## EMU NL



Rare Earth Exploration Projects - Esperance and Merredin WA, Georgetown QLD

7 October 2022

# Highlights

## CONDINGUP PROJECT (385 km2)

- New exploration tenement applications at Condingup, near Esperance WA
- Condingup, clay hosted, REE (Rare Earth Elements) Project situated over favourable structural settings within the prospective Booanya Granite suite
- Situated just 35kms SE of ASX:OD6 Splinter Rock Project which is achieving success in similar setting within the enriched Booanya Granite suite
- Single Geoscience WA (GSWA) sample result showed significantly elevated, 1047ppm Total Rare Earth Oxides (TREO).
- Project 60kms to Esperance port and essential infrastructure via sealed roads
- Esperance projected to become a central hub for major renewable energy and green hydrogen production
- Targeting clay hosted REE deposit offering potential large-scale low-cost mining opportunities

## MERREDIN PROJECT (88 km2)

- New REE tenement application 30kms north of Merredin (WA Wheatbelt)
- 2 GSWA highly anomalous, elevated REE samples 1381ppm and 1000ppm TREO.
- Samples were recovered over prospective granite lithology within a north trending structural fault package.

## **GEORGETOWN PROJECT (850 km2)**

- REE potential recognised by University of Queensland's Sustainable Minerals Institute (August 2021 Report)<sup>1</sup>
- Fiery Creek and Georgetown tenements overlay REE prospectively which is related to the potential zones for (REE bearing) Iron-Oxide-Copper-Gold (IOCG) deposits which is further supported by moderate stream sediment anomalism
- Easily accessed vis sealed roads and in a well-regarded exploration/mining jurisdiction

EMU NL, ("EMU", or "the Company") is pleased to advise that it has applied for two highly prospective REE tenement packages in WA to complement its recently acquired Georgetown, prospective rare earth exploration ground in QLD.

The WA projects were identified from GSWA evaluation of high value mineral occurrences of TREO near Esperance WA and Merredin WA. The Condingup Project, Esperance, is located within the highly desirable Booanya Granite suite which has recently been

<sup>&</sup>lt;sup>1</sup> "Queensland New Economy Minerals Compilation: Rare Earth Elements", UQ Sustainable Minerals Institute, University of Queensland 10 August 2022



recognised for its enrichment for rare earth elements<sup>2</sup>. The tenement package is further defined by prospective, favourable geological structures. (See Fig 1.)

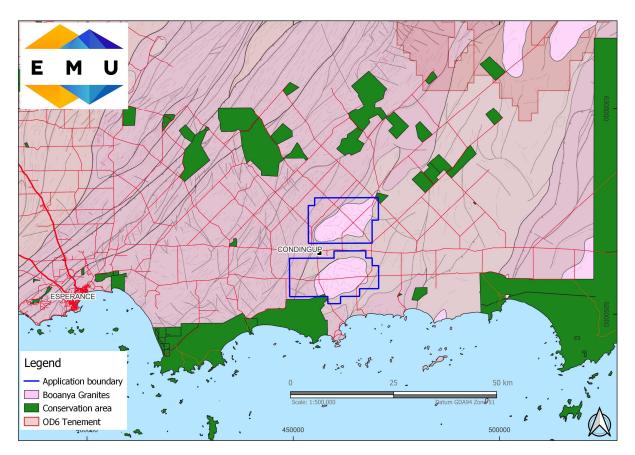


Fig 1. Condingup REE Project Tenements Under Application. 60kms from the port of Esperance, the tenements overlie prominent Booanya Granite features.

The Merredin REE Project is located 30kms north of Merredin WA. Two GSWA samples taken from within tenement package reported highly anomalous results, 1381ppm and 1000ppm TREO. The north trending structural fault setting provides further indication of prospectivity for REE exploration over the 88 square kilometre tenement application.

(See Fig 2.)

<sup>&</sup>lt;sup>2</sup> ASX:OD6 ASX Release "Prospectus", Project Overview - Independent Geological Report 20 June 2022



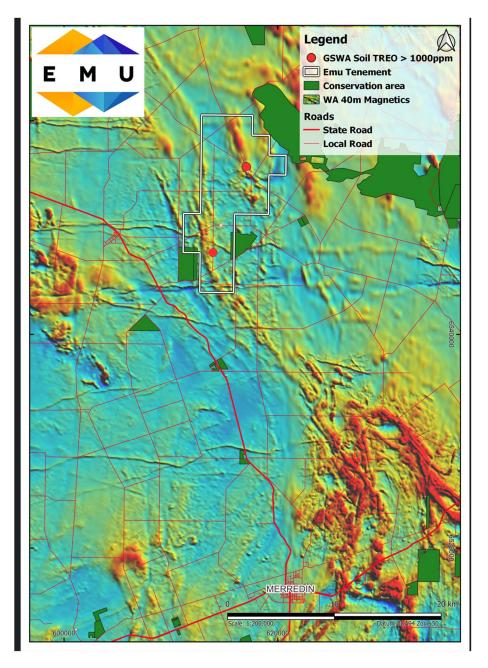


Fig 2. Merredin REE Project. The tenement package is situated over favourable structural setting approximately 30kms north of Merredin in WA Wheatbelt

EMU's WA REE projects add to the recent Georgetown Project (earn in JV) acquisition<sup>3</sup>. The prospectivity of REE at Georgetown has been further highlighted by University of Queensland Sustainable Minerals Institute, August 2021 report<sup>4</sup>. The report outlines the potential zones for REE bearing IOCG deposits which are interpreted to overlie portions the

<sup>&</sup>lt;sup>3</sup> ASX Release "Scale Project added to Exploration Portfolio - 850km2 of Highly Prospective Multi Mineral Tenements - Georgetown, Queensland" 1 September 2022

<sup>&</sup>lt;sup>4</sup> "Queensland New Economy Minerals Compilation: Rare Earth Elements", UQ Sustainable Minerals Institute, University of Queensland 10 August 2022



Georgetown and Fiery Creek Exploration Mineral Tenements. (See Fig 3.). The Georgetown tenement areas provide EMU with strong untested potential for the discovery of REE mineralisation. The report refers to the area as possessing strong mineral system indicators as well as anomalous REE in coarse and fine stream sediments. Whilst the Georgetown Project is endowed with a significant suite of other minerals and metals, its prospectivity for REE cannot be discounted and will represent a component of EMU's focussed exploration programmes in the coming months.

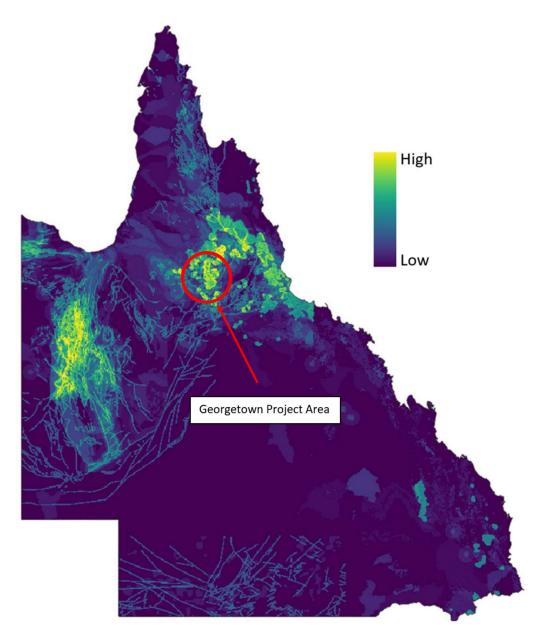


Fig 3. The high IOCG REE mineralisation potential from modelling by UQ SMI. "Queensland New Economy Minerals Compilation: Rare Earth Elements", UQ Sustainable Minerals Institute (10 August 2022)



## **Other Projects**

EMU continues to work at its existing Gold, Nickel, Copper, PGE projects in WA. RC drilling programmes at Graceland and Viper projects are scheduled within the next few weeks and a soils and electromagnetic survey are programmed for the Sunfire project subject to final approvals from DBCA. Multielement assays, testing high grade tungsten occurrences at Badja Project, are currently being processed.

### RELEASE AUTHORISED BY DOUG GREWAR

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### Emu NL

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#### ASX Codes: EMU and EMUCA

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PO Box 1112 West Perth, WA 6872

#### Fully paid shares (listed)

549,814,484 (including 18.6m 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 31/12/2023

#### **Options (unlisted)**

33,320,000 options to acquire fully [paid shares, exercisable at \$0.075 each, expiry 15/3/2023

35,000,000 options to acquire partly paid shares, exercisable at \$0.0001 each, expiry 15/11/2022

#### 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:

**Doug Grewar CEO** 

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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.

- END -

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# Table 1. GSWA Original Data

GSWA Origin	nal Data															
							Ce	Dy	Er	Eu	Gd	Но	La	Lu	Nd	Pr
DATASET	Tenement	SAMPLEID	GSWANO	BATCH_NO	EASTING	NORTHING	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
WACHEM	Condingup	194850_C1M1S0	194850	gsd08112011	457481	6257735	356.54	15.39	8.23	3.58	17.63	2.88	161.76	1.16	142.34	39.61
WACHEM	Merredin	224439_C0MWS0	224439	gs12082016	613936	6547634	330	8.63	4.56	2.08	11.6	1.79	223	0.47	142	45.8
WACHEM	Merredin	224441_C0MWS0	224441	gs12082016	617056	6555698	476	16.3	10.2	3.12	19	3.9	247	1.31	184	60.5
							Sm	Та	Тb	Tm	Y	Yb			Li	Sc
DATASET	Tenement	SAMPLEID	GSWANO	BATCH_NO	EASTING	NORTHING	ppm	ppm	ppm	ppm	ppm	ppm			ppm	ppm
WACHEM	Condingup	194850_C1M1S0	194850	gsd08112011	457481	6257735	23.31	2.81	2.59		100	7.81				12
WACHEM	Merredin	224439_C0MWS0	224439	gs12082016	613936	6547634	20.7	0.86	1.66	0.64	52	3.63			20.7	3.8
WACHEM	Merredin	224441_C0MWS0	224441	gs12082016	617056	6555698	28.9	1.99	2.91	1.36	105	8.48			22.1	9

#### Table 2. GSWA Converted to Oxide

GSWA Data	Converted to C	Dxide														
							Ce2O3	Dy2O3	Er2O3	Eu2O3	Gd2O3	Ho2O3	La2O3	Lu2O3	Nd2O3	Pr6011
DATASET	Tenement	SAMPLEID	GSWANO	BATCH_NO	EASTING	NORTHING	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
WACHEM	Condingup	194850_C1M1S0	194850	gsd08112011	457481	6257735	417.62	17.66	9.41	4.14	20.32	3.29	189.71	1.32	166.03	47.86
WACHEM	Merredin	224439_C0MWS0	224439	gs12082016	613936	6547634	386.53	9.9	5.21	2.41	13.37	2.05	261.53	0.53	165.63	55.34
WACHEM	Merredin	224441_C0MWS0	224441	gs12082016	617056	6555698	557.54	18.71	11.66	3.61	21.9	4.47	289.68	1.49	214.62	73.1
							Sm2O3	Ta205	Tb2O3	Tm2O3	Y2O3	Yb2O3			Li2O	Sc2O3
							5111205									30203
DATASET	Tenement	SAMPLEID	GSWANO	BATCH_NO	EASTING	NORTHING	ppm	ppm	ppm	ppm	ppm	ppm	TREO	MREO9	ppm	ppm
<b>DATASET</b> WACHEM	<b>Tenement</b> Condingup	<b>SAMPLEID</b> 194850_C1M1S0		BATCH_NO gsd08112011					<b>ppm</b> 2.98	ppm		ppm	-		ppm	
-			194850	_		6257735	ppm	ppm			<b>ppm</b> 126.99	<b>ppm</b> 8.89	1046.7	27.50	<b>ppm</b> 44.56	ppm

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# JORC Code 2012 Edition Table1: Section 1- Sampling Techniques and Data

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.	Samples collected by GSWA
•	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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	
Sub- sampling techniques and sample preparation •	disclosure of detailed information. If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being	Open file sample data from GSWA via DMIRS Data and Software Centre

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Criteria	JORC Code explanation	Commentary
	sampled.	
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	• Multi-element open file data
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Original open file GSWA element data converted to oxides using standard conversion factors – see table in release above</li> </ul>
Location of data points	<ul> <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 control.</li> </ul>	<ul> <li>Surveyed by GSWA with 10m accuracy. All coordinates are referenced Datum GDA94 EPSG 4283.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	• GSWA data across all of WA in file State Geochem
Sample security	• The measures taken to ensure sample security.	Open file data



Criteria	JORC Code explanation	Commentary				
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	Open file data				

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>The security of the tenure held at the time</li> </ul>	<ul> <li>The WA tenure hosting the GSWA referenced assays are under application by EMU Resources Pty Ltd</li> </ul>
	of reporting along with any known impediments to obtaining a licence to operate in the area.	
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	Open file GSWA soil data
Geology	• Deposit type, geological setting and style of mineralisation.	Granite host rocks
Data aggregation methods	<ul> <li>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.</li> </ul>	<ul> <li>Original open file GSWA element data converted to oxides using standard conversion factors – see table in release above</li> <li>MREO (Magnetic Rare Earth Oxides) =</li> </ul>
	• 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.	Pr6O11 + Nd2O3 + Sm2O3 + Gd2O3 + Tb2O3 + Dy2O3
	• The assumptions used for any reporting of metal equivalent values should be clearly stated.	
Diagrams	<ul> <li>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</li> </ul>	<ul> <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</li> </ul>



Criteria	JORC Code explanation	Commentary
	of drill hole collar locations and appropriate sectional views.	exploration.
Balanced reporting	• 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.	<ul> <li>Key location information and assays have been provided, refer to results reported in body of text.</li> </ul>
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>Geological interpretations have been taken from published maps, geophysical interpretation, historical and ongoing exploration.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of</li> </ul>	<ul> <li>Further soil sampling, mapping, reconnaissance, geochemical and geophysical assessments are required</li> </ul>
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

- END -