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ASX ANNOUNCEMENT

# **Exploration Update – SA Projects**

## Labyrinth demonstrates high-order gold-rare earths anomalism, Musgrave to be progressed

#### Highlights

- Auger drilling at the Labyrinth Project in South Australia's Gawler Craton demonstrates highorder gold and rare earths anomalism
- Gold and rare earth anomalism demonstrated within a possible repetition, in the north east of the Project area, of the Labyrinth Shear Zone that may have potential to host significant mineralisation
  - As demonstrated by Indiana Resources' Minos and Ariadne prospects ~25km along strike<sup>1</sup>
  - Historic CRAE drill hole returned anomalous copper and neodymium close to the interpreted location of the Labyrinth Shear Zone<sup>2</sup>
- Musgrave Project to be further assessed by a VTEM<sup>™</sup> MAX Geophysical Survey scheduled for December 2022 quarter
  - The Company intends to build upon the historical drill hole intercept of 19m at 0.2% Ni<sup>3</sup> returned in ultramafic cumulates
- The Musgrave Project was successful in the grant of up to \$200,000 under the South Australian Governments Accelerated Discovery Initiative (ADI)

Woomera Mining Limited (**ASX: WML**) ("**Woomera**", "**the Company**") is pleased to provide an update on recent exploration activities at its South Australian projects, Labyrinth in the Gawler Craton and Musgrave in the Musgrave Province.

At Labyrinth, Woomera has completed an auger drilling survey that has identified multiple, high order gold and rare earths anomalies coincident with a possible "Labyrinth Shear Zone" repetition in the north east of the Project area. The Company has also booked a VTEM<sup>™</sup> MAX Survey for the Musgrave Project, located in the same geological province as the Nebo-Babel (390Mt @ 0.31% Ni, 0.34% Cu<sup>4</sup>) and Wingellina (215.6Mt @ 0.91% Ni, 0.07% Co<sup>5</sup>) projects.

The Labyrinth Project is located 300km north-northwest of Port Augusta (Figure 1), 60km east of the Tarcoola gold mine and 200km west of Coda Minerals' Elizabeth Creek IOCG discovery. The 94km<sup>2</sup> tenement area is host to a sequence of Archean-early Mesoproterozoic Hiltaba Granite and Gawler Range Volcanics along with high order auger drilling anomalies in gold and cerium (a possible indicator for rare earth mineralisation).

<sup>&</sup>lt;sup>1</sup>Please refer to IDA Announcements for Indiana's discussion around the Minos and Ariadne dated 4 August 2020, 22 February 2021, 3 March 2021, 13 July 2021, 21 December 2021 and 11 January, 23 February & 15 March 2022.

<sup>&</sup>lt;sup>2</sup>Please refer to ASX Announcement "Prospectus" dated 5 December 2017.

<sup>&</sup>lt;sup>3</sup>ASX Announcement "South Australian Musgrave Project Update" dated 30 June 2020

<sup>&</sup>lt;sup>4</sup>OZ Minerals Website - <u>WMP MROR (ozminerals.com)</u>

<sup>&</sup>lt;sup>5</sup>NiCo Resources Investor Presentation 21/7/2022



The Musgrave Project is located 900km north-northwest of Port Augusta (Figure 1) and covers 1,600km<sup>2</sup> including the prospective Giles Complex that hosts base metal mineralisation. The presence of fertile host rocks has been confirmed in historical drilling, which returned results of up to 19m at 0.2% Ni<sup>1</sup> from ultramafic rocks.



Figure 1: Location of the South Australian Labyrinth and Musgrave Projects with Mt Venn displayed

#### Labyrinth Auger Geochemistry, Interpretation & Next Steps

Woomera has received all multi-element assays from the auger drilling program conducted at the Labyrinth Project. Work on the Project has involved multiple geochecmical programs designed to vector in on drill targets. With each program, targets have been refined based on geostatistical interrogations of data returned through the assays. Assay values in comparison to background or non-mineralised zones within the Project area display "order of magnitude" anomalism.

Background gold values at Labyrinth appear to be circa 2 parts per billion (ppb), therefore any values above twice the background amount are deemed anomalous. Furthermore, cerium (Ce), an element associated with the lanthanide series of elements (rare earths) displays a background value of circa 15ppb Ce. The cut-off used for cerium anomalism is three times the background amount. In light of the significant gold and rare earths mineralisation demonstrated by Indiana Resources (ASX:IDA) at its Minos and Ariadne prospects along strike, the Company is encouraged by the anomalism identified at Labyrinth. Woomera's interpretation is that there is the potential for parallel repetitions of the Labyrinth Shear Zone hosting mineralisation.

Figures 2 and 3 below demonstrate the anomalism displayed in the recent auger drilling. The lines across the figures indicate the interpreted Labyrinth Shear Zone and a possible eastern, parallel



repetition. Drilling by CRAE in 1988 intersected weathered basement at a depth of 69 metres and trace pyrite, chalcopyrite and pyrrhotite was logged throughout the 308m drill hole. Elevated levels of copper (max 792ppm) and neodymium (max 240ppm) were recorded in peridotites and basalts respectively<sup>\*</sup>.

\*Please refer to ASX Announcement "Prospectus" dated 5 December 2017.

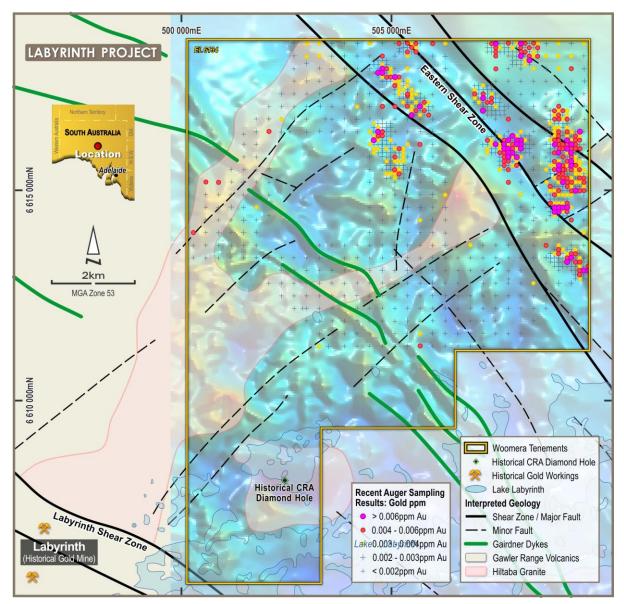


Figure 2: Labyrinth Gold-Rare Earth Project displaying gold (ppb) in calcrete results over regional magnetics.



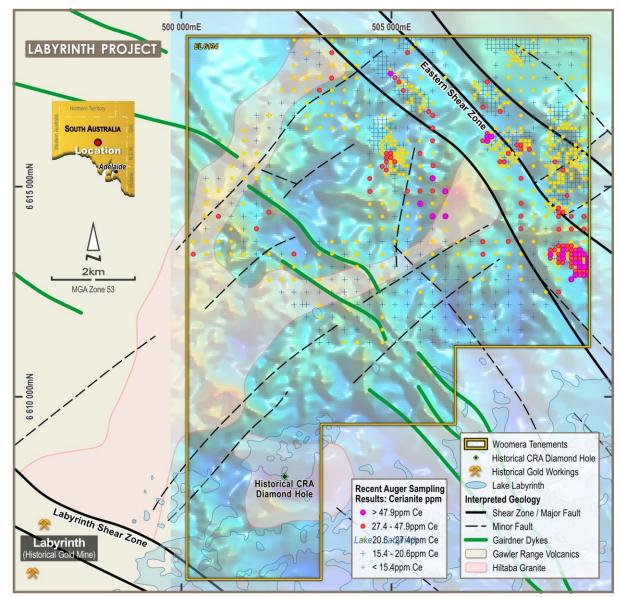


Figure 3: Labyrinth Gold-Rare Earth Project displaying cerium (ppb) in calcrete results.

Woomera is seeking regulatory approval to drill-test these anomalies and will update the market on the approval, commencement and results of this program in due course.

## Musgrave VTEM<sup>™</sup> MAX Survey and Next Steps

The VTEM<sup>™</sup> MAX survey at Musgrave is designed to complement work completed by Woomera as part of the 2019/2020 field programs. The Company expects the high resolution imagery to highlight prospective lithologies, allowing it to target potential mineralisation. The survey will be conducted in the December 2022 quarter with results communicated to the market in due course.



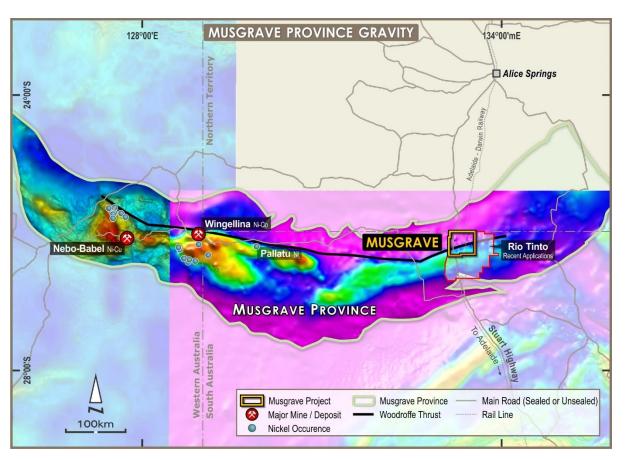


Figure 5: Musgrave Ni-Cu Project regional position with respect to the Musgrave Province (note Rio Tinto recent applications).

Earlier this year, the Company announced that we were successful in in its application for co-funding under the South Australian Governments Accelerated Discovery Initiative (ADI), to be allocated to the Musgrave Project in South Australia. The ADI is designed to increase greenfield mineral exploration activity to attract exploration investment required to uncover future mines throughout the state.

The Musgrave Project has been offered matching funding of up to \$200,000 on a dollar-for-dollar basis to undertake exploration aircore drilling. Woomera has committed to completing the VTEM<sup>™</sup> MAX Survey in the last quarter of this year, from which drill targets may be defined, and partly funded through this scheme.

#### **Management Comment**

Woomera Managing Director, Jason Livingstone said:

"The Labyrinth Project is proving to be a strategic and highly prospectivity land holding within South Australia's Gawler Craton. With the auger calcrete anomalism displayed from these results, we are very eager to undertake further assessment via drilling. While hosting part of the Labyrinth Shear Zone that has displayed a proven endowment of minerals, the tenement also features an interpreted parallel Eastern Shear that looks to be very prospective based on the geochemical anomalism displayed.

"Furthermore, the Musgrave Project, located within the Giles Complex suite of rocks that hosts deposits such as Nebo-Babel and Wingellina along strike, is very exciting. Historical work by previous owners and Woomera itself suggests that we are in the right area. Rio Tinto recently acquiring a significant





landholding immediately south and east of the Musgrave tenure only adds weight to the view that this area has excellent prospectivity. The completion of this VTEM<sup>TM</sup> Max Survey is a prudent, methodical step to develop drill targets, for which we have dollar-for-dollar spend matching from the ADI."

This ASX announcement has been approved and authorised for release by the Board of Woomera Mining Ltd.

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### **About Woomera Mining Limited**

Woomera Mining Limited is a focussed mineral explorer. The Company is exploring for battery metals (lithium nickel, copper + PGE's) and gold in the Yilgarn and Pilbara Cratons of Western Australia plus the Musgrave Province in South Australia along with copper-gold mineralisation in the Gawler Craton of South Australia.

## **Competent Persons Statement**

The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr Jason Livingstone. Mr Livingstone is a full-time employee of Woomera Mining Limited and is a Member of the Australasian Institute of Mining and Metallurgy with over twenty years of experience in the field of activity being reported. Mr Livingstone has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activity that 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' relating to the reporting of Exploration Results. Mr Livingstone consents to the inclusion in the report of matters based on his information in the form and context in which it appears.

## **Forward Looking Statements**

Certain statements in this document are or maybe "forward-looking statements" and represent Woomera's intentions, projections, expectations or beliefs concerning among other things, future exploration activities. The projections, estimates and beliefs contained in such forward-looking statements necessarily involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Woomera, and which may cause Woomera's actual performance in future periods to differ materially from any express or implied estimates or projections. Nothing in this document is a promise or representation as to the future. Statements or assumptions in this document as to future matters may prove to be incorrect and differences may be material. Woomera does not make any representation or warranty as to the accuracy of such statements or assumptions.

#### **Previously Reported Information**

Information in the announcement references previously reported exploration results extracted from the Company's announcements, including WML ASX Release 11 March 2022. For the purposes of ASX Listing Rule 5.23 the Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the estimates in the original announcements continue to apply and have not materially changed.





## Appendix 1: Labyrinth Project - JORC Table 1

Please note – the CP has excluded The Musgrave Project from the Table 1 descriptions as there is no new information presented, and references for previously stated information are inserted.

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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> <li>The nature of the sampling was to scoop sample returned from the auger holes that had reacted to Hydrochloric acid and further confirmation by colour.</li> <li>Reference measures used were laboratory standards.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core</li> </ul>	<ul> <li>Tray back mounted auger drill rig with 75mm diameter auger.</li> <li>The sample point was drilled until a calcrete was returned, the calcrete was</li> </ul>





Criteria	JORC Code explanation	Commentary
	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). Method of recording and	subsequently sampled.
Drill sample recovery	<ul> <li>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> <li>No recovery of sample was noted, only the reaction to hydrochloric acid (HCl).</li> <li>The action taken to ensure the correct horizon was sampled is its reaction to HCl, then colour.</li> </ul>
Logging	<ul> <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> <li>The style of drilling does not lend itself to the inclusion within a mineral resource estimate – it is reconnaissance geochemical work to vector in on potential mineralisation. However, they were geologically logged to ensure the correct sampling horizon was obtained.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <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> </ul>	Please see below for sample preparation and analysis:     SAMPLE PREPARATION     ALS CODE DESCRIPTION     WEI-21 Received Sample Weight     LEV-01 Waste Disposal Levy     LOG-22 Sample login - Rcd w/o BarCode     SCR-41 Screen to -180um and save both     ANALYTICAL PROCEDURES     ALS CODE DESCRIPTION INSTRUMENT     AuME-TL43 25g Trace Au + Multi Element PKG





Criteri	a JORC Code explanation	Commentary
Qualit assay and labora tests	<ul> <li>Measures taken to ensure that the sampling is representative 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 sampled.</li> <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 paramete 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,</li> </ul>	<ul> <li>The author believes the assay methodology is appropriate for low level geochemical detection of elements to assist in constraining soil anomalies that may persist into bedrock mineralisation.</li> <li>The author believes the analytical method, QAQC and acceptable levels of precision have been achieved through the selection of the correct soil horizon to sample, QAQC was acceptable with no outliers identified and field and laboratory checks were prepared with care and double check before submission and during analysis.</li> </ul>
Verific of sam and as	<i>pling • Documentation of primary data</i>	<ul> <li>No verification beyond duplicates both field and laboratory, and standards were employed.</li> <li>No adjustment to assay data was performed, however, was domained based on basement geology and statistical analysis performed on what would be considered anomalous within that geological domain.</li> </ul>
Locati data p	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys)</li> </ul>	<ul><li>presented within the images in the body of the announcement.</li><li>Grid systems utilised have been noted and</li></ul>





Crit	teria	JORC Code explanation	Commentary
dat rela geo	entation of a in ation to blogical ucture	<ul> <li>Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Not applicable as this is surface, geochemical sampling, analysis and interpretation.</li> </ul>
	nple urity	• The measures taken to ensure sample security.	<ul> <li>Sample security was managed by the auger rig operator from field to laboratory, then by the laboratory until assay results were delivered. The author believes the chain of custody was secure and appropriate to ensure that the samples are representative of the location they were taken from.</li> </ul>
	dits or iews	• The results of any audits or reviews of sampling techniques and data.	<ul> <li>No external reviews or audits have been performed.</li> <li>Internal reviews have been performed to ensure sample quality, analytical robustness and subsequent interpretation has been interrogated.</li> </ul>

#### Part 2: Reporting of Exploration Results

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</li> </ul>	<ul> <li>All licenses discussed are illustrated in the above images and tenement ID's noted.</li> <li>Currently all the tenements are in good standing. There are no known impediments to obtaining a licences to operate in either area.</li> </ul>





Criteria	JORC Co	de explanation	Commentary
		he time of reporting along with any known impediments to obtaining a licence to operate in he area.	
Explorat done by parties	other • A	Acknowledgment and appraisal of exploration by other parties.	• Exploration and mining by other parties has been extensively reviewed and has been used as a guide to Woomera's future exploration activities. Previous parties may have completed soils sampling, rock chip sampling, RC drilling and diamond drilling over selected parts of the project.
Geology		Deposit type, geological setting and style of mineralisation.	<ul> <li>The targeted mineralisation is typical of Carlin-type epithermal gold mineralisation where the mineralization forms very large tonnage flat lying deposits</li> <li>Woomera will also explore for steeper dipping high grade feeder structures and low sulphidation epithermal vein arrays within the land package along with "Homestake" style sulphide replacement banded iron formation mineralization at Golden Marra Mamba</li> </ul>
Drill hole	e tion • ! i	A summary of all information material to the understanding of the exploration results including a tabulation of the following nformation for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> <li>f the exclusion of this nformation is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly</li>	<ul> <li>Auger drilling has been employed and adequately detailed in the images and text above.</li> <li>The type of drilling and the results are a part of a geochemical assessment of the tenure, the inclusion of hole depths, exact coordinates etc and its exclusion does not detract fro the graphical and text descriptions of the anomalies illustrated.</li> </ul>





Criteria	JORC Code explanation	Commentary
	explain why this is the case.	
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> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>The analytical results were domained by the geological unit from which they were taken. Then a statistical analysis on the elemental analysis was performed to understand the population spread within the data, inflection points were used to understand population differences and to determine what was anomalous and what is background.</li> <li>All assay results are reported to 3 significant figures in line with the analytical precision of the laboratory techniques employed.</li> <li>No metal equivalent reporting is used or applied.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Unable to ascertain at this point in time as the data is reconnaissance exploratory data showing us the potential of mineralization below or nearby.</li> </ul>
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 of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul> <li>All diagrams within the body of the announcement fairly and accurately reflect all data at the authors disposal.</li> </ul>
Balanced reporting	<ul> <li>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</li> </ul>	<ul> <li>All pertinent information has been provided in this announcement.</li> </ul>





Criteria	JORC Code explanation	Commentary
	misleading reporting of Exploration Results	
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 possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Woomera is intending to complete first pass reconnaissance drilling at the Labyrinth Project post regulatory approvals.</li> <li>Furthermore, Woomera intends to perform a further geophysical survey at the Musgrave Project.</li> </ul>