

## ANNOUNCEMENT

8 JULY 2024

### MAIDEN TRIAL PRODUCT FROM SYBELLA RARE EARTH ORE

The Board of Red Metal is very pleased to announce the results of our first proof-of-concept impurity removal trial on the Sybella rare earth ore leading to the successful precipitation of a potentially saleable mixed rare earth carbonate (MREC) product.

#### KEY RESULTS AND IMPLICATIONS:

- **48.7% of the MREC product** is comprised of Total Rare Earth Oxides (TREO).
- The **Magnet Rare Earth Oxide (MREO) proportion of the TREO is 39.5%**. This high proportion is significant because MREOs represent **92.5% of the value of TREO** elements in the product.
- Importantly, the more critical Heavy Rare Earth Oxides (**HREO**) make up **26.6% of the value** of TREO in the MREC product.
- The MREC product was achieved using **low-cost** and readily available **alkali reagents**.
- MREC precipitation **from ore to the final product** achieved high recoveries: 75% of the neodymium, 76% of the praseodymium, 52% of the terbium and 45% of the dysprosium.
- **Very low levels of uranium, thorium** and iron report to the MREC product.
- **Additional improvements** in downstream recovery and MREC purity are **expected with further optimisation** applied to the higher purity leach liquors derived from the current pH 3 and 3.5 test work.
- The maiden Sybella MREC product has a **higher MREO grade, higher MREO/TREO ratio** and **higher HREO/MREO ratio** than MREC product from industry leading ionic clay projects.
- Although subject to further optimisation studies, we believe that, with the successful production of this maiden MREC product, the Company now has a **pathway established to developing a premium MREC product** which is a major positive for the Sybella project.

Our exciting Sybella rare earth oxide (REO) discovery is a new granite-hosted deposit type located just 20 kilometres southwest of Mount Isa that offers vast tonnage potential. Early-stage drilling, metallurgical and comminution studies have added to our confidence that a low-cost, low-capital, heap leach processing option may prove feasible.

**Managing Director Rob Rutherford said:**

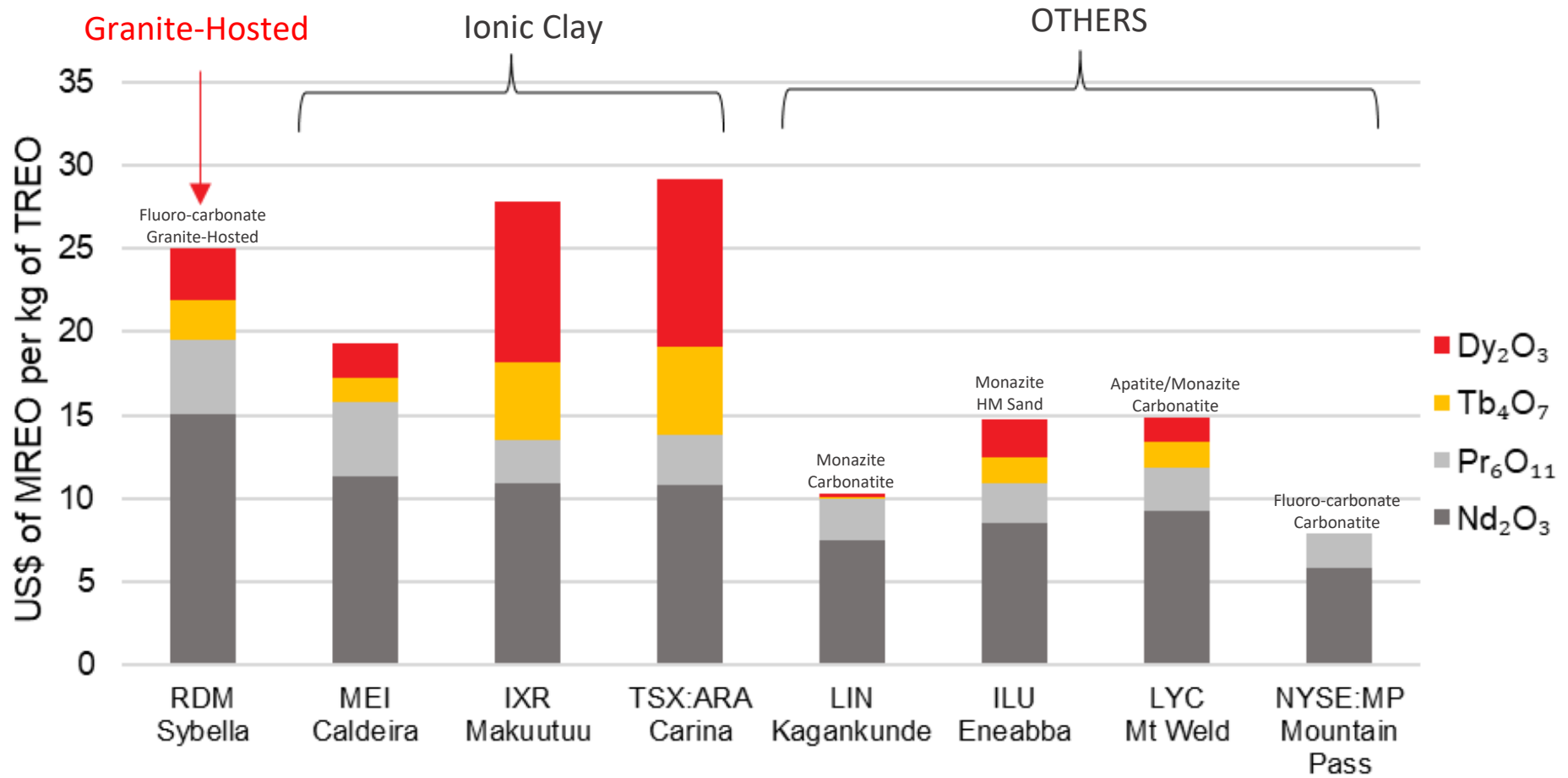
*“Impurity removal and precipitation of a saleable product with minimal REO loss is an important hurdle to clear for both the Granite-Hosted Sybella and Ionic Clay-Hosted deposit types. As such, success with our first impurity removal attempt is a major step forward for the Sybella REO discovery as it shows the essential indicators are in place to cost effectively produce a quality MREC product.*

*The Company is very confident that our ongoing studies will confirm a process route that optimises REO recovery (increases revenue) while reducing the acid consumption rate and ensuring that impurities in the final product are satisfactorily minimised (lowering processing costs). Success with the studies would give confidence that a premium MREC product could be delivered with low operating costs.*

*We look forward to announcing assay results from the over 8000 metres of step-out drilling recently completed across a 24 square kilometres area of the mineralised granite”.*



[Figure 1] Sybella Project: Maiden mixed rare earth carbonate product (8.2g dry weight) following innovative impurity removal trials on pH 1.3-1.7 Pregnant Leach Solution (PLS) derived from the Phase 2 bottle roll leaches.



[Figure 2] Sybella Project Maiden MREC Product: Comparison of MREO basket value using current REO prices showing proportion of neodymium and praseodymium (Nd and Pr) to the HREOs dysprosium and terbium (Dy and Tb) in the REO basket (refer Table 3 for data and references). Chart shows the basket price of Sybella is comparable to the higher value ionic clay projects. Although subject to further optimisation studies, the Sybella ore may have the potential to produce a premium MREC product.

**IMPURITY REMOVAL & MREC PRECIPITATION TRIAL**

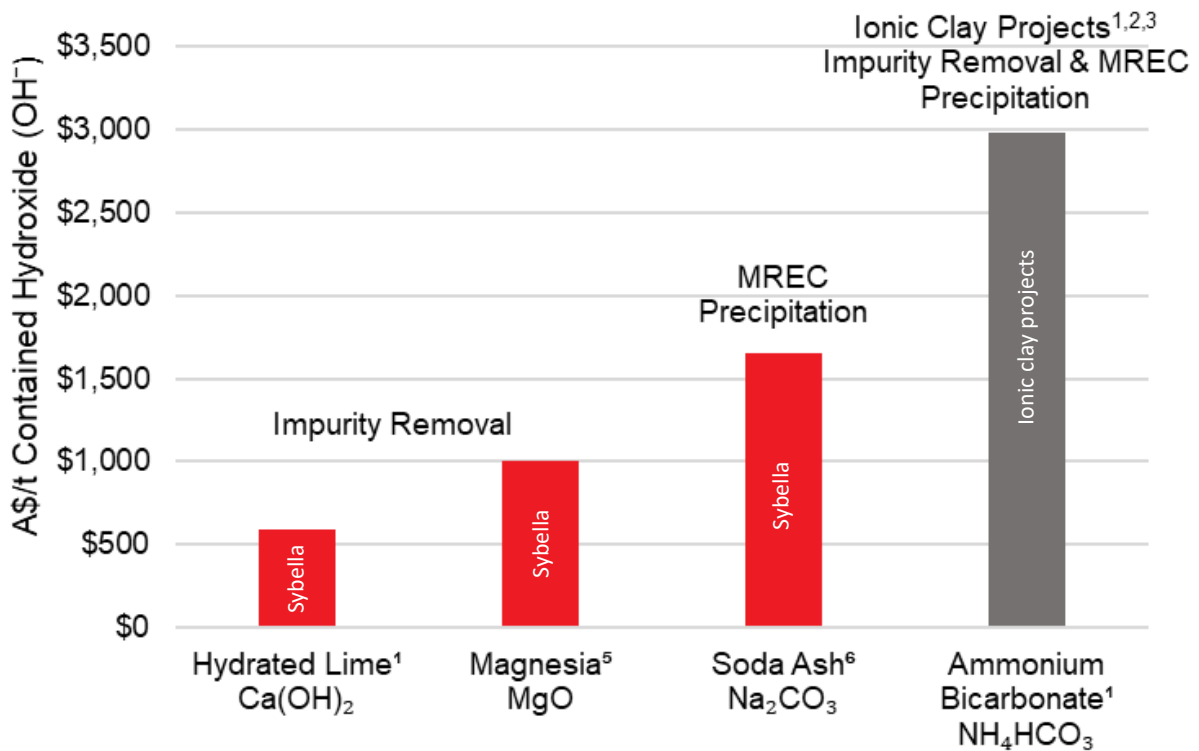
Our first attempt at impurity removal and MREC precipitation from the Sybella *Pregnant Leach Solution (PLS)* was particularly encouraging allowing precipitation of a potentially saleable MREC product (Figure 1 and 2) using low-cost alkali reagents (Figure 3).

**Impurity Removal**

This maiden impurity removal trial was undertaken on a blend of the pH 1.3 and pH 1.7 PLS derived from the Phase 2 bottle roll tests. The REO-enriched liquor was generated from leaching 10 kilograms of rock representative of the weathered granite ore type from which strong rare earth oxide (REO) extractions had been achieved (refer Appendix 2 and Red Metal ASX: RDM dated 3 June 2024). The PLS sample used was chosen as the most impure and potentially the most challenging of the leach liquors collected to date.

Impurities, including iron, aluminium, phosphorous, silica, thorium and uranium were removed via conventional ambient temperature precipitation methods, as similarly applied by ionic clay developers. Firstly, the PLS was adjusted to pH 3.2 with low-cost locally produced magnesia reagent (QMAG EMAG75). The liquor was then adjusted to pH 5.5 with low-cost hydrated lime, Ca(OH)<sub>2</sub>.

Importantly, the trialled reagents for impurity removal at Sybella have a significantly lower unit cost corrected for neutralising value compared to ammonium carbonate commonly used by ionic clay projects (Figure 3).



[Figure 3] Comparison of typical impurity removal and MREC precipitation reagent unit costs for Sybella (red) vs ionic clay projects.

### Maiden MREC Precipitation Results

Following impurity removal on our pregnant liquor sample, 8.2 grams of MREC product was precipitated using soda ash at pH 8 after oven drying at 60°C. It comprised 48.7% TREO of which the percentage of magnet rare earths (neodymium, praseodymium, dysprosium and terbium oxides) was 39.5% (Table 1). This result is well above that of other REO projects and should result in higher payability based on industry pricing mechanisms (see MREO/TREO ratio in Figure 6).

Our first-pass MREC precipitation achieved high downstream recoveries of 93% neodymium, 94% praseodymium, 93% dysprosium and 93% terbium (Figure 4). This coupled with the strong REO extractions achieved during bottle roll leaching (Appendix 2), resulted in a high **REO recovery from ore to the final MREC product** including:

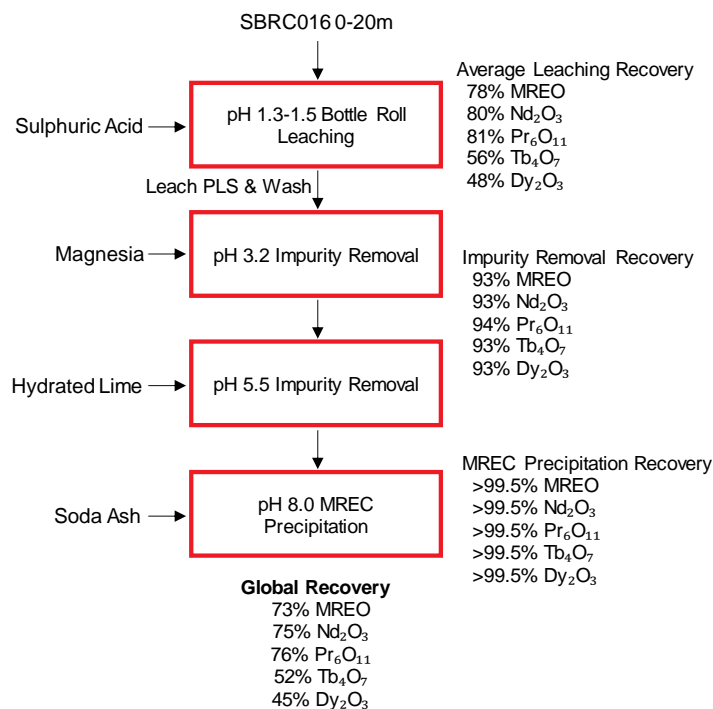
- 75% of the neodymium,
- 76% of the praseodymium,
- 52% of the terbium,
- 45% of the dysprosium.

Very low levels of uranium, thorium and iron report to the MREC product (Table 2). Results from this maiden study have also identified clear optimisation pathways to lower the residual impurity levels of aluminium, calcium and magnesium and further enhance the MREC purity.

Optimisation of the upstream leaching step by increasing the leach pH to 3 and 3.5 is also expected to improve the downstream impurity removal circuit and MREC precipitation. Weakening the acid leach strength and increasing the residence time was shown to increase the REO/aluminium and REO/iron ratios in the PLS which has the potential to further reduce rare earth losses and further increase the MREC purity.

Optimisation of the impurity removal and MREC precipitation steps will be undertaken on pH 3 and/or pH 3.5 leach liquors derived from the current column leach trials.

The MREO content and MREO basket value of our Sybella product are compared using published MREC data from industry leading ionic clay projects in Figure 2, Figures 5 to 7 and Table 3.



[Figure 4] Sybella MREC precipitation test flowsheet and process unit MREO recoveries.

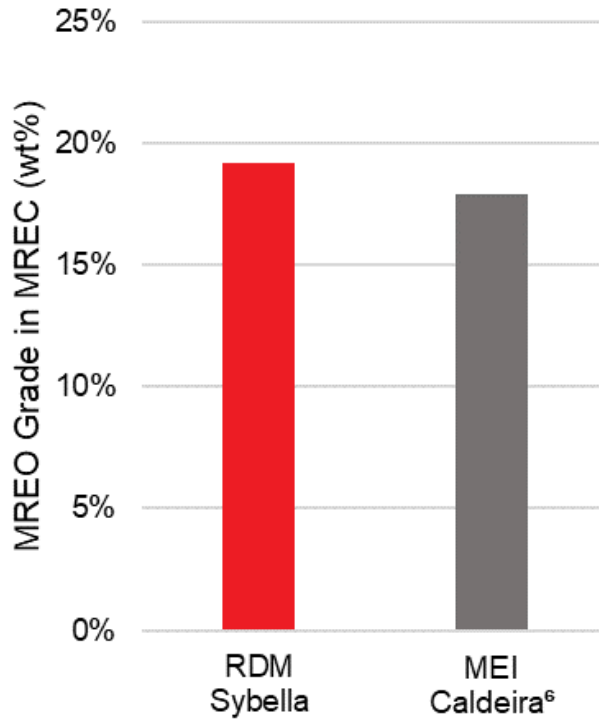
[Table 1] Sybella Project Maiden MREC Product: REO composition as weight percentage, REO composition distribution as percent of TREO weight percent (REO/TREO), and REO basket value distribution as a percentage of TREO basket value (REO/TREO basket value).

Rare Earth Oxide	REO wt% in MREC	REO wt% Distribution as % of TREO	REO Basket Value Distribution as % of TREO	
La <sub>2</sub> O <sub>3</sub>	21.60%	44.3%	0.9%	LREO
CeO <sub>2</sub>	0.73%	1.5%	0.1%	
Pr <sub>6</sub> O <sub>11</sub> *	4.21%	8.6%	16.4%	
Nd <sub>2</sub> O <sub>3</sub> *	14.25%	29.2%	55.7%	
Sm <sub>2</sub> O <sub>3</sub>	1.76%	3.6%	0.3%	
Eu <sub>2</sub> O <sub>3</sub>	0.14%	0.3%	0.3%	HREO
Gd <sub>2</sub> O <sub>3</sub>	1.06%	2.2%	1.9%	
Tb <sub>4</sub> O <sub>7</sub> *	0.16%	0.3%	8.9%	
Dy <sub>2</sub> O <sub>3</sub> *	0.60%	1.2%	11.5%	
Ho <sub>2</sub> O <sub>3</sub>	0.12%	0.3%	0.6%	
Er <sub>2</sub> O <sub>3</sub>	0.14%	0.3%	0.5%	
Tm <sub>2</sub> O <sub>3</sub>	0.03%	0.1%	0.0%	
Yb <sub>2</sub> O <sub>3</sub>	0.14%	0.3%	0.2%	
Lu <sub>2</sub> O <sub>3</sub>	0.02%	0.0%	1.1%	
Y <sub>2</sub> O <sub>3</sub>	3.77%	7.7%	1.7%	
Sc <sub>2</sub> O <sub>3</sub>	0.00%	0.0%	0.0%	
TREO	48.73%	100%	100%	
MREO*	19.22%	39.4%	92.5%	
LREO	42.55%	87.3%	73.4%	
HREO	6.19%	12.7%	26.6%	

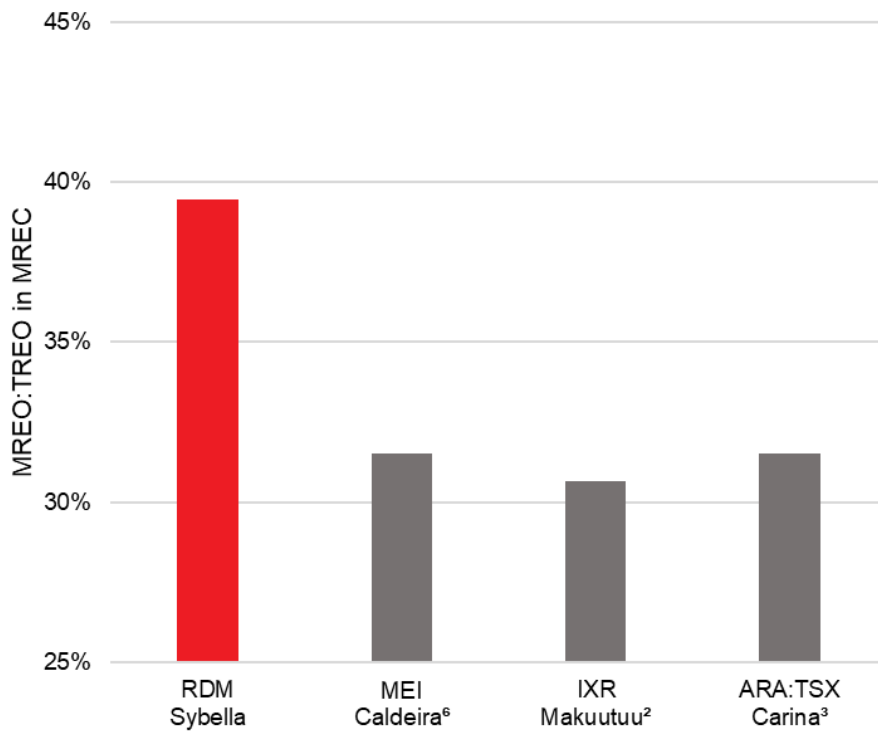
\*Magnet Rare Earth Oxides (MREO)- praseodymium, neodymium, terbium, dysprosium

[Table 2] Sybella Project Maiden MREC Product: Impurity composition as weight percent. Note the very low iron, uranium and thorium. This first pass trial has identified key optimisation paths to further improve its quality by lowering the aluminium, calcium and magnesium levels.

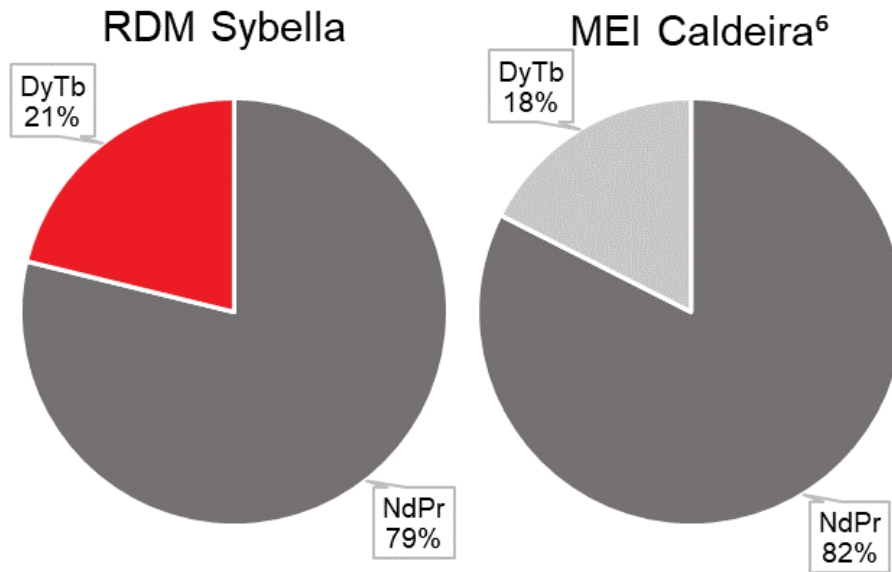
Impurity	wt%
Ca	4.09
Al	2.72
Mg	1.76
Cu	0.72
Zn	0.60
Na	0.48
Te	0.27
Ni	0.17
Fe	0.03
U	0.0026
Th	0.0003
Others	0.49



[Figure 5] Sybella Project Maiden MREC Product: Peer comparison showing MREO grade in the final product. Note Sybella MREC product MREO grade is slightly higher than published results from Meteoric Resources (ASX: MEI) Caldeira product.



[Figure 6] Sybella Project Maiden MREC Product: Peer comparison showing MREO content as percent of TREO content in the final product. Note, the Sybella MREO/TREO ratio is significantly higher than published results from ionic clay projects.



[Figure 7] Sybella Project Maiden MREC Product: Comparison of MREO basket value distribution showing proportion of NdPr (light MREO) to DyTb (heavy MREO) in the final products. Note the slightly higher proportion of the strategically important and higher value heavy rare earth elements in the Sybella product.

[Table 3] Sybella Project Maiden MREC Product: Peer comparison of TREO basket value for Sybella with other major REO projects. Although subject to further optimisation studies, the Sybella ore may have the potential to produce a premium MREC product.

REO	RDM Sybella	MEI Caldeira	IXR Makuutuu	TSX:ARA Carina	LIN Kagankunde	ILU Eneabba	LYC Mt Weld	NYSE:MP Mountain Pass	REO Price US\$/kg
La <sub>2</sub> O <sub>3</sub>	44.3%	57.6%	17.8%	-	28.8%	21.8%	24.3%	33.8%	\$ 0.56
CeO <sub>2</sub>	1.5%	1.4%	11.3%	-	50.3%	45.0%	44.5%	49.6%	\$ 1.02
Pr <sub>6</sub> O <sub>11</sub>	8.6%	8.6%	5.0%	5.9%	4.9%	4.6%	5.0%	4.1%	\$ 51.52
Nd <sub>2</sub> O <sub>3</sub>	29.2%	22.0%	21.2%	20.9%	14.5%	16.6%	18.0%	11.2%	\$ 51.52
Sm <sub>2</sub> O <sub>3</sub>	3.6%	2.4%	3.7%	-	0.9%	2.5%	2.6%	0.9%	\$ 2.10
Eu <sub>2</sub> O <sub>3</sub>	0.3%	0.6%	0.8%	-	0.2%	0.1%	0.6%	0.1%	\$ 27.30
Gd <sub>2</sub> O <sub>3</sub>	2.2%	1.5%	4.2%	-	0.3%	1.4%	1.4%	0.2%	\$ 23.10
Tb <sub>4</sub> O <sub>7</sub>	0.3%	0.2%	0.6%	0.7%	0.0%	0.2%	0.2%	0.0%	\$ 749.00
Dy <sub>2</sub> O <sub>3</sub>	1.2%	0.8%	3.8%	4.0%	0.1%	0.9%	0.6%	0.0%	\$ 253.40
Ho <sub>2</sub> O <sub>3</sub>	0.3%	0.1%	0.8%	-	0.0%	0.2%	0.1%	0.0%	\$ 68.60
Er <sub>2</sub> O <sub>3</sub>	0.3%	0.3%	2.2%	-	0.0%	0.5%	0.2%	0.0%	\$ 43.40
Tm <sub>2</sub> O <sub>3</sub>	0.1%	0.0%	0.3%	-	0.0%	0.1%	0.0%	0.0%	\$ -
Yb <sub>2</sub> O <sub>3</sub>	0.3%	0.1%	1.6%	-	0.0%	0.4%	0.1%	0.0%	\$ 14.00
Lu <sub>2</sub> O <sub>3</sub>	0.0%	0.0%	0.3%	-	0.0%	0.1%	0.0%	0.0%	\$ 777.00
Y <sub>2</sub> O <sub>3</sub>	7.7%	4.5%	26.5%	-	0.2%	5.6%	2.4%	0.1%	\$ 6.02
MREO:TREO	39%	32%	31%	32%	19%	22%	24%	15%	-
HREO:TREO	13%	8%	41%	-	1%	10%	6%	0%	-
Ref.		6	2	3	7	8	8	8	SMM, 30/6/24

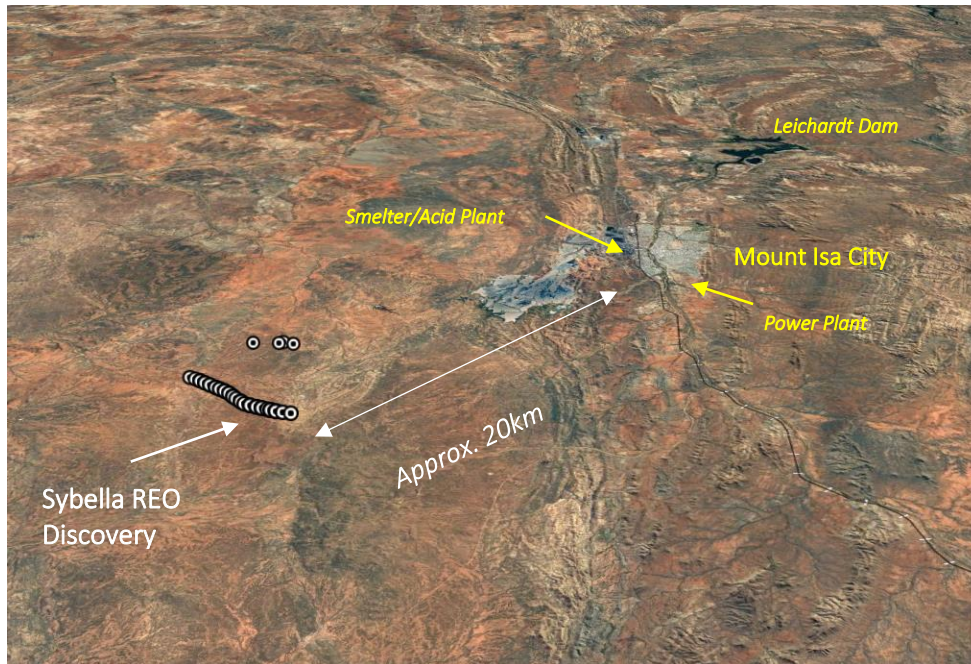
SMM - Shanghi Metal Market price



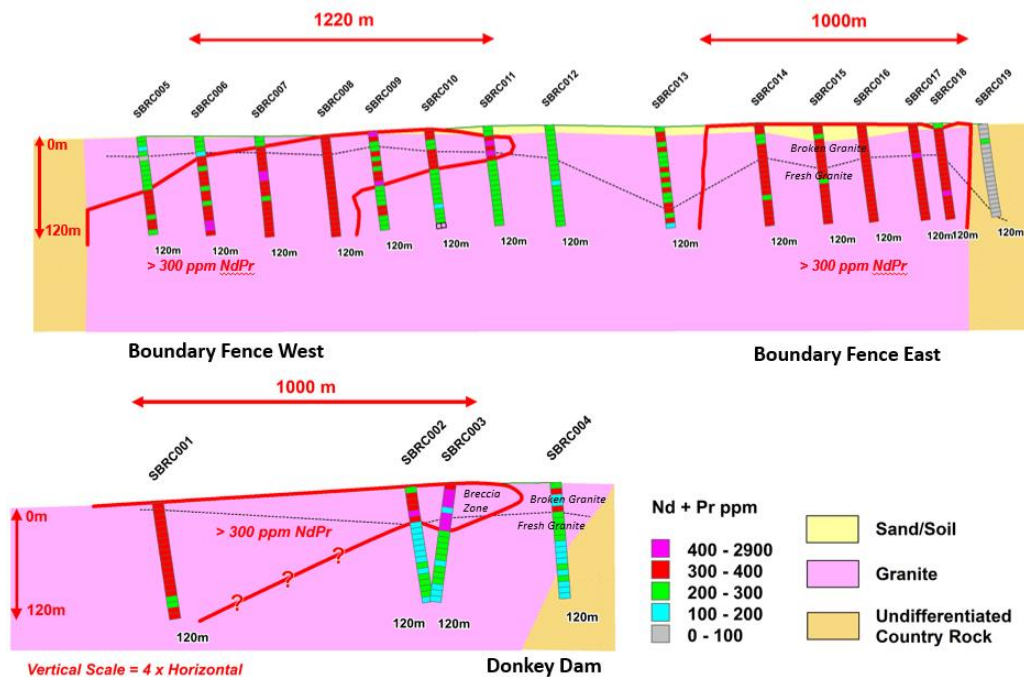
### ONGOING WORK PROGRAMS

Work this year will continue to seek the most cost-effective process for REO extraction and provide a more certain indication of the size and grade potential of this exciting new magnet metal discovery.

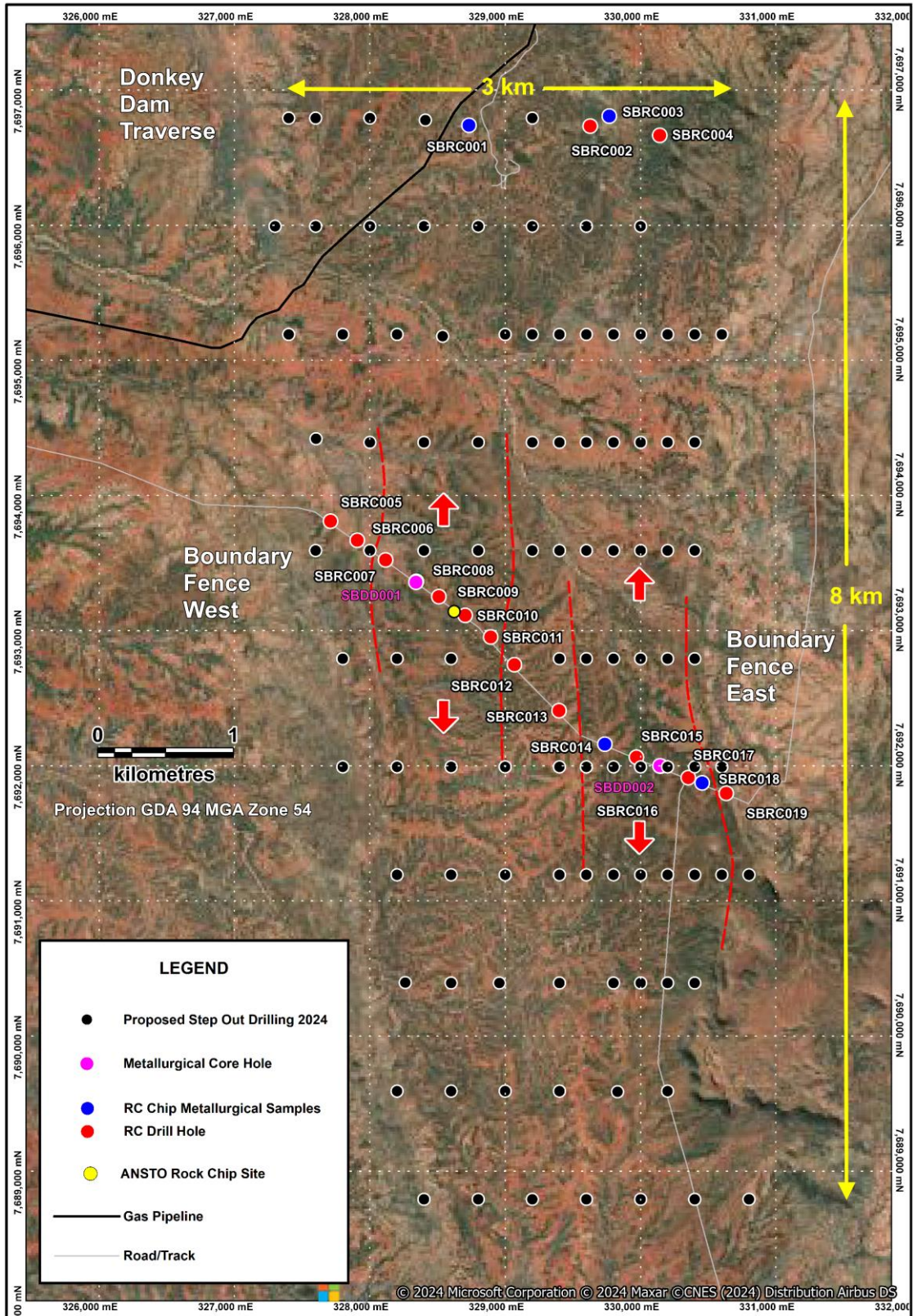
Assay results from broad step-out drilling recently completed over a 24 square kilometres area of the project are due shortly (Figure 10). Follow-on column leach test work and additional bottle roll tests using very weak acids (pH 2 to pH 3.5) run over extended residence times (>120 days) are underway. Infill resource drilling is proposed to begin later this field season.



[Figure 8] Oblique aerial view facing north showing Sybella discovery RC drill holes in relationship to the city of Mount Isa highlighting the associated infrastructure advantages.



[Figure 9] Sybella Project: Drill sections showing variation in **NdPr oxide assay** values at depth and between holes in the granite.



[Figure 10] Sybella Project: Proposed 2024 drill program (black circles) and existing Red Metal drill hole locations on satellite image highlighting wide zones of >300 ppm NdPr oxide (red lines). Note: Samples from the blue RC percussion holes were composite sampled for Phase 1 and Phase 2 metallurgical test work, pink circles show the approximate location of metallurgical core holes for the Phase 2 metallurgical test work currently in progress.

This announcement was authorised by the Board of Red Metal. For further information concerning Red Metal's operations and plans for the future please refer to the recently updated web site or contact Rob Rutherford, Managing Director at:

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www.redmetal.com.au



Rob Rutherford  
Managing Director



Russell Barwick  
Chairman

### Competent Persons Statement

The information in this report that relates to Exploration Results is based on and fairly represents information and supporting documentation compiled by Mr Robert Rutherford, who is a member of the Australian Institute of Geoscientists (AIG). Mr Rutherford is the Managing Director of the Company. Mr Rutherford has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code). Mr Rutherford consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

### REFERENCES

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2. Ionic Rare Earths Ltd. (20 March 2023). *MAKUUTU STAGE 1 DFS CONFIRMS TECHNICAL AND FINANCIAL VIABILITY FOR SUSTAINABLE, LONG-LIFE SUPPLY OF MAGNET AND HEAVY RARE EARTHS, MAIDEN ORE RESERVE ESTIMATE*. [ASX Release].
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6. Meteoric Resources Limited. (29 February 2024). *First Mixed Rare Earth Carbonate (MREC) Produced for Caldeira REE Project*. [ASX Announcement]
7. Lindian Resources Limited. (1 July 2024). *KANGANKUNDE PROJECT STAGE 1 OUTSTANDING FEASIBILITY STUDY RESULTS*. [ASX Announcement]
8. Iluka Resources. (3 May 2024). *Macquarie Australia Conference Presentation*.  
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## APPENDICES

### Appendix 1: Table 1 Sybella Project - JORC 2012 metallurgical sampling techniques and data.

Criteria	JORC 2012 Explanation	Commentary
<b>Sampling Techniques</b>	Nature and quality of sampling	<i>The impurity removal and MREC precipitation trial relating to this announcement was undertaken on blended Phase 2 Pregnant Leach Solution (PLS) derived from pH 1.3 and pH 1.7 IBRT leach tests on weathered granite material (refer Appendix 2 and Red Metal ASX: RDM announcement dated 3 June 2024)</i>
	Include reference to measures taken to ensure representativity samples and the appropriate calibration of any measurement tools or systems used.	<i>For the impurity removal and MREC precipitation trial, blending pH 1.3 and pH 1.7 PLS ensured sufficient volume of REO enriched liquor with elevated impurity levels to complete the test work. This blended high REO liquor is believed to be typical of the most impure and potentially the most challenging PLS for Sybella (refer Red Metal ASX: RDM dated 3 June 2024). The leach PLS was generated from a total of 10 kg of ore fed into the Phase 2 bottle roll leaches.</i>
	Aspects of the determination of mineralisation that are Material to the Public Report.	<i>The PLS for the impurity removal trial are derived from intermittent bottle rolls (IBRT) which are used to simulate the leaching mechanism inherent in heap leaching. The bottle rolls are agitated (turned on a roller) for 5 minutes every hour, such that diffusion is the dominant mechanism for lixiviant transfer into the ore particles. This is the same mechanism that dominates in heap leaching.</i>
<b>Drilling Technique</b>	Drill type (eg 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.).	<i>Not applicable</i>
<b>Drill Sample Recovery</b>	Method of recording and assessing core and chip sample recoveries and results assessed.	<i>Not applicable</i>
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	<i>Not applicable</i>
	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.	<i>Not applicable</i>
<b>Logging</b>	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.	<i>Not applicable</i>
	Whether logging is qualitative or quantitative in nature.	
	Core photography	<i>Not applicable</i>
	The total length and percentage of the relevant intersections logged.	<i>Not applicable</i>
<b>Sub-sampling techniques and sample preparation</b>	If core, whether cut or sawn and whether quarter, half or all core taken.	<i>Refer Red Metal announcement ASX: RDM dated 3 June 2024.</i>
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	<i>Impurity removal trial used PLS derived from IBRT which utilised 5 metres composite samples derived from cyclone split, non-pulverised RC chip samples collected for each metre, or crushed core composited over 5 metres.</i>  <i>Appropriateness - IBRT are used to simulate the leaching mechanism inherent in heap leaching. The bottle rolls are agitated (turned on a roller) for 5 minutes every hour, such that diffusion is the dominant mechanism for lixiviant transfer into the ore particles. This is the same mechanism that dominates in heap leaching.</i>

Criteria	JORC 2012 Explanation	Commentary
	Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.	<i>Refer Red Metal announcements ASX: RDM dated 3 June 2024</i>
	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.	<i>No impurity removal repeats or duplicates have been run at this stage</i>
	Whether sample sizes are appropriate to the grain size of the material being sampled.	<i>Five metre composite sampling of the as-received, non-pulverised RC sample and crushed core samples for IBRT work are considered appropriate for REE minerals &lt;2mm grain size evenly distributed throughout the granite.</i>
<b>Quality of assay data and laboratory tests</b>	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<p><i>Impurity Precipitation solid products were analysed using the following assay methods:</i></p> <p><i>Rare Earth Elements: ALS method ME-MS81 – Lithium borate fusion prior acid dissolution and ICP-MS analysis for Ba, Ce, Cr, Cs, Dy, Er, Eu, Ga, Gd, Hf, Ho, La, Lu, Nb, Nd, Pr, Rb, Sc, Sm, Sn, Sr, Ta, Tb, Th, Ti, Tm, U, V, W, Y, Yb, Zr. ALS method ME-MS81 is the most common method for analysing for REE in clay samples. This method provides the most quantitative analytical approach for a broad suite of trace elements including REE.</i></p> <p><i>Base metals: Four acid digestion followed by OES-ICP analysis at Core Group’s internal laboratory, including key impurity elements Al and Fe.</i></p> <p><i>The MREC product was analysed using the following assay methods:</i></p> <p><i>Rare Earth Elements: ALS method ME-MS81h – Lithium borate fusion prior acid dissolution and ICP-MS analysis for Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sm, Tb, Th, Tm, U, Y, Yb. ALS method ME-MS81h is equivalent to ME-MS81 but provides a higher upper detection limit.</i></p> <p><i>Where REE were above the ME-MS81h upper limit, ALS method ME-XRF30 - X-Ray Fluorescence (XRF) was used for La<sub>2</sub>O<sub>3</sub>, Pr<sub>6</sub>O<sub>11</sub>, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Dy<sub>2</sub>O<sub>3</sub>.</i></p> <p><i>All liquid samples were analysed using the following assay methods:</i></p> <p><i>Base metals via OES-ICP analysis at Core Group’s internal laboratory.</i></p> <p><i>Rare Earth elements via ALS method ME-MS02 – MS-ICP analysis for Ce, Dy, Er, Eu, Gd, Ho, La, Lu, Nd, Pr, Sc, Tb, Tm, Y.</i></p>
	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.	<i>No geophysical tools were used to report element concentrations at Sybella.</i>
	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.	<i>Core Group and ALS included standard and blank materials to monitor the performance of the laboratory in keeping with NATA accreditation. The standards and blanks used displayed acceptable levels of accuracy and precision.</i>
<b>Verification of sampling and assaying</b>	The verification of significant intersections by either independent or alternative company personnel.	<p><i>Results reviewed by the Company’s Exploration Manager, Database Manager and the Managing Director, and metallurgical specialists at Core Group.</i></p> <p><i>No independent impurity removal trials have been undertaken.</i></p>
	The use of twinned holes.	<i>SBDD002 with SBDD003 and SBDD004 were twinned holes adjacent to RC percussion hole SBRC016 to collect sufficient sample mass for comminution and Phase 2 leach test work. The blend of SBDD002-004 is referred to as SBDD002 for IBRT reporting. PLS for the impurity work were derived from IBRTs on SBRC016 and SBDD002 (Appendix 2).</i>
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	<i>Primary data is stored both in its source electronic form, and, where applicable, on paper. Assay data is retained in both the original certificate (.pdf) form, where available, and the text files received from the laboratory. Primary data was entered in the field into a portable logging device using standard drop-down codes. At this early stage, text data files are exported and stored in Excel and an Access database. MapInfo software is used to check and validate drill-hole data.</i>

Criteria	JORC 2012 Explanation	Commentary																																																			
	Discuss any adjustment to assay data.	<p>Rare earth elements are reported from both ME-MS81 and Core Group's internal liquor OES-ICP method as the elemental concentration. The rare earth elements were converted to the industry standard rare earth oxide format using the conversion factors available below which are based on the molar mass of each rare earth oxide.</p> <table border="1"> <thead> <tr> <th>Element</th> <th>Conversion Factor</th> <th>Oxide</th> </tr> </thead> <tbody> <tr><td>La</td><td>1.1728</td><td>La<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Ce</td><td>1.2284</td><td>CeO<sub>2</sub></td></tr> <tr><td>Pr</td><td>1.2082</td><td>Pr<sub>6</sub>O<sub>11</sub></td></tr> <tr><td>Nd</td><td>1.1664</td><td>Nd<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Sm</td><td>1.1596</td><td>Sm<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Eu</td><td>1.1579</td><td>Eu<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Gd</td><td>1.1526</td><td>Gd<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Tb</td><td>1.1762</td><td>Tb<sub>4</sub>O<sub>7</sub></td></tr> <tr><td>Dy</td><td>1.1477</td><td>Dy<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Ho</td><td>1.1455</td><td>Ho<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Er</td><td>1.1435</td><td>Er<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Tm</td><td>1.1421</td><td>Tm<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Yb</td><td>1.1387</td><td>Yb<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Lu</td><td>1.1371</td><td>Lu<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Y</td><td>1.2699</td><td>Y<sub>2</sub>O<sub>3</sub></td></tr> <tr><td>Sc</td><td>1.5337</td><td>Sc<sub>2</sub>O<sub>3</sub></td></tr> </tbody> </table> <p>Rare earth abbreviations typically used in industry reporting and throughout this report were in accordance with IUPAC guidelines, and were as follows:  <b>REE</b> - Rare Earth Elements, value presented as elemental assay.  <b>REO</b> - Rare Earth Oxides, value presented as oxide assay.  <b>TREE</b> - La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu plus Y and Sc.  <b>MREE</b> - Pr, Nd, Tb, Dy.  <b>LREE</b> - La, Ce, Pr, Nd and Sm.  <b>HREE</b> - Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu plus Y.  <b>TREO</b> - La<sub>2</sub>O<sub>3</sub>, CeO<sub>2</sub>, Pr<sub>6</sub>O<sub>11</sub>, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub> plus Y<sub>2</sub>O<sub>3</sub> and Sc<sub>2</sub>O<sub>3</sub>  <b>MREO</b> - Pr<sub>6</sub>O<sub>11</sub>, Nd<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>, Dy<sub>2</sub>O<sub>3</sub>  <b>LREO</b> - La<sub>2</sub>O<sub>3</sub>, CeO<sub>2</sub>, Pr<sub>6</sub>O<sub>11</sub>, Nd<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>  <b>HREO</b> - Eu<sub>2</sub>O<sub>3</sub>, Gd<sub>2</sub>O<sub>3</sub>, Tb<sub>4</sub>O<sub>7</sub>, Dy<sub>2</sub>O<sub>3</sub>, Ho<sub>2</sub>O<sub>3</sub>, Er<sub>2</sub>O<sub>3</sub>, Tm<sub>2</sub>O<sub>3</sub>, Yb<sub>2</sub>O<sub>3</sub>, Lu<sub>2</sub>O<sub>3</sub> plus Y<sub>2</sub>O<sub>3</sub>  <b>NdPr</b> - is the sum of the oxide values for neodymium and praseodymium.</p> <p>Rare earth recovery in both the Phase 2 IBRT leaching and the impurity removal and MREC precipitation testwork has been calculated via the mass basis method.</p> <p><u>Mass Basis</u>, which is calculated as element mass in liquor/ (element mass in liquor + element mass in solids) for the discharge liquor and solids. This method ignores the head assay and somewhat eliminates sampling error impacting the head assay. It also accounts for any mass loss within the test.</p>	Element	Conversion Factor	Oxide	La	1.1728	La <sub>2</sub> O <sub>3</sub>	Ce	1.2284	CeO <sub>2</sub>	Pr	1.2082	Pr <sub>6</sub> O <sub>11</sub>	Nd	1.1664	Nd <sub>2</sub> O <sub>3</sub>	Sm	1.1596	Sm <sub>2</sub> O <sub>3</sub>	Eu	1.1579	Eu <sub>2</sub> O <sub>3</sub>	Gd	1.1526	Gd <sub>2</sub> O <sub>3</sub>	Tb	1.1762	Tb <sub>4</sub> O <sub>7</sub>	Dy	1.1477	Dy <sub>2</sub> O <sub>3</sub>	Ho	1.1455	Ho <sub>2</sub> O <sub>3</sub>	Er	1.1435	Er <sub>2</sub> O <sub>3</sub>	Tm	1.1421	Tm <sub>2</sub> O <sub>3</sub>	Yb	1.1387	Yb <sub>2</sub> O <sub>3</sub>	Lu	1.1371	Lu <sub>2</sub> O <sub>3</sub>	Y	1.2699	Y <sub>2</sub> O <sub>3</sub>	Sc	1.5337	Sc <sub>2</sub> O <sub>3</sub>
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<b>Location of data points</b>	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.	PLS for impurity removal were derived from RC percussion chip and crushed diamond core samples (Appendix 2). Refer to Red Metal ASX: RDM dated 21 August 2023 for RC percussion collars and ASX: RDM dated 3 June 2024 for diamond collar coordinates and PLS site information.																																																			
	Specification of the grid system used.	GDA94_Zone54 datum.																																																			
	Quality and adequacy of topographic control.	Topographic relief has been extracted using the ELVIS digital terrain information at Geoscience Australia.																																																			
<b>Data spacing and distribution</b>	Data spacing for reporting of Exploration Results.	Phase 2 leach PLS used for the initial impurity removal and MREC precipitation trial were from a single location using hole SBRC016 and twinned diamond core hole SBDD002 (Appendix 2, Figure 10).																																																			
	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.	The RC and diamond core drill pierce point spacing is not sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation.																																																			
	Whether sample compositing has been applied.	The impurity removal and MREC precipitation trial sample spacing was limited to one drill hole position along the Boundary Fence East traverse (Appendix 2, Figure 10). This data spacing is sufficient for proof-of-concept testing of the weathered granite, however more testing on PLS derived from column leach tests on the fresh and weathered granite using weaker acids (pH 3-3.5) are planned.																																																			
		Sampling for the impurity removal and MREC precipitation trial used PLS collected from 4 separate 5m composite leach samples representing the top 20 metres or weathered zone from one drill hole position along the Boundary Fence East traverse (Appendix 2).																																																			

Criteria	JORC 2012 Explanation	Commentary
		<i>The PLS was generated from a total of 10 kg of ore fed into the Phase 2 bottle roll leaches.</i>
<b>Orientation of data in relation to geological structure</b>	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	<i>The granite displays a deformation foliation that varies from steep west dipping to sub-vertical. Where access permitted, the drilling was oriented 60 degrees to the east across the dominant fabric.</i>
	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.	<i>Insufficient data to determine bias at this point.</i>
<b>Sample security</b>	The measures taken to ensure sample security.	<i>Phase 2 IBRT PLS was stored at Core Groups metallurgical laboratory in Brisbane.</i>
<b>Audits or reviews</b>	The results of any audits or reviews of sampling techniques and data.	<i>Core Groups initial impurity removal work was reviewed by Red Metal's experienced Managing Director, Board members and Exploration Manager.</i>

### Appendix 1: Table 2 Sybella Project - JORC 2012 reporting of exploration results

Criteria	JORC 2012 Explanation	Commentary
<b>Mineral tenement and land tenure status</b>	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.	<i>The Sybella drilling is located within EPM 28001 situated in the Mount Isa region of north-west Queensland. EPM 28001 is owned 100% by Red Metal Limited subsidiary Sybella Minerals Pty Ltd. Conduct and compensation agreements have been established with the pastoral lease holder at May Down and Ardmore stations. An ancillary exploration access agreement has been established with the Kalkadoon native title party.</i>
	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.	<i>The tenement is in good standing.</i>
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	<i>Prior to Red Metals drilling (Red Metal ASX: RDM dated 21 August 2023 and 3 June 2024) there had been no previous drilling by other parties directed towards REE. However, the granite of interest was drilled and sampled as part of a regional seismic traverse by Geoscience Australia in 1994 (line L138_94MTI_01). End of hole assays from this drill traverse provide regularly spaced (nominally 250 metres) REE analyses across the granite, highlighting its grade in fresh rock (refer Red Metal: ASX: RDM Release 26 July 2023). A total of 16 shallow holes intersected the targeted granite with many holes ending in greater than 300ppm neodymium plus praseodymium (NdPr) oxide.</i>
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	<i>Red Metal's experienced exploration team speculate the potential for a new granite-hosted, weak-acid soluble REO deposit style that can be broadly compared with other granite-hosted, weak-acid soluble mineral deposit types such as the giant Rossing and Husab soluble uranium deposits or the Morenci soluble copper deposits. These large tonnage deposit types are characterised by low-grades of soluble ore minerals hosted in low-acid consuming granite rock and can be bulk mined and then extracted using simple coarse grind and low-acid leach processing.</i>
<b>Drill hole Information</b>	A summary of all information material to the understanding of the exploration results including a tabulation of survey information for all Material drill holes:	<i>Refer to Figures 11 and Red Metal ASX: RDM announcement dated 21 August 2023 and 3 June 2024 for RC drill hole collar and diamond core coordinates and JORC tables.</i>  <i>A summary of key results from the first impurity removal trial are presented in Tables 1 and Table 2.</i>
<b>Data aggregation methods</b>	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.	<i>No data aggregation methods have been applied</i>
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	<i>No metal equivalents are reported</i>
<b>Relationship between</b>	These relationships are particularly important in the reporting of Exploration	<i>At this stage of exploration insufficient data exists to confidently estimate true widths.</i>

Criteria	JORC 2012 Explanation	Commentary
<b>mineralisation widths and intercept lengths</b>	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 (e.g. 'down hole length, true width not known').	
<b>Diagrams</b>	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.	<i>Refer to Figures 9 and 10, Table 1 and Table 2 in this announcement, and Red Metal ASX: RDM announcements dated 21 August 2023 and 3 June 2024 for RC and diamond core collar coordinates and assays.</i>
<b>Balanced reporting</b>	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.	<i>See text to this announcement and Table 1, Table 2 and Appendix 2</i>  <i>MREO content and MREO basket value of our Sybella product are compared using published MREC data from industry leading ionic clay projects in Figure 2, Figures 5 to 7 and Table 3.</i>
<b>Other substantive exploration data</b>	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.	<i>A preliminary mineralogical study undertaken for Red Metal by ANSTO Minerals (ANSTO), show most of the rare earth elements within a typical fresh surface sample of the granite occur within the highly soluble fluoro-carbonate minerals bastnasite and synchysite (refer Red Metal ASX: RDM announcement dated 21 August 2023).</i>  <i>A seismic refraction trial surveyed along the Boundary Fence traverse highlights softer, potentially rippable, granite rock to about 20 metres below surface, which could offer significant comminution and mining cost advantages.</i>
<b>Further work</b>	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	<i>Follow-on column leach test work and additional bottle roll tests using very weak acids (pH 2 to pH 3.5) over extended residence times (&gt;120 days) are underway.</i>  <i>Additional impurity removal and MREC precipitation test work on leach liquors generated from the higher pH, IBRT and column leach test work are planned.</i>  <i>Step-out drilling over an 8 kilometre by 3 kilometre portion of the granite was initiated in early May (Figure 10, refer Red Metal ASX announcements dated 13 May 2024) with 120 holes for 8172 metres completed by the end of June.</i>  <i>Assay results from the step-out drill program are due over the next few months with infill resource drilling scheduled for later in this field season.</i>  <i>Work this year will seek an effective process for REO extraction and provide a more certain indication of the size and grade potential of this exciting new REO discovery.</i>

## Appendix 2: Sybella Project – location of pregnant leach solutions from Phase 2 bottle roll tests blended as feed for impurity removal and MREC production.

Drill Hole ID	Depth (m)		Particle Size P <sub>80</sub> mm	Residence Time Days	pH (Average)	Sample Mass kg	Head Grade (ppm)						Extraction (%) Discharge Mass Basis					
	from	to					TREO	MREO	Pr <sub>6</sub> O <sub>11</sub>	Nd <sub>2</sub> O <sub>3</sub>	Tb <sub>4</sub> O <sub>7</sub>	Dy <sub>2</sub> O <sub>3</sub>	TREO	MREO	Pr	Nd	Tb	Dy
SBRC016	0	5	2.2	21	1.3	2.5	1,782	398	81	282	4.9	29	92	91	92	92	80	75
	5	10	2.0	21	1.3	2.5	1,843	395	80	281	5.3	30	82	82	84	84	65	57
	10	15	1.8	28	1.8	2.5	1,846	400	83	283	5.1	29	72	74	77	77	49	38
SBDD002	15	20	7.1	28	1.7	2.5	1,701	363	75	257	4.7	27	63	65	72	68	30	22

Refer to Red Metal ASX: RDM dated 21 August 2023 for RC percussion collar coordinates and ASX: RDM dated 3 June 2024 for diamond collar coordinates.