4 April 2025

Assays results confirm Overland Uranium intersections in near-surface mineralisation

Highlights:

- **Assays confirm Uranium intersections in the first hole where a calcrete-hosted surficial uranium occurrence was detected, atOV047:**
  - 2m at 92ppm U_3O_8 from 26m, including:
    - 1m at 103ppm U_3O_8 from 27m;
    - 1m at 82ppm U_3O_8 from 26m; and
  - 1m at 72ppm U_3O_8 from 31m

- **Significant mineralisation potential at Overland:** The modern drainage setting indicates an anomalous mineralised zone up to 6m thick and over 1km wide, open in all directions.

- **Dual Uranium potential:** Assays now confirm Overland demonstrates potential for both near surface, calcrete-hosted uranium, and deeper, ISR-amenable deposits, highlighting the strategic significance of AR3's 4,000km^2 exploration land package.

- **Drilling and assays continue:**
  - Assays from the remainder of the infill holes following up OV047 are expected in the June quarter 2025.
  - Our 2025 drilling program will continue through April, following up the surficial uranium discovery and deeper ISR-amenable deposits.

- Engage with this announcement at the AR3 ***investor hub.***

AR3 Managing Director and CEO, Travis Beinke, said:

"These assay results from the first hole where the occurrence of shallow calcrete-hosted uranium was discovered underscore the significant potential of the Overland project. The search for both shallow calcrete-hosted uranium, and sedimentary hosted, ISR amenable targets, continues in this frontier uranium play.

"We look forward to providing further updates on our ongoing drill program and sharing assay results as AR3 pursues active uranium exploration activity at Overland."

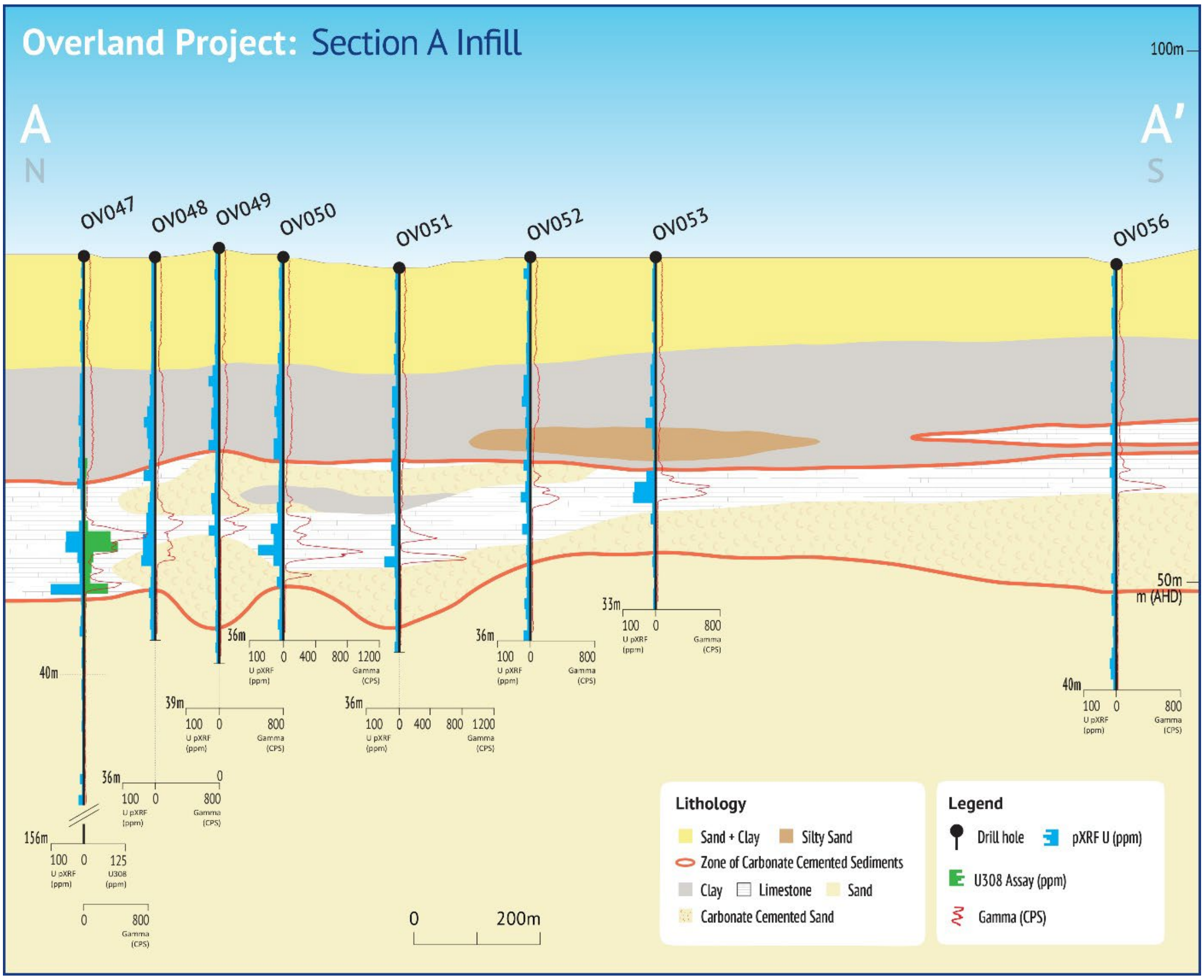

Figure 1: *Section A- A' displaying lithology interpretation, natural gamma responses (cps) and pXRF uranium responses (ppmU). In relation to the disclosure of pXRF results, the Company cautions that estimates of uranium elemental abundance from pXRF results should not be considered a proxy for quantitative analysis of a laboratory assay result. Assay results are required to determine the actual widths and grade of the mineralisation. The company uses an Olympus Vanta M Series portable X-ray Fluorescence (pXRF) analyzer to screen Air Core drilling samples for mineralization prior to submitting samples to a commercial laboratory for assay. This provides an initial understanding of the mineralization distribution before sampling, ensuring submitted samples are representative of the targeted mineralization. While pXRF confirms the presence of mineralization, it does not accurately determine elemental concentrations due to limitations such as a small analysis window, uneven distribution, shallow penetration depth, and irregular surfaces. The pXRF results are indicative and the pXRF readings are subject to confirmation by chemical analysis from an independent laboratory.*

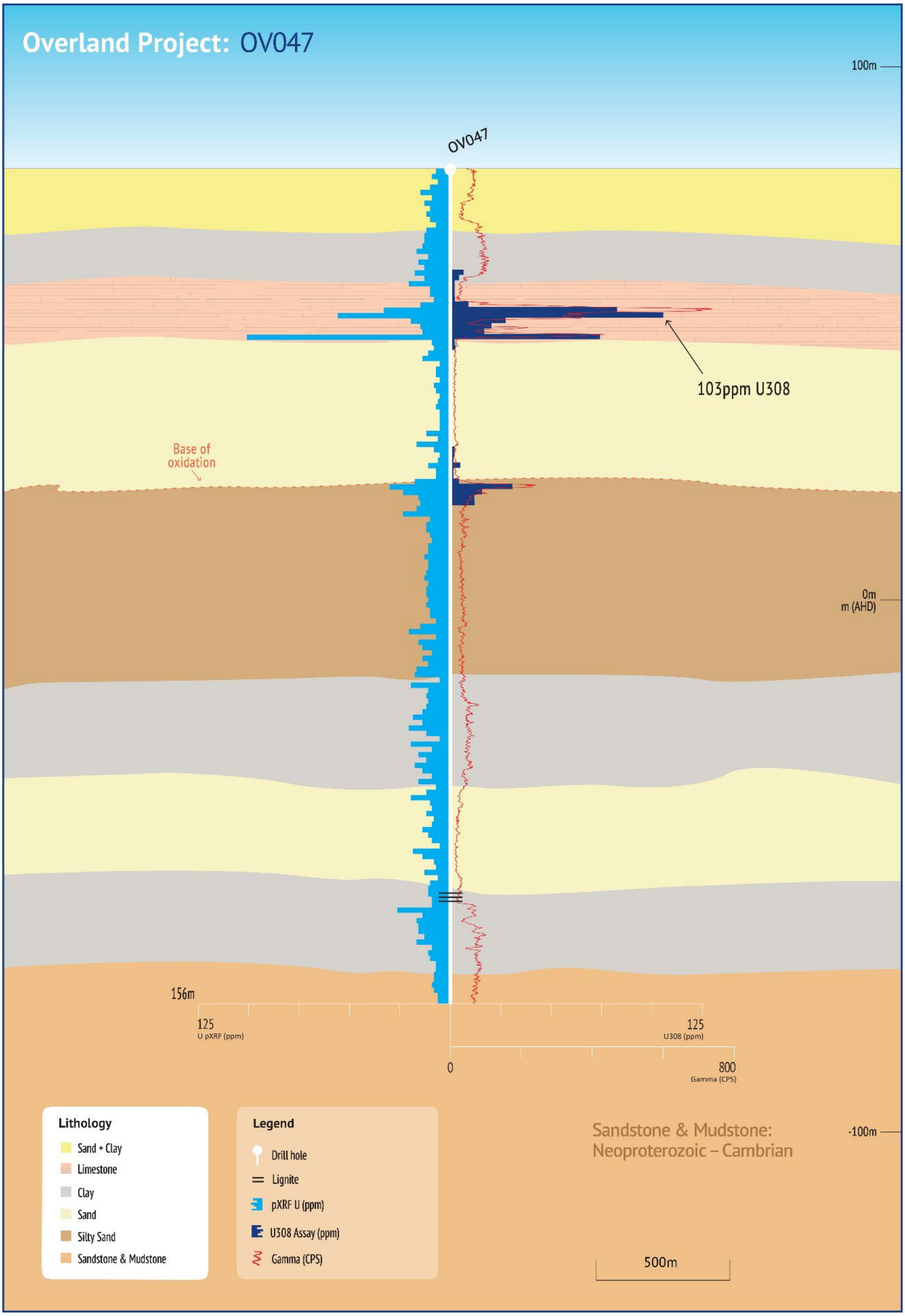

Figure 2: *Strip log displaying drill hole OV047 lithology, natural gamma responses (cps), pXRF uranium responses (ppm U) and chemical assay results (ppm U_3O_8)*

Australian Rare Earths Limited (ASX: AR3) is pleased to provide an update on the chemical assays received from samples recovered from the shallow calcrete hosted intersections in drill hole OV047.

The assay results conform with down hole gamma responses and in-field pXRF measurements for contained uranium in OV047. This provides continued confidence that these immediate field-based measurements can guide drill hole targeting at Overland.

Now supported by these recent assays and significant uranium intersections, follow-up drilling of OV047's anomalous gamma and pXRF uranium readings in shallow carbonate-cemented sediments, point to the potential for a widespread continuation of calcrete hosted uranium mineralisation.

The follow-up drilling, consisting of nine drill holes targeting the shallow carbonate-cemented sediments, have consistently confirmed anomalous gamma and pXRF uranium responses[1]. The discovery remains open in all directions for calcrete-hosted uranium mineralisation. The mineralisation spans an extensive area, with a potential strike length stretching dozens of kilometres along the modern drainage profile and a width exceeding one kilometre.

The follow up drilling was conducted at 100 to 600 metre spacings to depths of up to 42 metres, with anomalous zones occurring between 20 and 32 metre depths (Figure 1: section A-A').

Initial indications of a shallow uranium occurrence at Target 1 of EL6678 came in drill hole OV047, which intersected a 6 metre interval containing anomalous gamma and pXRF uranium responses. Gamma responses peaked at 741 counts per second (cps), with maximum pXRF uranium response of 105ppm uranium in OV047. Subsequent drilling has provided further evidence of this style of mineralisation, with gamma responses peaking at 1,010cps in hole OV050 and additional anomalous pXRF uranium values exceeding 50ppm occurring in holes OV050 and OV053. The identified anomalous zones range from two to six metres thick.

Mineralogical assessments of hole OV047 drill cuttings through scanning electron microscope (SEM) and micro XRF analysis indicate that uranium is hosted in the secondary calcite cementation of both the limestone and the sandy sediments in this setting. Indicative uranium levels of up to ~350ppm uranium have been detected in the calcite cement infilling these sediments. The uranium within the calcite cement was identified by analysing samples with a Bruker M4 Tornado Plus µXRF instrument operated by Adelaide Microscopy at the University of Adelaide[2].

This shallow sedimentary uranium mineralisation in secondary carbonate cementation is similar to Namibia's surficial uranium deposits, as found at Paladin Energy's Langer Heinrich mine or Deep Yellow's Tumas project. Similar calcrete-hosted deposits are also found in Western Australia at Cameco's Yeelirrie deposit and Toro Energy's Wiluna project.

---

[1] See ASX Release: 19 March 2025

[2] This instrument behaves much like the handheld pXRF, however the incident X-Ray beam is focussed to ~15µm in diameter, allowing for targeted spot analysis and x-ray "imaging" by moving the sample under the focussed x-ray beam. In relation to the disclosure of µXRF results, the Company cautions that estimates of uranium elemental abundance from µXRF results should not be considered a proxy for quantitative analysis of a laboratory assay result. Assay results are required to determine the actual widths and grade of the mineralisation

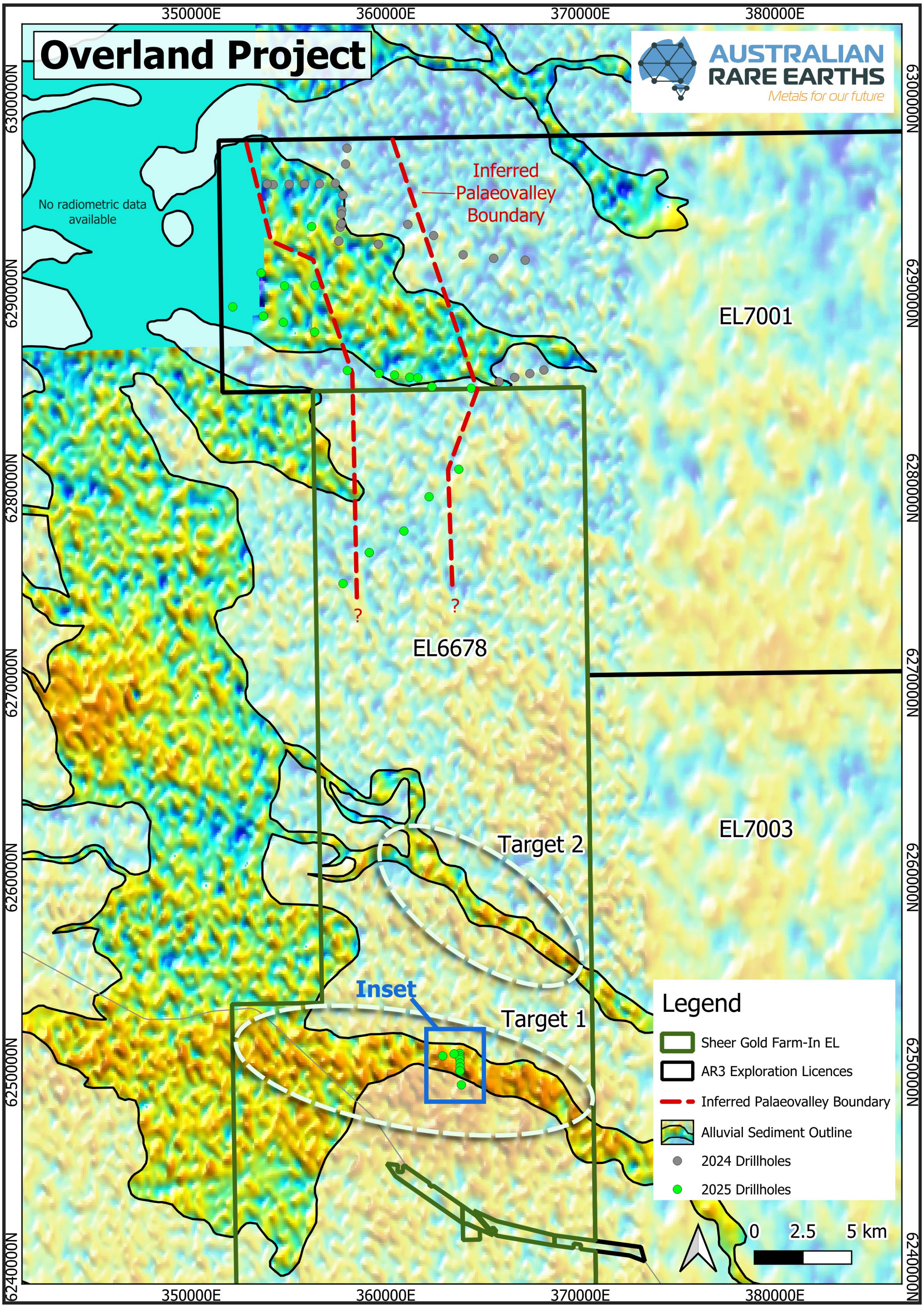

Figure 3: *Project Location Plan with figure 4 inset shown*

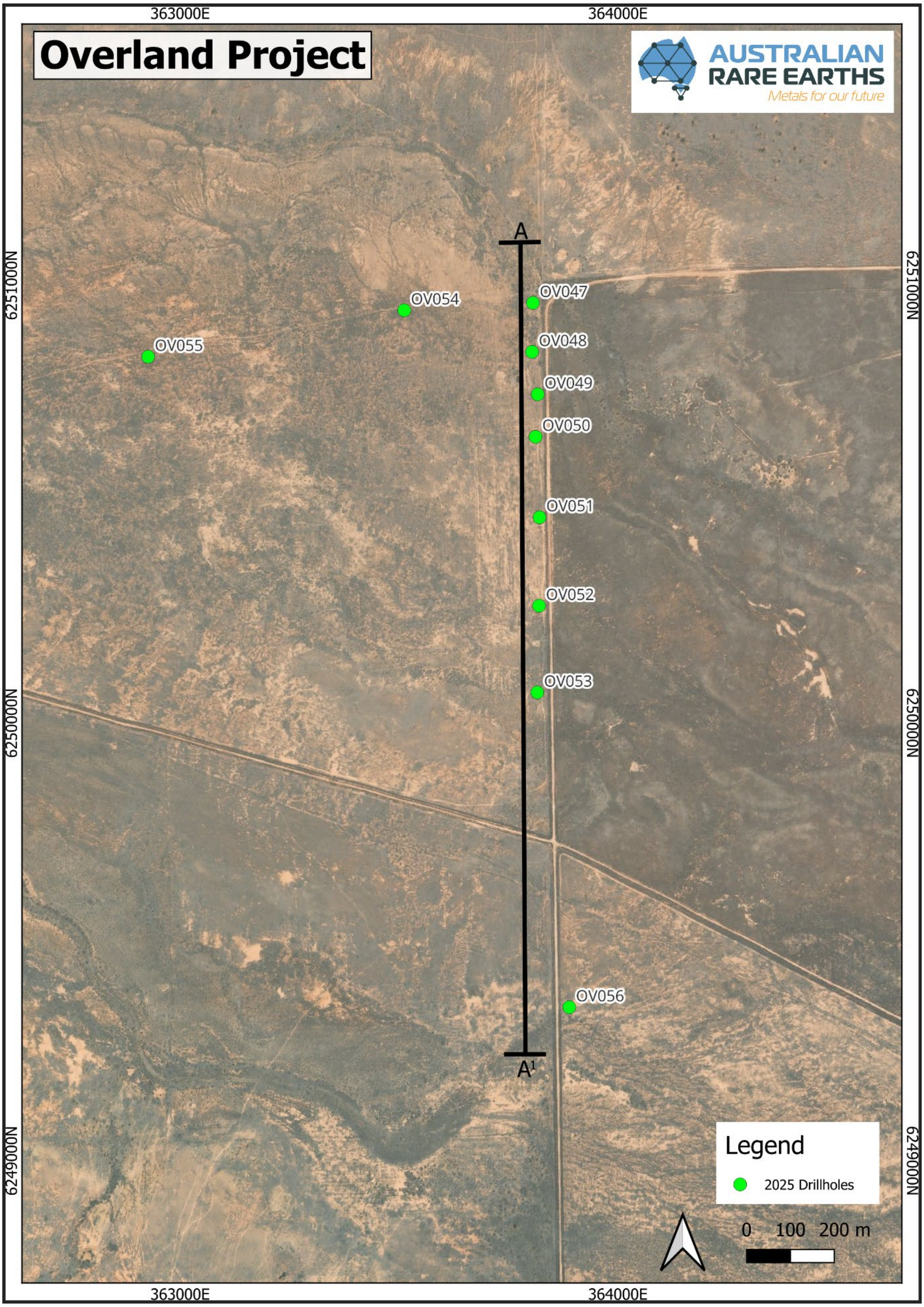

Figure 4: *Inset Figure, section location plan.*

Next steps

AR3's initial 2025 drilling program will continue to follow up the shallow uranium occurrence intersected in the Target 1 area to determine its extent, and to test Target 2 for similar mineralisation style. In addition, high-priority initial targets on EL6678 will be drill-tested, focusing on deeper paleochannel-hosted, in-situ recoverable (ISR) deposits.

Drilling will also target the highly prospective drill targets along the western margin of a palaeovalley setting within EL7001 defined through drilling completed in 2024 and more recently in 2025 (Figure 3).

AR3 has sent samples from the recent drilling for assay analysis and expects results to be released progressively over the next few months.

The announcement has been authorised for release by the Board of Australian Rare Earths Limited.

For further information please contact:

Australian Rare Earths Limited
Travis Beinke
Managing Director and CEO
T: 1 300 646 100

Media Enquiries
Jessica Fertig
Tau Media
E: info@taumedia.com.au

Engage and Contribute at the AR3 investor hub: https://investorhub.ar3.com.au/

Competent Person's Statement

The information in this report that relates to Exploration results is based on information compiled by Australian Rare Earths Limited and reviewed by Mr Rick Pobjoy who is the Chief Technical Officer of the Company and a member of the Australian Institute of Mining and Metallurgy (AusIMM). Mr Pobjoy has sufficient experience that is relevant to the style of mineralisation, the type of deposit under consideration and to the activities undertaken 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 Pobjoy consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

About Australian Rare Earths Limited

Australian Rare Earths (AR3) is an emerging diversified critical minerals company, strategically positioned to meet the growing global demand for uranium and rare earth elements. The Company's vast 4,000 km^2 Overland Uranium Project in South Australia shows strong uranium discovery potential, with initial drilling identifying opportunities for substantial near-surface and deeper deposits.

Simultaneously, AR3's Koppamurra Rare Earths Project in South Australia and Victoria has secured important government support through a $5 million grant to accelerate development. With support from global advanced industrial materials manufacturer, Neo Performance Materials, AR3 is progressing toward a Pre-Feasibility Study and a demonstration facility, solidifying its role in diversifying global rare earth supply chains for the clean energy transition. With strategic projects and strong government support, AR3 is poised for significant growth in the critical minerals market.

JORC Table 1

Section 1 Sampling Techniques and Data		
Criteria	**Explanation**	**Comment**
Sampling techniques	*Nature and quality of sampling (e.g., 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. 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 (e.g., '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 (e.g., submarine nodules) may warrant disclosure of detailed information.*	*Air Core drilling methods were used to obtain samples from the Overland drilling program between October-December 2024 and January-March 2025* *The following information details the Air Core drill sampling process:* • *All Air Core drill samples were collected from the rotary splitter mounted at the bottom of the cyclone into a pre-numbered calico bag. The samples were geologically logged at 1 m intervals.* • *Based on hole-diameter, generic material density and a 20% split on the cyclone samples averaged ~1.5-2.5 kg in mass.* • *Chip trays were used to collect a representative sample for each 1m sample interval for each hole.* • *After the samples were collected within the calico bags, they were screened for anomalous gamma radiation using a handheld Ranger EXP survey meter (S/N R318772) calibrated 23/09/2024 prior to being geologically logged and tested with a pXRF at the drill site.* • *The gamma screening was conducted by placing the handheld Ranger survey meter ~10cm from the calico sample for 5-10sec and noting the dose rate in µSv. If elevated dose rates were detected the field crew was then notified before any additional sample logging was conducted and the anomalous reading recorded in the geological log.* • *A handheld Olympus Vanta pXRF Analyser (Model Vanta M Series S/N 842924) was used to assess the geochemistry of the Air Core samples in the field. The pXRF analysis provided screening analysis to characterize the sample lithology and full suite of elements.* • *The pXRF sampling was analysed through the calico bag with a beam count time of 20-30 sec beam 1 and 10 sec beam 2. One pXRF analysis per sample was performed.*

		• *Samples are laid on a workbench and flattened to create a stable surface for the pXRF. The pXRF is placed on the sample with the beam down for the analysis.* • *All readings were taken at ambient temperatures between 10 and 45 degrees Celsius. The Olympus Vanta is rated for continuous operation within these temperatures.* • *Samples range from dry to wet, this is dependent on which formation is being intercepted and whether drilling water has been injected.* • *A Uranium standard Oreas 121 (215 ppm U, sourced from Mantra Resources Nyota Prospect, Tanzania, which is a Tabular Sandstone hosted deposit) was used to verify the accuracy of the pXRF before and after each analysis session.* • *The OREAS 121 standard was prepared using an industry standard pXRF sample cup and analysed for 20-30 sec on beam 1 and 10 Sec on beam 2.* • *A silica blank is used to monitor the accumulation of contamination on the lens of the pXRF. Analysis of the blank is undertaken before and after each analysis session.* • *Review of pXRF standard and blank data is checked to ensure the pXRF is operating correctly before and after each session.* • *Samples were selected for assay at the end of the hole based on geology, pXRF, and natural downhole gamma response.* • *Field duplicates were taken at a rate of ~1:40 and inserted blindly into the sample batches.* • *Field Standards were taken at a rate of ~1:40 and inserted blindly into the samples batches.* • *Samples were submitted to Bureau Veritas in Adelaide for analysis. The sample weights were recorded (wet and dry) and samples*

		were dried at 105 degrees for a minimum of 24 hours. The samples were secondary crushed to 3 mm fraction and then pulverised to 90% passing 75 µm. Excess residue was maintained for storage while the rest of the sample was placed in 8x4 packets and sent to the central weighing laboratory. • *The samples were submitted for analysis using Mixed Acid Digest – Lithium Borate Fusion ICP-MS method (BV Code SC302) with detection limits for each element shown in ppm Ag (0.2 ppm), Al (50.0 ppm), As (1.0 ppm), Au (0.01 ppm), Ba (2.0 ppm), Be (0.5 ppm), Bi (0.1 ppm), Ca (100.0 ppm), Cd (0.5 ppm), Ce (0.1 ppm),* *Co (1.0 ppm), Cr (20.0 ppm), Cs (0.1 ppm), Cu (1.0 ppm), Dy (0.05 ppm), Er (0.05 ppm), Eu (0.05 ppm), Fe (100.0 ppm), Ga (0.2 ppm), Gd (0.2 ppm), Hf (1.0 ppm), Ho (0.02 ppm), In (0.05 ppm), K (100.0 ppm), La (0.1 ppm), Li (10.0 ppm), Lu (0.02 ppm), Mg (50.0 ppm), Mn (50.0 ppm), Mo (0.5 ppm), Na (100.0 ppm), Nb (0.5 ppm), Nd (0.05 ppm), Ni (2.0 ppm), P (50.0 ppm), Pb (1.0 ppm), Pr (0.05 ppm), Rb (0.2 ppm), Re (0.1 ppm), S (50.0 ppm), Sb (0.1 ppm), Sc (1.0 ppm), Se (5.0 ppm), Si (50.0 ppm), Sm (0.05 ppm), Sn (0.1 ppm), Sr (0.5 ppm), Ta (0.1 ppm), Tb (0.02 ppm), Te (0.2 ppm), Th (0.1 ppm), Ti (50.0 ppm), Tl (0.1 ppm), Tm (0.05 ppm), U (0.1 ppm), V (20.0 ppm), W (0.5 ppm), Y (1.0 ppm), Yb (0.05 ppm), Zn (2.0 ppm), Zr (10.0 ppm)* • *Select samples, often at the bottom of the holes thought to be weathered basement/saprolite material were also analyzed for gold using Lead collection Fire Assay AAS (BV Code FA001) where a detection limit for Au (0.01 ppm)* • *A laboratory repeat was taken at ~ 1 in 21 samples.* • *Commercially obtained standards were inserted by the laboratory at a rate of ~ 1 in*

		9 into the sample sequence. • *After the hole was drilled to completion a Reflex EZ Gamma logging tool (serial number GAM-043) rented from Imdex, and operated by the drilling crew was run down the hole, inside the rods/innertube to log the natural gamma response of the sediments. The gamma tool was last calibrated by Imdex on October 9th, 2024, as noted in the provided Certificate of Conformance.* • *The survey was run in and out of the hole at a speed of no more than 10m/min and the downhole speed was reviewed after the survey.* • *The up (out) survey was then used to plot sections, after reviewing both in and out.* • *Before each downhole gamma survey the Reflex EZ Gamma logging tool was checked with an EZ-Gamma confidence checker by AR3 staff (S/N 025). The confidence checker was last calibrated 29/08/24.* • *Using the EZ-Gamma confidence checker at the start of each run allows the gamma tool to be checked ensuring it is within specifications and the tool has not been damaged or faulty providing confidence an accurate gamma reading is collected for each hole.* • *The check is completed by first running the gamma tool for ~3-5min to measure Background Gamma (BKG) in cps. A second survey is then conducted after sliding the EZ-Gamma Confidence checker (Jig serial number 025) over the gamma probe and measuring a Sleeve Response (SR) in cps. The BKG value is subtracted from the SR value which provides a Calculated Sleeve Response (CSR) value in cps. The CSR is then compared to the Expected Value (EV) of the gamma checker which is certified to be 636 cps. A resulting pass value= 636 cps +/- 10 % and required before the survey tool is confirmed as operating within expected limits.*

		• *The formula used for checking the gamma tool is as follows;* • *CSR= SR-BKG* • *CSR is compared to the EV of the confidence checker which is certified to 636cps (for jig serial number 025) +/- 10% (for pass value of 573-700cps).* • *After the gamma survey is completed, the data is uploaded to the Imdex hub IQ portal (https://iq.imdexhub.com) from the rig via satellite internet and available for review.* • *Scanning Electron Microscope (SEM) and µXRF Analysis referred to in this report was completed by Adelaide Microscopy by Dr. Ben Wade, Electron Microscopist specializing in Geological techniques, ICPMS, SEM, Electron Microprobe, X-Ray Analysis and Physical Science Preparations. Dr. Ben Wade is also the State Representative for AMAS.* • *Two samples were selected for SEM and µXRF Analysis from Hole OV047. One sample from 28m (sample 28/1) and a second sample from 30m (sample 30/1).* • *The analysis was largely to determine if Uranium was hosted in discrete U rich phases in the limestone, or if hosted as low-level Uranium in the carbonate cement itself* • *The two chip samples were mounted in Struers Epofix resin and cured overnight. Following this, a flat surface was prepared on progressively finer wet and dry sandpaper under kerosene (400/800/1000 grit). After this step, samples were hand polished under kerosene with 9µm, 3µm and 1µm oil-based diamond paste, then washed thoroughly and ultrasonically bathed under 100% ethanol. Sample 30/1 of carbonate cemented sandstone was friable and difficult to polish, and many sand grains plucked out during the polishing step. However enough remained of the sample that was polished to conduct analysis on. Following this samples were carbon coated (~15nm thick layer) ready for*

		SEM analysis. • *SEM observation was conducted on a Hitachi SU3800 microscope using backscattered electron imaging (BSE), and x-ray analyses were conducted with a Bruker EDS detector. On a flat polished surface, variations in greyscale under BSE are directly related to compositional differences, in which "brighter" phases contain more "heavy elements" such as Uranium in this case. As such, particular interest was paid to "bright" particles on the BSE images to determine if any of them were U bearing. In both samples 28/1 and 30/1 no U bearing phases were found, with most bright particles being either iron oxides, baryte, or monazite (1 grain with no detectable U in it). No detectable U peak was seen in calcite analyses on the SEM, which was to be expected as the typical elemental detection limit of SEM-EDS analysis is around ~2-3000ppm.* • *Following the SEM imaging and analysis, samples were then put into a Bruker M4 Tornado Plus µXRF instrument. This instrument behaves much like the handheld pXRF, however the incident X-Ray beam is focussed to ~15µm in diameter, allowing for targeted spot analysis and x-ray "imaging" by moving the sample under the focussed x-ray beam. As such both chips were first imaged at a coarse pixel resolution of 100µm to get a broad view of the spatially resolved chemistry, then after this targeted single point analysis was done on select locations on both samples to detect low level Uranium. All targeted is done from the 10x optical image on the microscope, and as such spot analysis on sample 30/1 targeting only the carbonate cement was difficult due to the fine-grained nature of it and lack of optical contrast in minerals. As a result, most analytical spectra on sample 30/1 hit the quartz grains which are the bulk of the sample.* • *µXRF Spot analysis was completed on two*

		areas (Area1 and Area2) on sample 28/1 and one area (Area1) on sample 30/1, with 8 spots done on each. • *A total of 4 spot analysis from Area 1 sample 28/1 reported anomalous U within a calcite cement ranging between (0.024-0.036 elemental wt% U) and 1 spot analysis from Area 1 sample 30/1 reported anomalous U within a carbonate cement (0.015 elemental wt% U).* • *No other anomalous U was detected in the spot analysis.*
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).*	• *Drilling was completed using a Wallis "Mantis 200" Air Core drill rig with an onboard Sullair compressor (560cfm @ 200psi).* • *Air Core drilling is a form of reverse circulation drilling where the sample is collected at the face and returned inside the inner tube. The drill cuttings are removed by injection of compressed air into the hole via the annular area between the inner tube and the drill rod.* • *Air Core drill rods used were 3 m long.* • *NQ diameter (76 mm) drill bits and rods were used.* • *All Air Core drill holes were vertical with depths varying between ~36m and 200 m*
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.* *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*	• *Drill sample recovery for Air Core drilling is monitored by recording sample condition descriptions where 'Poor' to 'Very Poor' were used to identify any samples recovered which were potentially not representative of the interval drilled.* • *A comment was included where water injection was required to recover the sample from a particular interval. The use of water injection can potentially bias a sample. Minimal water injection was required during this drilling program and used sparingly.* • *Overall, no consistent/significant loses of*

	fine/coarse material.	*sample material was observed.* • *The rotary splitter was set to an approximate 20% split, which produced approximately 1.5-2.5 kg sample for each meter interval.* • *The 1.5-2.5 kg sample was collected in a pre-numbered calico bag and the remaining 80% (5 kg to 8 kg) was disposed directly into the sump as drilling progressed.* • *At the end of each drill rod, the drill string is cleaned by blowing down with air to remove any clay and silt potentially built up in the sample pipes and cyclone.* • *The relationship (if any) between sample recovery and grade is unknown* • *No sample recovery information was reported in historical reports relating to historical drilling within this release.*
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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged.*	• *All Air Core samples collected in calico bags were logged for lithology, colour, cement type, hardness, percentage rock estimate, and any relevant comments such as moisture, sample condition, evidence of reducing or oxidizing conditions, and vegetation/organic material.* • *Geological logging data for all drill holes was qualitatively logged onto Microsoft Excel spreadsheet using a field laptop with validation rules built into the spreadsheet including specific drop- down menus for each variable. The data was uploaded to the Australian Rare Earths Azure Data Studio database.* • *Every drill hole was logged in full and logging was undertaken with reference to a drilling template with codes prescribed and guidance to ensure consistent and systematic data collection.* • *The density drilling is not sufficient to support consideration of resource estimation, or mining and no geotechnical logging was completed.*
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all cores taken.* *If non-core, whether riffled, tube sampled, rotary split,*	• *1m Air Core sample interval was homogenised within the cyclone and the rotary splitter was set to an approximate 20% split producing around 1.5-2.5 kg sample for each metre*

	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.*	*interval.* • *The 1.5-2.5kg sample was collected in a pre-numbered calico bag and the 80% (5 kg to 8 kg) portion was disposed directly into the sump as drilling progressed.* • *Duplicates were generally taken within intervals which indicated potential for anomalous U mineralization based on geology, pXRF, and gamma signature. These duplicate samples were collected by splitting the 1m interval by emptying the sample on to a table, mixing and splitting into 1/8th subsamples and randomly assigning 4 of the splits into the duplicate and 4 remaining as the primary.* • *The 1.5-2.5 kg sample collected in the calico bag was logged by the geologist onsite.* • *Approximately 10-20g of sample material from each for each 1m calico sample placed in a chip tray.* • *The logged calico samples were scanned with a pXRF onsite through the calico bag.* *At the end of the drillhole samples were selected for analysis.* • *Samples selected for analysis were placed in polyweave bags labelled with the sample number, From-To interval, and Hole ID, then segregated into bulka bags for transport to the lab for analysis.* • *No correction factors were applied to pXRF results.* • *Field duplicates of all the samples were completed at a frequency of ~1 in 40 samples. Field standards were inserted into the sample sequence at a frequency of ~1:40. Standard reference Material (SRM) samples were inserted into the sample batches at a frequency rate of 1 per 10 samples by the laboratory and a repeat sample was taken at a rate of 1 per 21 samples.* • *An on-site geologist oversaw the sampling and logging process and selected samples for analysis based on the logging descriptions pXRF analysis, and downhole gamma response.*

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. 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.*	• *The detailed geological logging of samples provides lithology (sand/clay component)* • *The 1.5 kg Air Core samples were assayed by Bureau Veritas laboratory in Wingfield, Adelaide, South Australia, which is considered the Primary laboratory.* • *The samples will be initially oven dried at 105 degrees Celsius for 24 hours. Samples will be secondary crushed to 3 mm fraction and the weight recorded. The sample will then be pulverised to 90% passing 75 µm. Excess residue will be maintained for storage while the rest of the sample is placed in 8x4 packets and sent to the central weighing laboratory.* • *All weighed samples will then be analysed using the Multiple Elements Fusion/Mixed Acid Digest analytical method;* • *The samples were submitted for analysis using Mixed Acid Digest – Lithium Borate Fusion ICP-MS method (BV Code SC302) with detection limits for each element shown in ppm Ag (0.2 ppm), Al (50.0 ppm), As (1.0 ppm), Au (0.01 ppm), Ba (2.0 ppm), Be (0.5 ppm), Bi (0.1 ppm), Ca (100.0 ppm), Cd (0.5 ppm), Ce (0.1 ppm), Co (1.0 ppm), Cr (20.0 ppm), Cs (0.1 ppm), Cu (1.0 ppm), Dy (0.05 ppm), Er (0.05 ppm), Eu (0.05 ppm), Fe (100.0 ppm), Ga (0.2 ppm), Gd (0.2 ppm), Hf (1.0 ppm), Ho (0.02 ppm), In (0.05 ppm), K (100.0 ppm), La (0.1 ppm), Li (10.0 ppm), Lu (0.02 ppm), Mg (50.0 ppm), Mn (50.0 ppm), Mo (0.5 ppm), Na (100.0 ppm), Nb (0.5 ppm), Nd (0.05 ppm), Ni (2.0 ppm), P (50.0 ppm), Pb (1.0 ppm), Pr (0.05 ppm), Rb (0.2 ppm), Re (0.1 ppm), S (50.0 ppm), Sb (0.1 ppm), Sc (1.0 ppm), Se (5.0 ppm), Si (50.0 ppm), Sm (0.05 ppm), Sn (0.1 ppm), Sr (0.5 ppm), Ta (0.1 ppm), Tb (0.02 ppm), Te (0.2 ppm), Th (0.1 ppm), Ti (50.0 ppm), Tl (0.1 ppm), Tm (0.05 ppm), U (0.1 ppm), V (20.0 ppm), W (0.5 ppm), Y (1.0 ppm), Yb (0.05 ppm), Zn (2.0 ppm), Zr (10.0 ppm)* • *Select samples, often at the bottom of the holes thought to be weathered basement/saprolite material were also analyzed for gold using Lead collection Fire*

		Assay AAS (BV Code FA001) where a detection limit for Au (0.01 ppm) • *Field duplicates were collected and submitted at a frequency of ~1 per 40 samples.* • *Bureau Veritas will complete its own internal QA/QC checks that include a Laboratory repeat every 21st sample and a standard reference sample every 9th sample prior to the results being released.* • *Australian Rare Earths submitted field standards at a frequency of ~1:40 samples.* • *Australian Rare Earths inserted field blanks at a frequency of ~1:40 samples. The adopted QA/QC protocols are acceptable for this stage of test work. The sample preparation and assay techniques used are industry standard and provide a total analysis.* • *Scanning Electron Microscope (SEM) and µXRF Analysis referred to in this report was completed by Adelaide Microscopy by Dr. Ben Wade, Electron Microscopist specialising in Geological techniques, ICPMS, SEM, Electron Microprobe, X-Ray Analysis and Physical Science Preparations. Dr. Ben Wade is also the State Representative for AMAS.* • *Two samples were selected for SEM and µXRF Analysis from Hole OV047. One sample from 28m (sample 28/1) and a second sample from 30m (sample 30/1).* • *The analysis was largely to determine if Uranium was hosted in discrete U rich phases in the limestone, or if hosted as low-level Uranium in the carbonate cement itself* • *The two chip samples were mounted in Struers Epofix resin and cured overnight. Following this, a flat surface was prepared on progressively finer wet and dry sandpaper under kerosene (400/800/1000 grit). After this step, samples were hand polished under kerosene with 9µm, 3µm and 1µm oil-based diamond paste, then washed thoroughly and ultrasonically bathed under 100% ethanol. Sample 30/1 of carbonate cemented*

		sandstone was friable and difficult to polish, and many sand grains plucked out during the polishing step. However enough remained of the sample that was polished to conduct analysis on. Following this, samples were carbon coated (~15nm thick layer) ready for SEM analysis. • *SEM observation was conducted on a Hitachi SU3800 microscope using backscattered electron imaging (BSE), and x-ray analyses were conducted with a Bruker EDS detector. On a flat polished surface, variations in greyscale under BSE are directly related to compositional differences, in which "brighter" phases contain more "heavy elements" such as Uranium in this case. As such, particular interest was paid to "bright" particles on the BSE images to determine if any of them were U bearing. In both samples 28/1 and 30/1 no U bearing phases were found, with most bright particles being either iron oxides, baryte, or monazite (1 grain with no detectable U in it). No detectable U peak was seen in calcite analyses on the SEM, which was to be expected as the typical elemental detection limit of SEM-EDS analysis is around ~2-3000ppm* • *Following the SEM imaging and analysis, samples were then put into a Bruker M4 Tornado Plus µXRF instrument. This instrument behaves much like the handheld pXRF, however the incident X-Ray beam is focussed to ~15µm in diameter, allowing for targeted spot analysis and x-ray "imaging" by moving the sample under the focussed x-ray beam. As such both chips were first imaged at a coarse pixel resolution of 100µm to get a broad view of the spatially resolved chemistry, then after this targeted single point analysis was done on select locations on both samples to detect low level Uranium. All targeted is done from the 10x optical image on the microscope, and as such spot analysis on sample 30/1 targeting only the carbonate cement was difficult due to the fine-grained nature of it and lack of optical contrast in minerals. As a result, most analytical spectra on sample 30/1 hit the quartz grains which are the bulk of the sample.*

		• *µXRF Spot analysis was completed on two areas (Area1 and Area2) on sample 28/1 and one area (Area1) on sample 30/1, with 8 spots done on each.* • *A total of 4 spot analysis from Area 1 sample 28/1 reported anomalous U within a calcite cement ranging between (0.024-0.036 elemental wt% U) and 1 spot analysis from Area 1 sample 30/1 reported anomalous U within a carbonate cement (0.015 elemental wt% U).* • *No other anomalous U was detected in the spot analysis.*
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.* *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.*	• *All results are checked by the company's Chief Technical Officer.* • *Field based geological logging for drill holes was entered directly into an Excel spreadsheet format with validation rules built into the spreadsheet including specific drop-down menus for each variable. This digital data was then uploaded to the Australian Rare Earths Azure Data Studio database.* • *Assay data will be received in digital format from the laboratory and uploaded to Australian Rare Earths Azure Data Studio database.* • *Field and laboratory duplicate data pairs of each batch will be plotted to identify potential quality control issues.* • *Standard Reference Material sample results will be checked from each sample batch to ensure they are within tolerance (<3SD) and that there is no bias.* • *U3O8 is the industry accepted form for reporting Uranium. An oxide factor for U3O8 of 1.1793 was used for reporting throughout this report.*

Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down- hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* *Specification of the grid system used.* *Quality and adequacy of topographic control.*	• *All maps are in GDA94/MGA zone 54.* • *All overland coordinate information was collected using handheld GPS utilizing GDA 1994, Zone 54. While spatial location is expected to be recovered within 3 – 5 m, it is possible that the elevation can be as much as 10 m out with respect to the currently established geoid.* • *Drillhole RL has been corrected using An Australian wide SRTM. The 1 second SRTM Level 2 Derived Smoothed Digital Elevation Model (DEM-S) is derived from the 2000 SRTM. The DEM-S has a ~30m grid which has been adaptively smoothed to improve the representation of the surface shape and is the preferred method for shape and vertical accuracy from STRM products. The smoothing process estimated typical improvements in the order of 2-3 m. This would make the DEM-S accuracy to be of approximately 5 m.*
Data spacing and distribution	*Data spacing for reporting of Exploration Results.* *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.* *Whether sample compositing has been applied.*	• *Locations of Overland drill holes are reported within the appendices of this report.* • *No geological or grade continuity estimations are being determined from the Overland drilling data.*

Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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.*	• *All Overland drill holes were drilled vertically as detailed in the appendices of this report.* • *There is no indication that a sampling bias exists as the geology is relatively flat lying therefore vertical holes are appropriate.*
Sample security	*The measures taken to ensure sample security.*	• *After logging, the samples in calico bags were tied and placed into polyweave bags, labelled with the drill hole and sample numbers contained within the polyweave and transported to the site laydown area, at the end of each day.* • *Sample selections were determined at the drill site and at the end of the day the polyweave bags were placed into bulk bags for either sending to the lab or storage facility.* • *Samples were shipped at a frequency of once every ~10 days during drilling.* • *Samples were transported to the lab by AR3 personnel or by courier.* • *The laboratory inspected the packages and did not report tampering of the samples and provided a sample reconciliation report for each sample dispatch.*
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	• *Internal reviews were undertaken by AR3's Exploration Manager and Chief Technical Officer during the drilling, sampling, and geological logging process and throughout the sample collection and dispatch process to ensure AR3's protocols were followed.*

Section 2 Reporting Exploration Results		
Criteria	**Explanation**	**Comment**
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• *Australian Rare Earths Overland project is comprised of EL7001, EL7003 and EL7005 held by Valrico Resources Ltd Pty and WRDBD PTY LTD, wholly owned subsidiaries of Australian Rare Earths.* • *The three EL's cover an area of approximately 2,980km2.* • *In addition, Valrico Resources Ltd Pty have entered into an earn in agreement with the license holders of EL6678 (Sheer Gold Pty Ltd) on November 19th, 2024 (see ASX announcement).* • *When the earn in period is completed, the tenure will be transferred to Valrico adding another 990km^2 to the Overland project and bringing the total Overland project area to 3779km^2.* • *There are no Conservation Parks or Regional Reserves in the EL areas.* • *The White Dam CP has been excised from the SW corner of EL7003 and southern portion of EL6678.* • *The Morgan CP are located outside the SW corner of EL7003.* • *Registered Native Title Determination Application SC2019/001 overlaps with the central portion of EL7003 and southern portion of EL6678.* • *Registered Native Title Determination Application SC20/002 overlaps with the NW corner of EL7005.* • *A registered and Notified Indigenous Land Use Agreement (ILUA)- The River Murray and Crown Lands SI2011/025 overlaps with the southern portion of EL7003* • *A registered and Notified Indigenous Land Use Agreement (ILUA)- Ngadjuri Faraway Hill Pastoral SI2005/005 overlaps with the Northwest corner of EL7005.*

Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	• *Exploration activities by other exploration companies extends back to the 1970's.* • *Historically the area has been explored for Base Metals, Coal, Gold, Copper, Heavy Mineral Sands, and Water.*
Geology	*Deposit type, geological setting and style of mineralisation.*	• *The Overland project is targeting Paleochannel Uranium within the Murray and Renmark Group sediments of the Murray Basin.* • *Sedimentary hosted uranium deposits occur in medium to coarse-grained sedimentary sequences deposited in a continental fluvial or marginal marine sedimentary environment. Impermeable shale/mudstone units are interbedded in the sedimentary sequence and often occur immediately above and below the mineralised sediments. Uranium is precipitated under reducing conditions caused by a variety of reducing agents within the permeable sediments including carbonaceous material (detrital plant debris, amorphous humate, marine algae), sulphides (pyrite, H2S), and hydrocarbons.* • *Anomalous uranium within the Murray Basin occurs in carbonaceous clay and lignite of the Winnambool Formation and Geera Clay (Murray Group) of the Murray Basin, however the Renmark Group sediments have never been effectively targeted for uranium in the South Australian portion of the Murray Basin and therefore represent a highly promising new frontier for uranium exploration.* • *Shallow sedimentary uranium mineralisation in secondary carbonate cementation is another style of U mineralization being targeted, similar to Namibia's surficial uranium deposits. Similar calcrete-hosted deposits are also found in Western Australia*

Drill hole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* *- easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* *- dip and azimuth of the hole* *- down hole length and interception depth* *- hole length.* *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• *The material information for the Overland drilling is contained within the Appendices of this report*
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* *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*	• *No data aggregation methods were used in reporting this release.* • *A list of Significant U3O8 Intersections is located within the appendices of this report. A cut off grade of 50ppm U3O8 has been applied to generate these significant intersections.*

	aggregations should be shown in detail. *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• *All down hole lengths of geological intervals are interpreted to be true widths as the geology in the region is relatively flat lying and the holes are vertical.*
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• *Diagrams are included in the body of this release.*
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.*	• *This release contains all drilling results that are consistent with the JORC guidelines. Where data may have been excluded, it is considered not material.*

Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• *State radiometric concentration grids were created by merging the data recorded across many airborne radiometric surveys. This was an update to previous State grids to include recent surveys such as the extensive Gawler Craton Airborne Survey. Data was levelled using a combination of the AWAGS2 (Australia Wide Airborne Geophysical Survey) and vehicle-borne streaming radiometric tie-lines. Additional levelling procedures were employed using software routines developed by Geoscience Australia. Grids were low-pass filtered using a 7-point, degree-3 Savitzky-Golay filter (Savitzky, A. and Golay, Analytical Chemistry, 36: 1627-1639).* • *SARIG Regional Geophysics Image "Uranium (radiometrics)" layer was used to create the Radiometric images within this report.* • *All known relevant exploration data has been reported in this release.*
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• *Additional work will consist of (but not limited to) continued desktop review and reprocessing of historical geophysical and geological data to assist with target generation.* • *Air Core drilling, downhole gamma logging, and sampling.* • *Additional EPEPR applications to expand exploration across the broader tenure.*

Appendix 2 - List of Collars

Hole ID	East (m)	North (m)	RL (m ASL)	Drill Method	Down Hole Width (mm)	Total Depth EOH (m)	Azimuth	Dip Direction
OV001	357586	6292689	144	Aircore	76	169	0	-90
OV002	357690	6293487	143	Aircore	76	186	0	-90
OV003	357737	6294273	144	Aircore	76	144	0	-90
OV004	357797	6295053	145	Aircore	76	141	0	-90
OV005	365825	6285470	125	Aircore	76	90	0	-90
OV006	366631	6285684	125	Aircore	76	99	0	-90
OV007	367406	6285881	120	Aircore	76	117	0	-90
OV008	368128	6286065	116	Aircore	76	120	0	-90
OV009	357716	6294068	144	Aircore	76	129	0	-90
OV010	357408	6295655	146	Aircore	76	159	0	-90
OV011	356597	6295626	150	Aircore	76	177	0	-90
OV012	355824	6295616	150	Aircore	76	150	0	-90
OV013	355032	6295603	152	Aircore	76	138	0	-90
OV014	354210	6295591	153	Aircore	76	120	0	-90
OV015	357936	6296643	147	Aircore	76	153	0	-90
OV016	358007	6297451	144	Aircore	76	138	0	-90
OV017	359624	6292527	138	Aircore	76	147	0	-90
OV018	361135	6293543	137	Aircore	76	135	0	-90
OV019	362460	6292973	133	Aircore	76	87	0	-90
OV020	363978	6291982	129	Aircore	76	87	0	-90
OV021	365550	6291803	126	Aircore	76	90	0	-90
OV022	367167	6291703	124	Aircore	76	111	0	-90
OV023	353904	6295615	154	Aircore	76	114	0	-90
OV024	357665	6293397	143	Aircore	76	141	0	-90
OV025	357725	6293588	143	Aircore	76	129	0	-90
OV026	358026	6286039	136	Aircore	76	120	0	-90
OV027	359656	6285888	132	Aircore	76	152	0	-90
OV028	361238	6285689	129	Aircore	76	156	0	-90
OV029	362375	6285207	128	Aircore	76	138	0	-90
OV030	364394	6285132	125	Aircore	76	117	0	-90
OV031	352138	6289308	154	Aircore	76	132	0	-90
OV032	353707	6288826	149	Aircore	76	147	0	-90
OV033	354739	6288516	147	Aircore	76	168	0	-90
OV034	356344	6288014	142	Aircore	76	120	0	-90
OV035	353598	6291050	151	Aircore	76	153	0	-90
OV036	360452	6285810	130	Aircore	76	171	0	-90
OV037	361652	6285661	128	Aircore	76	156	0	-90
OV038	354793	6290389	148	Aircore	76	138	0	-90
OV039	356367	6290408	144	Aircore	76	147	0	-90
OV040	356195	6293430	148	Aircore	76	126	0	-90
OV041	357802	6275096	122	Aircore	76	161	0	-90
OV042	359155	6276686	122	Aircore	76	54	0	-90
OV043	359155	6276691	122	Aircore	76	183	0	-90
OV044	360935	6277793	122	Aircore	76	180	0	-90
OV045	362228	6279556	121	Aircore	76	141	0	-90
OV046	363757	6280966	124	Aircore	76	114	0	-90
OV047	363806	6250960	82	Aircore	76	156	0	-90
OV048	363804	6250848	81	Aircore	76	36	0	-90
OV049	363817	6250751	82	Aircore	76	39	0	-90
OV050	363812	6250654	80	Aircore	76	36	0	-90
OV051	363821	6250470	78	Aircore	76	36	0	-90
OV052	363820	6250268	78	Aircore	76	36	0	-90
OV053	363816	6250070	78	Aircore	76	33	0	-90
OV054	363512	6250943	81	Aircore	76	33	0	-90
OV055	362927	6250837	81	Aircore	76	42	0	-90
OV056	363889	6249351	77	Aircore	76	138	0	-90

Appendix 3- List of Significant U3O8 Intersections at 50ppm cutt off

Hole ID	From (m)	To (m)	Width (m)	U3O8 (ppm)
OV047	26	28	2	92
OV047	31	32	1	72