

11 October 2023

## ASX ANNOUNCEMENT

# HIGH PRIORITY CARBONATITE MAGNETIC TARGETS IDENTIFIED AT WALLOWAY

### Highlights

- A detailed drone aerial magnetic survey at the Company's 100% owned Walloway Rare Earth Element (REE) Prospect in South Australia has identified numerous magnetic targets
- The targets are highly characteristic of carbonatite bodies, both in magnetic character and geological context, when compared to the known Walloway Carbonatite
- Magnetic modelling shows the targets have significant depth potential
- Aircore drilling of magnetic carbonatite targets is planned for early November 2023 (approval pending)

**Olympio Metals Limited (ASX:OLY) (Olympio or the Company)** is pleased to announce that a detailed drone magnetic survey<sup>1</sup> across the Company's Walloway REE Prospect (100% Olympio) has been completed. The survey successfully identified numerous discrete magnetic targets highly characteristic of carbonatite bodies, especially when compared to the magnetic signature of the known Walloway Carbonatite.

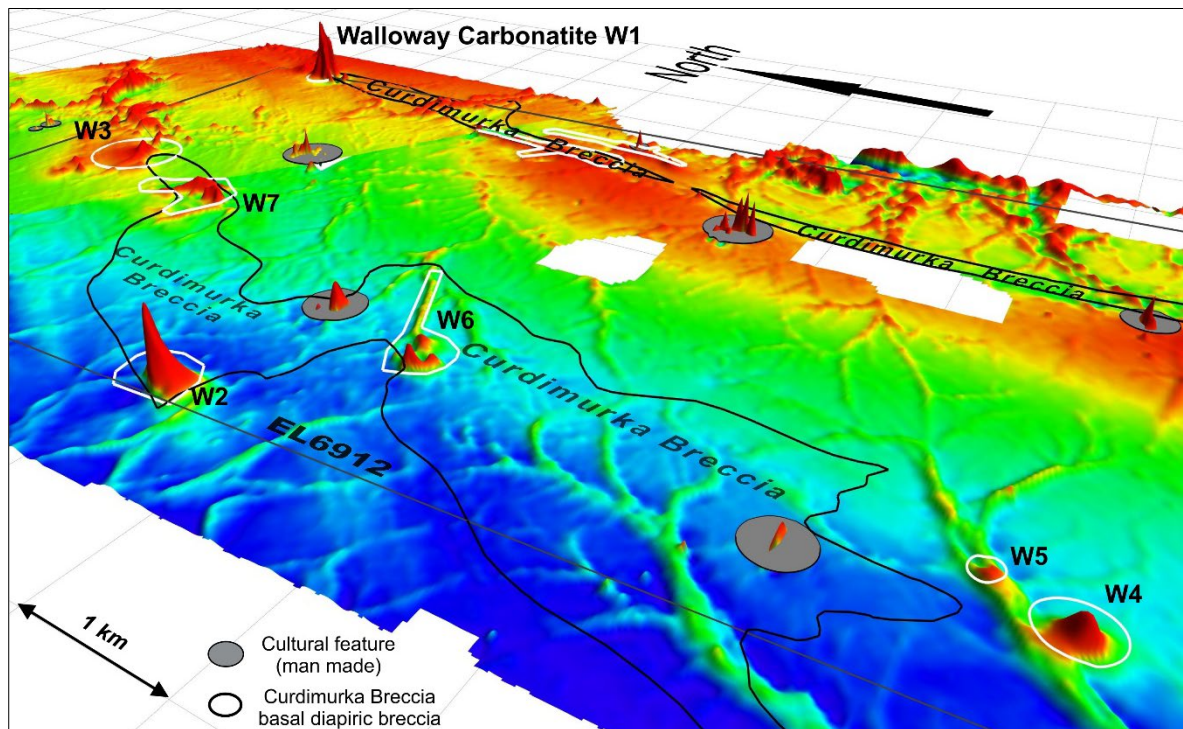
Magnetic modelling of the carbonatite targets has revealed robust magnetic models, with typically shallow depth to source (<50m), and several models extending to >500m below surface.

Recent Ultra Fine Fraction soil sampling over selected targets has revealed several instances of notable REE anomalism, spatially correlated with the magnetic targets.

### **Olympio's Managing Director, Sean Delaney, commented:**

*"The quality of the magnetic targets identified by the recent survey has been outstanding. We have numerous magnetic targets that are very similar to the Walloway Carbonatite, based on geophysical characteristics and geological context. We look forward to testing the shallow extents of a number of these newly defined magnetic targets at Walloway with an aircore drill program which will commence next month."*

<sup>1</sup> ASX Announcement 11 September 2023 – Aeromagnetic Survey Commenced at Walloway



*Figure 1: TMI magnetic image, perspective view, Walloway Prospect*

## Highly Prospective Carbonatite Magnetic Targets

The UAV (drone) magnetic survey was completed in mid-October by Atlas Geophysics. The survey was completed at 50m flight line spacing (N-S), 25m terrain clearance and spanned a 90km<sup>2</sup> area. Anomalies were identified by Olympio exploration staff, with follow up inversion modelling conducted by geophysical consultants, Planetary Geophysics.

The Walloway Carbonatite occurs in the northeastern corner of the Walloway Prospect tenement EL6912 (Figures 1,2). The carbonatite occurs at the northern tip of the Curdimurka Breccia, a diapiro breccia with an unconformable contact with overlying Proterozoic sediments. The location of all high-quality magnetic targets at Walloway reveal close association with the extent of the Curdimurka Breccia (Figures 1, 2). The upper unconformable contact of the Curdimurka Breccia is interpreted as a structural surface which may have focused ascending carbonatite intrusive magmas and provides further discrimination criteria to rank the magnetic targets at Walloway.

Inversion modelling of the carbonatite-style targets at Walloway has produced models with depth extent suggestive of carbonatite intrusives, and limited depth to target (<50m). Some targets reveal significant depth extent, particularly target W3, which is suggestive of a large blind intrusive body (Figure 3). Given the scale and depth of the target, further magnetic modelling and a gravity survey will be required to comprehensively assess the target.

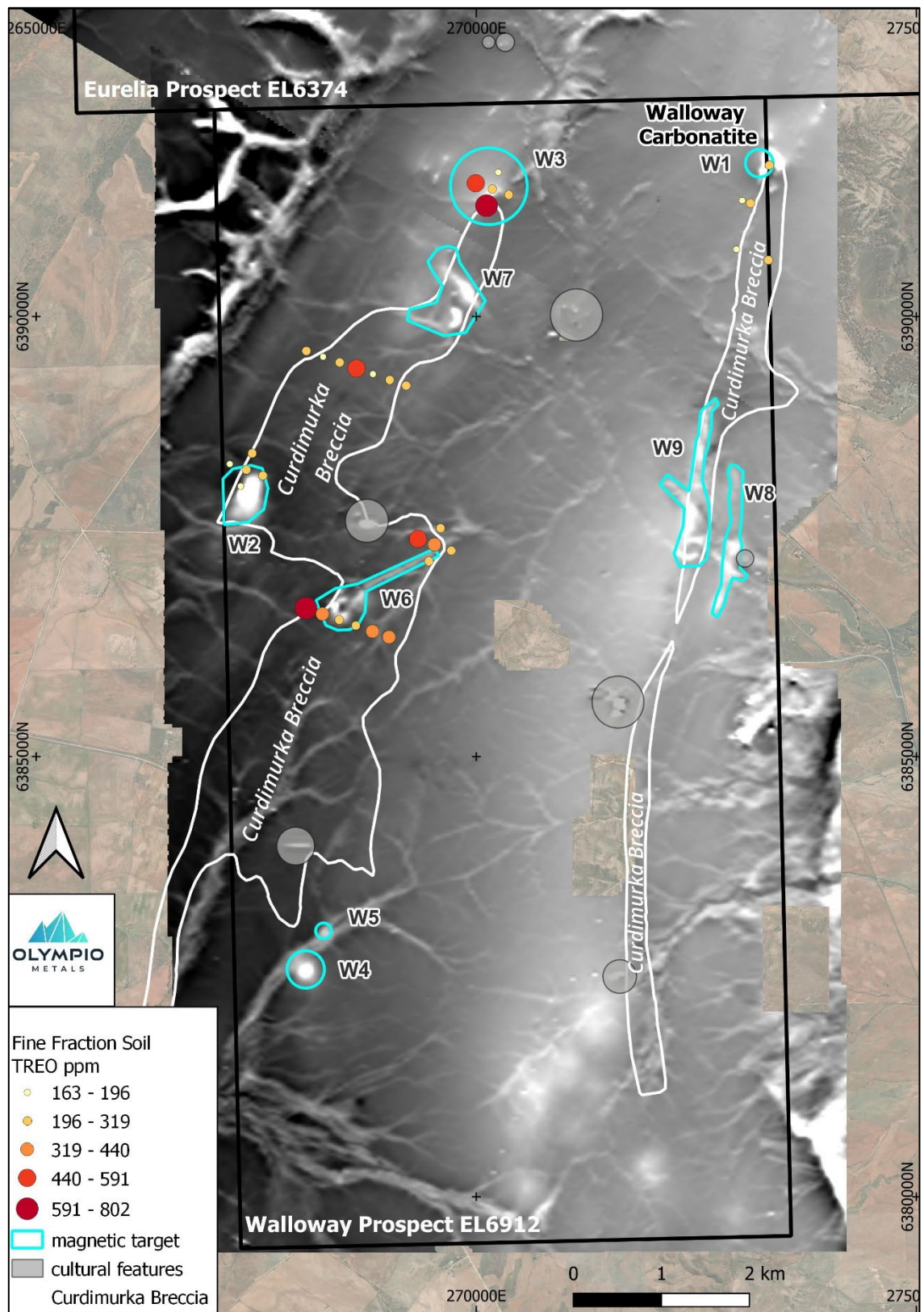


Figure 2: Soil sampling TREO over TMI magnetics, Walloway



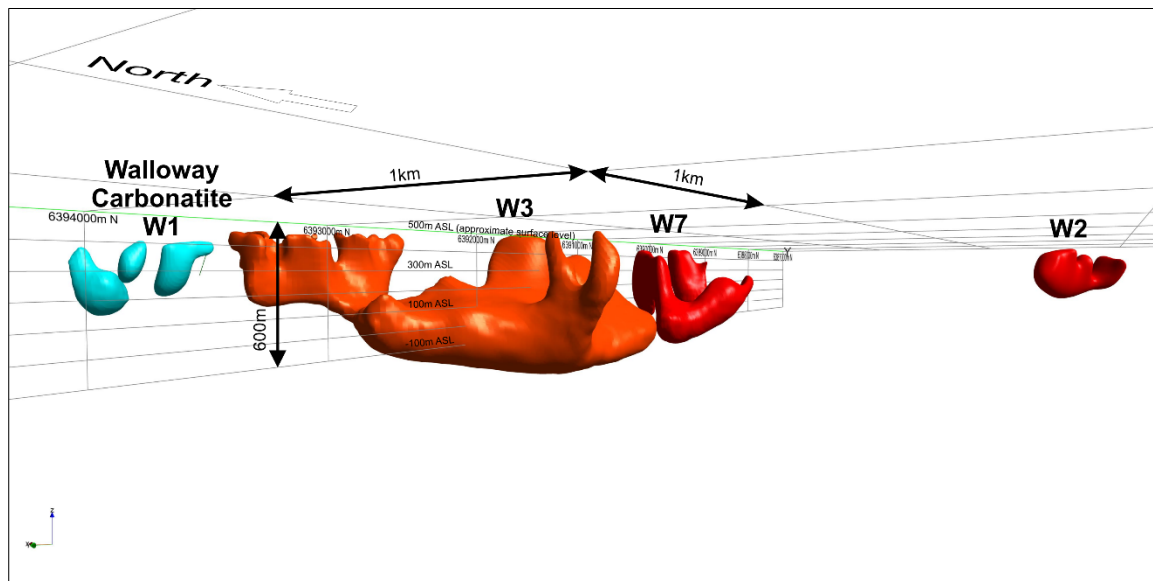


Figure 3: Magnetic inversion models W1, W2, W3, W7 (at 0.002 SI susceptibility), perspective view

## Strong REE Soil Anomalism Over Magnetic Targets

In August 2023, several limited profiles of soil sampling were collected by Olympio geologists over selected magnetic targets during a drill site reconnaissance visit (Figure 2). The samples were analysed by the Ultra Fine Fraction analysis method (LabWest). Surface soil samples of 200g -2mm were collected in the field, then sieved in the laboratory to <2µm and analysed for gold (Au) plus a full 50 element suite by ICP-MS/OES (including REE). All assay details are contained in attached Table 1, with sampling and assay criteria presented in JORC Table 1 (Appendix).

The Total Rare Earth Oxides (TREO) soil content is presented in Figure 2, which shows numerous magnetic targets coincident with areas of elevated TREO (>400ppm), particularly W3 and W6. A soil sample in sheetwash soil near W3 reported >800ppm TREO. This result is highly encouraging and will be further targeted in upcoming drilling.

## Drilling Planned for November 2023

Olympio will commence with an aircore drilling program to more efficiently test a number of targets and is modifying received regulatory approval to drill targets W1, W2, W3. A further Exploration Program for Environment Protection and Rehabilitation (EPEPR) to drill targets W4, W5, W6, W7, W8, W9 has been submitted to the South Australian Department of Energy and Mining, with approval expected imminently.

An aircore drilling program has been designed to test the many shallow targets at Walloway (including W2, W4, W5, W6, W8, W9), with a drilling contractor engaged to commence in early November 2023.

For the deeper targets (W1, W3, W7), a gravity survey is planned for late 2023. Following the gravity survey, reverse circulation (RC) drilling is planned for the deeper portions of these magnetic targets in 2024.

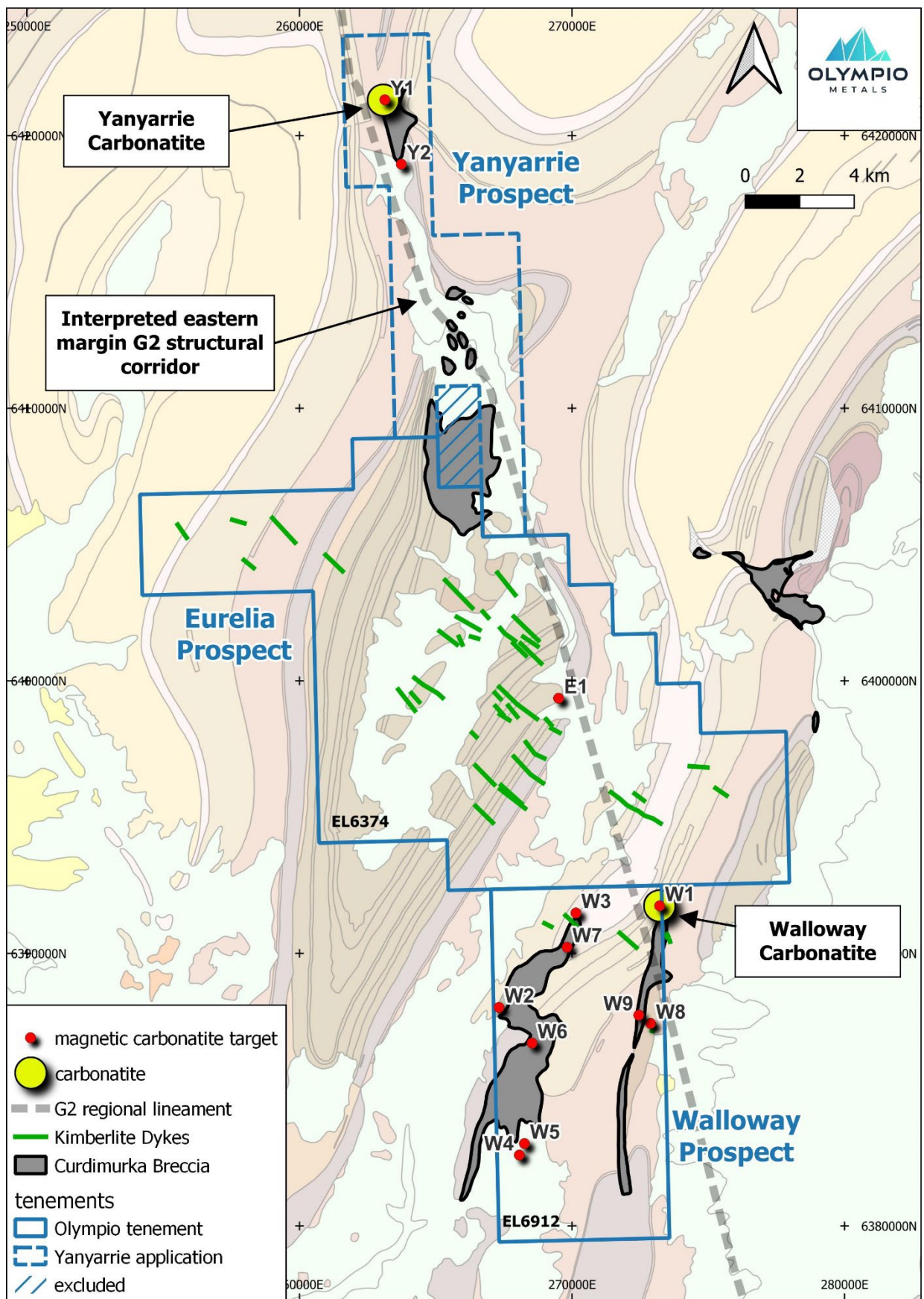


Figure 4: Olympio's Eureka Project.

## Carbonatites and Alkaline Igneous Rock Types – REE hosts

The Eurelia Project area is a recognised zone of alkaline igneous rocks, including the Walloway and Yanyarrie carbonatites and the Eurelia kimberlite dykes (*Figure 4*). Alkaline igneous rock complexes are recognised worldwide as hosts of economic REE mineralisation (*Dostal 2017, Smith et.al. 2016, Verplanck et. al. 2010, Chakhmouradian & Zaitsev 2012*).

Alkaline intrusive complexes often occur as plugs, dykes, sills, breccias or veins. Carbonatites and alkaline intrusive rock types may be mineralised with REEs, niobium, phosphorus, tantalum, uranium, thorium, copper, iron, titanium, vanadium, barium, fluorine and zirconium.

A wide range of alkaline igneous rock types and associated regolith are potential hosts of economic REE mineralisation, including:

- Laterite over Carbonatite (e.g. Mt Weld / Lynas, Cummins Range/ Rare-X)
- Ironstone dykes (e.g. Yangibana/Hastings Metals)
- Apatite dykes and veins (e.g. Nolans / Arafura)
- Ionic Clay Hosted (Koppamurra/ Australian Rare Earths)



*Figure 5: Continental geological setting of Olympio's Eurelia Project*

The G2 crustal corridor (*O'Driscoll, 1986*) is correlated with the distribution of alkaline igneous rock types and REE mineralisation on a continental scale (*Figure 5*). The Eurelia Project, (which includes the Walloway and Yanyarrie carbonatites), is coincident with the G2 corridor, similarly

to the pending REE mining operations of Nolans, Koppamurra, and major REE-hosting deposits such as Olympic Dam and Carrapateena.

Olympio is the first explorer to recognise the REE potential of the carbonatites and alkaline igneous rocks at Eurelia. The Olympio exploration model is designed to systematically test for the numerous REE mineralisation styles that may exist within the Eurelia Project.

The announcement is authorised by the Board of Olympio Metals.

**For further information:**

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**Competent Person's Statement**

The information in this announcement that relates to exploration results for the Project is based on information compiled by Mr. Neal Leggo, a Competent Person who is a Member of the Australian Institute of Geoscientists and a consultant to Olympio Metals Limited. Mr. Leggo 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 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Leggo consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

**Forward Looking Statements**

This announcement may contain certain "forward looking statements" which may not have been based solely on historical facts, but rather may be based on the Company's current expectations about future events and results. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis.

However, forward looking statements are subject to risks, uncertainties, assumptions, and other factors which could cause actual results to differ materially from future results expressed, projected or implied by such forward looking statements. Such risks include, but are not limited to exploration risk, Mineral Resource risk, metal price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the countries and states in which we sell our product to, and government regulation and judicial outcomes.

Readers should not place undue reliance on forward looking information. The Company does not undertake any obligation to release publicly any revisions to any "forward looking statement" to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

#### ISSUED CAPITAL

Ordinary Shares: 66.4M

#### BOARD OF DIRECTORS

**Sean Delaney**, Managing Director

**Simon Andrew**, Chairman

**Aidan Platel**, Non-Executive Director

#### COMPANY SECRETARY

Peter Gray

#### REGISTERED OFFICE:

L2, 25 Richardson St,  
West Perth 6005

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# JORC Code - Table 1

## Section 1: Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	Explanation	Comment																																																
Sampling techniques	Nature and quality of sampling.	38 Soil samples were collected at 200m spacing on traverses over aeromagnetic anomalies and geological contacts/targets <ul style="list-style-type: none"><li>• Samples were collected by digging a hole to ~20cm, and collecting ~300g of -2mm material in a paper Geochem bag</li><li>• Samples were bagged in polyweave and delivered by Olympio Staff to LabWest in Malaga</li><li>• REE assay results for all soil samples referred to in this report are included in Table1</li><li>• TREO is calculated, thus: CeO2 + Dy2O3 + Er2O3 + Eu2O3 + Gd2O3 + Ho2O3 + La2O3 + Lu2O3 + Nd2O3 + Pr6O11 + Sm2O3 + Tb4O7 + Tm2O3 + Y2O3 + Yb2O3</li><li>• All REE sample results were returned as ppm and have subsequently been converted according to the following conversion factors:</li></ul> <table><tr><th>Element</th><th>Conversion factor (oxide)</th><th>Equivalent oxide</th></tr><tr><td>Ce</td><td>1.2284</td><td>CeO2</td></tr><tr><td>Dy</td><td>1.1477</td><td>Dy2O3</td></tr><tr><td>Er</td><td>1.1435</td><td>Er2O3</td></tr><tr><td>Eu</td><td>1.1579</td><td>Eu2O3</td></tr><tr><td>Gd</td><td>1.1526</td><td>Gd2O3</td></tr><tr><td>Ho</td><td>1.1455</td><td>Ho2O3</td></tr><tr><td>La</td><td>1.1728</td><td>La2O3</td></tr><tr><td>Lu</td><td>1.1371</td><td>Lu2O3</td></tr><tr><td>Nd</td><td>1.1664</td><td>Nd2O3</td></tr><tr><td>Pr</td><td>1.2082</td><td>Pr6O11</td></tr><tr><td>Sm</td><td>1.1596</td><td>Sm2O3</td></tr><tr><td>Tb</td><td>1.1762</td><td>Tb4O7</td></tr><tr><td>Tm</td><td>1.1421</td><td>Tm2O3</td></tr><tr><td>Y</td><td>1.2699</td><td>Y2O3</td></tr><tr><td>Yb</td><td>1.1387</td><td>Yb2O3</td></tr></table>	Element	Conversion factor (oxide)	Equivalent oxide	Ce	1.2284	CeO2	Dy	1.1477	Dy2O3	Er	1.1435	Er2O3	Eu	1.1579	Eu2O3	Gd	1.1526	Gd2O3	Ho	1.1455	Ho2O3	La	1.1728	La2O3	Lu	1.1371	Lu2O3	Nd	1.1664	Nd2O3	Pr	1.2082	Pr6O11	Sm	1.1596	Sm2O3	Tb	1.1762	Tb4O7	Tm	1.1421	Tm2O3	Y	1.2699	Y2O3	Yb	1.1387	Yb2O3
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	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.																																																	
Drilling techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., 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 reported																																																
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	N/A																																																
	Measures taken to maximise sample recovery and ensure representative nature of the samples.																																																	

	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.																																																																									
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.	Soil samples were not logged																																																																								
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.																																																																									
	The total length and percentage of the relevant intersections logged.																																																																									
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	<ul style="list-style-type: none"><li>• Soil samples were collected from a 20cm deep hole, which is appropriate for Ultra Fine Fraction soil sampling.</li><li>• -2mm sieves and pans were cleaned after each sample collected.</li><li>• No field duplicates were collected.</li></ul> UFF soil samples are largely insensitive to the grain size collected, so long as the fine fraction is retained																																																																								
	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 sampled.																																																																									
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.	<ul style="list-style-type: none"><li>• Samples were analysed at LabWest Malaga using the Ultra Fine Fraction UFF technique (UFF-PER). Collection of &lt;2 micron fraction, Au + multi-elements on Ultrafine fraction, microwave Digest in Aqua Regia, and includes Rare Earth Elements.</li></ul> <table><tr><td>Al</td><td>As</td><td>Au</td><td>Ba</td><td>Be</td><td>Bi</td></tr><tr><td></td><td>Ca</td><td>Cd</td><td>Ce</td><td>Co</td><td>Cr</td></tr><tr><td></td><td>Cs</td><td>Cu</td><td>Dy</td><td>Er</td><td>Eu</td></tr><tr><td></td><td>Fe</td><td>Ga</td><td>Gd</td><td>Ge</td><td>Hf</td></tr><tr><td></td><td>Hg</td><td>Ho</td><td>In</td><td>K</td><td>La</td></tr><tr><td></td><td>Li</td><td>Lu</td><td>Mg</td><td>Mn</td><td>Mo</td></tr><tr><td></td><td>Nb</td><td>Nd</td><td>Ni</td><td>Pb</td><td>Pd</td></tr><tr><td></td><td>Pr</td><td>Pt</td><td>Rb</td><td>Re</td><td>S</td></tr><tr><td></td><td>Sb</td><td>Sc</td><td>Se</td><td>Sm</td><td>Sn</td></tr><tr><td></td><td>Sr</td><td>Ta</td><td>Tb</td><td>Te</td><td>Th</td></tr><tr><td></td><td>Ti</td><td>Tl</td><td>Tm</td><td>U</td><td>V</td></tr><tr><td></td><td>W</td><td>Y</td><td>Yb</td><td>Zn</td><td>Zr</td></tr></table> <ul style="list-style-type: none"><li>• One standard was assayed, GRE-6 (Geostats Pty Ltd)</li><li>• No blanks were assayed</li><li>• No repeat assays were completed</li></ul>	Al	As	Au	Ba	Be	Bi		Ca	Cd	Ce	Co	Cr		Cs	Cu	Dy	Er	Eu		Fe	Ga	Gd	Ge	Hf		Hg	Ho	In	K	La		Li	Lu	Mg	Mn	Mo		Nb	Nd	Ni	Pb	Pd		Pr	Pt	Rb	Re	S		Sb	Sc	Se	Sm	Sn		Sr	Ta	Tb	Te	Th		Ti	Tl	Tm	U	V		W	Y	Yb	Zn	Zr
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	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.																																																																									
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.																																																																									
Verification of sampling and assaying	The verification of significant intersections by independent or alternative company personnel.	N/A																																																																								
	The use of twinned holes.																																																																									
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.																																																																									
	Discuss any adjustment to assay data.																																																																									

<b>Location of data points</b>	<i>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.</i>	A hand-held Garmin GPS was used to record the coordinates for all samples. Sample coordinates were recorded in MGA zone 54.
	<i>Specification of the grid system used.</i>	
	<i>Quality and adequacy of topographic control.</i>	
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	The data spacing of the traverses (200m) is considered appropriate for first pass Ultra Fine Fraction (UFF) soils to define carbonatite dykes and intrusions
	<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>	
	<i>Whether sample compositing has been applied.</i>	
<b>Orientation of data in relation to geological structure</b>	<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>	Traverse orientations were typically across strike, or centred on aeromagnetic targets
	<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>	
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Samples were handled exclusively by OLY staff to the point of lab submission.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none"> <li>• All sampling data reported in this announcement was assayed by LabWest</li> <li>• OLY have not completed any external audits or reviews of the sampling techniques.</li> <li>• No drilling results are being reported in this announcement.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

<b>Criteria</b>	<b>Explanation</b>	<b>Comment</b>
<b>Mineral tenement and land tenure status</b>	<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>	<ul style="list-style-type: none"> <li>• EL6374 is a joint venture between Olympio and Copper Claim Ltd (tenement holders). EL6912 is owned and operated 100% by Olympio Metals Limited</li> <li>• All the tenements are in good standing.</li> </ul>
	<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>	
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> <li>• Within EL6374, significant exploration by Flinders Mines for kimberlites in the period 2000-2010. No exploration directly for carbonatites was undertaken. The exploration is detailed in Openfile report ENV09915.</li> <li>• Within EL6912 there has been no exploration for kimberlites or carbonatites for 50 years.</li> </ul>
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>The Eurelia Project area is a recognised zone of alkaline igneous rocks, including the Walloway and Yanyarrie carbonatites and the Eurelia kimberlite dykes (Figure 4). Alkaline igneous rock complexes are recognised worldwide as hosts of economic REE mineralisation (Dostal 2017, Smith et.al. 2016, Verplanck et. al. 2010, Chakhmouradian &amp; Zaitsev 2012).</p> <p>Alkaline intrusive complexes often occur as plugs, dykes, sills, breccias or veins. Carbonatites and alkaline intrusive rock types may be mineralised with REEs, niobium, phosphorus, tantalum, uranium, thorium, copper, iron, titanium, vanadium, barium, fluorine and zirconium. A wide range of alkaline igneous rock types and associated regolith are potential hosts of economic REE mineralisation.</p>

<b>Drill hole Information</b>	<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>	There is no drilling with EL6912 to date
<b>Data aggregation methods</b>	<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> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	Not applicable to reconnaissance soil sampling
<b>Relationship between mineralisation widths and intercept lengths</b>	<i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <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>	Not applicable to reconnaissance soil sampling
<b>Diagrams</b>	<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>	Not applicable to reconnaissance soil sampling
<b>Balanced reporting</b>	<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>	Not applicable to reconnaissance soil sampling
<b>Other substantive exploration data</b>	<i>Other exploration data, if meaningful and material, should be reported.</i>	<p>All samples collected have been reported in this announcement.</p> <p>A detailed drone magnetic survey across the Walloway REE Prospect was completed. Results returned numerous discrete magnetic targets, highly characteristic of carbonatite bodies in comparison to the known Walloway Carbonatite. The UAV (drone) magnetic survey was completed in mid-October by Atlas Geophysics. The survey was completed at 50m flight line spacing (N-S), 25m terrain clearance and spanned a 90km<sup>2</sup> area. Anomalies were identified by Olympio exploration staff, with follow up inversion modelling conducted by geophysical consultants, Planetary Geophysics.</p> <p>Magnetic modelling of the carbonatite targets has revealed robust magnetic models, with typically shallow depth to source (&lt;50m), and several models extending to &gt;500m below surface.</p>
<b>Further Work</b>	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <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>	<ul style="list-style-type: none"> <li>• modelling of aeromagnetic anomalies</li> <li>• ground gravity survey of deeper magnetic anomalies</li> <li>• aircore drilling of shallow magnetic targets</li> <li>• RC drilling of deeper magnetic/gravity targets</li> </ul>



Table 1 Soil sample Ultra Fine Fraction REE assays

Sample No	E_MGA54	N_MGA54	Description	Ce	Dy	Er	Eu	Gd	Ho	La	Lu	Nd	Pr	Sm	Tb	Tm	Y	Yb	TREO
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
WS001	273114	6391286	soil	100	3.95	2.23	1.24	4.35	0.81	25.9	0.3	20.5	5.39	4.76	0.68	0.3	21.2	2	234
WS002	273020	6391318	soil	53.6	5.05	2.91	1.29	4.93	1.01	17.1	0.36	17.3	4.11	4.62	0.87	0.39	31.5	2.43	179
WS003	273330	6391720	soil	117	5.21	2.79	1.99	6.56	1	45.6	0.32	34.1	8.96	7.47	0.98	0.35	29.9	2.12	319
WS004	273318	6390641	soil	82.4	4.67	2.43	1.53	5.31	0.89	25	0.26	23.1	5.52	5.73	0.81	0.3	24.2	1.84	222
WS005	272955	6390763	soil	69.1	4.63	2.6	1.38	4.75	0.92	18.7	0.32	17.7	4.27	4.69	0.77	0.33	25.1	2.15	190
WS006	268065	6386686	soil	197	22.8	14.6	5.23	21.1	4.96	50	1.74	72.4	15.6	19.2	3.67	1.86	163	11.6	734
WS007	268252	6386620	soil	107	14.8	9.07	4.09	15.6	3.2	33.1	1.05	52.4	10.2	14.7	2.6	1.17	76.9	6.65	425
WS008	268442	6386554	soil	144	2.89	1.35	1.61	4.79	0.51	34.4	0.17	35.8	9.56	7.49	0.61	0.19	12.3	1.23	310
WS009	268631	6386488	soil	201	1.8	1	0.72	2.49	0.35	17.1	0.14	13.2	3.57	3.01	0.35	0.13	8.87	0.9	310
WS010	268820	6386422	soil	275	2.95	1.48	1.12	4.13	0.55	27.1	0.2	21.5	5.83	4.65	0.57	0.2	14.7	1.31	440
WS011	269008	6386358	soil	148	5.34	2.48	2.85	8.01	0.92	47.5	0.29	65.9	16.9	13.7	1.12	0.31	24	1.99	408
WS012	267575	6388192	soil	136	2.51	1.49	0.8	2.62	0.5	15	0.21	12.4	3.2	2.86	0.43	0.2	12.9	1.38	234
WS013	267454	6388446	soil	99.6	4.5	2.59	1.64	5.51	0.92	31.5	0.35	27.4	6.97	6.26	0.79	0.34	25.2	2.31	261
WS014	267387	6388259	soil	147	2.85	1.62	1.01	3.25	0.56	20.7	0.24	15.6	4.22	3.5	0.49	0.23	14.3	1.58	264
WS015	267199	6388323	soil	55	4.04	2.4	1.29	4.52	0.85	23	0.29	18.1	4.69	4.35	0.73	0.32	23.1	1.98	175
WS016	267322	6388071	soil	75.6	4.22	2.26	1.28	4.28	0.8	19.3	0.28	17.3	4.37	4.34	0.72	0.31	23.9	1.91	195
WS017	268069	6389608	soil	89.4	4.27	2.04	1.59	5.92	0.77	30.6	0.23	24.6	5.95	5.77	0.84	0.25	22.2	1.51	237
WS018	268259	6389542	soil	66.3	3.56	1.86	1.26	4.15	0.68	21.2	0.21	19	4.73	4.48	0.63	0.23	19.3	1.47	180
WS019	268448	6389478	soil	95.5	3.68	1.96	1.4	4.87	0.71	25.6	0.22	20.9	5.5	4.87	0.69	0.24	24.6	1.44	233
WS020			GRE-6	98900	489	106	1150	2320	59.1	4020 0	6.94	2770 0	7290	4400	182	9.35	1440	52.1	22173 1
WS021	268638	6389410	soil	214	4.94	1.92	4.44	11.4	0.77	81.3	0.22	96.8	22.2	19.1	1.27	0.24	16.7	1.5	572
WS022	268825	6389345	soil	66.1	2.39	1.22	1.03	3.21	0.44	20.7	0.15	19	5.16	3.94	0.45	0.16	12.2	1.08	166
WS023	269017	6389279	soil	86.3	4.5	2.57	1.35	4.99	0.91	22.9	0.31	21.9	5.34	5.26	0.79	0.32	26.4	1.99	225
WS024	269203	6389215	soil	97.8	3.47	1.97	1.37	4.63	0.68	31	0.25	25.8	6.9	5.48	0.64	0.26	21.4	1.62	246

Sample No	E_MGA54	N_MGA54	Description	Ce	Dy	Er	Eu	Gd	Ho	La	Lu	Nd	Pr	Sm	Tb	Tm	Y	Yb	TREO
				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
WS025	270369	6391382	soil	117	6.81	3.93	1.85	6.94	1.33	28	0.54	28.9	6.76	7.21	1.15	0.53	39.8	3.49	308
WS026	270116	6391259	soil	360	11.4	4.8	4.82	16.5	1.97	89.6	0.49	83.8	21	19	2.3	0.58	44.4	3.43	802
WS027	270249	6391637	soil	60.9	3.48	2.04	0.92	3.49	0.71	19.3	0.27	13.9	3.44	3.47	0.58	0.28	19.9	1.85	163
WS028	270182	6391447	soil	101	5.01	3.22	1.37	5.24	1.06	16.7	0.43	19.4	4.49	5.19	0.85	0.43	30.8	2.77	240
WS029	269993	6391514	soil	123	17.2	9.54	5.33	20.8	3.49	65.5	1.02	91.6	21	22.2	3.17	1.18	99.7	6.91	591
WS030	269461	6387219	soil	125	3.91	2.2	1.48	5.03	0.81	26.7	0.27	26.7	6.63	5.91	0.73	0.3	21	1.87	277
WS031	269715	6387340	soil	76	6.22	3.8	1.43	5.88	1.32	16.2	0.47	18	4.13	4.95	1.02	0.48	39.6	3.05	222
WS032	269594	6387595	soil	113	5.96	3.17	1.82	6.78	1.13	29.8	0.39	27.8	7.06	7.1	1.05	0.41	33.1	2.62	292
WS033	269337	6387473	soil	171	7.12	2.76	4.98	14.2	1.11	83.3	0.29	107	27.6	24.1	1.74	0.33	24.4	2.19	565
WS034	269525	6387408	soil	182	5.86	3.24	2.14	7.45	1.15	38.5	0.41	36.7	9.31	8.58	1.11	0.42	33.3	2.72	403
WS035	269460	6399174	soil	48.3	3.7	1.96	1.23	4.61	0.69	22.2	0.25	24	5.98	5.35	0.67	0.25	20.8	1.68	170
WS036	269524	6399362	soil	61.8	4.18	2.18	1.31	4.84	0.77	24.5	0.29	25.7	6.63	5.77	0.72	0.28	21.7	1.88	196
WS037	269339	6399427	soil	50.8	3.94	2.13	1.29	4.87	0.76	23	0.29	25.2	6.4	5.62	0.71	0.28	21	1.84	178
WS038	269592	6399550	soil	70.3	4.58	2.49	1.44	5.44	0.85	30.6	0.34	31.7	8.07	6.77	0.78	0.33	23.5	2.13	228
WS039	269716	6399300	soil	52.2	3.58	1.99	1.13	4.27	0.68	25.4	0.27	24.5	6.48	5.21	0.62	0.26	17.9	1.67	176