



Cobalt Blue Holdings – Capital Structure

ASX: COB

Cobalt exploration & development company.

Commodities:

Cobalt and Sulphur

Capital Structure:

Ordinary Shares at 09/06/2021: 248.2m

Options (unlisted):

8.8m

Promissory Note¹ (5yr to 2025):

Market Cap (undiluted):

\$3.0m \$90m

Share Price:

Share Price at 09/06/2021: \$0.36

Cash:

Cash On Hand

\$4.2m² Source: Cobalt Blue Holdings Limited

Railway

Big Hill

Broken Hill

Adelaide

EL 6622

EL 8143

Pyrite Hill

23 KM TO BROKEN HILL

EL 889

¹ 3 years interest free, then 6% interest, paid annually in arrears. Can be repaid anytime in whole or in part without penalty. ² As at 31 March 2021



Broken Hill

Broken

Hill

Cobalt

Project

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Globally Significant Project

Broken Hill Cobalt Project (BHCP) Overview:

- Targeted project life +20 years:
 - Mineral Resource 123 Mt for 81,400 t cobalt*, with significant expansion potential via exploration and acquisition.
 - 3,500+ tpa of cobalt (as cobalt sulphate).
 - 300,000 tpa of elemental sulphur.

Probable Ore Reserve	71.8 Mt	710 ppm Co	7.6% S
Production Target	98 Mt	690 ppm Co	7.4% S

- Patented minerals processing technology for treating pyrite feedstocks:
 - 85-90% recovery of cobalt from ore to product.
 - Generation of stable leach residues minimal footprint.



^{*}The reported Mineral Resources are inclusive of the reported Ore Reserves.

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BHCP - investment fundamentals

Australia's largest cobalt sulphide deposit - a top 10 global cobalt mine

- Project life target is +20 years.
- Politically stable jurisdiction. Established infrastructure in a mining district.

Flexible, low cost production

- Cobalt sulphate production from MHP intermediate.
- Lowest quartile costs: cobalt C1 (US\$9.34/lb)* & AISC (US\$12.13/lb)*.

Low capital intensity

All in pre-production capital A\$560m for 3,500+ tpa Co.

(incl. EPCM, process plant, infrastructure, water/power supply, mine development, contingencies of A\$70m)

Existing commercial partnerships

☐ LG International, Mitsubishi Corporation & Sojitz Corporation



^{*}Project Update 2020 - Value Engineering Study including nickel credits.

BHCP - Project Metrics

Financials*

- Pre-Tax NPV_{7.5} A\$861m (IRR 23%)
- Post Tax NPV_{7.5} A\$554m (IRR 19%)
- Payback: 4.5 years
- EBITDA A\$3.05B generated LOM
 (Co: US\$27.5/lb, S US\$145/t, Ni US\$6.0/lb, FX A\$ \$0.70)



Parameters

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- ~3,500 tpa cobalt sulphate
- 300,000 tpa sulphur
- 17-year operations

Life of Mine (Production Target)	Revenue (%)	Revenue (A\$m)
Cobalt	84%	4,972
Sulphur	16%	973

^{*}Project Update 2020 - Value Engineering Study including nickel credits.

BHCP – Capital and Operating Costs

Capital Costs

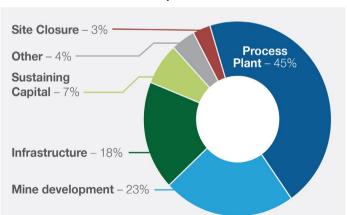
Dersonal

 All in pre-production : A\$560m (incl \$70m contingencies)

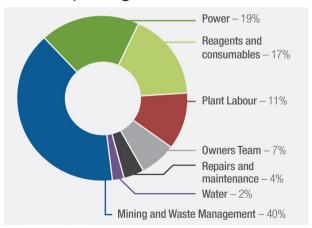
LOM Operating Costs

- Cobalt Sulphate ~US\$12/lb (ASIC)
- Cobalt Hydroxide (MHP) ~US\$9/Ib (ASIC)
- Globally lowest quartile costs

Life of Mine Capital Breakdown



Operating Cost Breakdown

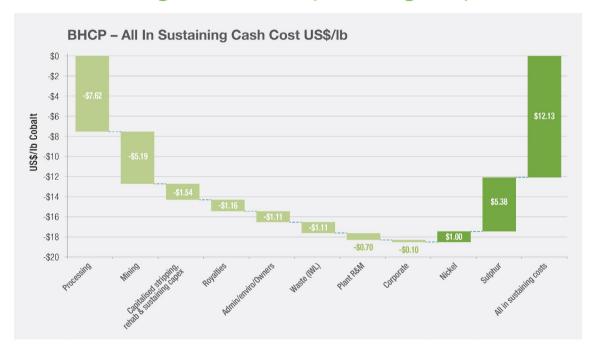




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BHCP – Operating Costs

All In Sustaining Costs - lowest quartile of global producers



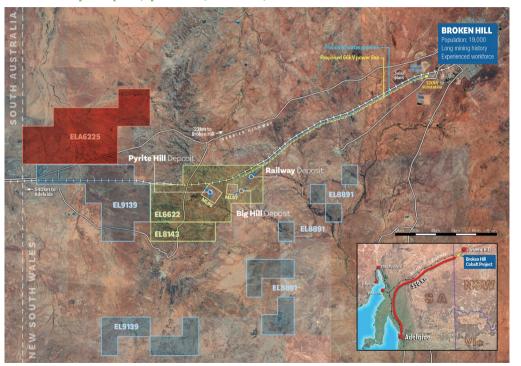
^{*}Project Update 2020 - Value Engineering Study including nickel credits.





BHCP – significant logistical advantages

Broken Hill - people, power, water, road and rail benefits.





Mineral Resource Summary

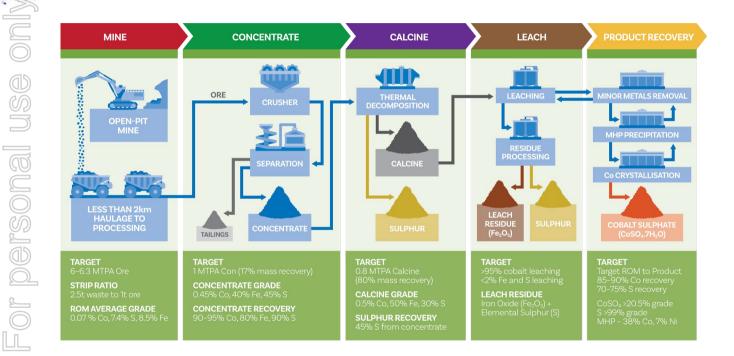
Category	Mt	Co ppm	CoEq (ppm)	Fe (%)	S (%)	Pyrite (%)	Contained Co (t)	Py (Mt)
Pyrite Hill Cut-off Grade 275 ppm CoEq								
Measured	18	928	1094	10.7	9.9	19	17,100	3
Indicated	8	700	827	9.6	7.6	14	5,800	1
Inferred	7	811	957	10.4	8.7	16	5,700	1
Total	34	847	1000	10.4	9.1	17	28,700	6
Railway Cut-c	Railway Cut-off Grade 275 ppm CoEq							
Indicated	45	605	718	7.8	6.7	13	27,400	6
Inferred	29	568	681	8.1	6.8	13	16,300	4
Total	74	591	704	7.9	6.7	13	43,700	9
Big Hill Cut-of	ff Grade 27	5 ppm CoEq						
Indicated	11	613	714	6.6	6.1	11	6,600	1
Inferred	5	517	605	6.0	5.2	10	2,400	0
Total	15	584	681	6.4	5.8	11	9,000	2
Total Cut-off G	arade 275 p	pm CoEq						
Measured	18	928	1094	10.7	9.9	19	17,100	3
Indicated	64	619	731	7.8	6.7	13	39,900	8
Inferred	40	604	720	8.3	6.9	13	24,300	5
Total	123	660	782	8.4	7.3	14	81,400	17

The Mineral Resource estimates for the BHCP deposits (at a 275 ppm CoEq cut-off) detailed by Mineral Resource dissification (CoEq = Co ppm + S % *16.74).

Note minor rounding errors may have occurred in completion of this table.



BHCP - Cobalt Sulphate Production Flowsheet





BHCP – Scale of Metallurgical Testwork

Scaling testwork - growing confidence in the COB Process

Study Level	Period	Concen	trate Circuit	Pyrolys	sis Circuit	Leaching/Purification	
Scoping Study	FY2017	20-30 kg	Lab scale	1 kg	Lab scale	1 kg	Lab scale
Pre-Feasibility Study	FY2018	820 kg	Bulk trial in batch mode	100 kg	2-3 kg batches	30 kg	0.2-1 kg batches
Project Update	FY2020	45 tonne	Continuous pilot circuit 2-3 t/hr	150 kg	Continuous pilot circuit 4-8 kg/hr	20 kg	1-3 kg batch
Current Pilot	FY2021	45-50 t	Continuous pilot circuit 2-3 t/hr	Up to 15 t	Commercial sized furnace 100-150 kg/hr	Up to 15 t	Pilot equipme 1t batches
Future (Feasibility Study)	FY2022	4000 t	Mobile plant 10-15 t/hr	Up to 500 t	Commercial sized furnace 100-150 kg/hr	Up to 500 t	Demonstration plant 50-100 kg/h







Concentrate Pyrite - FeS₂



Calcine Pyrrhotite - Fe₇S₈



Elemental Sulphur



Leach Residue Fe₂O₃



Co-Ni Mixed Hydroxide



Cobalt Sulphate CoSO₄.7H₂O





BHCP – Timeline

The BHCP development timeline is shown below:

	2019	2020	2021	2022
Broken Hill Cobalt Project				
Business Achievements	Mitsubishi — Sulphur Agreement 100% Project Ownership		Global cobalt sample program - Q1 2021	Final Investment Decision — Late 2022 Cobalt Qualification Program — 2H 2022
Technical Studies	Resource upgrade Drilling: +9,500m Resource: 111Mt	Project Update 2020 – July 2020		Feasibility Study and Approvals – Late 2022
Metallurgical Studies	Concentration — Pilot Scale Testwork	Pilot Plant — Q4 2020	Demonstration Plant – Q4 2021	
Environmental Approvals	CPDP Submitted	Scoping Report – Jan 2020 SEARs issued – Feb 2020		EIS Submission – 2H 2022 SSD Determination – 2H 2022
Partnerships				
Business Achievements			Cobalt in Waste Streams project - from 2H 2021	
	ACHIE	VEMENTS	G	OALS



The Cobalt Blue Team

"Extensive expertise - mineral development, investment management, corporate law and energy storage."

Independent Chairman - Robert Biancardi

- IBM, Citibank, Westpac and Evolution Healthcare (senior management and director).
- Numerous directorships of private companies including Rockridge Private Equity and Hutchisons Child Care (successful ASX listing).

Independent Director – Hugh Keller

- Partner Blake Dawson (now Ashurst) and its predecessor firms for 35 years until retirement from full time legal practice in 2010.
- Non-executive director of ASX listed Thakral Holdings Limited and of LJ Hooker Limited.

Independent Director - Rob McDonald

- 40 years of international mining sector experience.
- Investment banking/private equity investment management.

Chief Executive Officer – Joe Kaderavek

- Deutsche Bank, Head of Resources, equities / investment management, resources and energy storage technology focus.
- PwC. Operational reviews and strategic assessments mining, minerals processing, and infrastructure in Australia, North America and Europe; seconded to BHPB and Rio Tinto.

Executive Manager - Dr Andrew Tong

- Metallurgist with over 15 years experience in project development, operating mining and processing activities, and patenting innovative minerals processing technology.
- Managing Director of Northern Territories Resources Pty Limited.

Chief Financial Officer - Danny Morgan

- Chartered Accountant with over 25 years' professional financial and commercial experience including IPO's, M&A, Project Financing, JV's and Project Developments.
- Wide experience across private and publicly listed resource companies including Donaldson Coal, Oil Search and Roc Oil.





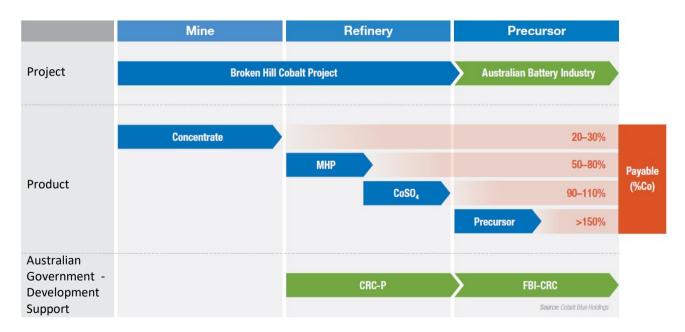
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BHCP in the global cobalt value chain

Cobalt Products & Payables:







BHCP - Mixed Hydroxide Product (MHP)

- ☐ High Grade: 37% cobalt.
- Byproduct Credit: 7% nickel.
- Low trace metal impurities Cu, Fe, Mn.
- ☐ Trading terms minimum grade is 30% Co content.

Typical content from testwork:

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Ca	Co	Cl	Cu	Fe	Mn	Ni	Zn
2.5 %	37 %	7 %	0.01 %	0.07 %	0.85 %	7 %	0.1 %

MHP and Cobalt Sulphate Markets

BHCP Product	Payable % Co metal price	Purity	End Use Typical	Customers
Cobalt Sulphate	90-110%	Very High	Li ion batteries	Precursor/Cathode Makers
Mixed Hydroxide Product	50-80%	Low	Metallic cobalt & Li ion batteries	Commodity Trading Houses Mining Companies



BHCP – Cobalt Sulphate

BHCP – Cobalt Sulphate Heptahydrate (CoSO₄.7H₂0)

- High Grade: 20.8% cobalt.
- Low trace metal impurities.



Metal	Units	СОВ	AVG 9 producers
Со	%	>20.8%	>20.5
Al	ppm	2	<10
As	ppm	<1	<5
Ca	ppm	<0.01	<10 (can be up to 100)
Cd	ppm	< 0.001	<10
Cr	ppm	<0.01	<5
Cu	ppm	1	<10
Fe	ppm	<1	<10
K	ppm	0.6	<5 (can be up to 100)
Mg	ppm	27	<20 (can be up to 100)
Mn	ppm	5	<10 (can be up to 100)
Na	ppm	128	<20 (can be up to 100)
Ni	ppm	<10	<10 (can be up to 100)
Pb	ppm	< 0.05	<10
Si	ppm	< 0.5	<20
Zn	ppm	<2	<10



BHCP – Elemental Sulphur

BHCP - Elemental Sulphur

- >99% purity (max 0.2% Fe, 0.5% SiO₂)
- Physical Form: Prills (2 5 mm)
- Australia: 1mtpa deficit market:
 - fertiliser feedstock (55%)
 - metallurgical consumption (43%)

C. Colombian A. S. C.	Al	600	ppm
Sea Charles To Company	Ca	160	ppm
6-2660	Co	<20	ppm
	Fe	0.10	%
	Mg	60	ppm
	Na	100	ppm
	SiO ₂	0.45	%
	S	99.3	% by difference



BHCP – outstanding capital efficiency

New global projects running at 3 to 4x COB capital intensity

Project	US\$ Capex	Cobalt (tpa)	By-products	Cobalt Payable (%LME)	Mine Life (years)	Capital Intensity (US\$/tpa Co)
Broken Hill Cobalt (Aust)	392	3,530	Sulphur	100%	17	112,000
Mount Thirsty (Aust)	260	1,600	Ni	80%	12	163,000
Kabanga (Tanzania)	750	2,400	Ni	Low		313,000
Kalgoorlie Nickel Project (Aust)	918	2,150	Ni	100%	>25	427,000
Sunrise (Syerston) (Aust)	1,490	3,360	Ni/Sc	100%	>25	444,000
Wellgreen Central (Canada)	450	1,000	Ni/Cu	Low	25	450,000
NiWest (Aust)	676	1,400	Ni	100%	>25	483,000
Dumont (Canada)	1030	2,000	Ni/Pt		20	515,000
NICO (Canada)	589	500	Bi/Au	100%	>20	1,178,000

Source: Company Announcements and CRU database as of 5 July 2020. All other global projects include nickel or copper as primary metals, with cobalt being a minor by product



Strategic Partners

Existing Partnerships - LG International and Mitsubishi Corporation.



Source: Cobalt Blue Holdings Limited

Cobalt products assessment includes Sojitz Corporation + others (under NDA).



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COB Partnerships

Commercialising the COB Process:

- COB Process (technology) is a patented asset.
- Short-term:
 - understanding market size proving the COB Process works for different styles of mineralisation.
 - consulting fees.
- Long-term:
 - project participation.
 - joint marketing of cobalt products.
- ☐ Three testwork partners to date:
 - Broken Hill District (Mutooroo),
 - South Australia (Carrapeteena OZ Minerals (ASX:OZL)
 - Queensland (Millennium Project Global Energy Metals)



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Australian Critical Minerals

Assisting in the development of Australia's battery capabilities

Participating with Australian industry and researchers to develop processing pathways for refined battery raw materials.



A\$1.57m grant awarded from CRC-Project Program Round 8. COB led consortium for pilot scale optimisation of the recovery of cobalt from pyrite.





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Pilot Plant - Concentrate Circuit







Pilot Plant - Leach Circuit





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Pilot Plant - Leach Circuit (II)







Pilot Plant - Calcine Circuit









Pilot Plant - Product Recovery Circuit







Compliance Statements

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

The information is extracted from the reports referenced below which are available to view at https://www.cobaltblueholdings.com/.

Slide 3: The Mineral Resource estimate is as released on 16 July 2020 in the market announcement titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' available to view at https://www.cobaltblueholdings.com/. A complete summary of Mineral Resources by classification is provided on Slide 9 (note minor rounding errors may have occurred in compilation of this summary). The Mineral Resource has been reported at a cut-off of 275 ppm cobalt equivalent based on an assessment of material that has reasonable prospects of eventual economic extraction. The cobalt equivalent grade has been derived from the following cut-off calculation: CoEq ppm = Co ppm + (S price/Co price) × (S recovery/Co recovery)). This equates to CoEq ppm = Co ppm + (S% × 16.74). The parameters used for this calculation are listed in the table below. The Company confirms all elements included in the metal equivalence calculation have reasonable potential to be recovered and sold.

Assumption	Input
A\$/US\$ Exchange Rate	0.70
Cobalt Price	US\$25/lb Co
Sulphur Price	US\$123/t
Cobalt Recovery	85.5%
Sulphur Recovery	64.4%





Compliance Statements

Slide 3 (continued): The Ore Reserve estimate, production target and metallurgical results are as released in the market announcement titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' available to view at https://www.cobaltblueholdings.com/.

Slide 4: The forecast financial information including C1, AISC and pre-production capital cost estimates are as released on 16 July 2020 in the market announcement titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' available to view at https://www.cobaltblueholdings.com/.

Slide 5: The forecast financial information and production target parameters are as released on 16 July 2020 in the market announcement titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' available to view at https://www.cobaltblueholdings.com/.

Slide 6: The forecast financial information including pre-production capital cost estimates and LOM operating costs are as released on 16 July 2020 in the market announcement titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' available to view at https://www.cobaltblueholdings.com/.

Slide 7: The forecast financial information including AISC are as released on 16 July 2020 in the market announcement titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' available to view at https://www.cobaltblueholdings.com/.

Slide 9: The Mineral Resource estimate is as released on 16 July 2020 in the market announcement titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' available to view at https://www.cobaltblueholdings.com/. The Mineral Resource has been reported at a cut-off of 275 ppm cobalt equivalent based on an assessment of material that has reasonable prospects of eventual economic extraction. The cobalt equivalent grade has been derived from the following cut-off calculation: CoEq ppm = Co ppm + (S pm × (S price/Co price) × (S recovery/Co recovery)). This equates to CoEq ppm = Co ppm + (S% × 16.74). The parameters used for this calculation are listed on Slide 23.

Slide 10: The cobalt sulphate production flowsheet is as released on 16 July 2020 in the market announcement titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' available to view at https://www.cobaltblueholdings.com/.

Slide 16: The metallurgical results are as released on 28 April 2020 in the market announcement titled 'Mixed Hydroxide Product (MHP) testwork delivers premium product' and further described in the market announcement released on 16 July 2020 titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' both of which are available to view at https://www.cobaltblueholdings.com/.



Compliance Statements

Slide 17: The metallurgical results are as released on 28 July 2020 in the market announcement titled 'BHCP testwork High purity cobalt and sulphur products' and further described in the market announcement released on 16 July 2020 titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' both of which are available to view at https://www.cobaltblueholdings.com/.

Slide 18: The metallurgical results are as released on 28 July 2020 in the market announcement titled 'BHCP testwork High purity cobalt and sulphur products' and further described in the market announcement released on 16 July 2020 titled 'Broken Hill Cobalt Project (BHCP) Project Update 2020' both of which are available to view at https://www.cobaltblueholdings.com/.



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