21 August 2023

Leach tests achieve up to 85% recovery of Magnet Rare Earths

- Very high extraction rates of rare earth elements (REE[1]) achieved using a simple hydrochloric acid leach at an acid concentration of 25g/l HCl within a leaching period of 24 hours.
- Extraction rates of up to 72% of TREO[2] were achieved at the key Mia and Vincent Prospects, including up to 85% of high value magnet rare earths (MagREO[3]).
- This follows impressive screen beneficiation test results which returned an average grade upgrade of 164% from Mia and 154% from Vincent. Over 80% of the TREO is contained within 50% of the original sample mass, and the barren proportion can be rejected when simply screened at -75 microns[4].
- Drilling is scheduled to resume at the Mia Prospect in September, leading to the Company's maiden Mineral Resource Estimate later in the year.

Mount Ridley's Chairman Mr. Peter Christie commented:

"Recent results have provided valuable metallurgical insights as the Company progresses towards a flow sheet for the Mia Prospect and the larger Mount Ridley REE Project.

"The weighted average drill-intersection grade at Mia now exceeds 1,500ppm TREO. It is projected that this grade may increase to above 2,400ppm TREO through simple screen beneficiation, a rate of upgrade of 160%, and now excellent acid leach test results have been returned from beneficiated test samples, showing the potential efficacy of HCl leaching to recover rare earth elements at a reasonable level of acid consumption.

"We are looking forward to resuming drilling and metallurgy at the Mia Prospect in September ahead of the Company's maiden Mineral Resource Estimate later in the year."

1 REE means the 14 common rare earth elements; cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), samarium (Sm), terbium (Tb), thulium (Tm), ytterbium (Yb). Yttrium (Y) is usually included with REE.

2 TREO means the sum of the 14 REE+Y, each converted to its respective stoichiometric element oxide.

3 MagREO means the sum of Dy_2O_3, Nd_2O_3, Pr_6O_{11} and Tb_4O_7.

4 ASX: MRD: 6 July 2023 "Excellent screen beneficiation test results lift REE grades by up to 202% at the Mount Ridley REE1 Project".

Exploration Update – Acid Leach Test Results

Mount Ridley Mines Limited (ASX: **MRD**, "**Mt Ridley**" or "**the Company**") is pleased to provide a summary of results from a programme of acid leach tests conducted on samples from the Mount Ridley Rare Earth Elements Project, situated approximately 50km north of the Port of Esperance, Western Australia (Figure 1).

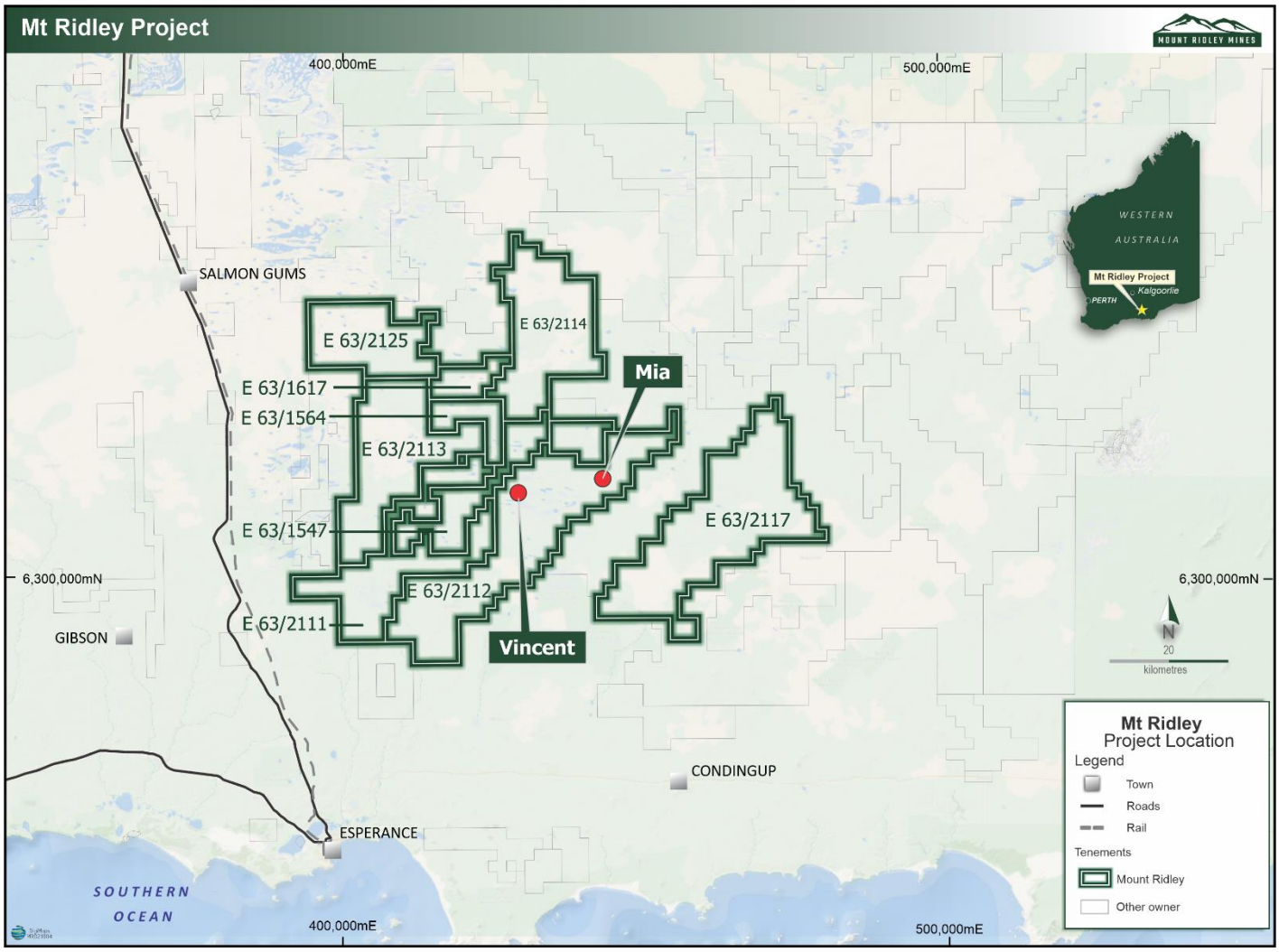

Figure 1: The Mount Ridley REE Project comprises 9 granted exploration licences in south-west Western Australia with an area of approximately 3,400km^2. The location of the Mia and Vincent Prospects are highlighted.

Metallurgy using HCl acid leach

Results have been received for 12 samples from the Mia, Jody, Winston and Vincent Prospects. Samples were the products of the earlier screen beneficiation testing that were screened to -25 microns. Hydrochloric acid leach testing was supervised by Independent Metallurgical Operations Pty Ltd (IMO) with work undertaken by Metallurgy Pty Ltd.

Samples were leached with hydrochloric acid at three strengths: 3.6g/l HCl (pH 1), 10g/l HCl and 25g/l HCl; and at a range of times from 6 hours to 24 hours.

Best results were returned when samples were leached at 25g/l HCl for 24 hours. (Table 1).

Table 1:
Summary of key samples from REE Extraction at 25g/l HCl over a leaching period of 24 hours

Prospect	**Mia**	**Winstons**	**Vincent**	**Vincent**	**Mia**	**Jody**
Drill Hole	MRAC 1188	MRDD0036	MRDD0029	MRDD0029	MRAC1180	MRAC1146
Interval	57-63 m	51 - 52.6 m	30 - 34 m	34 - 39.2 m	9-17 m	33-44 m
Head Grade TREO (ppm)	6,304	8,952	2,470	1,366	2,771	1,033
Upgrade	142%	139%	191%	160%	190%	231%
-25 micron Grade TREO (ppm)	8,929	12,408	4,710	2,188	5,272	2,382
TREO Extracted	67%	35%	61%	76%	41%	61%
Mag REO Extracted	77%	27%	79%	85%	42%	60%
Calc Recovered TREO (ppm)	**5,979**	**4,301**	**2,886**	**1,658**	**2,172**	**1,453**

Calculated recovery rates of high value MagREO are considered good to excellent from samples from locations within the Mia, Vincent and Jody Prospects.

- Central Mia: (MRAC1166, MRAC1188) 56-77% MagREO
- Vincent: (MRDD029 x 2, MRAC1109, MRAC1146) 69-85% MagREO
- Jody: (MRAC1146) 60% MagREO
- Eastern Mia: (MRAC1180, MRAC1184, elevated Nb zone) 29-42% MagREO
- Winstons: (MRDD036 (high head grade) MRAC1209) 20-27% MagREO

Lower recoveries were returned from the Butch Prospect, which encompasses an apparent younger aged volcanic intrusive complex with a much higher proportion of light REE.

- Butch: (MRAC1162, mafic intrusive complex) 19% MagREO

Exploration Update

1. **Drilling**: Assays from infill aircore holes drilled at the Central Mia Prospect are currently being received and compiled, for an expected release date in early to mid September.
2. **Surveys**: Logistics are being finalised ahead of flora and Aboriginal heritage protection surveys at the central Mia Prospect. Drill sites will be prepared concurrently with surveys after which drilling can commence. Subject to ground conditions, surveys are scheduled for September.
3. **Drilling**: Infill drilling to bring the drilling density down generally to a 400 x 400m grid is scheduled for a September start. The planned programme will comprise 180 holes for approximately 9,000m, which will include approximately 20 holes for specific metallurgy samples.

Programmes of Work approvals have been received from the DMIRS[5], (subject to completing heritage and flora surveys), to drill throughout the 16km long Mia-Marvin Trend. The Company also has approvals to drill in and around the Vincent Prospect to follow up the excellent metallurgical results reported herein. As the project advances, the Company is focussing on areas where REE mineralisation shows excellent beneficiation and leach characteristics.

The Company acknowledges the Esperance Nyungar People, custodians of the Project area and thanks the Esperance Tjaltjraak Native Title Aboriginal Corporation for facilitating the Company's exploration programmes.

This announcement has been authorised for release by the Company's board of directors.

For further information, please contact:

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5 Department of Mines Industry Regulation and Safety, WA

About the Mount Ridley REE Project

The Company announced on 1 July 2021 that laterally extensive REE mineralisation had been identified at its namesake Mount Ridley Project.

The Mount Ridley Project is located from approximately 50 kilometres northeast of the deep-water port of Esperance, a town with approximately 12,000 people and a hub for tourism, agriculture, and fishing (Figure 1). The Port exports minerals including nickel sulphide, iron ore and spodumene.

The Project is approximately 20 kilometres east of the sealed Goldfields Esperance Highway and infrastructure corridor which includes the Kalgoorlie-Esperance railway line and gas pipeline. The Esperance airport is located at Gibson Soak, approximately 20 kilometres from the Project.

About Mount Ridley Mines Limited

Mount Ridley is a company targeting demand driven metals in Western Australia.

Its namesake Mount Ridley Project, located within a Fraser Range sub-basin, was initially acquired for its nickel and copper sulphides potential, and is now recognised as being prospective for clay hosted REE deposits.

The Company also holds approximately 18% of the Weld Ranges in the mid-west of Western Australia. Areas of the tenements are prospective for iron and gold.

Caution Regarding Forward Looking Information

This announcement may contain forward-looking statements that may involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions, and estimates should change or to reflect other future developments.

Competent Person

The information in this report that relates to exploration strategy and results is based on information supplied to and compiled by Mr David Crook. Mr Crook is a consulting geologist retained by Mount Ridley Limited. Mr Crook is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists and has sufficient experience which is relevant to the exploration processes undertaken to qualify as a Competent Person as defined

in the 2012 Editions of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

The information in this document that relates to metallurgical test work is based on, and fairly represents, information and supporting documentation reviewed by Mr Peter Adamini, BSc (Mineral Science and Chemistry), who is a Member of The Australasian Institute of Mining and Metallurgy (AusIMM). Mr Adamini is a full-time employee of Independent Metallurgical Operations Pty Ltd, who has been engaged by Mt Ridley Mines Limited to provide metallurgical consulting services. Mr Adamini has approved and consented to the inclusion in this document of the matters based on his information in the form and context in which it appears.

With respect to JORC Table 1 included in MRD announcements to ASX dated:

- 2 August 2021. "REE Potential Unveiled at Mount Ridley."
- 13 September 2021. "REE Targets Extended."
- 21 October 2021. "Encouraging Rare Earth Extraction Results."
- 2 August 2022. "Excellent Drilling Results Expand Rare Earth Mineralisation Footprint at the Mt Ridley Project."
- 6 October 2022. "Highest grades to date returned from Mt Ridley Rare Earth Project, Mineralised footprint extended to more than 1,200km2."
- 14 February 2023. "Thick, shallow and high grade REE mineralisation discovered at the new Jody and Marvin Prospects.
- 30 March 2023. "Resource drilling commences on 30km long Mia - Marvin Zone at the Mount Ridley REE Project."
- 10th May 2023. "Coincident High-Grade Rare Earth Elements and Geophysical Anomalies at Mia Prospect".
- 24th May 2023. "Drilling update for the Mia REE Prospect".
- 6 July 2023. "Excellent screen beneficiation test results lift REE grades by up to 202% at the Mount Ridley REE Project".

Mount Ridley confirms that it is not aware of any new information or data that materially affects the information included in these announcements and that all material assumptions and technical parameters underpinning the exploration results continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Appendix 1

A. Drill Hole Collar Locations for Reported Holes.

Table 2: Drill hole Collar Locations						
Hole ID	**Prospect**	**Drill Type**	**Depth m**	**East m**	**North m**	**Nominal RL m**
MRAC1101	Vincent	AC	51	430,296	6,317,481	190
MRAC1109	Vincent	AC	56	432,595	6,315,262	190
MRAC1146	Jody	AC	45	429,813	6,334,831	190
MRAC1162	Butch	AC	53	432,800	6,327,551	190
MRAC1180	Mia	AC	17	441,230	6,315,374	190
MRAC1184	Mia	AC	59	440,683	6,314,263	190
MRAC1186	Mia	AC	69	439,863	6,314,250	190
MRAC1188	Mia	AC	63	439,070	6,314,239	190
MRAC1209	Winstons	AC	40	436,719	6,324,666	190
MRDD029	Vincent	DD	46.4	426,832	6,315,327	190
MRDD036	Winstons	DD	58.6	429,073	6,322,574	190

- Grid is GDA94-51
- Coordinates by hand-held GPS with a presumed accuracy within +-5m
- All holes drilled vertically (dip = -90°, azimuth = 0°)

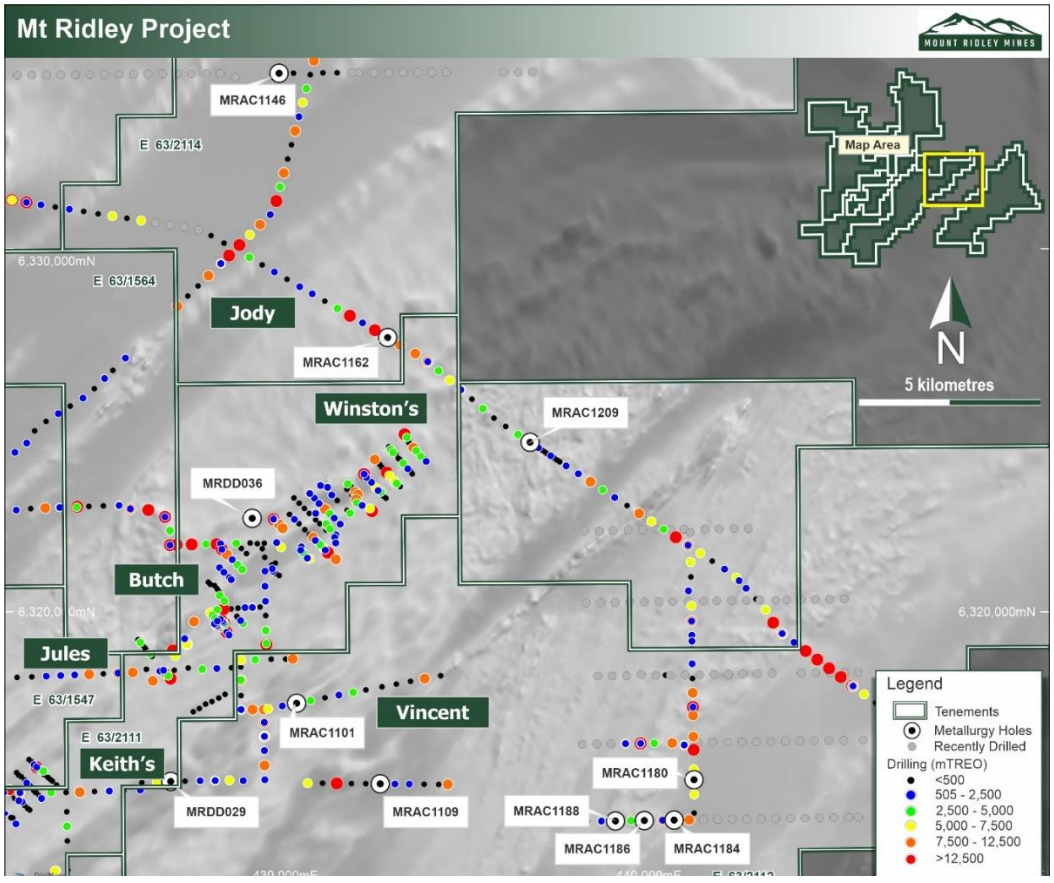
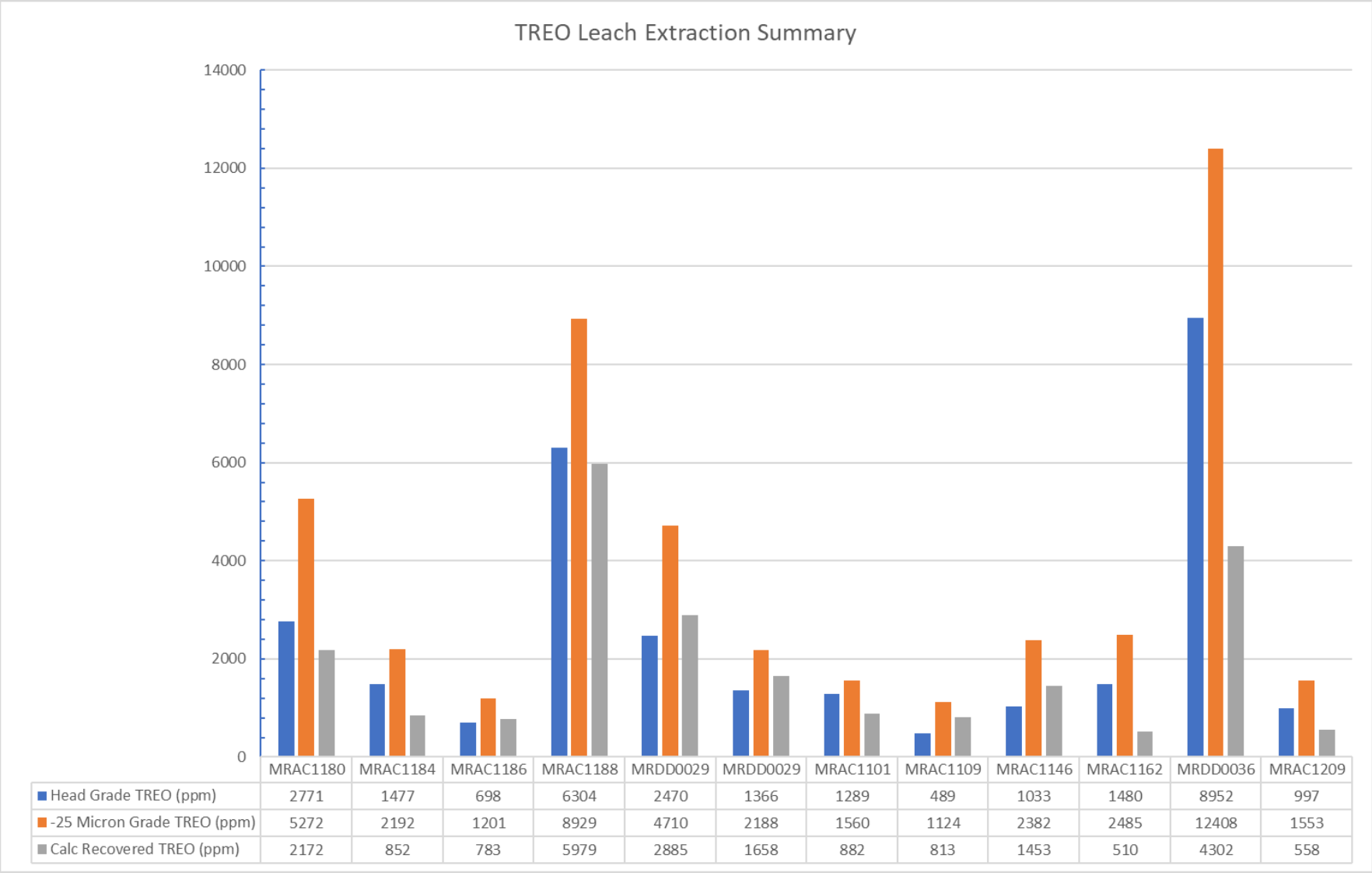


Figure 5: Location of drill holes reported in this announcement.

Appendix 1

B. HCl Leach Results.

Table 3 Leach Test Results using 25g/litre HCl with a 24hr Residence Time												
Prospect	**Mia**	**Mia**	**Mia**	**Mia**	**Vincent**	**Vincent**	**Vincent**	**Vincent**	**Jody**	**Butch**	**Winstons**	**Winstons**
Drill Hole	MRAC1180	MRAC1184	MRAC1186	MRAC1188	MRDD0029	MRDD0029	MRAC1101	MRAC1109	MRAC1146	MRAC1162	MRDD0036	MRAC1209
Interval	9-17 m	30-59 m	45-66 m	57-63 m	30 - 34 m	34 - 39.2 m	39-51 m	39-56 m	33-44 m	18-53 m	51 - 52.6 m	24-39 m
Head Grade TREO (ppm)	**2771**	**1477**	**698**	**6304**	**2470**	**1366**	**1289**	**489**	**1033**	**1480**	**8952**	**997**
Upgrade	190%	148%	172%	142%	191%	160%	121%	230%	231%	168%	139%	156%
-25 micron Grade TREO (ppm)	**5272**	**2192**	**1201**	**8929**	**4710**	**2188**	**1560**	**1124**	**2382**	**2485**	**12408**	**1553**
HREO	62.26%	49.27%	67.61%	30.90%	32.88%	47.54%	36.14%	50.46%	74.84%	26.34%	38.72%	27.84%
LREO	38.30%	37.70%	64.66%	79.93%	81.69%	87.29%	72.84%	76.20%	55.46%	19.62%	34.31%	36.41%
TREO	41.20%	38.88%	65.22%	66.96%	61.27%	75.77%	56.55%	72.29%	61.02%	20.52%	34.67%	35.89%
MagREO (Magnets)	42.39%	28.85%	56.23%	76.90%	78.88%	85.24%	68.85%	74.73%	60.18%	18.83%	26.73%	20.32%
Calc Recovered TREO (ppm)	**2172**	**852**	**783**	**5979**	**2885**	**1658**	**882**	**813**	**1453**	**510**	**4302**	**558**
Al	37.52%	0.87%	1.66%	2.08%	83.39%	88.31%	74.60%	76.28%	54.62%	19.43%	34.57%	37.39%
Fe	52.54%	54.09%	65.32%	53.63%	60.72%	72.36%	52.07%	64.48%	67.75%	23.30%	32.57%	22.29%
Dy	56.23%	47.16%	72.39%	46.70%	55.17%	65.82%	50.87%	64.40%	74.55%	26.11%	35.56%	25.71%
Er	62.13%	53.17%	65.09%	28.51%	38.12%	50.33%	35.43%	48.62%	72.32%	27.03%	40.48%	30.70%
Ho	59.07%	46.68%	68.31%	35.82%	46.09%	57.75%	42.78%	58.27%	76.41%	26.75%	38.27%	30.17%
Lu	68.48%	49.66%	59.25%	15.19%	34.27%	41.89%	29.69%	33.56%	68.60%	27.66%	45.28%	28.36%
Tb	52.09%	46.55%	74.41%	57.69%	64.09%	73.90%	57.30%	65.04%	67.06%	23.52%	35.12%	23.25%
Tm	63.94%	49.97%	62.78%	24.14%	39.17%	49.50%	23.67%	44.57%	71.71%	29.79%	42.70%	32.16%
Y	64.03%	49.73%	67.56%	28.49%	27.49%	43.50%	34.84%	50.74%	77.92%	27.11%	39.81%	28.88%
Yb	63.48%	47.07%	60.22%	19.36%	37.73%	48.06%	32.00%	36.24%	68.75%	26.53%	43.57%	30.97%
Ce	47.13%	75.44%	93.75%	82.18%	82.02%	89.40%	79.91%	78.83%	54.30%	21.88%	72.41%	59.29%
Eu	62.13%	53.17%	65.09%	28.51%	79.37%	86.56%	70.21%	74.89%	66.22%	22.06%	31.12%	20.20%
Gd	51.84%	43.21%	70.17%	67.85%	69.95%	81.48%	63.44%	74.53%	68.43%	24.67%	31.39%	20.35%
La	27.36%	14.21%	37.99%	80.74%	85.16%	91.54%	76.88%	76.62%	53.67%	17.92%	15.98%	12.79%
Nd	42.56%	28.72%	54.93%	80.62%	85.88%	91.13%	75.75%	77.99%	59.50%	18.95%	27.34%	20.93%
Pr	37.45%	23.56%	52.16%	80.23%	84.63%	90.33%	74.47%	77.98%	57.48%	17.29%	24.64%	18.96%
Sm	46.03%	36.32%	64.01%	77.66%	83.44%	89.18%	73.27%	79.42%	61.58%	20.31%	30.52%	21.31%



	MRAC1180	MRAC1184	MRAC1186	MRAC1188	MRDD0029	MRDD0029	MRAC1101	MRAC1109	MRAC1146	MRAC1162	MRDD0036	MRAC1209
Head Grade TREO (ppm)	2771	1477	698	6304	2470	1366	1289	489	1033	1480	8952	997
-25 Micron Grade TREO (ppm)	5272	2192	1201	8929	4710	2188	1560	1124	2382	2485	12408	1553
Calc Recovered TREO (ppm)	2172	852	783	5979	2885	1658	882	813	1453	510	4302	558

Graph1: A comparison of each sample's TREO head grade, beneficiated (-25 micron) grade and calculated recovery grade.

Appendix 2

JORC Code, 2012 Edition – Table 1 Report for the Mount Ridley Project

Section 1 Sampling Techniques and Data: Aircore Drilling

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	Mount Ridley Mines Limited (ASX: MRD) is reporting HCl leach results from samples of Aircore ("AC") or diamond ("DDH") drilling. Primary sample analyses and techniques have previously been reported. Selected samples were composited and supplied to Simulus Pty Ltd ("Simulus") for screen beneficiation testing and assays of the head sample and screened fractions including the -25 micron fraction that was used in the HCl leach tests. (See footnote 4)
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Samples described in Table 2 were composited based on earlier sample analyses. Composite head assays have been compared to original assays and are sufficiently close to consider the samples to be 'fit for purpose'.
	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 (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	AC and DDH drilling generated samples of between 1 metre and 3 composited metres taken for primary analysis. Remaining, unprepared sample bulks were submitted to Simulus and then subsampled to generate beneficiation sample composites of 10kg each.
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).	AC: A type of reverse circulation drilling using slim rods and a 100mm blade bit drilled to refusal (saprock to fresh rock). DDH: PQ core is recovered from diamond drilling.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Recovery was visually assessed, recorded on drill logs, and considered to be acceptable within industry standards.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	The majority of sample were of good quality. Samples were visually checked for recovery, moisture, and contamination. A cyclone was used to deliver the sample into buckets.
	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.	Unknown at this stage.

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.	Geological logging was complete in full for every hole, this includes lithology, weathering, oxidation state, alteration, veining, mineralisation if present. Considered appropriate for this style of drilling and the stage of the project. All holes were chipped for the entire hole for a complete chip tray record.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Geological logging is inherently qualitative. More specific logging may be undertaken if chemical analyses warrant it.
	The total length and percentage of the relevant intersections logged.	All holes were logged for the entire length of the hole.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	DDH core samples – quarter core. Where sample interval permitted split using a blade, otherwise where necessary, sawn.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	AC samples were collected via a cyclone into a bucket and laid out in rows as single 1m piles. 1m or up to 3m composite samples were 'speared' from the sample piles for an approximately 2.5 - 3.5kg sample. Selected mineralised intervals (refer to Tables 1 and 2) were further composited for the beneficiation test work reported herein. Beneficiation samples were screened at +500 um, -500+106 microns, -106+75 microns, -75+38 microns, -38+25 microns and -25 microns.
	For all sample types, the nature, quality, and appropriateness of the sample preparation technique.	Sampling technique is appropriate for the intended testing.
	Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.	Duplicates and certified reference material ("CRM") were routinely inserted within the original sampling sequence approximately one in every thirty samples. CRM material was selected form a range of REE grade populations.
	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.	For AC, field QAQC procedures included the insertion of field duplicates and CRM's at pre-specified intervals at the time of drilling. All duplicate samples were speared for single metre samples and composite sampling, the size/quantity of the samples were kept consistent (approx. 2 kg). This is considered fit for purpose at this stage of the project. An independent appraisal of QC/field duplicates shows that the sample variance is acceptable.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	To date this has not been studied as the host material is clay.
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.	Screen beneficiation test work undertaken by Simulus. (Refer to announcement to ASX dated 6 July 2023. "Excellent screen beneficiation test results lift REE grades by up to 202% at the Mount Ridley REE Project"). Analyses of head and screened fraction samples reported were undertaken Simulus by a lithium borate fusion with ICP-MS finish. Simulus' laboratory is not NATA accredited however is considered 'fit for purpose'. The subsequent HCl leach tests standard operating procedure was agreed between IMO and the Company.

		Hydrochloric acid leach testing was supervised IMO with work undertaken by Metallurgy Pty Ltd. Samples were leached with hydrochloric acid at three strengths: 3.6g/l HCl (pH 1), 10g/l HCl and 25g/l HCl; and at a range of times from 6 hours to 24 hours. Testwork product analysis was undertaken by Intertek Minerals. Solution analysis was conducted using an ICP-MS whilst solids analysis was conducted using a lithium borate fusion with either an ICP-OES or ICP-MS finish.
	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.	None used, not applicable.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	Standards and laboratory checks have been assessed and show results within acceptable limits of accuracy, with good precision in most cases. ALS analysed 6 different standards, which were predominantly 3rd party independently manufactured.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections are calculated by experienced geologists and verified by an independent consultant.
	The use of twinned holes.	None, not applicable.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All collected data stored in a commercially managed database.
	Discuss any adjustment to assay data.	Raw assays are stored in the commercially managed database with elemental values calculated to oxide for 15 REE's see Section 2 – Data Aggregation Methods.
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.	AC drill hole collar locations were surveyed using a hand-held GPS with +-3m accuracy. No down-hole surveys were carried out, drillholes were also vertical. This is considered satisfactory for the stage of the project. DDH collars were surveyed by DGPS.
	Specification of the grid system used.	GDA94-51
	Quality and adequacy of topographic control.	RL's estimated from a digital elevation model with points gained as a component of an aeromagnetic survey. The datum may have some error, but RL of holes should be relative to each other and fit for purpose on a hole to hole basis.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Variable throughout project. See Figure 2.
	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	There is insufficient data collected for a Mineral Resource Estimate.

	applied.	
	Whether sample compositing has been applied.	Sample composites are described in Tables 1 and 2. Composites of 10kg were made from the listed intervals.
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.	Not determined yet. Likely unbiased as vertical holes are sampling a horizontal mineralised feature.
	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.	Unlikely to be biased as the mineralisation is represented as flat lying lenses and the drilling orientation is perpendicular to mineralisation.
Sample security	The measures taken to ensure sample security.	Standard industry practice is used when collecting, transporting, and storing samples for analysis. Calico samples are sealed into poly weave bags, labelled and cable tied. These are then sealed in labelled bulka bags and transported to the laboratory in Perth by established freight companies. Chain of custody is known at all stages of the process. Drilling pulps are retained and stored off site in a designated storage facility.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sampling techniques are consistent with industry standards. A third-party geochemical specialist is reviewing the data. Drilling results and geological logging are also cross checked by project geologists.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section 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.	Tenements E 63/1547, E 63/1564, E 63/1564, E 63/1564, E 63/1564, E 63/1617, E 63/2111, E 63/2112, E 63/2113, E 63/2114, E 63/2117 and E 63/2125 located from 35km northwest of Esperance, Western Australia. Registered Holder is Mount Ridley Mines Limited (Company) (100%). Odette One Pty Ltd has a 15% free-carried beneficial interest in E 63/2117. The Project is subject to a Full Determination of Native Title which is held by the Esperance Nyungars NNTT Number: WC2004/010, Federal Court Number: WAD28/2019.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	The tenements are in good standing, and there are no impediments to operating in the targeted areas other than requirements of the DMIRS, DBCA and Heritage Protection Agreements, all of which are industry standard.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Many parties, including Government organisations, private and public companies, have explored the area. A substantial compilation of work prior to Mount Ridley was undertaken by Bishop who was the first to research and champion the potential of the Grass Patch Complex, interpreted as a large, crudely layered, amphibolite-gabbro complex beneath shallow cover sediments. The mafic complex is considered to have the potential to host nickel-copper sulphide deposits and PGE deposits. Completed detailed litho-geochemistry interpretation from 'best available' end of hole assays, resulting in a crude basement geological map. Additional drilling tested the models but didn't return assays of commercial consequence. Mount Ridley has completed a large complement of geophysical surveys and drilling, aimed at nickel sulphides and gold. Nearby, Salazar Gold Pty Ltd were the first company to search for REE in the Great Southern, identifying the Splinter REE deposit. Work started in 2010 and continues now.
Geology	Deposit type, geological setting, and style of mineralisation.	Clay-hosted rare earth deposit.

<table>
<tr><td>Drill hole Information</td><td>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.</td><td>All relevant data for the drilling conducted is tabulated in Appendix 1 of this announcement.
It should be noted that RL is estimated from a digital elevation model gained during an aeromagnetic survey.</td></tr>
<tr><td>Data aggregation methods</td><td>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.</td><td>Assay results not reported. Significant intersections are calculated using a minimum 1m thickness, minimum 700ppm TREO cut-off, maximum internal dilution of 3m, no external dilution.
No metal equivalent values have been used.
Stoichiometric factors to convert elements to oxides:
<table>
<tr><td>Ce_ppm</td><td>1.2284</td><td>CeO_2_ppm</td></tr>
<tr><td>Dy_ppm</td><td>1.1477</td><td>Dy_2O_3_ppm</td></tr>
<tr><td>Er_ppm</td><td>1.1435</td><td>Er_2O_3_ppm</td></tr>
<tr><td>Eu_ppm</td><td>1.1579</td><td>Eu_2O_3_ppm</td></tr>
<tr><td>Gd_ppm</td><td>1.1526</td><td>Gd_2O_3_ppm</td></tr>
<tr><td>Ho_ppm</td><td>1.1455</td><td>Ho_2O_3_ppm</td></tr>
<tr><td>La_ppm</td><td>1.1728</td><td>La_2O_3_ppm</td></tr>
<tr><td>Lu_ppm</td><td>1.1372</td><td>Lu_2O_3_ppm</td></tr>
<tr><td>Nd_ppm</td><td>1.1664</td><td>Nd_2O_3_ppm</td></tr>
<tr><td>Pr_ppm</td><td>1.2082</td><td>Pr_6O_{11}_ppm</td></tr>
<tr><td>Sm_ppm</td><td>1.1596</td><td>Sm_2O_3_ppm</td></tr>
<tr><td>Tb_ppm</td><td>1.1762</td><td>Tb_4O^7_ppm</td></tr>
<tr><td>Tm_ppm</td><td>1.1421</td><td>Tm_2O_3_ppm</td></tr>
<tr><td>Y_ppm</td><td>1.2695</td><td>Y_2O_3_ppm</td></tr>
<tr><td>Yb_ppm</td><td>1.1387</td><td>Yb_2O_3_ppm</td></tr>
<tr><td colspan="3">Source: Element-to-stoichiometric oxide conversion factors - JCU Australia.</td></tr>
<tr><td colspan="3">TREO: the sum of Sm_2O_3, Dy_2O_3, Er_2O_3, Eu_2O_3, Gd_2O_3, Ho_2O_3, Lu_2O_3, Tb_4O_7, Tm_2O_3, Y_2O_3, Yb_2O_3, Ce_2O_3, La_2O_3, Nd_2O_3, and Pr_6O_{11}
HREO: the sum of Sm_2O_3, Dy_2O_3, Er_2O_3, Eu_2O_3, Gd_2O_3, Ho_2O_3, Lu_2O_3, Tb_4O_7, Tm_2O_3, Y_2O_3, and Yb_2O_3.
LREO: the sum of Ce_2O_3, La_2O_3, Nd_2O_3, and Pr_6O_{11}.
CREO: the sum of Dy_2O_3, Eu_2O_3, Nd_2O_3, Tb_4O_7, and Y_2O_3.
MagREO: the the sum of Nd_2O_3, Pr_6O_{11}, Dy_2O_3 and Tb_4O_7.</td></tr>
</table></td></tr>
</table>

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').	The interdependence of mineralisation width and length has not been established. To date the targeted mineralisation seems to be a flat-lying sheet, so vertical drilling suggests true width is similar to downhole width. The margins to mineralisation have not been determined.
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.	Refer to maps, tables and figures in this report.
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.	Selected composite samples reported in Table 1 are converted from REE values and aggregated according to the stoichiometric factors and formula above. Assay results in Table 3 are as received (except TREE, which is calculated).
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.	All new, meaningful, and material exploration data has been reported.
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.	Analysis of additional samples is progressing and will be reported when received. Further drilling is scheduled. Metallurgical testwork will be ongoing. 3D geological modelling and mineralisation studies are being carried out. Additional drilling is planned.