



**CASTILLO COPPER
LIMITED**

ASX Release

15 February 2022

**CASTILLO COPPER
LIMITED**
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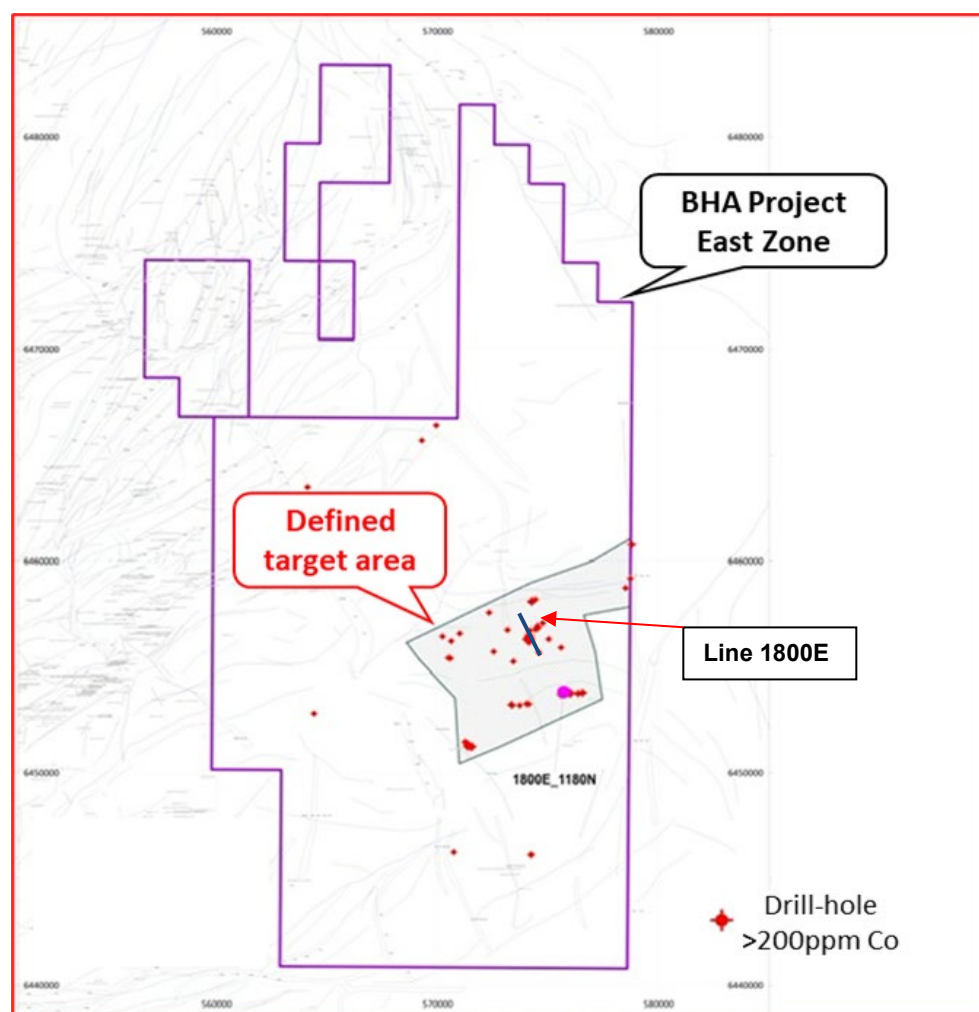
Dr Dennis Jensen

ASX/ LSE Symbol:
CCZ

Shallow cobalt mineralisation zones identified, as development work accelerates

Castillo Copper's CEO Dr Dennis Jensen commented: *"Preliminary interpretations from analysing assayed drillhole data collected so far suggests cobalt mineralisation is within four zones down to a relative shallow 70m, with coincident base metal occurrences. This is encouraging as our geology team have now coded over 70% of the 6,182 drill-holes within the East Zone (BHA Project)¹ and will shortly commence modelling a JORC 2012 compliant inferred mineral resource estimate (MRE) focused on cobalt with potential for base and precious metal (copper and gold) credits. In addition, the target area to be modelled is 2.5km long by 600m wide and located in the tenure's south-east quadrant (Figure 1). In the Board's view, uncovering and leveraging high-quality legacy assays to potentially model up a JORC 2012 compliant MRE can materially advance the East Zone and create value for shareholders."*

FIGURE 1: EAST ZONE, BHA PROJECT – TARGET AREA



Source: CCZ geology team

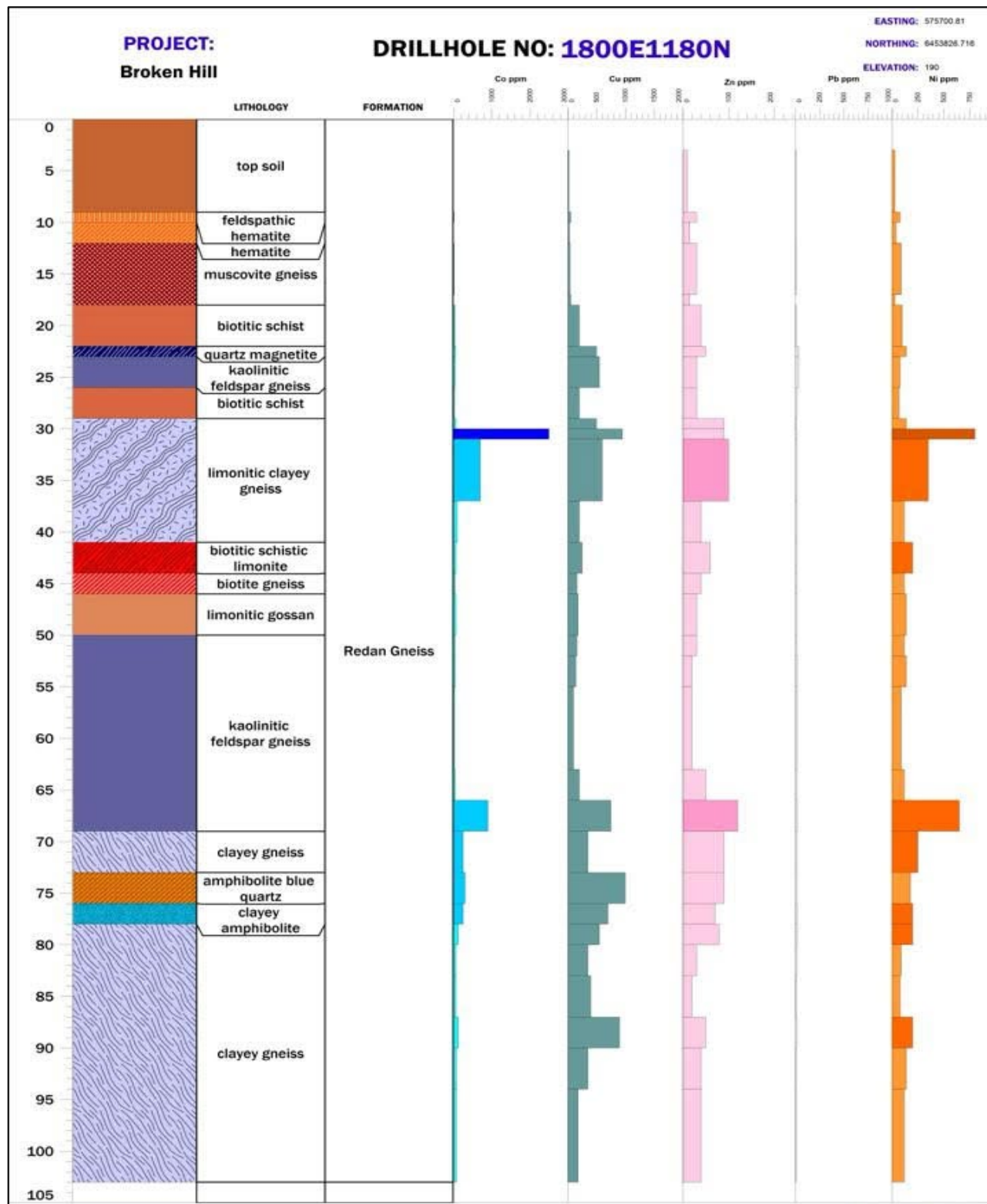
- Preliminary interpretations, based on analysing assayed drill-hole data, suggests cobalt mineralisation, with coincident base metal occurrences, is within four zones down to a relatively shallow 70m
- Over 70% of 6,182 drill-holes¹ are now coded, which should enable work on modelling a JORC 2012 compliant MRE focused on cobalt with potential for base metal credits, to commence shortly
- The ability to leverage legacy data to potentially model a JORC 2012 MRE is a win-win, as it can fast-track developing the BHA Project at a negligible cost and create material value for shareholders

Castillo Copper Limited's ("CCZ") Board is pleased to report that work on codifying legacy assayed drill-hole data at the BHA Project's East Zone has exceeded 70% (out of 6,182 drill-holes¹). Pleasingly, this should enable work on potentially geologically modelling a JORC 2012 compliant MRE focused on cobalt with the potential for base metal credits, to commence shortly. In addition, the geology team delineated the area to be modelled which is 2.5km long by 600m wide and located in the south-east quadrant (refer Figure 1).

SHALLOW COBALT MINERALISATION

A closer examination of some of the drill-holes processed to date suggests that cobalt mineralisation occurs in four zones, mostly down to 70m (Figure 2), within certain parts of the target area.

FIGURE 2: DRILL-HOLE HIGHLIGHTS COBALT OCCURENCES IN FOUR ZONES



Source: CCZ geology team

One line at the historical North Broken Hill's Quartz Reef Prospect (Line 1800 E; Figure 1) was drilled across a steeply dipping gossanous quartz magnetite and quartz pyrite¹. A well-defined zone of quartz magnetite, quartz pyrite and amphibolite with anomalous geochemistry returning 200 ppm to 2,500ppm Co occurs in the Redan Gneiss. Thin bands of 0.10% to 0.21% Cu (1,000 to 2,100ppm) occur in these broadly anomalous zones, while lead values are low (<50 ppm) and zinc rarely exceeds 100 ppm¹.

Elsewhere in the tenure cobalt is seldom greater than 100 ppm, but can be anomalous in limonitic manganiferous Redan Gneiss, with 1m @ 0.25% and 3m @ 900 ppm Co in hole 1180 N, and 3m @ 950 ppm Co in hole 1200N. Generally, nickel follows the cobalt trend, having values up to 800 ppm¹.

Once the full data set is coded, which is currently being fast tracked, work will commence on modelling a JORC 2012 compliant MRE focused on cobalt with potential for base metal credits.

The Board believes utilising legacy assayed drill-hole data to potentially model a JORC 2012 compliant MRE delivers CCZ a significant comparative advantage over peers in the Broken Hill region. Notably, the direct geological modelling costs are negligible relative to undertaking multi-year integrated drilling campaigns to generate the same result.

Next steps

In NSW:

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

In Queensland:

- Assay results for the Arya Prospect; and
- Big One Deposit – JORC 2012 compliant mineral resource estimate.

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 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.
- 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 February, Leyh W.R., 1977 Progress Report on Farmcote Exploration Licenses 780 and 782, Farmcote Area, Broken Hill, NSW for the three months to 27 October 1978, North Broken Hill Limited for the NSW Geological Survey, (GS1977-078) and Leyh W.R., 1978 Progress Report on Exploration Licenses 1099 and 1100 for the six months to 27 October 1978, North Broken Hill Limited for the NSW Geological Survey, (GS1978-407)

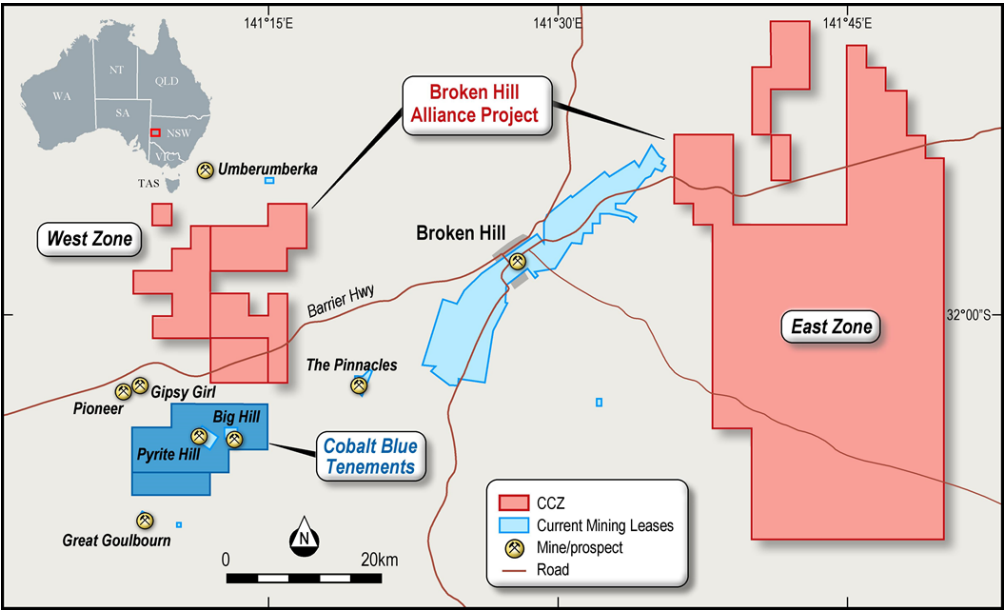
Competent Person Statement

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 2: WEST AND EAST ZONE – BHA PROJECT



Source: CCZ geology team

APPENDIX B: JORC CODE, 2012 EDITION – TABLE 1

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 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. 	<ul style="list-style-type: none"> 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. Sampling was databased if it occurred inside the EL and in a 300m buffer surrounding the EL, to establish anomalous trend directions, if any existed. Nearly 6,555 sample analyses from stream sediment, soil, and rock chip sources were collated and combined. Of these approximately 680 sample did not reside in the government database and had to be encoded or georeferenced from the source reports (12 in total). Reference to these reports is given in the associated geology report (Biggs (2021a)). Many of the sampling programs, especially from the 1990's did include reference samples and duplicate analyses and other forms of QA/QC checking. Sampling prior to 1988 generally has higher "below detection limits" and less or no QA/QC checks.
Drilling techniques	<ul style="list-style-type: none"> 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.). 	<ul style="list-style-type: none"> Historical drilling consists of auger, rotary air blast, reverse circulation and diamond coring. In and around the model area are 6,182 drillholes, however it should be noted that the majority of these are <18m in depth, and the number of holes >100m number around 14. Complete drilling analyses results are in the process of being compiled, and hence did not form part of this study.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	<ul style="list-style-type: none"> Not applicable in this study, no new holes completed.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate 	<ul style="list-style-type: none"> The drilling that did occur was generally completed to modern-day standards. The preferred exploration strategy in the eighties and early

	<p><i>Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <ul style="list-style-type: none"> <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> <i>The total length and percentage of the relevant intersections logged.</i> 	<p>nineties was to drill shallow auger holes to negate the influence of any Quaternary and Tertiary thin cover.</p> <ul style="list-style-type: none"> No downhole geophysical logging took place.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> <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> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> Not applicable, as no new drilling was undertaken.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <i>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.</i> <i>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.</i> 	<ul style="list-style-type: none"> All of the analyses bar a few (<500 out 11,975) samples were laboratory tested in various NATA-registered laboratories throughout Australia. Many of the earlier CRA Exploration stream sediment and soil samples were analysed by CRA internal laboratories. North Broken Hill used their onsite laboratory on some campaigns.
Verification of sampling and assaying	<ul style="list-style-type: none"> <i>The verification of significant intersections by either independent or alternative company personnel.</i> <i>The use of twinned holes.</i> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> Over 830 samples have had their assays duplicated. None of the historical data has been adjusted.
Location of data points	<ul style="list-style-type: none"> <i>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.</i> <i>Specification of the grid system used.</i> <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> 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 It is estimated that locational accuracy therefor varies between 2-50m

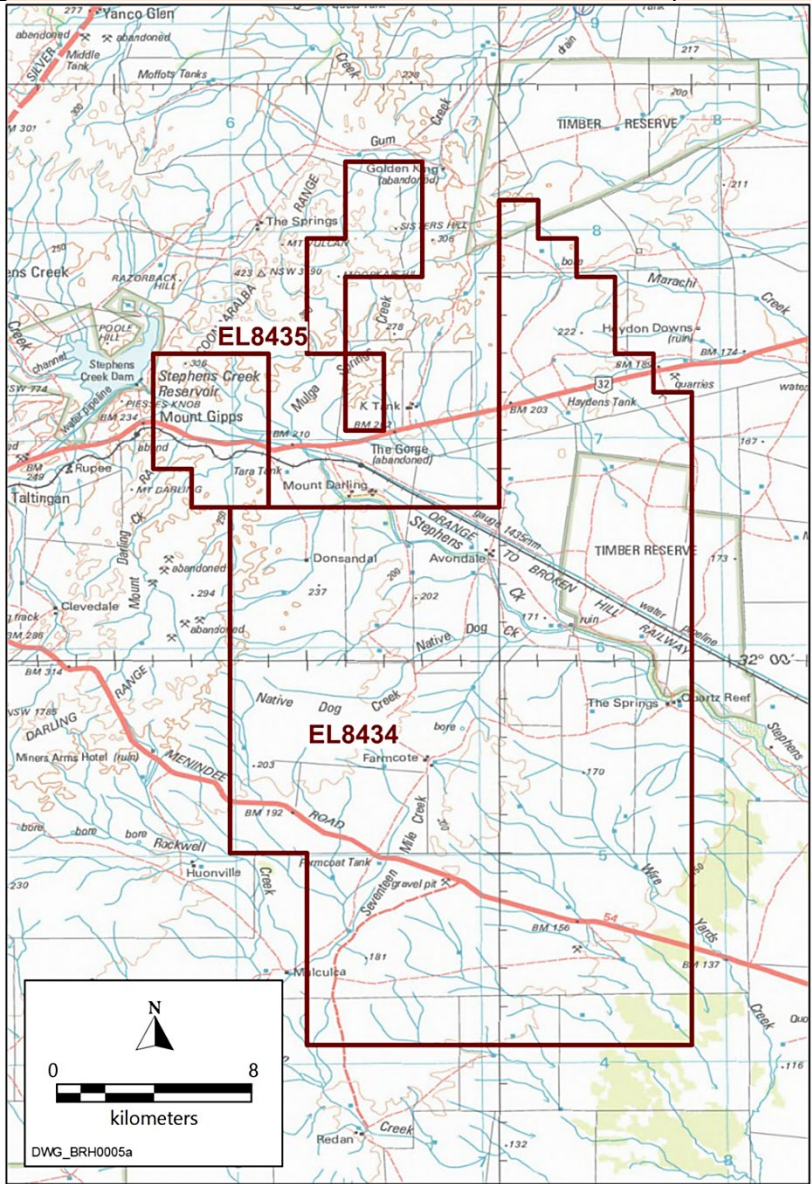
Data spacing and distribution	<ul style="list-style-type: none">• <i>Data spacing for reporting of Exploration Results.</i>• <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>• <i>Whether sample compositing has been applied.</i>	<ul style="list-style-type: none">• The average sample spacing across the tenure varies per element, and sample type, as listed in Table A3-1-1, below: <i>Table A3-1: EL 8434 and EL 8435 Surface and Drillhole Sampling</i><table><tr><th>Description</th><th>Number</th><th>Average Spacing</th><th>Comments</th></tr><tr><td>Stream Sediment</td><td>1,395</td><td>320</td><td>Includes BCL</td></tr><tr><td>Soil</td><td>1,049</td><td>240</td><td></td></tr><tr><td>Surface Rock Chip</td><td>2,150</td><td>185</td><td></td></tr><tr><td>Drilling</td><td>11,975</td><td>220</td><td>Includes shallow auger holes. Six (6) holes in the tenures are held in GSNSW library.</td></tr><tr><td>Mineral Occurrences</td><td>98</td><td>420</td><td>Includes quarries and industrial minerals occurrences</td></tr></table>• No sample compositing has been applied.	Description	Number	Average Spacing	Comments	Stream Sediment	1,395	320	Includes BCL	Soil	1,049	240		Surface Rock Chip	2,150	185		Drilling	11,975	220	Includes shallow auger holes. Six (6) holes in the tenures are held in GSNSW library.	Mineral Occurrences	98	420	Includes quarries and industrial minerals occurrences
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Orientation of data in relation to geological structure	<ul style="list-style-type: none">• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>• <i>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.</i>	<ul style="list-style-type: none">• The current database does not contain any sub-surface geological logging, which is being compiled (70% complete)• Geological mapping by various companies has reinforced that the strata dips variously between 40 and 83 degrees.																								
Sample security	<ul style="list-style-type: none">• <i>The measures taken to ensure sample security.</i>	<ul style="list-style-type: none">• 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																								
Audits or reviews	<ul style="list-style-type: none">• <i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none">• No audits or reviews have yet been undertaken.																								

SECTION 2 REPORTING OF EXPLORATION RESULTS

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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. 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. 	<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 A12-1). EL 8434 and EL 8435 were both granted on the 2nd of June 2016 to Squadron Resources for a term of five (5) years for Group One Minerals. On the 25th 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 12th of August 2021 for a further six (6) years and are due to expire on the 2nd 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 580km².</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 68km².</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 A3-2-1: EL 8434 and EL 8434 General Location Map



<p><i>Exploration done by other parties</i></p>	<ul style="list-style-type: none"> • <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<p>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, Pasminco Exploration Ltd, Normandy Exploration 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 reliable geochemical sampling. These involve a slow systematic search over low outcropping areas, poorly exposed subcrops and float areas as well as the</p>
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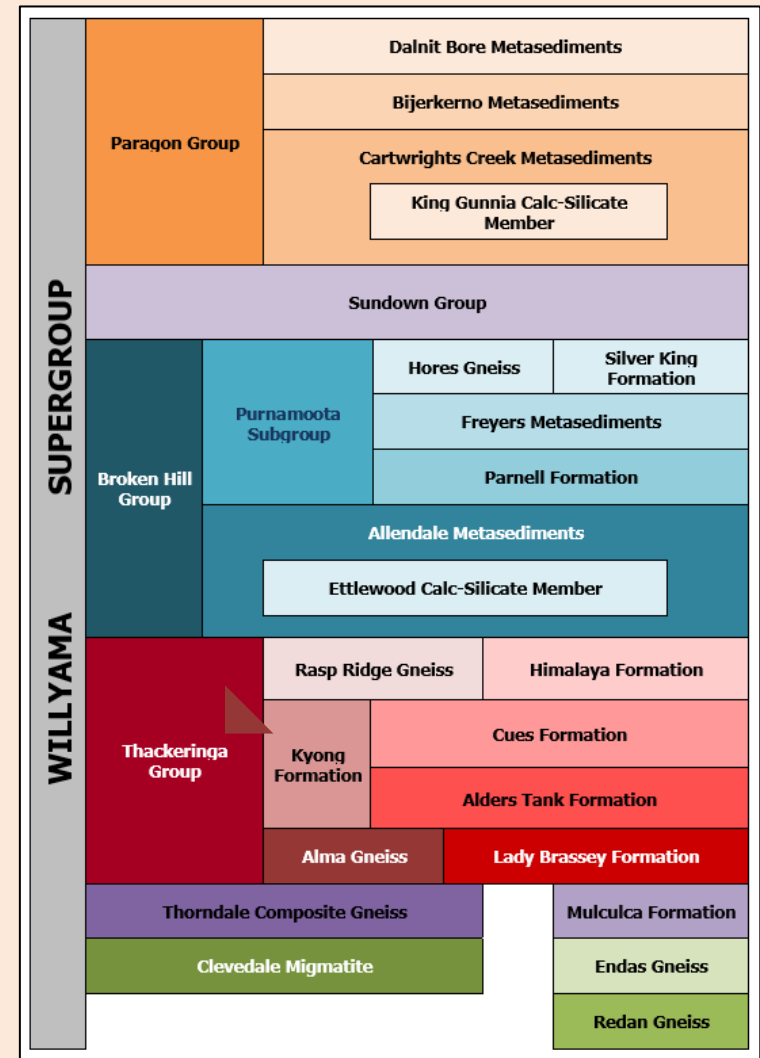
		<p>progressive development of effective regolith mapping and sampling tools. This work has been combined with a vast amount of intermittently acquired past exploration data. The recent data compilation includes an insufficiently detailed NSWGS regional mapping scale given the problems involved, plus 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 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>Work Carried out by Squadron Resources and Whyloo Metals 2016-2020</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).</p>
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		<p>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"> • Airborne EM survey. • Soil and chip sampling. • Data compilation. • Geological and logistical reconnaissance. • Community consultations; and • Execution of land access agreements. <p>Airborne EM Survey</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</p>
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		<p>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>Soil and Chip sampling</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>
Geology	<ul style="list-style-type: none"> • <i>Deposit type, geological setting, and style of mineralisation.</i> 	<p>Regional Geology</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</p>

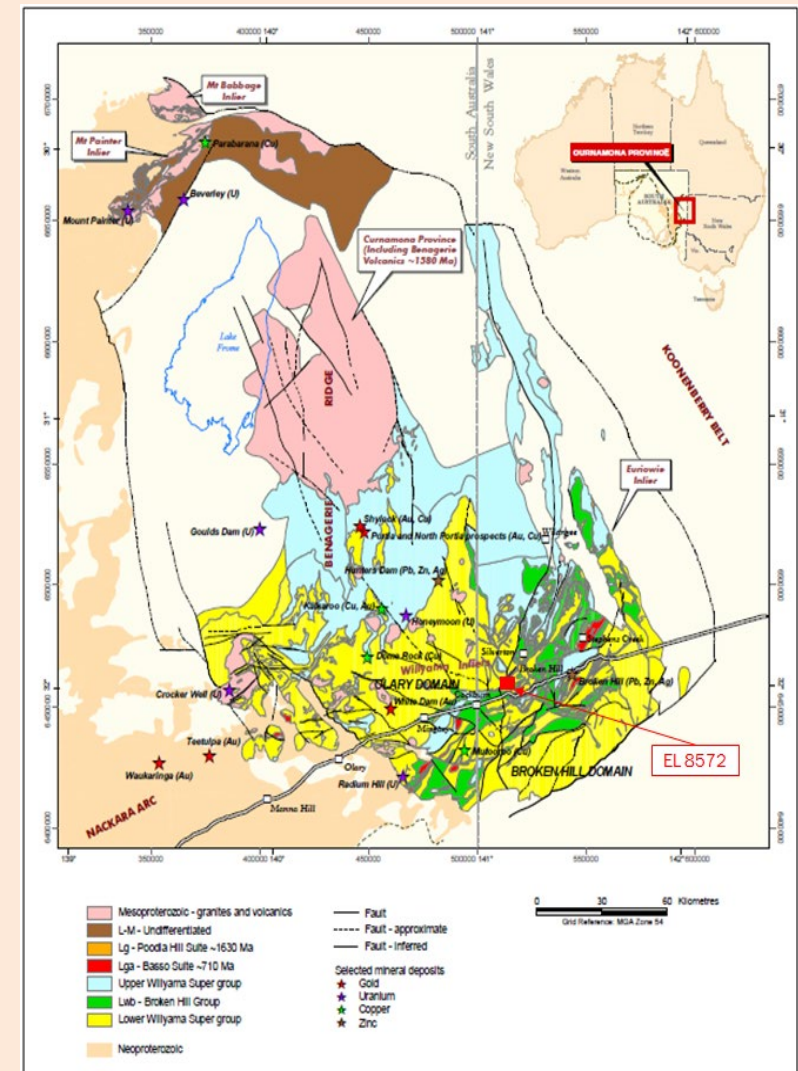
		<p>gneisses, and minor 'lode' rocks which are quartz-albite and calc-silicate rocks (Geoscience Australia, 2019). Prograde metamorphism ranges from andalusite through sillimanite to granulite grade (Stevens, Barnes, Brown, Stroud, & Willis, 1988).</p> <p>Regionally, the tenures are situated in Broken 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 A3-2-3). 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 A3-2-2: Regional Stratigraphy



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

Figure A3-2-3: Regional Geological Map



Modified after (Peljo, 2003)

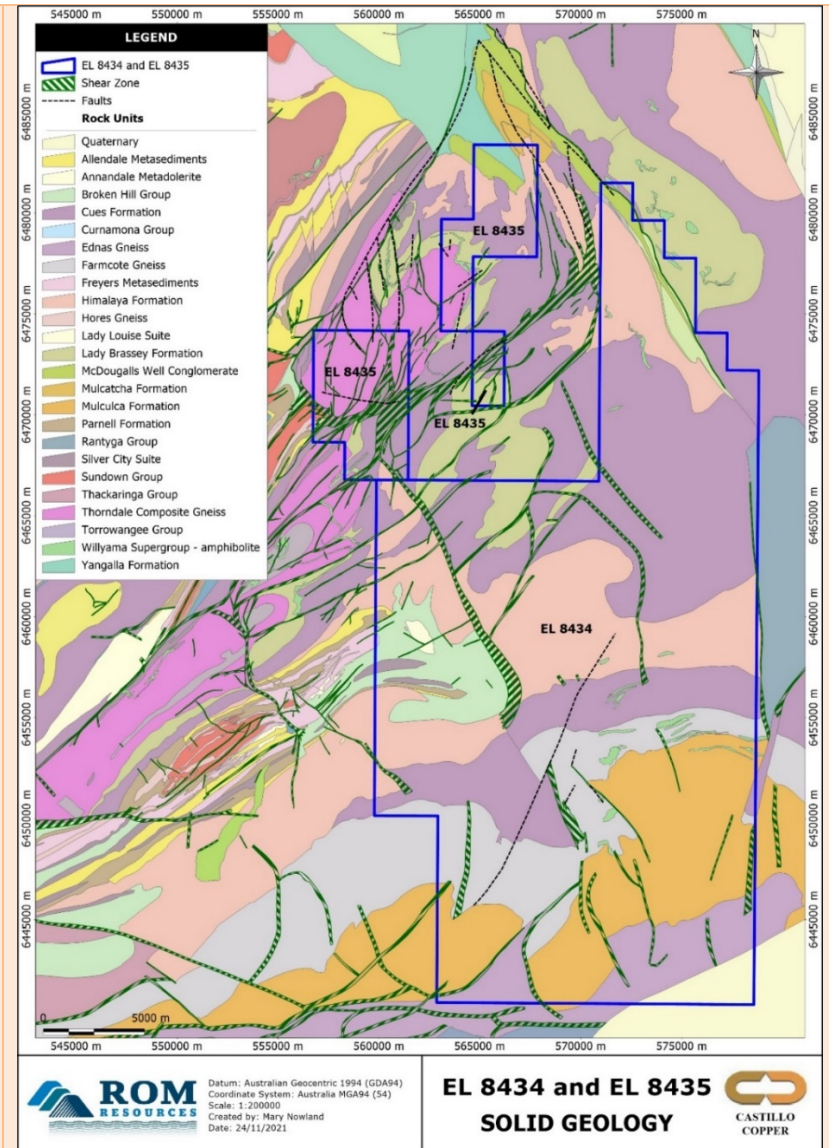
There are over twenty (20) rock formations mapped within the project area. Parts of the project area are covered by Quaternary alluvium, sands, and by Tertiary laterite obscuring the basement geology. Within

		<p>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).</p> <p>Local Geology</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>Broken Hill Group</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>Thackaringa Group</p> <p>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</p>
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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). 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. 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

		<p>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>Lady Louise Suite</p> <p>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>Rantya Group</p> <p>Farmcote Gneiss contains metasediments 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 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>Silver City Suite</p> <p>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>Torrowangee Group</p>
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		<p>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>Sundown Group</p> <p>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.</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> <p>Figure A3-2-4: EL 8434 and EL 8435 Solid Geology</p>
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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

- No new drillholes have been completed yet.

	<ul style="list-style-type: none"> ○ 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. ● 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. 	
Data aggregation methods	<ul style="list-style-type: none"> ● 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. ● 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. ● The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> ● No new assays are reported in this announcement
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> ● These relationships are particularly important in the reporting of Exploration Results. ● If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. ● 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'). 	<ul style="list-style-type: none"> ● 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, and pegmatitic intrusions within the shears, or on or adjacent to the boundaries of the Himalaya Formation. ● 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 zinc.
Diagrams	<ul style="list-style-type: none"> ● 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. 	<ul style="list-style-type: none"> ● Current surface anomalies are shown on maps in the report. All historical surface sampling has had their coordinates converted to MGA94, Zone 54.
Balanced reporting	<ul style="list-style-type: none"> ● 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. 	<ul style="list-style-type: none"> ● No new exploration results have been reported, but regarding the surface sampling, no results other than duplicates, blanks or reference standard assays have been omitted.
Other substantive	<ul style="list-style-type: none"> ● 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 	<ul style="list-style-type: none"> ● Historical explorers have also conducted airborne and ground gravity, magnetic, EM, and IP resistivity surveys over parts of the tenure area

<i>exploration data</i>	<i>method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	but this is yet to be collated.
<i>Further work</i>	<ul style="list-style-type: none"> • <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> • <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> 	<p>Work has commenced on Stage 2, which is to identify more anomalies and priority zones within the EL 8434 and EL8435, it is recommended that:</p> <ul style="list-style-type: none"> • The non-sampled zone in the centre of the tenure be defined and sampled. • A more detailed study of historical drillholes should be conducted to determine if enough data exists to estimate a JORC resource; and • A program of field mapping and ground magnetic or EM surveys be planned and executed.