

ASX Release

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Drilling underway at Arya Copper Prospect

 The inaugural drilling campaign at the Arya Copper Prospect is now underway, after a massive logistical effort to prepare the drill-pads and heli-lift the rig and all supporting equipment to site (Figure 1)

FIGURE 1: CHOPPER AIRLIFTING DRILL RIG TO SITE



Location: 351773 mN; 7865660 mN Source: CCZ geology team

- After reconciling the geochemical and geophysics data¹, the Board decided to orchestrate a strategic "proof of concept" campaign, comprising five initial RC drill-holes
- $\circ~$ The key focus remains, being to drill-test the three targets identified by BHP in the mid-1990s including EG01, EG02 and EG10^{1,2}:
 - Of these, EG01 has been interpreted as a potential massive sulphide bedrock conductor 130m thick, 1,500m long and 450m wide at a revised 100-200m depth^{1,2}
- If initial observations and findings from the drilling are encouraging, the campaign will be expanded to fully-test the extent of any underlying system
- Concurrently, the geology team will undertake a 200m-by-200m mapping / rock chip sampling campaign which is designed to extend the known surface anomaly to the south

Castillo Copper's Managing Director Simon Paull commented: "Of the 22 targets that we have across the tenure in the Mt Isa region, the Arya Copper Prospect has generated the most intrigue and interest among stakeholders. The geochemistry and geophysical evidence have all provided compelling evidence the three targets are potentially among the best within our tenure. As such, the Board optimistically looks forward to the initial observations as the campaign progresses."

Castillo Copper Limited ("CCZ") is delighted to announce that drilling is now under way at the Arya Copper Prospect, which is located in the Mt Isa copper-belt.

DRILLING UNDERWAY AT THE ARYA COPPER PROSPECT

Drilling is now underway at the Arya Copper Prospect after the largest mobilisation effort in CCZ's history (Figure 2). This entailed heli-lifting the drill-rig, all supporting equipment and personal to site due to the rough terrain. After running several scenarios, heli-lifting all the equipment to site (and between drill pads) was calculated to be more cost efficient and flexible than building a reinforced, access road at this initial stage of the campaign.

FIGURE 2: MOBILISING TO ARYA COPPER PROSPECT



Location: 351773 mN; 7865660 mN Source: CCZ geology team Further, post reconciling historic geochemical and geophysical data, the Board decided it was strategically more prudent to orchestrate a "proof of concept" campaign comprising five RC drill-holes initially which includes AR04, AR08, AR09, AR13 and AR21 (Figure 3). If the first-round observations and geological findings are encouraging, there is built-in flexibility to expand the campaign to fully drill-test the extent of any underlying system.

Even with a "proof of concept" campaign, the focus remains on drill-testing the three main targets that BHP identified in the mid-1990s comprising EG01, EG02 and EG10. Significantly, much of the emphasis will be on EG01 which is interpreted to be a potential massive sulphide bedrock conductor 130m thick, 1,500m long and 450m wide at a revised 100-200m depth^{1,2}.



FIGURE 3: EG01, EG02 & EG10 - ARYA PROSPECT

Notes:

1. Coordinate system is MGA94-Zone 54

2. Shows EM anomalies, MIM EM airborne survey, Location of AusAEM surveyline 2024_003, proposed drillhole collars

Source: CCZ Geology Team

In addition, the geology team will undertake a 200m-by-200m mapping / rock-chip sampling campaign which is aiming to extend the known historical surface anomaly to the south.

Next steps

In Queensland, the following is set to take place over the coming weeks:

• Progress reports on drilling at the Arya Copper Prospect.

For the lithium projects:

• Ongoing due diligence for the Picasso and Litchfield Lithium Projects, including return of assay results for surface sampling campaigns.

There are several ongoing steps for the Zambia operations, including:

- Complete the IP survey at the Luanshya & Mkushi Projects then analyse the results for incremental targets for test-drilling; and
- o Commence work on the inaugural drilling campaign for the Luanshya Project.

For and on behalf of Castillo Copper

Simon Paull

Managing Director

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 copperrich region.
- Four high-quality prospective assets across Zambia's copper-belt which is the second largest copper producer in Africa.
- > A large tenure footprint proximal to Broken Hill's world-class deposit that is prospective for 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

- BHP Minerals Pty Ltd, 1998. EPM 11383 (Alsace Camp), 11452 (Epsilon), Combined Annual/Final Report for the Period Ending 19/12/98. QDEX Report: 30750; BHP Minerals Pty Ltd, 1997. EPM 11383 (Alsace Camp), 11452 (Epsilon), Combined Annual Report for the Period Ending 19/12/97. QDEX Report: 29762; and CCZ ASX Release – 10 June 2020 and 13 April 2021
- 2) CCZ ASX Release 10 August & 14 September 2021

Competent Person Statement

The information in this report that relates to Exploration Results for "Big One Deposit" is based on information compiled or reviewed by Mr Mark Biggs. Mr Biggs is both a shareholder and 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: JORC Code, 2012 Edition – Table 1 Ayra Geochem and EM Interpretation

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	 Nature and quality of sampling (eg 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 (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g 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. 	 Three (3) entities completed rock chip sampling methods over at least four (4) separate surface sampling campaigns and are described in the current ASX Release, a generalised description of rock chip sample collection is presented here. Rock Chip Samples – were collected up to approximately a 5m radius around the recorded co-ordinate location. The rock chip fragments that were collected to make up the sample included a typical fragment size that approximately ranged from 2-5cm. Sub-sampling occurred as described in the section 'Sub-sampling techniques and sample preparation' in Section 1 of the current Table 1. The surface sample results described in this ASX Release are suitable for the reporting 'exploration work would have to be completed to geologically model and then estimate a mineral resource.
Drilling techniques	 Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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). 	 There are no historical drillholes in the Ayra -Sansa prospect area.
Drill sample recovery	 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. 	• No new drillholes samples were taken.
Logging	 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. 	 No geological logging took place as no new holes were drilled.

Criteria	JORC Code explanation	Commentary
Sub- sampling techniques and sample preparation	 The total length and percentage of the relevant intersections logged. If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 All surface samples were collected dry. BHP Minerals rock chip samples –sample location and assay data were extracted from an Appendix of the QDEX report using Optical Character Recognition, then underwent a correction or data QA/QC process to ensure that subsequent data extracted was "as reported". Mount Isa Mines - the sample location and assay data were extracted from QDEX report as .dat files. Mount Isa Mines - Typically for surface samples there were brief descriptions of the lithology etc is recorded within sample ledgers/registers. Mount Isa Metals – sample location and assay data were extracted from an Appendix of the QDEX report using Optical Character Recognition, then underwent a correction or data QA/QC process to ensure that subsequent data extracted was "as reported". The surface sample results described in this ASX Release are suitable for the reporting 'exploration work would have to be completed in order to geologically model and then estimate a mineral resource.
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	 The rock chip samples were dispatched for Assay to Amdel Analytical Laboratories at Mt Isa. The samples were digested by Aqua Regia and elemental analysis completed by Direct Optical Emission ICP: under Amdel Analytical Laboratory test method IC3E. Elements analysed by this method IC3E included Cu, Pb, Zn, Ag, As, Ba, Bi, Cd, Ci, Co, Fe, K, La, Mn, Mo, Na, Ni, Sn, Ta. Tl, and W. Not all batches, however, appear to have been analysed for all elements. Mount Isa Mines rock chip samples: o Elements analysed by this method could include Cu, Pb, Zn, Ag, As, Ba, Bi, Cd, Ci, Co, Fe, K, La, Mn, Mo, Na, Ni, Sn, Ta. Tl, and W. Not all batches, however, appear to have been analysed for all elements. Gold was assessed by sampling techniques in the field then assayed by method GI 142 which is a cyanidation technique (BCL or Bulk Cyanide Leach) bottle roll which had detection limits as low as 0.05 ppb Au. Rock chips were collected by taking a series of chips approximately 2 to 5cm in diameter across approx. a 3m radius

Criteria	JORC Code explanation	Commentary
		 of the outcrop being sampled. The sample was then crushed and analysed for a base metal suite by method GA 140. Rock chips analysed for gold included for some batches suite GG 326 comprising of a 30-gram charged fire assay fusion with carbon rod finish with detection limits down to 0.001 ppm Au. Some indicator element and whole rock analysis was undertaken by ICP-MS at Analabs. The Analabs analytical methods changed from March 1994, yet the same collection method appears to be comparable to earlier years: Analabs Assay methods employed for rock chip, soil, and stream sediment additionally included (for some campaigns): Method GI 142 (ICP) for elements Cu, Pb, Zn, Fe, Mn, Co, P, & As. Method GX401 (pressed powder XRF trace determination) for Ba; and Method GG334 (aqua regia with carbon rod finish) for Au. Detection limits across any year were suitable for detecting 'Trace Elements'. 'Ore grade' testing occurred when either, visible base metal minerals were present and/or were Cu, Pb, or Zn, exceeded 10,000ppm of the respective element. Mt Isa Metals rock chip samples were processed at a Commercial Laboratory, information in the QDEX report indicates that this was Analabs Townsville (which later fell under SGS ownership). Elemental Analysis for the assay results returned from the commercial laboratory were Cu, Pb, Zn, Ba, Co, and Au. It is assumed that the analytical testing such is a semicondent of the respective lessing such as the were processed at a commercial laboratory were Cu, Pb, Zn, Ba, Co, and Au. It is assumed that the analytical testing such as the such as the processed and the theory were by the such as the processed at a commercial laboratory were Cu, Pb, Zn, Ba, Co, and Au. It is assumed that the analytical testing such as the processed at a commercial laboratory were Cu, Pb, Zn, Ba, Co, and Au. It is assumed that the analytical testing such as the processed at a commercis of the processed as the processed astarton from the com
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 Mount Isa Mines rock chip samples: Independent verification of surface samples had been completed for selected gold assay values. Analabs Townsville Assays checked against ALS Townsville Assays when high Au values were returned for stream sediment samples. The two sets of assay results generally showed an acceptable correlation, and this matched observations historically reported by Mount Isa Mines. BHP Minerals and Mount Isa Metals rock chip samples do not appear to have had any independent laboratory testing of the samples across different laboratories. The surface sample results described in this ASX Release are

Criteria	JORC Code explanation	Commentary
		suitable for the reporting 'exploration results' for mineral prospectivity, additional exploration work would have to be completed to geologically model and then estimate a mineral resource.
Location of data points	 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. Specification of the grid system used. Quality and adequacy of topographic control. 	 For rock chip samples positions were recorded by handheld GPS with areas highlighting anomalies sometimes returned to for additional sampling and locations checked by handheld GPS. Locational Data for BHP Minerals was in AMG66 and Mount Isa Mines was recorded in local grid and/or AMG84 zone 54 Easting (mE) and Northing (mN). There was no topographical control used for some locations. Locational Data for Mount Isa Metals was recorded in local grid and/or MGA94 zone 54 Easting (mE) and Northing (mN). The Arya rock chip sample dataset is anticipated on average to have up to a +/-20m horizontal level of accuracy in sample locations and range up to a +/-10m of accuracy in sample locations for vertical accuracy. Surface sample and assay data had been prepared and compiled into Manifold GIS System and all data converted to GDA94-Zone 54.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. 	 For the Ayra surface sampling modelling for copper, the average RMS sample-to-sample spacing was as follows: Stream sediments 67m Soil 48m Rock chip 233m
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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. 	 In general, the strike of the Surprise Creek Formation is east- northeast to east, dipping moderately to the north. For 'Arya' rock chips there was no fixed orientation as these methods were used in the first instance to define distinct areas of anomalisms, based on areas of observed surface mineralisation. For 'Arya' rock chips that produced significant anomalous values appear to be associated with the mapped fault, fault bounded breccia, and the Surprise Creek Formation 'PLrd' rock unit ('Prd' historical) that dominates the 'Arya' prospect to the south of the fault.
Sample security	• The measures taken to ensure sample security.	 There is no detailed record of sample security methods were employed in the field or by transport to the laboratory and measures taken in the laboratory by earlier explorers. Given the provenance of the data from historical explorers and the remoteness of the location, historical sample security is

Criteria	JORC Code explanation	Commentary
		deemed adequate for the reporting of surface assay grades and trends.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	No external reviews or audits have been undertaken, except for the Independent Geologists Report by SRK in 2019 for the LSE Listing and a review of the airborne and ground geophysics by the GeoDiscovery Group.
		Note, the reference is: Nelson K., Review of open file EM and magnetic geophysical data at Ayra Prospect, GeoDiscovery Group, unpublished confidential report to Castillo Copper Limited, June 2021, 16pp.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	 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. 	 The following mineral tenures are held 100% by subsidiaries of Castillo Copper Limited, totalling an area of approximately 961km² in the "Mt Oxide North project": EPM 26574 (Valparaisa North) – encompasses the Big One historical mineral resource, Holder Total Minerals Pty Ltd, granted 12-June-2018 for a 5-year period over 100 sub-blocks (323.3Km2), Expires 11-June-2023. EPM 26462 (Big Oxide North) – encompasses the 'Boomerang' historical mine and the 'Big One' historical mine, Holder: QLD Commodities Pty Ltd, granted: 29-Aug-2017 for a 5-year period over 67 sub-blocks (216.5Km²), Expires: 28-Aug-2022. EPM 26525 (Hill of Grace) – encompasses the Arya significant aeromagnetic anomaly, Holder: Total Minerals Pty Ltd for a 5-year period over 38 sub-blocks (128.8Km2), Granted: 12-June 2018, Expires: 11-June-2023. EPM 26513 (Torpedo Creek/Alpha Project) – Granted 13-Aug 2018 for a 5-year period over 23 sub-blocks (74.2Km2), Expires 12-Aug-2023; and EPM 27440 (The Wall) – An application was lodged on the 12-Dec2019 over 70 sub-blocks (~215Km²) by Castillo Copper Limited. The tenure was granted on the 7th March 2021.
<i>Exploration done by other parties</i>	Acknowledgment and appraisal of exploration by other parties.	 A selection of historical QDEX / mineral exploration reports has been reviewed for historical tenures that cover or partially cover the Project Area in this announcement. Federal and State Government reports supplement the historical mineral exploration reporting (QDEX open file exploration records). Most explorers were searching for Cu-Au-U and/or Pb-Zn-Ag, and, proving satellite deposit style extensions to the several small sub-economic copper deposits (e.g., Big Oxide and Josephine). With the Mt Oxide Project in regional proximity to Mt Isa and numerous historical and active mines, the Project area has seen the historical mineral tenures subject to various styles of surface sampling, with selected locations typically targeted at specific locations within the Mt Oxide Pillar by shallow drilling (Total hole depth is typically less than 75m). The Mt Oxide project tenure package has a significant

Criteria	JORC Code explanation	Commentary
		 opportunity to be reviewed and explored by modern exploration methods in a coherent package of EPM's, with three of these forming a contiguous tenure package. Various Holders and related parties of the 'Big One' historical mining tenure (ML8451) completed a range of mining activities and exploration activities on what is now the 'Big One' prospect for EPM 26574. The following unpublished work is acknowledged in previous ASX reports: West Australian Metals NL, 1994. Drill Programme at the "Big One" Copper Deposit, North Queensland for West Australian Metals NL. Wilson, D., 2011. 'Big One' Copper Mine Lease 5481 Memorandum – dated 7 May 2011. Wilson, D., 2015. 'Big One' Mining Lease Memorandum – dated 25 May 2015: and Csar, M, 1996. Big One & Mt Storm Copper Deposits. Unpublished Xplore Resources field report Aug 2020. Arya prospect - the five (5) historical exploration reports generated by various explorers that contributed information and data to this ASX Release are detailed in the References section of the main body.
Geology	Deposit type, geological setting and style of mineralisation.	 The Mt Oxide North project is located within the Mt Isa Inlier of western Queensland, a large, exposed section of Proterozoic (2.5 billion- to 540-million-year-old) crustal rocks. The inlier records a long history of tectonic evolution, now thought to be like that of the Broken Hill Block in western New South Wales. The Mt Oxide project lies within the Mt Oxide Domain, straddling the Lawn Hill Platform and Leichhardt River Fault Trough. The geology of the tenement is principally comprised of rocks of the Surprise Creek and Quilalar Formations which include feldspathic quartzites, conglomerates, arkosic grits, shales, siltstones and minor dolomites and limestones. The Mt Oxide Pillar project area is cut by a major fault zone, trending north-northeast to south-southwest across the permits. This fault is associated with major folding, forming several tight syncline and anticline structures along its length. The desktop studies commissioned by CCZ on the granted mineral tenures described four main styles of mineralisation account for most mineral resources within the rocks of the Mt Isa Province (after Withnall & Cranfield, 2013).

Criteria	JORC Code explanation	Commentary
		 Sediment hosted silver-lead-zinc – occurs mainly within fine grained sedimentary rocks of the Isa Super basin within the Western Fold Belt. Deposits include Black Star (Mount Isa PbZn), Century, George Fisher North, George Fisher South (Hilton) and Lady Loretta deposits. Brecciated sediment hosted copper – occurs dominantly within the Leichhardt, Calvert, and Isa Super basin of the Western Fold Belt, hosted in brecciated dolomitic, carbonaceous and pyritic sediments or brecciated rocks proximal to major fault/shear zones. Includes the Mount Isa copper orebodies and the Esperanza/Mammoth mineralisation. Iron-oxide-copper-gold ("IOCG") – predominantly chalcopyrite, pyrite magnetite/hematite mineralisation within high grade metamorphic rocks of the Eastern Fold Belt. Deposits of this style include Ernest Henry, Osborne, and Selwyn; and Broken Hill type silver-lead-zinc – occur within the high-grade metamorphic rocks of the Eastern Fold Belt. Cannington is the major example, but several smaller currently sub-economic deposits of the Eastern Fold Belt. However, a significant exception is noted at Tick Hill where high grade gold mineralisation was produced, between 1991 and 1995 by Carpentaria Gold Pty Ltd, some 700 000 tonnes of ore was mined at an average grade of 22.5 g/t Au, producing 15 900 kg Au. The Tick Hill deposit style is poorly understood (Withnall & Cranfield, 2013). ROM Resources had noted in a series of recent reports for CCZ on the granted tenures, that cover the known mineralisation styles including: Disseminated copper associated with trachyte dykes. Copper-rich iron stones (possible IOCG) in E-W fault zones; and possible Mississippi Valley Type ("MVT") stockwork sulphide mineralisation carrying anomalous copper-lead-zinc and silver.

Criteria	JORC Code explanation	Commentary
		 Mt Gordon/Mammoth deposit is hosted by brittle quartzites, and Esperanza by carbonaceous shales. Mineralisation has been related to the Isan Orogeny (1,590 – 1,500 Ma). Mineralisation at all deposits is primarily chalcopyrite-pyrite-chalcocite, typically as massive sulphide within breccias. At the Big One prospect, West Australian Metals NL described the mineralisation as (as sourced from the document "West Australian Metals NL, 1994. Drill Programme at the "Big One" Copper Deposit, North Queensland for West Australian Metals NL."): The targeted lode / mineralised dyke is observable on the surface. The mineralisation targeted in the 1993 drilling programmed is a supergene copper mineralisation that includes malachite, azurite, cuprite, and tenorite, all associated with a NE trending fault (0620 to 2420) that is intruded by a porphyry dyke. The mineralised porphyry dyke is vertical to near vertical (850), with the 'true width' dimensions reaching up to 7m at surface. o At least 600m in strike length, with strong Malachite staining observed along the entire strike length, with stroical open pits having targeted approximately 200m of this strike. Exact depth of mining below the original ground surface is not clear in the historical documents, given the pits are not battered it is anticipated that excavations have reached 5m to 10m beneath the original ground surface. Associated with the porphyry dyke are zones of fractured and/or sheared rock, the siltstones are described as brecciated, and sandstones around the shear as carbonaceous. The known mineralisation from the exploration activities to date had identified shallow supergene mineralisation with a few drillholes targeting deeper mineralisation in and around the 200m of strike historical open A strongly altered hanging wall that contained malachite and cuprite nodules. Chalcocite mineralization has been identified but it is unclear on the prevalence of the Chalcocite; and The mineralisation was ame

 Boomerang prospect contains: Secondary copper staining over ~80 Associated with a major east-west to the upper Surprise Creak Formation
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Criteria	JORC Code explanation	Commentary
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. 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. 	 There are no new drillholes completed, although fourteen (14) are planned. There is no historical drilling at Ayra.
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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. 	 No data aggregation methods are utilised in the current ASX Release, since the sampling types are surface samples (for example: rock chip samples).
Relationship between mineralisatio n widths and intercept lengths	 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 (eg 'down hole length, true width not known'). 	 The strike of the country rock is northeast to east, with the deep Ayra conductor is orientated east – west. The smaller, shallower conductors strike north-northeast to northeast. The main faulting trends is northeast.
Diagrams	 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. 	 Appropriate diagrams are presented in the body and the Appendices of the current ASX Release. Where scales are absent from the diagram, grids have been included and clearly labelled to act as a scale for distance. Maps and Plans presented in the current ASX Release are in MGA94 Zone 54, Eastings (mN), and Northing (mN), unless clearly labelled otherwise.
Balanced reporting	 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. 	 All surface sampling and ground and airborne geophysical data has been reported, there have been no results withheld.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	 Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	 GEOTEM & PROTEM: The airborne electromagnetic GEOTEM geophysical survey undertaken by BHP Minerals in 1997 on historical tenure EPM11383 & EPM1152. A total of 726-line kilometres were flown on a SE-NW, flown by 'Geoterrex-Dighem Pty Limited' at a mean height of approximately 105m above the ground surface (line spacing 500m apart). Previous interpretations the penetration of the GEOTEM method to have an estimated range of between 200-300m below the ground surface, this is dependent on conductivity contrasts, size, and attitude of the subsurface targets. Eleven (11) anomalies were identified, with four (4) recommended for follow up, with three (3) of the four (4) anomalies followed up by ground geophysical at what CCZ calls the 'Arya' prospect. The BHP Minerals 1997 GEOTEM survey information was extracted from QDEX Data to accompany the QDEX report information. The 'Arya' prospect anomalies are EG01, EG02, EG10, with the geophysical observations of the body and Appendices of the current ASX Release, including the PROTEM observations. The PROTEM loop, survey traverse, and/or depth sounding method applied. QUESTEM & GENIE-EME The airborne electromagnetic GEOTEM geophysical survey undertaken by Mount Isa Mines in 1991 on historical tenure EPM7448, EPM7338, and EPM7863. A total of approximately 600km-line kilometres (exact line length would need to be extracted from digitised images) would were flown on a SE-NW, flown by 'Aerodata Holdings Limited' at a mean height of approximately 120m above the ground surface (line spacing 400m apart). In a previous ASX release (July 2020) Xplore Resources Pty Ltd interprets the penetration of the QUESTEM method to have an estimated range of between 200-300m below the ground surface thrue, kits is dependent on conductivity contrasts, size, and attitude of the subsurface targets. Twentynine (29) anomalies were identified across the three (3) historical tenure, with six (6) recommended for follow up ground geophysical survey in formation.<

Criteria	JORC Code explanation	Commentary
		 the Arya prospect. Arya prospect anomaly L4 followed up by a ground electromagnetic traverse by Mount Isa Mines GENIE-EM is to the west of the EG02 BHP minerals anomaly. Queensland Government Data: 'PLrd' rock unit lower boundary from the Surprise Creek Formation sourced from QSpatial and aligns with GeoResGlobe – this is equivalent to the historical tenure reports 'Prd' rock unit lower boundary from the Surprise Creek Formation.
		GEODISCOVERY REVIEW
		The study of Nelson (2021) concluded that:
		 Whilst hard copies of the 1997 BHP ground EM data are available, no digital data is on open file. Hard copy profiles have been visually interpreted, however due to lack of digital data it cannot be remodelled. The historic BHP model results and survey locations have not been provided and there is uncertainty in the location of Anomaly E02. Magnetic modelling, CDI and LEI of the TEMPEST survey line indicate the BHP depth estimate of conductive from the EG01 sounding is likely over estimated. Depth to main conductive sources appears to be between around 200m beneath surface (Nelson (2021). EG02 appears to be associated with a fault and EG10 appears to be more surficial. It is recommended that the LEI of the TEMPEST survey (most recent AEM data acquired in the region), along with magnetic model output be used to plan the next drill campaign (Figure 10 - 12). The current drill plan could be improved to better test the modelled conductive sources and structural features. If the drill testing of the conductive sources indicates the presence of prospective lithologies and/or mineralisation, then consideration should be given to acquiring detailed ground EM and magnetic coverage to further assist targeting.
Further work	• The nature and scale of planned further work (eg tests for lateral	• Further work will consist of a combination of:
	 extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, 	 Fourteen (14) hole RC drilling Program Soil and or Rock chip sampling

Criteria	JORC Code explanation	Commentary		
	including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	0	Ground IP or EM Survey	

TABLE A2-1: AYRA PROPOSED DRILLING DETAILS

Site ID	Order	Easting	Northing	Property	Lot	Property Name and Assay
2021_AR01		353658	7864556	Stanbroke	10SP28770	Kamilaroi
2021_AR02		353576	7864727	Stanbroke	10SP28770	Kamilaroi
2021_AR03		353382	7865215	Stanbroke	10SP28770	Kamilaroi
2021_AR04	5	353492	7865316	Stanbroke	10SP28770	Kamilaroi Zn: 127ppm TD TBC
2021_AR05		353238	7865378	Stanbroke	10SP28770	Kamilaroi
2021_AR06		353255	7865419	Stanbroke	10SP28770	Kamilaroi
2021_AR07		353455	7865843	E Butterworth	2510PH461	Morella
2021_AR08	3	352987	7865441	Stanbroke	10SP28770	Kamilaroi Cu: 97ppm TD: TBC
2021_AR09	4	353032	7865535	Stanbroke	10SP28770	Kamilaroi Cu: 145ppm TD: 250m
2021_AR10		353109	7865718	E Butterworth	2510PH461	Morella
2021_AR11		353166	7865923	E Butterworth	2510PH461	Morella
2021_AR12		352753	7865543	Stanbroke	10SP28770	Kamilaroi
2021_AR13	2	352768	7865581	Stanbroke	10SP28770	Kamilaroi Zn: 108ppm TD: TBC
2021_AR14		352508	7865519	Stanbroke	10SP28770	Kamilaroi
2021_AR15		352535	7865604	Stanbroke	10SP28770	Kamilaroi
2021_AR16		352606	7865843	E Butterworth	2510PH461	Morella
2021_AR17		352350	7865645	Stanbroke	10SP28770	Kamilaroi
2021_AR18		352270	7865784	E Butterworth	2510PH461	Morella
2021_AR19		352098	7865746	E Butterworth	2510PH461	Morella
2021_AR20		351797	7865527	Stanbroke	10SP28770	Kamilaroi
2021_AR21	1	351773	7865660	Stanbroke	10SP28770	Kamilaroi Cu: 128 ppm TD: 250m
2021_AR22		351926	7865895	E Butterworth	2510PH461	Morella
2021_AR23		351576	7865619	Stanbroke	10SP28770	Kamilaroi

FIGURE A2-1: CROS-SECTION THROUGH MAGNETIC SUSCEPTIBILITY MODEL



Notes:

Assumes induced magnetic field. Note lack of magnetic response associated with the regional NNE conductor trend. The magnetic modelling indicates the Ayra conductive source is associated with a magnetic response (at around 100 – 200m depth below surface). Of note, circled in yellow is the highly conductive response attributed to regional NNE trending regional conductors within the Native Bee Siltstone and Surprise Creek and Quilalar Formations.



FIGURE A2-2: CROSS-SECTION OF MAGNETIC SUSCEPTIBILITY TAKING INTO ACCOUNT INDUCED AND REMANENT MAGNETIC FIELD



FIGURE A2-3: EXTRACTED AUSAEM CONDUCTIVITY DEPTH IMAGE AT AYRA PROJECT

Notes:

Approximate locations of E2 and E10 shown along with planned drilling in black. Note warm colours indicate higher conductivity. Three potential conductive regions of interest have been circled in black. Possible proposed holes shown in blue.

FIGURE A2-4: ISOMETRIC VIEW OF CONDUCTIVITY SECTION AND MAGNETIC ANOMALY, LOOKING NORTHWEST

Source: CCZ geology team