



CASTILLO COPPER  
LIMITED

ASX Release

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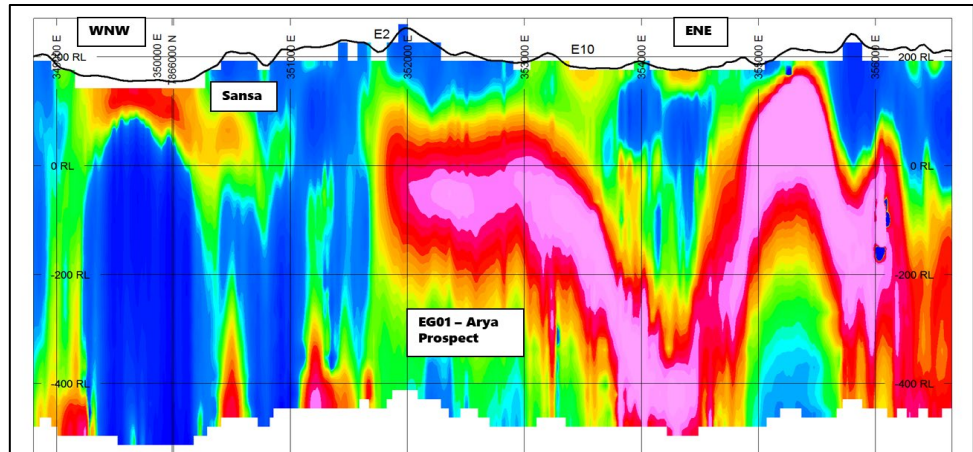
**ASX/ LSE Symbol:**

CCZ

## Logistics in place to test-drill 130m thick target at Arya Prospect

- All key logistics have been finalised to enable work to commence at the prime Arya Prospect during September 2021
- A re-interpretation of legacy data by CCZ's geophysicist consultant<sup>1,5</sup> – which enabled better targeting at the Big One Deposit – provides new insights and re-emphasises Arya Prospect's merits as a major exploration target in Mt Isa's copper-belt:
  - ❖ Notably, re-processing data from AusAEM Survey, commissioned by Geoscience Australia<sup>2</sup>, shows the EG01 anomaly – interpreted to be 130m thick, 1,500m long & 450m wide – is only around 100-200m deep (Figure 1)

FIGURE 1: RE-PROCESSED AUSAEM SURVEY DATA



Source: CCZ geology team

- This is a significant finding, as it highlights EG01 is much shallower than the initial ~430m depth estimate based on analysing data from BHP, which discovered the Arya Prospect in the mid-1990s<sup>3</sup> and recommended it be drill-tested
- Incrementally, CCZ's geophysicist re-processed aero-magnetic data generated by Mt Isa Mines in the mid-1990s<sup>4,5</sup> which highlighted a significant electro- magnetic anomaly proximal to the Arya Prospect in an otherwise quiet magnetic terrain
- Reconciling known geochemical surface results (up to 1.84% Cu in rock-chips<sup>4</sup>), with newly interpreted magnetic and AEM results, makes the case for test-drilling the Arya Prospect even more compelling ahead of the campaign kicking-off
- CCZ will continue developing the Big One Deposit as numerous targets are yet to be drill-tested; furthermore, the Board's strategic intent is to model up a JORC compliant resource and, if justified, apply for a mining lease
- Note, assays are still pending for the current Big One Deposit campaign as there is a backlog at the laboratory due to a significant volume of exploratory work in the Mt Isa region

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**Castillo Copper's Managing Director Simon Paull commented:** "We are on track to commence drilling the prime Arya Prospect during September. Encouragingly, recent work by our geophysicist consultant has uncovered new insights which make the case for drilling the Arya Prospect even more compelling, especially as interpretation of the sizeable EG01 anomaly shows it is materially shallower than previously estimated."

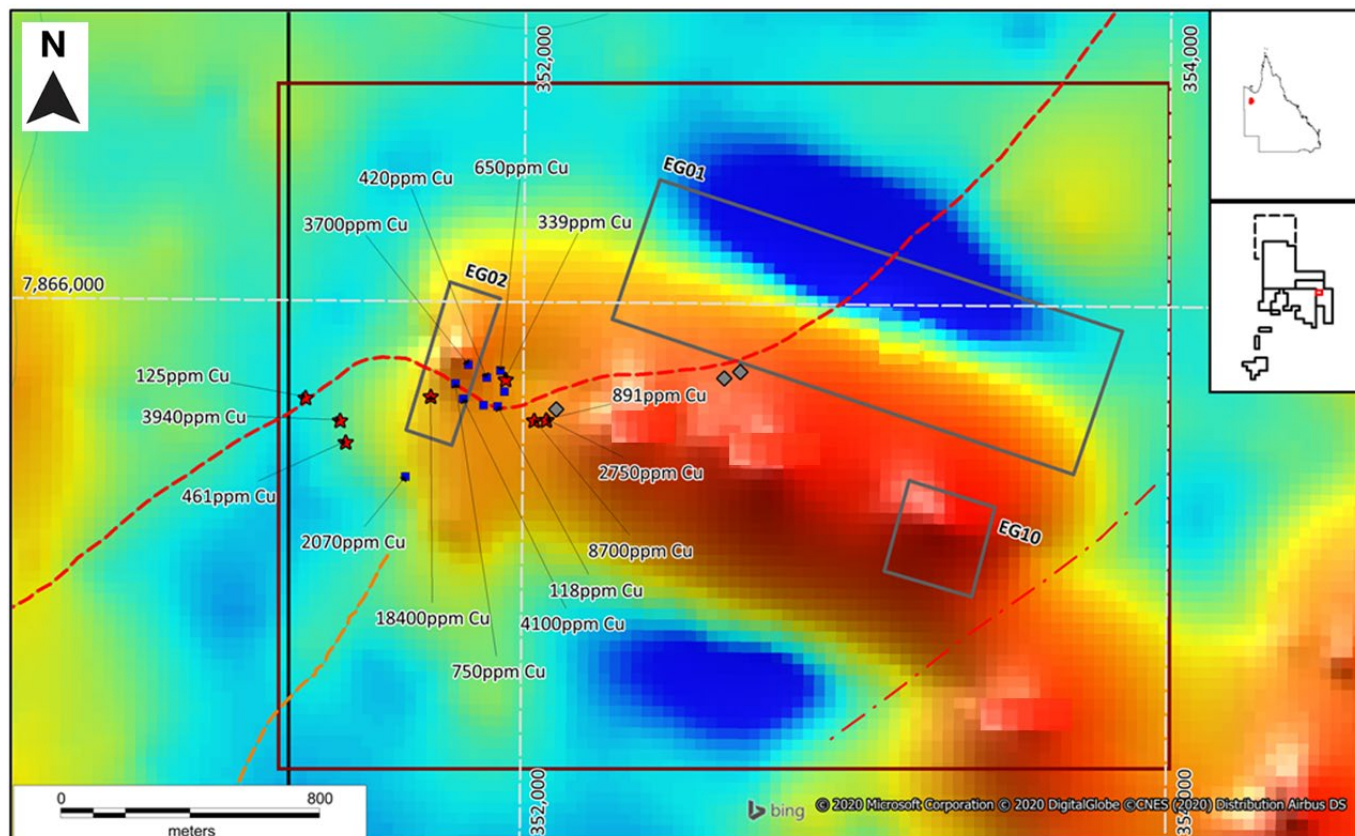
**Castillo Copper Limited (“CCZ”)** is pleased to announce that all logistics are now in place for drilling to commence at the prime Arya Prospect during September 2021. In addition, CCZ’s geophysicist consultant has re-interpreted historical aero-electromagnetic (AEM) and electromagnetic (EM) data that verifies the Arya Prospect is a major target in Mt Isa’s copper-belt.

**DRILL-TESTING PRIME ARYA PROSPECT**

**Logistics in place**

CCZ’s logistic service providers have verified they are on track for drilling to commence at the prime Arya Prospect during September 2021. The key focus will be drill-testing several targets identified by BHP in the mid-1990s including EG01, EG02 and EG10 (Figure 2)<sup>3</sup>.

**FIGURE 2: EG01, EG02 & EG10 – ARYA PROSPECT**



Source: CCZ ASX Release – 4 September 2019 & 13 April 2021

**GEOPHYSICIST RE-INTERPRETATION**

CCZ’s geophysicist consultant – instrumental in improving targeting at the Big One Deposit – has reviewed and re-interpreted legacy AEM and EM data for the Arya Prospect, concluding it is a major exploration target within the Mt Isa copper-belt.

**Electromagnetics**

To re-cap, the Arya Prospect was originally identified by the 1997 Alsace/Epsilon BHP AEM survey<sup>3</sup> as it was characterised by a strong AEM anomaly. At the time, BHP<sup>3</sup> classified the Arya Prospect a priority target which resulted in a follow up ground survey, but no test-drilling was ever undertaken.

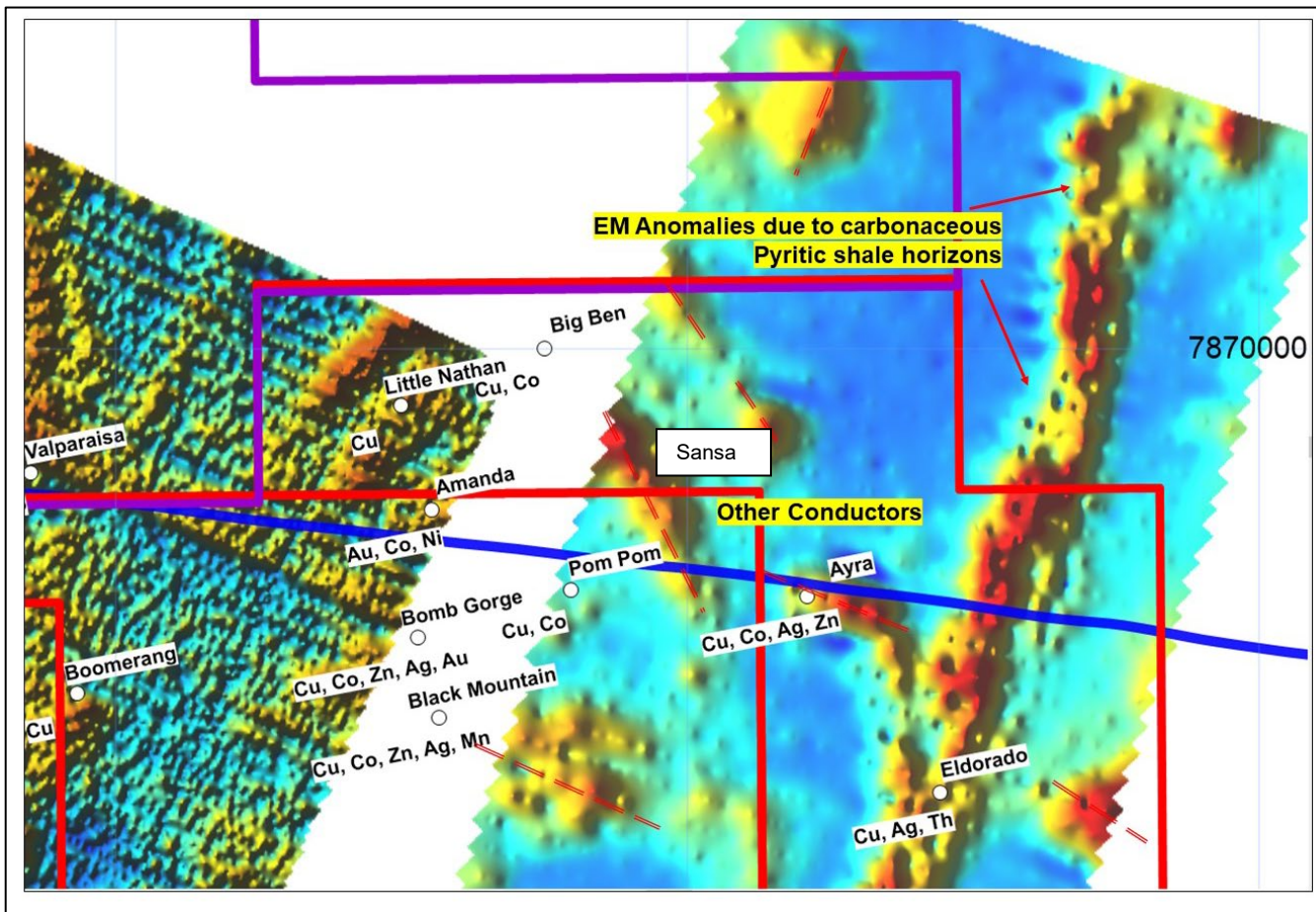
In addition, BHP<sup>3</sup> identified several other prospective EM anomalies across the region (east of the Arya Prospect running north-east) attributable to steeply dipping thick carbonaceous pyritic shale horizons.

In March 2019, Geoscience Australia released the results of its AusAEM survey<sup>2</sup> which identified the anomaly at the Arya Prospect.

Reconciling BHP and Geoscience Australia's AEM results with assayed rock chips at surface, up to 1.84% Cu<sup>4</sup>, resulted in the initial interpretation that EG01 was potentially a massive sulphide conductor 130m thick, 1,500m long, 450m wide and approximately 430m deep.

Figure 3 highlights BHP (red line) and Geoscience Australia's (blue line) AEM surveys relative to surface geochemistry results in determining the prime target at the Arya Prospect.

**FIGURE 3: ARYA PROSPECT COPPER GEOCHEMISTRY VS AEM SURVEY RESULTS**



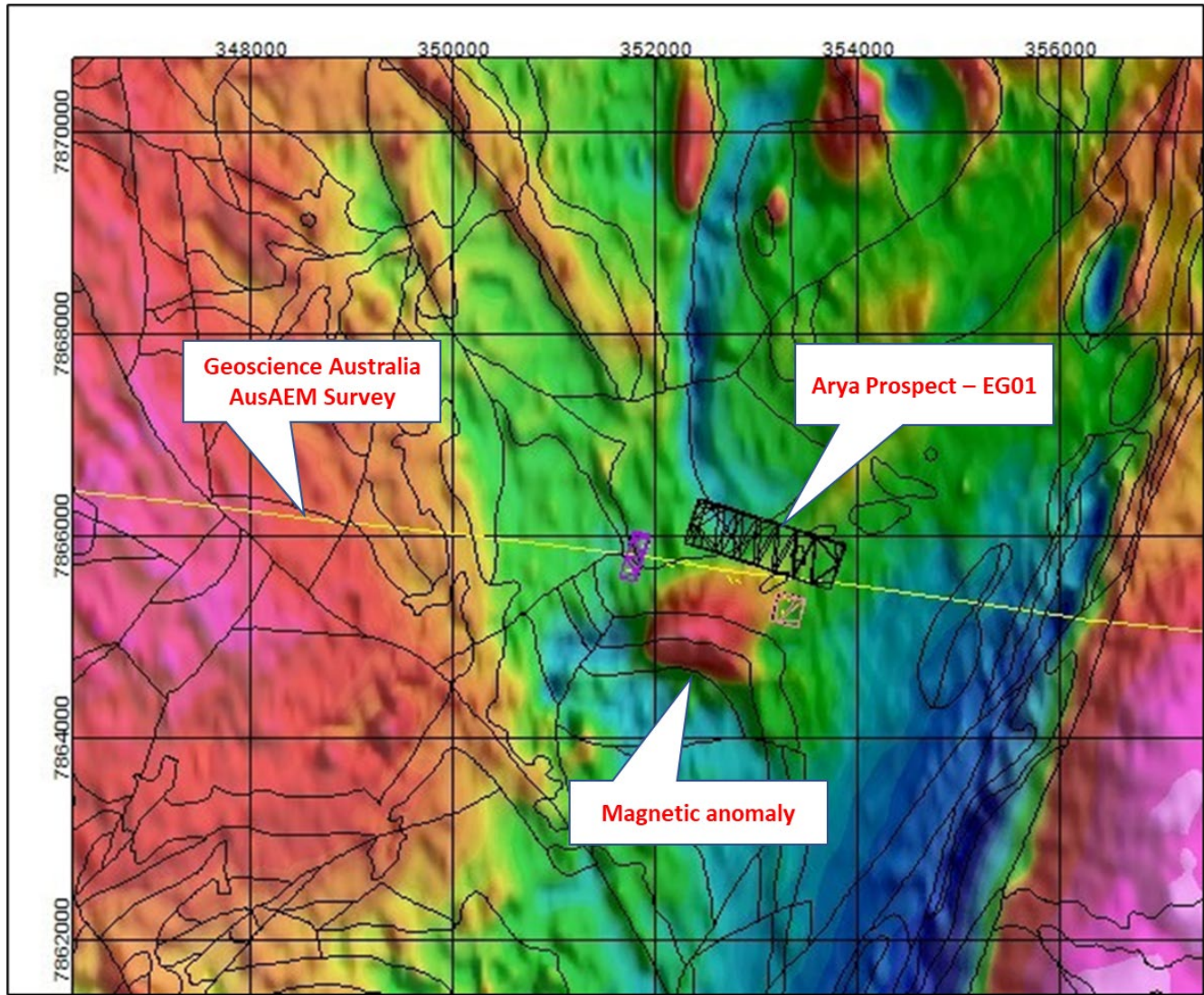
Source: CCZ geology team

In re-processing Geoscience Australia's AusAEM Survey data (Figure 1)<sup>3</sup>, CCZ's geophysicist believes the EG01 anomaly is now only approximately 100-200m deep rather than ~430m as initially estimated. This is a significant finding that enhances the exploration potential of the Arya Prospect.

### **Magnetics**

In reviewing and re-processing historical aero-magnetics data generated by MIM<sup>4</sup> in the 1990s, CCZ's geophysicist noted there is a significant magnetic anomaly proximal to the Arya Prospects otherwise quiet magnetic terrain (Figure 4).

**FIGURE 4: ARYA PROSPECT – MAGNETIC DATA**



Source: CCZ geology team

Holistically, the cross-over of significant AEM and magnetic anomalies, aligning with elevated occurrences of copper at surface, make a compelling case for test-drilling the Arya Prospect.

**BIG ONE DEPOSIT**

As there are still multiple targets at the Big One Deposit which are yet to be drill-tested, development work will continue. Based on results to date, the Board remains committed to model up and estimate a resource to the standard of the 2012 JORC Code resource and, if justified, apply for a mining lease.

**Next steps**

There are several ongoing steps, including:

- Reporting of the assay results from the Big One Deposit drilling campaign and surface sampling along the IP survey lines; and
- Commence drilling campaign at the Arya Prospect.

**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 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 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 – 20 May 2021
- 2) CCZ ASX Release – 10 June 2020 and Brodie, R. C., & Ley-Cooper, A. Y. (2019). AusAEM Year 1 NT/QLD Airborne Electromagnetic Survey TEMPEST® airborne electromagnetic data and Em Flow@conductivity estimates. Geoscience Australia.
- 3) CCZ ASX Releases – 4 September 2019 & 13 April 2021; 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 and BHP Minerals Pty Ltd, 1997. EPM 11383 (Alsace Camp), 11452 (Epsilon), Combined Annual Report for the Period Ending 19/12/97. QDEX Report: 29762.
- 4) Mt Isa Metals Ltd, 2010. EPM 15767, Myally Tenement, Annual Report for the Period 5/06/2009 to 4/6/2010. QDEX Report: 64491; M.I.M Exploration Pty Ltd, 1993, Exploration Permit for Minerals Nos. 7448 "Lagoon Creek". Second Annual Report 18 May 1991 to 17 May 1992, Queensland Australia. QDEX Report: 24523; and M.I.M Exploration Pty Ltd, 1992, "Myally Creek" EPM 7338 and "Lagoon Creek" EPM 7448 Joint Twelve Month Report for Period 18 May 1990 to 18 May 1991 Queensland, Australia. QDEX Report: 23516.
- 5) 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.

### 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
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>• <i>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.</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 (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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Sub-sampling occurred as described in the section 'Sub-sampling techniques and sample preparation' in Section 1 of the current Table 1.</li> <li>• The surface sample results described in this ASX Release are 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.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>• <i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>• There are no historical drillholes in the Ayra -Sansa prospect area.</li> </ul>
<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>• No new drillholes samples were taken.</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> </ul>	<ul style="list-style-type: none"> <li>• No geological logging took place as no new holes were drilled.</li> </ul>

<p><b>Sub-sampling techniques and sample preparation</b></p>	<ul style="list-style-type: none"> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> <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>• All surface samples were collected dry.</li> <li>• 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”.</li> <li>• Mount Isa Mines - the sample location and assay data were extracted from QDEX report as .dat files.</li> <li>• Mount Isa Mines - Typically for surface samples there were brief descriptions of the lithology etc is recorded within sample ledgers/registers.</li> <li>• 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”.</li> <li>• The surface sample results described in this ASX Release are suitable for the reporting ‘exploration results’ for mineral prospectivity, additional exploration work would have to be completed in order to geologically model and then estimate a mineral resource.</li> </ul>
<p><b>Quality of assay data and laboratory tests</b></p>	<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> <li>• <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></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The rock chip samples were dispatched for Assay to Amdel Analytical Laboratories at Mt Isa.</li> <li>• The samples were digested by Aqua Regia and elemental analysis completed by Direct Optical Emission ICP: under Amdel Analytical Laboratory test method IC3E.</li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> <li>• Rock chips were collected by taking a series of chips approximately 2 to 5cm in diameter across approx. a 3m radius of the outcrop being sampled. The sample was then crushed and analysed for a base metal suite by method GA 140.</li> </ul>

		<ul style="list-style-type: none"> <li>• 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.</li> <li>• The Analabs analytical methods changed from March 1994, yet the same collection method appears to be comparable to earlier years:</li> <li>• Analabs Assay methods employed for rock chip, soil, and stream sediment additionally included (for some campaigns):</li> <li>• Method GI 142 (ICP) for elements Cu, Pb, Zn, Fe, Mn, Co, P, &amp; As.</li> <li>• Method GX401 (pressed powder XRF trace determination) for Ba; and Method GG334 (aqua regia with carbon rod finish) for Au.</li> <li>• 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.</li> <li>• 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 suite is comparable to those reported for Mount Isa Mines Analabs suite.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mount Isa Mines rock chip samples: <ul style="list-style-type: none"> <li>○ Independent verification of surface samples had been completed for selected gold assay values.</li> <li>○ 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.</li> </ul> </li> <li>• 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.</li> <li>• The surface sample results described in this ASX Release are 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.</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>• 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.</li> <li>• 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.</li> <li>• Locational Data for Mount Isa Metals was recorded in local grid and/or MGA94 zone 54 Easting (mE) and Northing (mN).</li> <li>• 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.</li> <li>• Surface sample and assay data had been prepared and compiled into Manifold GIS System and all data converted to GDA94-Zone 54.</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>• For the Arya surface sampling modelling for copper, the average RMS sample-to-sample spacing was as follows: <ul style="list-style-type: none"> <li>○ Stream sediments 67m</li> <li>○ Soil 48m</li> <li>○ Rock chip 233m</li> </ul> </li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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>• In general, the strike of the Surprise Creek Formation is east-northeast to east, dipping moderately to the north.</li> <li>• For 'Arya' rock chips there was no fixed orientation as these methods were used in the first instance to define distinct areas of anomalies, based on areas of observed surface mineralisation.</li> <li>• 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.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Given the provenance of the data from historical explorers and the remoteness of the location, historical sample security is deemed adequate for the reporting of surface assay grades and trends.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<p>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.</p>

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
<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>	<ul style="list-style-type: none"> <li>The following mineral tenures are held 100% by subsidiaries of Castillo Copper Limited, totalling an area of approximately 961km<sup>2</sup> in the “Mt Oxide North project”:</li> <li>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 (323.3Km<sup>2</sup>), Expires 11-June-2023.</li> <li>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 (216.5Km<sup>2</sup>), Expires: 28-Aug-2022.</li> <li>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 (128.8Km<sup>2</sup>), Granted: 12-June 2018, Expires: 11-June-2023.</li> <li>EPM 26513 (Torpedo Creek/Alpha Project) – Granted 13-Aug 2018 for a 5-year period over 23 sub-blocks (74.2Km<sup>2</sup>), Expires 12-Aug-2023; and</li> <li>EPM 27440 (The Wall) – An application was lodged on the 12-Dec2019 over 70 sub-blocks (~215Km<sup>2</sup>) by Castillo Copper Limited. The tenure was granted on the 7<sup>th</sup> March 2021.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>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).</li> <li>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).</li> <li>With the Mt Oxide Project in regional proximity to Mt Isa and</li> </ul>

		<p>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).</p> <ul style="list-style-type: none"> <li>• The Mt Oxide project tenure package has a significant 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.</li> <li>• 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: <ul style="list-style-type: none"> <li>○ West Australian Metals NL, 1994. Drill Programme at the "Big One" Copper Deposit, North Queensland for West Australian Metals NL.</li> <li>○ Wilson, D., 2011. 'Big One' Copper Mine Lease 5481 Memorandum – dated 7 May 2011.</li> <li>○ Wilson, D., 2015. 'Big One' Mining Lease Memorandum – dated 25 May 2015: and</li> <li>○ Csar, M, 1996. Big One &amp; Mt Storm Copper Deposits.</li> <li>○ Unpublished Xplore Resources field report Aug 2020.</li> </ul> </li> <li>• 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.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>

- 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).
- 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 are known.
- Gold is primarily found associated with copper within the IOCG 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:
  - Stratabound copper mineralisation within ferruginous sandstones and siltstones of the Surprise Creek Formation.
  - 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.

- The Mt Oxide and Mt Gordon occurrences are thought to be breccia and replacement zones with interconnecting faults. The 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 programme 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 (85°), with the ‘true width’ dimensions reaching up to 7m at surface. At least 600m in strike length, with strong Malachite staining observed along the entire strike length, with historical 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 amenable to high grade open pit mining methods of the oxide mineralization (as indicated by numerous historical open pit shallow workings into the shear zone).
- Desktop studies commissioned by CCZ and completed by ROM Resources and SRK Exploration have determined that the Big One prospect is prospective for Cu, and Ag.
- Desktop studies commissioned by CCZ have determined the

		<p>Boomerang prospect contains:</p> <ul style="list-style-type: none"> <li>• Secondary copper staining over ~800m of strike length.</li> <li>• Associated with a major east-west trending fault that juxtaposes the upper Surprise Creek Formation sediments against both the underlying Bigie Formation and the upper Quilalar Formation units.</li> <li>• At the 'Flapjack' prospect there is the potential for: <ul style="list-style-type: none"> <li>○ Skarn mineralisation for Cu-Au and/or Zn-Pb-Cu from replacement carbonate mineralisation, particularly the Quilalar Formation.</li> <li>○ Thermal Gold Aureole mineralisation is a potential model due to the high silica alteration in thermal aureole with contact of A-Type Weberra Granite – related to the Au mineralisation; and/or</li> <li>○ IOCG mineralisation related to chloride-rich fluids.</li> </ul> </li> <li>• At the 'Crescent' prospect there is the potential for: <ul style="list-style-type: none"> <li>○ Skarn mineralisation for Cu-Au and/or Zn-Pb-Cu from replacement carbonate mineralisation, particularly the Quilalar Formation; and/or</li> <li>○ Thermal Gold Aureole mineralisation is a potential model due to the high silica alteration in thermal aureole with contact of A-Type Weberra Granite – related to the Au mineralisation; and</li> <li>○ IOCG mineralisation related to potassic rich fluids.</li> </ul> </li> <li>• At the 'Arya' prospect there is the potential for: <ul style="list-style-type: none"> <li>○ Supergene mineralisation forming at the surface along the fault, fault breccia, and the Surprise Creek Formation 'PLrd' rock unit</li> <li>○ ('Prd' historical).</li> <li>○ Epigenetic replacement mineralisation for Cu (with minor components of other base metals and gold) from replacement carbonate mineralisation, particularly the Surprise Creek Formation.</li> <li>○ Skarn mineralisation for Cu-Au and/or Zn-Pb-Cu from replacement carbonate mineralisation, particularly the Surprised Creek Formation; and/or</li> <li>○ IOCG mineralisation related to chloride rich fluids.</li> </ul> </li> <li>• A selection of publicly available QDEX documents / historical exploration reports have been reviewed, refer to Section 2, sub-section "Further Work" for both actions in progress and proposed future actions.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information</i></li> </ul>	<ul style="list-style-type: none"> <li>• There are no new drillholes completed, although fourteen (14) are planned. There is no historical drilling at Arya.</li> </ul>

	<p>for all Material drill holes:</p> <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> <p>• 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.</p>	
<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 (eg 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 data aggregation methods are utilised in the current ASX Release, since the sampling types are surface samples (for example: rock chip samples).</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 (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</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>• 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.</li> <li>• Maps and Plans presented in the current ASX Release are in MGA94 Zone 54, Eastings (mN), and Northing (mN), unless clearly labelled otherwise.</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 surface sampling and ground and airborne geophysical data has been reported, there have been no results withheld.</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, groundwater, geotechnical and rock</li> </ul>	<p>GEOTEM &amp; PROTEM:</p> <ul style="list-style-type: none"> <li>• The airborne electromagnetic GEOTEM geophysical survey undertaken by BHP Minerals in 1997 on historical tenure EPM11383 &amp; EPM1152. A total of 726-line kilometres were</li> </ul>

*characteristics; potential deleterious or contaminating substances.*

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 observations are anticipated to have a deeper penetration than the GEOTEM observations, based on the PROTEM loop, survey traverse, and/or depth sounding method applied.

#### QUESTEM & GENIE-EM:

- 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, this 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 for historical tenure EPM7448, and one of these L4 near 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



		<p>aligns with GeoResGlobe – this is equivalent to the historical tenure reports ‘Prd’ rock unit lower boundary from the Surprise Creek Formation.</p> <p>GEODISCOVERY REVIEW</p> <p>The study of Nelson (2021) concluded that:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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)).</li> <li>• EG02 appears to be associated with a fault and EG10 appears to be more surficial.</li> <li>• 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.</li> <li>• 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.</li> </ul> <p>Figures A2-1 to A2-4 illustrate the above conclusions.</p>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg 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>	<ul style="list-style-type: none"> <li>• Further work will consist of a combination of: <ul style="list-style-type: none"> <li>○ Fourteen (14) hole RC drilling Program</li> <li>○ Soil and or Rock chip sampling</li> <li>○ Ground IP or EM Survey</li> </ul> </li> </ul>

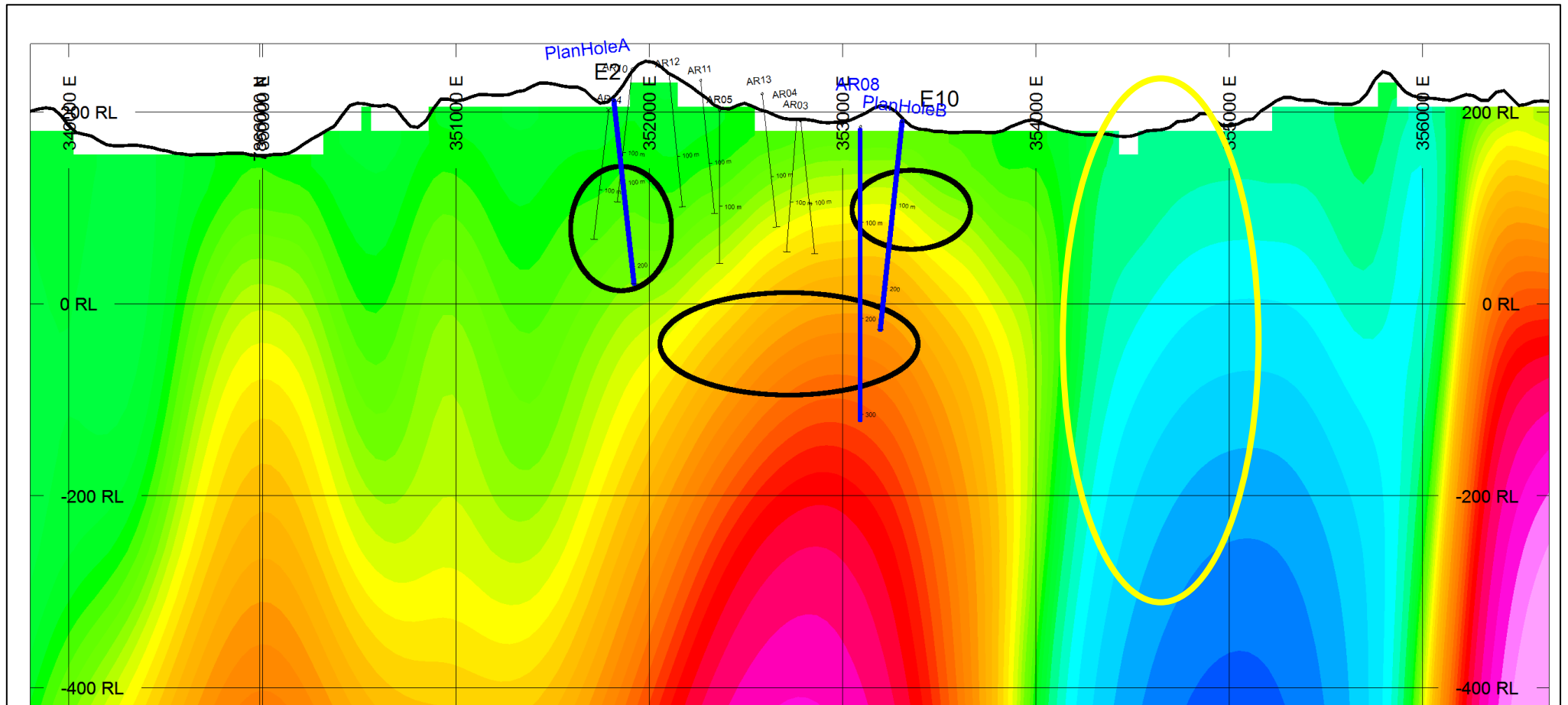
**TABLE A2-1: AYRA PROPOSED DRILLING DETAILS**

Drill Order	SiteID	Easting (GDA94)	Northing (GDA94)	Total Depth (m)	Dip	Azimuth	Est. Days	Notes	Property
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<b>1</b>	2021_AR01	353240	7865274	160	-60	165	1.5	Originally AR01	Kamileroi
<b>2</b>	2021_AR02	353258	7865419	160	-60	135	1.5	Originally AR02	Kamileroi
<b>3</b>	2021_AR03	352751	7865542	160	-60	245	1.5	Originally AR03	Kamileroi
<b>4</b>	2021_AR04	352775	7865583	160	-60	120	1.5	Originally AR04	Kamileroi
<b>5</b>	2021_AR05	352357	7865641	160	-90	0	1.5	Originally AR05	Kamileroi
<b>6</b>	2021_AR06	353574	7864724	160	-90	0	1.5	Originally AR06	Kamileroi
<b>7</b>	2021_AR10	351931	7865892	160	-60	270	1.5	Originally AR10	Morella
<b>8</b>	2021_AR11	352276	7865779	160	-60	125	1.5	Originally AR11	Morella
<b>9</b>	2021_AR12	352103	7865743	160	-60	200	1.5	Originally AR12	Morella
<b>10</b>	2021_AR13	352607	7865837	160	-75	0	1.5	Originally AR13	Morella
<b>11</b>	2021_AR14	351776	7865654	160	-60	290	1.5	Originally AR14	Kamileroi
<b>12</b>	2021_AR15	351813	7865789	160	-60	270	1.5	Added 04/06/21	Kamileroi
<b>13</b>	2021_AR16	351575	7865617	160	-60	340	1.5	Added 04/06/22	Kamileroi
<b>14</b>	2021_AR17	352531	7865612	160	-60	345	1.5	Added 04/06/23	Kamileroi
<b>15</b>	2021_AR18	352458	7865443	160	-60	270	1.5	Added 04/06/24	Kamileroi
<b>16</b>	2021_AR19	352984	7865449	160	-60	240	1.5	Added 04/06/25	Kamileroi

Source: CCZ geology team

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

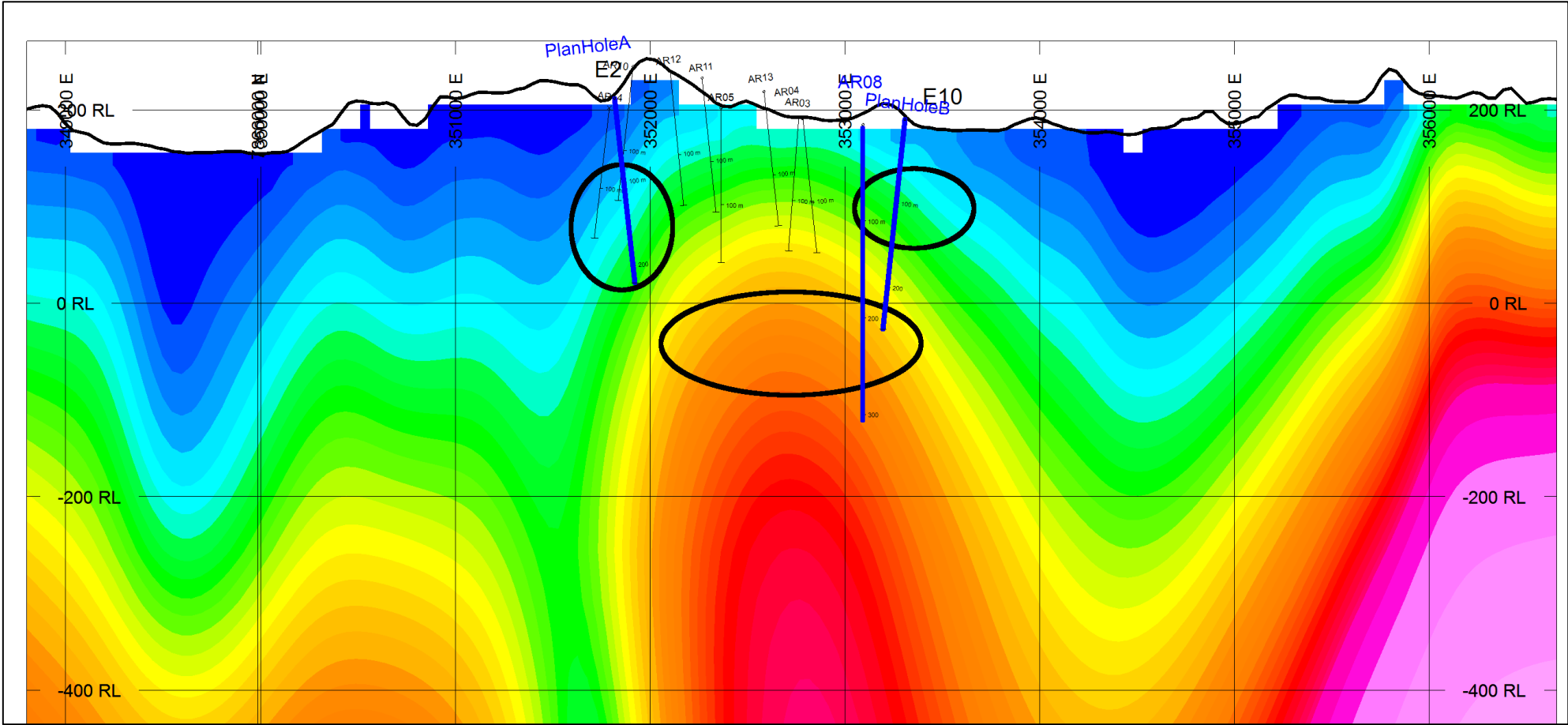


**Notes:**

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.

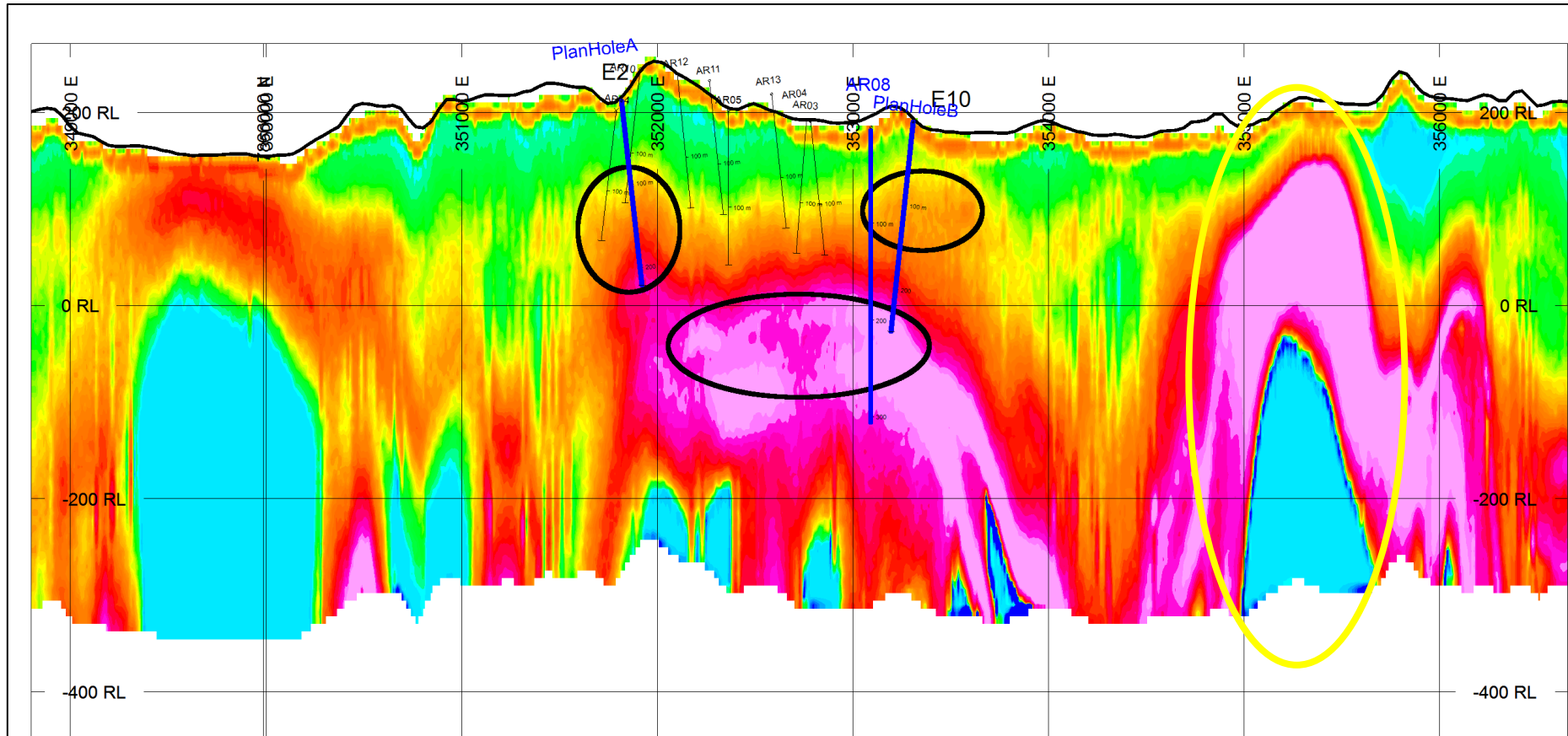
Source: CCZ geology team

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



Source: CCZ geology team

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

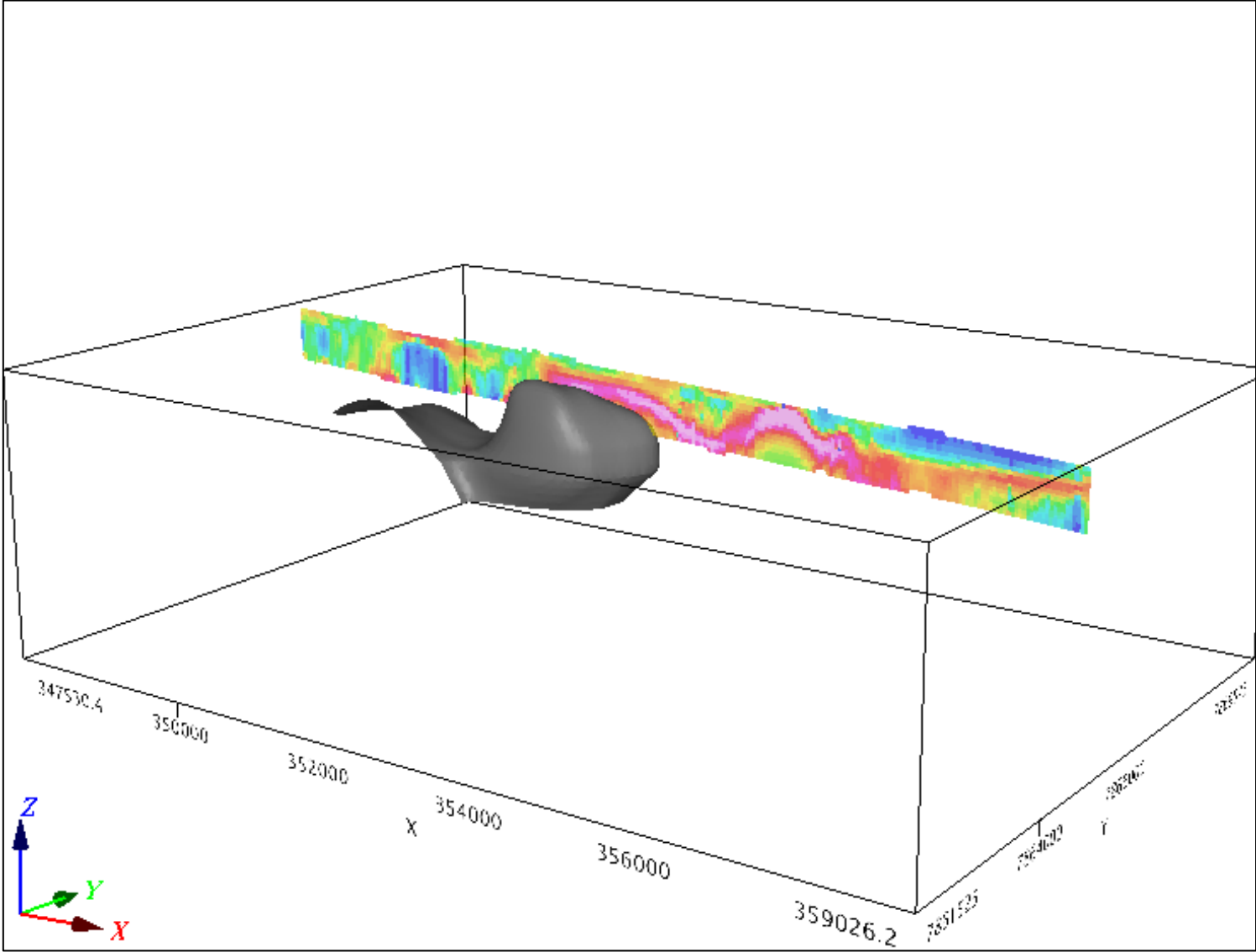


Notes:

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.

Source: CCZ geology team

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



Source: CCZ geology team