ASX ANNOUNCEMENT
Heavy Rare Earths Limited (ASX: HRE)
13 June 2025

SOIL ASSAYS CONFIRM URANIUM TARGET FOR DRILLING AT PERENJORI

- **8 kilometre-long Gingaba Well airborne radiometric anomaly upgraded by new soil assays of up to 116 ppm U**
- **Gingaba Well airborne anomaly compares favourably in extent and amplitude with those over known significant calcrete-hosted uranium resources in Western Australia**
- **Drilling planned to test potentially sizeable uranium target at Gingaba Well**

Heavy Rare Earths Limited (**"HRE"** or **"the Company"**) is pleased to report assay results from a soil sampling program at its 100 per cent-owned Perenjori uranium project in the Mid West region of Western Australia. The exploration model being investigated by HRE at Perenjori is a calcrete (palaeochannel-hosted) uranium deposit, similar to those at Langer Heinrich in Namibia and Yeelirrie in Western Australia. Palaeochannel-hosted rare earth deposits within the same drainage system are also being targeted.

The soil survey builds on exploration completed by the Company since mid-2024. Programs of passive seismic were successful in delineating the location, extent and depth of palaeochannels beneath the project area. Limited soil sampling in 2024 at the Gingaba Well uranium anomaly, which has a spatial association with the project's easternmost palaeochannel and was first detected by a Geological Survey of Western Australia (GSWA) airborne magnetic-radiometric survey in 2011, yielded U assay values of up to 138 ppm in the ultrafine (-2 µm) soil fraction *(refer to ASX announcement 19 June 2024)*.

The current program involved collecting a total of 231 soil samples (including field duplicates) at a nominal spacing of 500 m along lines spaced 2-4 km apart across the inferred thalweg[1] of the targeted palaeochannels. These samples were submitted to LabWest Minerals Analysis in Perth for assay via their Ultrafine+^{TM} method.

Uranium (U) assays are presented in Figure 1. A clear target at Gingaba Well is confirmed where U assays of up to 116 ppm U were recorded (Figure 2). The E-W trending palaeochannel on E59/2905 has a lower amplitude airborne U feature associated with it and a correspondingly elevated U background (5-20 ppm) in soils compared with soils sampled across the main N-S palaeochannel on E70/6397.

Total rare earth assays of between 29 and 343 ppm were returned across the survey area, but no spatially coherent anomalous zones, such as at Gingaba Well in U, are evident in the data.

[1] Line connecting the lowest points along a drainage

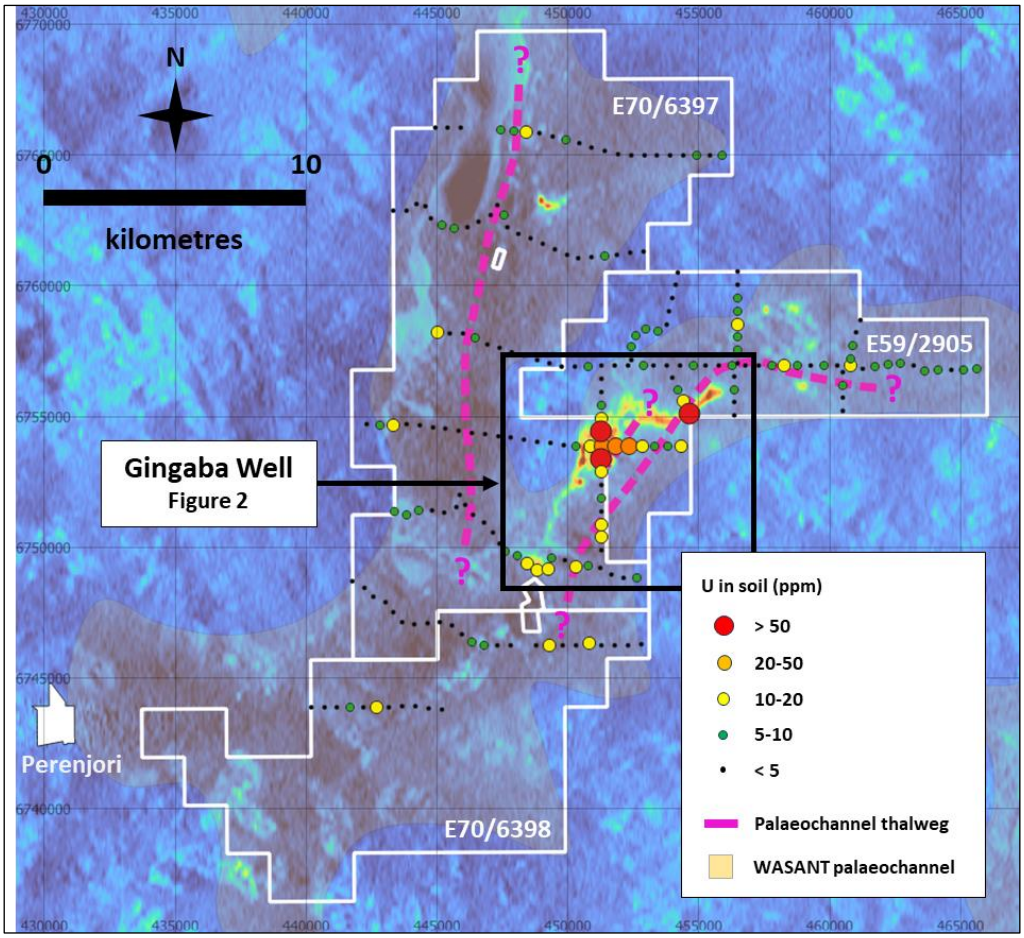

Figure 1: Uranium in soil assays, Perenjori project. Location of Gingaba Well also shown.
Background image: airborne radiometric uranium channel, Geoscience Australia Perenjori survey.

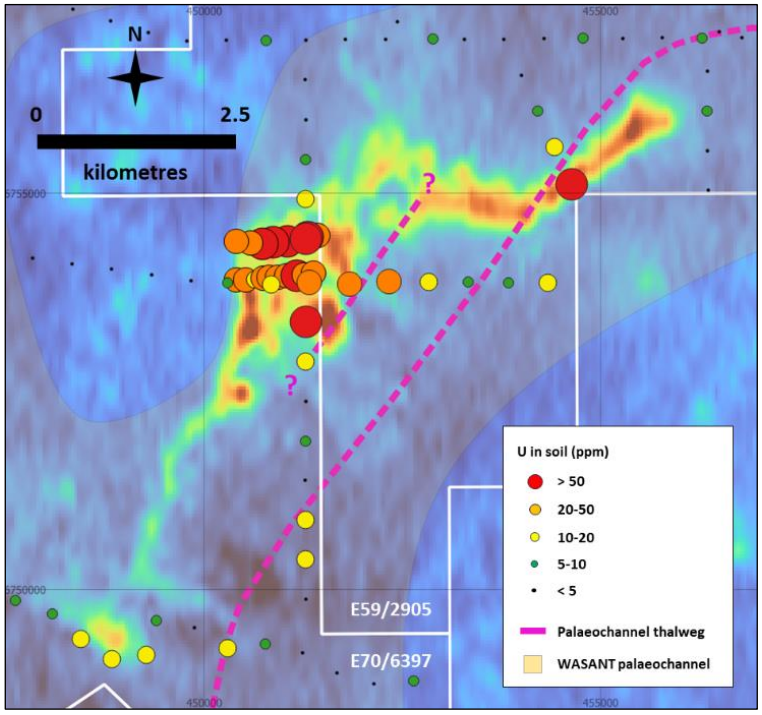

Figure 2: Uranium in soil assays from 2024 and 2025 surveys, Gingaba Well target.

Gingaba Well Uranium Target

Importantly at Gingaba Well, strongly elevated U soil assays from the 2024 and 2025 programs show an excellent spatial correlation with the 8 km-long airborne anomaly, yielding values in the range 11 to 138 ppm U (Figure 2 and Table 1). These values compare with the maximum airborne response at Gingaba Well of 26 ppm U.

Figure 3 compares the airborne radiometric anomaly at Gingaba Well with those over significant calcrete-hosted U resources at Yeelirrie (Cameco Corporation), and Lake Maitland and Centipede/Millipede (Toro Energy Limited; ASX: TOE) in Western Australia[2]. The spatial footprint of the Gingaba Well anomaly is similar to the highlighted deposits. However, the maximum airborne U-channel response at Gingaba Well is half that at Yeelirrie (52 ppm U) but exceeds those at Lake Maitland (15 ppm U) and Centipede/Millipede (16 ppm U).

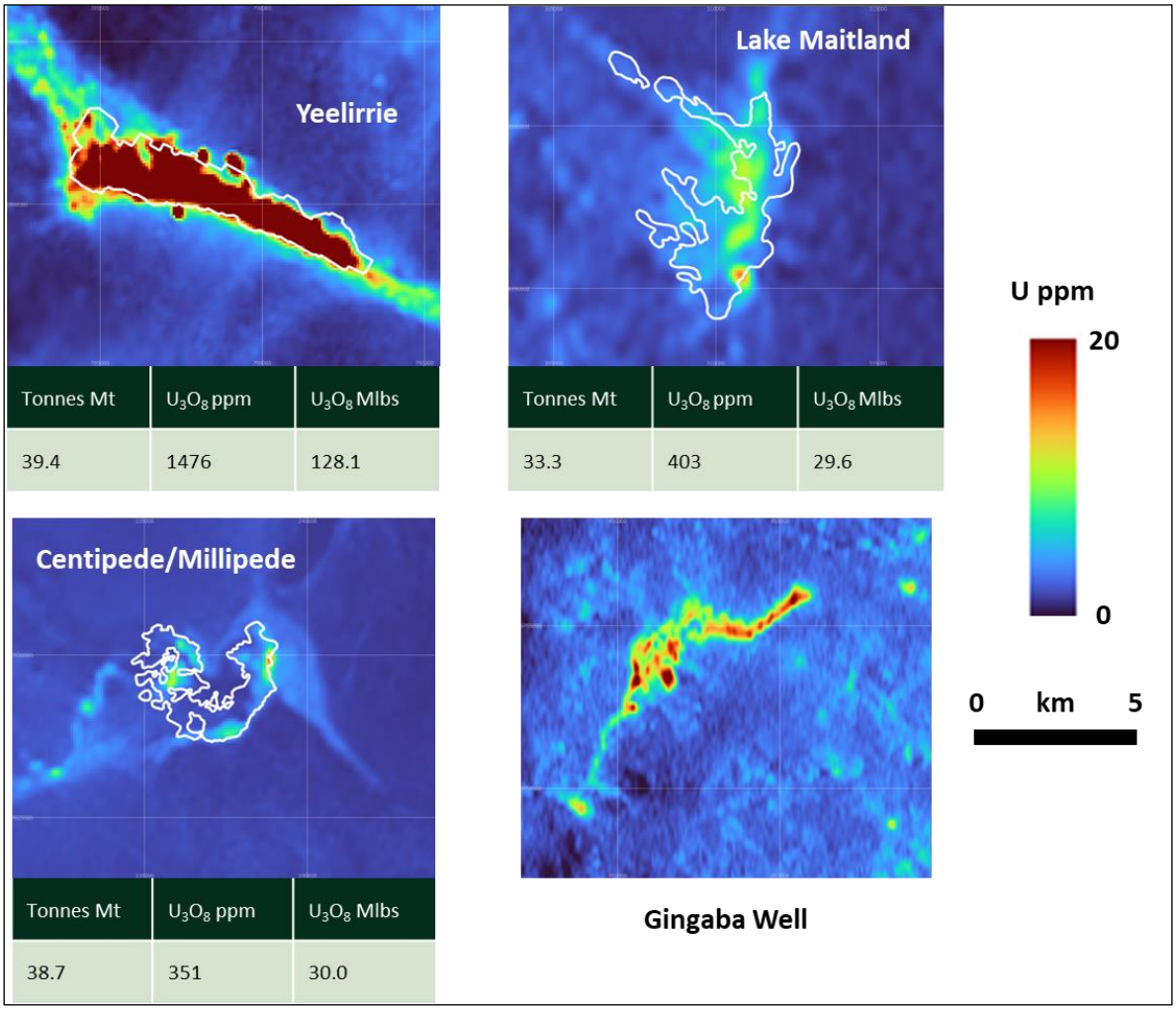

Figure 3: Airborne radiometric (U channel) responses over Gingaba Well target and significant calcrete-hosted uranium resources in Western Australia: Yeelirrie, Lake Maitland and Centipede/Millipede.
Background images: GSWA Sandstone (Yeelirrie deposit) and Perenjori (Gingaba Well) surveys; Geoscience Australia Wiluna (Centipede/Millipede deposit) and Sir Samuel (Lake Maitland deposit) surveys.

[2] Yeelirrie U resource (Cameco Corporation): https://www.cameco.com/sites/default/files/documents/2024-mineral-reserves-and-resources.pdf.
Lake Maitland and Centipede/Millipede U resources (Toro Energy Limited): https://www.toroenergy.com.au/wp-content/uploads/2024/10/Homsany_Richard_Toro-Energy-Ltd.pdf.

Future Work

HRE considers the Gingaba Well surface uranium anomaly may be indicative of a deposit hosted deeper within the palaeochannel and plans to drill shallow fences of holes to test this possibility, subject to receipt of all cultural heritage and government approvals. These will be the first exploration holes drilled into HRE's Perenjori project tenements.

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This announcement has been approved by the Board of HRE.

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About Heavy Rare Earths Limited

Heavy Rare Earths Limited (ASX: HRE) is an Australian uranium and rare earth exploration and development company. HRE's uranium exploration projects are in the uranium-rich Curnamona Province of eastern South Australia and in the Mid West region of Western Australia. The Company's key rare earth exploration project is Cowalinya, near Esperance in Western Australia.

Competent Person's Statement

The Exploration Results contained in this announcement were compiled by Mr Richard Brescianini of Total Rare Earth Solutions. Mr Brescianini is a Member of the Australian Institute of Geoscientists (MAIG). He is a Non-Executive Director of Heavy Rare Earths Limited. Mr Brescianini has more than 35 years' experience in mineral exploration and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 JORC Code. Mr Brescianini consents to the inclusion in this announcement of the matters based on the Exploration Results in the form and context in which they appear.

Table 1: Ultrafine™ soil results shown in Figure 2, Gingaba Well target.

SAMPLE ID	NORTHING (m)	EASTING (m)	ELEVATION (m)	URANIUM (ppm)	TREE* (ppm)
PUF03009	6757323.7	448338.2	270	2.2	61.7
PUF03010	6757180.1	448815.0	275	4.6	53.8
PUF03011	6757030.6	449295.8	275	1.6	34.2
PUF03012	6756924.4	449778.6	275	1.8	44.7
PUF03013	6756928.1	450279.7	272	2.0	50.3
PUF03014	6756931.0	450779.3	272	5.1	54.3
PUF03015	6756934.6	451278.5	277	2.5	47.9
PUF03016	6756941.6	451779.6	277	2.0	29.8
PUF03018	6756939.7	452284.3	266	1.5	104.2
PUF03019	6756943.2	452883.8	263	6.7	157.4
PUF03020	6756944.9	453281.0	264	4.0	128.4
PUF03021	6756948.3	453783.1	266	3.4	76.1
PUF03022	6756949.6	454281.2	265	3.5	78.3
PUF03023	6756954.7	454782.7	265	5.3	60.7
PUF03024	6756957.0	455277.6	265	4.5	115.2
PUF03025	6756959.1	455776.8	265	4.5	70.2
PUF03026	6756959.9	456277.0	265	6.5	147.2
PUF03027	6756961.9	456780.8	265	2.9	95.3
PUF04013	6754183.3	447832.0	276	2.5	115.1
PUF04015	6754112.6	448332.7	282	3.4	128.7
PUF04016	6754043.1	448833.9	289	2.4	85.7
PUF04017	6753974.1	449332.0	288	3.2	55.6
PUF04018	6753902.0	449835.9	270	2.4	204.3
PUF04019	6753875.0	450299.1	262	5.5	105.4
PUF04020	6753854.7	450840.2	263	16.1	112.6
PUF04021	6753879.8	451328.0	263	30.5	77.1
PUF04022	6753851.4	451828.8	264	47.9	64.6
PUF04023	6753882.0	452329.7	263	21.2	129.0
PUF04024	6753878.3	452836.2	263	10.2	88.2
PUF04026	6753878.5	453334.0	264	9.3	160.2
PUF04027	6753874.1	453832.2	264	5.0	129.7
PUF04028	6753875.8	454332.5	264	14.9	308.7
PUF05015	6749866.7	447623.9	262	5.9	115.5

PUF05016	6749693.7	448082.2	262	9.6	120.9
PUF05017	6749380.6	448443.4	262	11.3	116.0
PUF05018	6749122.5	448831.0	261	12.6	124.4
PUF05020	6749176.4	449272.4	264	11.6	137.2
PUF05021	6749614.2	449397.2	263	6.0	105.0
PUF05022	6749518.7	449878.1	262	4.5	128.0
PUF05023	6749263.2	450295.2	262	10.7	62.5
PUF05024	6749309.9	450765.0	263	6.3	149.6
PUF05025	6749196.7	451244.0	264	4.5	293.3
PUF05026	6748952.7	451679.6	265	4.7	81.8
PUF05027	6748814.5	452139.8	267	3.1	56.0
PUF05028	6748844.2	452639.3	270	5.3	63.0
PUF08011	6757160.4	452431.6	265	3.7	195.6
PUF09009	6757034.6	456501.7	265	2.9	111.3
PUF09010	6756540.1	456351.6	265	3.6	120.8
PUF09011	6756035.5	456348.4	265	9.9	148.3
PUF09012	6755537.5	456352.1	267	4.1	124.6
PUF09013	6755043.2	456354.0	271	3.9	117.5
PUF11001	6756431.0	451277.3	271	2.4	94.8
PUF11002	6755927.6	451282.1	269	1.4	145.6
PUF11003	6755426.5	451279.8	266	6.4	137.4
PUF11005	6754928.8	451280.7	264	19.5	153.2
PUF11006	6754427.7	451278.5	264	107.9	41.0
PUF11007	6753377.1	451279.3	263	113.8	76.2
PUF11008	6752877.7	451280.4	263	10.7	68.9
PUF11009	6752378.5	451280.2	263	3.5	83.9
PUF11010	6751876.4	451281.2	262	5.9	122.2
PUF11011	6751382.0	451277.5	262	3.1	74.9
PUF11012	6750883.1	451280.6	262	14.2	60.1
PUF11013	6750379.9	451280.3	262	10.1	109.6
PUF11014	6749878.5	451281.6	262	3.7	120.3
PUF12001	6756493.6	454002.2	266	4.5	69.6
PUF12003	6756039.1	454204.4	265	8.3	133.0
PUF12004	6755582.3	454417.7	265	14.9	181.7
PUF12005	6755118.3	454636.1	264	116.4	43.8

308131	6754396	450404	272	30	132.6
308130	6754378	450580	273	24	60.8
308129	6754361	450728	274	59	26.2
308128	6754387	450874	272	82	25.2
308127	6754395	451047	274	72	34.3
308126	6754405	451179	273	11	20.9
308125	6754450	451303	275	87	34.6
308124	6754469	451432	271	38	21.7
308114	6753903	450406	275	32	84.3
308115	6753904	450521	273	41	46.8
308116	6753909	450642	273	18	34.9
308117	6753925	450741	275	23	43.6
308118	6753939	450823	275	26	6.0
308119	6753937	450925	274	37	12.6
308120	6753957	451036	276	41	17.4
308121	6753966	451171	275	138	37.5
308122	6753974	451266	275	21	73.8
308123	6753994	451380	275	33	28.3

** TREE (Total Rare Earths) = La + Ce + Pr + Nd + Sm + Eu + Gd + Tb + Dy + Ho + Er + Tm + Yb + Lu + Y.*

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this Section apply to all succeeding Sections)

Criteria	JORC Code Explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g., cut channels, random chips, or specific specialized 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.*	• Soil sampling employed collection of approximately 500 g of material at a depth of 20-50 cm sieved to -2 mm to remove coarse particles, and bagged in paper Geochem Bags.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• No measures were taken by Heavy Rare Earths Limited (HRE) to ensure representivity of samples.
	Aspects of the determination of mineralisation that are Material to the Public Report.	• Not applicable.
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.).*	• HRE has not conducted any drilling at Perenjori to date.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	• Not applicable.
	Measures taken to maximize sample recovery and ensure representative nature of the samples.	• Not applicable.
	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.	• Not applicable.

Criteria	JORC Code Explanation	Commentary
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.*	• Not applicable.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	• Not applicable.
	The total length and percentage of the relevant intersections logged.	• Not applicable.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	• Not applicable.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	• Not applicable.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• Not applicable.
	Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.	• Not applicable.
	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.	• A duplicate soil sample was collected at every 20th sample site. Comparison of the original and duplicate samples show that uranium (U) and total rare earth (TREE) values are reproduced to better than 5% and 7% respectively, which are considered adequate for a soil survey.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	• Not applicable.

Criteria	JORC Code Explanation	Commentary
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.*	• Soil samples were analysed using LabWest Minerals Analysis' Ultrafine+™ method which extracts only the < 2 µm sample fraction. This gives highly accurate and precise total analyses for 65 elements, including U and 15 rare earths (REE), via ICP-MS and -OES. This is considered a state-of-the-art analytical methodology, but because only a small portion of the sample is analysed, the resultant metal values do not represent the bulk metal content of the sample.
	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.	• Not applicable.
	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.	• HRE's sampling protocols require that Certified Reference Materials (CRMs, including blanks) and field duplicates are inserted into each analytical batch at every 20th sample. • LabWest uses regular duplicates, CRMs and blanks. Based on assessment of a limited number of CRMs an acceptable level of accuracy and precision has been achieved by LabWest. • No issues have been detected with sample collection or analysis.
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	• Not applicable.
	The use of twinned holes.	• Not applicable.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• Pre-determined soil sample IDs and locations were provided to acquisition contractor XM Logistics as an Excel file. All field data, including soil sample GPS locations and soil types, were captured electronically by XM Logistics' sampling crew in the field. An Excel file was provided to HRE at the conclusion of the program.
	Discuss any adjustment to assay data.	• Not applicable.

Criteria	JORC Code Explanation	Commentary
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• Soil sample locations were recorded using a hand-held Garmin GPSMAP 67 GPS. Horizontal positional accuracy is ±3-5 m.
	Specification of the grid system used.	• MGA94 Zone 50.
	Quality and adequacy of topographic control.	• Hand-held GPS only.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	• Soil samples were collected at a nominal 500 m interval along 12 traverses across the project area. Soil traverses were spaced 2-4 km apart.
	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.	• Not applicable.
	Whether sample compositing has been applied.	• Not applicable.
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.*	• Soil sample lines are approximately perpendicular to the inferred thalweg of the targeted palaeochannels (Figure 1).
	If the relationship between the drilling orientation and the orientation of key mineralized structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Not applicable.
Sample security	*The measures taken to ensure sample security.*	• Samples were in the custody of XM Logistics field personnel from collection to delivery to the laboratory.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	• Not applicable.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding Section 1 also apply to this Section)

Criteria	JORC Code Explanation	Commentary
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.*	• Exploration licences E70/6397, E70/6398 and E59/2905 that comprise the Perenjori project are located 185 kilometres ESE of Geraldton in Western Australia. They consist of 70, 39 and 32 graticular blocks respectively, occupying a total area of 421 km^2. They are situated on a mixture of unallocated Crown land, general lease (for grazing purposes) and private farm land. The registered holder of the tenements is Heavy Rare Earths Limited (HRE). • Full native title rights have been granted over the tenements and surrounding lands to people collectively represented by the Bundi Yamatji Aboriginal Corporation, with whom cultural heritage surveys are undertaken in advance of substantial disturbance exploration works.
	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.	• The granted tenements are in good standing. There are no impediments to operating on the tenements other than requirements of the West Australian Department of Energy, Mines, Industry Regulation and Safety (DEMIRS), and the Yamatji Proponent Standard Heritage Agreement which is industry standard.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	• There is no exploration drilling recorded on the Perenjori project tenements. • Historic exploration of most relevance was undertaken by Enterprise Uranium Ltd (Enterprise) for uranium (U) on E59/1856 and E70/4295 in 2012-14. Enterprise undertook limited ground spectrometer readings, and soil, rock and brine sampling of airborne radiometric (U) anomalies. They also flew wide-spaced lines of airborne EM attempting to characterise the paleo drainage system, with follow up hand-held XRF and soil sampling yielding U values of up to 100 ppm. Soil analyses did not include rare earths (REE).

Criteria	JORC Code Explanation	Commentary
Geology	*Deposit type, geological setting and style of mineralisation.*	• The deposit type being investigated is a palaeochannel- or calcrete-hosted U deposit. A secondary target is ion adsorption clay-hosted REE mineralisation in palaeochannels or developed over bedrock granitic rock types which contain anomalous levels of REE. • The geology of the Perenjori area is dominated by salt lakes (playas) and Quaternary lacustrine, calcrete and laterite. Laterite is associated with sparse outcrops of Archaean granitoids which locally exhibit extreme weathering. Minor outcrops of fresh granitoids range from hornblende and biotite-bearing granite and granodiorite to undifferentiated varieties.
Drillhole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* - *easting and northing of the drillhole collar* - *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* - *dip and azimuth of the hole* - *down hole length and interception depth* - *hole length.*	• Not applicable.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated.*	• Individual REE assays are summed to produce a total rare earths (TREE) grade for each assay sample.
	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.	• Not applicable.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	• Not applicable.

Criteria	JORC Code Explanation	Commentary
Relationship between mineralisation widths and intercept lengths	*If the geometry of the mineralisation with respect to the drillhole 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 (e.g., 'down hole length, true width not known').*	• Not applicable.
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 drillhole collar locations and appropriate sectional views.*	• Not applicable.
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.*	• Not applicable.
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 Gingaba Well U anomaly was first detected by an airborne magnetic-radiometric commissioned by the Geological Survey of Western Australia (GSWA) in 2011-2012. This survey was flown along E-W lines spaced 200 m apart at a nominal ground clearance of 50 m. The spectrometer had a total volume for detection of 33.6 L.
Further work	*The nature and scale of planned further work (e.g., 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.*	• HRE plans a program of shallow (< 50 m) drillholes at the Gingaba Well prospect in order to test the palaeochannel beneath the coincident surface geochemical-airborne radiometric (U) anomaly.