

# High Grade Zinc Zone Discovered at Browns Reef

## **Highlights**

- Eastern Metals' initial drilling program at Browns Reef was completed in March 2022 with mineralisation intersected in all four holes extending the lode along strike and at depth;
- High grade zinc assay results received from all holes drilled;
- Mineralised intervals include:
  - o BRD016: **6.0m** @ **3.2% Zn**, 1.3% Pb, 0.12% Cu, 8.6 g/t Ag and 0.3 g/t Au from 453.5m;
  - BRD017: 13m @ 5.4% Zn, 2.3% Pb, 0.14% Cu, 11.5 g/t Ag and 0.9 g/t Au from 225m including 2m @ 14.6% Zn, 5.1% Pb, 0.22% Cu, 22.5 g/t Ag and 0.5 g/t Au from 225m;
  - BRD018: 16m @ 4.1% Zn, 1.6% Pb, 0.33% Cu, 27.5 g/t Ag and 0.4 g/t Au from 251m including 6m @ 7.3% Zn, 2.3% Pb, 0.58% Cu, 47.7 g/t Ag and 0.9 g/t Au from 251m;
  - BRD019: 12.5m @ 8.1% Zn, 2.6% Pb, 0.10% Cu, 17.3 g/t Ag and 0.5 g/t Au from 269.5m including 8.5m @ 9.8% Zn, 2.7% Pb, 0.12% Cu, 22.9 g/t Ag and 0.6 g/t Au from 269.5m, and two significant Cu-rich zones which averaged 1.9% Cu over 4m from 279m and 1.4% Cu over 3m from 295m.
- Potential discovery of a significant high grade zinc zone with elevated levels of Pb, Cu, Ag and Au;
- Lode now identified over a strike length of more than 100m and vertical depth of 300m and remains open along strike and at depth;
- We are calling this zone, formerly referred to as the Northern High Grade Zone, the Evergreen Zone; and
- Follow up diamond drilling program to extend the Evergreen Zone further along strike has been planned and has received regulatory approval.

Eastern Metals Limited (ASX: EMS, 'Eastern Metals' or 'the Company') is pleased to announce that assays have now been received from the Company's initial diamond drilling campaign at Browns Reef with high grade broad intersections of sulphide mineralisation identified in all four holes drilled. This has extended the lode approximately 50m above and below the historic BRD013 (drilled by Kidman Resources) and at least 50m along strike to both the south and north of BRD013. Interpretation of drill results will continue however these results are thought to be the first stage of a significant high grade zinc-dominated polymetallic zone discovery at Browns Reef.

#### Managing Director and CEO, Wayne Rossiter said

"This initial drilling campaign has been an outstanding success with high grade mineralisation encountered in all holes over significant mineralised intervals. The Evergreen Zone lode has a current strike length of over 100m and vertical depth of at least 300m and remains open along strike and at depth. Our next steps will be to drill further along strike and this program has received regulatory approval".

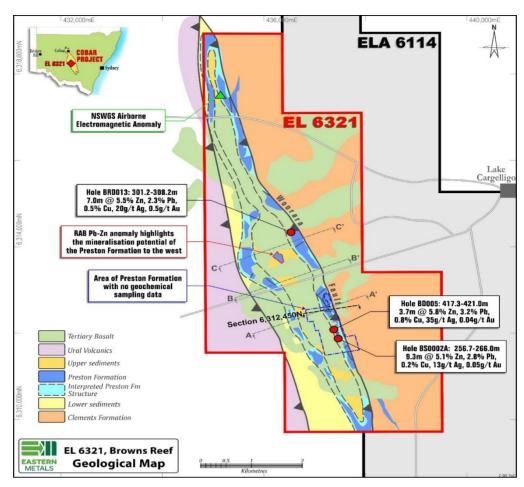
#### **Browns Reef**

Browns Reef lies 5km to the west of the town of Lake Cargelligo, approximately 470km west of Sydney. The area surrounding the Browns Reef base-metal deposit is utilised for agricultural purposes, including grazing and cropping.

The known deposit at Browns Reef occupies a small part of the tenement. Most of the deeper drilling to date has been confined to a zone approximately 2.7km long in the central to southern part of the tenement and is situated on the eastern flank of the interpreted 9km long synclinal structure.

Figure 1 shows the interpreted geology of the Browns Reef project area. This drawing also shows the location of the two high grade zones identified by Eastern Metals for further and more detailed follow-up drilling. The northern-most of these zones, formerly known as the Northern High Grade Zone and now known as the Evergreen Zone, is centred near the historic hole BRD013 drilled by Kidman Resources, which returned an intersection of **7.0m averaging 5.5% Zn, 2.3% Pb, 0.5% Cu, 20.2 g/t Ag and 0.5 g/t Au.** This is the area that was tested by the Company's recent drilling program.

A long section through the eastern limb of the structure shown in Figure 1, is shown in Figure 2. This drawing also shows the location of the two high grade zones identified for further and more detailed follow-up drilling. The four red "dots" surrounding BRD013 in the Northern High Grade Zone, now known as the Evergreen Zone, were the planned pierce points for the Company's recent four hole drilling program. A more detailed long section of the Evergreen Zone incorporating the results of the recent drilling and the interpreted lode outline is shown in Figure 3.



**Figure 1** Interpreted Browns Reef structure with the location of the previous high grade broad intersections which are the initial focus of Eastern Metals' exploration.

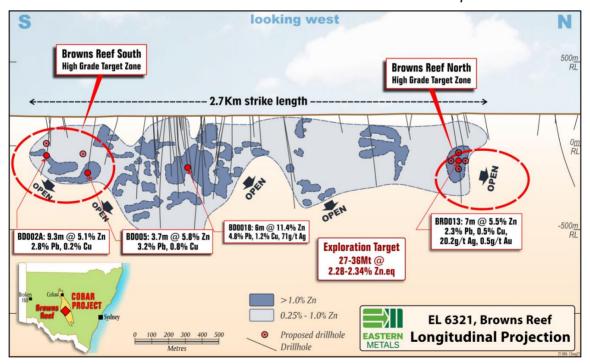


Figure 2 Long section of Browns Reef deposit previously drilled which identifies the Browns Reef North "High Grade Target Zone", now known as the Evergreen Zone.

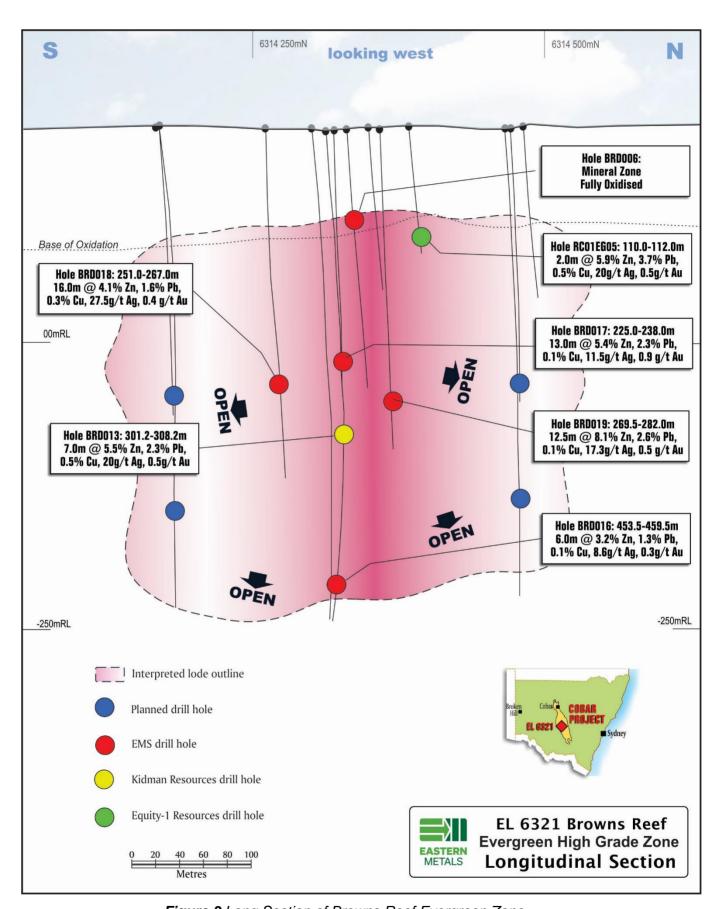


Figure 3 Long Section of Browns Reef Evergreen Zone.

A photograph of the massive sulphide intersection in hole BRD18 from 253.0m to 255.5m down hole is shown in Figure 4.



Figure 4 Massive sulphide mineralisation in drill core from hole BRD018 253.0m-255.5m.

The collar coordinates and other essential details of the four diamond holes drilled by Eastern Metals to test the Evergreen Zone are tabulated in Appendix 1. The surface projections of these holes and holes drilled earlier by Kidman Resources and another previous tenement holder, Equity 1, in the Evergreen Zone area are shown in Figure 5.

Figures 6, 7 and 8 are cross sections spaced at 50m intervals along strike and show each of the holes drilled by Eastern Metals and the previous tenement holders together with logged sulphide intervals and the interpreted lode and footwall hydrothermal breccia. Continuity of the narrow mineralised interval intersected west of the main lode in Hole BRD016 [3.0m from 372.5m to 375.5m down hole (estimated true width 1.8m)] has yet to be determined. The deeper 18.7m sulphide intersection in BRD016 has extended the main lode to a vertical depth of 300m. The 15.3m sulphide intersection in BRD017 has confirmed the continuity of the lode between Kidman Resources' holes BRD006 and BRD013.

Eastern Metals has planned a follow-up diamond drilling program designed to test for further extensions to the Evergreen Zone along strike to the north and south. Regulatory approvals for this program have been received. This program is scheduled for later this financial year.

The Company has also designed a diamond drilling program to test the other high grade zone shown in Figure 2, the Southern High Grade Zone. This program will be undertaken when all necessary approvals are in place.

In addition, a RAB drilling program has also been planned to test for geochemical anomalies over the western limb and other areas of the structure shown in Figure 1. There is no previous deep drilling in this area, and very limited prior exploration.

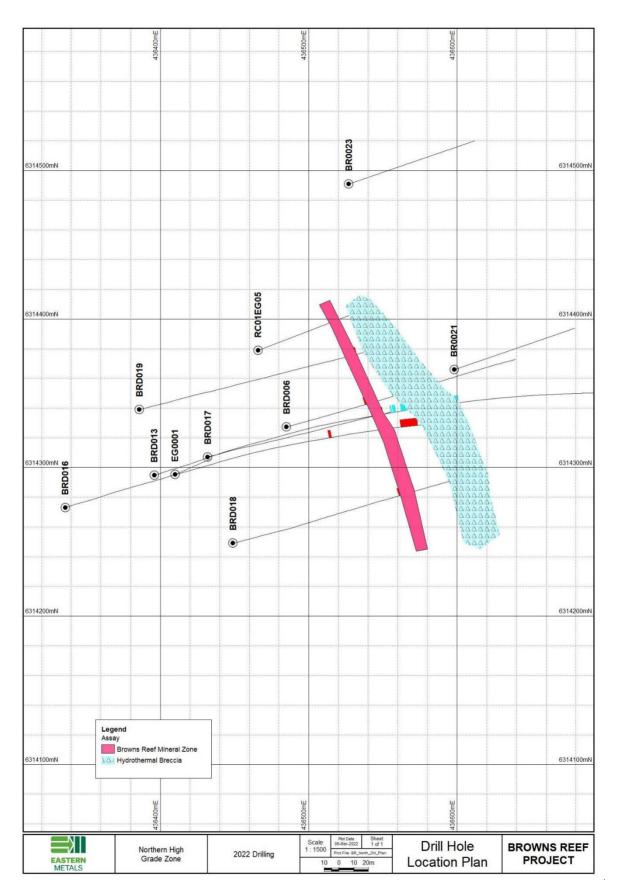
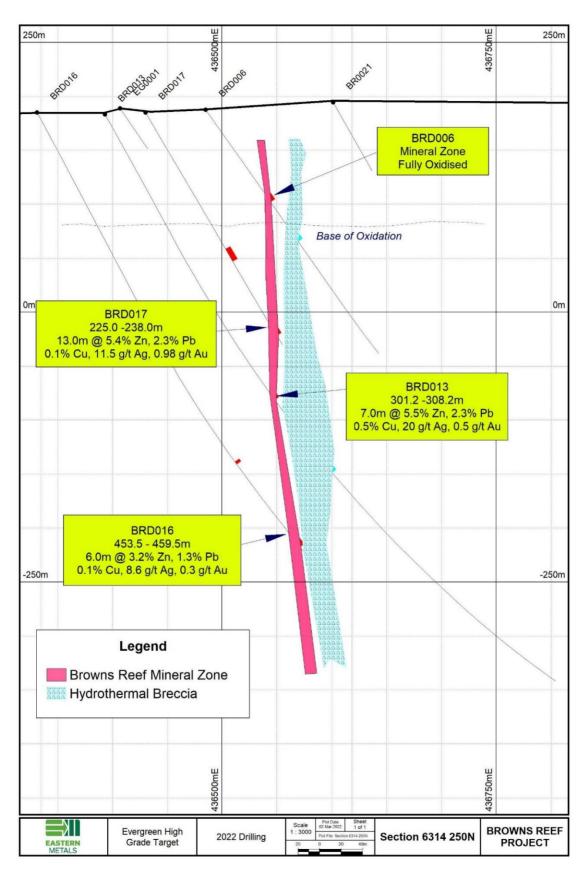


Figure 5 Browns Reef Project drill hole location plan showing interpreted mineralised lode and hydrothermal breccia zone at -70m RL.



**Figure 6** Interpreted cross section through the Browns Reef deposit showing previous drill hole traces and holes BRD016 and BRD017.

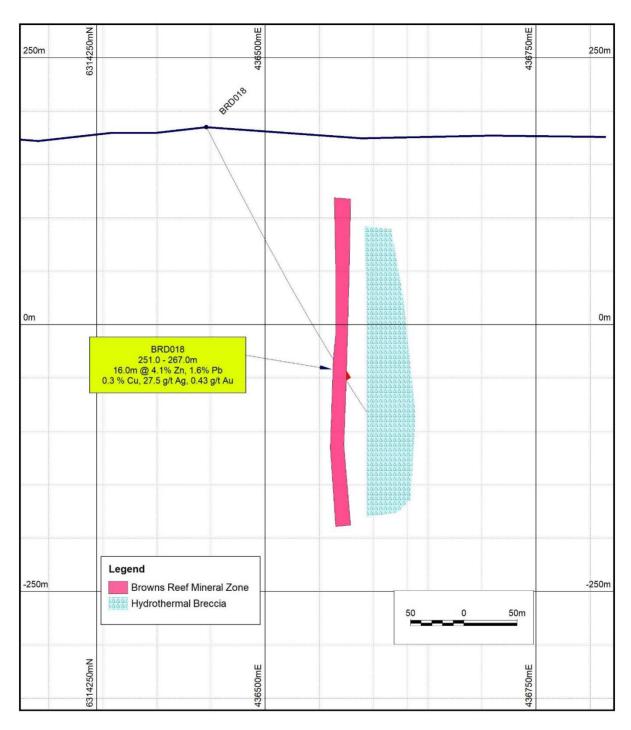


Figure 7 Interpreted cross section 6314 200N through the Browns Reef deposit showing the drill hole trace for hole BRD018.

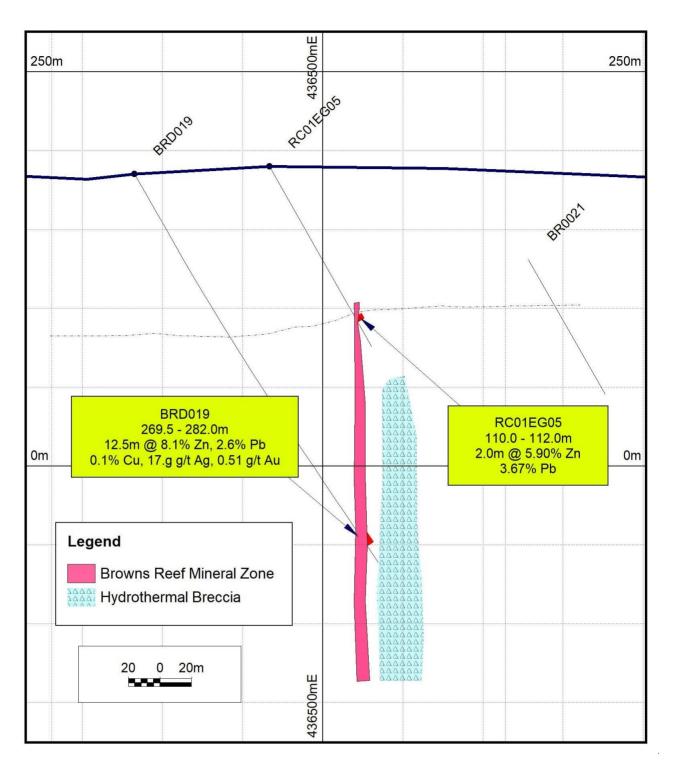


Figure 8 Interpreted cross section 6314 300N through the Browns Reef deposit showing the drill hole traces for previous hole RC01EG05 and hole BRD019.

#### **Authorisation for this Announcement**

This announcement has been authorised for release by the Company's Disclosure Officers in accordance with its Disclosure and Communications Policy which is available on the Company's website, www.easternmetals.com.au.

## **Previously Reported Information**

The information in this report that references previously reported Exploration Results, Mineral Resources or Ore Reserves is extracted from the Company's Prospectus lodged with ASIC on 18 August 2021 (ASX: EMS 22 October 2021), and ASX announcements made on 17 January, 28 January, 31 January, 11 February and 9 March 2022. The Prospectus and the above disclosures are available to view on the Company's website <a href="https://www.easternmetals.com.au">www.easternmetals.com.au</a> or on the ASX website <a href="https://www.easternmetals.c

# **Forward-Looking Statements**

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning the Company's planned activities, including mining and exploration programs, and other statements that are not historical facts. When used in this document, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward-looking statements. In addition, summaries of Exploration Results and estimates of Mineral Resources and Ore Reserves could also be forward looking statements. Although Eastern Metals believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.

## **Competent Person Statement**

The information in this disclosure that relates to Exploration Results, Mineral Resources or Ore Reserves (as those terms are used and defined in the JORC Code), except where otherwise noted, is based on information compiled by Mr Gary Jones who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Jones is a full-time employee of Geonz Associates, Consultant Geologists, a former director of Eastern Metals, and Principal Consultant – Geology to the Company. Mr Jones has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code. Mr Jones consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

#### **Contacts**

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#### **APPENDIX 1**

## **KEY INFORMATION FOR EMS DRILL HOLES**

#### <u>Drill Hole Location Data - Evergreen High Grade Zone</u>

Hole ID	Collar Co-ords		Dip	Azimuth	Azimuth	RL	Depth
TIOIC_ID	MGA94Z55_East	MGA94Z55_North	Degrees	MGA94Z55_Grid	Magnetic	m	m
BRD016	436334.4	6314271.4	-61	71	61	181.5	500.0
BRD017	436429.5	6314309.4	-60	75	65	184.1	250.0
BRD018	436447.6	6314248.3	-63	75	65	186.3	348.5
BRD019	436385.5	6314337.6	-59.6	75	65	182.1	330.4

#### **Drill Hole Assay Summary - Evergreen High Grade Zone**

Hole_ID	Depth_From	Depth_To	Interval	Estimated	Cu	Pb	Zn	Ag	Au
	m	m	m	True Width (m)	%	%	%	g/t	g/t
BRD016	453.5	459.5	6	3.6	0.12	1.3	3.2	8.6	0.31
BRD017	225	238	13	8	0.14	2.3	5.4	11.5	0.98
incl.	225	227	2	1.2	0.22	5.1	14.6	22.5	0.52
BRD018	251	267	16	10	0.33	1.61	4.1	27.5	0.43
incl	251	257	6	3.6	0.58	2.3	7.3	47.7	0.89
BRD018	279	283	4	2.4	1.85	0.7	0.9	8.4	0.2
BRD018	295	298	3	1.8	1.38	0.6	0.3	34.5	0.2
BRD019	269.5	282	12.5	7.6	0.1	2.6	8.1	17.3	0.51
incl	269.5	278	8.5	5.1	0.12	2.7	9.8	22.9	0.57

# **JORC Code, 2012 Edition – Table 1**

# Section 1 Sampling Techniques and Data: Browns Reef Project

# **Diamond Drilling**

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.	Diamond drill core provides a high-quality sample that is logged for lithological, structural, geotechnical, analytical and other attributes.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Sampling of the mineralised core for assaying has been carried out using a diamond saw as per industry best practice.
	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.	Diamond drilling was used to obtain mostly 1m samples from which1.5 – 3.5 kg was pulverised and analysed by a low level multi element ICP technique. High grade above detection limit samples were reanalysed by ICP following an Aqua Regia leach. Gold was analysed by fire assay on a 30g charge with AAS finish.
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).	The Browns Reef project holes were drilled with standard diamond drilling techniques. Rotary mud drilling was used to pre-collar the holes to solid rock whereupon coring commenced in HQ size core (diameter: 63.5mm) to fresh rock and then NQ core (diameter: 47.6mm) and NQ3 (45.1mm) core through the lode sections to end of hole (EOH). Eastern Metals used a reputable drilling contractor; DDH1 Drilling with a truck mounted rig.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Diamond drill core recoveries were recorded during drilling and reconciled during the core processing and geological logging. Core was generally competent with some zones of broken core. There was no significant drill core lost during drilling.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Diamond drill core is measured and marked after each drill run using wooden blocks denoting the depth. Rig procedures are adjusted as necessary including drilling rate, run length, bit and fluid pressure to maintain sample integrity and to keep the profile of the hole as near as possible to the planned dip and azimuth.

Criteria	JORC Code explanation	Commentary	
	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.	Core loss was minimal due to the use of triple tube coring methods in the lode zones. Care was taken to avoid bias when sawing the mineralised zones.	
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.	Systematic geological logging has been undertaken. Data collected includes:  Nature and extent of lithologies and alteration Intervals, amount and mode of occurrence of metallic minerals such as pyrite, chalcopyrite, galena and sphalerite.  Location, extent and nature of structures such as bedding, veins, faults etc Geotechnical logging has yet to be completed.	
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography	Depending on the lithology being logged, drill core is logged as both qualitative (discretional) and quantitative (volume percent sulphide minerals, quartz veining).  Core was photographed wet and dry with one tray per image.	
	The total length and percentage of the relevant intersections logged.	The entire hole was geologically logged from top to bottom (100%). Intervals with no recovery were noted as such but were generally minor.	
Sub- sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken	Core was cut using a manual diamond saw. Wherever possible all samples were collected from the same side of drill core. The full interval of half-core sample was submitted for assay analysis. Where core was incompetent due to being broken rock, representative samples were collected along the axis of the core.	
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Not applicable – core drilling.	
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Drill core was cut in half along the length and the total half core submitted as the sample. This procedure meets industry standards where 50% of the total sample taken from the diamond core is submitted. All intervals sampled were submitted for assaying. Sample weights were recorded by the assay laboratory.	
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	No sub-sampling was completed by Eastern Metals. All sub-sampling of the prepared core was completed by the assay laboratory.	
	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.	The retention of the remaining half-core is an important control as it allows assay values to be viewed against the actual geology; and, where required, further samples may be submitted for quality assurance or petrography. No resampling of half core or duplicated samples have been completed at the project by Eastern Metals.	

Criteria	JORC Code explanation	Commentary
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are appropriate to correctly represent the mineralisation based on style of mineralisation
Quality of assay data and	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	The sample preparation and assaying methods used were selected by Eastern Metals and were appropriate for the style and grade of mineralisation. The techniques are considered as total.
laboratory tests	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.	No use of hand-held geophysical instruments is planned for the core at this stage. Magnetic susceptibility measurements may be carried out in future.
	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.	Appropriate standards and blanks were inserted into the sample stream at regular intervals. Results for these samples have shown acceptable levels of accuracy and precision. Duplicate samples will be forwarded to an independent laboratory for check assaying in due course.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	The presence of massive sulphides has been confirmed by visual inspection by Eastern Metals Board members and by the Principal Consulting Geologist via close-up core photographs.
	The use of twinned holes.	Nil.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All data and logging was recorded directly into field laptops. Visual and numerical validation was completed by the on-site geologists.
	Discuss any adjustment to assay data.	No adjustment to the assay data is required.
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.	A handheld Garmin GPSmap unit was used to site the hole collar positions with an averaged waypoint measurement accuracy of 1m. Completed hole collar positions have subsequently been accurately measured by a registered land surveyor.  Alignment of the drill rig was carried out using offset fore and back site pegs and compass and confirmed with the down-hole survey tool. Down-hole surveys for dip and azimuth were carried out using an Axis gyroscopic survey instrument at down-hole intervals of between 25 and 30m.
	Specification of the grid system used	Grid system used for the Lake Cargelligo project is Geodetic Datum of Australia (GDA) 94 Zone 55S.
	Quality and adequacy of topographic control.	Topographic control with hand-held GPS and government 1:50,000 scale topographic mapping is adequate for the project. Accurate topographic height measurements were obtained from the EMS hole collar positions by the registered land surveyor. DTM data has also been obtained from previous exploration company surveys.
Data spacing and	Data spacing for reporting of Exploration Results.	Drill holes in this program were spaced 50 metres up and down dip and along strike from a hole drilled by a previous explorer. Core blocks

Criteria	JORC Code explanation	Commentary
distribution		recording the depth are inserted at the end of each core run.
	Whether the data spacing and distribution is sufficient to establish the	No new mineral resource estimation has been carried for this section
	degree of geological and grade continuity appropriate for the Mineral	of the Browns Reef mineral deposit. Future follow-up diamond drilling
	Resource and Ore Reserve estimation procedure(s) and classifications applied.	is being planned.
	Whether sample compositing has been applied	No.
Orientation	Whether the orientation of sampling achieves unbiased sampling of	The inclined drill holes were designed to intersect the known
of data in	possible structures and the extent to which this is known, considering	lithological and interpreted mineralisation as near as possible to a
relation to geological	the deposit type.	perpendicular orientation. The orientation of the drill holes achieved relatively unbiased sampling.
structure	If the relationship between the drilling orientation and the orientation of	The holes were designed to intercept perpendicular to geological units
	key mineralised structures is considered to have introduced a sampling	and mineralisation to best obtain near true widths.
0	bias, this should be assessed and reported if material.	One in half of a coff of a large for a sall of a contact of a large for a
Sample	The measures taken to ensure sample security.	Core is held at an off-site location and before and after being
security		processed, is stored in secure storage. Assay samples were delivered to the analytical laboratory by the site geologist thereby avoiding any
		handling by a third-party transport operator.
Audits or	The results of any audits or reviews of sampling techniques and data.	No audits or review are warranted at this stage.
reviews		

# **Section 2 Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	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.	EL6321 Browns Reef is located 5km west of Lake Cargelligo NSW. The tenement is held by Eastern Metals Limited. Ground activity and security of tenure are governed by the NSW State government via the Mining Act 1992. Land is freehold and access was granted under the terms of a compensation agreement with the landowner.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Browns Reef base metal mineralisation was first discovered by the landowner who recognised outcropping gossanous material. The prospect was subsequently systematically developed by Jennings Industries-Electrolytic Zinc Company of Australia (EZ)-Esso Joint Venture, and later by Comet Resources. The most recent exploration

Criteria	JORC Code explanation	Commentary
		was carried out by Kidman Resources which was acquired by Wesfarmers in 2019 and who sold the project to Eastern Metals in 2021.
Geology	Deposit type, geological setting and style of mineralisation.	Volcanogenic massive and disseminated stratabound and structurally controlled Cu, Pb, Zn, Ag, (Au) deposit hosted in steeply dipping sediments.
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.	See Appendix 1 in the body of the report.
	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.	Not applicable.
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.	Length weighting of individual samples was used to obtain the mean grades contained in this report.
	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	Selected intervals were reported on the basis of a combined Pb+Zn grade of > 4%.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents have been used in reporting of these results.
Relationship between	These relationships are particularly important in the reporting of Exploration Results.	
mineralisation widths and intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Drill hole azimuths were between 70 and 75 degrees MGA 94 Z55 grid to the East. The targeted mineral zone is semi-vertical. The holes were designed to intersect perpendicular to the mineralisation to best gain near true widths.
	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	Intersections of sulphide mineralisation in this report are down hole lengths. Based on the known geology and orientation of the drill hole

Criteria	JORC Code explanation	Commentary
	width not known').	true widths are estimated at 60% of these down hole lengths.
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	See figures 3, 5, 6, 7 and 8 in the body of the report.
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.	Other exploration data are discussed in the body of the report and in previous ASX announcements by Eastern Metals.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).  Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Further step-out inclined diamond holes are planned for this project to continue to test the mineralisation along strike in both north and south.  See Figure 3 in the body of the report.