

## REE Discovery Viper Project Jerramungup WA

15 May 2023

# EMU NL

RARE EARTHS ELEMENTS, PRECIOUS AND BASE METALS EXPLORER

EMU NL (ASX: EMU) (“**EMU**” or “**the Company**”) is pleased to announce an exciting **REE discovery** and in doing so, a new REE region. Long awaited<sup>1</sup>, multi element assay results from its maiden drilling campaign at the 100% owned Viper Project, near Jerramungup, in Western Australia, have returned significant, anomalous REE (Rare Earth Element) values.

### HIGHLIGHTS

- Assay results from EMU’s maiden RC drilling program at its Viper Project have confirmed the discovery of an entirely new REE region near Jerramungup WA.
- Zones of REE mineralisation, hosted in basement Gneiss/Granite rocks and adjacent weathered clays, were encountered from shallow depths in RC drilling varying from 20m to 52m in thickness.
- Significant drill assays from 4m composite drill samples include:
  - Drillhole 22VRC001: **40m @ 438.70 ppm TREO** from 28m
  - Drillhole 22VRC002: **4m @ 566.5 ppm TREO** from 12m  
and **20m @ 432.7 ppm TREO** from 84m
  - Drillhole 22VRC003: **20m @ 654.23 ppm TREO** from 0m  
including **4m @ 1,137.68 ppm TREO** from 16m
  - Drillhole 22VRC004: **32m @ 459.87 ppm TREO** from 0m
  - Drillhole 22VRC005: **52m @ 541.95 ppm TREO** from 4m  
including **28m @ 648.12 ppm TREO** from 4m
- **All drill holes** ended in significantly **anomalous** (composite) REE up to **380.9 ppm TREO<sup>2</sup>** with an overall sample average **MREO<sup>3</sup> of 29.4%** and **HREO<sup>4</sup> of 15.6%**.
- Drilling confirms EMU’s conceptual mineralisation model highlighting the project’s clay hosted REE enrichment overlaying the adjacent Granite/Gneiss terrain.

<sup>1</sup> ASX Release 23 November 2023 “Maiden Drilling Programme Commences at EMU’s Ni-Cu-PGE, Gold Viper Project, Jerramungup WA”

<sup>2</sup> TREO Total Rare Earth Oxides

<sup>3</sup> Total Magnetic Rare Earth Oxides

<sup>4</sup> Total Heavy Rare Earth Oxides

- Application lodged for a further **120 square km** extension immediately to the south of existing tenements covering an identical geological setting.
- Follow-up extensional drilling is being planned over the main portion of the REE mineralisation zones with the aim of increasing the overall strike, width, and depth of the mineralisation.
- The project is located in the south-eastern wheatbelt with sealed road access and is adjacent to the town of Jerramungup in the WA wheatbelt.
- The discovery represents as a potentially large scale REE project with good access to infrastructure and workforce.

EMU's RC (Reverse Circulation) drilling programme, completed in November 2022, was undertaken to test anomalous geochemical nickel and copper occurrences, geophysical electromagnetic conductors generated from its comprehensive, systematic exploration programmes<sup>5</sup> and to test possible extensions of the historic Netty Copper Mine copper mineralisation. Fire assays were completed for gold and PGEs. That analysis was followed by the application of much more time consuming 62 Multi Element assay method for base metals and REE using the pulp samples that were fire assayed.

Assay results from the drilling have revealed significant REE anomalism. Surface rock samples collected from EMU's exploration campaign reconnaissance activities have also recorded widespread REE anomalism.

Prompted by EMU's conceptual modelling, but without the benefit of the multi element assays, 38 rock samples were collected from outcropping granites within the area adjoining the existing Viper Project tenements to the south and these samples have reported strong REE anomalism. (See Figure 2.)

Accordingly, EMU applied for an additional 120 square kms of exploration license ground, bringing the total project exploration area to 242 square kms.

**Peter Thomas, EMU Chairman commented,**

*"The assay results taken from rock chip samples and 5 RC drill holes at Viper have led EMU to declare a REE project discovery. The results are highly anomalous and encouragingly exhibit thick mineralised zones throughout the length of drill holes. We are extremely encouraged that the samples taken from outcropping rocks over the wider project area have all reported anomalous REE mineralisation."*

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<sup>5</sup> See ASX Release 22 November 2022 "Maiden Drilling Programme Commences at EMU's Ni-Cu-PGE, Gold Viper Project, Jerramungup WA"

*The discovery prompted EMU to immediately apply for further exploration licences covering similar geology adjoining the Viper Project”.*

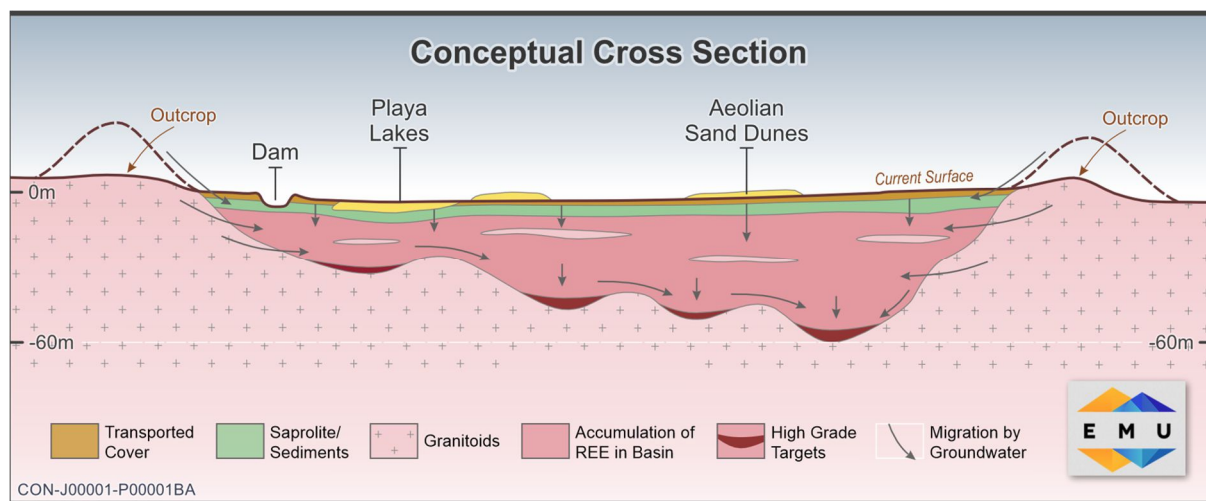
## Viper Project Drilling

The high value REE TREO assay results were recorded from 4m composite drill samples which are likely to be significantly upgraded once the 1m split interval assay results are received. The anomalous REE results have been recorded both in the saprolite, “clay” layers and within the “basement” hard rock sections of the drill column. REE mineralisation was encountered through broad zones in all drill holes.

REE TREO averaged 365 ppm across the entire 5 drill holes, with all drill holes ending in anomalous mineralisation indicating mineralisation of the underlying basement rocks.

## Conceptual Model – Clay Hosted REE at Viper Project

EMU expects to identify REE supergene concentrations in clay zone “traps” in adjacent saprolite weathering profiles overlying and adjacent to the fertile granite suites within the Viper Project.

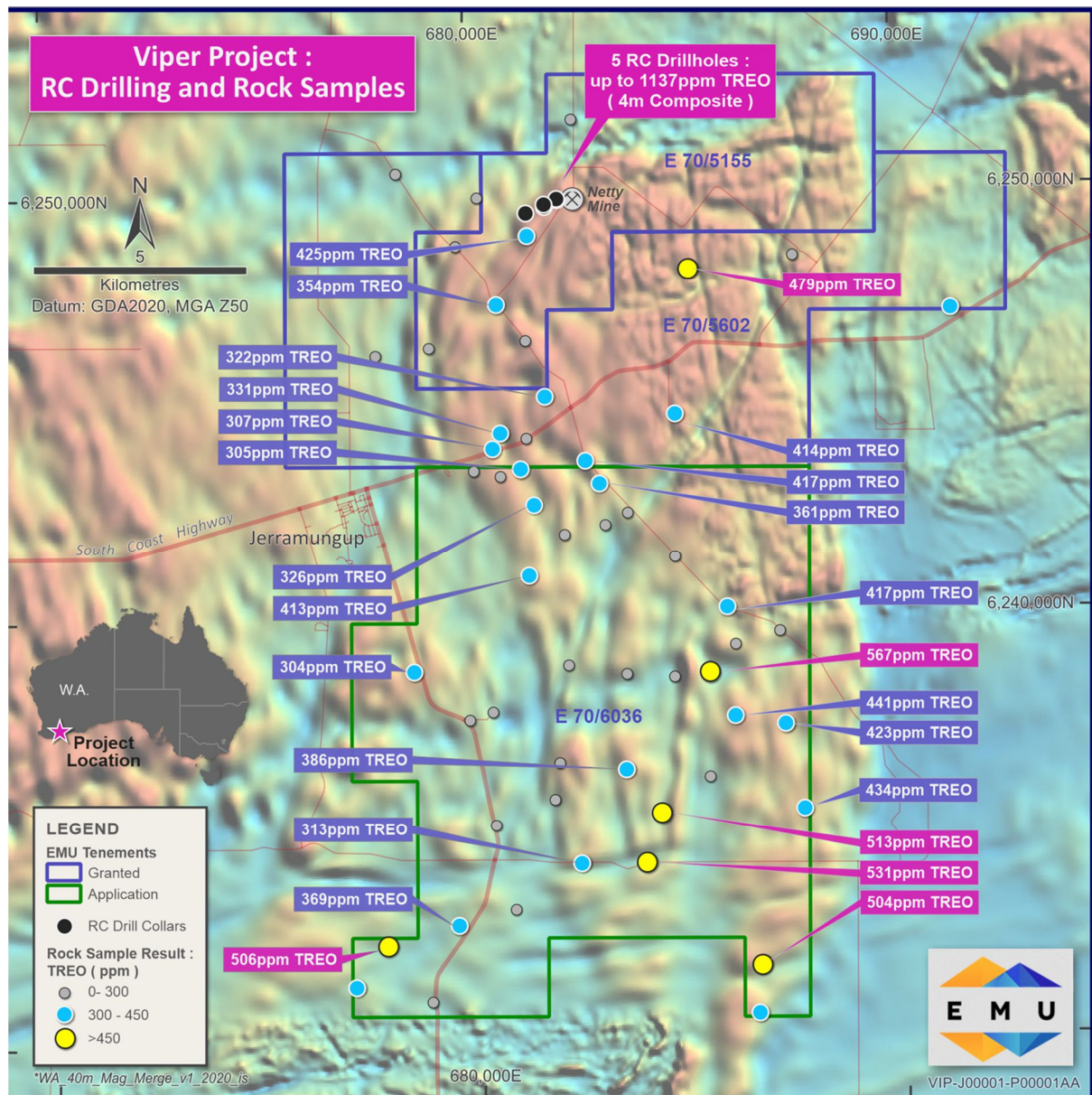


**Figure 1. A conceptual cross section of the granite suite at Viper showing outcrops locations and prospective enriched clay layers and clay traps.**

## Follow Up Work Programme

EMU has initiated the planning of a follow up Aircore drilling programme to target the deeper clay zones. To assist in the preparation of the drill collar locations, EMU has engaged Resource Potentials, Geophysics Consultancy, to review open-source data such as aeromagnetic imaging to ascertain deeper weathered zone targets adjacent and overlaying the granite suites.

Confirmation of depth of clays from this review will be tested in the field based by a passive seismic survey which will confirm clay depths over basement rocks and provide vectors for aircore drilling. Following the survey, which provides immediate in field results, EMU will commence a stage 1 Aircore drilling programme.



**Figure 2. Map with underlying areomagnetic layer showing Viper Project with new tenement area under application in the south of granted tenements.**



**For further information, please contact:**

Doug Grewar  
**Chief Executive Officer**  
Emu NL

Investors can sign into our interactive investor hub and join in on the conversation with Emu NL.

<https://investorhub.emunl.com.au/auth/signup>  
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Table 1. Significant Rock Sample Results > 450 TREO (PPM & %)

Site_ID	Medium	Easting	Northing	TREO	MREO %	HREO %	CREO %	CeO2	Dy2O3	Er2O3	Eu2O3	Gd2O3	Ho2O3	La2O3	Lu2O3	Nd2O3	Pr6O11	Sm2O3	Tb4O7	Tm2O3	Y2O3	Yb2O3
ESS01857	Granitoid	685503	6238585	567	21.5	3.2	18.0	251.83	2.16	0.77	2.42	5.04	0.31	164.19	0.09	88.30	30.90	10.90	0.48	0.09	8.81	0.64
ESS01871	Granitoid	683920	6234125	531	20.6	5.4	19.2	244.80	3.27	1.40	2.23	5.94	0.60	138.39	0.16	80.36	24.93	11.05	0.69	0.21	15.37	1.18
ESS01867	Granitoid	684297	6235293	513	25.9	14.3	29.4	201.46	9.31	3.49	3.15	14.29	1.53	94.53	0.34	96.69	24.69	18.79	1.85	0.47	39.49	2.49
ESS01880	Granitoid	677794	6232566	506	21.9	3.6	18.6	227.23	1.97	0.70	1.03	5.23	0.30	140.74	0.08	81.41	26.57	10.17	0.56	0.08	8.95	0.52
ESS01873	Granitoid	686585	6231669	504	20.8	4.8	18.8	234.26	2.96	1.05	2.01	6.13	0.47	131.35	0.11	77.33	23.87	11.18	0.63	0.14	11.81	0.82
ESS01764	Granitoid	685186	6248102	479	23.9	8.5	24.3	206.15	4.61	1.81	3.65	8.92	0.73	106.14	0.20	85.26	23.52	13.80	1.02	0.25	21.72	1.46

Table 2. Significant RC Sample Results > 450 TREO (PPM & %)

Sample_ID	Interval (m)	TREO	MREO %	HREO %	CREO %	CeO2	Dy2O3	Er2O3	Eu2O3	Gd2O3	Ho2O3	La2O3	Lu2O3	Nd2O3	Pr6O11	Sm2O3	Tb4O7	Tm2O3	Y2O3	Yb2O3
ERC09166	4	1137.68	22.52	10.75	24.78	510.69	11.11	5.45	5.01	20.52	2.05	226.35	0.55	187.79	54.77	30.73	2.57	0.72	75.43	3.94
ERC09236	4	863.2	24.92	13.76	28.57	338.51	13.08	5.91	6.55	20.17	2.42	172.40	0.71	156.30	43.18	27.48	2.51	0.79	68.19	5.00
ERC09242	4	715.36	24.96	12.04	27.62	292.83	9.06	4.23	5.19	14.98	1.70	141.91	0.49	131.80	35.93	21.57	1.78	0.58	49.78	3.54
ERC09241	4	679	24.35	10.54	25.97	289.31	7.70	3.52	4.56	13.37	1.41	138.39	0.41	122.47	33.70	19.37	1.59	0.51	40.13	2.98
ERC09162	4	639	24.22	8.66	24.54	278.77	6.28	2.56	4.59	12.10	1.08	133.70	0.30	115.24	31.72	19.48	1.48	0.34	29.21	2.00
ERC09237	4	637	24.19	11.54	26.71	257.69	7.80	3.64	4.50	12.68	1.44	138.39	0.38	113.61	31.25	18.32	1.52	0.47	42.80	2.86
ERC09235	4	630	24.6	10.55	25.91	263.54	7.92	3.33	4.43	13.02	1.39	131.35	0.39	113.37	32.07	18.55	1.54	0.42	35.94	2.52
ERC09208	4	589	21.81	15.84	28.42	235.43	8.42	4.39	4.27	12.56	1.55	120.80	0.60	93.31	25.04	16.47	1.59	0.64	59.69	3.78
ERC09209	4	568	24.86	15.51	30.38	216.69	8.93	3.80	4.94	14.75	1.52	108.95	0.40	103.34	27.03	18.79	1.84	0.51	53.46	2.86
ERC09132	4	567	24.19	39.09	47.25	142.90	21.92	11.89	7.57	25.01	4.23	60.75	1.18	90.86	20.48	22.50	3.80	1.43	143.50	8.48
ERC09165	4	558	24.54	13.84	29.07	210.83	7.15	3.17	4.30	12.91	1.27	119.63	0.33	101.24	26.92	17.63	1.55	0.45	47.88	2.51
ERC09152	4	557	24.87	10.62	26.48	231.92	6.47	2.63	4.09	12.33	1.09	113.18	0.28	102.88	27.62	17.86	1.47	0.34	32.51	1.98
ERC09207	4	529	24.39	10.96	26.48	201.46	5.92	2.69	3.87	10.67	1.00	127.84	0.35	95.53	26.21	15.77	1.25	0.39	33.40	2.27
ERC09239	4	523	23.48	12.73	27.1	214.35	6.39	3.21	3.69	10.71	1.23	108.60	0.40	90.16	25.04	14.73	1.27	0.45	40.26	2.71
ERC09210	4	490	23.87	18.3	31.38	185.07	8.33	4.65	3.72	12.68	1.62	89.02	0.59	84.33	22.59	15.31	1.62	0.67	55.62	3.80
ERC09240	4	489	24.73	11.91	27.24	196.78	6.34	2.94	3.84	10.64	1.13	101.10	0.33	88.88	24.34	15.42	1.27	0.38	32.76	2.40
ERC09232	4	487	23.08	8.96	23.76	209.66	4.73	2.00	2.92	8.39	0.86	110.71	0.24	82.58	23.99	13.22	1.05	0.27	24.38	1.70
ERC09122	4	486	23.66	9.01	24.46	206.15	4.82	2.02	3.66	9.66	0.82	108.37	0.20	85.73	23.29	14.73	1.08	0.23	23.49	1.43
ERC09163	4	485	24.7	10.36	26.16	187.41	5.31	2.37	3.84	9.87	0.93	116.11	0.28	88.53	24.69	14.15	1.24	0.33	27.94	1.98
ERC09116	4	461	23.85	9.89	25.34	194.44	5.08	2.02	3.86	9.49	0.85	98.87	0.23	81.76	22.00	14.61	1.14	0.25	25.02	1.55
ERC09119	4	460	23.76	9.55	25.04	194.44	4.79	2.02	3.68	9.20	0.78	100.27	0.24	81.65	21.77	14.26	1.07	0.24	24.00	1.57
ERC09117	4	454	24.1	10.1	25.68	188.58	4.88	2.23	3.80	9.64	0.84	98.05	0.23	81.65	21.77	14.38	1.13	0.26	25.14	1.54
ERC09164	4	452	23.41	11.11	25.87	185.07	4.77	2.39	3.31	8.88	0.87	100.74	0.28	78.15	21.77	12.64	1.09	0.32	29.59	2.00
ERC09153	4	451	25.13	10.17	26.5	187.41	5.11	2.18	3.82	9.94	0.88	92.18	0.22	85.03	22.12	14.96	1.19	0.29	24.51	1.62
ERC09265	4	450	22.93	6.63	21.97	200.29	3.45	1.35	2.45	6.97	0.57	107.43	0.15	76.98	22.00	11.48	0.84	0.18	15.24	1.09

Table 3. Other Rock Sample Results <450 and >250 TREO (PPM & %)

Site_ID	Medium	Easting	Northing	TREO	MREO %	HREO %	CREO %	CeO2	Dy2O3	Er2O3	Eu2O3	Gd2O3	Ho2O3	La2O3	Lu2O3	Nd2O3	Pr6O11	Sm2O3	Tb4O7	Tm2O3	Y2O3	Yb2O3
ESS01863	Granitoid	686076	6237548	441	24.83	14.25	28.57	171.01	7.76	3.03	2.65	11.64	1.25	87.84	0.28	79.32	20.71	16.23	1.59	0.41	34.54	2.28
ESS01865	Granitoid	687662	6235338	434	20.67	4.97	19	216.69	2.42	1.01	1.79	4.94	0.38	98.05	0.15	66.60	20.13	9.15	0.54	0.14	11.09	0.90
ESS01712	Granitoid	681408	6248953	425	25.08	10.07	26.4	176.87	4.60	2.08	3.39	8.64	0.78	87.61	0.23	79.55	21.42	13.34	1.02	0.26	23.62	1.56
ESS01862	Granitoid	687255	6237340	423	19.83	3.1	16.94	208.49	1.46	0.53	1.71	3.63	0.23	109.89	0.07	61.82	20.25	7.71	0.37	0.08	6.30	0.47
ESS01753	Granitoid	682672	6243620	417	19.76	3.5	17.2	200.29	1.58	0.64	1.34	3.61	0.26	113.29	0.08	61.00	19.43	6.97	0.38	0.09	7.42	0.52
ESS01861	Granitoid	685939	6240105	417	19.87	3.21	17.09	199.12	1.42	0.55	1.41	3.53	0.24	114.47	0.08	61.35	19.66	7.18	0.35	0.07	6.68	0.48
ESS01766	Granitoid	684803	6244686	414	24.65	9.15	25.29	176.87	4.37	1.77	3.22	8.38	0.69	86.55	0.19	76.28	20.48	12.99	0.98	0.24	19.94	1.34
ESS01849	Granitoid	681293	6240931	413	25.45	39.01	46.42	87.50	18.25	10.61	5.51	17.87	3.36	57.94	1.13	67.18	17.09	16.93	2.69	1.27	98.29	7.82
ESS01868	Granitoid	683484	6236333	386	25.49	10.5	26.99	158.13	4.69	1.74	3.36	8.93	0.74	77.87	0.17	73.37	19.31	13.34	1.00	0.23	21.72	1.28
ESS01879	Granitoid	676908	6231329	371	22.12	8.85	22.84	161.64	3.53	1.62	1.89	5.97	0.63	87.73	0.14	59.60	18.02	8.84	0.81	0.19	18.79	1.09
ESS01881	Granitoid	679468	6232733	369	22.34	4.55	19.71	154.61	2.27	0.75	1.89	4.68	0.32	107.90	0.07	60.54	19.08	8.35	0.56	0.09	7.51	0.52
ESS01767	Granitoid	691339	6247065	368	20.22	7.64	20.29	167.50	3.26	1.48	1.24	5.09	0.56	92.42	0.14	53.77	16.62	7.95	0.68	0.18	15.62	1.06
ESS01845	Granitoid	682992	6243078	362	24.46	12.45	27.28	139.38	5.22	2.49	3.18	8.36	0.86	79.87	0.20	64.27	18.02	12.06	1.00	0.27	25.02	1.63
ESS01756	Granitoid	680651	6247331	354	23.27	10.11	24.86	148.76	3.97	1.90	2.83	6.81	0.71	78.93	0.23	60.89	16.74	10.38	0.85	0.25	19.56	1.55
ESS01751	Granitoid	680684	6244306	331	24.28	9.49	25.3	139.38	3.62	1.52	2.64	6.62	0.61	71.42	0.15	59.95	16.03	10.26	0.79	0.21	16.76	1.16
ESS01844	Granitoid	681443	6242599	326	23.96	10.35	25.34	125.33	4.03	1.83	2.55	6.21	0.62	80.81	0.18	56.69	16.74	10.40	0.74	0.22	18.67	1.26
ESS01752	Granitoid	681750	6245145	322	22.74	8.64	23.32	139.38	3.25	1.43	2.25	5.61	0.54	74.82	0.16	54.12	15.21	8.62	0.68	0.19	14.86	1.12
ESS01874	Granitoid	682384	6234135	313	23.84	8.79	24.3	134.70	3.16	1.28	2.29	5.76	0.55	68.73	0.15	55.29	15.45	8.93	0.70	0.18	14.60	1.12
ESS01872	Granitoid	686500	6230547	308	20.67	5.43	19.4	141.73	1.99	0.71	1.97	3.85	0.33	79.75	0.08	46.66	14.63	6.57	0.41	0.10	8.74	0.51
ESS01761	Granitoid	680495	6243941	307	24.26	9.96	25.69	128.84	3.45	1.54	2.51	5.95	0.58	66.03	0.17	55.52	14.86	9.08	0.74	0.21	16.76	1.21
ESS01843	Granitoid	681146	6243453	305	24.24	9.92	25.24	119.47	3.51	1.58	2.55	5.83	0.57	73.53	0.16	53.65	16.03	9.29	0.69	0.19	16.51	1.20
ESS01851	Granitoid	678537	6238717	304	23.35	39.94	45.38	79.77	13.89	7.81	4.23	13.60	2.54	30.84	0.86	44.21	10.72	12.64	2.09	0.97	73.40	6.13
ESS01846	Granitoid	683644	6242377	291	21.06	8.39	21.31	124.16	2.72	1.23	1.40	4.73	0.45	75.53	0.15	43.74	14.28	7.36	0.53	0.14	13.59	0.89
ESS01765	Granitoid	687645	6248384	290	24.01	9.43	25.11	124.16	3.03	1.35	2.36	5.42	0.52	61.81	0.15	51.79	14.16	8.42	0.67	0.18	14.98	1.07
ESS01754	Granitoid	682678	6243617	284	20.26	5.26	19.18	130.01	1.73	0.81	2.29	3.02	0.29	76.11	0.13	42.46	12.99	5.25	0.37	0.11	7.63	0.84
ESS01859	Granitoid	686397	6239959	283	24.21	11.3	26.07	110.92	3.91	1.70	2.59	6.09	0.58	64.15	0.17	49.11	14.75	9.32	0.71	0.21	17.40	1.20
ESS01841	Granitoid	680043	6243422	271	24.66	11.49	26.93	99.91	3.53	1.64	2.55	5.73	0.56	65.56	0.15	48.64	13.93	8.98	0.64	0.19	17.52	1.14



Table 4. Viper RC Drilling Collar File

Hole ID	Hole Type	Easting	Northing	EOH Depth	Dip	Az	NAT RL	Prospect
22VRC001	RC	682132	6249785	78	-60	160	268	Viper
22VRC002	RC	682124	6249807	120	-60	160	268	Viper
22VRC003	RC	681831	6249629	150	-60	175	254	Viper
22VRC004	RC	681825	6249682	120	-60	175	256	Viper
22VRC005	RC	681394	6249485	119	-60	170	257	Viper

## Emu NL

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### Fully paid shares (listed)

1,450,021,079 (including 18.6m the subject of the ATM which EMU can buy back for nil consideration)

### Contributing Shares (listed)

40,485,069 paid to \$0.03, \$0.03 to pay, no call before 31 December 2023

### Contributing Shares (Unlisted)

35,000,000 paid to \$0.0001, \$0.04 to pay, no call before 31 December 2025

### Options (unlisted)

172,453,621 options to acquire fully paid shares, exercisable at \$0.01 each, on or before 7 October 2024

### Performance Rights (Unlisted)

48,571,429 performance rights in relation to acquisition of Gnows Nest project

### Directors:

**Peter Thomas**  
Non-Executive Chairman

**Terry Streeter**  
Non-Executive Director

**Gavin Rutherford**  
Non-Executive Director

**Tim Staermose**  
Non-Executive Director

### Investor enquiries:

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## COMPETENT PERSON'S STATEMENT

The information in this report that relates to exploration results is based on, and fairly represents information and supporting documentation prepared by Kurtis Dunstone, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Dunstone is an employee of EMU NL and has sufficient experience in the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the *"Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves"*. Mr Dunstone consents to the inclusion herein of the matters based upon his information in the form and context in which it appears.

## FORWARD LOOKING STATEMENTS

As a result of a variety of risks, uncertainties and other factors, actual events and results may differ materially from any forward looking and other statements herein not purporting to be of historical fact. Any statements concerning mining reserves, resources and exploration results are forward looking in that they involve estimates based on assumptions. Forward looking statements are based on management's beliefs, opinions and estimates as of the respective dates they are made. The Company does not assume any obligation to update forward looking statements even where beliefs, opinions and estimates change or should do so given changed circumstances and developments.

## NEW INFORMATION OR DATA

EMU confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Mineral Resources, which all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not materially changed from the original market announcement.

JORC Code 2012 Edition Table 1:  
Section 1- Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>A total of 18, 1-2kg surface rock samples were collected for assay.</li> <li>Sampling was carried out under Company protocols and QAQC procedures as per current industry practice. See further details below.</li> <li>Samples were dispatched to LabWest in Perth. Sample preparation by the laboratory included sample sorting, oven drying, mechanical pulverisation to 95% passing 75 microns. Analytical method MMA-04.</li> <li>Reverse Circulation (RC) was completed over 5 holes, totaling 587m. Sample type was drilling cuttings from RC drilling, sampled every 1 metre. Every sample weighted between 3 and 5 kgs.</li> <li>Industry standard practices was used to ensure sample representation. Nagrom &amp; LabWest Laboratories in Perth applied QA-QC for sample preparation and appropriate instrument calibration.</li> <li>Individual samples were collected from the riffle splitter below the cyclone into calico bags for analysis.</li> <li>Duplicates, blanks, and standards will be submitted to ensure results are repeatable and accurate. Laboratory comparison checks will also be completed. With no statistically significant lab errors or biasing shown at this stage.</li> <li>Intervals were geologically logged by geologist currently on the drilling programme.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>RC drilling was completed by standard RC Drilling techniques. KTE Pty Ltd using KWL700/T685 drill rig - 143mm diameter face sampling hammer bit was used.</li> <li>Drill samples are homogenised by riffle splitting prior to sampling and a 3-5g split</li> </ul>

Criteria	JORC Code explanation	Commentary
		sample is submitted for assay only. The sampling intervals submitted for analysis consisted of 4m composites.
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All metre intervals were logged, and sample recoveries were estimated by geologist on site based on bag volume estimation and recorded as a percentage. Sample recoveries were classified as satisfactory, and the volume of sample was considered to represent a good composite sample overall.</li> <li>All samples were noted if dry, moist or wet in the geological logging sheets</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Rock Chip geological logging was done on a visual basis, including; colour, grain size, lithology type, weathering, and mineralogy.</li> <li>All RC drilling is qualitatively and quantitatively logged for a combination of geological and geotechnical attributes in their entirety including as appropriate major &amp; minor lithologies, alteration, vein minerals, vein percentage, sulphide type and percentage, colour, weathering, hardness, grain size.</li> <li>All RC holes were geologically logged from the start to the end of hole. All fields' descriptions are qualitative in nature</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being</li> </ul>	<ul style="list-style-type: none"> <li>The samples were dried and pulverised to 95% passing -75 microns before analysis – samples were classified as homogeneous.</li> <li>QA/QC certified reference samples and field duplicates were routinely inserted at a rate of 1 in 20 with every batch submitted for assay.</li> <li>The sample size is appropriate for the mineralization style, application and analytical techniques used.</li> <li>All RC holes were sampled and split every 1 metre using a cone splitter to produce a sample between 3 and 5 kgs sub-sample for submission to Nagrom for Au, Pt &amp; Pd with the rest submitted to LabWest for multi-element analysis.</li> <li>Approx. 7% of submitted samples are in the form of standards, blanks, and</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>sampled.</i>	<p>duplicates and will be submitted once the drilling programme has been completed.</p> <ul style="list-style-type: none"> <li>The sample sizes are appropriate to the grain size of the material been sampled.</li> <li>4m composites were submitted to be analysed.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li><i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>The rock chip samples were analysed by LabWest using microwave mixed-acid method MMA-04, 62 element determination including rare-earths using a combination of ICP-MS and ICP-OES finish.</li> <li>Detection limits are appropriate for the included results.</li> <li>Geochemical Analysis of the RC samples conducted by WestLabs for multi-element analysis (40 elements suite) included drying and pulverising to 95% passing 75um. Four acid ICP-AES (ME-ICP61) was used to assay for Ag (ppm), Al (ppm), As (ppm), Ba (ppm), Ca (%), Cd (ppm), Ce (ppm), Co (ppm), Cr (ppm), Cs (ppm), Cu (ppm), Dy (ppm), Er (ppm), Eu (ppm), Fe (%), Ga (ppm), Gd (ppm), Ge (ppm), Hf (ppm), Ho (ppm), In (ppm), K (ppm), La (ppm), Li (ppm), Lu (ppm), Mg (%), Mn(ppm), Mo (ppm), Na (%), Nd (ppm), Ni (ppm), P (ppm), Pb (ppm), Pr (ppm), Rb (ppm), Re (ppm), S (ppm), Sb (ppm), Sc (ppm), Se (ppm), Sm (ppm), Sn (ppm), Se (ppm), Ta (ppm), Th (ppm), Ti (ppm), Ti (ppm), Tm (ppm), U (ppm), V (ppm), W (ppm), Y (ppm), Yb (ppm), Zn (ppm) and Zr (ppm),</li> <li>Nagrom Laboratory in Perth used FA50_OES method to analysis for Au (ppm), Pt (ppm) and Pad (ppm)</li> <li>Acceptable levels of accuracy for all data referenced in this ASX announcement have been achieved given the purpose of the analysis.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic)</i></li> </ul>	<ul style="list-style-type: none"> <li>Assays are as reported from the laboratory and stored in the company database, managed by an independent database consultant.</li> <li>Field data was collected on site using both field sample books and a company Toughbook (laptop computer) and entered into a set of standard logging</li> </ul>

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	<p>protocols.</p> <ul style="list-style-type: none"> <li>Discuss any adjustment to assay data.</li> </ul>	<p>templates.</p> <ul style="list-style-type: none"> <li>Relevant individual rare-earth element results were converted to stoichiometric oxide using industry standard stoichiometric conversion factors:</li> </ul> <table border="1"> <thead> <tr> <th>Element PPM</th><th>Oxide Form</th><th>Conversion Factor</th></tr> </thead> <tbody> <tr><td>Ce</td><td>CeO<sub>2</sub></td><td>1.2284</td></tr> <tr><td>Dy</td><td>Dy<sub>2</sub>O<sub>3</sub></td><td>1.1477</td></tr> <tr><td>Er</td><td>Er<sub>2</sub>O<sub>3</sub></td><td>1.1435</td></tr> <tr><td>Eu</td><td>Eu<sub>2</sub>O<sub>3</sub></td><td>1.1579</td></tr> <tr><td>Gd</td><td>Gd<sub>2</sub>O<sub>3</sub></td><td>1.1526</td></tr> <tr><td>Ho</td><td>Ho<sub>2</sub>O<sub>3</sub></td><td>1.1455</td></tr> <tr><td>La</td><td>La<sub>2</sub>O<sub>3</sub></td><td>1.1728</td></tr> <tr><td>Lu</td><td>Lu<sub>2</sub>O<sub>3</sub></td><td>1.1371</td></tr> <tr><td>Nd</td><td>Nd<sub>2</sub>O<sub>3</sub></td><td>1.1664</td></tr> <tr><td>Pr</td><td>Pr<sub>6</sub>O<sub>11</sub></td><td>1.2082</td></tr> <tr><td>Sm</td><td>Sm<sub>2</sub>O<sub>3</sub></td><td>1.1596</td></tr> <tr><td>Tb</td><td>Tb<sub>4</sub>O<sub>7</sub></td><td>1.1762</td></tr> <tr><td>Tm</td><td>Tm<sub>2</sub>O<sub>3</sub></td><td>1.1421</td></tr> <tr><td>Y</td><td>Y<sub>2</sub>O<sub>3</sub></td><td>1.2699</td></tr> <tr><td>Yb</td><td>Yb<sub>2</sub>O<sub>3</sub></td><td>1.1387</td></tr> </tbody> </table> <p>Rare-Earth Oxide results were calculated using:</p> <p><b>TREO (Total Rare Earth Oxide)</b> = CeO<sub>2</sub> + Dy<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + La<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub> + Nd<sub>2</sub>O<sub>3</sub> + Pr<sub>6</sub>O<sub>11</sub> + Sm<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Tm<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub></p> <p><b>Mag REO (Magnet Rare Earth Oxide)</b> = Dy<sub>2</sub>O<sub>3</sub> + Pr<sub>6</sub>O<sub>11</sub> + Nd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Gd<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Sm<sub>2</sub>O<sub>3</sub></p> <p><b>HREO (Heavy Rare Earth Oxide)</b> = Dy<sub>2</sub>O<sub>3</sub> + Er<sub>2</sub>O<sub>3</sub> + Eu<sub>2</sub>O<sub>3</sub> + Gd<sub>2</sub>O<sub>3</sub> + Ho<sub>2</sub>O<sub>3</sub> + Lu<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Tm<sub>2</sub>O<sub>3</sub> + Y<sub>2</sub>O<sub>3</sub> + Yb<sub>2</sub>O<sub>3</sub></p> <p><b>CREO (Critical Rare Earth Oxide)</b> = Dy<sub>2</sub>O<sub>3</sub> + Eu<sub>2</sub>O<sub>3</sub> + Nd<sub>2</sub>O<sub>3</sub> + Tb<sub>4</sub>O<sub>7</sub> + Y<sub>2</sub>O<sub>3</sub></p> <p><b>Percent MREO (Magnetic)</b> = MREO / TREO</p> <p><b>Percent HREO (Heavy)</b> = HREO / TREO</p> <p><b>Percent CREO (Critical)</b> = CREO / TREO</p> <p>No Twinned Holes were used</p>	Element PPM	Oxide Form	Conversion Factor	Ce	CeO <sub>2</sub>	1.2284	Dy	Dy <sub>2</sub> O <sub>3</sub>	1.1477	Er	Er <sub>2</sub> O <sub>3</sub>	1.1435	Eu	Eu <sub>2</sub> O <sub>3</sub>	1.1579	Gd	Gd <sub>2</sub> O <sub>3</sub>	1.1526	Ho	Ho <sub>2</sub> O <sub>3</sub>	1.1455	La	La <sub>2</sub> O <sub>3</sub>	1.1728	Lu	Lu <sub>2</sub> O <sub>3</sub>	1.1371	Nd	Nd <sub>2</sub> O <sub>3</sub>	1.1664	Pr	Pr <sub>6</sub> O <sub>11</sub>	1.2082	Sm	Sm <sub>2</sub> O <sub>3</sub>	1.1596	Tb	Tb <sub>4</sub> O <sub>7</sub>	1.1762	Tm	Tm <sub>2</sub> O <sub>3</sub>	1.1421	Y	Y <sub>2</sub> O <sub>3</sub>	1.2699	Yb	Yb <sub>2</sub> O <sub>3</sub>	1.1387
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Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic</li> </ul>	<ul style="list-style-type: none"> <li>Rock samples and reconnaissance RC Drillholes were located using a handheld GPS system with an accuracy of +/- 5m and stored in the company database.</li> <li>All coordinates are referenced to MGA Zone 50, Datum GDA94.</li> <li>Topographic control was gained using</li> </ul>																																																



Criteria	JORC Code explanation	Commentary
	<i>control.</i>	government DTM data with handheld GPS check.
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>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.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>Data spacing is listed in a Table within the body of the report.</li> <li>Rock samples were collected where rock was exposed at surface.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Samples were taken with consideration of stratigraphy and alteration; samples do not straddle geological or stratigraphic boundaries.</li> <li>The relationship between drilling orientation and mineralisation orientation is not considered to have introduced any material sampling bias during the drilling program.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>Each sample was put into a pre-numbered draw string calico bag, securely tied off and placed into a larger "polyweave" bag. Each polyweave contained 5 calico bag samples and was tied off with a zip tie. Samples were transported by company staff to LabWest Laboratories in Malaga, after returning from the reconnaissance program.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Continuous improvement, internal reviews of sampling techniques and procedures are ongoing. No external audits have been performed on the methodology to date.</li> </ul>

JORC Code 2012 Edition Table 1:  
Section 2- Reporting of Exploration Reports

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The tenure hosting the Viper Project (and historic gold mine) is owned 100% by Coruscant Minerals Pty Ltd, a wholly owned subsidiary of EMU NL. The tenements include E70/5155 and E70/5602.</li> <li>E70/5155 hosts the historic Netty Copper</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Mine</li> <li>No known issues exist with the project tenure.</li> <li>The project tenements are all in good standing.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>Past production from the Netty mine over the period 1907 – 1969 was reported to be 3.13 tonnes of contained copper from 30.5t of oxide and sulphide (chalcopyrite) ore at a grade of over 10% Cu.</li> <li>Detailed channel sampling of the underground mine workings over a strike length of 40m by Audax Resources Limited in 1987 returned copper values in the range 3% to 10% with a peak value of 14.1% from a total of 52 samples. Nickel results were mostly over 1,000 ppm, with a peak value of 0.51%.</li> <li>Little modern-day exploration has been conducted within the current tenement areas.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Viper Project is located 8km northeast of the wheatbelt town of Jerramungup and centred on the historic Netty Copper Mine within granites, felsic to mafic gneisses, dolerite and gneiss of the Archean Lake Grace Terrane.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> </ul> </li> <li><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not</i></li> </ul>	<ul style="list-style-type: none"> <li>Refer to Drill Hole Collar tables for all drill holes reported in the body of the report.</li> <li>Collar locating and GPS accuracy is included in Tables.</li> <li>No material information, results or data have been excluded.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Grades are reported as downhole length-weighted averages of laboratory reported grades. No top cuts have been applied to the reporting of the assay results.</li> <li>All higher-grade intervals are included in the reported grade intervals.</li> <li>No metal equivalent values are used.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>The geometry of the mineralisation is interpreted to vary from steeply west dipping (Gnows Nest Mine) to steeply east dipping (Monte Cristo) and generally sub-vertical elsewhere.</li> <li>All assay results are based on downhole lengths, and true widths are not known.</li> <li>The steep dip of the mineralisation means that drill widths are exaggerated.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Refer to figures in body of the report.</li> <li>Geological and mineralisation interpretations are based on current knowledge and will change with further exploration.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>	<ul style="list-style-type: none"> <li>Key drilling location information and assays have been provided, refer to results reported in body of text.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li><i>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;</i></li> </ul>	<ul style="list-style-type: none"> <li>Geological interpretations have been taken from published maps, geophysical interpretation, historical and ongoing exploration.</li> <li>Metallurgical, groundwater, and geotechnical studies have not</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	commenced as part of the assessment of the project.
<b>Further work</b>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>The stage 2 RC drilling programme has been completed in its entirety, with the current announcement (news release) reporting only on the first batch of results returned from Nagrom Analytical.</li> <li>Significant intersections reported for Gnows Nest and Flying Emu.</li> <li>The nature and scale of further work will be determined once the complete interpretation and analysis of results from the current drilling programme are completed.</li> </ul>

- END -