



ASX Release

21 March 2022

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## Diamond core tests demonstrates high-grade cobalt-zinc potential at Broken Hill

- CCZ's geology team re-tested diamond core – from drill-holes BH1 & BH2 at the “The Sisters” Prospect<sup>1</sup> (East Zone, BHA Project) – available at the core library in Broken Hill, NSW, with encouraging results:
  - ❖ Utilising a PXRF analyser – to identify samples for follow up assays – readings up to **1,705ppm Co and 9.63% Zn** were recorded
  - ❖ More significantly, several wide PXRF intervals (7-9m wide) were delineated with high-grade cobalt-zinc readings (Figure 1)
  - ❖ These identified intervals from the BH1 & BH2 core (Appendix B) are being sent to the laboratory for follow up analysis

*The above results are an average of two readings taken for 60 seconds and are preliminary. They are being used to identify sections for core re-sampling and subsequent laboratory analyses. They are not being used in the block model and do not replace laboratory analyses.*

**FIGURE 1: PRXF INTERVALS BH1 & BH2 – THE SISTERS PROSPECT**

Drillhole	From	To	Apparent Thickness (m)	Co (ppm)	Zn (%)
BH1	11.84	20.89	9.05	859	0.26
	106.62	114.36	7.26	946	1.53
	116.24	124.66	8.42	897	3.26
	124.66	129.54	4.88	370	0.89
BH2	89.35	90.44	1.09	245	1.89
	92.66	93.57	0.91	350	1.94
	137.29	140.58	3.29	525	2.21

(Note: Refer to Appendices B); Source: CCZ geology team

- The PXRF analysis for BH1 & BH2 is consistent with earlier assayed sections from the same diamond core (over different depths), with the best results comprising: **1.8m @ 820ppm Co from 124.7m (BH1) and 1.5m @ 320ppm Co from 138.4m (BH2)<sup>2</sup> – Refer Appendix C**
- There is a primary 1,200m synclinal structure at The Sisters Prospect<sup>3</sup> – which BH1 intersected – that appears to host high-grade cobalt-zinc mineralisation: **this is now a key target for further drill-testing**
- In addition, further forensic work on codifying the 6,380 drill-holes around the Reefs Tank & Tors Tank Prospects found more evidence of shallow cobalt mineralisation, with the best intercepts: **7m @ 1,600ppm Co from 30m (drillhole 1800E1180N); 15m @ 760ppm Co from 67m (3E51N); 10m @ 520ppm Co from surface (2925E1240S); and 5m @ 520ppm Co from 45m (TT05W10N)<sup>4</sup>**
- The Board is optimistic there is adequate geological data across The Sisters, Reefs Tank & Tors Tank Prospects to potentially prove up a primary cobalt JORC 2012 compliant mineral resource estimate

**Castillo Copper's CEO Dr Dennis Jensen commented:** “The preliminary results from analysing The Sisters Prospect's diamond core has delivered Castillo Copper an excellent outcome. We now have compelling evidence, subject to final assays, there is high-grade cobalt-zinc mineralisation apparent and a prime target for future test drilling. Furthermore, the Board believes that, once all the assays are in from The Sisters Prospect, there will be sufficient data to potentially prove up a primary global cobalt mineral resource estimate that complies with the JORC 2012 Code.”

Castillo Copper Limited's ("CCZ") Board is delighted to report a successful trip by the geology team to the core library in Broken Hill, NSW, where they analysed diamond core from drill-holes BH1 and BH2 at The Sisters Prospect<sup>1</sup> within the East Zone, BHA Project.

## HIGH GRADE COBALT-ZINC POTENTIAL

The objective of the trip to the core library in Broken Hill was to find incremental evidence (from analysing untested diamond core from BH1 & BH2) to demonstrate the presence of cobalt-zinc mineralisation at The Sisters Prospect<sup>1</sup> (Figure 2).

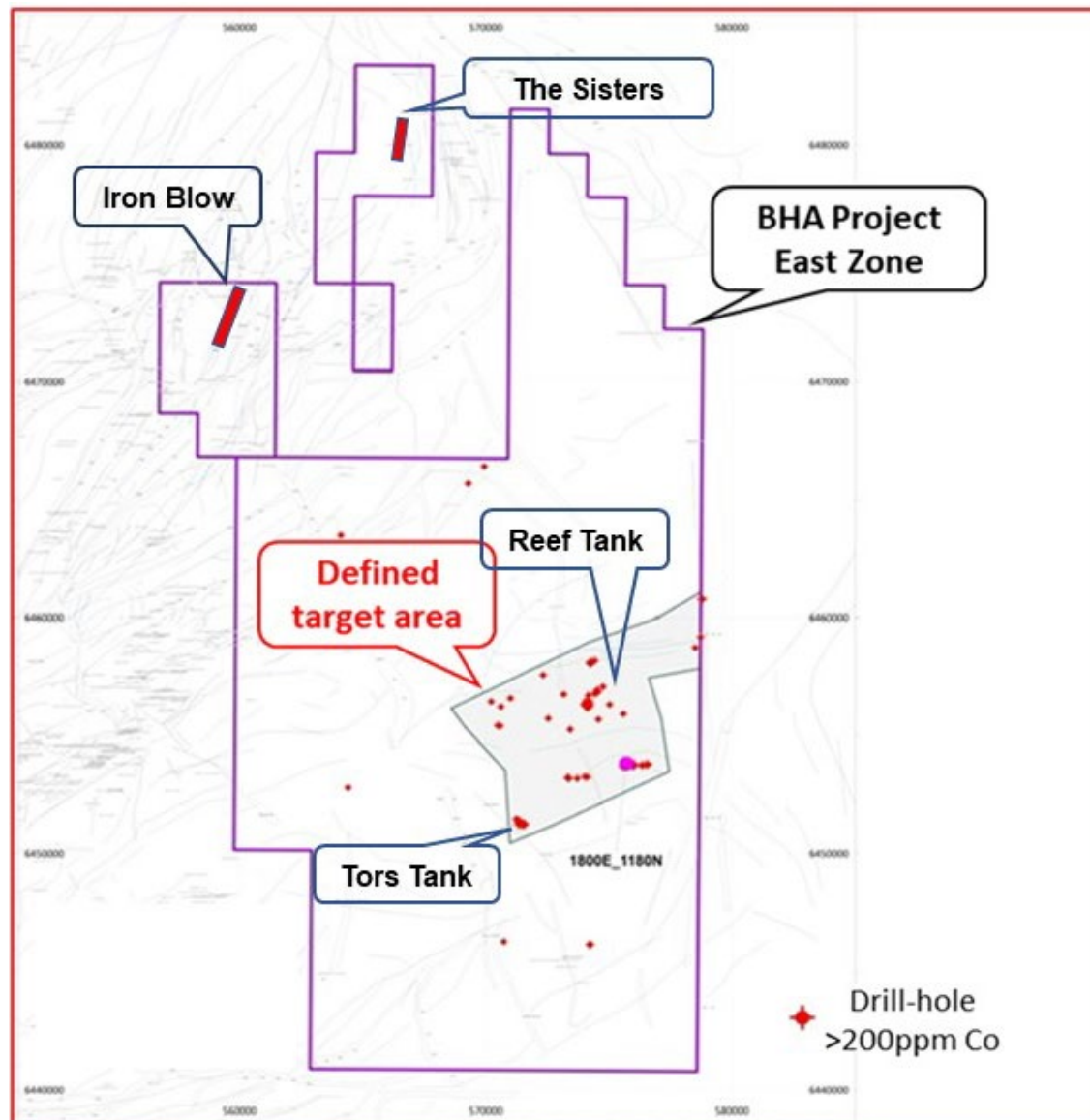
Using a PXRF analyser, purely to identify parts of the diamond core for follow up assays, the initial readings returned up to **1,705ppm Co and 9.63% Zn**. Further, there were several wide PXRF intervals that delineated high-grade cobalt-zinc mineralisation, including (refer Figure 1 & Appendix B):

- **9.05m @ 859ppm Co & 0.26% Zn from 11.84m**
- **8.42m @ 897ppm Co & 3.26% Zn from 116.24m**
- **7.26m @ 946ppm Co & 1.53% Zn from 106.62m**
- **4.88m @ 370ppm Co & 0.89% Zn from 124.66m (Appendix B)**

Due to these findings, the identified intervals from BH1 & BH2 diamond core are being sent to the laboratory for a complete analysis to confirm the results reconcile with the PXRF observations.

*The results are an average of two readings taken for 60 seconds and are preliminary. They are being used to identify sections for core re-sampling and subsequent laboratory analyses. They are not being used in the block model and do not replace laboratory analyses.*

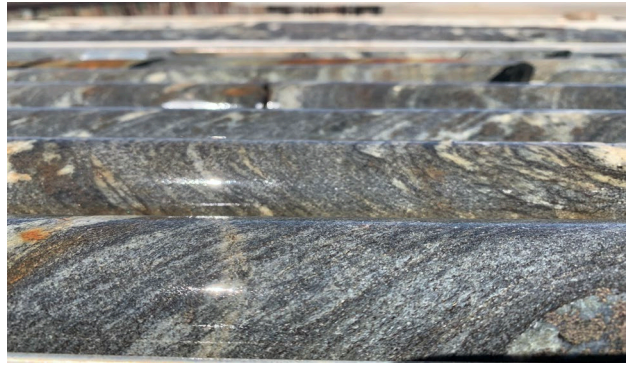
**FIGURE 2: THE SISTERS PROSPECT, EAST ZONE, BHA PROJECT**



Source: CCZ geology team



## PHOTO GALLERY: ANALYSING BH1 & BH2 DAIMOND CORE AT BROKEN HILL



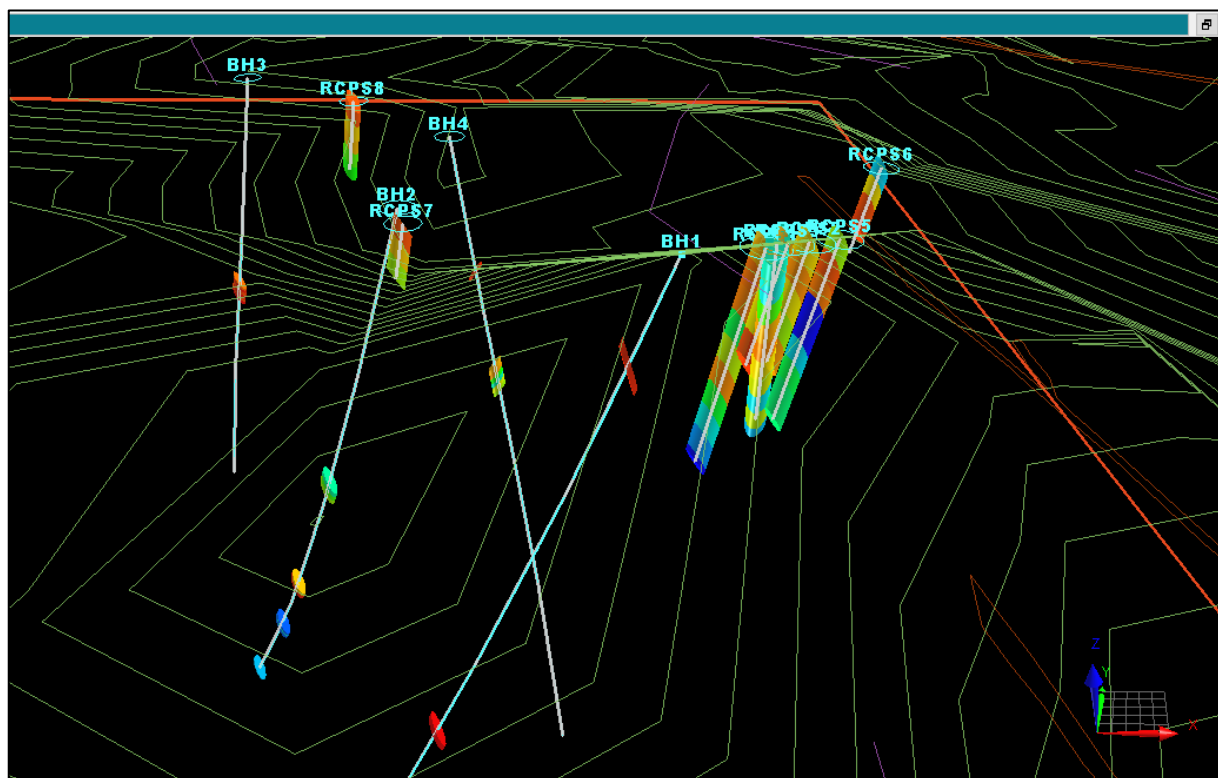
Location: Core library in Broken Hill – Drill-holes BH1 & BH2 from The Sisters Prospect

Source: CCZ geology team

Previous assays of the diamond core from BH1 & BH2, from different sections to where the PXRF analysis targeted, returned encouraging results, with the best intercepts comprising: **1.8m @ 820ppm Co from 124.7m (BH1) and 1.5m @ 320ppm Co from 138.4m (BH2)<sup>2</sup>** – refer Appendix C for further details. As such, when reconciling the historical assays with the recent PXRF results, it provides a relatively high degree of confidence there is significant potential to extend the known cobalt mineralisation once verified by assays.

Indeed, according to a previous report<sup>3</sup> there is a primary 1,200m synclinal structure at The Sisters Prospect – which BH1 intersected – that appears to host high-grade cobalt-zinc mineralisation. As can be seen in Figure 3, most historic drilling campaigns missed this structure completely. Consequently, it is now a key target for further drill-testing once a timeline is set to undertake an inaugural drilling campaign at The Sisters Prospect.

**FIGURE 3: THE SISTERS HISTORICAL DRILL-HOLES – COBALT PPM BY LABORATORY ASSAY**



Source: CCZ geology team

Note: red disks >800ppm Cobalt

## Reefs Tank & Tors Tank Prospects

Ongoing work to codify the 6,380 drill-holes around the Reefs Tank & Tors Tank Prospects – within the defined target area – has found more evidence of shallow cobalt mineralisation, with the best intercepts: **7m @ 1,600ppm Co from 30m (1800E1180N); 15m @ 760ppm Co from 67m (3E51N); 10m @ 520ppm Co from surface (2925E1240S); and 5m @ 520ppm Co from 45m (TT05W10N)<sup>4</sup>.**

## Primary cobalt MRE

Assessing the preliminary findings holistically across The Sisters, Reefs Tank & Tors Tank Prospects, the Board is optimistic there is adequate geological data to potentially prove up a primary cobalt JORC 2012 compliant mineral resource estimate.

## Next steps

In NSW:

- JORC 2012 compliant mineral resource estimate for the BHA Project East Zone.

In Queensland:

- Assay results for Arya Prospect.
- Big One Deposit – formalising timing for next drilling campaign.

In Zambia:

- Complete geophysical report on the Mkushi Project; and
- Complete work on the inaugural drilling campaign for the Luanshya Project.

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

**Dr Dennis Jensen**  
CEO

## 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 Mt Isa copper-belt 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 copper-rich 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-lead-copper-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."

### References

- 1) CCZ ASX Release – 9 March 2022 AND Gilfillan J.F., 1971, Report on Exploration by Falconbridge (Australia) Pty Ltd on ATP 3091 Broken Hill Area NSW under option from Minerals Recovery (Australia) N.L., Falconbridge (Australia) Pty Limited, Jan 1971, 93pp
- 2) CCZ ASX Release – 15 March 2022 and 9 March 2022
- 3) Gilfillan J.F., 1971, Report on Exploration by Falconbridge (Australia) Pty Ltd on ATP 3091 Broken Hill Area NSW under option from Minerals Recovery (Australia) N.L., Falconbridge (Australia) Pty Limited, Jan 1971, 93pp
- 4) Leyh, W.R., and Lees T., 1977, Progress Report on Exploration Licence, No. 846 Iron Blow -Yellowstone Area, Broken Hill, New South Wales for the six months period ended 29th June 1977, North Broken Hill Limited, Report GS1976-198, Jul 77, 35pp **AND** Leyh, W.R., 1990, Exploration Report for the Third Six Monthly Period ended 12th June 1990 for EL 3238 (K Tank), Broken Hill District, New South Wales for the six months period, Pasminco Limited, Report GS1989-226, Jun 90, 22pp **AND** Main, J.V., and Tucker D.F., 1981, Exploration Report for Six Month Period 8th November 1980 to 7th May 1981, EL 1106 Rockwell, Broken Hill, NSW, CRA Exploration Pty Ltd, GS1980-080, Jul 1981, 40pp

### Competent Person Statement

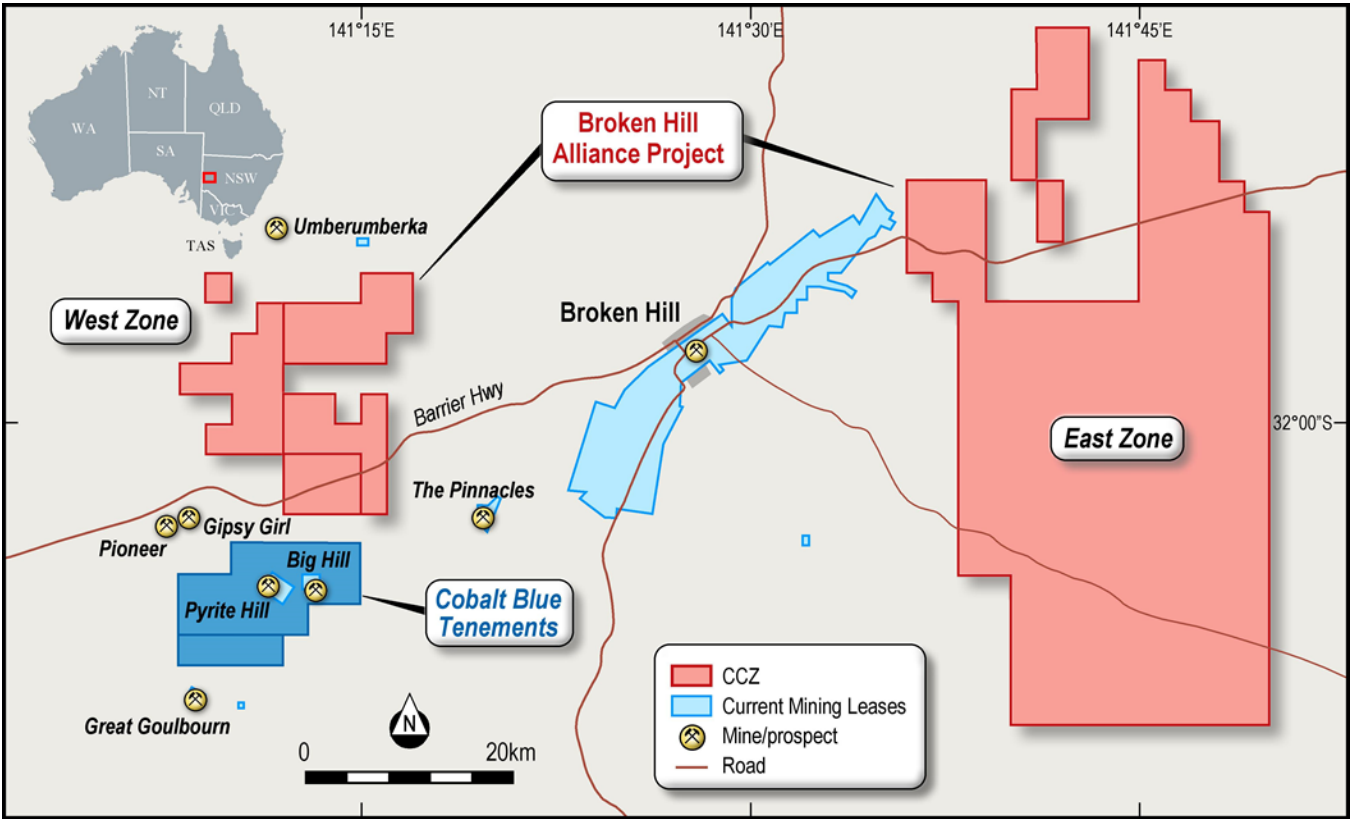
The information in this report that relates to Exploration Results for "BHA Project, East Zone" is based on information compiled or reviewed by Mr Mark Biggs. Mr Biggs is a director of ROM Resources, a company which is a shareholder of Castillo Copper Limited. ROM Resources provides ad hoc geological 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.



**APPENDIX A: BHA PROJECT**

**FIGURE A1: WEST AND EAST ZONE – BHA PROJECT**



Source: CCZ geology team

## APPENDIX B: MAGNETIC SUSCEPTIBILITY AND XRF READINGS

TABLE B1: BH1 AND BH2 - MAGNETIC SUSCEPTIBILITY AND XRF READINGS ON BQ CORE

HoleID	SamplID	From	To	Thick	Mag.Susc. (10 <sup>-3</sup> SI)	Co (ppm)	Cu (ppm)	Zn (ppm)
BH1	BH1.1	11.89	12.378	0.488	22	835	2200	2560
BH1	BH1.2	12.378	12.866	0.488	16.7	1350	935	4610
BH1	BH1.3	12.866	13.354	0.488	19.5	255	2585	1135
BH1	BH1.4	13.354	13.964	0.61	11.9	930	1300	915
BH1	BH1.5	13.964	14.33	0.366	33.4	755	380	440
BH1	BH1.6	14.33	15.426	1.096	46.9	450	1090	725
BH1	BH1.7	15.426	16.522	1.096	40.5	670	3605	490
BH1	BH1.8	16.522	17.618	1.096	43.7	1255	120	2970
BH1	BH1.9	17.681	18.777	1.096	35.9	1335	430	9790
BH1	BH1.10	18.777	19.807	1.03	10.5	850	2305	2090
BH1	BH1.11	19.81	20.84	1.03	0.7	665	170	1580
BH1	BH1.12	20.84	21.87	1.03	1.3			1545
BH1	BH1.13	21.87	22.9	1.03	0.9	660	90	3585
BH1	BH1.14	22.9	23.93	1.03	0.4	1600	720	8355
BH1	BH1.15	23.93	24.99	1.06	0.3		230	380
BH1		24.99	99.06	74.07				
BH1	BH1.16	99.06	100.95	1.89	0.4			6630
BH1	BH1.17	100.95	102.84	1.89	0.8			2345
BH1	BH1.18	102.84	104.73	1.89	0.5			2625
BH1	BH1.19	104.73	106.62	1.89	368.3		5635	3575
BH1	BH1.20	106.62	108.51	1.89	131	285	10395	10385
BH1	BH1.21	108.51	110.46	1.95	604.7	1500	7215	26565
BH1	BH1.22	110.46	112.41	1.95	2000	990	140	21460
BH1	BH1.23	112.41	114.36	1.95	1801.3	1010	1605	2895
BH1	BH1.24	114.36	116.31	1.95	1906		375	2815
BH1	BH1.25	116.31	118.26	1.95	1644.7	140	260	19365
BH1	BH1.26	118.26	119.29	1.03	168	1600	770	41340
BH1	BH1.27	119.29	120.32	1.03	108.3	1705	735	14485
BH1	BH1.28	120.32	121.35	1.03	1187	920	365	43580
BH1	BH1.29	121.35	122.38	1.03	1479.7	1230	565	96315
BH1	BH1.30	122.38	123.44	1.06	1289	435	485	9205
BH1	BH1.31	123.44	124.66	1.22	97.2	250	560	4035
BH1	BH1.32	124.66	125.88	1.22	238.3		2015	12460
BH1	BH1.33	125.88	127.1	1.22	0.7	370	15620	3925
BH1	BH1.34	127.1	128.32	1.22	107.4		3085	5305
BH1	BH1.35	128.32	129.54	1.22	299.2		40	10560
BH2	BH2.1	75.59	77.48	1.89	0	220	40	3790
BH2	BH2.2	77.48	79.37	1.89	0		30	850
BH2	BH2.3	79.37	81.26	1.89	0		545	1375
BH2	BH2.4	81.26	83.15	1.89	0	330	205	2295
BH2	BH2.5	83.15	85.04	1.89	13.6		45	2610
BH2	BH2.6	85.04	85.46	0.42	0.4		35	2270
BH2	BH2.7	85.46	85.88	0.42	0.3		90	3460
BH2	BH2.8	85.88	86.3	0.42	0.3			765
BH2	BH2.9	86.3	86.72	0.42	0.5			2225
BH2	BH2.10	86.72	87.17	0.45	0.8			860
BH2	BH2.11	87.17	88.26	1.09	0.3		60	2105
BH2	BH2.12	88.26	89.35	1.09	1.8	230	60	1340
BH2	BH2.13	89.35	90.44	1.09	0.2		245	18940
BH2	BH2.14	90.44	91.53	1.09	0.5			240
BH2	BH2.15	91.53	92.66	1.13	0.7			1700
BH2	BH2.16	92.66	93.57	0.91	1		415	19365
BH2	BH2.17	93.53	94.44	0.91	0.4		65	1175
BH2	BH2.18	94.3	95.21	0.91	0.5		410	3465
BH2	BH2.19	95.21	96.12	0.91	0.2		165	5715
BH2	BH2.20	96.12	97.23	1.11	0.5		20	985

HoleID	SamplID	From	To	Thick	Mag.Susc. (10 <sup>-3</sup> SI)	Co (ppm)	Cu (ppm)	Zn (ppm)
BH2	BH2.21	97.23	97.77	0.54	0.3			1625
BH2	BH2.22	97.77	98.31	0.54	0.7		40	1650
BH2	BH2.23	98.31	98.85	0.54	2.1		40	800
BH2	BH2.24	98.85	99.39	0.54	0.9		100	475
BH2	BH2.25	99.39	99.97	0.58	0.4		35	445
BH2	BH2.26	99.97	101.37	1.4	0.3		320	7760
BH2	BH2.27	101.37	102.77	1.4	0.4		85	2875
BH2	BH2.28	102.77	104.17	1.4	0.3		20	1080
BH2	BH2.29	104.17	105.57	1.4	0.5		20	1195
BH2	BH2.30	105.57	106.99	1.42	1.1		30	680
BH2	BH2.31	106.99	108.08	1.09	0.8		90	2270
BH2	BH2.32	108.08	109.17	1.09	0.4			370
BH2	BH2.33	109.17	110.26	1.09	0.5			360
BH2	BH2.34	110.26	111.35	1.09	0.8		145	4090
BH2	BH2.35	111.35	112.47	1.12	1.5		190	4115
BH2	BH2.36	112.47	113.45	0.98	0.6		240	1210
BH2	BH2.37	113.45	114.43	0.98	1.4		220	1830
BH2	BH2.38	114.43	115.41	0.98	0.6			770
BH2	BH2.39	115.41	116.39	0.98	0.4			1685
BH2	BH2.40	116.39	117.35	0.96	0		30	1520
BH2	BH2.41	117.35	118.39	1.04	0.3			685
BH2		118.39	132.89	14.5				
BH2	BH2.42	132.89	133.99	1.1	0.4			980
BH2	BH2.43	133.99	135.09	1.1	0.6			830
BH2	BH2.44	135.09	136.19	1.1	244.7		110	1705
BH2	BH2.45	136.19	137.29	1.1	241.7		70	1545
BH2	BH2.46	137.29	138.38	1.09	78.9	445		11205
BH2	BH2.47	138.38	139.48	1.1	52.2		270	15555
BH2	BH2.48	139.48	140.58	1.1	23.5	565	180	6955
BH2	BH2.49	140.58	141.68	1.1	351.7	160	30	1190
BH2	BH2.50	141.68	142.78	1.1	387.3		155	2295
BH2	BH2.51	142.78	143.87	1.09	345.3		50	2300
BH2		143.87	161.24	17.37				
BH2	BH2.52	161.24	162.28	1.04	0.2			625
BH2	BH2.53	162.28	163.32	1.04	0		60	2810
BH2	BH2.54	163.32	164.36	1.04	0.1			325
BH2	BH2.55	164.36	165.4	1.04	0.3			865
BH2	BH2.56	165.4	166.42	1.02	0.4			410

Note: PXRF readings to be verified by resampling core intervals and then conducting laboratory analyses, most likely ME-MS61R (ALS technique) or similar. Readings are the average of 2 scans held for 60 sec.

Source: CCZ geology team



## APPENDIX C: THE SISTERS LABORATORY ANALYSIS

**TABLE C1: THE SISTERS LABORATORY ANALYSIS**

Drillhole	SampleID	From (m)	To (m)	Length	Ag	Au_ppm	Co	Cu	Pb	Zn	As	Bi	Pd
BH1	6100	20.57	22.25	1.68	1.4		185	183	46	22			
BH1	6101	113.84	115.52	1.68	1.5			1465					
BH1	6102	115.52	117.04	1.52	1.6			535					
BH1	6103	117.04	118.57	1.52	1.3			410					
BH1	6104	118.57	120.09	1.52	1.5			188					
BH1	6105	120.09	121.62	1.52	1.5			300					
BH1	6106	121.62	123.14	1.52	1.8			84					
BH1	6107	123.14	124.66	1.52	1.1			620					
BH1	6108	124.66	126.49	1.83			860	19300					
BH2	6201	88.39	89.92	1.52			17	60					
BH2	6202	89.92	91.44	1.52			22	63					
BH2	6203	91.44	92.96	1.52			26	65					
BH2	6204	137.16	138.38	1.22			40	20		60			
BH2	6205	138.38	139.90	1.52	0.7		320	210		40			
BH2	6206	161.54	162.46	0.91			3	2		19			
BH2	6207	162.46	163.07	0.61			13	7		26			
BH2	6208	163.07	163.98	0.91			4	8		11			
BH2	6209	163.98	164.59	0.61			3	2		11			
BH2	6210	198.12	198.73	0.61			6	2		16			
BH3	6220	67.67	68.28	0.61	0.2		75	70	52	40			
BH3	6221	68.28	69.19	0.91	0.1		380	190	64	20			
BH3	6222	69.19	70.10	0.91	0.2		115	50	49	20			
BH3	6223	70.10	70.41	0.30	0.1		80	20	48	30			
BH3	6224	70.41	71.32	0.91	0.1		400	210	58	20			
BH3	6225	71.32	71.93	0.61	0.1		150	110	52	25			
BH3	6226	71.93	72.54	0.61	0.4		80	30	48	20			
BH3	6227	72.54	73.15	0.61	0.3		795	264	72	20			
BH3	6228	73.15	73.76	0.61	0.2		405	140	65	25			
BH4	6400	35.66	36.58	0.91	1		160	45					
BH4	6283	64.92	66.45	1.52			41	550	40	28			
BH4	6284	66.45	67.97	1.52			46	10	65	34			

Drillhole	SampleID	From (m)	To (m)	Length	Ag	Au_ppm	Co	Cu	Pb	Zn	As	Bi	Pd
BH4	6285	67.97	69.49	1.52			21	10	60	18			
BH4	6286	69.49	71.02	1.52			16	5	50	4			
BH4	6287	71.02	72.54	1.52			28	5	60	10			
BH4	6288	72.54	73.76	1.22			26	5	50	20			
RCPS1	S1_00_04	0.00	4.00	4.00	0.5	0.008	41	17	10	28	1	2	0.002
RCPS1	S1_04_08	4.00	8.00	4.00	0.5	0.006	69	73	14	35	1	10	0.001
RCPS1	S1_08_12	8.00	12.00	4.00	0.5	0.098	61	127	15	9	44	14	0.004
RCPS1	S1_12_16	12.00	16.00	4.00	1	0.164	19	180	31	8	30	10	0.007
RCPS1	S1_16_20	16.00	20.00	4.00	1	0.123	27	228	19	8	56	21	0.01
RCPS1	S1_20_24	20.00	24.00	4.00	0.5	0.027	51	247	9	13	62	12	0.002
RCPS1	S1_24_28	24.00	28.00	4.00	0.5	0.006	20	8	7	25	1	9	0.001
RCPS1	S1_28_32	28.00	32.00	4.00	0.5	0.002	13	23	2	26	1	8	0.001
RCPS1	S1_32_36	32.00	36.00	4.00	0.5	0	5	25	2	19	1	9	0
RCPS1	S1_36_37	36.00	37.00	1.00	1	0.001	2	19	2	10	1	8	0
RCPS2	S2_00_04	0.00	4.00	4.00	0.5	0.015	36	123	24	23	1	16	0.002
RCPS2	S2_04_08	4.00	8.00	4.00	0.5	0.027	51	203	33	20	1	14	0.004
RCPS2	S2_08_12	8.00	12.00	4.00	0.5	0.006	32	137	32	16	1	16	0.002
RCPS2	S2_12_16	12.00	16.00	4.00	0.5	0.017	26	233	25	11	12	15	0.003
RCPS2	S2_16_20	16.00	20.00	4.00	0.5	0.04	48	378	18	12	18	15	0.002
RCPS3	S3_00_04	0.00	4.00	4.00	2	0.006	43	31	7	28	3	13	0.002
RCPS3	S3_04_08	4.00	8.00	4.00	1	0.004	43	17	12	35	1	10	0.001
RCPS3	S3_08_12	8.00	12.00	4.00	0.5	0.006	32	23	7	38	1	2	0.002
RCPS3	S3_12_16	12.00	16.00	4.00	0.5	0	30	7	7	21	1	9	0.001
RCPS3	S3_16_20	16.00	20.00	4.00	0.5	0.009	138	228	16	17	4	19	0.002
RCPS4	S4_00_04	0.00	4.00	4.00	0.5	0.002	14	20	6	9	1	2	0.001
RCPS4	S4_04_08	4.00	8.00	4.00	0.5	0.001	12	7	5	12	1	2	0
RCPS4	S4_08_12	8.00	12.00	4.00	0.5	0.002	22	22	7	18	1	2	0.001
RCPS4	S4_12_16	12.00	16.00	4.00	0.5	0.015	45	10	5	27	1	6	0.001
RCPS4	S4_16_20	16.00	20.00	4.00	0.5	0.001	53	2	7	25	1	2	0.001
RCPS4	S4_20_24	20.00	24.00	4.00	0.5	0	34	7	7	25	1	6	0.001
RCPS4	S4_24_28	24.00	28.00	4.00	0.5	0.001	28	420	8	37	1	7	0.001
RCPS4	S4_28_32	28.00	32.00	4.00	1	0.004	12	720	10	32	1	10	0
RCPS4	S4_32_36	32.00	36.00	4.00	2	0.001	27	17	7	26	1	13	0.003
RCPS4	S4_36_38	36.00	38.00	2.00	0.5	0	6	12	5	19	1	7	0
RCPS5	S5_00_04	0.00	4.00	4.00	0.5	0.002	26	71	9	28	1	9	0.003

Drillhole	SampleID	From (m)	To (m)	Length	Ag	Au_ppm	Co	Cu	Pb	Zn	As	Bi	Pd
RCPS5	S5_04_08	4.00	8.00	4.00	0.5	0.004	81	86	26	31	3	15	0.003
RCPS5	S5_08_12	8.00	12.00	4.00	1	0.001	66	13	6	21	1	10	0
RCPS5	S5_12_16	12.00	16.00	4.00	2	0	2	7	6	13	1	11	0
RCPS5	S5_16_20	16.00	20.00	4.00	1	0	2	24	6	10	1	7	0
RCPS5	S5_20_24	20.00	24.00	4.00	2	0	8	11	9	36	1	10	0
RCPS5	S5_24_28	24.00	28.00	4.00	2	0	19	33	10	59	1	13	0.003
RCPS5	S5_28_32	28.00	32.00	4.00	2	0	18	23	7	30	1	12	0.001
RCPS5	S5_32_35	32.00	35.00	3.00	2	0.002	18	12	6	24	1	12	0
RCPS6	S6_00_04	0.00	4.00	4.00	0.5	0.001	7	9	2	13	1	6	0
RCPS6	S6_04_08	4.00	8.00	4.00	1	0.001	35	21	2	28	1	7	0
RCPS6	S6_08_12	8.00	12.00	4.00	2	0.045	86	251	16	99	1	16	0.003
RCPS6	S6_12_15	12.00	15.00	3.00	0.5	0.041	119	438	18	69	1	13	0.003
RCPS7	S7_00_04	0.00	4.00	4.00	0.5	0.006	81	61	15	32	1	14	0.003
RCPS7	S7_04_08	4.00	8.00	4.00	0.5	0.002	40	70	13	13	1	16	0.002
RCPS7	S7_08_12	8.00	12.00	4.00	0.5	0.006	26	62	14	10	1	16	0.003
RCPS8	S8_00_04	0.00	4.00	4.00	0.5	0.004	81	65	12	52	22	8	0.005
RCPS8	S8_04_08	4.00	8.00	4.00	0.5	0.006	38	77	15	8	2	13	0.002
RCPS8	S8_08_12	8.00	12.00	4.00	0.5	0.006	41	39	13	29	5	11	0.006
RCPS8	S8_12_16	12.00	16.00	4.00	0.5	0.012	24	36	6	36	1	9	0.002
RCPS8	S8_16_20	16.00	20.00	4.00	0.5	0	21	12	2	7	1	9	0

Notes: Laboratories were Falconbridge Laboratories, Perth, WA, Geochemical and Mineralogical Laboratories Pty Ltd, Sydney NSW and SGS Sydney, NSW.

Source: CCZ geology team

## APPENDIX D: 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
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Surface sampling used in this analysis was all historical from the period 1964-2018. This includes the 2016 and 2018 Squadron Resources soil sampling program. The data was a combination of the NSW Geological Survey surface sampling database and historical annual and relinquishment reports revisited and additional data extracted.</li> <li>Reference to these reports is given in the associated geology reports (Biggs (2022a, b, c).</li> <li>Many of the sampling programs, especially from the 1990’s did include reference samples and duplicate analyses and other forms of QA/QC checking.</li> <li>Sampling prior to 1988 generally has higher “below detection limits” and less or no QA/QC checks.</li> <li>Regarding historical cores from holes held by the NSW Geological Survey across EL 8434 and 8435, selected sections have been reanalysed using pXRF. The grades quoted for cored intervals described in Table A1 have been measured using a handheld pXRF Analyser. These grades are indicative grades only as the pXRF Analyser does not have the same degree of accuracy as laboratory generated results.</li> <li>Sample details from the pXRF machine for Ag, Cu, Co, and Zn are listed in Table A1, below. The complete results for all elements have been listed in Appendix 1 of the Geological Summary report.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><i>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.).</i></li> </ul>	<ul style="list-style-type: none"> <li>Historical drilling consists of auger, rotary air blast, reverse circulation, and diamond coring. In and around The Sisters model area are twelve (12) drillholes, however it should be noted that the majority of these are &lt;18m in depth, and the number of holes &gt;100m number around 14.</li> </ul>



		Complete drilling analyses results are in the process of being compiled, and hence did not form part of this study.
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable in this study, no new holes completed.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <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 library core relogged over the same intervals as the PXRf readings were taken.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality, and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable, as no new drilling was undertaken.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> </ul>	<ul style="list-style-type: none"> <li>• All the historical samples (87) were laboratory tested in various NATA-registered laboratories throughout Australia. Many of the earlier Falconbridge stream sediment and soil samples were analysed by the Falconbridge internal laboratories.</li> </ul>

	<ul style="list-style-type: none"> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <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>	<ul style="list-style-type: none"> <li>XRF geochemical data taken from field portable XRF Niton.</li> <li>Duration of sampling 60 seconds per filter (2 filters).</li> <li>Calibration of the unit was carried out on the unit at the start of the sampling at the core library.</li> <li>The following elements were analysed; Ag, As, Se, Ca, K, S, Ba, Sb, Sn, Cd, Pd, Zr, Sr, Rb, Pb, Hg, Zn, W, Cu, Ni, Co, V, Ti, Au, Fe, Mn, Cr, Sc, Mo, Th, U, Ta.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>BH1 and/or BH2 will require twinning to confirm XRF readings.</li> <li>None of the historical data has been adjusted.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>In general, locational accuracy does vary, depending upon whether the samples were digitised off plans or had their coordinated tabulated. Many samples were reported to AGD66 or AMG84 and have been converted to MGA94.Zone 54</li> <li>It is estimated that locational accuracy therefor varies between 2-50m</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>The average sample spacing across the tenure varies per element, and sample type, as listed in Table A1-1, below:</li> </ul>

		<p>Table D1: EL 8434 and EL 8435 Surface and Drillhole Sampling</p> <table><tr><th>Description</th><th>Number</th><th>Average Spacing</th><th>Comments</th></tr><tr><td>Stream Sediment</td><td>88</td><td>185</td><td>Includes BCL</td></tr><tr><td>Soil</td><td>6</td><td>54</td><td></td></tr><tr><td>Surface Rock Chip</td><td>22</td><td>310</td><td></td></tr><tr><td>Drilling</td><td>87</td><td>190</td><td>Twelve drillholes in total. Drilling by Falconbridge and Endeavour Minerals</td></tr><tr><td>Mineral Occurrences</td><td>24</td><td>260</td><td>Includes quarries and industrial minerals occurrences</td></tr></table> <ul style="list-style-type: none"><li>No sample compositing has been applied.</li></ul>	Description	Number	Average Spacing	Comments	Stream Sediment	88	185	Includes BCL	Soil	6	54		Surface Rock Chip	22	310		Drilling	87	190	Twelve drillholes in total. Drilling by Falconbridge and Endeavour Minerals	Mineral Occurrences	24	260	Includes quarries and industrial minerals occurrences
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Mineral Occurrences	24	260	Includes quarries and industrial minerals occurrences																							
Orientation of data in relation to geological structure	<ul style="list-style-type: none"><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>	<ul style="list-style-type: none"><li>The current database does not contain any sub-surface geological logging for The Sisters, which is being compiled (50% complete)</li><li>Geological mapping by various companies has reinforced that the strata dips variously between 45 and 80 degrees.</li></ul>																								
Sample security	<ul style="list-style-type: none"><li>The measures taken to ensure sample security.</li></ul>	<ul style="list-style-type: none"><li>The sample security measures, except for the Squadron Resources work programs is not known. Squadron took samples to their Broken Hill office and transported samples for analysis to ALS Broken Hill</li></ul>																								
Audits or reviews	<ul style="list-style-type: none"><li>The results of any audits or reviews of sampling techniques and data.</li></ul>	<ul style="list-style-type: none"><li>No audits or reviews have yet been undertaken.</li></ul>																								

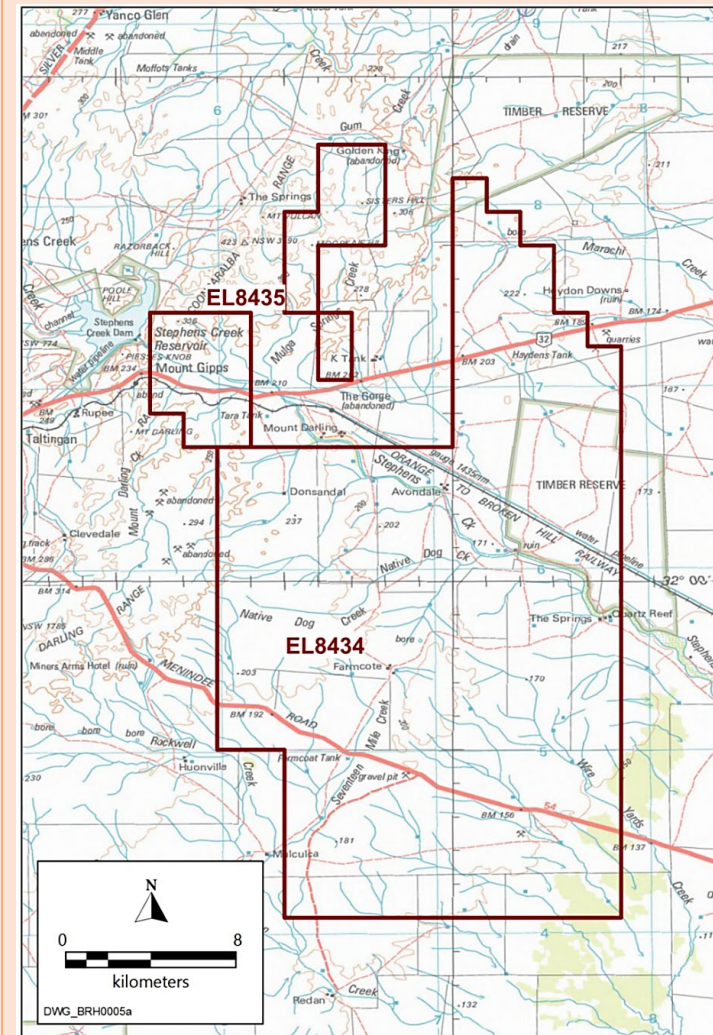
## SECTION 2 REPORTING OF EXPLORATION RESULTS

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <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>	<p>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).</p> <p>EL 8434 and EL 8435 were both granted on the 2<sup>nd</sup> of June 2016 to Squadron Resources for a term of five (5) years for Group One Minerals. On the 25<sup>th</sup> of 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</sup> of August 2021 for a further six (6) years and are due to expire on the 2<sup>nd</sup> of June 2027.</p> <p>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>.</p> <p>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>.</p> <p>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 eastern 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 of the EL 8434. The Orange to Broken Hill Rail line also dissects EL 8435 western section the middle and then travels north-west to south-east slicing through the eastern arm of EL 8434 (Figure A3-2-1).</p>



Figure D1: EL 8434 and EL 8435 General Location Map



**Exploration  
done by other  
parties**

- Acknowledgment and appraisal of exploration by other parties.

Explorers who were actively involved over longer historical periods in various parts of EL8434 were: - North Broken Hill Ltd, CRAE Exploration, Major Mining Ltd and Broken Hill Metals NL, Pasmenco Exploration Ltd, Normandy Exploration

		<p>Ltd, PlatSearch NL/Inco Ltd/ EGC Pty Ltd JV and the Western Plains Gold Ltd/PlatSearch/EGC Pty Ltd JV.</p> <p>A comprehensive summary of work by previous explorers was presented in Leyh (2009). However, more recently, follow-up field reconnaissance of areas of geological interest, including most of the prospective zones was carried out by EGC Pty Ltd over the various licenses. This work, in conjunction with a detailed interpretation of aeromagnetic, gravity plus RAB / RC drill hole logging originally led to the identification of at least sixteen higher priority prospect areas. All 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.</p> <p>A total of 22 prospects were then recognised on the exploration licence with at least 12 occurring in and around the tenure.</p> <p>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.</p> <p>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.</p> <p>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</p>
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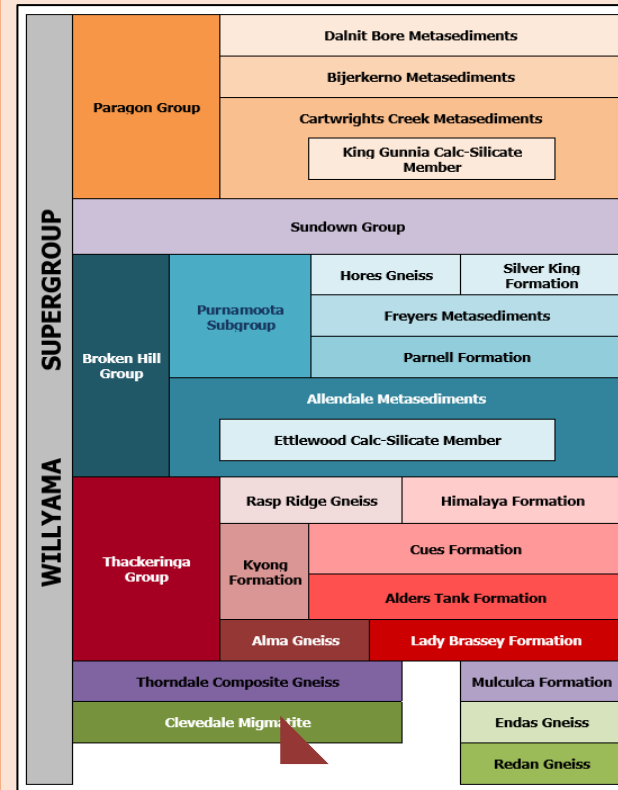
		<p>continue to be of limited application due to the high degree of weathering and the often prevailing and complex regolith cover constraints.</p> <p>Between 2007 and 2014 Eaglehawk Geological Consulting has carried out detailed research, plus compilation and interpretation of a very large volume of 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.</p> <p><b>Work Carried out by Squadron Resources and Whyloo Metals 2016-2020</b></p> <p>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.</p> <p>The area overlies a potential magmatic Ni-Cu-PGE source region of metasomatised sub-continental 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:</p> <ul style="list-style-type: none"> <li>• Airborne EM survey.</li> <li>• Soil and chip sampling.</li> <li>• Data compilation.</li> </ul>
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		<ul style="list-style-type: none"> <li>• Geological and logistical reconnaissance.</li> <li>• Community consultations; and</li> <li>• Execution of land access agreements.</li> </ul> <p><b>Airborne EM Survey</b></p> <p>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.</p> <p>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.</p> <p><b>Soil and Chip sampling</b></p> <p>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.</p> <p>One hundred and sixty-six (166) soil samples were collected at a nominal 20cm depth using a 2mm aluminium 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.</p> <p>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.</p>
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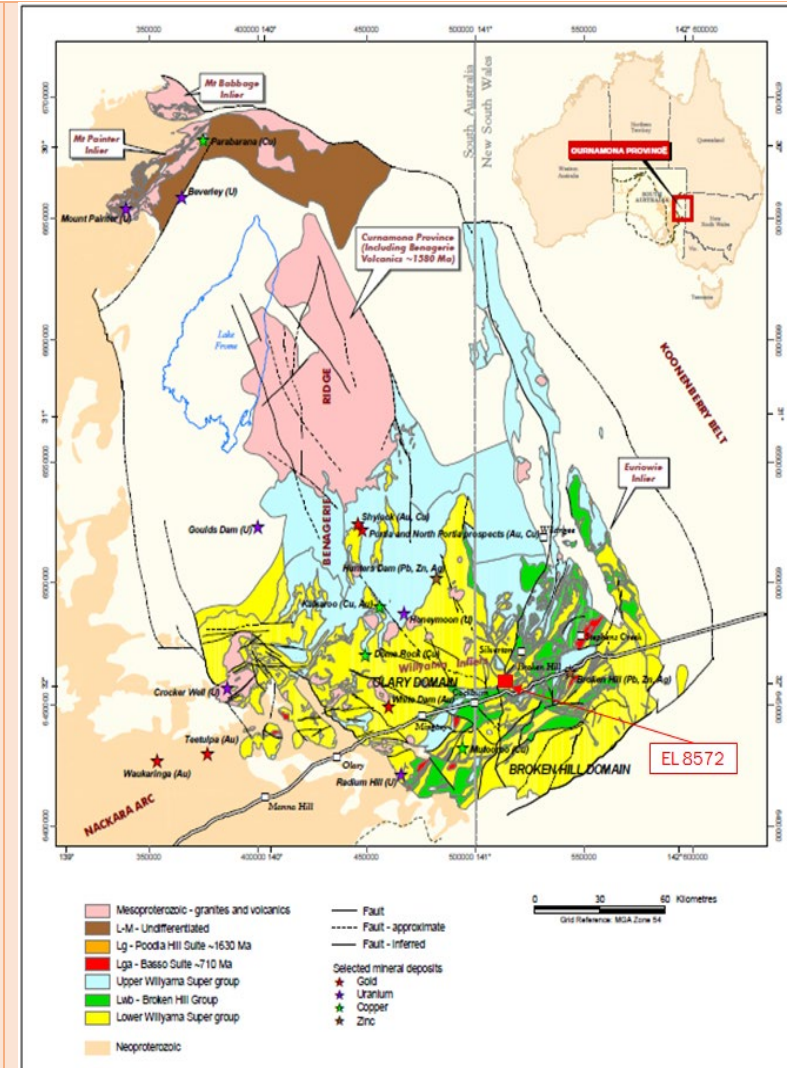
<b>Geology</b>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting, and style of mineralisation.</i></li> </ul>	<p><b>Regional Geology</b></p> <p>The Broken Hill polymetallic deposits are located within Curnamona Province (Willyama Super group) (Figure A3-2-2) that hosts several 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, &amp; Willis, 1988).</p> <p>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.</p>
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Figure D2: Regional Stratigraphy



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

		<i>Figure D3: Regional Geological Map</i>
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Modified after (Peljo, 2003)

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,

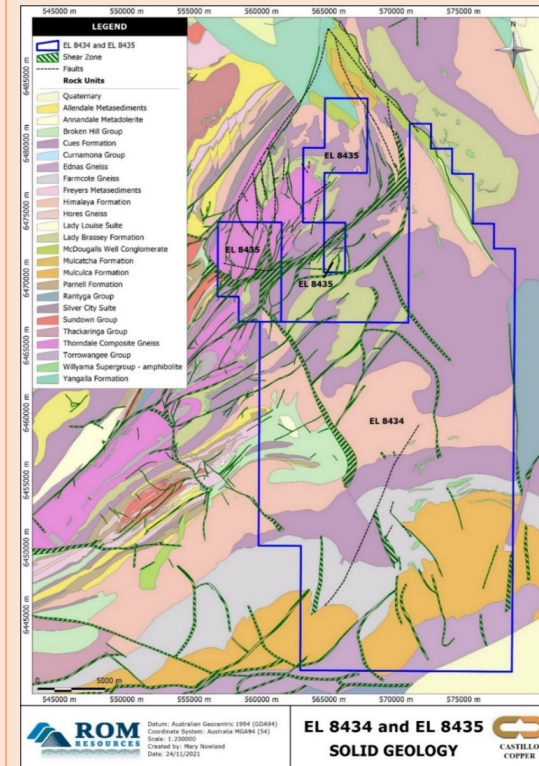


		<p>the Thackaringa Group, and the younger Broken Hill Group (Colquhoun, et al., 2019).</p> <p><b>Local Geology</b></p> <p>A summary of the units that host or appear to host the various mineralisation styles within EL 8434 and EL 8435 is given below.</p> <p><b>Broken Hill Group</b></p> <p>The Hores Gneiss 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).</p> <p><b>Thackaringa Group</b></p> <p>The Thorndale Composite Gneiss is distinguished by mostly gneiss, but also migmatite, amphibolite, and minor magnetite. The age of this unit is &gt;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, &amp; 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.</p> <p>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 volcanoclastic 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).</p> <p>A distinctive leucocratic quartz-microcline-albite(-garnet) gneiss (interpreted as meta-rhyolite) occurs as thin, continuous, and extensive horizons, in several</p>
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		<p>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.</p> <p>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.</p> <p>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 Rantya Group (Redan and Ednas Gneisses, Mulculca Formation, and the now formalised Farmcote Gneiss).</p> <p><b>Lady Louise Suite</b> 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).</p> <p><b>Rantya Group</b> Farmcote Gneiss contains metasedimentary rocks and gneiss and is a new unit at the top of Rantya 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</p>
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		<p>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 quartzo-feldspathic composite gneiss. It is overlain by Mulculca Formation.</p> <p><b>Silver City Suite</b> 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 Thackaringa Group and the Broken Hill Group. This unit is aged between 1680 to 1707Ma.</p> <p><b>Torrowangee Group</b> 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).</p> <p><b>Sundown Group</b> 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).</p> <p>There is also an unnamed amphibolite in Willyama Supergroup, which present typically medium grained plagioclase and amphibole or pyroxene rich stratiform or discordant dykes.</p>
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Figure D4: 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 drill holes:
  - easting and northing of the drill hole collar
  - elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
  - dip and azimuth of the hole
  - down hole length and interception depth
  - hole length.

- No new drillholes have been completed yet.

	<ul style="list-style-type: none"> <li>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.</li> </ul>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>No new laboratory assays are reported in this announcement; however, a visit is in progress to the GSNSW core library to relog and resample six (6) drillholes completed across EL 8434 and 8435. Portable XRF readings are being used to identify sections of core to be resampled.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>As a database of all the historical borehole sampling has not yet been compiled 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>No existing geological 3D models exist but preliminary investigation has shown that sufficient data may be available to generate a small resource of cobalt or copper.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Current surface anomalies are shown on maps in the report. All historical surface sampling has had their coordinates converted to MGA94, Zone 54.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>All portable XRF readings have been included. Regarding the surface sampling, no results other than duplicates, blanks or reference standard assays have been omitted.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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,</li> </ul>	<ul style="list-style-type: none"> <li>Historical explorers have also conducted airborne and ground gravity, magnetic, EM, and IP resistivity surveys over parts of the tenure area but this is yet to be fully georeferenced (ground IP surveys).</li> </ul>

	<i>groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<p>Work has commenced on Stage 2, which is to identify more cobalt anomalies and priority zones within the EL 8434 and EL8435, it is recommended that:</p> <ul style="list-style-type: none"> <li>The non-sampled zone in the centre of the tenure be defined and sampled.</li> <li>A more detailed study of historical drillholes should be conducted to determine if enough data exists to estimate a JORC resource; and</li> <li>A program of field mapping and ground magnetic or EM surveys be planned and executed.</li> </ul>



## APPENDIX E: BHA Modelling Updates

### Objectives and Scope

As part of an ongoing database and modelling effort of cobalt at Reefs Tank and Tors Tank a program of relogging and resampling was instigated across the tenure suite EL8434 and 8435. The objective was to examine the rock types, local structure and mineralisation styles which are very similar in many instances to the cobalt horizons at Reefs Tank and Tors Tank.

Drillholes held within the GSNSW Broken Hill Core Storage Facility were identified as being held within as listed in Table E1, below. The holes covered existing prospects: The Sisters, Iron Blow, Round Hill, and Rockwell, all which were wholly within or partly trending into the BHA tenure package.

**TABLE E1: EL 8434, 8435 DRILLHOLES FOR RE-LOGGING AND RESAMPLING**

HOLE_NAME	E_GDA94	N_GDA94	LOG_FROM_m	LOG_TO_m	Notes	Notes
BH1	566841.77	6480228.70	20.00	23.00	Cobalt as high as 950ppm in several bands, in chloritic schist	BH1&2 from The Sisters Cu-Au-Co historic mine; depths will be in feet.
			113.00	127.00		
BH2	566721.77	6480418.70	77.00	116.00	Cobalt as high as 250ppm in several bands, in chloritic schist	
			136.00	141.00		
DD80RW4	559571.82	6459448.72	74.00	112.00	No anomalous Cu, Pb, Zn, Ag zones; Co not analysed	DD80RW series at Rockwell BHT prospect
			124.00	130.00		
DD80RW4_1	559571.82	6459448.72	74.00	112.00	No anomalous Cu, Pb, Zn, Ag zones; Co not analysed	Redrill at the same site
			124.00	130.00		
			198.00	232.00		
			270.00	275.00		
			350.00	375.00		
DD90_IB3	560223.79	6473890.70	140.00	250.00	No assay found??	DD90_IB3 at the Iron Blow BHT and PGE prospect
RH3	562961.79	6474868.70	6.00	52.60	No assay for cobalt (only PGE); look for chloritic schist or blue quartz, Mn-rich horizons	Drillholes This is the western-most drillhole in the Round Hill PGE Prospect

Source: CCZ geology team

## Current Investigations

This release concerns the first two drillholes BH1 and BH2 from The Sisters prospect (Figure E1), as examination of the other holes at other prospects is in progress.

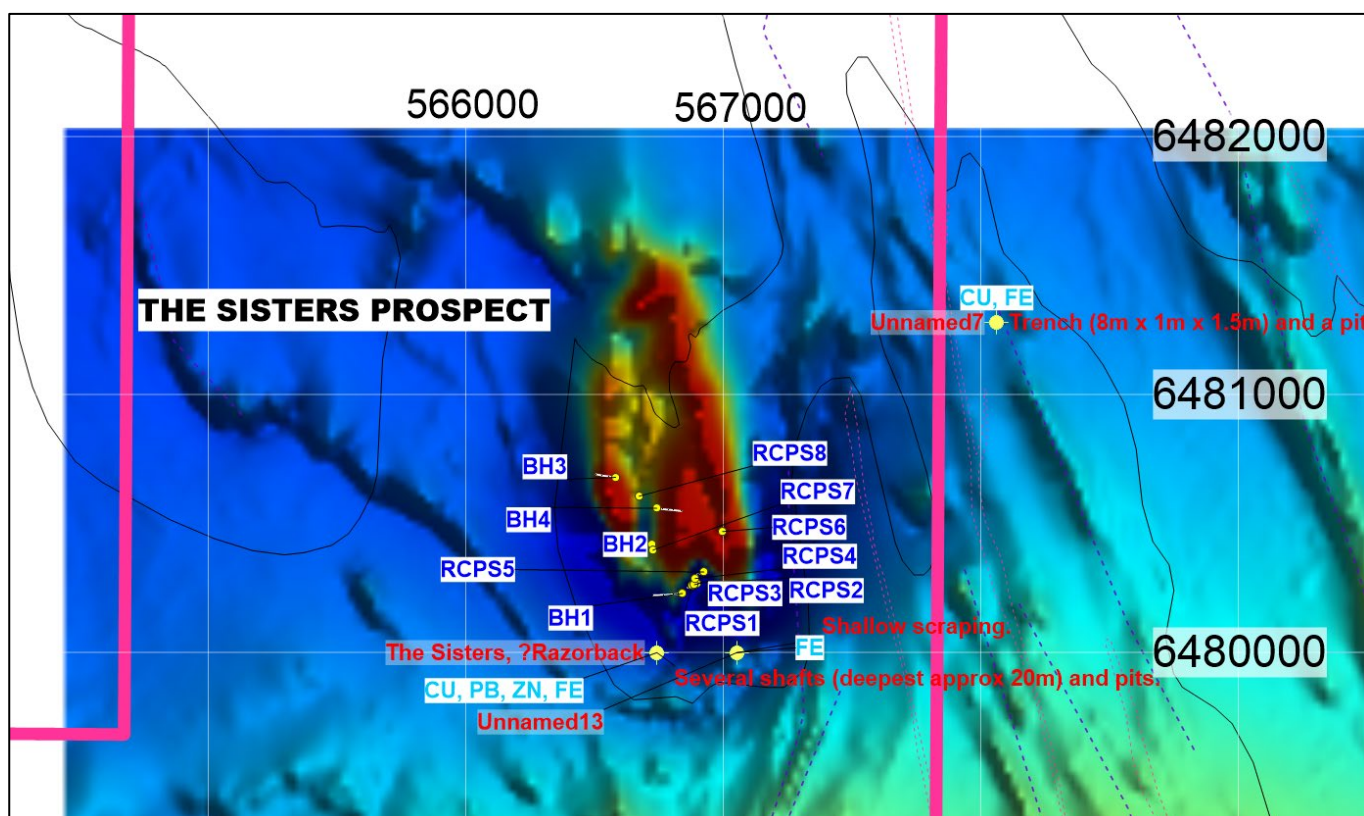
Core from each of these holes was sequentially laid on core tables and attempted to be reconciled with historically logged drill depths (drilling completed between 1969 and 1970), a task complicated by missing core, incorrectly named core boxes and the use of imperial measurements and limited use of core blocks.

In BH1 thirty-one (31) intervals and in BH2 fifty-six (56) approximately 1m intervals for portable XRF and magnetic susceptibility and future lab analysis identified and marked with core blocks (blue). Intervals located across three zones of interest. Two, sixty second XRF readings and three Mag Sus reading taken per interval.

Previously sampled intervals were identified. Core blocks were inserted within core trays to identify sample intervals for further cutting and analysis. Wet and dry photographs of core from both holes was undertaken (see Figures E2 and E3).

XRF data preliminary results and a comparison to historical sampling are given above. In general, BH1 showed significant cobalt and zinc mineralisation, and to a lesser degree copper mineralisation.

**FIGURE E1: LOCATION OF HISTORICAL DRILLING AT THE SISTERS**



Notes:

1. Coordinate system is MGA 94 Zone 54
2. Background image is East Avalon TMI Magnetics
3. Mineral occurrence noted by the GSNSW shown as yellow stars
4. Mineral occurrence commodities also shown.

Source: CCZ geology team

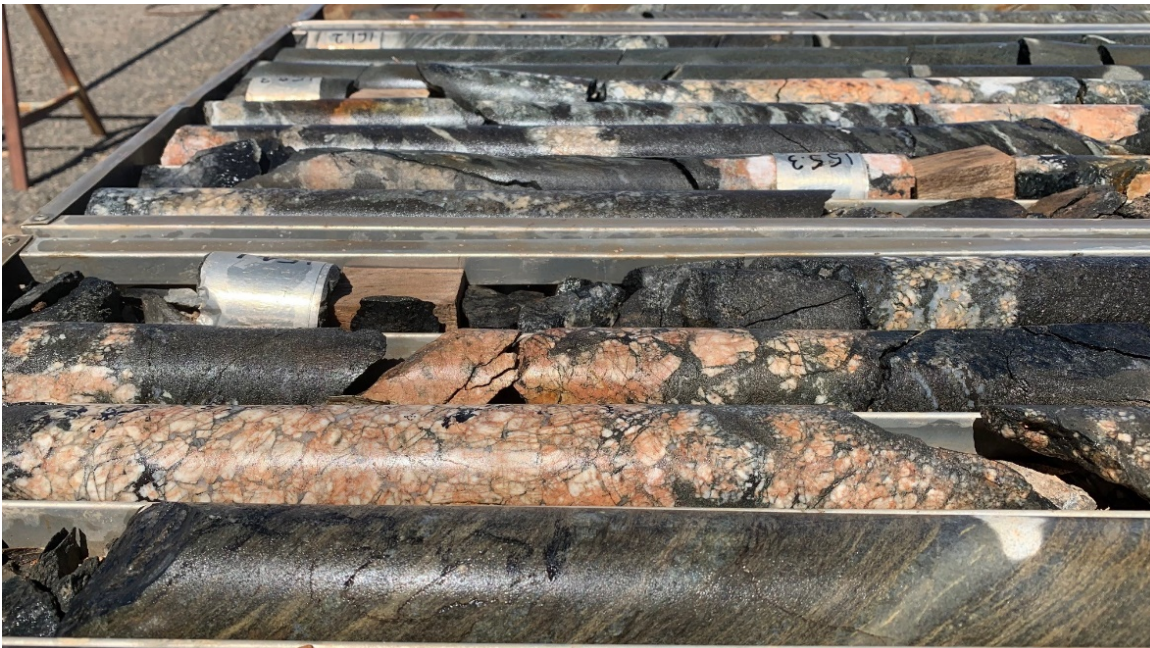


**FIGURE E2: SETTING UP FOR CORE PHOTOGRAPHY**



Source: CCZ geology team

**Figure E3: Typical High Grade Metamorphic rocks in BH2**



Source: CCZ geology team

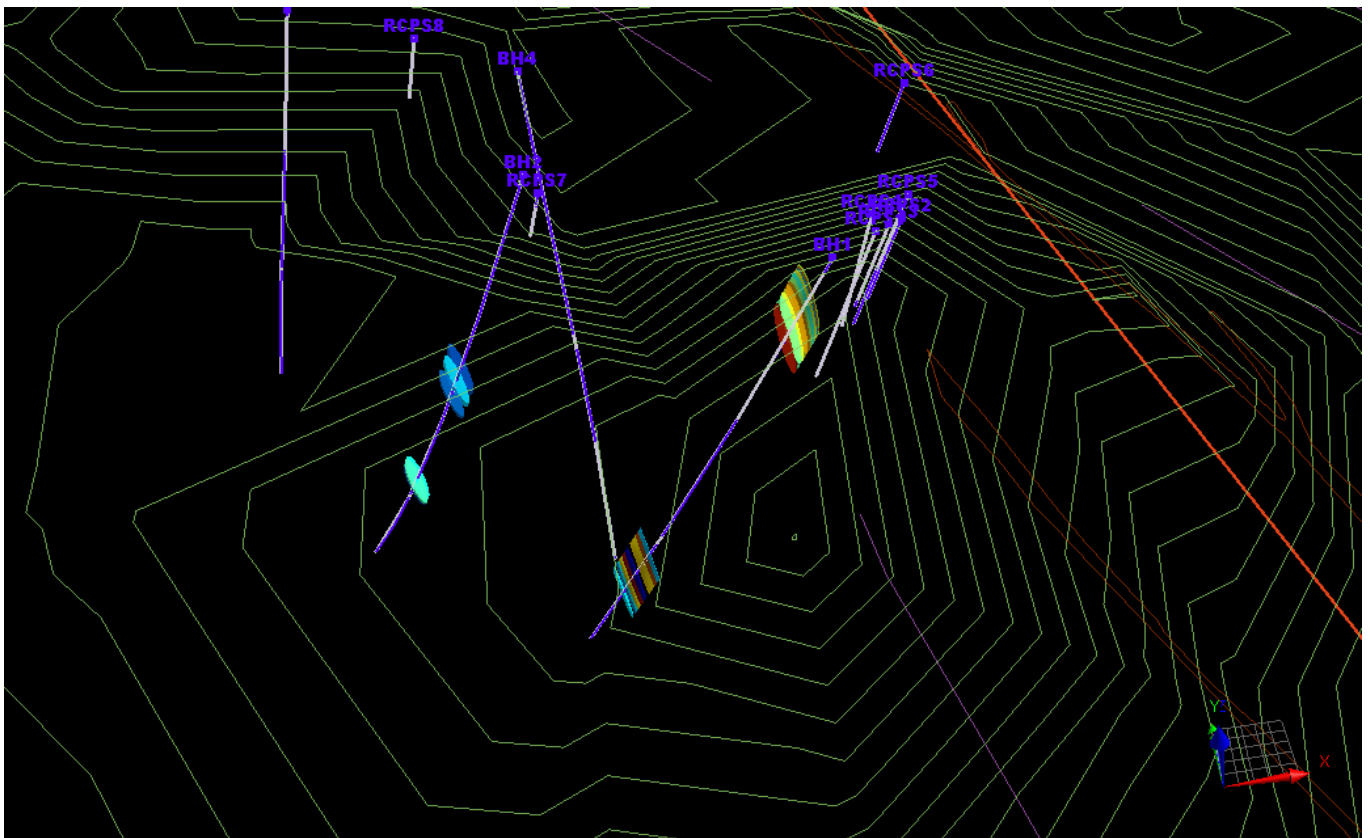
Best intersections from the two holes are as shown in Table E2 and in Figures E4 and E5, below.

**TABLE E2: SIGNIFICANT PRXF ASSAY READINGS FOR INTERVALS BH1 AND BH2**

Drillhole	From	To	App. Thick. (m)	Co (ppm)	Cu (%)	Zn (%)
<b>BH1</b>	11.84	20.89	9.05	859	0.15	0.26
	106.62	114.36	7.26	946	0.48	1.53
	116.24	124.66	8.42	897	0.05	3.26
	124.66	129.54	4.88	370	0.52	0.89
<b>BH2</b>	89.35	90.44	1.09	245	0.02	1.89
	92.66	93.57	0.91	350	0.04	1.94
	137.29	140.58	3.29	525	0.05	2.21

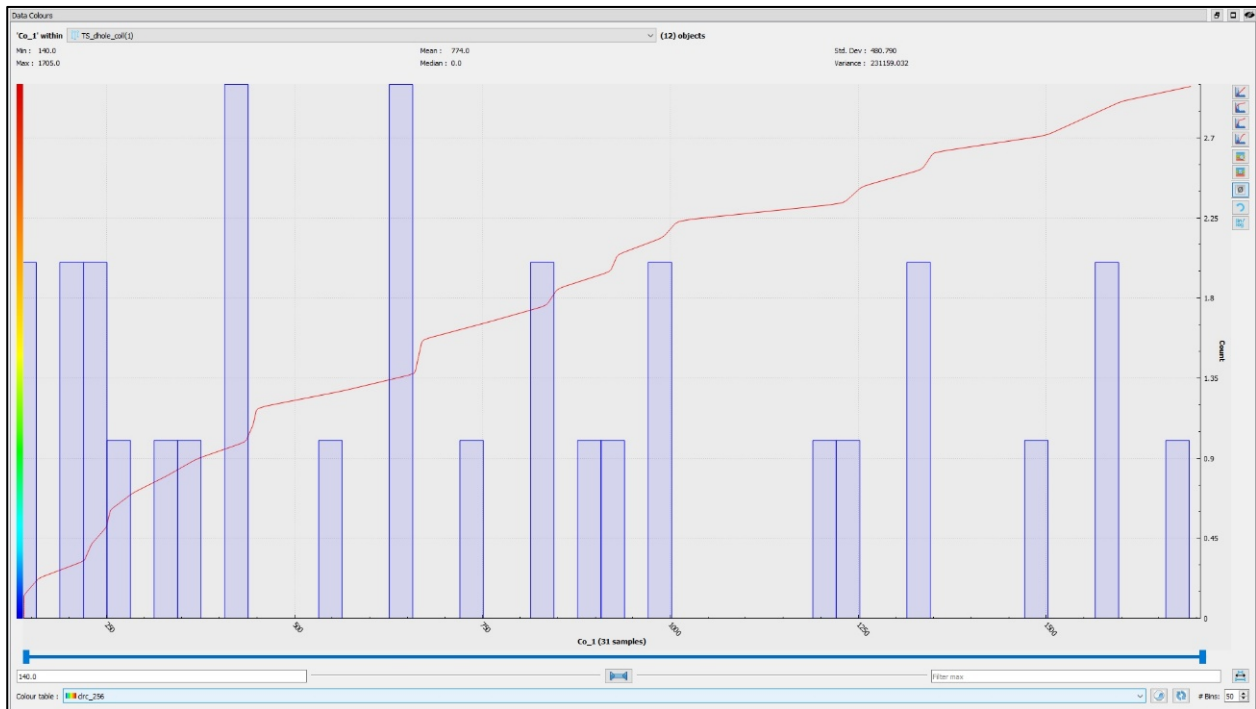
Source: CCZ geology team

**FIGURE E4: BH1 AND BH2 PXR COBALT VALUES (PPM; COLOURS AS PER FIGURE E5)**



Source: CCZ geology team

**FIGURE E5: BH1 AND BH2 PXRF COBALT HISTOGRAM**



Source: CCZ geology team

Given the unexpected thick intervals of anomalous cobalt by portable XRF, historical laboratory assay data was downloaded and encoded, with Table E3 and Figures E6 and E7 illustrating significant intersections.

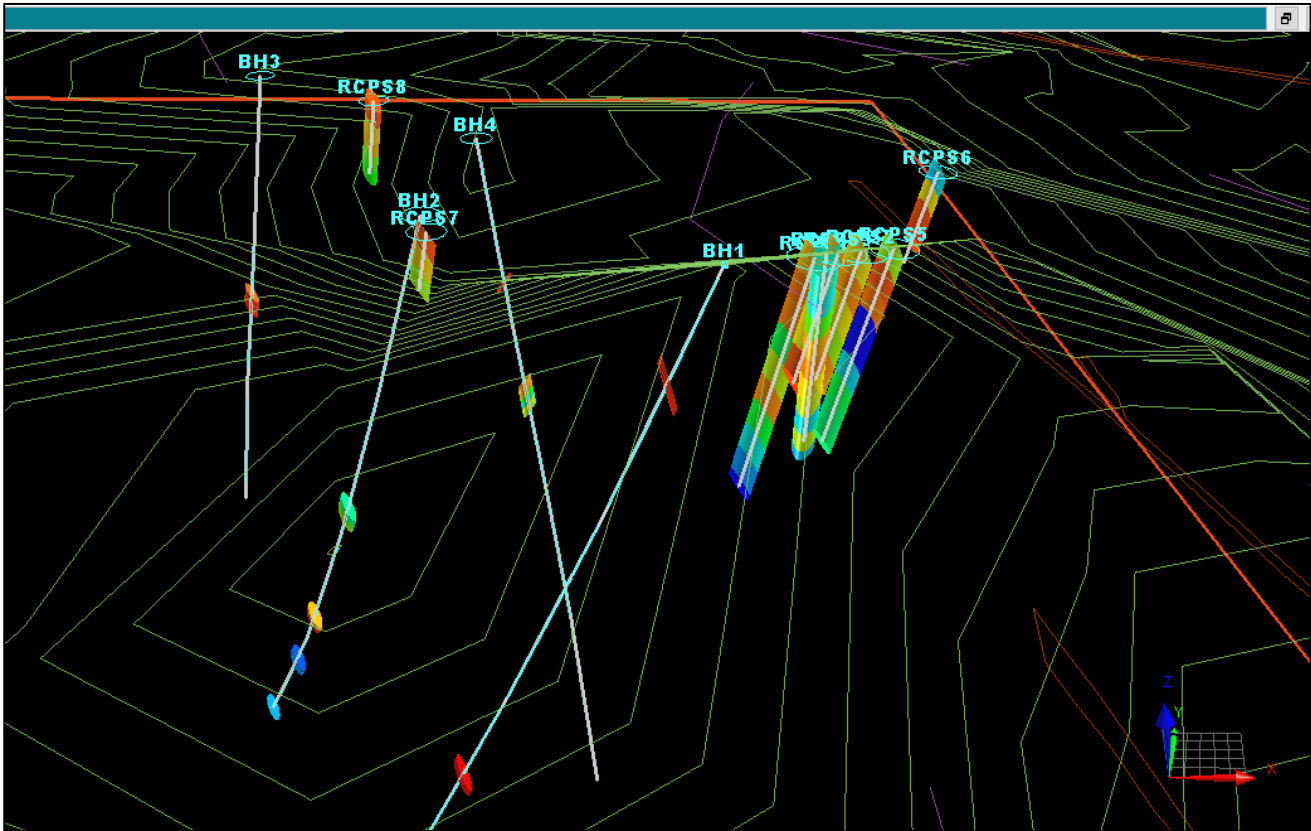
**TABLE E3: SIGNIFICANT LABORATORY ASSAY READINGS FOR ALL “THE SISTERS” DRILLHOLES**

Drillhole	From	To	App. Thick. (m)	Ag (g/t)	Co (ppm)	Cu (%)	Zn (%)
BH1	20.57	22.25	1.68	1.4	185	0.02	0.002
BH1	123.14	126.49	3.35	1.1	430	1.0	n/a
BH2	138.38	139.90	1.52	0.7	320	0.02	0.004
BH3	68.28	73.76	5.48	0.2	301	0.01	0.002
BH4	35.66	36.58	0.92	1.0	160	0.004	n/a
RCPS3	16.0	20.0	4.0	0.5	138	0.02	0.002
RCPS4	12.0	15.0	3.0	0.5	119	0.04	0.007

Source: CCZ geology team



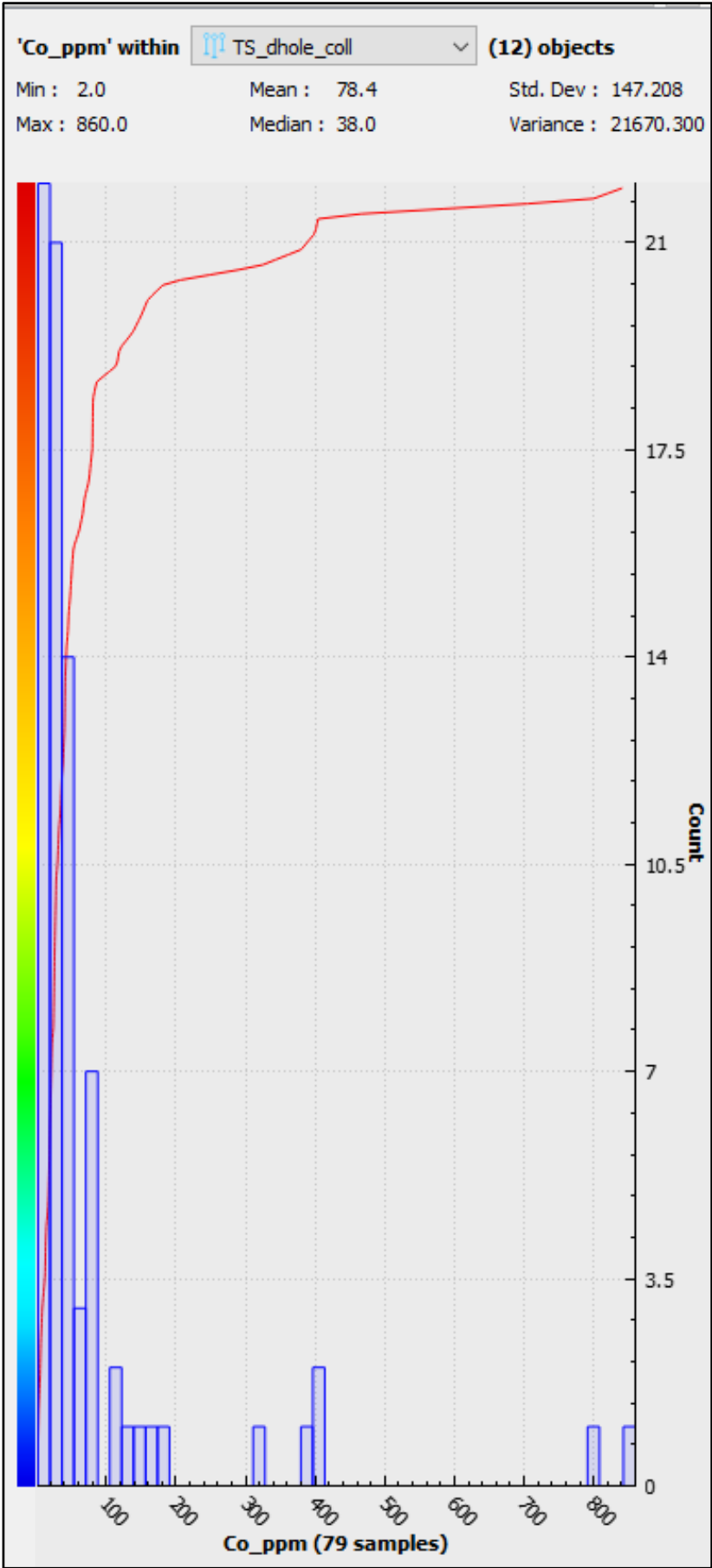
FIGURE E6: THE SISTERS HISTORICAL DRILLHOLES, COBALT PPM BY LABORATORY ASSAY



Source: CCZ geology team



FIGURE E7: HISTOGRAM OF HISTORICAL LABORATORY ASSAY



Source: CCZ geology team

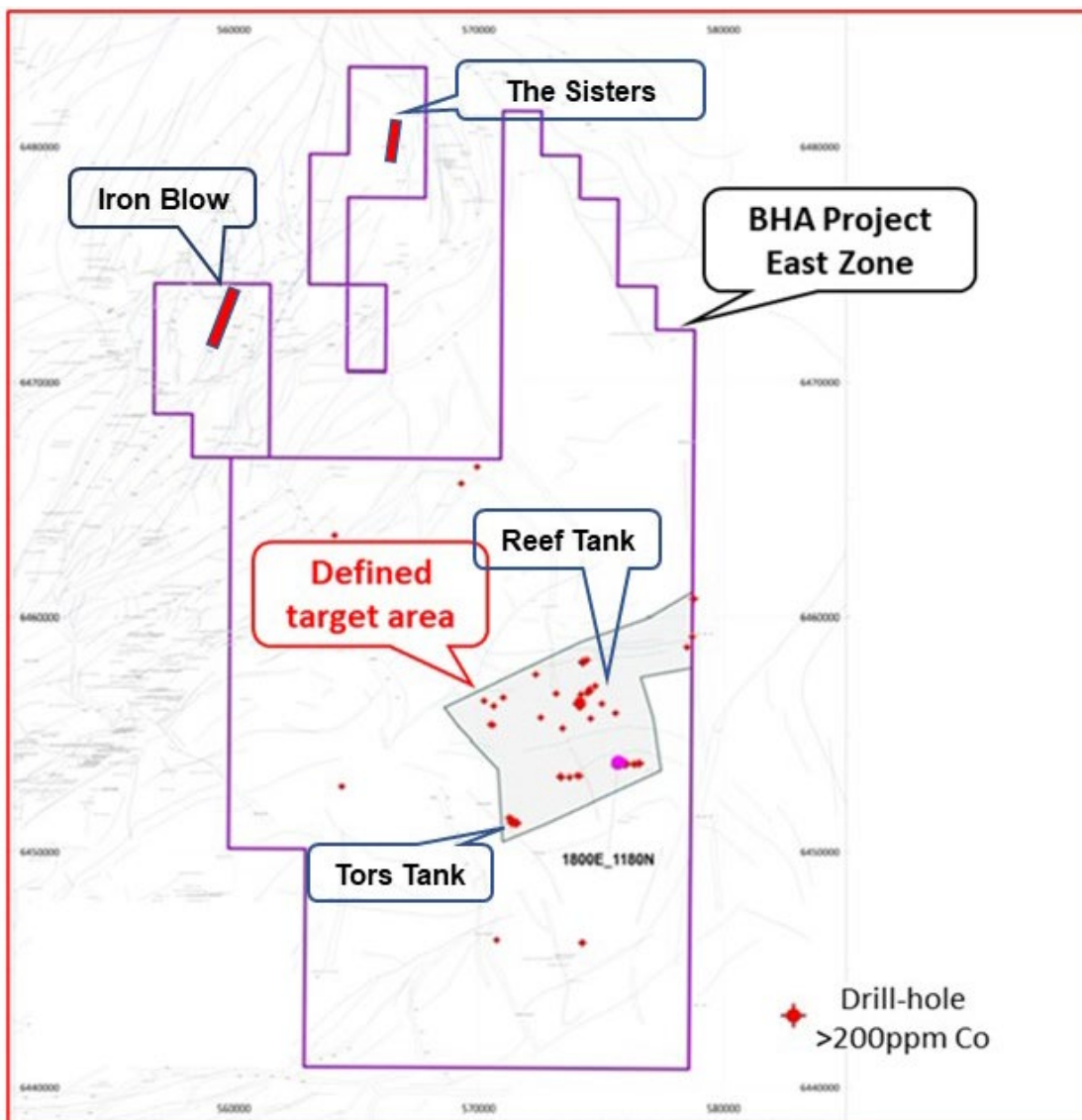
## Location and background

"The Sisters" prospect is located 13km northeast from Broken Hill, NSW (Figure A1-8). Access by road is via Mt. Gipps turning off the Barrier Highway at K Tank Station, 9km east from Broken Hill, thence 4km north via a station track. "The Sisters" lie 500m west across country from this point.

Within EL8435, The Sisters Prospect comprises a prominent ridge forming exposures of banded iron formation in a tight synform, hosted in schists. The formation outcrops over one kilometre and consists of individual lensoidal bands of quartz and magnetite up to tens of metres thick and up to 100 metres long. Below the base of oxidation pyrite occurs as weak disseminations and narrow massive laminae. Magnetite is concentrated in the base of the synform (Timms and Groves 2003).

The synform is flatly north plunging and strongly contorted and crumpled. Secondary copper mineralisation occasional with weak gold and silver occurs at surface along a major north-south striking structure associated with shearing and quartz veining. The structure appears axial planar. The more significant mineralisation appears to be developed where the structure intersects lenses of the banded iron formation in the hinge zone.

**FIGURE E8: EL 8434 & 8435 LOCATION PLAN – THE SISTERS PROSPECT**



Source: CCZ geology team

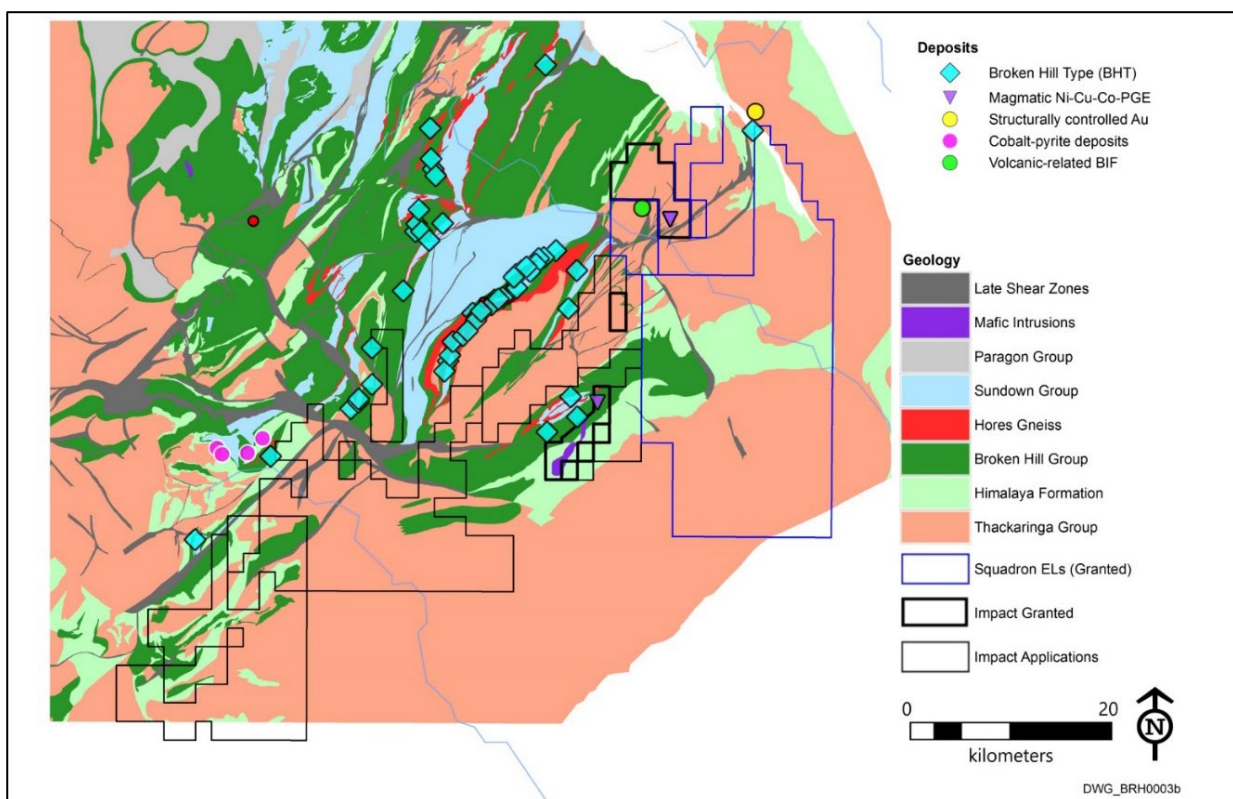
## Regional geology

The Sisters prospect occurs in a bedded quartz magnetite horizon, folded into a north pitching synclinal structure. The synclinal structure is large and is clear on airborne magnetic imagery. The trough of the quartz-magnetite (QM) bed probably extends several thousand metres downwards vertically (Gilfillan 1971).

These rocks form part of the Willyama Super Group of lower to middle Paleoproterozoic Age (1690 – 1730 Ma; Willis et al 1983). Stratigraphically they have been mapped as being higher in sequence than the Broken Hill mineralisation. The unit hosts cobalt-rich pyritic horizons at Pyrite Hill and Big Hill. The protolith probably sandy marine shelf sedimentary rocks with variable evaporitic or hypersaline component. The unit occurs in Thackaringa Group and overlies the Cues Formation.

Mineralisation at The Sisters consists of scattered copper carbonates and silicates in bands in the QM bed and appears confined to this horizon. Two shallow shafts have been sunk in the schists adjacent to the hanging wall of the QM (see Figure E9). The more northerly shaft appears to be about 20m deep and copper carbonates were evident in the mullock from this shaft (Timms and Groves 2003).

**FIGURE E9: BHA TENURES – REGIONAL GEOLOGY AND MINERALISATION STYLES**



Source: Maloney (2018)

## **Mineralisation**

The mineralisation is indicated by surface exposures of ferruginous gossan showing box works and siliceous lenses with some box works, any by numerous surface historical workings. Some disseminated mineralisation with associated copper carbonates occurs in parts of the QM rock.

The controls of mineralisation appear to be:

- (1) Favourable structure. Near the heel of the syncline where pressure lows favouring mineralisation are frequently developed.
- (2) Favourable Bedding. The QM rock here has acted as a favourable bed, with some replacement of QM by mineralisation and probable infilling of fractures within the QM by mineralisation. The mineralisation does appear to favour the hanging wall of the bed.
- (3) Fault Control. The mineralisation appears to be associated with faulting (Strike 150°, dip 75° W) which cuts obliquely across the QM layer. Widths of mineralisation vary considerably on either side of such faults.

## **Surface sampling**

Grab samples by various explorers (Gilfillan 1971; Leyh 1976; 1990; Timms and Groves 2003) were taken over the surface of the QM formation. The highest value obtained was 0.4% copper with values between 1500 ppm and 4000 ppm copper for 4 samples, each of which showed some visible copper carbonates. A sample of gossan with box works assayed 900 ppm.

The siliceous formation with box works and iron oxide gave miscellaneous values with 10 samples assaying between 70 and 160 ppm Cu. No significance is attached to the values obtained, other than that they establish the minimum dimensions of the length of original mineralisation.

## **Potential**

The main occurrences of gossan and siliceous rock with box works occur over a length of approximately 400m on the western limb of the main synclinal structure. Additional mineralisation occurs over a further 100 metres in a minor fold structure.

Other minor obvious occurrences of mineralisation occur which give scope for prospecting for additional shoots of mineralisation around the structure. It is likely that the mineralisation will persist at depth though pitching to the north and it is recommended that the downward extension of the mineralisation be drilled below the water table.

The structure is a large one (at the surface >1,200m in length) and the possibility exists of a large tonnage of ore being established, particularly on the keel of the synclinal structure (Gilfillan 1971).

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