EASTERN METALS

ASX ANNOUNCEMENT
14 June 2023

Soil Geochemistry Adds To Currawalla Rare Earths Potential

Highlights

- High-grade rare earths elements (**REEs**) were discovered by Eastern Metals Limited (**Eastern Metals** or **Company**) near the Currawalla mine shaft on the Company's *Tara* tenement, EL9180 in the Cobar basin of New South Wales, in March 2023; [1]
- Mullock from the shallow shaft and nearby outcrop returned assays from an independent laboratory of up to 3.38% total rare earth oxides (**TREO**) associated with a quartz breccia unit that has been sampled over a strike length of more than 100 metres;
- The mine shaft, the quartz breccia unit, and the zone of high-grade samples are coincident with a "bulls eye" aeromagnetic anomaly that has been confirmed by a detailed ground magnetic survey[2];
- The Company has recently completed soil sampling program using a portable XRF (**pXRF**) analyser that has mapped a zone of strong TREO readings close to the quartz breccia and the interpreted source of the magnetic anomaly, as well as returning anomalous TREO readings broadly coincident with the possible circular or ring-like (annular) structure in the magnetics that runs to the north, west, and south of the main magnetic anomaly, and also to the south west;
- There is a close relationship between the highly anomalous surface samples, the quartz breccia, the source of the magnetic anomaly, and the anomalous TREO-in-soils geochemistry;
- An RC drilling program will commence later this month to test these targets[3];
- The ground magnetic anomaly and the soil geochemistry are open to the north-east where the quartz breccia unit extends onto the neighboring farming property to which access is expected to be obtained after completion of mustering.

Eastern Metals Limited advises that a soil sampling program using a pXRF instrument has been completed over an area of approximately 17 hectares in the immediate vicinity of the Currawalla mine, located on the

[1] See the Company's ASX announcement of 20 March 2023 "High Grade Rare Earths at Tara".
[2] See the Company's ASX announcement of 31 May 2023 "Ground Magnetics Enhances Currawalla Rare Earths Potential".
[3] See the Company's ASX announcements of 24 May 2023 "Drilling Planned for Rare Earths at Currawalla" and 6 June 2023 "Contract for Currawalla Drilling Program Has Been Awarded".

Company's Tara exploration licence (EL 9180) in New South Wales, where laboratory assays of up to 3.38% TREO were obtained from mullock and outcrop samples.

The area covered by the soil sampling program was marginally larger than the area covered by the detailed ground magnetic survey completed a few weeks ago. Highly anomalous TREO readings were recorded near the quartz breccia and the interpreted source of the ground magnetic anomaly. Weaker though still distinctly anomalous results were observed in the area broadly coincident with the possible circular or ring-like (annular) structure in the magnetics that runs to the north, west, and south of the main magnetic anomaly, and also to the southwest of the main magnetic anomaly.

Eastern Metals' Chairman Bob Duffin said; "We have designed an RC drilling programs to test the coincident geochemical and geophysical anomalies near the Currawalla Mine shaft where high grade TREO assays were obtained from mullock and outcrop sampling. The drilling program will commence later this month."

He also said "Rarely do you see such a close correlation between a discreet magnetic anomaly, a shaft on an old mine, highly anomalous TREO values in rock specimens collected near the mine, and soil sampling anomalies in its vicinity. We are looking forward to the results of this drilling program with much anticipation".

EL 9180 "*Tara*"

Tara is the northern-most exploration licence held by Eastern Metals in the Cobar basin. It is located 120 kilometres south of Cobar and 80 kilometres north of EMS's flagship Browns Reef polymetallic project, west of Lake Cargelligo. Tara consists of 122 graticular units and covers approximately 352 square kilometres.

The Tara exploration licence is largely underlain by the Erimean Granite in the Rast Trough of the Cobar basin. The Silurian Erimean Granite is a cordierite-biotite granite and monzogranite with minor rhyolite intrusions. In the south-eastern corner of the tenement the Urambie Granodiorite, a Silurian intrusive related to the Erimean Granite, abuts the Early Ordovician Abercrombie Formation, a mica-quartz sandstone, interbedded with laminated siltstone and mudstone, which is overlain by the Late Ordovician Bendoc Group Currawalla Shale.

No economic mineral deposits are known within Tara, but there are at least two old diggings on mineralised shows. These are the Currawalla mine, which is the subject of this announcement, and the Tara prospect.

The location of the Company's Tara exploration licence and its relationship to the Company's other tenements in the Cobar basin, and other mines and advanced prospects, is shown in Figure 1.

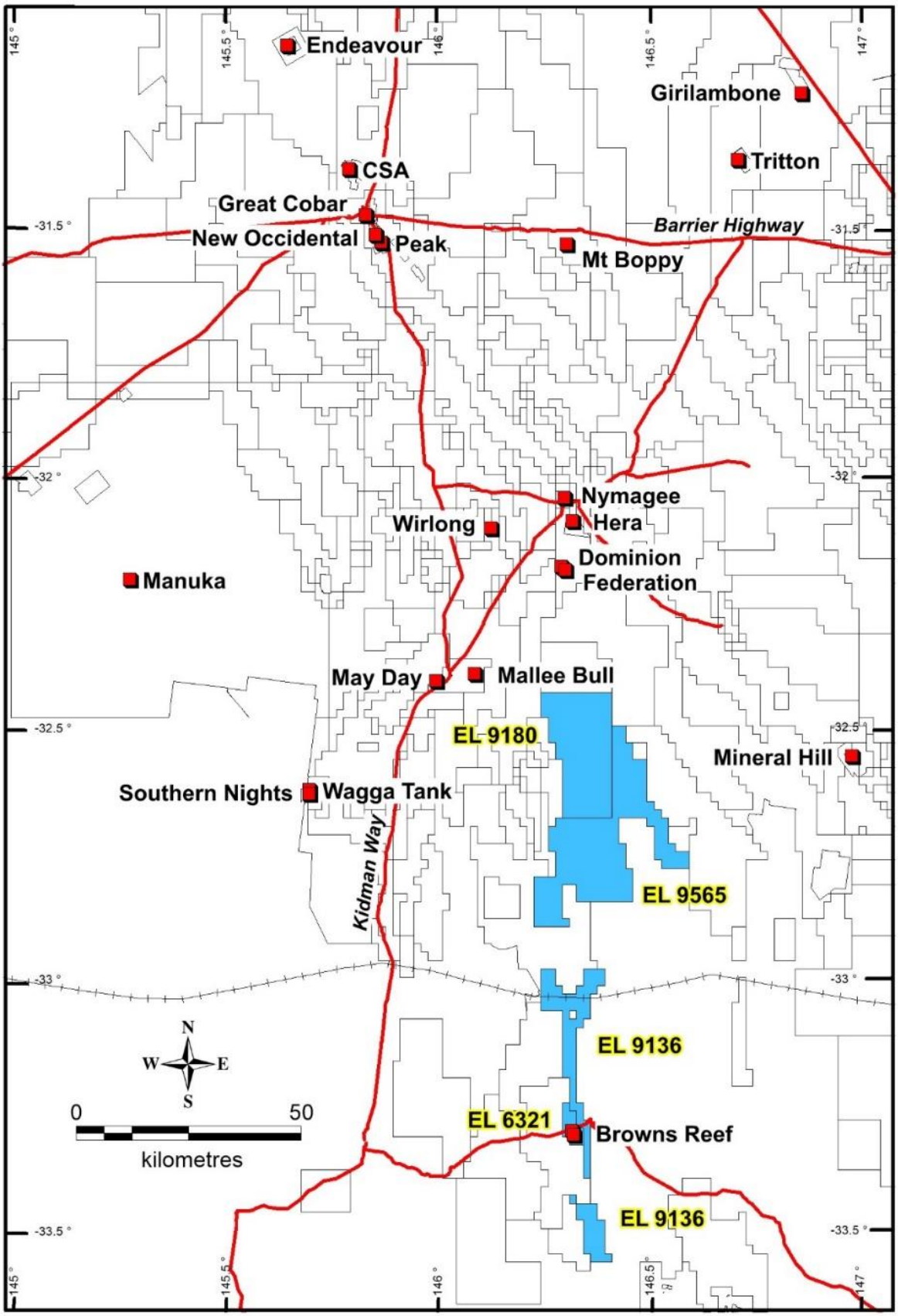

Figure 1. Location of EL 9180 *Tara*

The Currawalla Soil Sampling Program

The Currawalla Mine lies in the southeastern corner of EL 9180. It consists of a timber lined shaft, now in very poor condition, approximately 1 metre square to a depth of about 4 metres. Mullock from the shaft lies in dumps near the shaft. The shaft is at the southwestern end of an outcropping quartz breccia that extends for some 400 metres to the northeast. The quartz breccia lies near the contact between the Silurian Urambie Granodiorite and the Ordovician basement metasediments. It's likely that the shaft and pits were historically developed for exploration purposes by prospectors, who were looking for gold and/or base metals, certainly not for REEs. The Company's sampling of mullock and outcrop along this unit returned laboratory assays of up to 3.38% TREO.

A ground magnetic survey was completed by the Company near the Currawalla mine to better define an aeromagnetic anomaly that was known to exist over the prospect area. This work, which covered approximately 25 hectares, showed that there is a very clear spatial association between the shaft, the samples carrying high TREOs, and the magnetic anomaly. An RC drilling program has been designed to test this area. The drilling program is scheduled to commence before the end of June 2023.

More recently, a soil sampling program has been completed over an area broadly similar to that covered by the Company's ground magnetic survey. The survey was carried out using a SciApps XR555 portable XRF instrument with readings taken on a 25 metre by 25 metre grid. This instrument has the capability of detecting most REEs as well as a suite of other elements including certain base and precious metals. Co-ordinates for each sample location were recorded using the HandyGPSlite application on an Apple I-Phone 13 Pro. Further details of the soil sampling program are set out in Appendix 1.

pXRF Sampling for REEs

REEs are a set of 17 nearly indistinguishable, lustrous silvery-white soft heavy metals with atomic numbers from 57 to 71 (total of 15 elements), plus two other elements, scandium and yttrium, which are not strictly rare earths but which are often regarded as such because they have characteristics similar to REEs, including their chemical properties.

pXRF instruments are fast and convenient to use in the field and give results for a large suite of elements in real time. As they are faster and cheaper to produce results than laboratories, their use has become more popular in recent years. However, their limitations are well known, and the elemental abundances produced by them should not be treated as having the status of an assay produced by an independent chemical laboratory.

The SciApps XR555 pXRF instrument was set to record only 5 of the 17 REEs for this program. These are cerium, lanthanum, neodymium, scandium and yttrium.

Metal contents as measured by analytical laboratories are normally reported as elemental abundance in parts per million (**ppm**) but common market practice is to report the abundances as oxide equivalences. Multipliers[4] used to convert elemental abundances as measured by the SciApps XR555 pXRF to oxide equivalents are as follows: cerium 1.2284, lanthanum 1.1728. neodymium 1.1664, scandium 1.5338 and yttrium 1.2699. After making these adjustments, the resulting figures were added together to give the total rare earth abundance, or TREO, for each sampling point.

It's important to note that the TREOs as calculated above may be lower than the TREOs as reported by an independent analytical laboratory because the laboratory analyses for all 17 REEs. For this reason, it is generally the contrast between background levels and the strength of a local anomaly that's important in the interpretation of pXRF geochemical surveys, rather than the absolute level of the anomaly itself.

Soil Sampling Results

The TREO results for the Currawalla soil sampling program are shown in Figure 2.

This drawing shows the strength of the TREO reading at each of the sampling points on the 25 metre by 25 metre grid. The size of the red dot is proportional to the TREO reading – the bigger the dot, the higher the reading. The geochemical results are shown with the contoured magnetic anomaly as background, as well as the location of the Currawalla mine shaft and the quartz breccia unit.

There is a very clear correlation between the strongest TREO readings, the quartz breccia unit, and the ground magnetic anomaly. The magnetic survey, the soil sampling program and the mapping of the quartz breccia are not closed to the north-east of the main magnetic anomaly. These areas lie on an adjacent farming property where access will not be available until the completion of mustering in a few weeks time. There are indications that other soil anomalies may lie within the arcuate or annular zone of magnetic anomalies to the north, west and south of the main magnetic anomaly, and elsewhere – for example, in the extreme south western part of the grid. Further work will be done to better define these anomalies after the completion of the drilling program that's scheduled to commence before the end of June 2023.

[4] Source: "Element-to-stochiometric oxide conversion factors", James Cook University, Advanced Analytical Centre

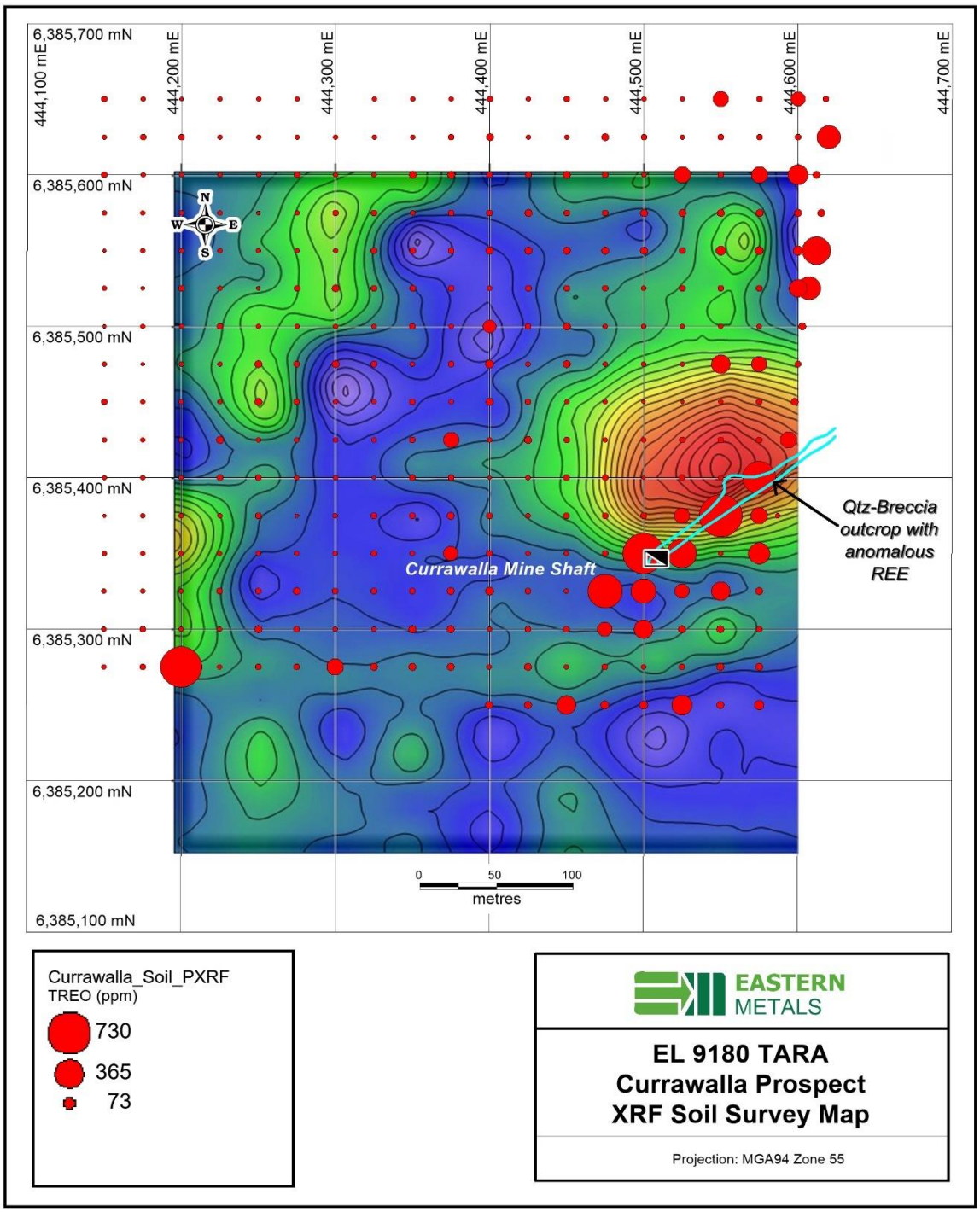

Figure 2. Soil Sampling Geochemistry, Currawalla Prospect

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 announcement that references previously reported Exploration Results for EL 9180 *Tara* is extracted from Company's Prospectus dated 18 August 2021 (ASX: EMS 22 October 2021), and from the Company's ASX announcements "High Grade Rare Earths at Tara", "Drilling Planned for Rare Earths at Currawalla" and "Ground Magnetics Enhances Currawalla Rare Earths Potential", dated 20 March 2023, 24 May 2023 and 31 May 2023 respectively. The Prospectus and the aforementioned announcements are available to view on the Company's website (www.easternmetals.com.au) and on the ASX website (www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the Prospectus or these announcements and that all material assumptions and technical parameters underpinning the Exploration Results continue to apply and have not materially changed.

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 Exploration Results and the attached JORC Table 1 in this announcement are 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 has consented to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Contacts

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APPENDIX 1 - JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data: EL9180 Tara Project

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.*	XRF readings were collected from soils on a 25m by 25m grid across the area of a prior ground magnetic geophysical survey. Co-ordinates for each sample location were found using the HandyGPSlite app on an Apple I-Phone 13 Pro. Horizontal accuracy is +/-5m. 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 pXRF requires self-calibration at each start-up using a stainless-steel disc supplied by the manufacturer. A further calibration shot was acquired each morning at start up, using a commercial certified reference material (CRM) sample.
	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.	This reported pXRF work was undertaken on soil samples. The readings were collected at a maximum depth for each hole – approximately 10-15cm depth. In the area sampled there is very little soil developed.
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 process 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 two settings, “soil” and “mining”, as some elements(eg Al, As, Ta) are better detected using the XRF acquisition parameters in mining setting.
	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.*	Not applicable – no laboratory assays are being reported.
	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.	A Sciapps pXRF model X-555 was used, on soil and mining settings, each reading being for 60 seconds. Daily calibrations are discussed above.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	The pXRF requires self-calibration at each start-up using a stainless-steel disc supplied by the manufacturer. A further calibration shot was acquired each morning at start up using a commercial certified reference material (CRM) sample.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Not applicable – no drilling reported herein.
	The use of twinned holes.	Not applicable – no drilling 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 a laptop computer.
	Discuss any adjustment to assay data.	pXRF data are provided as elemental abundances. EMS converted those to oxide abundances using the stochiometric conversion factors disclosed in the main body of the report. This is standard industry practice when reporting REE results. The source of the conversion factors used is also shown in the main body of the report
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 the HandyGPSlite app on an Apple I-Phone 13 Pro. Horizontal accuracy is +/-5m, 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.*	Samples were measured on a nominal 25m by 25m grid
	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	No samples were collected.
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.*	The samples were measured on a nominal 25m by 25m grid.
	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.*	No samples were collected.
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

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.*	EL9180 Tara is located some 30km NE of Euabalong town and 120km S of Cobar NSW. The tenement was granted on 21 May 2021 for a 3-year period and is held 100% by Eastern Metals Limited. Ground activity and security of tenure are governed by the NSW State government via the Mining Act 1992. Approval of the landholder to access the site was obtained prior to entry onto the property.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	The area covered by EL9180 has been intermittently held and explored by several companies; most notably Cobar Mines 1960's; Samedan Oil 1970's; Getty Oil early 1980's; Packrac late 1980's; Placer 1990's Golden Cross 2000's and Peel Mining 2010's. Various regional mapping, geophysics, and follow up drilling programs were undertaken but no extensive mineralisation found.
Geology	*Deposit type, geological setting and style of mineralisation.*	EL 9180 is located over the Emerian Granite in the Rast Trough of the Cobar Basin. The Silurian Emerian Granite is a cordierite-biotite granite and monzogranite with minor rhyolite intrusions. In the south-eastern EL corner, the Urambie Granodiorite abuts the Early Ordovician Abercrombie Formation, a mica-quartz sandstone, interbedded with laminated siltstone and mudstone, which is overlain by the Late Ordovician Bendoc Group Currawalla Shale.
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. Eastings and northings of the sample locations were recorded using a HandyGPSlite app on an Apple I-Phone 13 Pro. They are shown in Figure 2 in the main 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 – see above.

Criteria	JORC Code explanation	Commentary
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.*	Not applicable – no grade weightings 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 samples have been assayed.
	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, however pXRF readings indicate the presence of REEs in soils.
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 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 REE values with a program of geological mapping and shallow inclined RC drilling to test both beneath the quartz breccia outcrop and the source of the magnetic anomaly. These targets are located near the interpreted geological contact of Urambie Granodiorite and Bendoc Group rocks.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	The locations of the historic shaft and associated quartz shear zone are shown in Figures 1 and 2 in the main body of this report.