ASX:EMS
Level 8, 210 George Street
Sydney NSW 2000
1300 737 760
info@easternmetals.com.au

3 June 2024

NEW HIGH-PRIORITY TARGETS IDENTIFIED AT BROWNS REEF, NSW

Field work programs identify new strongly anomalous base metal zones to the north and south of the high-grade Evergreen zone

KEY HIGHLIGHTS

- Assay results from recent fieldwork programs to the north of known high-grade mineralisation at the Browns Reef Project in NSW's southern Cobar Basin have returned highly anomalous grades from surface rock chip samples.
- Mapping and pXRF traverses along the Woorara Fault, a regional-scale structure related to known mineralisation at the high-grade Pineview and Evergreen zones, have identified new anomalous zones north and south of Evergreen, which have been named 'Kelpie Hill' and 'Windmill Dam' respectively.
- Planning is underway to update and extend the existing drilling approvals for Evergreen to include these prospects, along with an Induced Polarisation (IP) survey.
- Three land access agreements have now been secured for EL9136 (Bothrooney), with reconnaissance fieldwork on this tenement scheduled for mid-June 2024.

Eastern Metals Ltd (**ASX: EMS**) ("**Eastern Metals**" or "the **Company**") is pleased to announce that recent fieldwork programs across the 100%-owned EL6321, part of its Browns Reef Project (**Figure 1**), located in the southern Cobar Basin of NSW, have identified new zones of anomalous base metal mineralisation in the northern portion of the project area.

The fieldwork programs were completed in April 2024 and May 2024 and focused on the Woorara Fault, to the north of the known high-grade Pineview and Evergreen zones at Browns Reef[1]. A JORC Table 1 is provided at **Appendix A**.

Commenting on the results, Eastern Metals' Chief Executive Officer Ley Kingdom said: *"These are highly encouraging initial results from our fieldwork programs, which have confirmed the ability of mapping and soil pXRF analysis to identify geochemical trends within EL6321.*

[1] Eastern Metals Ltd (ASX: EMS) ASX Announcements 27 June 2022, 'Evergreen Discovery Zone Expanded at Browns Reef' & 2 August 2022, 'More High-Grade Assays in Evergreen Discovery at Browns Reef'

"What's even more encouraging is that these programs have highlighted new anomalous areas along the prospective Woorara Fault. These new areas include Kelpie Hill and Windmill Dam, located to the north and south of the known high-grade mineralisation zone at Evergreen.

"Kelpie Hill and Windmill Dam will be high-priority target areas for upcoming exploration programs, with IP surveys and drilling planned to test whether these represent a continuous zone of mineralisation between Pineview and Evergreen, and potentially, a northern extension of Evergreen."

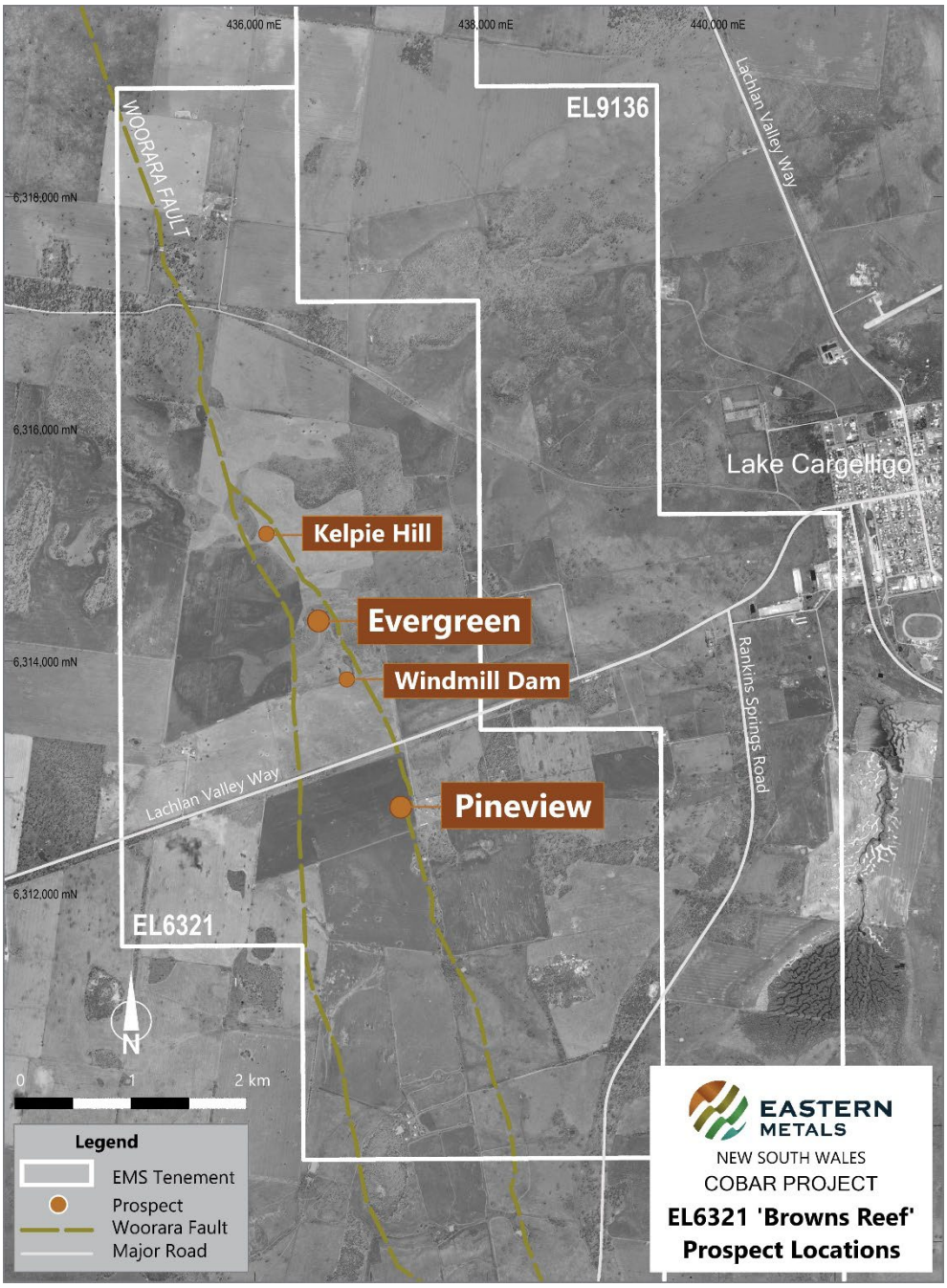

Figure 1: Location of EL6321, Browns Reef and the Pineview, Evergreen, Kelpie Hill & Windmill Dam prospects.

EL6321 Browns Reef

Overview

Browns Reef (EL6321) is an 'advanced exploration project' located 5km west of Lake Cargelligo in the southern Cobar Basin, NSW. It is a structurally controlled, polymetallic system extending along the inferred Woorara Fault and the Preston Formation and Clements Formation contact.

Fieldwork within EL6321 was undertaken in April 2024 and focused on the area between the Lachlan Valley Way Road and the North Uabba Road. The program was aimed at ground truthing and, where possible, adding to the auger and rotary air blast (RAB) hole data and geological mapping originally acquired by the Electrolytic Zinc Company of Australasia Ltd (EZ) in the 1970s.

Most paddocks in the area have been cropped or cultivated at some stage and outcrop is rare; however, gossanous material is commonly evident in stone raked piles throughout the entire strike length of the inferred Woorara Fault and Preston-Clements contact, defining a north-northwest trending zone.

In addition, ground reconnaissance revealed that gossanous float material was often present scattered along the approximate trend of the inferred mineralised zone; it is believed that significant displacement of this float due to farm activities has not taken place. In total, 28 samples of gossanous rock material were collected for assaying, comprising an average of 1-2kg per sample from multiple pieces of surface float.

A second field trip was conducted in mid-May 2024 utilising a SciAps X555 portable X-ray fluorescence analyser (pXRF) to conduct soil readings every 10 metres along east-west traverses. Line spacing was informed based on real-time results and the previous day's visual assessment of geochemical dispersion of lead. The program was used to test the pXRF capabilities for detecting lead in soils and identifying geochemical trends across the different lithologies at Browns Reef.

The Tertiary basalt coverage within EL6321 is a considerable masking lithology that potentially covers portions of the northern extension of the Browns Reef mineralisation. The pXRF demonstrated that soil anomalism of lead (Pb) and arsenic (As) were readily traceable within the soil profiles and decreasing Pb results could effectively map out the basalt and Clements Formation contact zones. Rock chip samples paired with the pXRF readings were able to distinguish further prospective zones to the south and north of the Evergreen deposit.

Of particular note are two new prospective areas now designated "Kelpie Hill" and "Windmill Dam". Kelpie Hill is located approximately 700 metres to the northwest of Evergreen, and Windmill Dam is 500 metres to the southeast.

Rock Chip Sample Summary

A total of twenty-eight (28) rock chip samples of gossanous float lithologies were sent for assaying in April 2024. Multi-Element ICP and Low-Level Fire Assay techniques were used for all samples with potential pathfinder elements (e.g. As) included in the analysis suite.

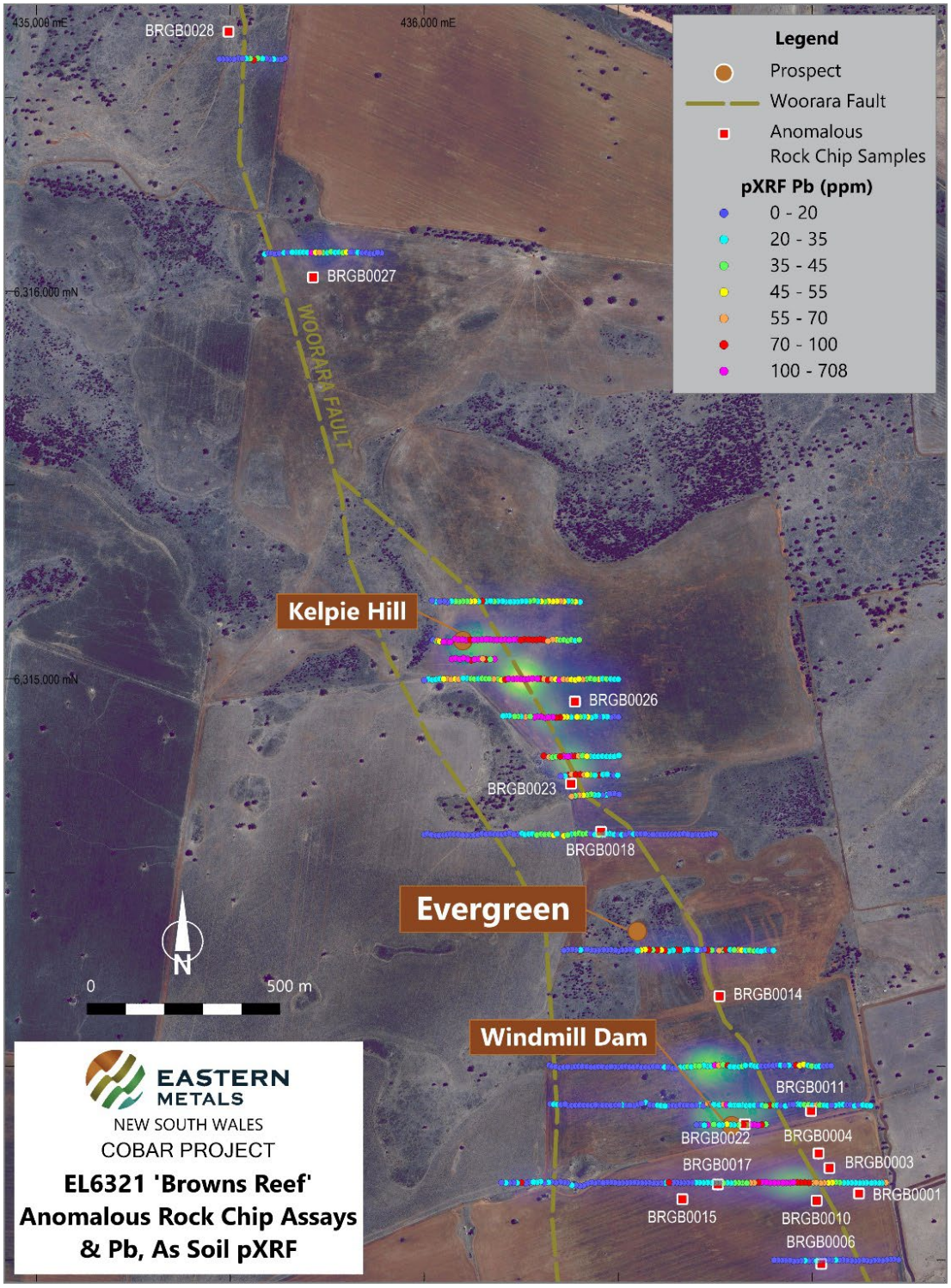

Figure 2: Location of rock chip samples, pXRF traverses with Pb (ppm) and As (ppm, 'heat mapped').

A summary of anomalous results is presented in **Table 1**. A photo of BRGB0022 is shown in **Figure 3** (for assay grades, refer to **Table 1**).

All but one of these samples were collected from gossanous and ferruginous ex-sulphide float, the remaining sample from a stone raked pile (BRGB0001). Preliminary results from these rock chip samples were used as a guide for the pXRF traverse program described below, particularly in areas of low auger/RAB drilling density. The locations of rock chip samples are plotted below in **Figure 2**.

Table 1: EL6321 rock chip sample anomalous assay results

Sample ID	MGA94 E	MGA94 N	Au (ppm)	Cu (ppm)	Pb (ppm)	Zn (ppm)
BRGB0001	437120	6313677	0.01	23.1	68	**2400**
BRGB0003	437044	6313743	<0.01	61.2	**1000**	**2600**
BRGB0004	437016	6313780	<0.01	**116.0**	150	**3700**
BRGB0006	437023	6313495	0.01	**132.0**	**1200**	**1800**
BRGB0010	437011	6313658	0.01	99.2	50	**1600**
BRGB0011	436996	6313890	<0.01	51.5	82	**1200**
BRGB0014	436761	6314186	0.01	**157.0**	**3200**	**6400**
BRGB0015	436665	6313662	<0.01	86.1	**1500**	**1200**
BRGB0017	436756	6313700	0.01	**136.0**	**3000**	**1000**
BRGB0018	436455	6314610	<0.01	65.6	**2100**	**1100**
BRGB0022[2]	436826	6313856	0.01	**622.0**	**4200**	**1400**
BRGB0023	436378	6314734	**0.03**	90.6	**1300**	**1700**
BRGB0026	436388	6314946	**0.02**	98.4	**1200**	**2200**
BRGB0027	435713	6316041	<0.01	**231.0**	**1600**	**2500**
BRGB0028	435495	6316675	<0.01	52.9	400	**1700**

pXRF Summary

Seventeen (17) lines of 10m spacing pXRF soil readings were collected between 17 and 21 May 2024. A total of 753 readings were taken with a SciAps X555 pXRF utilised on 'soils' mode which allows for highly sensitive multi-elemental analysis.

Initial sampling lines were chosen based on their proximity to gossanous rock chip samples that were collected in April 2024. Sampling lines were between 6313500N and 6316600N, which commenced close to the Lachlan Valley Way and ended near the North Uabba Road.

The ability of the pXRF to pick up Pb within soils is evident and background soil Pb within the Tertiary basalt and Ordovician Clements Formation cover soils was approximately 10-20 ppm. Even within cultivated paddocks, the elevation in Pb along the interpreted Browns Reef mineralisation trend was apparent (see **Figure 2**). Pb often ranged from 70-100+ ppm within these zones. The highest Pb

[2] Photo of sample BRGB0022 shown in Figure 3

value recorded for the program was 708 ppm which fell within the newly designated Kelpie Hill prospect.

In-fill lines were added at the beginning of each day pending the visual display of the Pb values from the previous day. In-fill lines were also added to provide a clearer anomalous trend line where the EZ auger/RAB drillholes were sparse. In matching bottom-hole assay data from the 1970s and pXRF results, a clearer trend of anomalous base metal zones can be distinguished where the Tertiary basalt is not present (see **Figure 2**).

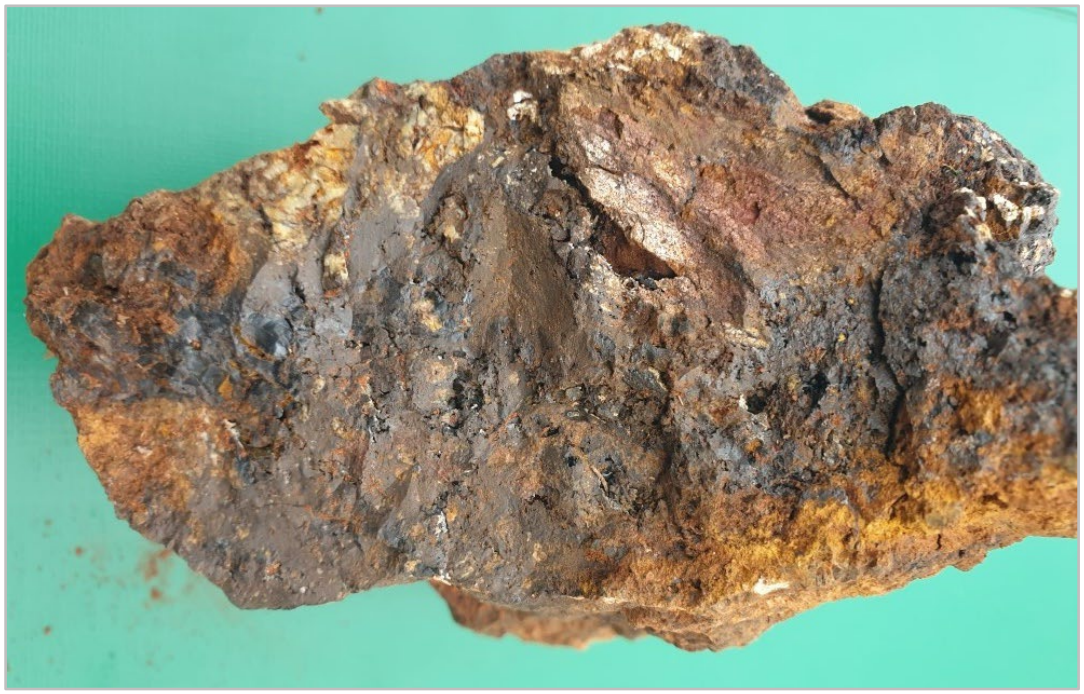

Figure 3: Sample BRGB0022, gossanous ironstone (for assay grades, refer to **Table 1**)

Next Steps

Current regolith mapping and pXRF traverse readings at the surface have demonstrated the ability to detect anomalous base metal concentrations, and further work to extend and in-fill the pXRF work where regolith is permissive (i.e. where basalt cover is absent) is planned for mid-June.

Planning is also underway for an IP survey north and south of Evergreen, as this has the capability to remove the masking effect of the Tertiary basalt cover, potentially highlighting significant new target areas for drilling. In addition, work is underway to update and extend the existing diamond drilling approvals for Evergreen to include areas to the north and south for reverse circulation (RC) drilling.

EL9136 Bothrooney

Three land access agreements were signed by landholders for EL9136 (Bothrooney) in mid-May 2024 and reconnaissance fieldwork on this tenement is scheduled for mid-June 2024.

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.

Previously Reported Information

Certain information in this announcement references previously reported announcements. The announcements are available to view on the Company's website (www.easternmetals.com.au) and on the ASX website (www.asx.com.au). Other than the new information set out in this announcement, the Company confirms that it is not aware of any new information or data that materially affects the information included in the previous announcements and that all material assumptions and technical parameters underpinning the exploration results continue to apply and have not materially changed.

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.

Competent Persons Statement

Exploration

The information in this report that relates to Exploration Results is based on, and fairly represents, information compiled by Mr David Edgecombe, a Competent Person who is a member of the Australian Institute of Geoscientists (MAIG) and the Australian Institute of Mining and Metallurgy (MAusIMM). Mr Edgecombe has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Mr David Edgecombe consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Contacts

For more information, please contact:

Ley Kingdom
Chief Executive Officer
leykingdom@easternmetals.com.au
M: 0407 487 409

Nicholas Read
Read Corporate
nicholas@readcorporate.com.au
P: 08 9388 1474
M: 0419 929 046

APPENDIX A: JORC Code, 2012 Edition – TABLE 1

Section 1 – Sampling Techniques and Data, EL6321 Browns Reef

Reconnaissance survey results only, no drilling reported.

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.*	Rock chip samples of gossanous and ferruginous rock float were collected from paddocks at sites across the EL near the known Evergreen deposit. GPS locations were recorded with a Garmin GPS Model GPDMAP 65S. This was considered appropriate as the information was to be used to gain a broad understanding of potential base metal mineralisation along strike of the known Browns Reef zone where paddocks had been cultivated. The float samples were not considered significantly far removed from their original in situ location and used as a gauge only. pXRF measurements were then taken at 10m spacing readings along traverses across Northing line orientations along the known strike extent of Browns Reef anomalous base metal zone. Co-ordinates for each sample location was marked with a Garmin GPS Model GPDMAP 65S unit. Horizontal accuracy is +/-1.8m. All samples were analysed using a Sci-Apps X-555 portable XRF (pXRF).
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	The independent laboratory executed their own QAQC procedures once rock chip samples were received. The pXRF requires self-calibration at each start-up using a stainless-steel disc supplied by manufacturer. This was completed at the start of each traverse and each time the machine was turned on. Readings that were considered anomalous along the traverse lines were repeated.
	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.	Rock chip samples were collected based on visual interpretation of gossanous textures and mineralogy. These samples were taken as a reconnaissance exercise only that may allow further targeting of extensions to the known polymetallic Evergreen Zone within EL6321.Samples were submitted to an independent laboratory. Samples were pulverised and analysed by a low level multi-element ICP and Au by fire assay on a 30g charge with AAS finish. The reported pXRF work was undertaken on soil samples. The readings were

		collected at maximum depth of each hole – approximately 10-15cm depth. To demonstrate repeatability, soil readings were taken at 10m intervals without variation and on multiple traverses. The pXRF is regarded as a first pass screening technique, as are the rock chip samples for reconnaissance purposes only.
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).*	No drilling is being reported herein.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Not applicable – no drilling reported.

Criteria	JORC Code explanation	Commentary
Drill sample recovery (cont.)	*Measures taken to maximise sample recovery and ensure representative nature of the samples.*	Not applicable – no drilling reported
	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.	Not applicable – no drilling reported.
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.*	Not applicable – no drilling reported.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Not applicable – no drilling reported.
	The total length and percentage of the relevant intersections logged.	Not applicable – no drilling reported.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken*	Not applicable – no drilling reported.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Not applicable – no drilling reported.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The nature, quality and appropriateness of the sample preparation technique is in line with best industry practice.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	pXRF measurement on soil samples from 10-15cm depth gave a representative analysis of the elements within the soil.
	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.	All soil locations were measured by pXRF on one setting, "soil" for the sensitivities of a suite of elements that this mode detects. Anomalous results outside of expected zones were repeated.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sampling was appropriate to the grainsize of those lithologies

Criteria	JORC Code explanation	Commentary
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.*	The sample preparation and assaying methods used were selected by Eastern Metals and were appropriate for the style of potential mineralisation. The techniques are considered as 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.	Sciapps pXRF model X-555 was used, on soil setting, each reading being for 60 seconds. Daily calibrations are discussed earlier in Table 1. A small plastic food grade, clear bag was used to protect the integrity of the prolene window and avoid damage to the pXRF
	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 by the independent Laboratory as per their in house QAQC process. The pXRF requires self-calibration at each start-up using a stainless-steel disc supplied by manufacturer.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Not applicable – no drilling results reported herein.
	The use of twinned holes.	Not applicable – no drilling results reported herein.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Analytical data measured in the field by the pXRF was automatically stored in the instrument at the time of reading and later downloaded to laptop computer.
	Discuss any adjustment to assay data.	pXRF data are provided elemental abundances, EMS attached the correct GPS locations to each reading.
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.*	Sample location co-ordinates were acquired by Garmin GPS Model GPDMAP Horizontal accuracy is +/-1.8m, which is considered sufficient for the current program.
	Specification of the grid system used	Grid system used for the project is Geodetic Datum of Australia (GDA) 94 Zone 55S.

Criteria	JORC Code explanation	Commentary
	Quality and adequacy of topographic control.	The quality and adequacy of the topographic control are regarded as suitable.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Rock chip samples were collected along strike from the Browns Reef mineralisation for a total of 2.2km. pXRF traverses were conducted at 10m readings on 15 lines over potentially mineralised zones.
	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.	Not applicable – no Mineral Resource or Ore Reserve estimates are reported herein.
	Whether sample compositing has been applied	Nil – no compositing of rock chip samples was applied.
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.*	Rock chip samples were collected over 2.2km along the inferred strike trend of the known Browns Reef mineralisation. pXRF readings were conducted on east/west lines across the interpreted Browns Reef mineralisation trend on 10m readings.
	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.	Not applicable – no drilling reported herein.
Sample security	*The measures taken to ensure sample security.*	Rock chip samples were personally couriered to an independent exploration service provider in Adelaide and sent via courier to Bendigo for analysis.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No audits or review are warranted at this stage.

Section 2 – Reporting of Exploration Results, EL6321 Browns Reef

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 land holder.
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 was carried out by Kidman Resources which was acquired by Wesfarmers in 2019 and who sold the project to Eastern Metals in 2021. Eastern Metals Limited has drilled six diamond holes at the Evergreen deposit to date (in 2022).
Geology	*Deposit type, geological setting and style of mineralisation.*	Structurally controlled, polymetallic volcanogenic massive and sedimentary exhalative ("SEDEX") disseminated Cu, Pb, Zn, Ag, (Au) deposit extending along the inferred Woorara Fault, and the Preston Formation and Clements Formation geological unconformity.
Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ** easting and northing of the drill hole collar* ** elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ** dip and azimuth of the hole* ** down hole length and interception depth* ** hole length.*	No drilling results are reported herein.
	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	Not applicable – see above.

	understanding of the report, the Competent Person should clearly explain why this is the case.	
Criteria	**JORC Code explanation**	**Commentary**
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	Not applicable – no grade weightings, averaging techniques nor cutting of high grades are reported.
	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.	Not applicable – no drilling results, therefore no aggregate intercepts are reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable – no metal equivalents reported.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	Not applicable – no drilling reported.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Not applicable – no drilling 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').	Not applicable – no drilling reported.
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.*	No new discoveries are reported in this announcement, further follow up exploration work may continue to define new prospects.
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.*	Previous exploration activities are discussed in the body of the report. The main body of the announcement and entries in this JORC Table 1 above include references to previously reported information. No bulk samples have been collected nor has any new metallurgical testing been carried out.

Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Eastern Metals will follow up the anomalous base metal values with further geological mapping, pXRF traverses and the design of an IP survey.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Location of the known prospects are highlighted within maps in the body of the report.