

Met results deliver solid upgrades @ Broken Hill with resource drilling planned



# Highlights

- Metallurgical test-work on BH1 drill-core extracted from The Sisters Prospect<sup>1</sup> BHA Project's East Zone (Appendix A) – delivered excellent beneficiation results for cobalt and, surprisingly, copper-gold (Appendix B) – with the best outcomes:
  - > Cobalt: 200ppm head-grade up to 2,500ppm post-test-work; 12x upgrade
  - > Copper: 520ppm head-grade up to 16,000ppm (1.6%) post-test-work; 30x upgrade
  - > Gold: 0.02g/t Au head-grade up to 3.87g/t Au post-test-work; >190x upgrade
- Pleasingly, the metallurgical test-work showed that cobalt-copper-gold liberated easily from BH1 drill-core samples to produce a potentially viable concentrate
- Moving forward, the Board's primary focus for the East Zone is to increase the confidence in the current inferred Mineral Resource Estimate (MRE) which stands at 21,556t cobalt (64Mt @ 318 ppm Co) and 44,260t copper (63Mt @ 0.07% Cu)<sup>2</sup>
- As such, the geology team are close to finalising optimal cobalt targets across several prospects for the inaugural drilling campaign, which will be implemented once regulatory approvals are secured:
  - > To date, land-holder approval has been secured and access routes mapped out

**Castillo Copper's Managing Director Dr Dennis Jensen commented:** "The Board was pleasantly surprised upon learning of the exceptional metallurgical results, especially nearly 4 g/t gold and 1.6% copper which provide new dynamics to follow up. However, the Board's current prime focus is to increase the confidence in the inferred cobalt resource with a highly targeted drilling campaign across several prospects, with planning to be finalised shortly."

# **Compelling metallurgical results**

**Castillo Copper Limited's** ("**CCZ**" or "**the Company**") Board is pleased to announce that several rounds of preliminary metallurgical test-work on BH1 drill-core (The Sisters Prospect; East Zone – Appendix A) produced excellent beneficiation results for cobalt-copper-gold – with the best outcomes as follows:

- > Cobalt: 200ppm head-grade up to 2,500ppm post-test-work; 12x upgrade
- > **Copper:** 520ppm head-grade up to 16,000ppm (1.6%) post-test-work; 30x upgrade
- **Gold:** 0.02g/t Au head-grade up to 3.87g/t Au post-test-work; >190x upgrade (Appendix B)

The original BH1 drill-core the samples were extracted from comprised:

# 24m @ 424ppm Co from 103m including 2m @ 1,120ppm Co from 107m; 1m @ 873ppm Co from 120m; and 2m @ 486ppm Co from 125m (BH1)<sup>1</sup>

A key feature the metallurgical test-work highlighted was that cobalt-copper-gold liberated easily from the BH1 drill-core samples to produce a potentially viable concentrate (Figure 1).

# FIGURE 1: METALLURGICAL TESTING - CONCENTRATE EXAMPLE



Source: ALS Metallurgy, Perth, Western Australia

# Drilling campaign to increase MRE confidence

To improve confidence in the current global MRE – 21,556t cobalt (64Mt @ 318 ppm Co) and 44,260t copper (63Mt @ 0.07% Cu)<sup>2</sup> – and potentially extend known mineralisation, CCZ will soon undertake an inaugural drilling campaign across several prospects within the BHA Project's East Zone.

The geology team are close to finalising optimal cobalt targets and subject to Board approval, will then file an application with the NSW Resources Regulator to implement the drilling campaign.

Previous field trips and land-holder meetings have already formalised approvals and enabled access routes to be mapped out.

### The Board of Castillo Copper Limited authorised the release of this announcement to the ASX.

Dr Dennis Jensen

**Managing Director** 

#### Competent Person's Statement

The information in this report that relates to Exploration Results and Mineral Resource Estimates for "BHA Project, East Zone" is based on information compiled or reviewed by Mr Mark Biggs. Mr Biggs is a director of ROM Resources, a company which is a shareholder of Castillo Copper Limited. ROM Resources provides ad hoc geological consultancy services to Castillo Copper Limited. Mr Biggs is a member of the Australian Institute of Mining and Metallurgy (member #107188) and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, and Mineral Resources. Mr Biggs holds an AusIMM Online Course Certificate in 2012 JORC Code Reporting. Mr Biggs also consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The Australian Securities Exchange has not reviewed and does not accept responsibility for the accuracy or adequacy of this release.

#### References

CCZ ASX Release - 5 May 2022

CCZ ASX Release - 1 June 2022



# **About Castillo Copper**

Castillo Copper Limited is an Australian-based explorer primarily focused on copper across Australia and Zambia. The group is embarking on a strategic transformation to morph into a mid-tier copper group underpinned by its core projects:

- A large footprint in the in the Mt Isa copperbelt district, north-west Queensland, which delivers significant exploration upside through having several high-grade targets and a sizeable untested anomaly within its boundaries in a copperrich region.
- Four high-quality prospective assets across Zambia's copper-belt which is the second largest copper producer in Africa.
- A large tenure footprint proximal to Broken Hill's world-class deposit that is prospective for cobalt-zinc-silver-leadcopper-gold and platinoids.
- Cangai Copper Mine in northern New South Wales, which is one of Australia's highest grading historic copper mines.

The group is listed on the LSE and ASX under the ticker "CCZ."

# **Directors**

Mr Gerrard Hall

Dr Dennis Jensen

Mr Geoff Reed

# **ASX/LSE Symbol**

CCZ



# **Dr Dennis Jensen Managing Director**

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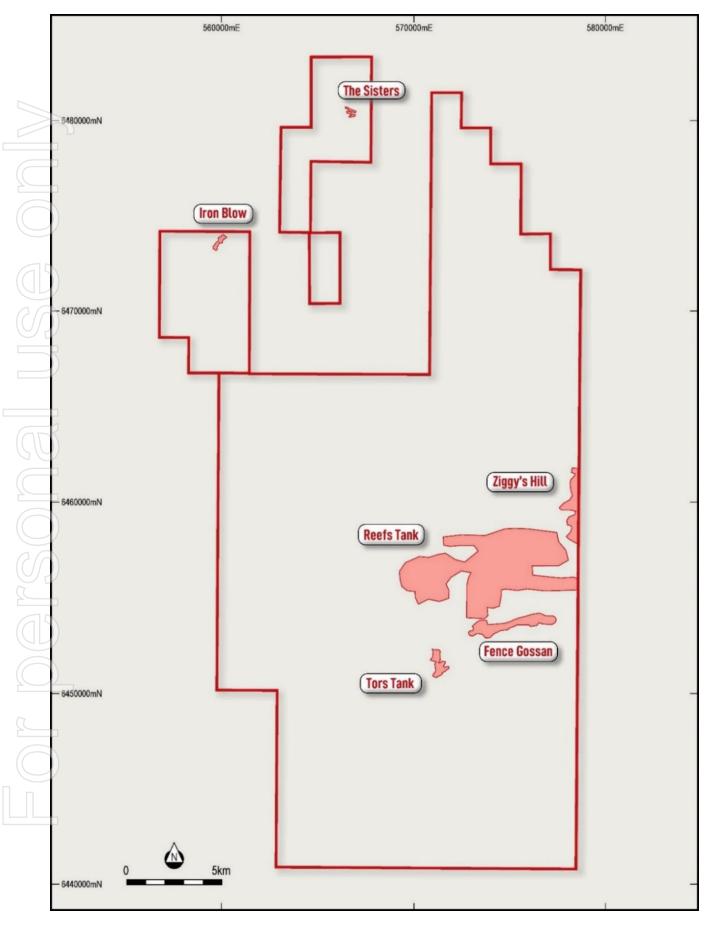
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# APPENDIX A: PROSPECT'S IN BHA PROJECT'S EAST ZONE



Source: CCZ geology team

# APPENDIX B: METHODOLOGY AND TEST-WORK

CCZ contracted ALS Metallurgy, Perth, Western Australia to undertake the preliminary rougher test-work on the BH1 drill-core sample.

The core for metallurgical testing is from EL8435 in NSW, near Broken Hill, from a historic mine called "The Sisters" and from a NQ diamond core hole BH1, drilled by Falconbridge in 1970. The cored hole comes courtesy of the GSNSW E.C. Andrews core library in Broken Hill.

This composite of about 14m goes around 494ppm cobalt (inc. a 1m sample as high as 1,120ppm), with some copper (0.1%) and a little bit of silver and maybe some TREO present. The main target is cobalt which is probably interspersed and locked within pyrite.

As part of this strategy and to further test the economic potential of BHA Project's East Zone, cobalt preliminary rougher testing was recently completed by ALS Metallurgy's laboratory using an approximately 16kg composite derived from drill-hole (BH1) as shown in Figure B1 below:

Drillhole	XRF Samp	SampleID	From	То	Length (m)	Weight (kg)	Ag_ppm	Co_ppm	Cu_ppm	Ag Mass	Co Mass	Cu Mass
BH1	BH1.18	CCZ03785	103.07	104.73	1.66	0.65	0.32	712	483	0.01	28.44	19.30
BH1	BH1.19	CCZ03786	104.73	106.62	1.89	0.84	0.2	450	773	0.01	23.23	39.91
BH1	BH1.20	CCZ03787	106.62	108.51	1.89	0.94	0.29	1120	1260	0.02	64.71	72.80
BH1	BH1.21	CCZ03788	108.51	110.46	1.95	1.54	0.04	93.5	90.1	0.00	8.85	8.53
BH1	BH1.22	CCZ03789	110.46	112.41	1.95	1.75	0.05	23.3	167	0.01	2.51	17.96
BH1	BH1.23	CCZ03790	112.41	114.36	1.95	2.08	0.04	112.5	23.9	0.01	14.38	3.06
BH1	BH1.24	CCZ03791	114.36	116.31	1.95	1.66	0.15	62.6	33.5	0.02	6.39	3.42
BH1	BH1.25	CCZ03792	116.31	118.26	1.95	0.81	0.15	409	235.0	0.01	20.36	11.70
BH1	BH1.26	CCZ03793	118.26	119.29	1.03	0.71	0.13	419	233.0	0.01	18.28	10.17
BH1	BH1.27	CCZ03794	119.29	120.32	1.03	0.72	0.08	759	56.8	0.00	33.59	2.51
BH1	BH1.28	CCZ03795	120.32	121.35	1.03	0.7	0.33	873	196.5	0.01	37.56	8.45
BH1	BH1.29	CCZ03796	121.35	122.38	1.03	0.84	0.04	111	72.7	0.00	5.73	3.75
BH1	BH1.30	CCZ03797	122.38	123.44	1.06	0.72	0.77	193	73.6	0.03	8.54	3.26
BH1	BH1.31	CCZ03798	123.44	124.66	1.22	0.69	0.46	477	385	0.02	20.23	16.33
BH1	BH1.32	CCZ03799	124.66	125.88	1.22	0.7	1.18	727	10650	0.05	31.28	458.21
BH1	BH1.33	CCZ03800	125.88	127.10	1.22	0.92	0.49	245	4280	0.03	13.85	242.02
					24.03	16.27				0.23	338	921

# FIGURE B1: THE SISTERS SAMPLE FOR METALLURGICAL TESTING



Once at ALS Metallurgy's Perth laboratory, the head grade of the composite sample was determined to be variable compared to the calculated arithmetic average above, as shown in Figure B2 below.

FIGURE B2: THE SISTERS - TESTING HEAD GRADE

Analyte	BH1 Composite	Analyte	BH1 Composite
Ag (ppm)	<2	Mg (ppm)	6400
AI (%)	1.68	Mn (ppm)	100
Au (g/t)	0.02 / <0.02	Mo (ppm)	<5
Ba (ppm)	60	Na (ppm)	1860
Be (ppm)	<5	Ni (ppm)	45
Bi (ppm)	<10	P (ppm)	9000
Ca (%)	1.70	Pb (ppm)	110
Cd (ppm)	<5	SiO2 (%)	46.6
Co (ppm)	200	Sr (ppm)	160
Cr (ppm)	150	Ti (ppm)	800
Cu (ppm)	520	V (ppm)	258
Fe (%)	28.0	Y (ppm)	<100
K (ppm)	1800	Zn (ppm)	230
Li (ppm)	<5		

Source: ALS Metallurgy, Perth, Western Australia

The laboratory considered several rougher options for targeting a bulk concentrate (Cu/Co), with future programs looking to refine this and separate more target material.

However, with a bulk concentrate methodology the focus, recovery takes priority over grade at this stage. Initially, two different reagent schemes for the bulk concentrate generation:

- Natural pH, PAX, Danafloat 245; (PAX may cause high iron collection)
- Cytec aero float, Aero 3894 with an Aero 208 promoter

The final recommendation was to try initially 10g/t of the Danafloat / Aero 208, with 5g/t of the PAX or Aero 3894. Further, consideration was given to add additional dosage at the end of the first three concentrates (assumed 2-minute Ro concentrate), and then see if more product reports into Ro Con 4. Eventually, a series of rougher tests were carried out based on the following methodology:

## A) Sample preparation and screening analysis

- Receive samples and inventory
- Control crush P100 3.35mm (assumed no compositing) ≻
- Rotary blending & splitting 1kg charges (12 x 1kg)  $\geq$
- PPS Head assay submission  $\geq$
- Assay Head sample (Au, Co, Cu, S and SiO<sub>2</sub>, ICP Scan) ≻

# B) Flotation and gravity testing

- > 1 kg grind establishment single grind target
- > Rougher flotation (4 con 1 tail) (5 test allowance)
- > PPS Flotation product assay submission
- Assay Flotation products (Au, Co, Cu, Zn, S, and SiO2)
- Gravity separation Wilfley table Batch test
- PPS Table product assay submission
- > Assay Table products (Au, Co, Cu, Zn, S, and SiO<sub>2</sub>)

Four runs were established comparing two common froth reagents (Aerofloat and Danafloat; Figure B3) below.

New instructions for the float were based on the Danafloat reagent trialled previously. The new float targeted an elevated pH (11) to depress the S to give an indication if the Co / Cu are encapsulated in this material or not, based on recovery changes.

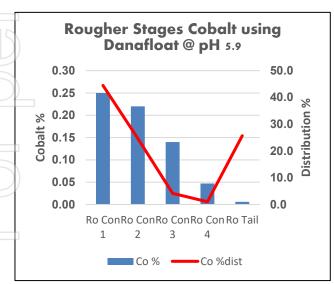
# FIGURE B3: The Sisters Metallurgical Testing Parameters

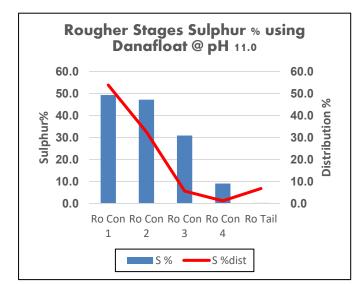
)	COMPOSITE	The Sisters BH1	The Sisters BH1	The Sisters BH1	The Sisters BH1
	TEST #	BF2270	BF2271	BF2291	BF2293
))	WATER TYPE	Perth Tap Water	Perth Tap Water	Perth Tap Water	Perth Tap Water
	REAGENT	Danafloat	AeroFloat	Danafloat	Danafloat
	GRIND SIZE	P80 75µm	P80 75µm	P80 75µm	P80 25µm
1	PULP DENSITY	35%	35%	35%	35%
J	рН	5.9	5.7	11.0	11.0

Source: ALS Metallurgy, Perth, Western Australia

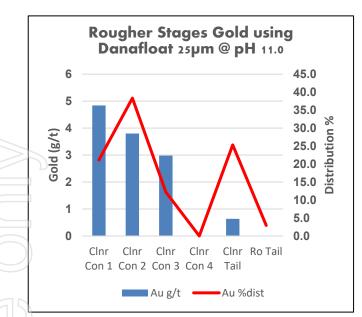
Figures B4 and B5 show the frother product comparison between Aerofloat and Danfloat concentrates for Co, S, Au, and Cu; the latter at 25µm. Danafloat products showed the best concentration of cobalt, with Ro Con 1 giving 12 times increase from a starting point of 200ppm to 2,500ppm.

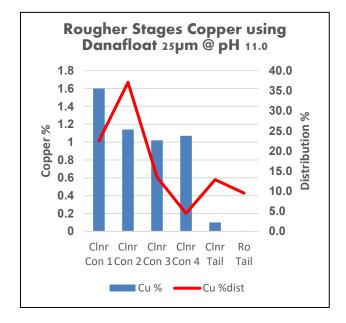
# FIGURE B4: METALLURGICAL TESTING – ROUGHER FROTHER PRODUCT EXAMPLE CO, S





## FIGURE B5: METALLURGICAL TESTING - ROUGHER FROTHER PRODUCT EXAMPLE AU, CU





Source: ALS Metallurgy, Perth, Western Australia

It should be noted the preliminary rougher testing was biased toward establishing a viable process configuration and recovery rather than grade. Figure B64 provides a range of improvements in grade for Au, Co, Cu and S using the Danafloat for various concentrate runs. Note, cumulative copper for Ro Con 1-3 gives 1.2% Cu at 72.1% recovery. Further, the high S grade of 46.9% at 92% recovery is of note.

### FIGURE B6: Metallurgical Testing Danafloat Head Grade Improvement for several elements

PRODUCT	WEIGHT		Au		Со		Cu		SiO2		S		Zn	
	Gram	%	%	%dist	%	%dist	%	%dist	%	%dist	%	%dist	%	%dist
Ro Con 1	38.37	3.85	0.32	6.56	0.25	44.46	0.58	38.16	3.25	0.27	49.30	53.82	0.01	0.96
Ro Con 2	24.20	2.43	0.24	3.10	0.22	24.68	0.55	22.82	5.30	0.28	47.20	32.50	0.02	2.43
Ro Con 3	6.41	0.64	0.30	1.03	0.14	4.16	0.50	5.50	23.10	0.32	30.90	5.64	0.06	1.93
Ro Con 4	4.67	0.47	0.17	0.42	0.05	1.02	0.23	1.84	46.40	0.47	9.08	1.21	0.08	1.88
Ro Tail	923.70	92.62	0.18	88.88	0.01	25.69	0.02	31.68	49.60	98.67	0.26	6.83	0.02	92.80
Calc'd Head	997.35	100.00	0.19	100.00	0.02	100.00	0.06	100.00	46.56	100.00	3.52	100.00	0.02	100.00
Assay Head			0.02		0.02		0.05		46.60				0.02	
Ro Con 1		3.85	0.32	6.56	0.25	44.46	0.58	38.16	3.25	0.27	49.30	53.82	0.01	0.96
Ro Con 1-2		6.27	0.29	9.67	0.24	69.14	0.57	60.98	4.04	0.54	48.49	86.32	0.01	3.39
Ro Con 1-3		6.92	0.29	10.70	0.23	73.30	0.56	66.48	5.81	0.86	46.85	91.96	0.02	5.33
Ro Con 1-4		7.38	0.28	11.12	0.22	74.31	0.54	68.32	8.39	1.33	44.46	93.17	0.02	7.20

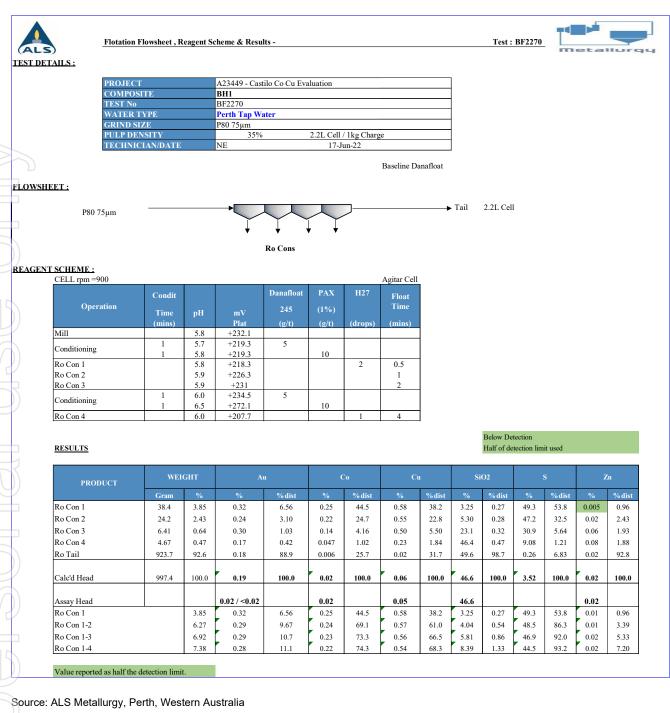
## (a) Original Crush at 75µm

Source: ALS Metallurgy, Perth, Western Australia

## (b) Regrind at 25µm

	Au		Со		Cu	
	g/t	%dist	%	%dist	%	%dist
Cinr Con 1	4.84	21.13	0.17	5.61	1.60	22.53
Cinr Con 2	3.80	38.37	0.18	13.74	1.14	37.10
Cinr Con 3	2.98	12.23	0.17	5.28	1.02	13.51
Cinr Con 4	0.01	0.01	0.18	1.77	1.07	4.48
CInr Tail	0.635	25.34	0.17	51.32	0.10	12.87
Ro Tail	0.005	2.95	0.005	22.29	0.005	9.50

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### Flotation Flowsheet , Reagent Scheme & Results -

Test : BF2271

Below Detection Half of detection limit used

Baseline Aerofloat



PROJECT	A23449 - Castilo Co Cu Evaluation
COMPOSITE	BH1
TEST No	BF2271
WATER TYPE	Perth Tap Water
GRIND SIZE	P80 75µm
PULP DENSITY	35% 2.2L Cell / 1kg Charge
TECHNICIAN/DATE	NE 17-Jun-22

### FLOWSHEET :



Ro Cons

### REAGENT SCHEME :

CELL rpm =900	Condit			Aero	Aero	H27	Agitar Cell Float
Operation	Time (mins)	рН	mV Plat	3894 (g/t)	208 (g/t)	(drops)	Time (mins)
Mill		5.7	+208.4				
Conditioning	1	5.6	+204.5	5			
Conditioning	1	5.6	+212.4		10		
Ro Con 1		5.6	+208.3			2	0.5
Ro Con 2		5.7	+209.3				1
Ro Con 3		5.8	+209.4				2
Conditioning	1	5.8	+210.3	5			
Conditioning	1	5.8	+220.3		10		
Ro Con 4		5.8	+218.4			1	4

### RESULTS

PRODUCT	WEI	WEIGHT		Au		Со		Cu		SiO2		S		Zn	
	Gram	%	%	% dist	%	% dist	%	% dist	%	% dist	%	% dist	%	% dist	
Ro Con 1	31.1	3.12	0.23	30.8	0.24	36.8	0.54	21.8	3.53	0.24	48.7	43.3	0.02	3.04	
Ro Con 2	25.7	2.57	0.26	28.8	0.23	29.1	0.59	19.7	4.05	0.22	47.9	35.2	0.02	2.51	
Ro Con 3	11.1	1.11	0.35	16.7	0.17	9.28	0.60	8.62	14.1	0.34	38.3	12.1	0.03	1.62	
Ro Con 4	7.28	0.73	0.12	3.77	0.057	2.05	0.21	1.98	40.7	0.64	11.8	2.46	0.07	2.49	
Ro Tail	923.2	92.5	0.005	19.9	0.005	22.8	0.04	47.9	49.7	98.6	0.26	6.87	0.02	90.3	
													L		
Calc'd Head	998.4	100.0	0.02	100.0	0.02	100.0	0.08	100.0	46.6	100.0	3.50	100.0	0.02	100.0	
Assay Head			0.02 / <0.02		0.02		0.05		46.6				0.02		
Ro Con 1		3.12	0.23	30.8	0.24	36.8	0.54	21.8	3.53	0.24	48.7	43.3	0.02	3.04	
Ro Con 1-2		5.69	0.24	59.6	0.24	65.9	0.56	41.5	3.77	0.46	48.3	78.5	0.02	5.56	
Ro Con 1-3		6.80	0.26	76.3	0.22	75.2	0.57	50.1	5.45	0.79	46.7	90.7	0.02	7.18	
Ro Con 1-4		7.53	0.25	80.1	0.21	77.2	0.53	52.1	8.87	1.43	43.3	93.1	0.03	9.67	

Value reported as half the detection limit.





Test :

Danafloat, Raised pH

➡ Tail

2.2L Cell



BF2291

PROJECT	A23449 - Castilo Co Cu Evaluation
COMPOSITE	BH1
TEST No	BF2291
WATER TYPE	Perth Tap Water
GRIND SIZE	P80 75µm
PULP DENSITY	35% 2.2L Cell / 1kg Charge
TECHNICIAN/DATE	NE 17-Jun-22
P80 75μm P80 75μm REAGENT SCHEME :	Ro Cons

CELL rpm =900							Agitar Cell	
Operation	Condit Time (mins)	Lime (g)	рН	mV Plat	Danafloat 245 (g/t)	PAX (1%) (g/t)	H27 (drops)	Float Time (mins)
Mill			5.5	+198.7				
Conditioning	1	1.3	11.0	-17.2	5			
Conditioning	1		11.1	-22.0		10		
Ro Con 1			11.0	-19.8			1	1
Ro Con 2		0.3	11.3	-25.1				2
Ro Con 3			11.2	-30.9				2
Conditioning	1		11.0	-44.7	5			
Conditioning	1		11.0	-32.7		10		
Ro Con 4			11.0	-52.4				5

### RESULTS

Below Detection Half of detection limit used

PRODUCT	WEI	GHT	Ag		Au		Co		Cu		S		SiO2	
	Gram	%	ppm	% dist	ppm	% dist	%	% dist	%	% dist	%	% dist	%	% dist
Ro Con 1	46.9	4.71	2	14.5	0.20	38.8	0.19	42.8	0.47	40.5	37.5	49.3	14.4	1.42
Ro Con 2	47.6	4.79	2	14.7	0.26	51.2	0.16	36.6	0.43	37.6	30.9	41.3	18.7	1.88
Ro Con 3	4.75	0.48	2	1.47	0.02	0.39	0.11	2.51	0.38	3.32	22.8	3.04	26.1	0.26
Ro Con 4	4.88	0.49	1	0.75	0.02	0.40	0.039	0.92	0.24	2.15	5.81	0.80	42.1	0.43
Ro Tail	890.1	89.5	0.5	68.6	0.0025	9.21	0.004	17.1	0.01	16.4	0.22	5.50	51.2	96.0
Calc'd Head	994.2	100.0	0.65	100.0	0.02	100.0	0.02	100.0	0.05	100.0	3.58	100.0	47.7	100.0
Assay Head					0.02 / <0.02		0.02		0.05		46.6		46.6	
Ro Con 1		4.71	2.00	14.5	0.20	38.8	0.19	42.8	0.47	40.5	37.5	49.3	14.4	1.42
Ro Con 1-2		9.50	2.00	29.1	0.23	90.0	0.17	79.4	0.45	78.2	34.2	90.7	16.6	3.30
Ro Con 1-3		9.98	2.00	30.6	0.22	90.4	0.17	82.0	0.45	81.5	33.6	93.7	17.0	3.56
Ro Con 1-4		10.5	1.95	31.4	0.21	90.8	0.17	82.9	0.44	83.6	32.3	94.5	18.2	3.99

#### Value reported as half the detection limit.

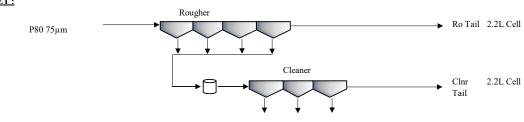






PROJECT	A23449 - Castilo Co Cu Evaluation
COMPOSITE	BH1
TEST No	BF2293
WATER TYPE	Perth Tap Water
GRIND SIZE	P80 75µm
PULP DENSITY	35% 2.2L Cell / 1kg Charge
TECHNICIAN/DATE	NE 17-Jun-22





CELL rpm =900							Agitar Cell	
	Condit				Danafloat	PAX	H27	Float
Operation	Time	Lime	pН	mV	245	(1%)		Time
	(mins)	(g)		Plat	(g/t)	(g/t)	(drops)	(mins)
Mill			5.9	+207.4				
Conditioning	1	1.61	11.1	-39.6	5			
Conditioning	1					10		
Ro Con 1		0.12	11.1	-41.1			2	1
Ro Con 2			11.1	-22.3				2
Ro Con 3			11.0	-16.2				2
Conditioning	1	0.25	11.1	-67.0	5			
Conditioning	1					10		
Ro Con 4			11.1	-70.6			1	5
	Re	egrind - Co	ombined Ro 1-4	Con, P80 20	µm target			
C	1	0.42	11.1	-48.0	5			
Conditioning	1					10		
Ro Con 1			11.1	-48.1				1
Ro Con 2			11.0	-18.4				2
Ro Con 2		0.05	11.0	-17.2				2
Ro Con 3		0.06	11.0	-18.0				2

#### RESULTS

Below Detection Half of detection limit used

PRODUCT	WEI	GHT	A	ı	Ca		Cı	1			Si	02
	Gram	%	ррт	% dist	%	% dist	%	% dist	%	% dist	%	% dist
Clnr Con 1	6.72	0.67	4.84	21.1	0.17	5.61	1.60	22.5	36.5	7.20	12.6	0.18
Clnr Con 2	15.5	1.55	3.80	38.3	0.18	13.7	1.14	37.1	36.5	16.7	12.6	0.42
Clnr Con 3	6.32	0.63	2.98	12.2	0.17	5.28	1.02	13.5	35.3	6.55	13.2	0.18
Clnr Con 4	2.00	0.20	0.01	0.01	0.18	1.77	1.07	4.48	36.0	2.11	12.9	0.05
Clnr Tail	61.4	6.15	0.64	25.3	0.17	51.3	0.10	12.9	34.0	61.4	16.1	2.10
Ro Tail	906.9	90.8	0.005	2.95	0.005	22.3	0.005	9.50	0.23	6.13	50.3	97.1
												1
Calc'd Head	998.9	100.0	0.15	100.0	0.02	100.0	0.05	100.0	3.41	100.0	47.0	100.0
Assay Head			0.02 / <0.02		0.02		0.05		46.6		46.6	
Clnr Con 1		0.67	4.84	21.1	0.17	5.61	1.60	22.5	36.5	7.20	12.6	0.18
Clnr Con 1-2		2.23	4.11	59.5	0.18	19.4	1.28	59.6	36.5	23.9	12.6	0.60
Clnr Con 1-3	Clnr Con 1-3		3.86	71.7	0.18	24.6	1.22	73.1	36.2	30.4	12.7	0.77
Clnr Con 1-4 3.06		3.06	3.61	71.7	0.18	26.4	1.21	77.6	36.2	32.5	12.7	0.83
Value reported as half the de	Value reported as half the detection limit.											

# **APPENDIX C: JORC CODE, 2012 EDITION – TABLE 1**

# Section 1 Sampling Techniques and Data

# (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary						
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>The location and sample interval details and grades quoted for cored interval described in Figure 1 in the main section are given in Table AC1-1 and Figure</li> </ul>						
Drilling techniques	<ul> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul> <li>In and around The Sisters model area are twelve (12) drillholes, however it should be noted that the majority of these are &lt;50m in depth, but only four (4) holes &gt;100m. Two of these are in the core library as shown below:</li> <li>HOLE_NAM E_GDA94 N_GDA94 END_DEPT AZIMUTH DIP DRILL TYPE BH1 5666841.77 6480228.70 152.4 263.5 -45 BQ</li> <li>BH2 566721.77 6480418.70 198.8 278.5 -50 BQ</li> <li>DB80RW4 559571.82 6459448.72 198.0 118.5 -60 NQ</li> <li>DD80RW4_1 559571.82 6459448.72 385.0 118.5 -60 NQ</li> <li>DD80RW4_1 559571.82 6473890.70 383.0 90 -63 NQ</li> <li>RH3 562961.79 6474868.70 52.3 294 -55 NQ</li> </ul>						
Drill sample	Method of recording and assessing core and chip sample	<ul> <li>Not applicable in this study, no new holes completed. Historical drillholes, including BH1 used for this study were documented to have &gt;90% core</li> </ul>						

recovery	<ul> <li>recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	recovery.
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>The drilling that did occur was generally completed to modern-day standards. The preferred exploration strategy in the eighties and early nineties was to drill shallow auger holes to negate the influence of any Quaternary and Tertiary thin cover.</li> <li>No downhole geophysical logging took place; however, measurements of magnetic susceptibility were taken on the six-library core relogged over the same intervals as the PXRF readings were taken.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality, and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>The preliminary rougher testwork methodology employed is listed as follows: Given the bulk concentrate methodology requested, recovery would take priority over the grade at this stage. Initially, two different reagent schemes for the bulk con generation:</li> <li>Natural pH, PAX, Danafloat 245; (PAX may cause high iron collection)</li> <li>Cytec aero float, Aero 3894 with an Aero 208 promoter</li> <li>The final recommendation was to try initially 10g/t of the danafloat / aero 208, with 5g/t of the PAX or Aero 3894. Consideration was also given to add additional dosage at the end of the first 3 concentrates (assumed 2-minute Ro concentrate), and then see if more product reports into Ro Con 4. Eventually, a series of rougher tests (refer to Table AC1-1) were carried out based on the following methodology:</li> <li>Sample Preparation and Screening Analysis</li> <li>Receive Samples and Inventory</li> <li>Control Crush P100 3.35mm (assumed no compositing)</li> <li>Rotary Blending &amp; Splitting 1kg charges (12 x 1kg)</li> <li>PPS - Head Assay Submission</li> <li>Assay - Head Sample (Ag, Au, Co, Cu, SiO2, S, ICP Scan)</li> <li>Flotation and Gravity Testing</li> <li>1 kg Grind Establishment Single grind target</li> </ul>



		Rougher Flotation (4 con 1 tail) (5 test allowance)
		PPS - Flotation Product Assay Submission
		Assay - Flotation Products (Ag, Au, Co, Cu, Zn, SiO2)
		Gravity Separation - Wilfley Table - Batch Test
		PPS - Table Product Assay Submission
		Assay - Table Products (Ag, Au, Co, Cu, Zn, SiO2, S)
Quality of	The nature, quality and appropriateness of the assaying and	
assay data and	laboratory procedures used and whether the technique is considered partial or total.	• The samples in the composite were originally analysed at the ALS Brisbane Laboratory using the ME-MS61R technique, as summarised below:
laboratory tests	<ul> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times,</li> </ul>	Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP - AES) Inductively Coupled Plasma - Mass Spectrometry (ICP-MS)
	calibrations factors applied and their derivation, etc.	Sample Decomposition is by_HF-HNO <sub>3</sub> -HCIO <sub>4</sub> acid digestion, HCI leach (GEO-4A01).
	<ul> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	A prepared sample (0.25 g) is digested with perchloric, nitric, hydrofluoric, and hydrochloric acids. The residue is topped up with dilute hydrochloric acid and analyzed by inductively coupled plasma atomic emission spectrometry. Following this analysis, the results are reviewed for high concentrations of bismuth, mercury, molybdenum, silver, and tungsten and diluted accordingly.
		Samples meeting this criterion are then analyzed by inductively coupled plasma-mass spectrometry. Results are corrected for spectral interelement interferences.
		NOTE: Four acid digestions can dissolve most minerals; however, although the term "near total" is used, depending on the sample matrix, not all elements are quantitatively extracted.
		Results for the additional rare earth elements will represent the acid leachable portion of the rare earth elements and as such, cannot be used, for instance to do a chondrite plot.
		<ul> <li>Laboratory inserted standards, blanks and duplicates were analysed per industry standard practice. There was no evidence of bias from these results.</li> </ul>
Verification of sampling	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul> <li>None of the library drillholes (including BH1) have been twinned, as they are historical holes.</li> </ul>
and assaying	• The use of twinned holes.	<ul> <li>The four preliminary rougher tests results have been reproduced in full in Appendix 1 of this ASX release.</li> </ul>
	<ul> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> </ul>	



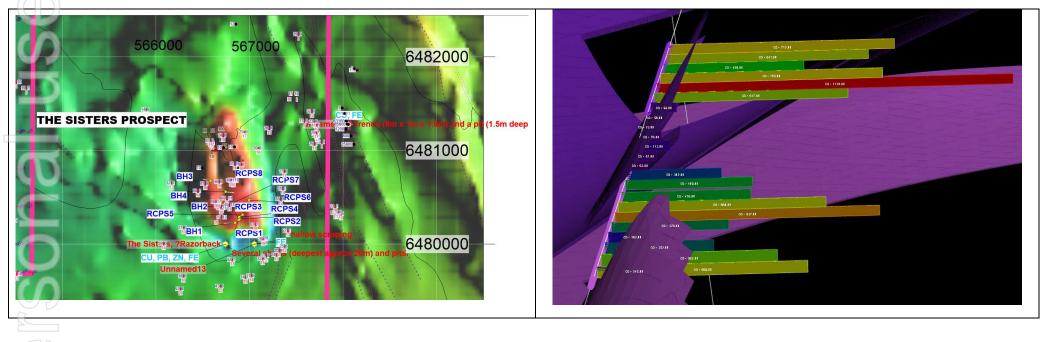
	Discuss any adjustment to assay data.				
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	were dig reported	itised off plans or to AGD66 or AM0	had their coordinat G84 and have beer	pending upon whether the sample ted tabulated. Many samples were n converted to MGA94.Zone 54 1 therefore varies between 2-50m
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>		listed in Table AB	1-2, below:	re varies per prospect, and sample
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	The curr Avondate     Geologic	ent database does e East , which is b cal mapping by va ips variously betw	s not contain any s eing compiled (759 rious companies ha	any results in this release ub-surface geological logging for % complete) as reinforced that the strata is tight grees, and dips mostly to the north
Sample security	• The measures taken to ensure sample security.	program transpor relogged within th personal	s is not known. S ted samples for ar I BH1 and used a e hole including th Ily to the ALS Labo	quadron took samp nalysis to ALS Brok diamond saw to sa nat interval listed in poratory in Brisbane	e Squadron Resources work bles to their Broken Hill office and ken Hill. Castillo Copper contractor imple and bag prospective intervals Table AC-2. Samples were driver , QLD who composited the core posite was air-freighted from

		Brisbane to ALS Perth laboratory.
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	No external audits or reviews have yet been undertaken.

# Table AC1-1: The Sisters Metallurgical Testing Parameters

>	COMPOSITE	The Sisters BH1	The Sisters BH1	The Sisters BH1	The Sisters BH1
	TEST #	BF2270	BF2271	BF2291	BF2293
	WATER TYPE	Perth Tap Water	Perth Tap Water	Perth Tap Water	Perth Tap Water
	REAGENT	Danafloat	AeroFloat	Danafloat	Danafloat
	GRIND SIZE	P80 75µm	P80 75µm	P80 75µm	P80 25µm
	PULP DENSITY	35%	35%	35%	35%
	рН	5.9	5.7	11.0	11.0

Figure AC1-1: The Sisters Sample and Drillhole location, and Cobalt Histogram



### Table AC1-2: The Sisters Sample for Metallurgical Testing

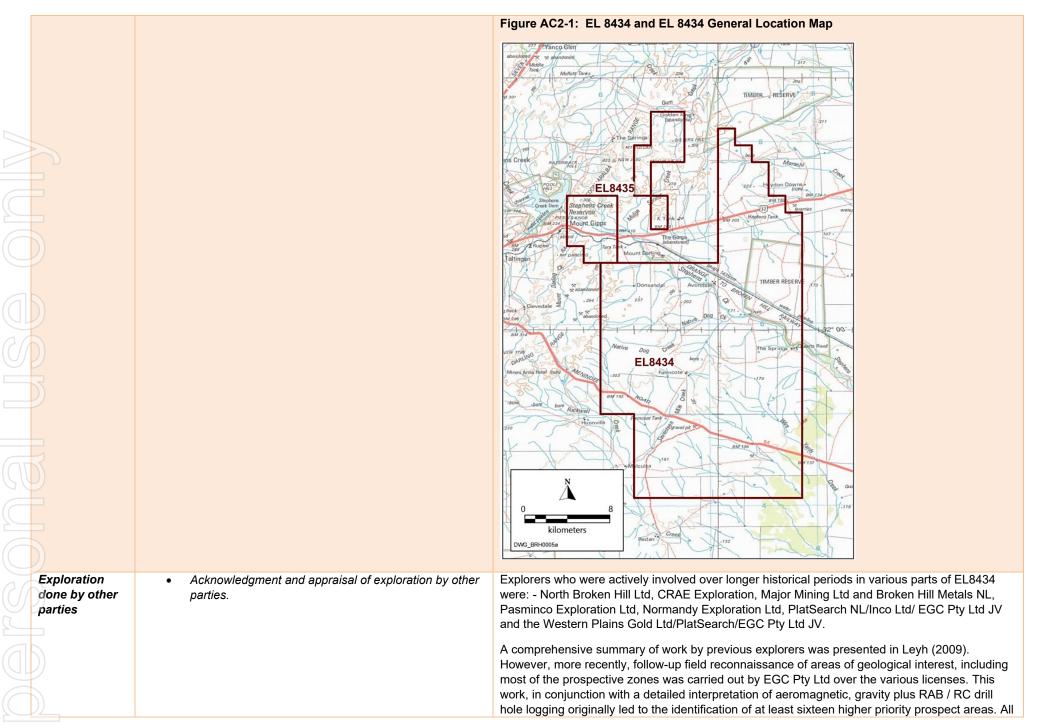
	Drillhole	XRF Samp	SampleID	From	То	Length (m)	Weight (kg)	Ag_ppm	Co_ppm	Cu_ppm	Ag Mass	Co Mass	Cu Mass
	BH1	BH1.18	CCZ03785	103.07	104.73	1.66	0.65	0.32	712	483	0.01	28.44	19.30
	BH1	BH1.19	CCZ03786	104.73	106.62	1.89	0.84	0.2	450	773	0.01	23.23	39.91
	BH1	BH1.20	CCZ03787	106.62	108.51	1.89	0.94	0.29	1120	1260	0.02	64.71	72.80
	BH1	BH1.21	CCZ03788	108.51	110.46	1.95	1.54	0.04	93.5	90.1	0.00	8.85	8.53
	BH1	BH1.22	CCZ03789	110.46	112.41	1.95	1.75	0.05	23.3	167	0.01	2.51	17.96
_	BH1	BH1.23	CCZ03790	112.41	114.36	1.95	2.08	0.04	112.5	23.9	0.01	14.38	3.06
-	BH1	BH1.24	CCZ03791	114.36	116.31	1.95	1.66	0.15	62.6	33.5	0.02	6.39	3.42
	BH1	BH1.25	CCZ03792	116.31	118.26	1.95	0.81	0.15	409	235.0	0.01	20.36	11.70
-	BH1	BH1.26	CCZ03793	118.26	119.29	1.03	0.71	0.13	419	233.0	0.01	18.28	10.17
)	BH1	BH1.27	CCZ03794	119.29	120.32	1.03	0.72	0.08	759	56.8	0.00	33.59	2.51
기	BH1	BH1.28	CCZ03795	120.32	121.35	1.03	0.7	0.33	873	196.5	0.01	37.56	8.45
	BH1	BH1.29	CCZ03796	121.35	122.38	1.03	0.84	0.04	111	72.7	0.00	5.73	3.75
	BH1	BH1.30	CCZ03797	122.38	123.44	1.06	0.72	0.77	193	73.6	0.03	8.54	3.26
J	BH1	BH1.31	CCZ03798	123.44	124.66	1.22	0.69	0.46	477	385	0.02	20.23	16.33
	BH1	BH1.32	CCZ03799	124.66	125.88	1.22	0.7	1.18	727	10650	0.05	31.28	458.21
	BH1	BH1.33	CCZ03800	125.88	127.10	1.22	0.92	0.49	245	4280	0.03	13.85	242.02
1						24.03	16.27				0.23	338	921



# SECTION 2 REPORTING OF EXPLORATION RESULTS

# (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Criteria Mineral tenement and land tenure status	<ul> <li>JORC Code explanation</li> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Commentary</li> <li>EL 8434 is located about 28km east of Broken Hill whilst EL 8435 is 16km east of Broken Hill. Both tenures are approximately 900km northwest of Sydney in far western New South Wales (Figure A1-2-1).</li> <li>EL 8434 and EL 8435 were both granted on the 2<sup>nd of</sup> June 2016 to Squadron Resources for a term of five (5) years for Group One Minerals. On the 25<sup>th of</sup> May 2020, Squadron Resources changed its name to Wyloo Metals Pty Ltd (Wyloo). In December 2020 the tenure was transferred from Wyloo Metals to Broken Hill Alliance Pty Ltd a 100% subsidiary company of Castillo Copper Limited. Both tenures were renewed on the 12<sup>th of</sup> August 2021 for a further six (6) years and are due to expire on the 2<sup>nd of</sup> June 2027.</li> <li>EL 8434 lies across two (2) 1:100,000 geology map sheets Redan 7233 and Taltingan 7234, and two (2) 1:250,000 geology map sheets, SI54-3 Menindee, and SH54-15 Broken Hill in the county of Yancowinna. EL 8434 consists of one hundred and eighty-six (186) units) in the Adelaide and Broken Hill 1:1,000,000 Blocks covering an area of approximately 580km<sup>2</sup>.</li> <li>EL 8435 is located on the 1:100,000 geology map sheet Taltingan 7234, and the 1:250,000 geology map sheet SH/54-15 Broken Hill in the county of Yancowinna. EL 8435 consists of twenty-two (22) units (Table 1) in the Broken Hill 1:1,000,000 Blocks covering an area of approximately 68km<sup>2</sup>.</li> <li>Access to the tenures from Broken Hill is via the sealed Barrier Highway. This road runs north- east to south-west through the northern portion of the EL 8434, passes the southern tip of EL 8435 exern section and through the middle of the western section of EL 8435. Access is also available via the Menindee Road which runs north-west to south-east through the southern section the middle and then travels north-west to south-east slicing through the eastern arm of EL 8434 (Figure AC-2-1).</li> </ul>



these prospects were summarized in considerable detail in Leyh (2008). Future work programs were then also proposed for each area. Since then, further compilation work plus detailed geological reconnaissance mapping and sampling of gossans and lode rocks has been carried out.

A total of 22 prospects were then recognised on the exploration licence with at least 12 occurring in and around the tenure.

With less than 15% outcropping Proterozoic terrain within the licence, this makes it very difficult to explore and is in the main very effectively screened from the easy application of more conventional exploration methodologies due to a predominance of extensive Cainozoic cover sequences. These include recent to young Quaternary soils, sands, clays and older more resistant, only partially dissected, Tertiary duricrust regolith covered areas. Depth of cover ranges from a few metres in the north to over 60 metres in some areas on the southern and central license.

Exploration by EGC Pty Ltd carried out in the field in the first instance has therefore been heavily reliant upon time consuming systematic geological reconnaissance mapping and relatable geochemical sampling. These involve a slow systematic search over low outcropping areas, poorly exposed subcrops and float areas as well as the progressive development of effective regolith mapping and sampling tools. This work has been combined with a vast amount of intermittently acquired past exploration data. The recent data compilation includes an insufficiently detailed NSWGS regional mapping scale given the problems involved, plus some regionally extensive, highly variable, low-level stream and soil BLEG geochemical data sets over much of the area.

There are also a few useful local detailed mapping grids at the higher priority prospects, and many more numerous widespread regional augers, RAB, and percussion grid drilling data sets. Geophysical data sets including ground magnetics, IP and EM over some prospect areas have also been integrated into the exploration models. These are located mainly in former areas of moderate interest and most of the electrical survey methods to date in this type of terrain continue to be of limited application due to the high degree of weathering and the often prevailing and complex regolith cover constraints.

Between 2007 and 2014 Eaglehawk Geological Consulting has carried out detailed research, plus compilation and interpretation of a very large volume of historic exploration data sourced from numerous previous explorers and dating back to the early 1970's. Most of this data is in non-digital scanned form. Many hard copy exploration reports (see references) plus several hundred plans have been acquired from various sources, hard copy printed as well as downloaded as scans from the Geological Survey of NSW DIGS system. They also conducted field mapping, costean mapping and sampling, and rock chip sampling and analysis.

#### Work Carried out by Squadron Resources and Whyloo Metals 2016-2020

Research during Year 1 by Squadron Resources revealed that the PGE-rich, sulphide-bearing ultramafic rocks in the Broken Hill region have a demonstrably alkaline affinity. This indicates a poor prospectivity for economic accumulations of sulphide on an empirical basis (e.g., in comparison to all known economic magmatic nickel sulphide deposits, which have a dominantly tholeiitic affinity). Squadron instead directed efforts toward detecting new Broken Hill-Type

(BHT) deposits that are synchronous with basin formation. Supporting this modified exploration rationale are the EL's stratigraphic position, proximity to the Broken Hill line of lode, abundant mapped alteration (e.g., gahnite and/or garnet bearing exhalative units) and known occurrences such as the "Sisters" and "Iron Blow" prospects.

The area overlies a potential magmatic Ni-Cu-PGE source region of metasomatised subcontinental lithospheric mantle (SCLM) identified from a regional targeting geophysical data base. The exploration model at the time proposed involved remobilization of Ni-Cu-PGE in SCLM and incorporation into low degree mafic-ultramafic partial melts during a post-Paleoproterozoic plume event and emplacement higher in the crust as chonoliths/small intrusives - Voisey's Bay type model. Programs were devised to use geophysics and geological mapping to locate secondary structures likely to control and localise emplacement of Ni-Cu-PGE bearing chonoliths. Since EL8434 was granted, the following has been completed:

- Airborne EM survey.
- Soil and chip sampling
- Data compilation.
- Geological and logistical reconnaissance.
- Community consultations; and
- Execution of land access agreements.

#### Airborne EM Survey

Geotech Airborne Limited was engaged to conduct an airborne EM survey using their proprietary VTEM system in 2017. A total of 648.92-line kilometres were flown on a nominal 200m line spacing over a portion of the project area. Several areas were infilled to 100m line spacing.

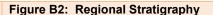
The VTEM data was interpreted by Southern Geoscience Consultants Pty Ltd, who identified a series of anomalies, which were classified as high or low priority based on anomaly strength (i.e., does the anomaly persist into the latest channels). Additionally, a cluster of VTEM anomalies at the "Sisters" prospect have been classified separate due to strong IP effects observed in the data. Geotech Airborne have provided an IP corrected data and interpretation of the data has since been undertaken.

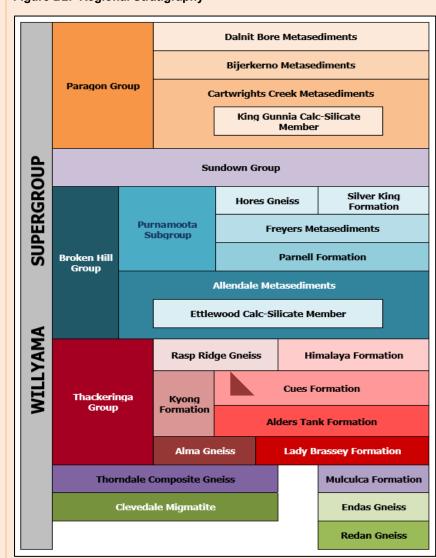
### Soil and Chip sampling

The VTEM anomalies were followed up by a reconnaissance soil sampling programme. Spatially clustered VTEM anomalies were grouped, and follow-up soil lines were designed. Two (2) VTEM anomalies were found to be related to culture and consequently no soils were collected. Two (2) other anomalies were sampled which were located above thick alluvium of Stephens Creek and were therefore not sampled. A line of soil samples was collected over a relatively undisturbed section at Iron Blow workings and the Sisters Prospect.

One hundred and sixty-six (166) soil samples were collected at a nominal 20cm depth using a 2mm aluminum sieve. Two (2) rock chips were also collected during this program. The samples were collected at either 20m or 40m spacing over selected VTEM anomalies. The samples were

		pulverised and analysed by portal XRF at ALS laboratories in Perth.
		Each site was annotated with a "Regolith Regime" such that samples from a depositional environment could be distinguished from those on exposed Proterozoic bedrock, which were classified as an erosional environment. The Regolith Regime groups were used for statistical analysis and levelling of the results. The levelled data reveals strong relative anomalies in zinc at VTEM anomaly clusters 10, 12 and 14 plus strong anomalous copper at VTEM 17.
Geology	<ul> <li>Deposit type, geological setting, and style of mineralisation.</li> </ul>	<b>Regional Geology</b> The Broken Hill polymetallic deposits are located within Curnamona Province (Willyama Super group) (Figure A3-2-2) that hosts several world-class deposits of lead, zinc, silver, and copper. The Willyama Supergroup consists of highly deformed metasedimentary schists and gneisses with abundant quartz-feldspathic gneisses, lesser basic gneisses, and minor 'lode' rocks which are quartz-albite and calc-silicate rocks (Geoscience Australia, 2019). Prograde metamorphism ranges from andalusite through sillimanite to granulite grade (Stevens, Barnes, Brown, Stroud, & Willis, 1988).
		Regionally, the tenures are situated in Broken Hill spatial domain which extends from far western New South Wales into eastern South Australia. The Broken Hill Domain hosts several major fault systems and shear zones, which were formed by various deformation events and widespread metamorphism which has affected the Willyama Supergroup (Figure A1-2-3). Major faults in the region include the Mundi Mundi Fault to the west of Broken Hill, the Mulculca Fault to the east, and the Redan Fault to the south. Broken Hill is also surrounded by extensive shear zones including the Stephens Creek, Globe-Vauxhall, Rupee, Pine Creek, Albert, and Thackaringa-Pinnacles Shear Zones.



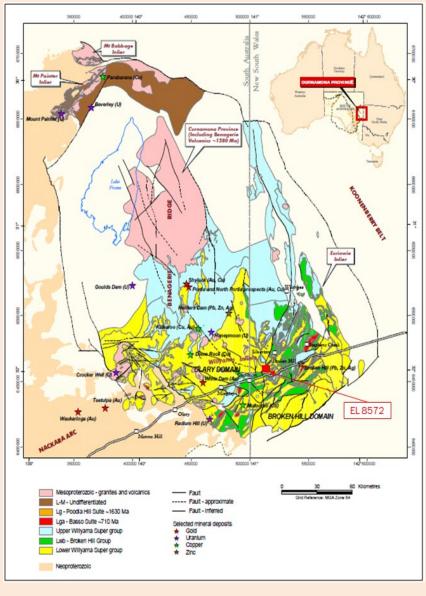


Modified after: (Stevens, Barnes, Brown, Stroud, & Willis, 1988)

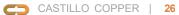




Figure B3: Regional Geological Map



Modified after (Peljo, 2003)



(7

There are over twenty (20) rock formations mapped within the project area. Parts of the project area are covered by Quaternary alluvium, sands, and by Tertiary laterite obscuring the basement geology. Within the Lower to Middle Proterozoic Willyama Supergroup (previously Complex) there are two (2) groups, the Thackaringa Group, and the younger Broken Hill Group (Colquhoun, et al., 2019).

#### Local Geology

A summary of the units that host or appear to host the various mineralisation styles within EL 8434 and EL 8435 is given below.

#### Broken Hill Group

The Hores Gneiss is mostly comprised of quartz-feldspar-biotite-garnet gneiss, interpreted as metadacite with some minor metasediments noted. An age range from Zircon dating has been reported as 1682-1695Ma (Geoscience Australia, 2019). The Allendale Metasediments unit contains mostly metasedimentary rocks, dominated by albitic, pelitic to psammitic composite gneiss, including garnet-bearing feldspathic composite gneiss, sporadic basic gneiss, and quartz-gahnite rock. Calc-silicate bodies can be found at the base of the unit and the formation's average age is 1691 Ma (Geoscience Australia, 2019).

#### Thackaringa Group

The Thorndale Composite Gneiss is distinguished by mostly gneiss, but also migmatite, amphibolite, and minor magnetite. The age of this unit is >1700Ma (Geoscience Australia, 2019) and is one of the oldest formations in the Group. The Cues Formation is interpreted as a deformed sill-like granite, including Potosi-type gneiss. Other rock-types include pelitic paragneiss, containing cordierite. The average age: ca 1700-1730 Ma. (Stevens, Barnes, Brown, Stroud, & Willis, 1988). Other rock types include mainly psammo-pelitic to psammitic composite gneisses or metasedimentary rocks, and intercalated bodies of basic gneiss. This unit is characterised by stratiform horizons of granular garnet-quartz +/-magnetite rocks, quartz-iron oxide/sulphide rocks and quartz-magnetite rocks (Geoscience Australia, 2019). This is a significant formation as it hosts the Pinnacles Ag-Pb-Zn massive sulphide deposit along with widespread Fe-rich stratiform horizons.

The protolith was probably sandy marine shelf sedimentary rocks. An intrusion under shallow cover was syn-depositional. The contained leuco-gneisses and Potosi-type gneisses are believed to represent a felsic volcanic or volcaniclastic protolith. Basic gneisses occur in a substantial continuous interval in the middle sections of the Formation, underlain by thinner, less continuous bodies. They are moderately Fe-rich (abundant orthopyroxene or garnet) and finely layered, in places with pale feldspar-rich layers, and are associated with medium-grained quartz-feldspar-biotite-garnet gneiss or rock which occurs in thin bodies or pods ('Potosi-type' gneiss).

A distinctive leucocratic quartz-microcline-albite(-garnet) gneiss (interpreted as meta-rhyolite) occurs as thin, continuous, and extensive horizons, in several areas. The sulphide-bearing rocks may be lateral equivalents of, or associates of Broken Hill type stratiform mineralisation. Minor

layered garnet-epidote-quartz calc-silicate rocks occur locally within the middle to basal section. The unit is overlain by the Himalaya Formation.

#### Cues Formation

The Cues Formation is intruded by Alma Granite (Geoscience Australia, 2019). The Himalaya Formation (Figure A3-2-4) consists of medium-grained saccharoidal leucocratic psammitic and albitic meta-sedimentary rocks (average age 1700Ma). The unit comprises variably interbedded albite-quartz rich rocks, composite gneiss, basic gneiss, horizons of thinly bedded quartz-magnetite rock. Pyrite-rich rocks occur at the base of the formation (Geoscience Australia, 2019). It is overlain by the Allendale Metasediments (Broken Hill Group). The Himalaya Formation hosts cobalt-rich pyritic horizons at Pyrite Hill and Big Hill. The protolith is probably sandy marine shelf sedimentary rocks with variable evaporitic or hypersaline component. Plagioclase-quartz rocks are well-bedded (beds 20 - 30mm thick), with rare scour-and-fill and cross-bedded structures.

Thin to thick (0.5 - 10m) horizons of thinly bedded quartz-magnetite rock also occur with the plagioclase-quartz rocks. In some areas the formation consists of thin interbeds of plagioclase-quartz rocks within meta-sedimentary rocks or metasedimentary composite gneiss (Geoscience Australia, 2019). Lady Brassey Formation which is well-to-poorly-bedded leucocratic sodic plagioclase-quartz rock, as massive units or as thick to thin interbeds within psammitic to pelitic metasedimentary composite gneisses. A substantial conformable basic gneiss. It overlies both Mulculca Formation and Thorndale Composite Gneiss. Part of the formation was formerly referred to as Farmcote Gneiss in the Redan geophysical zone of Broken Hill Domain - a zone in which the stratigraphy has been revised to create the new Rantyga Group (Redan and Ednas Gneisses, Mulculca Formation, and the now formalised Farmcote Gneiss).

#### Lady Louise Suite

This unit is approximately 1.69Ma in age comprising amphibolite, quartz-bearing, locally differentiated to hornblende granite, intrusive sills, and dykes, metamorphosed, and deformed; metabasalt with pillows (Geoscience Australia, 2019). Annadale Metadolerite is basic gneisses, which includes intervening metasedimentary rocks possibly dolerite (Geoscience Australia, 2021).

#### Rantya Group

Farmcote Gneiss contains metasedimentary rocks and gneiss and is a new unit at the top of Rantyga Group. It is overlain by the Cues Formation and Thackaringa Group, and it overlies the Mulculca Formation. The age of the unit is between 1602 to 1710Ma. Mulculca Formation is abundant metasedimentary composite gneiss, variable sodic plagioclase-quartz-magnetite rock, quartz-albite-magnetite gneiss, minor quartz-magnetite rock common, minor basic gneiss, albite-hornblende-quartz rock (Geoscience Australia, 2019). Ednas Gneiss contains quartz-albite-magnetite gneiss, sodic plagioclase-quartz-magnetite rock, minor albite-hornblende-quartz rock, minor quartz-class. It is overlain by Mulculca Formation.

Silver City Suite

Formerly mapped in the Thackaringa Group this new grouping accommodates the



metamorphosed and deformed granites. A metagranite containing quartz-feldspar-biotite gneiss with variable garnet, sillimanite, and muscovite, even-grained to megacrystic, elongate parallel to enclosing stratigraphy. It occurs as sills and intrudes both the Thackeringa Group and the Broken Hill Group. This unit is aged between 1680 to 1707Ma.

#### Torrowangee Group

Mulcatcha Formation comprises flaggy, quartzose sandstone with lenticular boulder and arkosic sandstone beds. Yangalla Formation contains boulder beds, lenticular interbedded siltstone, and sandstone. It overlies the Mulcatcha Formation (Geoscience Australia, 2020).

#### Sundown Group

The Sundown Group contains Interbedded pelite, psammopelitic and psammitic metasedimentary rocks and it overlies the Broken Hill Group. The unit age is from 1665 to 1692Ma (Figure A1-2-4).

There is also an unnamed amphibolite in Willyama Supergroup, which present typically medium grained plagioclase and amphibole or pyroxene rich stratiform or discordant dykes.



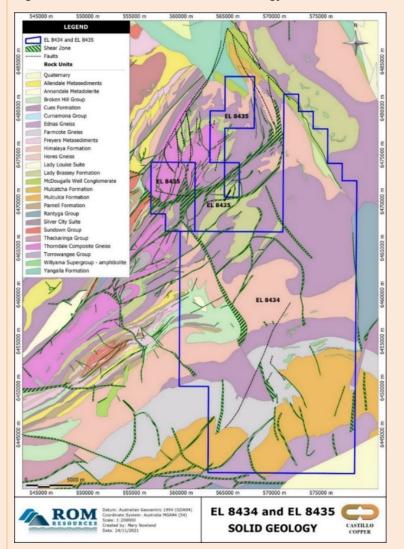
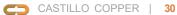


Figure B4: EL 8434 and EL 8435 Solid Geology

Drill hole Information • A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material  No new drillholes have been completed yet, but a small RC and diamond core drilling program across all the modelled prospects (The Sisters, Fence Gossan, Tors Tank, and Reefs Tank) is planned



	drill holes:	
Data	<ul> <li>drill holes:</li> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	No metal equivalents have been reported. Where rare earth element results have been
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>No metal equivalents have been reported. Where rare earth element results have been reported, they have been converted to rare earth oxides as per standard industry practice.</li> <li>No compositing of any of the metallurgical results has taken place</li> <li>No assay results have been withheld from the metallurgical test work.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').</li> </ul>	<ul> <li>As a database of all the historical borehole sampling has not yet been completed and validated (in progress) it is uncertain if there is a relationship between the surface sample anomalies to any subsurface anomalous intersections. Mineralisation is commonly associated with shears, faults, amphibolites, and pegmatitic intrusions within the shears, or on or adjacent to the boundaries of the Himalaya Formation.</li> <li>Geological 3D models - sufficient data was available to generate a small – moderate resource of cobalt with copper credits, which has been completed and reported in June 2022 in an ASX release.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>Current surface anomalies are shown on maps in the report in previous ASX releases. All historical surface sampling has had their coordinates converted to MGA94, Zone 54.</li> </ul>

Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul> <li>All results from the recent preliminary rougher flotation trials have been included as Appendix B in this release.</li> </ul>
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	<ul> <li>Historical explorers have also conducted airborne and ground gravity, magnetic, EM, and IP resistivity surveys over parts of the tenure area but these are yet to be fully georeferenced (especially the ground IP surveys).</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>It is recommended that:</li> <li>The non-sampled zones within the Core Library drillholes, BH1, BH2, and DD90-IB3 in the north of the tenure group be recovered, sampled, and analysed.</li> <li>That a more detailed study of historical drillholes should be conducted to determine if enough data exists at Iron Blow and Avondale East to estimate a JORC resource.</li> <li>That a program of field mapping and ground magnetic or EM surveys be planned and executed; and</li> <li>A program of exploration RC drilling be planned across all the model areas, except for Ziggy's Hill. Consideration should be given to coring at least one of the holes.</li> </ul>

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