise offtake agreements, potential partner negotiations, finalisation of DFS and ultimately development financing and FID for the BHCP.
- EXPERIENCED BOARD & MANAGEMENT TEAM: In our view, Cobalt Blue has a strong board and management team with the right mix of experience to bring the BHCP into production. COB is led by Joe Kaderavek who has experience in managing investments in global resources and minerals processing. The technical team is directed by Andrew Tong, a metallurgist with over 20 years' experience in project development and processing and Adam Randall as the Demo Plant Manager who has overseen the successful construction and commissioning of several pilot and demonstration processing facilities, as well as refurbishment and upgrade projects for commercial processing plants.



SITE VISIT HIGHLIGHTS

SUMMARY

COB has completed underground development at Pyrite Hill and extracted a representative ore sample to produce 680t of concentrate that is being fed through the Demonstration Plant. Plant construction is complete with sequential commissioning about to be completed. The scale of COB's Demonstration Plant is significant at over 5,000 tonnes of ore mined from Pyrite Hill, of which 4,200 tonnes have been grinded, milled, separated and concentrated into 680 tonnes (i.e. a 16.2% mass recovery averaging a 4,400ppm Co concentrate).

Two underground development drives provided lateral access to the cobalt-pyrite ore to allow for representative samples across the ore body. This is important to ensure that unbiased engineering data is generated from the fresh ore to produce the concentrate going into the Demo Plant to feed into the BHCP Feasibility Study.

The Demonstration Plant comprises the following key activities:

- Mine-concentrate operations now successfully completed with ore mined, crushed, screened, milled, gravity separated and fines recovered via flotation to produce a concentrate to be fed through the Demonstration Plant; and
- The concentrate (1/6th of the 4,200 tonnes, being 680 tonnes of concentrate) is trucked in 1t bulk bags to the processing plant in Broken Hill where it is calcinated (kiln), magnetically separated, purified (iron precipitation), leached and processed for extraction and recovery of cobalt as mixed hydroxide precipitate (MHP), elemental sulphur and cobalt sulphate (CoSO4).

The site visit pictures below illustrate the flow from mining to final product



Gravity separation via spirals



eaching autoclaves





Flotation circuit



Cobalt solvent extraction



ROM pad, crushing & stockpiles Hopper, ball mill and spirals



Kiln



Cobalt sulphate circuit



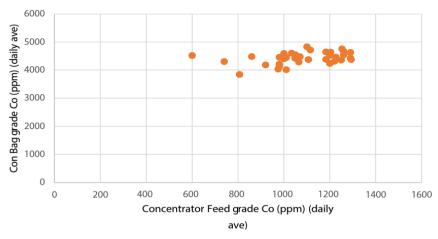
Source: Blue Ocean Equities



HIGHLIGHT 1: MINE TO CONCENTRATE PERFORMING BETTER THAN EXPECTED

During the site visit we noted that mining operations have been completed with over 5kt of ore extracted. Of these material, 4,200 tonnes were processed into 680t of concentrate at the expected 1/6th mass recovery. This is an important milestone as only 1 in 6 tonnes mined will be processed through the demo plant (and ultimately the commercial plant), maintaining the expected capital efficiency parameters for the BHCP. In addition to mass recovery, we were pleasantly surprised to note that cobalt recoveries from mine to concentrate were +95% which compare favourably with PFS recoveries of 90%. In addition to favourable mass and high cobalt recoveries, the concentrator is producing a consistent concentrate grade, irrespective of feed ore grade. This is another key outcome as it guarantees a consistent feed to the next stage of the process being the kiln for thermal decomposition.

Grade of concentrate vs incoming ore grade



Source: Company

HIGHLIGHT 2: DEMO PLANT NEARLY THERE, EXPECT HIGHER RECOVERIES VS PFS

During the site visit we noted good progress since our previous visit in June 2022. The kiln was commissioned in September 2022. Its operations have been optimised and it is calcinating the concentrate at rates of 150-200 kg per hour. The sulphur circuit was also undergoing optimisation and we understand is now operational. The leaching autoclave has now also been commissioned and operational with the initial 2t of pyrrhotite being treated. Initial MHP is expected to be recovered this month with continuous operations and first samples to end users expected in January 2023.

Sulphur, pyrrhotite and gangue (right)



Source: Blue Ocean Equities

Based on the feedback during our site visit, we expect cobalt recoveries from the kiln to MHP to be equal (or higher) vs PFS. The table below illustrates this and a key updated input into our financial model. In respect of sulphur recoveries, our assumption of 75% is consistent with COB's target.



TABLE 1: COBALT RECOVERIES

Parameter	PFS (2018) / Project Update (2020)	Demo Plant
Mass of ore	45t	4,200t
Feed type	RC drilling chips	Fresh ore, crushed, ball mill
Co recovery from Mine to Concentrate	90%	95%
Co recovery from Concentrate to MHP	96%	96%
Co recovery from Mine to MHP	86.4%	91.2%

Source: Company, Blue Ocean Equities estimates

HIGHLIGHT 3: FROM DEMO PLANT TO COMMERCIAL SCALE

With the Demo Plant nearing completion and feasibility work being progressed we anticipate the crystallisation of ongoing commercial and strategic discussions and key parameters for the BHCP to be firmed up in CY23. COB is working with Worley Parsons to deliver the feasibility study and we understand preliminary discussions, subject to detailed engineering, around scale up process guarantees are underway to support the project finance process. While it is preliminary to firm up capex and opex figures, we note most projects going into development recently have observed +30% capex inflation and we have adjusted our capex estimates for BHCP on this basis. COB's commercial plant is expected to be developed to produce MHP at Broken Hill and Cobalt Sulphate most likely at a refinery in WA (near other precursor cathode material suppliers). Operating costs are also likely to increase due to inflation, although the prospect of connecting to low cost solar/wind energy power could result in material savings on one of the largest cost inputs. Overall, at this stage we do not envisage a material impact on project economics and note there is further upside from the proposed additional sale of 1.5ktpa of cobalt sulphate from the refinery (vs the notional 3.5ktpa capacity at Broken Hill) via toll treating third party product (potentially from waste streams).



OTHER UPDATES

CAPITAL RAISING

In November 2022, COB raised \$22.3m via a \$4m institutional placement a 1:10 non-renounceable entitlement issue (which had an 85% uptake) and a \$2m shortfall placement to a sophisticated investor. This raising resulted in the issue of 38.5m shares at a price of \$0.58.

This capital raising, combined with existing cash and the endorsement by the Albanese Government of the \$15m grant secured earlier this year, materially strengthens COB's balance sheet.

Key uses of funds include:

- Completion of BHCP's DFS and commencement of FEED studies
- Maintaining Demo Plant post completion and retention of staff which will be key for the operation of the commercial plant
- Advance cobalt in waste streams opportunities
- Selective local commercial/industrial property purchases to support BHCP
- Working capital including to support strategic partnership and project finance processes

MARKET UPDATE

During 1H FY23, we have observed short term volatility in cobalt prices mainly driven by China-centric considerations, including lockdowns and lower consumer demand.

Cobalt prices have stabilised and are expected to recover and remain strong over the medium and long-term following the re-opening of China and potential economic stimulus. In addition, we expect mid-long term EV demand growth to be the major driver of growth, notwithstanding the expected lower use per battery cell.

Supply growth over medium term will mostly come from DRC and Indonesia which pose issues to Western supply chains as illustrated by the recent US Inflation Reduction Act legislation. From this perspective, we continue to expect new sources of supply from US FTA countries such as Australia to be highly sought after and well supported.

In respect of the US Inflation Reduction Act, we note there are US\$369Bn earmarked in Energy Security & Climate Change programs over the next 10 years. This legislation will have key impact on supply chains due to a range of considerations, including the US\$7,500 tax credit (split in US\$3,750 Critical Minerals and US\$3,750 Battery Components) per EV due to:

- Rules of Origin EVs must be manufactured in the US and:
 - o To access the 50% Critical Minerals credit must contain the minimum target % of value must be extracted, processed or recycled in the US or FTA countries
 - o To access the 50% Battery Component credit the minimum target % of value must be manufactured or assembled in North America
- Foreign Entities of Concern to get the tax credit, from 2024 for Battery Components or from 2025 for Critical Minerals the following countries will be excluded: China, Russia, North Korea and Iran

We note that following the recent mid-term elections in the US, there seems to be agreement among market observers and industry players that the speed of implementation of this legislation and its "go hard and fast" approach will drive structural change and incentivise US-made and compliant integrated supply chains around the North American EV industry.

Benchmark Mineral Intelligence recently noted that US gigafactory plans are now growing twice as fast as Europe's since the IRA as passed. It is expected that in the near term the European Union will potentially outline a comparable "Europe First" package to shore up manufacturing and supply of critical materials for EVs sold in Europe.

Projects such as BHCP located in Australia are expected to be key beneficiaries of both the US IRA and any similar legislation coming out of the European Union.



Code: COB

\$1.29m

Ava Daily Value

FINANCIAL MODEL SUMMARY

SUMMARY OF CHANGES

We have updated our financial model to reflect:

- the most recent issue of 38.5 million shares at \$0.58 to raise \$22.3m,
- higher cobalt recoveries of 91% (sulphur recoveries at 75%),
- higher capex figure of \$750m (from \$560m, including sulphate refinery capex of \$80m vs \$50m previously) to reflect total capex inflation of 34%, and
- USD/AUD at 0.70 and long-term sulphur price of US\$145/t.

52 Week Low

MODEL SUMMARY: FINANCIALS & NAV

BUY

\$1.35

\$1.33

133%



Stock Details

Implied Return

Target

NAV

Recommendation

Cobalt Blue Holdings

\$0.37

		Enterprise Value	\$189m
		Diluted MCap	\$219m
Share Price	\$0.58	Diluted Shares	378m
52 Week High	\$1.07	Free Float	100%

Macro Assumptions	FY22A	FY23E	FY24E	FY25E	FY26E
Exchange Rate (A\$/US\$)	0.73	0.70	0.70	0.70	0.70
Cobalt Price (US\$/lb)	30	35	37	37	37
Cobalt Price Realised (A\$/lb)	41	50	53	53	53
Profit & Loss (A\$m)	FY22A	FY23E	FY24E	FY25E	FY26E
Revenue	-	-	-	-	119
Operating Costs	-	-	-	-	(44)
Operating Profit	-	_	_	_	75
Corporate & Other	(5)	(5)	(5)	(5)	(5)
Exploration Expense	-	-	-	-	(0)
EBITDA	(5)	(5)	(5)	(5)	70
D&A	(0)	(0)	(0)	(0)	(10)
EBIT	(5)	(5)	(5)	60	145
Net Interest Expense	(0)	(0)	(0)	(4)	(18)
Pre-Tax Profit	(5)	(5)	(5)	57	127
Tax Expense	-	-	-	(18)	(38)
Underlying Profit	(5)	(5)	(5)	39	89
Signficant Items (post tax)	-	-	-	-	-
Reported Profit	(5)	(5)	(5)	39	121
Cook Floor (Adm)	EV22A	EV22E	EV24E	LASEL	EVacE

Cash Flow (A\$m)	FY22A	FY23E	FY24E	FY25E	FY26E
Operating Cashflow	(4)	(5)	(5)	70	168
Tax	-	-	-	-	(34)
Net Interest	(0)	(0)	(0)	(4)	(18)
Net Operating Cash Flow	(4)	(5)	(5)	67	116
Exploration	-	-	-	(1)	(1)
Capex	(9)	(5)	(450)	(115)	(5)
Acquisitions / Disposals	-	-	211	-	-
Other	-	-	-	-	-
Net Investing Cash Flow	(9)	(5)	(239)	(115)	(6)
Equity Issue	14	26	77	-	-
Borrowing / Repayments	-	(3)	365	(46)	(91)
Dividends	-	_	_	-	-
Other	(0)	15	1	2	-
Net Financing Cash Flow	14	37	443	(44)	(91)
Change in Cash Position	1	27	199	(92)	19
FX Adjustments	-	-	-	-	-
Cash Balance	10	38	237	145	164

Balance Sheet (A\$m)	FY22A	FY23E	FY24E	FY25E	FY26E
Cash	10	38	145	164	222
Other Current Assets	1	1	1	1	1
PP&E	1	6	560	543	521
Exploration & Development	37	37	38	39	40
Other Non Current Assets	1	1	1	1	1
Total Assets	50	83	745	747	784
Debt	2	-	319	228	137
Other Liabilities	4	4	22	26	33
Net Assets	44	79	404	493	614

Ratio Analysis		FY22A	FY23E	FY24E	FY25E	FY26E
Diluted Shares	m	318	371	505	505	505
EPS - Diluted	Ac	(1.7)	(1.4)	(1.1)	7.7	17.6
P/E	x	n.m.	n.m.	n.m.	7.5x	3.3x
CFPS - Diluted	Ac	(1.2)	(1.3)	(1.0)	13.2	23.1
P/CF	x	n.m.	n.m.	n.m.	4.4x	2.5x
FCF - Diluted	Ac	(4.0)	(2.6)	(90.1)	(8.8)	25.6
P/FCF	x	n.m.	n.m.	n.m.	n.m.	2.3x
Dividends	Ac	-	-	-	-	-
Dividend yield	%	-	-	-	-	-
Payout Ratio	%	-	-	-	-	-
Franking	%	-	-	-	-	-
Enterprise Value	A\$m	211	181	393	283	135
EV/EBITDA	x	-	-	-	-	1.9x
ROE	%	-	-	-	8%	14%
ROA	%	-	-	-	5%	11%
Net Debt / (Cash)		(8)	(38)	174	64	(85)
Gearing (ND/(ND+E))	%	n.m.	n.m.	30%	11%	(16%)
Gearing (ND/E)	%	n.m.	n.m.	43%	13%	(14%)

Reserve		
Tonnes	Grade	Cobalt
mt	ppm	kt
18	1,030	18.3
59	631	37.1
41	619	25.6
118	687	81.1
mt	ppm	kt
71.8	710	51.0
	Tonnes mt 18 59 41 118	Tonnes Grade mt ppm 18 1,030 59 631 41 619 118 687 mt ppm

Cobalt Price	US\$/lb +10%	7	15	15%	16%
Exchange Rate	A\$/US\$ -10%	8	19	19%	20%
Valuation	Discount	Stake	A\$m	A\$/sh	
BHCP (unrisked)		100%	1,207	3.25	
BHCP (risk-adjusted)	40%	75%*	451	1.22	
Processing Tech			50	0.13	
Corporate & Other			(38)	(0.10)	
Debt			3	0.01	
Cash			27	0.07	
Option Strikes			0	0.00	P/NAV

FY25E

A\$m

FY26E FY25E

A\$m

494

FY26E

1.33 0.44x

*Our Base Case valuation assumes Cobalt Blue sells 25% of BHCP to a partner for ~70% of NPV

Earnings Sensitivity

Risk adjusted NAV

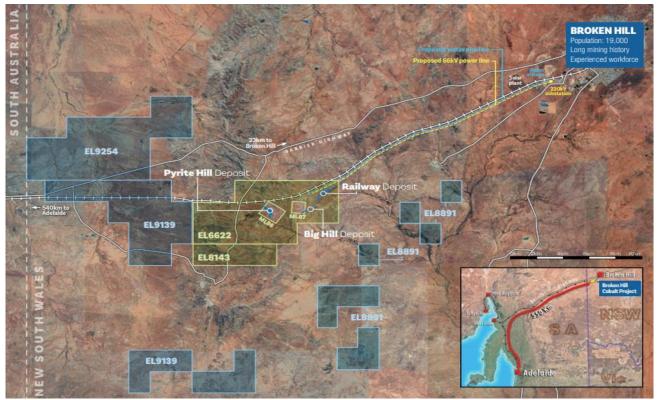


ANNEXURE: BROKEN HILL COBALT PROJECT - RECAP

Cobalt Blue's 100%-owned BHCP is located ~23km west of Broken Hill in NSW. It is located in close proximity to readily accessible power, water, rail and skilled labour — all key advantages reflected in its leading capital intensity.

The BHCP comprises six granted tenements for a total area of approximately 160km2 which is dissected by the Broken Hill to Port Pirie railway. The main targets for development are the large tonnage cobalt-bearing pyrite deposits, Pyrite Hill, Big Hill and Railway.

Location of the Broken Hill Cobalt Project



Source: Company

Mining will be done via a multi-pit operation extracting ore using conventional drill and blast, load, haul and dump processes. The three deposits are located near surface with the mineral resource estimate extending from the base of partial oxidation (located 20, 35 and 15m, respectively below surface) and extending several hundred meters down dip.

The BHCP reserve and resource support a mine life of +17 years at 3.5ktpa of saleable MHP. BHPC has substantial exploration upside with potential to extend mine life +10 years.

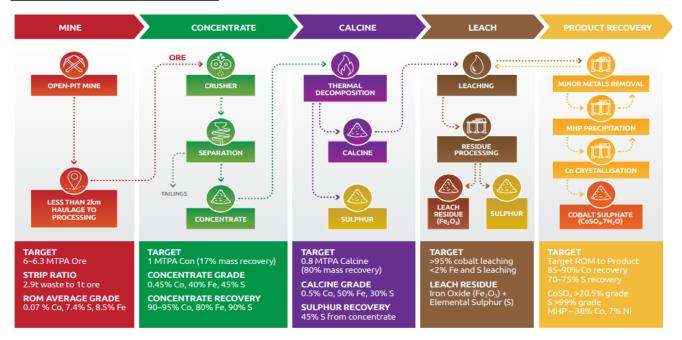
Resource & Reserve			
ВНСР	Tonnes	Grade	Cobalt
Resource	mt	ppm	kt
Measured	18	1,030	18.3
Indicated	59	631	37.1
Inferred	41	619	25.6
Total	118	687	81.1
Reserve	mt	ppm	kt
Probable	71.8	710	51.0

Source: Company



We consider mining at BHCP to be a relatively straight forward proposition and COB has now demonstrated the mass pull from mine to concentrate to be as or better than expected during the PFS. The key value proposition is incorporated in the process flowsheet as illustrated below.

The BHCP Process Flowsheet



Source: Company

The flowsheet incorporates COB's proprietary processing technology which in summary combines established and proved processes applied to address the specific characteristics of BHCP's cobalt-bearing pyrite as summarised below:

- 1. Crushing ROM ore to 1mm to recover a pyrite concentrate using gravity separation via spirals (and flotation for fines) while very simple, this initial step materially reduces the volumes required to be processed (from 6.3Mt to 1.0Mt) by increasing the grade +5x and therefore materially reducing the required plant capex vs peers.
- 2. Thermally treating the pyrite at +700°C under inert conditions to produce artificial pyrrhotite (calcine) and elemental sulphur. This process, also known as pyrolysis, eliminates the production of sulphuric acid and the costs associated with storing and transporting it. The sulphur is condensed into solid prills (nodules). Elemental sulphur is also a valuable byproduct (spot price currently US\$400/t) and easier/cheaper to handle vs sulphuric acid.
- 3. The pyrrhotite is then leached at low pressure and low temperature in an autoclave with >95% cobalt recoveries in the solution and additional sulphate recoveries via remelting.
- 4. The final stage comprises removal of minor metals (via precipitation, ion-exchange and solvent extraction) and precipitation of cobalt and nickel into a mixed hydroxide product (MHP) intermediate. MHP produced from COB's process has achieved +30% Co and 7% Ni, unlike most MHPs which typically contain an inverse proportion of nickel and cobalt.
- 5. COB also has the option of further processing its MHP into a cobalt sulphate and a nickel sulphate solution.

Recoveries during the PFS were 85.6% for cobalt and 64% for sulphur with target recoveries at 90% for cobalt and 75% for sulphur. We note that based on preliminary results from the Demo Plant these targets are likely to be exceeded.



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