# High Grade Rare Earths at Tara

### *First Mover Advantage in New Rare Earths Province*

## Highlights

- The Company's **Tara Project** (EL 9180) contains the Currawalla Mine, a shallow prospecting pit that was historically developed for base and precious metal exploration purposes.
- Eastern Metals recently carried out preliminary exploration activities at the old mine site.
- Whilst no base or precious metal targets were identified, portable XRF (**pXRF**) measurements taken on specimens from outcrop and mullock dumps returned very high rare earth (**REE**) readings.
- Samples with high pXRF readings were submitted for analysis at an independent laboratory and **returned assays up to 3.38% total rare earth oxide** (**TREO**).
- The Currawalla Mine is coincident with a discrete aeromagnetic anomaly, however no drilling at the mine site has been conducted and the aeromagnetic anomaly has not been explained.
- Eastern Metals regards the Currawalla mine site and its environs as a **high priority target for REE exploration**.
- The Company has applied for a **new exploration licence**, ELA 6600 (***Black Range)***, to secure prospective vacant ground and extend its footprint in this potentially new rare earths province.

**Eastern Metals Limited** (**EMS**, **Eastern Metals**, or **the Company)** advises that sampling of outcrop and mullock dumps at the Currawalla Mine, located on the Company's Tara exploration licence (EL 9180) in New South Wales, has returned assays of up to 3.38% TREO. Following on from these significant results, EMS has prepared an exploration program for Tara, which the Company believes may potentially lead to the recognition of a new rare earths province. Eastern Metals has subsequently lodged an application for an exploration licence  adjacent to Tara to secure further ground in this promising province.

**Eastern Metals' Chairman Bob Duffin said**; "At this stage, we do not know the full significance of these high TREO assays. The samples, taken over a length of 100 metres, may not be representative of the TREO content of fresh bedrock. However as **many of the TREO assays are very high grade, they must be followed up**. It will not be until the completion of the planned geological mapping, soil sampling program and ground magnetic survey, scheduled to be carried out shortly, followed by systematic drilling of Currawalla, that the full picture will become clear."

“These results from Tara are very exciting as rarely do you see such a close correlation between a discreet aeromagnetic anomaly, a shaft on an old mine, and highly anomalous values in rock specimens. As such, EMS has now applied for a new tenement adjacent to Tara to secure additional prospective ground in what we hope could be a brand new REE province.”

## 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, 40 kilometres south of Aurelia Metals Limited’s (**ASX: AMI**) mining hub at Nymagee, 20 kilometres southeast of the Mallee Bull copper deposit held by Peel Mining Limited (**ASX: PEX**), 60 kilometres west of Kidston Resources Limited’s (**ASX: KSL**) Mineral Hill mining operation, and 80 kilometres north of EMS’s flagship Browns Reef Base Metal Project, west of Lake Cargelligo. Tara consists of 122 graticular units and covers approximately 352 square kilometres – see Figure 1.

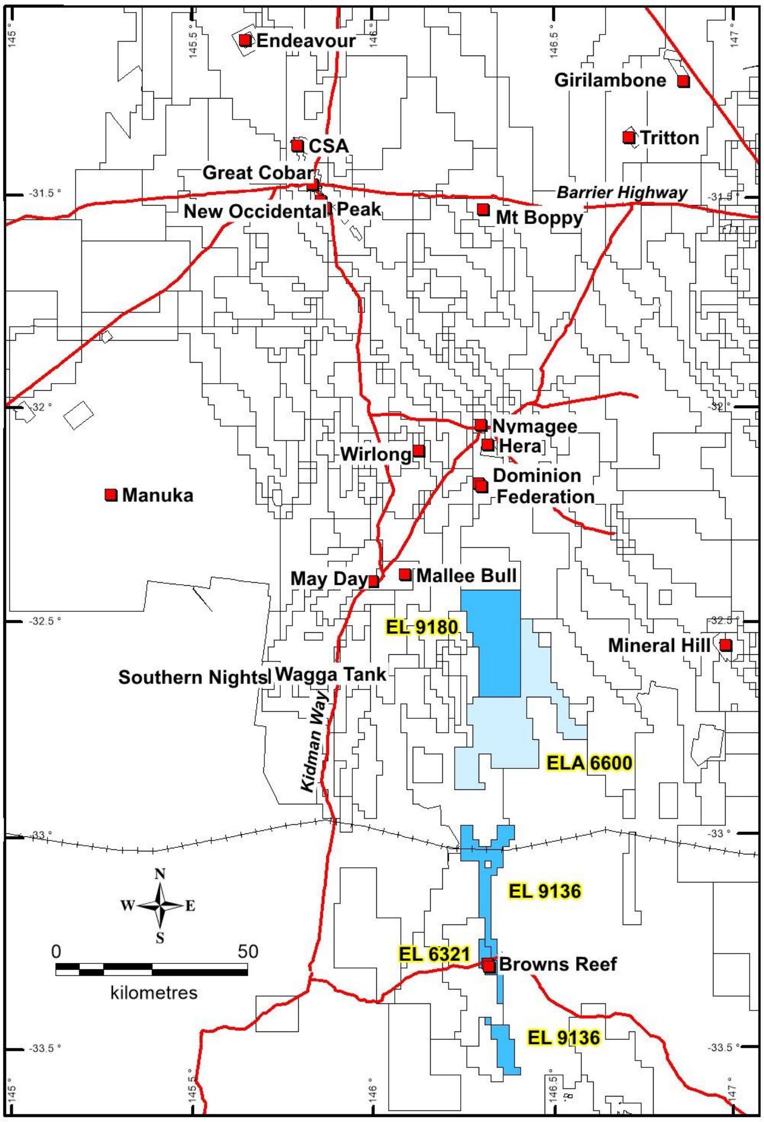


**Figure 1**. Location of EL 9180 *Tara*

The Tara EL is largely underlain by 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 corner of the tenement the Urambie Granodiorite, a Silurian intrusive related to the Emerian 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[1], which is the subject of this announcement, and the Tara prospect.

The geology of the tenement is detailed in Figure 2.

## The Currawalla Mine

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 between 1.5 metres and 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 is 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 exploring for rare earths.

A photograph of the mine shaft and the outcropping quartz breccia in the middle distance, which strikes to the northeast, is shown in Figure 3. There are several areas of good outcrop along this quartz breccia unit.

Whilst there have been no recent exploration activities near the Currawalla mine site, there are various reports by explorers and government geologists[2] who have made site visits over the years. Some of these reports refer to anomalous levels of base metals, particularly copper, and precious metals including gold, possibly associated with gossanous zones in the quartz breccia. There are no reports of prior exploration for rare earths.

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1 The Currawalla mine is also known as the Yarramba workings, or Mine 101.

2 These include “Mine data, Nymagee 1:250,000 metallogenic map” by D W Suppel, 1980; “First and final report on EL 3123”, D A Berkman 1988, for Australasian Gold Holding NL and Pacrac Holdings Pty Ltd; and “Nymagee 1:250,000 metallogenic map notes, D W Suppel and L B Gilligan, 1993.

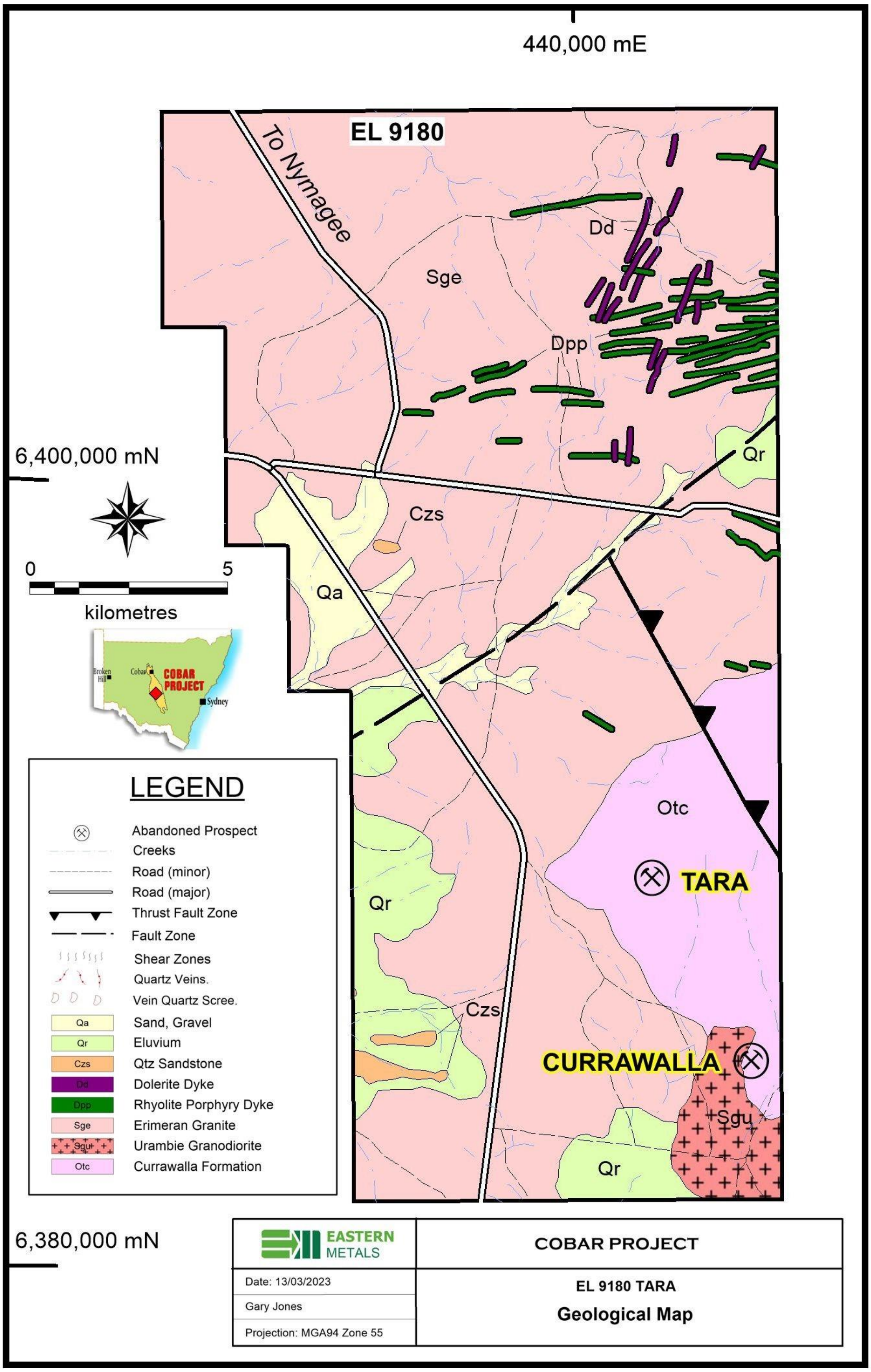


**Figure 2**. Geology of EL 9180 *Tara*

**Figure 3**. Currawalla Mine Shaft and Quartz Breccia

## Rare earths

Rare earth elements (**REE**), also known as the *lanthanides*, 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 REE, including their chemical properties. In common with most market participants, we include yttrium in this announcement as if it were a REE, but omit scandium and promethium, the latter because it is almost unknown in nature. It is common practice to refer to elements with atomic numbers 57 to 61 as light rare earths (**LRE**) and elements with atomic numbers 63 to 71 plus yttrium (atomic number 39) as heavy rare earths (**HRE**). The sum of the LRE and the HRE in a sample is known as the total rare earth (**TRE**) content of the sample.

Metal abundances 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. The oxide equivalent of the LRE is the light rare earth oxide (**LREO**), the heavy rare earth oxide (**HREO**) and the total rare earth oxide (**TREO**) respectively. Multipliers[3] used to convert elemental abundances to oxide equivalents are shown in Table 1.

**Table 1**. Conversion of Elemental Abundance to Oxide Abundance

| Light Rare Earths (LRE) | | | | Heavy Rare Earths (HRE) | | | |
|---|---|---|---|---|---|---|---|
| Atomic Number | Element | Oxide | Multiplier | Atomic Number | Element | Oxide | Multiplier |
| 57 | Lanthanum | $La_2O_3$ | 1.1728 | 63 | Europium | $Eu_2O_3$ | 1.1579 |
| 58 | Cerium | $CeO_2$ | 1.2284 | 64 | Gadolinium | $Gd_2O_3$ | 1.1526 |
| 59 | Praseodymium | $Pr_2O_3$ | 1.1703 | 65 | Terbium | $Tb_2O_3$ | 1.1762 |
| 60 | Neodymium | $Nd_2O_3$ | 1.1664 | 66 | Dysprosium | $Dy_2O_3$ | 1.1477 |
| 62 | Samarium | $Sm_2O_3$ | 1.1596 | 67 | Holmium | $Ho_2O_3$ | 1.1526 |
| | | | | 68 | Erbium | $Er_2O_3$ | 1.1435 |
| | | | | 69 | Thulium | $Tm_2O_3$ | 1.1421 |
| | | | | 70 | Ytterbium | $Yb_2O_3$ | 1.1387 |
| | | | | 71 | Lutetium | $Lu_2O_3$ | 1.1371 |
| | | | | 39 | Yttrium | $Y_2O_3$ | 1.2699 |

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

## Sampling and analysis

A total of 15 sites within Tara were recently visited. Two of these were selected based on regional geological interpretations, while the others were at the Currawalla mine site and nearby outcrops.

The samples were collected at four locations from mullock dumps near the shaft and from outcrop along the quartz breccia, over a length of approximately 80 metres. Sample coordinates were determined using a Garmin GPSMap65s GPS receiver. Samples were analysed in the field by an SciApps XR555 portable XRF (**pXRF**). This instrument has REE detection capability, due to its powerful 55kV beam. None of the samples collected contained visible chalcopyrite, pyrite or arsenopyrite, and none had malachite staining, which had been the prime rationale for investigating the mine.

However, the pXRF did show significantly high readings for the LRE cerium (Ce) and lanthanum (La) and the HRE proxy element yttrium (Y), in several samples. These samples were sent to an independent laboratory for assay for REE. They were crushed and pulverised and analysed by inductively coupled plasma atomic emission spectroscopy after aqua regia digestion. High grade REE samples were analysed by fusion and inductively coupled plasma mass spectroscopy.

Full assays for all REE analyses for the samples sent to the independent laboratory are shown in the tables in the Appendix. A summary of these results is set out in Table 2. Note that TREO assays for four samples exceed 1%, with a maximum of 3.38% TREO for sample T23-007. This sample also assayed 1.39% lead.

**Table 2**. TREO Assays

| Sample Number | Easting (m) | Northing (m) | RL (m) | Lithology | TLREO (ppm) | THREO (ppm) | TREO (ppm) | TREO (%) |
|---|---|---|---|---|---|---|---|---|
| T23-002 | 444562 | 6385195 | 298 | metasediments | 63 | 27 | 91 | 0.01 |
| T23-003 | 444514 | 6385352 | 302 | quartz/metasediments +/- Fe staining | 883 | 14 | 896 | 0.09 |
| T23-004 | 444514 | 6385352 | 302 | Kaolinised metasediments | 12,557 | 540 | 13,096 | 1.31 |
| T23-005 | 444514 | 6385352 | 302 | purple/red Fe metasediments | 2,935 | 32 | 2,966 | 0.30 |
| T23-006 | 444507 | 6385346 | 304 | red/brown Fe stained metasediments | 23,563 | 857 | 24,421 | 2.44 |
| T23-007 | 444507 | 6385346 | 304 | purple/grey metasilstone sheared | 31,940 | 1,909 | 33,849 | 3.38 |
| T23-008 | 444507 | 6385346 | 304 | quartz vein, sheared metasediment | 3,336 | 86 | 3,422 | 0.34 |
| T23-009 | 444542 | 6385386 | 309 | purple stained quartz vein, fractures | 2,033 | 55 | 2,087 | 0.21 |
| T23-010 | 444542 | 6385386 | 306 | quartz vein cutting numerous 2$^{o}$ veins | 22,317 | 395 | 22,711 | 2.27 |
| T23-011 | 444585 | 6385406 | 306 | quartz vein, fractured, Fe stained | 745 | 24 | 769 | 0.08 |
| T23-012 | 444585 | 6385406 | 306 | abundant purple/red Fe stained | 156 | 6 | 162 | 0.02 |
| T23-013 | 444585 | 6385406 | 306 | quartz vein with red/bn Fe staining | 51 | 1 | 52 | 0.01 |
| T23-014 | 444514 | 6385352 | 302 | quartz vein cutting numerous 2$^{o}$ veins | 1,563 | 78 | 1,641 | 0.16 |
| T23-015 | 444585 | 6385406 | 306 | milky quartz, Mn staining | 153 | 11 | 164 | 0.02 |

Samples T23-003, T23-004 and T23-011 were taken from near the shaft, samples T23-006, T23-007 and T23-008 from the mullock dump near the shaft, samples T23-009 and T23-010 were outcrop samples taken from the quartz breccia zone 50 metres to the north east of the shaft, and samples T23-012,T23-013 and T23-014 were outcrop samples taken from the quartz breccia zone 100 metres to the north east of the shaft. Most of these samples are highly anomalous in TREOs.

A photograph of sample T23-007 is shown in Figure 4. It is a purple to grey sheared metasiltstone. There are no visible REE or lead minerals in this sample. This is the sample that returned assays of 3.38% TREO and 2% lead.

**Figure 4**. Hand Specimen; Sample T23-007 (3.38% TREO)

## Aeromagnetic survey

An aeromagnetic survey was flown for the NSW Department of Mineral Resources (now Department of Regional NSW – Mining, Exploration and Geoscience) over much of the Cobar area in 1988. This survey covered all of EL 9180 *Tara*. The contractor was Tesla Airborne Geoscience Pty Ltd. The line spacing was 250 metres and the sensor height was 60 metres. The lines were flown in an east-west direction.

A contour map[4] of total magnetic intensity for the Currawalla mine area is shown in Figure 5. This map also shows the location of the mine shaft, and the locations of the samples collected and analysed, as set out in Table 2. There is a very clear spatial association between the shaft, the samples carrying high TREO, and the magnetic anomaly. This anomaly has never been drilled and its source remains unknown. It is a very high priority exploration target for EMS.

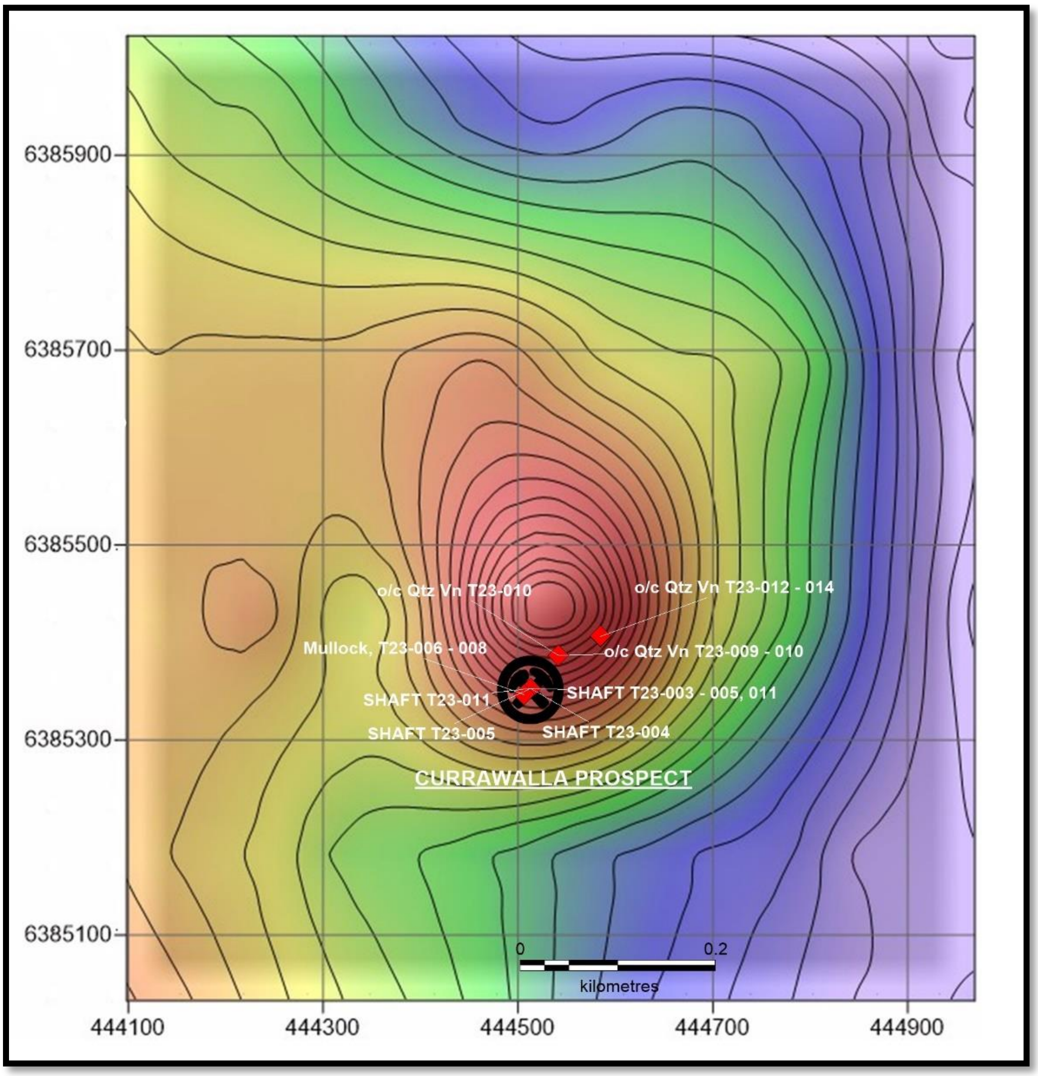


**Figure 5**. Aeromagnetic Anomaly, Currawalla Mine Shaft and Sample Locations

4 Contour interval 0.5nT. No regional background subtracted.

Modelling has shown that the magnetic anomaly cannot be explained, for example, by scrap iron that may have been disposed of in the shaft over many years.

## Proposed Work Program

A program of geological mapping, soil sampling and ground magnetic surveys at the Currawalla mine site and its environs has been prepared. This work will be conducted in forthcoming weeks. Depending on results, drilling will follow later.

## Application for a new Exploration Licence – ELA 6600 *Black Range*

Eastern Metals has applied for a new exploration licence, ELA 6600 *Black Range*, to secure vacant ground to the east and south of the Currawalla Mine, as well as nearby geological environments thought to be similar to that at the Currawalla mine site. This ELA covers 186 graticular units or approximately 540 square kilometres. If granted in full, it will be the Company's largest tenement in the Cobar Basin. It is shown in Figure 6.

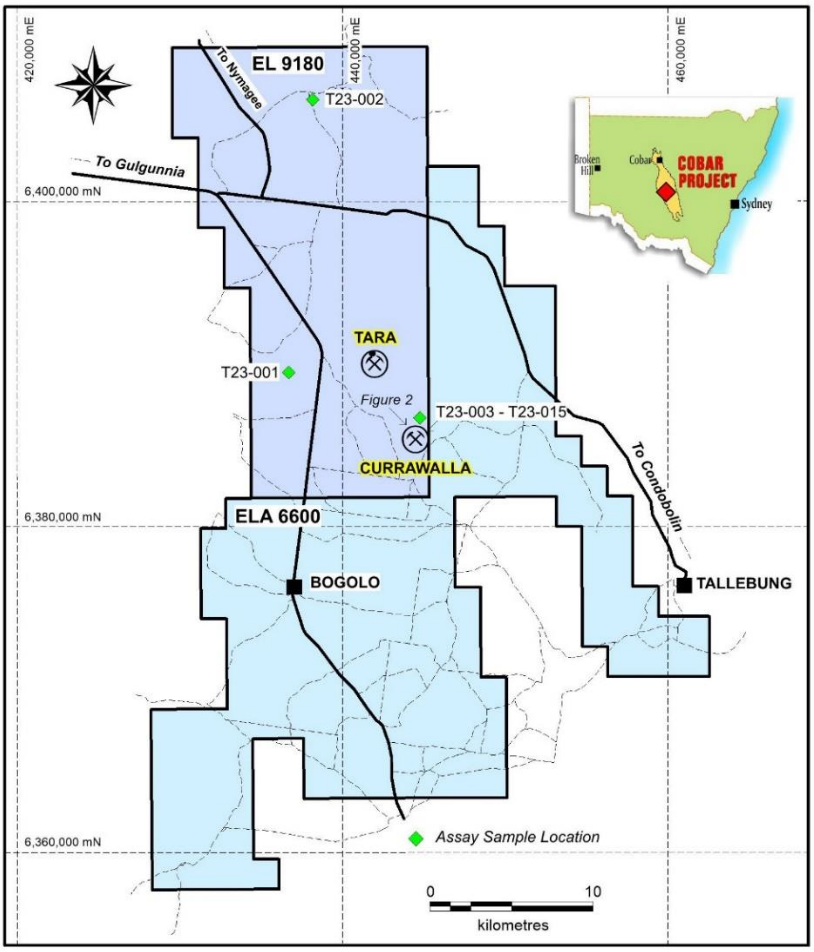


**Figure 6**. ELA 6600 *Black Range* and EL 9180 *Tara*

## 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 released on 18 August 2021. The Prospectus is available to view on the Company's website (www.easternmetals.com.au ) and on the ASX website (www.asx.com.au ). Other than the information 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 Prospectus 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
## ASSAYS – TARA PROJECT

| | Cerium | | Dysprosium | | Erbium | | Europium | | Gadolinium | | Holmium | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | Ce ppm | $CeO_2$ ppm | Dy ppm | $Dy_2O_3$ ppm | Er ppm | $Er_2O_3$ ppm | Eu | $Eu_2O_3$ ppm | Gd | $Gd_2O_3$ ppm | Ho ppm | $Ho_2O_3$ ppm |
| T23-001 | 54 | 66.3 | 8.2 | 9.4 | 4.2 | 4.8 | 2.4 | 2.8 | 8.5 | 9.8 | 1.65 | 1.9 |
| T23-002 | 26 | 31.9 | 2.6 | 3.0 | 1.4 | 1.6 | 0.3 | 0.3 | 2.2 | 2.5 | 0.53 | 0.6 |
| T23-003 | 437 | 536.8 | 2.9 | 3.3 | 0.8 | 0.9 | 2.4 | 2.8 | 7.3 | 8.4 | 0.36 | 0.4 |
| T23-004 | 5670 | 6965.0 | 133 | 152.6 | 29.5 | 33.7 | 79.5 | 92.1 | 284 | 327.3 | 16.05 | 18.4 |
| T23-005 | 1470 | 1805.7 | 8.2 | 9.4 | 1.5 | 1.7 | 8 | 9.3 | 24.4 | 28.1 | 0.89 | 1.0 |
| T23-006 | 10850 | 13328.1 | 212 | 243.3 | 47.4 | 54.2 | 131.5 | 152.3 | 473 | 545.2 | 25.9 | 29.7 |
| T23-007 | 13550 | 16644.8 | 528 | 606.0 | 100.5 | 114.9 | 305 | 353.2 | 1195 | 1377.4 | 60.4 | 69.2 |
| T23-008 | 1645 | 2020.7 | 21.5 | 24.7 | 4.5 | 5.1 | 13.1 | 15.2 | 46.1 | 53.1 | 2.53 | 2.9 |
| T23-009 | 909 | 1116.6 | 15.9 | 18.2 | 2.9 | 3.3 | 11.1 | 12.9 | 38 | 43.8 | 1.71 | 2.0 |
| T23-010 | 10700 | 13143.9 | 97.7 | 112.1 | 21.6 | 24.7 | 68.2 | 79.0 | 222 | 255.9 | 11.5 | 13.2 |
| T23-011 | 354 | 434.9 | 6.4 | 7.3 | 1.3 | 1.5 | 3.6 | 4.2 | 13 | 15.0 | 0.71 | 0.8 |
| T23-012 | 74 | 90.9 | 1.1 | 1.3 | 0.3 | 0.3 | 0.7 | 0.8 | 2.7 | 3.1 | 0.12 | 0.1 |
| T23-013 | 22 | 27.0 | 0.6 | 0.7 | 0.2 | 0.2 | 0.3 | 0.3 | 1 | 1.2 | 0.05 | 0.1 |
| T23-014 | 642 | 788.6 | 21.6 | 24.8 | 3.9 | 4.5 | 14.4 | 16.7 | 54.7 | 63.0 | 2.23 | 2.6 |
| T23-015 | 67 | 82.3 | 1.8 | 2.1 | 0.8 | 0.9 | 1.1 | 1.3 | 3.6 | 4.1 | 0.27 | 0.3 |

## APPENDIX
## ASSAYS – TARA PROJECT
## (continued)

| | Lanthanum | | Lutetium | | Niobium | | Neodimium | | Praesodymium | | Rubidium | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | La ppm | $La_2O_3$ ppm | Lu ppm | $Lu_2O_3$ ppm | Nb ppm | $Nb_2O_5$ | Nd ppm | $Nd_2O_3$ ppm | Pr ppm | $PrO_3$ ppm | Rb ppm | $Rb_2O$ |
| T23-001 | 25 | 29.3 | 0.63 | 0.7 | 17 | 24.3 | 31.8 | 37.1 | 7.5 | 8.8 | 107 | 117.0 |
| T23-002 | 11 | 12.9 | 0.21 | 0.2 | 14 | 20.0 | 10 | 11.7 | 3.1 | 3.6 | 403 | 440.7 |
| T23-003 | 132 | 154.8 | 0.09 | 0.1 | 1 | 1.4 | 110.5 | 128.9 | 33.4 | 39.1 | 11 | 12.0 |
| T23-004 | 1465 | 1718.2 | 1.6 | 1.8 | 1 | 1.4 | 2240 | 2612.7 | 526 | 615.6 | 9 | 9.8 |
| T23-005 | 434 | 509.0 | 0.09 | 0.1 | 3 | 4.3 | 358 | 417.6 | 109 | 127.6 | 28 | 30.6 |
| T23-006 | 2900 | 3401.1 | 2.62 | 3.0 | 3 | 4.3 | 3960 | 4618.9 | 979 | 1145.7 | 10 | 10.9 |
| T23-007 | 2860 | 3354.2 | 3.49 | 4.0 | 1 | 1.4 | 6870 | 8013.2 | 1375 | 1609.2 | 18 | 19.7 |
| T23-008 | 449 | 526.6 | 0.24 | 0.3 | 1 | 1.4 | 451 | 526.0 | 127.5 | 149.2 | 7 | 7.7 |
| T23-009 | 258 | 302.6 | 0.16 | 0.2 | 1 | 1.4 | 356 | 415.2 | 87.8 | 102.8 | 6 | 6.6 |
| T23-010 | 3120 | 3659.1 | 1.28 | 1.5 | 8 | 11.4 | 3220 | 3755.8 | 935 | 1094.2 | 7 | 7.7 |
| T23-011 | 85 | 99.7 | 0.11 | 0.1 | 2 | 2.9 | 122.5 | 142.9 | 30.8 | 36.0 | 12 | 13.1 |
| T23-012 | 19 | 22.3 | 0.05 | 0.1 | 2 | 2.9 | 25.1 | 29.3 | 6 | 7.0 | 7 | 7.7 |
| T23-013 | 8 | 9.4 | 0 | 0.0 | 2 | 2.9 | 8.4 | 9.8 | 2.3 | 2.7 | 6 | 6.6 |
| T23-014 | 159 | 186.5 | 0.19 | 0.2 | 1 | 1.4 | 339 | 395.4 | 68.2 | 79.8 | 12 | 13.1 |
| T23-015 | 15 | 17.6 | 0.1 | 0.1 | 0 | 0.0 | 30.8 | 35.9 | 6.6 | 7.7 | 6 | 6.6 |

## APPENDIX
## ASSAYS – TARA PROJECT
## (continued)

| | Samarium | | Terbium | | Thulium | | Yttrium | | Ytterbium | |
|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE | Sm ppm | $Sm_2O_3$ ppm | Tb ppm | $Tb_2O_3$ ppm | Tm ppm | $Tm_2O_5$ | Y ppm | $Y_2O_3$ ppm | Yb ppm | $Yb_2O_3$ ppm |
| T23-001 | 7.4 | 8.6 | 1.34 | 1.6 | 0.67 | 0.8 | 46 | 58.4 | 4.4 | 5.0 |
| T23-002 | 2.5 | 2.9 | 0.4 | 0.5 | 0.24 | 0.3 | 15 | 19.0 | 1.7 | 1.9 |
| T23-003 | 17.4 | 20.2 | 0.79 | 0.9 | 0.06 | 0.1 | 6 | 7.6 | 0.4 | 0.5 |
| T23-004 | 477 | 553.1 | 32.2 | 37.9 | 2.93 | 3.3 | 217 | 275.6 | 14.1 | 16.1 |
| T23-005 | 56.6 | 65.6 | 2.49 | 2.9 | 0.17 | 0.2 | 12 | 15.2 | 0.8 | 0.9 |
| T23-006 | 791 | 917.2 | 52.7 | 62.0 | 4.59 | 5.2 | 342 | 434.3 | 22.5 | 25.6 |
| T23-007 | 1695 | 1965.5 | 135 | 158.8 | 9.17 | 10.5 | 710 | 901.6 | 38.8 | 44.2 |
| T23-008 | 84.9 | 98.5 | 5.31 | 6.2 | 0.46 | 0.5 | 34 | 43.2 | 2.5 | 2.8 |
| T23-009 | 71.3 | 82.7 | 4.35 | 5.1 | 0.26 | 0.3 | 19 | 24.1 | 1.3 | 1.5 |
| T23-010 | 504 | 584.4 | 25 | 29.4 | 2.28 | 2.6 | 157 | 199.4 | 10.5 | 12.0 |
| T23-011 | 23.5 | 27.3 | 1.59 | 1.9 | 0.14 | 0.2 | 9 | 11.4 | 0.6 | 0.7 |
| T23-012 | 4.5 | 5.2 | 0.26 | 0.3 | 0.06 | 0.1 | 3 | 3.8 | 0.2 | 0.2 |
| T23-013 | 1.6 | 1.9 | 0.12 | 0.1 | 0 | 0.0 | 0 | 0.0 | 0.2 | 0.2 |
| T23-014 | 83 | 96.2 | 5.87 | 6.9 | 0.43 | 0.5 | 29 | 36.8 | 1.6 | 1.8 |
| T23-015 | 6.7 | 7.8 | 0.46 | 0.5 | 0.1 | 0.1 | 5 | 6.3 | 0.5 | 0.6 |

## JORC TABLE 1

# 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.* | Outcrop and mullock samples from an old shaft were collected at sites across the EL. The GPS locations were recorded using a Garmin GPS Model GPDMAP 65S. All samples were analysed with a new Sci-Apps X-555 portable XRF (pXRF). Fifteen samples that showed high pXRF readings were sent to an independent laboratory for assay. These samples were crushed and pulverised and analysed by inductively coupled plasma atomic emission spectroscopy after aqua regia digestion. High grade REEs were analysed by fusion and inductively coupled plasma mass spectroscopy. |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | The X555 pXRF had been calibrated against a set of assay result pulps and found to have very good representation. Multiple pXRF measurements were repeated & showed high levels of repeatability. There were no visible REE or base metal minerals in the samples tested with the pXRF or sent to the laboratory for assay. Because there were no interesting minerals seen in the samples, there was no visual bias in the selection of samples for testing. The independent laboratory has its own QA/QC procedures |
| | *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 solid rock samples, either outcrop or mullock from a shaft. One inherent issue with XRF readings on rock or core is the relatively small area analysed and the selective nature of the result. To demonstrate repeatability of the pXRF technique, most of the samples were analysed twice; and one sample had ten paired shots measured from different parts of the sample. In any case, the pXRF is regarded as a first pass screening technique and anomalous samples were sent for assay. |
| *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* | All samples sent for assay were photographed |
| | *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.* | Samples were collected, appraised and pXRF measurements were taken on freshly broken surfaces. At the laboratory, samples were crushed, pulverised and analysed by inductively coupled plasma atomic emission spectroscopy after aqua regia digestion. High grade REEs were analysed by fusion and inductively coupled plasma mass spectroscopy. |
| | *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.* | Outcrop material and hand samples were pXRF tested twice to determine repeatability and representivity of pXRF readings. The geologists in charge of the program recognised the need to ensure samples collected were representative. Because no base metal or REE minerals were seen, bias was avoided. Samples with anomalous pXRF readings were sent to an independent laboratory for assay. |
| | *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.* | Samples were subjected to pXRF twice to determine repeatability and representivity of XRF readings. Samples with anomalous pXRF readings were sent to an independent laboratory for assay, No base metal or REE minerals were seen so bias was avoided. |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | Samples compromised granite, quartz and metasediments; the specimen size 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 analytical process adopted by the laboratory is summarised above and is regarded as appropriate and is in line with best industry practice. |
| | *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 new Sci-Apps X-555 portable pXRF instrument was used for in-field screening to determine which samples should be sent for assay. The airborne geophysical survey was carried out by Tesla Airborne Geoscience Pty Ltd in 1988. The line spacing was 250 metres and the sensor height was 60 metres. The lines were flown in an east-west direction. |
| | *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.* | To demonstrate repeatability of the pXRF technique, most of the Tara samples were analysed twice; and one sample had ten paired shots measured from different parts of the sample. The laboratory used, Australian Laboratory Services, has its own QA/QC procedures in relation to testing of standards, blanks and duplicates. No third-party laboratory checks have been carried out. |
| *Verification of sampling and assaying* | *The verification of significant intersections by either independent or alternative company personnel.* | Two independent qualified geologists working under separate contracts to EMS carried out the sampling program. |
| | *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 laptop computer. |
| | *Discuss any adjustment to assay data.* | Assay information was provided by the laboratory to EMS as elemental abundances. EMS converted those to oxide abundances using the stochiometric conversion factors set out in Table 1 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 using a handheld Garmin GPS Model GPDMAP 65S, with +/- 3m of horizontal accuracy, 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 collected from three sites that were investigated as areas of interest within EL 9180. Anomalous REE values were recorded from one of these namely the Currawalla Mine. Thirteen samples were collected at the mine shaft, a mullock dump, and over a length of approximately 100 metres of the prospective quartz breccia zone. |
| | *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, individual specimens, whether collected from the same position or not, were sent for assay. |
| *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 collected from mullock dumps and outcrop on a quartz breccia unit. There was no biased sampling because several samples were taken from the same position. |
| | *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.* | The samples were taken from site by the two consultant geologists that carried out the fieldwork and were delivered by hand to Australian Laboratory Services' laboratory in Orange, NSW. ALS subsequently sent prepared sample to their Brisbane laboratory where the REE assaying was performed. |
| *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:*<br>• *easting and northing of the drill hole collar*<br>• *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>• *dip and azimuth of the hole*<br>• *down hole length and interception depth*<br>• *hole length.* | No drilling results are reported herein. Eastings and northings, along with RLs, of the sample locations were recorded using a Garmin GPS Model GPDMAP 65S and are set out in Table 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 – individual samples, not drill core, 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 and highly anomalous assays indicate the presence of REEs in outcrop and in mullock samples from a historic shaft. |
| *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, soil sampling and ground magnetic surveys near the interpreted geological contact of Urambie Granodiorite and Bendoc Group, and elsewhere. |
| | *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 historic shaft and associated quartz shear zone are shown in drawings and photos in the main body of this report. |