13 February 2025

Assay results confirm Uranium mineralisation at Overland

Highlights:

- **Uranium mineralisation confirmed:** Assay results confirm uranium mineralisation in the first 10 drill holes conducted during the 2024 inaugural drilling program.

- **Validation of the area's potential:** While the initial assays are of low grade, their significance is in validating down hole gamma responses and in-field pXRF measurements, supporting AR3's geological model for sedimentary-hosted uranium deposits to be generated within the large, lightly explored Overland Project area.

- **Anomalous Uranium:** Drill hole OV002 encountered uranium concentrations up to 20 times greater than adjacent background values across two 1-meter intervals, highlighting the potential for higher-grade zones elsewhere in the system.

- **Assays validate the down hole gamma responses and in-field pXRF measurements for contained uranium including:**
  - OV002 1m at 44ppm U_3O_8 from 80m
  - **OV002 1m at 58ppm U_3O_8 from 82m**
  - OV003 1m at 24ppm U_3O_8 from 86m
  - OV003 1m at 30ppm U_3O_8 from 109m
  - OV009 1m at 24ppm U_3O_8 from 86m
  - OV010 1m at 33ppm U_3O_8 from 91m
  - OV010 1m at 38ppm U_3O_8 from 93m

- **ISR Amenable Mineralisation:** Uranium mineralisation occurs in permeable sediments conducive to In-Situ Recovery (ISR) mining methods.

- **Active Uranium System Identified:** Geological indicators suggest an active system of uranium precipitation from solution in oxidized groundwaters within the Overland Project area, pointing to potential for future discoveries at the project.

- **Next round assays pending:** Additional assays from the 2024 drilling program are expected in Q1 2025, which will guide future exploration targeting.

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

AR3 Managing Director and CEO, Travis Beinke, said:

"The first ten holes at Overland have validated our geological model for potential sedimentary-hosted uranium deposits, confirming the presence of uranium in this frontier region.

With our initial results guided by field-based measurements, it is pleasing to now confirm the existence of uranium in the system with chemical assays. This provides us with further confidence in the exploration potential at Overland.

Given Overland's substantial ~4,000km^2 project area with numerous high-priority targets, these encouraging results from our first target in this greenfield exploration venture, while low grade, are a great start. We're narrowing the search space.

With a ~5,000m drilling program now underway testing multiple targets across this highly prospective area through to the end of March 2025, I look forward to providing shareholders regular updates from the field."

Australian Rare Earths Limited (ASX: AR3) is pleased to provide an update regarding chemical assays received from samples recovered from the first 10 holes drilled in 2024 at the Overland Project.

The assay results largely conform with down hole gamma responses and in-field pXRF measurements for contained uranium. This provides additional confidence that these immediate field-based measurements can guide us to a discovery at Overland as AR3's drilling progresses.

The result for drillhole OV002 identifying anomalous uranium content of up to 20x greater than the adjacent background values across 2 x 1m intervals, in permeable sediments, is especially significant. It points to conditions occurring at the Overland Project not just for the accumulation of uranium mineralisation, but for the mineralisation to be amenable for production via cost effective ISR techniques.

Initial drilling at Overland remains predominantly at very wide spacings, providing considerable potential for discovery even within the area currently drilled.

The assay results also showed anomalous uranium content at the base of oxidation of the sedimentary sequences intersected in drillholes and their contact with reduced sediments. These results point to an active system of uranium precipitation from solution in oxidized groundwaters, and meteoric waters, within the Overland Project area, further evidence of a setting providing all the requisite elements required for the formation of a sedimentary-hosted uranium deposits.

Overland – Sedimentary Hosted Uranium Prospectivity is supported by recent drilling and now by the laboratory assays from its first ten drill holes. The area has yielded compelling evidence supporting AR3's initial geological model. The five critical elements required for the formation of a sedimentary-hosted uranium deposit have been identified, including:

- a uranium source rock,
- permeable sediments as migration pathways, and
- effective reductants acting as traps for uranium precipitation.

This reinforces AR3's confidence in the Overland Project's potential for significant uranium mineralisation.

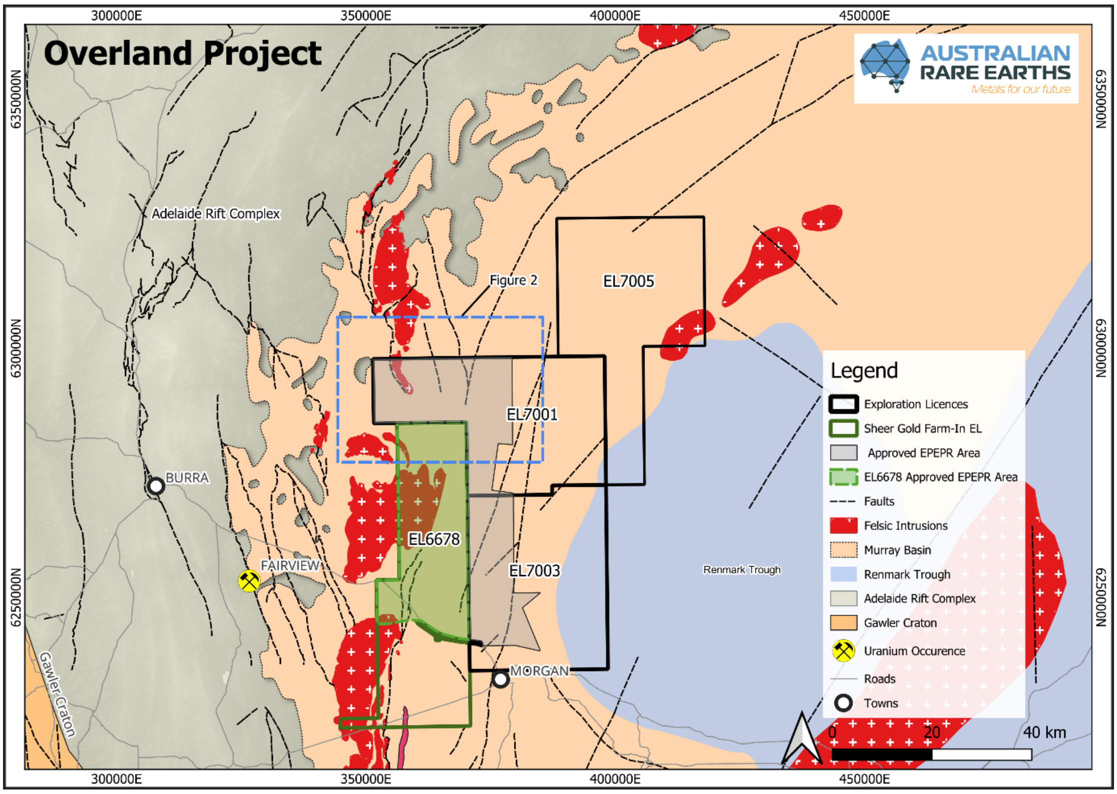

Figure 1: *Project Location Plan with figure 2 inset shown*

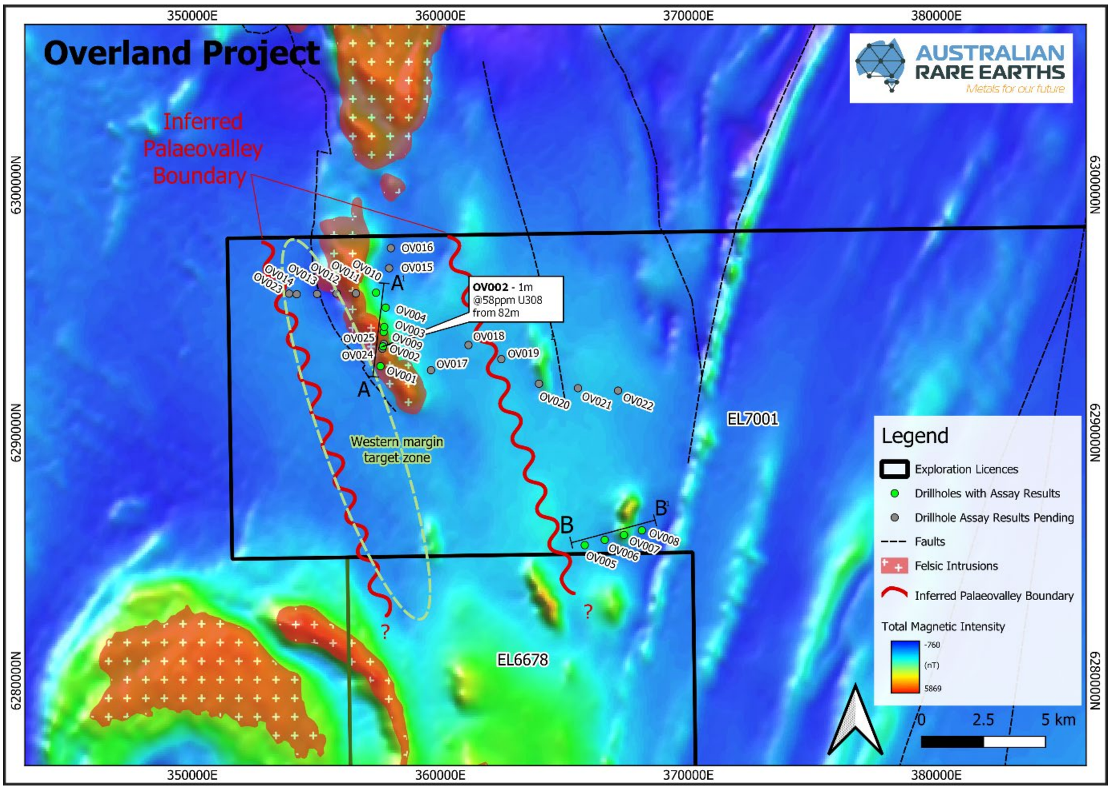

Figure 2: *Section Location Plan showing 2024 drillholes with assays received (green) and pending (grey)*

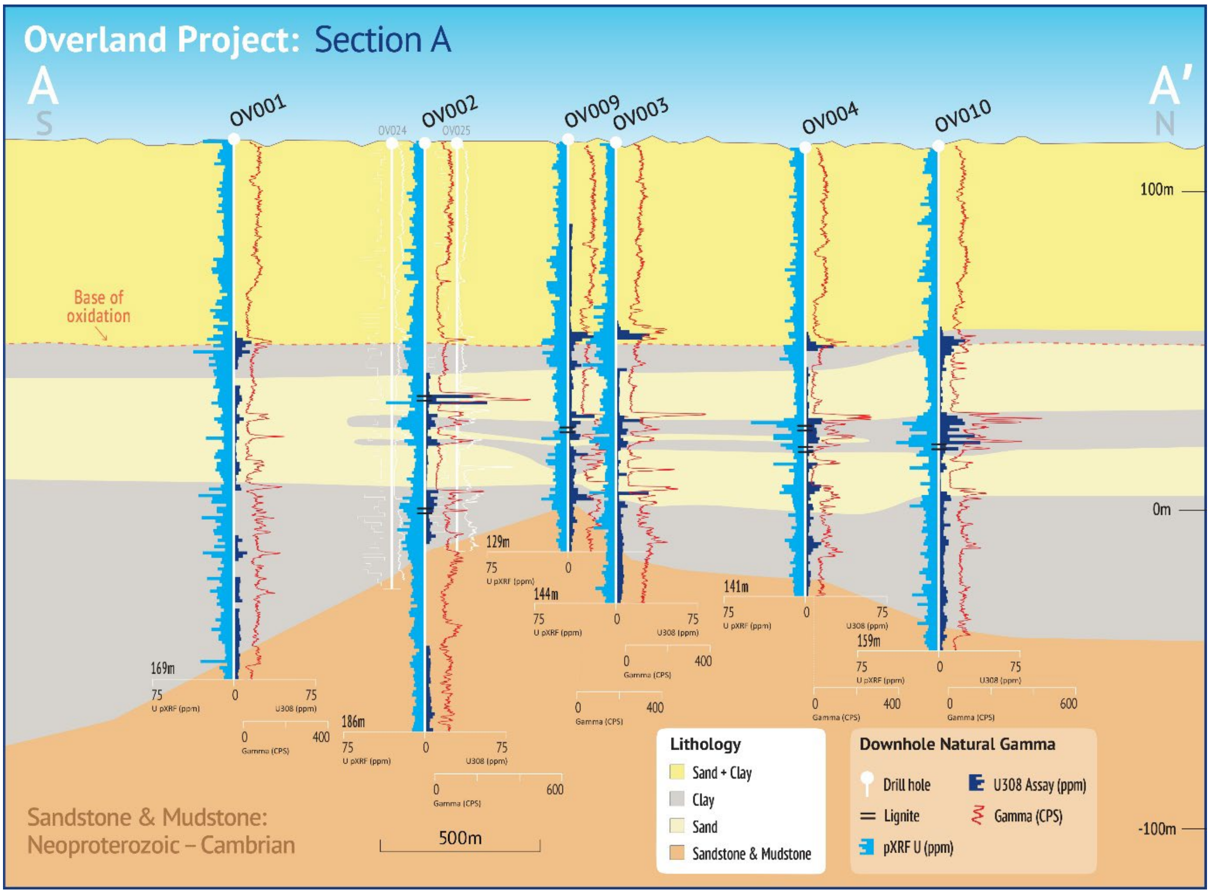

Figure 3: *-Section A-A[1] See Figure 4 for OV002 detail*

In relation to the disclosure of pXRF results in figures 3, 4 and 5, 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.*

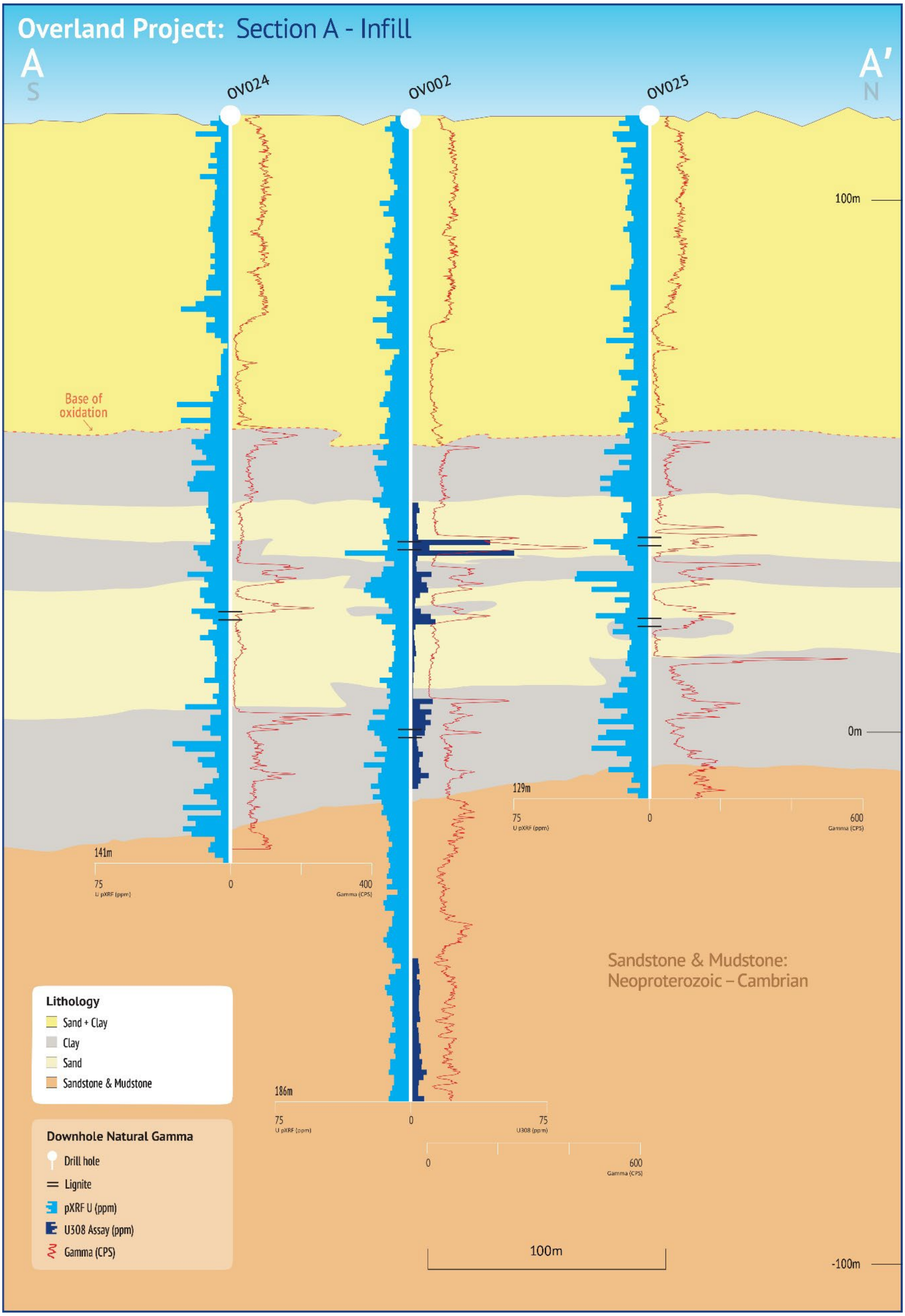

Figure 4: *Section showing OV002. OV002 intersected 1m @ 58ppm U_3O_8 from 82m. Assay results from OV024 and OV025 are pending*

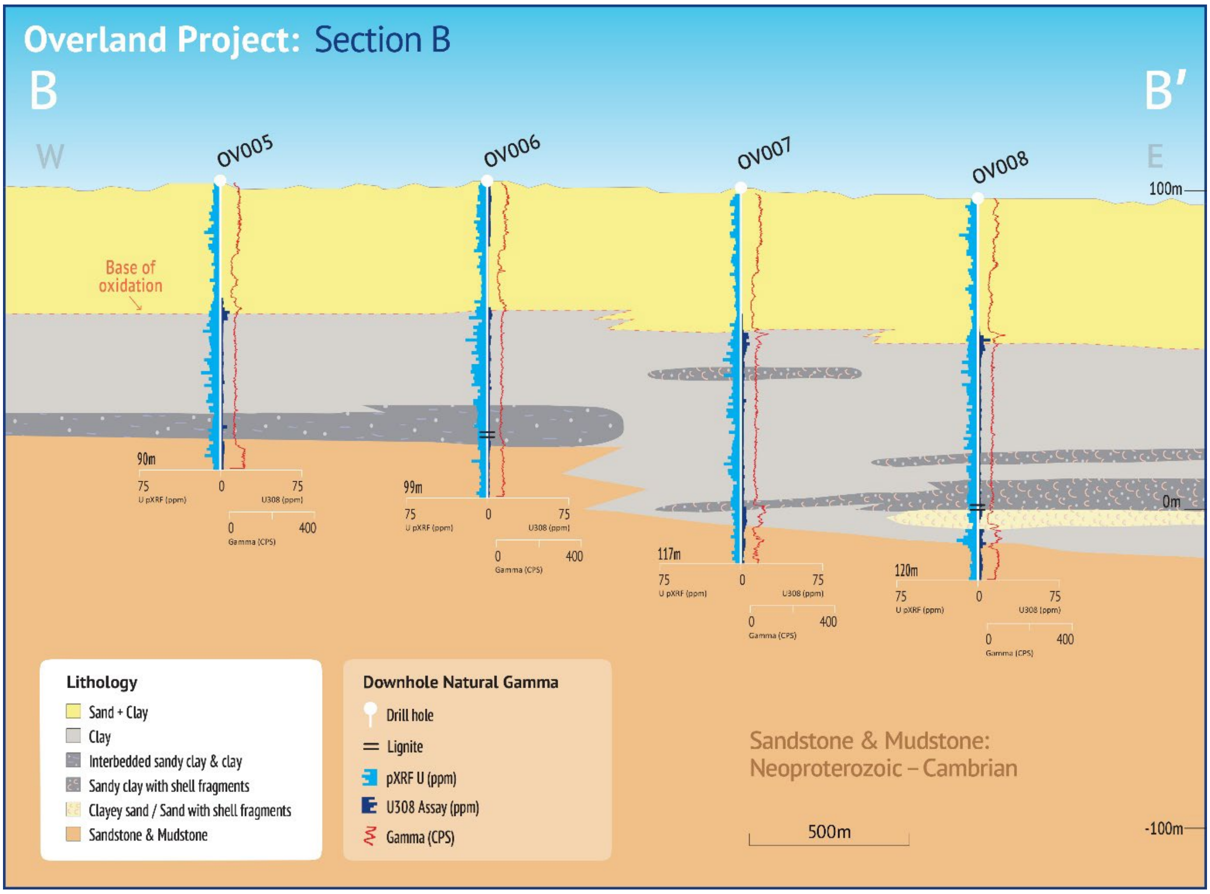

Figure 5 : *Section B-B*[1]

Next steps

Following regulatory approvals for the recent Farm-In Agreement with private minerals explorer Sheer Gold Pty Ltd (Sheer Gold)[1], AR3 now has three EPEPRs (Exploration Program for Environment Protection and Rehabilitation), covering a combined area of approximately 1,388km^2 (see Figure 1).

The 2025 drilling program at the Overland Uranium Project has recently commenced[2]. The drilling targets the western margin of the palaeovalley where previous drilling has identified an abundance of lignite horizons with associated anomalous downhole natural gamma readings, indicating significant potential for uranium mineralisation. Upon completion of drilling these targets the drill rig will move to EL6678 (the Sheer Gold tenement) to test additional high-priority targets. The estimated investment in drilling is expected to satisfy the requirements under the Farm-In Agreement with Sheer Gold.

Assays from the last 15 holes of the 2024 Overland drill program are expected to be received during Q1 2025 and will be assessed to provide further guidance for targeted exploration drilling.

[1] ASX: AR3 Release Feb 5, 2025
[2] ASX:AR3 Release Feb 7, 2025

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

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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 is committed to the timely exploration and development of its 100% owned, flagship Koppamurra Project, located in the new Koppamurra rare earths Province in southeastern South Australia and western Victoria. Koppamurra is a prospective ionic clay hosted rare earth deposit, rich in all the elements required in the manufacture of rare earth permanent magnets which are essential components in electric vehicles, wind turbines and domestic appliances. In addition, AR3 is actively reviewing other potential prospective areas which may also host uranium and ionic clay hosted rare earth deposits throughout Australia.

The Company is focused on executing a growth strategy that aims to position AR3 as an independent and sustainable source of energy transition metals, playing a pivotal role in the global transition to a green economy.

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.,*	*Air Core drilling methods were used to obtain samples from the Overland drilling program between October-December 2024* *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 pXFR 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 analized through the calico bag with a beam count time of 20-30 sec beam 1 and 10 sec beam 2. One pXRF analysis*

	submarine nodules) may warrant disclosure of detailed information.	*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 analized 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 oven 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 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) for Ag (0.1), Al (100), As (1), Ba (1), Be (0.5), Bi (0.1), Ca (100), Cd (0.5), Ce (0.1), Co (1), Cr (10), Cs (0.1), Cu (1), Dy (0.05), Er (0.05), Eu (0.05), Fe (100), Ga (0.2), Gd (0.2), Hf (0.2), Ho (0.02), In (0.05), K (100), La (0.5), Li (0.5), Lu (0.02), Mg (100), Mn (2), Mo (0.5), Na (100), Nb (0.5), Nd (0.05), Ni (2), P (100), Pb (1), Pr (0.2), Rb (0.2), Re (0.1), S (50), Sb (0.1), Sc (1), Se (5), Si (100), Sm (0.05), Sn (1), Sr (0.5), Ta (0.1), Tb (0.02), Te (0.2), Th (0.1), Ti (50), Tl (0.1), Tm (0.2), U (0.1), V (5), W (0.5), Y (0.1), Zn (2), Zr (1), Yb (0.05) • *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)* • *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 on sections, after reviewing both in and out*

		gamma surveys. • *Before each downhole gamma survey the Reflex EZ Gamma logging tool was checked with a 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 5min to measure background gamma, then a second survey after sliding the EZ-Gamma Confidence checker over the gamma probe and subtracting the background. The resulting pass value of ~600 cps +/- 5% is required before the survey tool is confirmed as operating within expected limits.* • *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.* • *The Fairview uranium occurrence shown on maps within this report is based on reported SA Geodatabase Reference sample #152296 (Explorers sample 45835) sourced from the SA Geodatabase available on SARIG https://minerals.sarig.sa.gov.au/RockSampleDetails.aspx?SampleNo=45835* • *Sample #152296 was collected by A.F. Crooks on 20/08/1984 and the sample was analyzed by XRF. Details on the lab or XRF device were not specified.*
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-*	• *Drilling was completed using a Wallis "Mantis 200" Air Core drill rig with an onboard Sullair compressor (560cfm @ 200psi).* • *Aircore drilling is a form of reverse circulation drilling where the sample is*

	sampling bit, or other type, whether core is oriented and if so, by what method, etc).	*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.* • *Aircore drill rods used were 3 m long.* • *NQ diameter (76 mm) drill bits and rods were used.* • *All aircore drill holes were vertical with depths varying between ~90 m 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 fine/coarse material.*	• *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 losses of 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*	• *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*

	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.*	*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, 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.*	• *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 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*

	Whether sample sizes are appropriate to the grain size of the material being sampled.	*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*	*•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;* *•ICP Scan (Mixed Acid Digest – Lithium Borate Fusion) Samples are digested using a mixed acid digest and also fused with Lithium Borate to ensure all elements are brought into solution. The*

	bias) and precision have been established.	*digests are then analysed for the following elements (detection Limits shown): Al (100) As (1) Ba (1) Be (0.5) Ca(100) Ce (0.1) Co (1) Cr (10) Dy (0.05) Er (0.05) Eu(0.05) Fe(100) Gd (0.2) Ho (0.02) K (100) La (0.5) Lu (0.02) Mg (100) Mn (2) Na (100) Nd (0.05) Ni (2) Pr (0.2) S (50) Sc (1) Si (100) Sm(0.05) Sr (0.5) Th (0.1) Ti (50) Tm (0.2) U (0.1) V (5) Y (0.1) Yb (0.05) Zr (1)* • *Select samples that were deemed likely to be of basement lithology (or saprolite) were also analyzed for Au Fire Assay with a detection limit of (0.01)* *•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.* *Historical data referenced within this report is detailed below;* • *The Fairview uranium occurrence an is based on reported SA Geodatabase Reference sample #152296 (Explorers sample 45835) sourced from the SA Geodatabase available on SARIG (https://minerals.sarig.sa.gov.au/RockSampleDetails.aspx?SampleNo=45835)* • *Sample #152296 was collected by A.F. Crooks*

		on 20/08/1984 and the sample was analyzed by XRF, details on the lab or XRF device were not specified.
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 Exploration Manager.* • *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.*

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 (Shear 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, H_2S), 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.*
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*	• *The material information for the Overland drilling is contained within the Appendices of this report*

	- *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.*	
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 aggregations should be shown in detail.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• *No data aggregation methods were used in reporting of 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.*

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.*	• *The Total Magnetic Intensity and Regional Geology displayed within this release is public data available for download via the South Australian Resources Information Gateway (SARIG) https://map.sarig.sa.gov.au/.* • *Total Magnetic Intensity - (TMI) is the magnitude of all magnetic influences measured at a point. The SA_TMI grid was produced by merging open file aeromagnetic surveys within South Australia at 80m cell size using Intrepid Software by Intrepid Geophysics. Data are provided as real valued ERMapper*

		rasters and relative georeferenced TIFF images. This suite of grids was produced in November 2021. • *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- 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	150	Aircore	76	169	0	-90
OV002	357690	6293487	142	Aircore	76	186	0	-90
OV003	357737	6294273	138	Aircore	76	144	0	-90
OV004	357797	6295053	138	Aircore	76	141	0	-90
OV005	365825	6285470	115	Aircore	76	90	0	-90
OV006	366631	6285684	119	Aircore	76	99	0	-90
OV007	367406	6285881	138	Aircore	76	117	0	-90
OV008	368128	6286065	138	Aircore	76	120	0	-90
OV009	357716	6294068	138	Aircore	76	129	0	-90
OV010	357408	6295655	138	Aircore	76	159	0	-90
OV011	356597	6295626	138	Aircore	76	177	0	-90
OV012	355824	6295616	138	Aircore	76	150	0	-90
OV013	355032	6295603	138	Aircore	76	138	0	-90
OV014	354210	6295591	138	Aircore	76	120	0	-90
OV015	357936	6296643	140	Aircore	76	153	0	-90
OV016	358007	6297451	140	Aircore	76	138	0	-90
OV017	359624	6292527	140	Aircore	76	147	0	-90
OV018	361135	6293543	157	Aircore	76	135	0	-90
OV019	362460	6292973	157	Aircore	76	87	0	-90
OV020	363978	6291982	157	Aircore	76	87	0	-90
OV021	365550	6291803	157	Aircore	76	90	0	-90
OV022	367167	6291703	157	Aircore	76	111	0	-90
OV023	353904	6295615	157	Aircore	76	114	0	-90
OV024	357665	6293397	157	Aircore	76	141	0	-90
OV025	357725	6293588	157	Aircore	76	129	0	-90

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

Hole ID	From (m)	To (m)	Width (m)	U3O8 (ppm)
OV002	82	83	1	58