

# **ANNOUNCEMENT**

## 21 October 2024

# RESOURCE ASSESSMENT CONFIRMS GIANT STATUS FOR SYBELLA RARE EARTH DISCOVERY

A maiden mineral resource estimate has quantified the Magnet Rare Earth Oxide (MREO) resource potential at Sybella defining huge Inferred Mineral Resources for a range of neodymium and praseodymium (NdPr) cut-off grades, underlining its global significance.

#### **HIGHLIGHTS:**

Grade distribution and good continuity between individual holes and drill sections has allowed the resources at Sybella to be classified as **Inferred Mineral Resources** under the principles of the JORC 2012 code.

The Mineral Resource Estimate defined **very large tonnages at good MREO grades** of neodymium and praseodymium (NdPr), dysprosium and terbium (DyTb) down to 100 metres below surface, including:

•	4.795 Bt at 302 ppm NdPr, 28 ppm DyTb	(using a 200 ppm NdPr cut-off grade)
•	2.558 Bt at 331 ppm NdPr, 31 ppm DyTb	(using a 300 ppm NdPr cut-off grade)
•	801 Mt at 356 ppm NdPr, 33 ppm DyTb	(using a 340 ppm NdPr cut-off grade)
•	209 Mt at 377 ppm NdPr, 34 ppm DyTb	(using a 360 ppm NdPr cut-off grade)

The Inferred Mineral Resources start at surface and remain open below 100 metres depth.

Early metallurgical test work has shown the high-value **heavy rare earth oxides** DyTb contributes 21% of the MREO basket value **enhancing the equivalent NdPr grade** of the resource.

This global resource, when constrained geologically, includes significant **at surface** Inferred Mineral Resources of **Weathered Granite** that represent advantageous early mining opportunities and will provide a focus for infill drilling. These comprise:

•	788 Mt at 297 ppm NdPr, 28 ppm DyTb	(using a 200 ppm NdPr cut-off grade)
•	384 Mt at 330 ppm NdPr, 30 ppm DyTb	(using a 300 ppm NdPr cut-off grade)
•	103 Mt at 354 ppm NdPr, 33 ppm DyTb	(using a 340 ppm NdPr cut-off grade)

Our consultants have advised that a drill spacing of **200 metres x 400 metres** will be adequate **for an Indicated Mineral Resource** category significantly reducing our planned drill program costs.

Red Metal will now **prioritise early-stage mining**, **metallurgical and infrastructure studies** and begin discussions with governments and potential end users about alternative funding options.

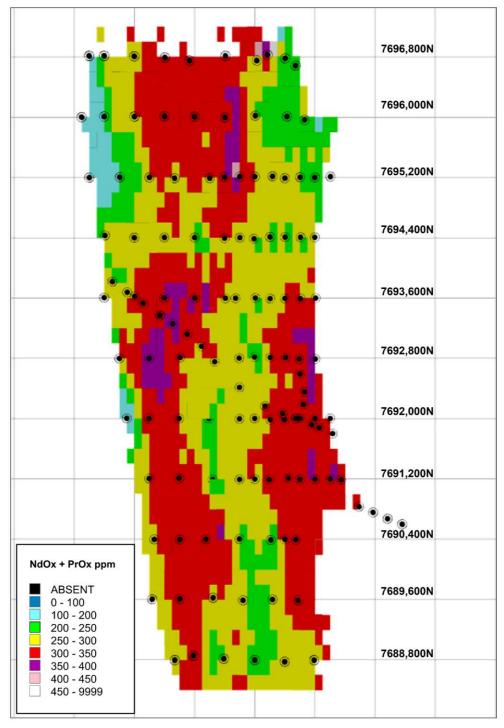
Our Sybella rare earth oxide (REO) discovery is unique being a granite-hosted deposit type. It contains very large Inferred Mineral Resources starting at surface, with few impurities and positive leaching characteristics. The project is ideally located just 20 kilometres from the city of Mt Isa. Early-stage 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:**

"We knew it was going to be big but this is way beyond our expectation. This giant resource base will enable any future operation to be long-life and run at very significant economies of scale, lowering its unit mining and processing costs. Sybella is shaping up as a globally significant source of MREO minerals and has the potential to become a strategically sought after asset.

We now have sufficient data to initiate early-stage mining studies and begin funding discussions with governments and potential end users. "



[Figure 1] Sybella Inferred Mineral Resource Estimate: Block model level plan showing variation in *NdPr oxide* block grade values from surface to 6 metres. No heavy rare earths of DyTb are included in this particular depiction. Grid is 800 metre by 800 metre.



#### **Sybella Mineral Resource Estimate**

Resource specialist H&S Consultants Pty Ltd has quantified the resource potential at Sybella to 100 metres below surface defining Inferred Mineral Resources for a range of neodymium plus praseodymium (NdPr) cutoff grades (Table 1 and Figure 5) and ore types (Tables 2 to 4, Figures 9 and 10).

The maiden Sybella Mineral Resource Estimate (MRE) utilised assay data on 1778 six-metre composite samples collected down 139 regularly spaced air core and RC drill holes covering an 8.4 kilometre by 3 kilometre portion of the rare earth oxide (REO) enriched granite (Figure 1). Each composite sample was analysed for rare earth elements using an ICP-MS technique that utilises lithium borate fusion prior to acid dissolution.

The 10,511 metre air core and RC programs included: 104 angled air core holes mostly drilled to 60 metres and spaced on regular 800 metre by 200 metre and 800 metre by 400 metre patterns; and 35 localised RC holes extended to between 120 and 240 metres (Red Metal ASX announcements dated 21 August 2023 and 11 September 2024).

All resources were estimated by ordinary kriging with details outlined in Appendix 1. Model blocks from the resource estimate have dimensions of 100 metres east by 200 metres north and 6 metres vertical (Figure 1 and Figures 6 to 8).

The nominal cut-off grades ranging from 200 ppm to 360 ppm NdPr (Tables 1 to 4) are based on available metallurgical test work (refer to Red Metal ASX announcements dated 1 February 2024, 18 March 2024, 3 June 2024, 8 July 2024), which suggests that mineralisation at about this threshold may have the potential to be economically extractable.

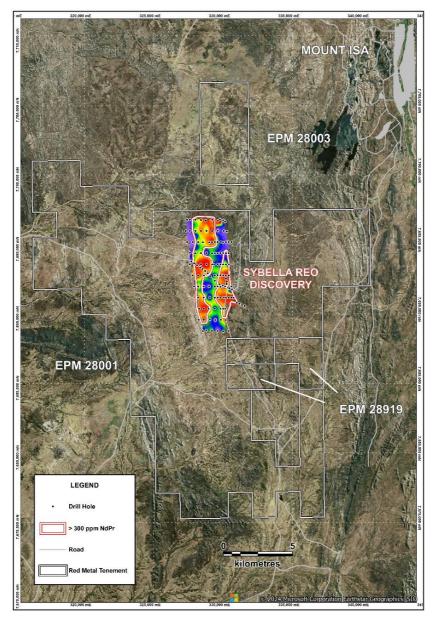
Grade distribution and continuity between individual holes and drill sections allow the resources at Sybella to be classified as Inferred Mineral Resources under the principles of the JORC 2012 code. Our consultants have advised that a drill spacing of 200 metres x 400 metres will be adequate for an Indicated Mineral Resource category.

Importantly, the MRE highlights significant tonnages of higher-grade mineralisation located near to surface which provide a focus for infill drilling and more focused metallurgical sampling (Figure 1 and Figures 5 to 9). These resources start at surface and remain open along strike and at depth below 100 metres where the deepest hole terminated in a wide zone of mineralisation 240 metres down-hole.



[Figure 2] Sybella infill drilling and sampling for maiden MRE.





[Figure 3] Sybella Project: Red Metal drill hole locations (black dots) on satellite imagery overlain by a colour image of the average grade of NdPr oxide to 60 metre down-hole.

#### **Global Resource**

The Sybella MRE has defined Inferred Mineral Resources of REO mineralisation to 100 metres below surface for a range of NdPr cut-off grades (Table 1 and Figure 5). These include:

•	4.795 Bt at 302 ppm NdPr, 28 ppm DyTb	(using a 200 ppm NdPr cut-off grade)
•	2.558 Bt at 331 ppm NdPr, 31 ppm DyTb	(using a 300 ppm NdPr cut-off grade)
•	801 Mt at 356 ppm NdPr, 33 ppm DyTb	(using a 340 ppm NdPr cut-off grade)
•	209 Mt at 377 ppm NdPr, 34 ppm DyTb	(using a 360 ppm NdPr cut-off grade)

This huge MREO resource base has the potential to supply very large tonnages of near-surface heap leachable material for many years and enable any future operation to be run at a very large scale, lowering its unit mining and processing costs.



It is important to note, that early metallurgical test work has shown the high-value heavy rare earth oxides of dysprosium and terbium (DyTb) contribute 21% of the MREO basket value enhancing the equivalent NdPr grade of the resource (refer to Red Metal ASX announcement dated 8 July 2024).

This global resource, when constrained by geological logging, includes significant near surface Inferred Resources of Weathered Granite (Table 2), Transitional Weathered to Fresh Granite (Table 3) and Fresh Granite (Table 4). Variation in the tonnages and grades of each resource category with changes in the NdPr cut-off grade are summarised in Figure 9. Changes in ore type with depth at a 300 ppm NdPr cut-off grade are summarised in Figure 10.

#### **Weathered Granite**

Although still ongoing, preliminary metallurgical test work is showing differing processing options between the more Weathered Granite and the less weathered Transitional Granite and Fresh Granite ore types (refer Red Metal ASX announcement dated 3 June 2024). The depth to this key metallurgical boundary is visually logged as the base of the lower saprolite interval and is referred to as Weathered Granite (Figure 4, Table 2, Figures 9 and 10). These at surface Inferred Resources of competent Weathered Granite represent advantageous potential early mining opportunities and comprise:

788 Mt at 297 ppm NdPr, 28 ppm DyTb

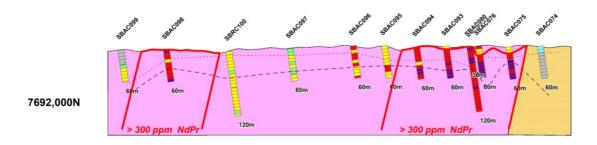
384 Mt at 330 ppm NdPr, 30 ppm DyTb

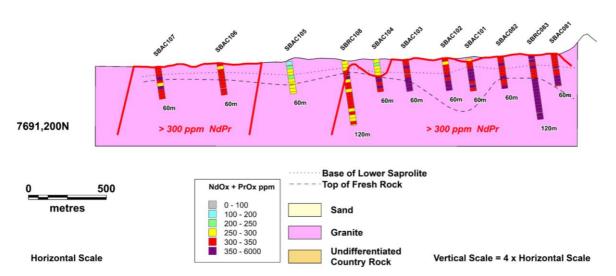
103 Mt at 354 ppm NdPr, 33 ppm DyTb

(using a 200 ppm NdPr cut-off grade)

(using a 300 ppm NdPr cut-off grade)

(using a 340 ppm NdPr cut-off grade)





[Figure 4] Stacked interpreted drill sections showing geology and variation in *NdPr oxide assay* values at depth and between drill lines in the granite. Refer to Red Metal ASX announcement dated 11 September 2024 for additional sections.



#### Geology

The Sybella REO mineralisation occurs primarily as the rare earth fluoro-carbonates minerals bastnasite and synchysite evenly disseminated throughout a 12 kilometer by 3 kilometre granite pluton. The continuity of both grade and geology appears to be controlled by the primary magmatic distribution of disseminated rare earth minerals. The REO mineralised granite is affected by mild weathering to an average depth of about 16 metres (Figures 4 and 10, Tables 2-4).

#### Metallurgy

Although subject to further detailed metallurgical studies, proof of concept leach test work confirmed strong REO extractions can be achieved using low levels of ambient temperature sulphuric acid on coarse fractions of both weathered and fresh granite, which show differing optimum leach parameters (refer to Red Metal ASX releases dated 1 February 2024, 18 March 2024, 3 June 2024). In addition, purification experiments on the pregnant leach solutions derived from the bottle roll test work successfully precipitated a potentially saleable mixed rare earth carbonate product (refer to Red Metal ASX release dated 8 July 2024).

Comminution tests have shown the coarsely crushed granite is classified as "Very Soft" when weathered and "Soft" when fresh which should translate into very competitive capital and operating costs for both mining and crushing product (refer to Red Metal ASX release dated 8 July 2024).

#### Mining

These 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. Being located just 20 kilometres from the city of Mt Isa offers significant power, water, labor and infrastructure advantages (Figure 3).

#### **Ongoing Work**

With this large MREO resource base confirmed and the block model established, Red Metal will now prioritise early-stage mining, metallurgical and infrastructure studies and begin discussions with governments and potential end users about alternative funding options.

Infill drilling of the shallower, higher-grade zones to an Indicated Mineral Resource category is planned. Heritage surveying and site preparation ahead of the proposed infill drilling has been initiated, however recent bush fires in the region have temporarily delayed planned field activities.

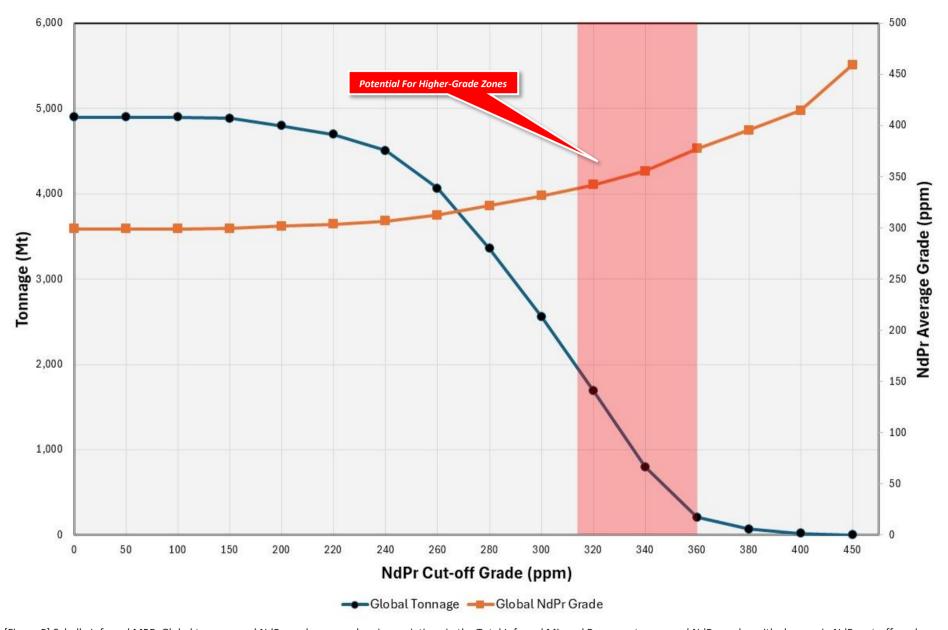
Geometallurgical domaining of the Sybella mineralisation using multi-element assay data and geological logging has been initiated. The additional bottle roll and column leach tests using weak sulphuric acid over extended residence times are progressing.



# [Table 1] Sybella Project: Global Inferred Mineral Resource Estimate showing grade and tonnage with variations in NdPr cut-off grades.

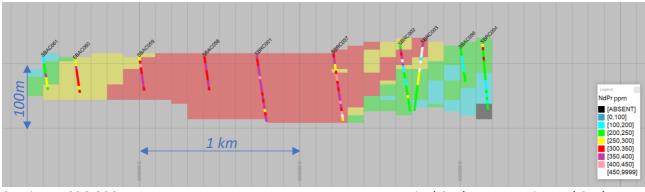
NdPr Cut-off ppm	Mt	NdPr ppm	DyTb ppm	Nd2O3 ppm	Pr6O11 ppm	Tb4O7 ppm	Dy2O3 ppm	La2O3 ppm	Y2O3 ppm	Sc2O3 ppm	LREO ppm	HREO ppm	TREO ppm	MREO ppm	SG
0	4,898	299	28	230	68.5	4.2	23.8	323	135	12.8	1,307	228	1,547	327	2.567
50	4,898	299	28	230	68.5	4.2	23.8	323	135	12.8	1,307	228	1,547	327	2.567
100	4,897	299	28	230	68.5	4.2	23.8	323	135	12.8	1,307	228	1,548	327	2.567
150	4,887	299	28	231	68.6	4.2	23.9	323	136	12.8	1,308	228	1,549	327	2.567
200	4,795	302	28	232	69.1	4.2	24.0	325	136	12.8	1,318	229	1,560	330	2.567
220	4,696	304	28	234	69.6	4.2	24.1	328	137	12.8	1,327	230	1,570	332	2.567
240	4,509	307	28	236	70.4	4.2	24.2	331	137	12.8	1,342	231	1,586	335	2.567
260	4,062	313	29	241	71.8	4.3	24.7	338	139	12.9	1,369	235	1,617	342	2.569
280	3,358	322	30	248	73.8	4.4	25.3	348	143	12.9	1,410	241	1,663	351	2.570
300	2,558	331	31	255	76.0	4.6	26.1	359	147	13.1	1,454	248	1,715	362	2.570
320	1,692	342	32	264	78.4	4.7	26.9	370	151	13.6	1,498	255	1,766	374	2.570
340	801	356	33	274	81.4	4.9	28.0	385	156	13.8	1,555	264	1,833	388	2.574
360	209	377	34	290	87.0	5.1	29.1	414	164	13.7	1,665	275	1,954	412	2.579
380	72	396	36	304	91.3	5.3	30.3	435	172	14.0	1,750	287	2,052	431	2.574
400	20	415	38	319	95.9	5.6	32.2	455	184	15.7	1,833	306	2,155	453	2.568





[Figure 5] Sybella Inferred MRE: Global tonnage and NdPr grade curves showing variations in the Total Inferred Mineral Resource tonnes and NdPr grades with changes in NdPr cut-off grades.





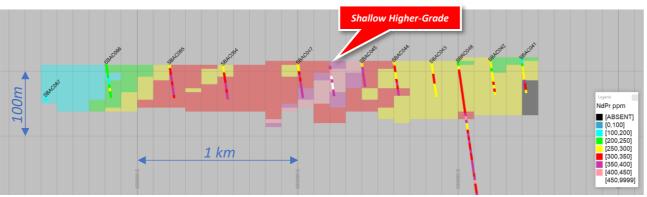
Section 7,696,800mN

Vertical Scale = 4X Horizontal Scale



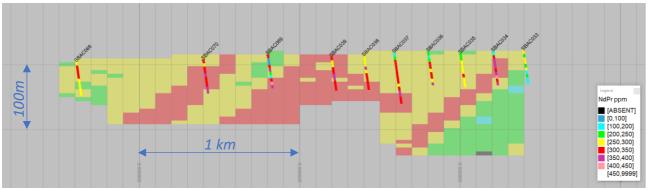
Section 7,696,000mN

Vertical Scale = 4X Horizontal Scale



Section 7,695,200mN

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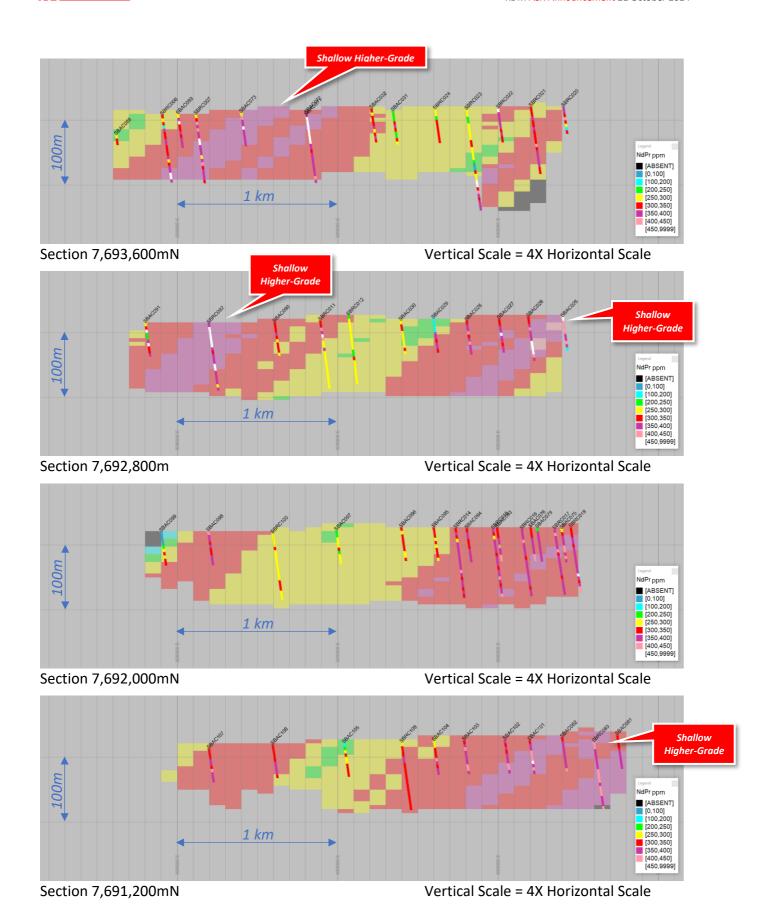


Section 7,694,400mN

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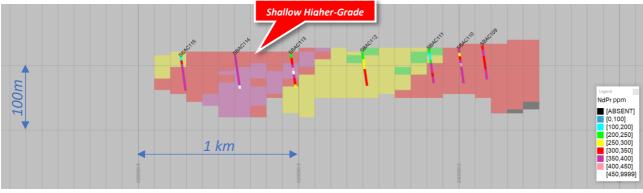
[Figure 6] Northern stacked block model sections showing variation in *NdPr oxide assay* values at depth and between drill lines in the granite assuming a dip and dip direction of 12 degree towards 260 degree.





[Figure 7] Central stacked block model sections showing variation in *NdPr oxide assay* values at depth and between drill lines in the granite assuming a dip and dip direction of 12 degree towards 260 degree.





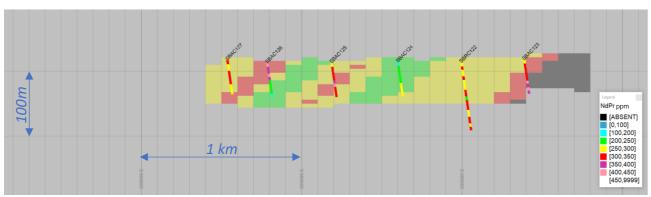
Section 7,690,400mN

Vertical Scale = 4X Horizontal Scale



Section 7,689,600mN

Vertical Scale = 4X Horizontal Scale

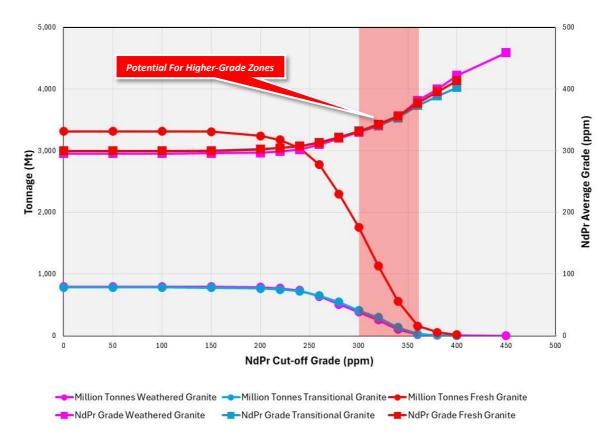


Section 7,688,800mN

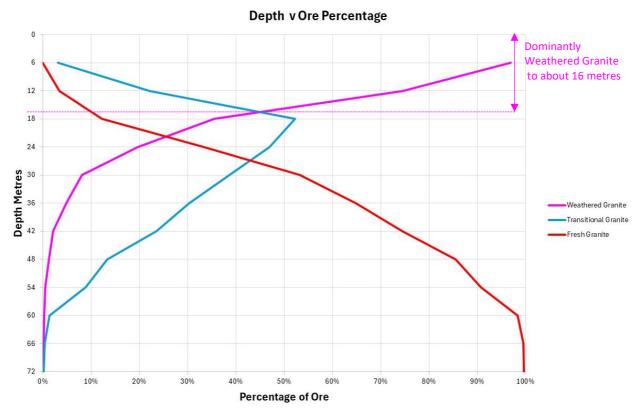
Vertical Scale = 4X Horizontal Scale

[Figure 8] Southern stacked block model sections showing variation in *NdPr oxide assay* values at depth and between drill lines in the granite assuming a dip and dip direction of 12 degree towards 260 degree.





[Figure 9] Sybella Inferred Mineral Resource Estimate: tonnage and NdPr grade curves showing variations in the Inferred Mineral Resource tonnes and grades with changes in NdPr cut-off grades for the Weathered Granite, Transitional Granite, Fresh Granite ore categories. Note the ore-types are based of visual geological logging of the regolith type.



[Figure 10] Sybella Inferred Mineral Resource Estimate: showing changes in the percentage of each ore category with depth using a 300 ppm NdPr cut-off grade. Note the ore-types are based of visual geological logging of the regolith type.



[Table 2] Sybella Project: Weathered Granite Inferred Mineral Resource Estimate showing grade and tonnage with variations in NdPr cut-off grades.

NdPr Cut-off ppm	Mt	NdPr ppm	DyTb ppm	Nd2O3 ppm	Pr6O11 ppm	Tb4O7 ppm	Dy2O3 ppm	La2O3 ppm	Y2O3 ppm	Sc2O3 ppm	LREO ppm	HREO ppm	TREO ppm	MREO ppm	SG
0	797	296	27	228	67.7	4.1	23.4	319	133	13.0	1,287	224	1,524	323	2.400
50	797	296	27	228	67.7	4.1	23.4	319	133	13.0	1,287	224	1,524	323	2.400
100	797	296	27	228	67.7	4.1	23.4	319	133	13.0	1,287	224	1,524	323	2.400
150	795	296	27	228	67.8	4.1	23.4	319	133	13.0	1,289	224	1,526	323	2.400
200	788	297	28	229	68.0	4.1	23.5	320	133	13.0	1,294	225	1,531	325	2.400
220	769	299	28	231	68.5	4.1	23.6	323	134	13.0	1,304	225	1,542	327	2.400
240	736	302	28	233	69.3	4.2	23.7	326	135	13.1	1,318	227	1,558	330	2.400
260	638	310	29	239	71.1	4.3	24.3	335	138	13.2	1,353	232	1,598	339	2.400
280	508	320	29	247	73.4	4.4	25.0	346	141	13.3	1,398	239	1,650	350	2.400
300	384	330	30	255	75.5	4.5	25.8	357	145	13.7	1,442	245	1,701	360	2.400
320	257	340	31	262	77.7	4.7	26.6	368	149	14.1	1,483	252	1,749	371	2.400
340	103	354	33	273	81.0	4.9	28.0	384	157	14.2	1,547	265	1,826	387	2.400
360	22	382	35	294	87.7	5.2	29.8	416	171	14.4	1,674	284	1,973	417	2.400



**Weathered Granite** 



[Table 3] Sybella Project: Transitional Granite Inferred Mineral Resource Estimate showing grade and tonnage with variations in NdPr cut-off grades.

NdPr Cut-off ppm	Mt	NdPr ppm	DyTb ppm	Nd2O3 ppm	Pr6O11 ppm	Tb4O7 ppm	Dy2O3 ppm	La2O3 ppm	Y2O3 ppm	Sc2O3 ppm	LREO ppm	HREO ppm	TREO ppm	MREO ppm	SG
0	785	299	28	231	68.8	4.1	23.6	324	134	12.7	1,309	226	1,548	327	2.600
50	785	299	28	231	68.8	4.1	23.6	324	134	12.7	1,309	226	1,548	327	2.600
100	785	299	28	231	68.8	4.1	23.7	324	134	12.8	1,309	226	1,548	327	2.600
150	781	300	28	231	68.9	4.1	23.7	325	134	12.8	1,313	226	1,552	328	2.600
200	765	303	28	233	69.6	4.2	23.8	328	135	12.8	1,324	228	1,565	331	2.600
220	750	305	28	235	70.0	4.2	23.9	330	135	12.8	1,333	228	1,574	333	2.600
240	723	307	28	237	70.7	4.2	24.1	333	136	12.8	1,346	230	1,589	336	2.600
260	650	314	29	242	72.2	4.3	24.6	340	139	12.9	1,374	234	1,621	343	2.600
280	548	322	30	248	74.0	4.4	25.2	349	142	13.0	1,409	240	1,662	352	2.600
300	412	333	31	256	76.3	4.6	26.1	360	147	13.2	1,457	248	1,718	363	2.600
320	300	341	31	263	78.2	4.7	26.7	369	150	13.5	1,490	253	1,757	373	2.600
340	137	353	33	272	81.1	4.9	27.8	383	155	13.7	1,544	262	1,820	386	2.600
360	29	373	34	287	86.5	5.1	28.9	411	162	13.6	1,647	273	1,934	407	2.600



**Transitional Weathered to Fresh Granite** 



[Table 4] Sybella Project: Fresh Granite Inferred Mineral Resource Estimate showing grade and tonnage with variations in NdPr cut-off grades.

NdPr Cut-off ppm	Mt	NdPr ppm	DyTb ppm	Nd2O3 ppm	Pr6O11 ppm	Tb4O7 ppm	Dy2O3 ppm	La2O3 ppm	Y2O3 ppm	Sc2O3 ppm	LREO ppm	HREO ppm	TREO ppm	MREO ppm	SG
0	3,317	300	28	231	68.7	4.2	24.0	323	136	12.7	1,311	229	1,553	328	2.600
50	3,317	300	28	231	68.7	4.2	24.0	323	136	12.7	1,311	229	1,553	328	2.600
100	3,316	300	28	231	68.7	4.2	24.0	323	136	12.7	1,311	229	1,553	328	2.600
150	3,311	300	28	231	68.7	4.2	24.0	324	136	12.7	1,312	230	1,554	328	2.600
200	3,243	302	28	233	69.3	4.2	24.2	326	137	12.7	1,323	231	1,566	331	2.600
220	3,177	304	28	235	69.8	4.2	24.2	328	137	12.8	1,332	231	1,576	333	2.600
240	3,050	307	29	237	70.5	4.2	24.4	332	138	12.8	1,346	233	1,592	336	2.600
260	2,775	313	29	241	71.9	4.3	24.8	338	140	12.8	1,372	236	1,621	342	2.600
280	2,301	322	30	248	73.8	4.4	25.4	349	143	12.8	1,412	242	1,666	352	2.600
300	1,762	331	31	255	76.0	4.6	26.1	360	147	13.0	1,456	248	1,717	362	2.600
320	1,135	343	32	265	78.5	4.7	27.0	371	152	13.4	1,503	256	1,772	375	2.600
340	561	356	33	275	81.5	4.9	28.0	386	157	13.8	1,559	264	1,838	389	2.600
360	158	377	34	291	87.0	5.1	29.0	414	163	13.6	1,667	274	1,955	412	2.600
380	55	396	35	304	91.5	5.3	30.1	437	170	13.8	1,757	285	2,055	431	2.600
400	17	414	37	317	96.1	5.5	31.5	457	178	14.9	1,838	297	2,150	451	2.600



**Fresh Granite** 



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:

Phone +61 (0)2 9281-1805 www.redmetal.com.au

Rob Rutherford Managing Director Russell Barwick Chairman

#### **Competent Persons Statement**

The information in this report that relates to Exploration Results that underpin the Mineral Resource Estimate 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.

The information in this report that relates to the Mineral Resource Estimate for the Sybella deposit is based on information compiled by Mr. Arnold van der Heyden, who is a Member and Chartered Professional (Geology) of the Australasian Institute of Mining and Metallurgy and a Director of H&S Consultants Pty Ltd. Mr. van der Heyden has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code). Mr van der Heyden consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.



Appendix 1: Table 1 Sybella Project - JORC 2012 Sampling Techniques and Data.

Criteria	JORC 2012 Explanation	Commentary
Sampling Techniques	Nature and quality of sampling	The maiden Sybella Mineral Resource Estimate (MRE) utilised assay data on 6 metre composite samples collected down 139 regularly spaced air core and RC drill holes covering an 8.4 kilometre by 3 kilometre portion of the rare earth oxide (REO) enriched granite. The 10,511 metre air core and RC programs includes 104 angled air core drill holes mostly drilled to 60 metres and spaced on a regular 800 metre by 200 metre and 800 metre by 400 metre patterns, and 35 localised RC holes extended to between 120 and 240 metres. This includes 19 RC holes drilled along the Boundary Fence and Donkey Dam traverses. The drill collar coordinates and assay data are available in Red Metal ASX announcements dated 21 August 2023 and 11 September 2024.  The method of drilling is considered to be of an acceptable quality for evaluating the REO mineralisation within the granite and estimation of resources.
	Include reference to measures taken to ensure representativity samples and the appropriate calibration of any measurement tools or systems used.	Sampling for geochemical analysis was continuous down the length of each hole with 1 sample collected every metre and composited over six metres for initial assay using a total acid digest. Locally compositing varied between 2-7 metres based on the hole depth and geology.
	Aspects of the determination of mineralisation that are Material to the Public Report.	1778 composite samples were submitted for analyses. Significant results and assay results are summarised in Red Metal ASX announcements dated 21 August 2023 and 11 September 2024.
Drilling Technique	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.).	A truck mounted, multi-purpose air core and/or RCP rig was utilised from surface to end of hole. 104 air core holes (6309 metres) and 35 RCP holes (4202 metres) were drilled. Air core was drilled to blade bit refusal then switched to an air core hammer bit and drilled to a set depth of about 60 metres. Face sampling blade and hammer air core bits were used at all times. Local deeper drill holes utilised an RC percussion drill set up from surface to the end of hole and also used a face bit.
		All RC hammer holes deeper than 60 metres (26 in total) were down hole surveyed at 30 metre intervals. An Axis North Seeking Champ Gyro #13047 tool was used. Air core holes drilled to less than 60 metres were oriented from surface at 60 degrees east using a clinometer and were not down-hole surveyed.
Drill Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Sample recoveries were visually estimated and recorded for each metre. Chip recovery overall was very good with most intervals logged as 100% recovery with local areas reduced to 60%.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Depths are checked against depths marked on the sample bags and rod counts are routinely performed by the drillers.
	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.	No sample recovery bias is observed due to homogenous distribution of the REO mineralisation in the granite.
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.	Qualitative codes and descriptions were used to record geological data such as lithology, weathering, hardness prior to sampling.
	Whether logging is qualitative or quantitative in nature.	Chia turu a con abstractuale d
	Core photography  The total length and percentage of the	Chip trays are photographed.  The total lengths of all holes have been geologically logged.
	relevant intersections logged.	total longino of an note make been geologically logged.



Criteria	JORC 2012 Explanation	Commentary
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	No core was collected.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	All composite pulp samples were prepared with standard crush then pulverisation techniques at ALS Mt Isa (methods SPL-21 / PUL-23). The composite method of sampling is considered appropriate for a homogeneous, disseminated granite-hosted ore type.
	Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.	Checks on representativity of composite spear sampling verses single metre sampling were performed on RC holes SBRC001 through SBRC019 and proved very good. 17 checks on representativity of composite pulp sampling vs single metre sampling from the infill air core and RC program also proved to be very good with a small variation of about plus or minus 4%.
	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 total of 104 field duplicate samples were inserted through the assay batch at a rate of about 1 in 19 samples. The duplicates showed very good repeatability.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	6 metre composite sampling is considered appropriate for REE minerals <2mm grainsize evenly distributed throughout the granite.
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.	All 1778 composite samples were sent to ALS for analysis of REE's and other traces Ba Ce Cr Cs Dy Er Eu Ga Gd Hf Ho La Lu Nb Nd Pr Rb Sm Sn Sr Ta Tb Th Tm U V W Y Yb Zr using Method ME-MS81d that utilises lithium borate fusion prior to acid dissolution and ICP-MS analysis. This method provides the most quantitative analytical approach for a broad suite of trace elements including REE. For analyses of the major element oxides Zr Si Al Fe Ca Mg Na K Cr Ti Mn P Sr Ba method ME-ICP06 was utilised while LOI used method ME_GRAD.
	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.	No geophysical tools were used to report element concentrations at Sybella.
	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.	A total of 37 blanks and 149 certified reference standards were inserted evenly throughout the assay batch. In addition to this, ALS has also included standard and blank materials to monitor the performance of the laboratory. The standards and blanks used displayed acceptable levels of accuracy and precision.
Verification of sampling and assaying	The verification of significant intersections	Result reviewed by Exploration Manager and the Managing Director and independent consultants from H&S Consultants Pty Ltd
	The use of twinned holes.	No holes have been twinned
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	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 an Excel/Access database on the company server which is backed-up to cloud-based storage each day. MapInfo software is used to check and validate drill-hole data.
	Discuss any adjustment to assay data.	Rare earth elements are reported from ME-MS81 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.
		Rare earth abbreviations typically used in industry reporting and throughout this report were in accordance with IUPAC guidelines, and were as follows:  REE - Rare Earth Elements, value presented as elemental assay.  REO - Rare Earth Oxides, value presented as oxide assay.



Criteria	JORC 2012 Explanation	Commentary					
Criteria	JORC 2012 Explanation	TREE - La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu plus Y and Sc.  MREE - Pr, Nd, Tb, Dy.  LREE - La, Ce, Pr, Nd and Sm.  HREE - Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu plus Y.  TREO - 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> 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> LREO - 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> HREO - 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> NdPr - is the sum of the oxide values for neodymium and praseodymium. DyTb - is the sum of the oxide values for dysprosium and terbium  Element Conversion Oxide 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>3</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>					
Location of data points	locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used.	Zone54 datum. GPS locations are accurate to about 3m.  GDA94_Zone54 datum.					
	Quality and adequacy of topographic control.	Topographic relief has been extracted using the ELVIS digital terrain information at Geoscience Australia.					
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The maiden Sybella Mineral Resource Estimate (MRE) utilised assay data on 6 metre composite samples collected down 139 regularly spaced air core and RC drill holes covering an 8.4 kilometre by 3 kilometre portion of the rare earth oxide (REO) enriched granite. The 10,511 metre air core and RC programs includes 104 angled air core drill holes mostly drilled to 60 metres and spaced on a regular 800 metre by 200 metre and 800 metre by 400 metre patterns, and 35 localised RC holes extended to between 120 and 240 metres. This includes 19 RC holes drilled along the Boundary Fence and Donkey Dam traverses.					
	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 drill pierce point spacing is sufficient to establish the degree of geological and grade continuity appropriate for an early-stage resource estimation.					
	Whether sample compositing has been applied.	RC chip bags from the 19 drill holes along the original discovery traverses were spear sampled every metre and composited every 6 metres for the initial REE analysis. Two separate cyclone split samples were collected for each metre and stored on site for subsequent use and analysis.					
		For all other holes, two separate cyclone split samples were collected for each metre with one stored on site for subsequent use and analysis while the second was sent to ALS for compositing. The individual metres samples were dried and pulverised (methods SPL-21 / PUL-23). ALS					



Criteria	JORC 2012 Explanation	Commentary
		composited 50g from each 1 metre pulped sample over a 6 metre interval establishing a 300g composite pulp sample for analysis.
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.	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.
	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.	Insufficient data to determine bias at this point.
Sample security	The measures taken to ensure sample security.	Chips were logged and sampled in the field with chip tray records and two split one metre samples collected and stored at Red Metal's Cloncurry base for future reference. 6 metre composite samples were transported directly to ALS Mt Isa for preparation and analysis. Digital data is stored on company server and back-up to cloud-based storage each day.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	External audits have been undertaken by H&S Consultants Pty Ltd.

Appendix 1: Table 2 Sybella Project - JORC 2012 Reporting of Exploration Results

Criteria	JORC 2012 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.	region of north-west Queensland. EPM 28001 is owned 100% by Sybell.  Minerals Pty Ltd a wholly owned subsidiary of Red Metal Limited Landholder conduct and compensation agreements have been established with the pastoral lease holders at May Down and Ardmore Stations. A					
	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 tenement is in good standing.					
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No previous drilling by other parties has been directed towards REE, however the granite of interest was regularly 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 REE analyses across the granite, highlighting its grade in fresh rock (refer Red Metal: ASX 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.					
Geology	Deposit type, geological setting and style of mineralisation.	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.					
		The Sybella Granite Suite is a polyphase granitic intrusive complex comprising multiple granitic plutons. The granite pluton that hosts the rare earth oxide mineralisation has highly deformed margins and shows a distinct biotite schlieren foliation with a steep westerly dip (of about 70 degrees) and a gentle south plunging mineral lineation defined by biotite clusters. The deformed pluton is wedged between two ovoid-shaped, less deformed, granite plutons which suggests it may be an earlier phase of the Sybella Granite Suite.					



Criteria	JORC 2012 Explanation	Commentary
		Mineralisation occurs primarily as the REE fluoro-carbonates minerals bastnasite and synchysite evenly disseminated throughout the granite pluton. The continuity of both grade and geology appears to be controlled by the primary magnatic distribution of disseminated rare earth minerals within the granite and to a lesser extent by the overprinting west dipping foliation imposed on the granite.
		The contacts between the REO enriched granite with the adjacent meta- sedimentary and amphibolite units have been drilled across in several places and locally drilled through (refer to cross sections in Red Metal ASX announcement dated 11 September 2024). Magnetic imagery clearly maps the granite/amphibolite contact.
		There is no obvious evidence of faulting causing significant offset, although minor local dislocation is possible.
		The Sybella Granite is affected by weathering with strong weathering to an average depth of about 16 metres and partial weathering to an average depth of about 24 metres. These boundaries can be visually logged using colour and mineral changes.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of survey information for all Material drill holes:	Refer to figures and tables in this announcement and Red Metal ASX announcements dated 21 August 2023 and 11 September 2024.
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.	No data aggregation methods have been applied
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been applied
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 (e.g. 'down hole length, true width not known').	At this stage of exploration insufficient data exists to confidently estimate a relationship between mineralisation widths and intercept widths.
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 figures and tables in this announcement and Red Metal ASX announcements dated 21 August 2023 and 11 September 2024.
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.	See text and tables to this announcement
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	A 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 fluorocarbonate minerals bastnasite and synchysite.  Although subject to further detailed metallurgical studies, proof of
	results; bulk density, groundwater,	concept leach test work confirmed strong REO extractions can be achieved



Criteria	JORC 2012 Explanation	Commentary
	geotechnical and rock characteristics; potential deleterious or contaminating substances.	using low levels of ambient temperature sulphuric acid on coarse fractions of both weathered and fresh granite. Lowering the acid strength and increasing the residence time have significantly improved the reduction of iron and aluminium contaminants and significantly reduced the acid consumption rate (refer to Red Metal ASX releases dated 1 February 2024, 18 March 2024,.3 June 2024).
		In addition, purification experiments on the pregnant leach solutions derived from the bottle roll test work successfully precipitated our first potentially saleable mixed rare earth carbonate (MREC) product (refer to Red Metal ASX release dated 8 July 2024).
		Comminution test work show the coarsely crushed granite is classified as "Very Soft" when weathered and "Soft" when fresh which should translate into very competitive capital and operating costs for both mining and crushing product (refer to Red Metal ASX release dated 8 July 2024).
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).	With this large resource base in place Red Metal can now initiate early- stage mining studies as a priority and begin discussions with governments and potential end users about alternative funding options.
	· · · · · · · · · · · · · · · · · · ·	Infill drilling of the shallower, higher-grade zones to an Indicated category is planned. Heritage surveying and site preparation ahead of the proposed infill drilling has been initiated however, recent bush fires in the region have temporarily delayed planned field activities. More focused infill drilling will enable targeted metallurgical test work and facilitate early-stage mining studies.
		Geometallurgical domaining of the Sybella mineralisation using multi- element assay data and geological logging has been initiated. The additional bottle roll and column leach tests using weak sulphuric acid over extended residence times are progressing.

# Appendix 1: Table 3 Sybella Project - JORC 2012 Estimation and Reporting of Mineral Resources

Criteria	JORC 2012 Explanation	Deposit Specific Information
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.  Data validation procedures used.	Red Metal Limited stores the geological data for the Sybella project electronically in a MS Access database. All data is recorded on paper logs and then transferred to a digital record in MS Excel or, recorded directly from the field into a ruggardised lap top, in order to import all data into an industry standard database.  Basic checks were performed by H&S Consultants Pty Limited (HSC) prior to the Mineral Resource Estimate (MRE) to ensure data consistency, including checks for from-to interval errors, missing or duplicate information, and extreme or unusual assay values. Magnetic declination and grid convergence for the project area was also checked.  All data errors/issues were reported to the Red Metal Database Manager and corrected in the primary database.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.  If no site visits have been undertaken indicate why this is the case.	The Competent Person for the MRE has not visited site because this project is at an early stage of exploration and only an Inferred Mineral Resource is being reported.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The continuity of both grade and geology appears to be controlled by the primary magmatic distribution of disseminated rare earth minerals within the granite and to a lesser extent by the overprinting west dipping foliation imposed on the granite.  The confidence in the geological interpretation is high due to its exposure at or near surface, consistent geology and grades down-hole and between holes, the even disseminated nature of the presumably magmatic REO



Criteria	JORC 2012 Explanation	Deposit Specific Information
		mineralisation and, the ability to visually log variations in the weathering profile. Magnetic imagery clearly maps the granite/amphibolite contact adding to the confidence in the geological interpretation.
	Nature of the data used and of any assumptions made.	There is no obvious evidence of faulting causing significant offset, although minor local dislocation is possible.  HSC developed a geological interpretation of the deposit based on drill hole data, which is assumed to be accurate. Red Metal provided an outline of the host Templeton Granite based on geophysical data, as well as a set of geological cross-sections, which HSC incorporated into the geological interpretation.
		The MRE is restricted to the Templeton Granite and samples in adjacent meta-sediments were excluded. The granite contact is assumed to dip 70 degrees to the west. Surfaces were generated for the base of strong weathering and top of fresh rock.
		Topography was sourced by Red Metal from AGSO's ELVIS portal and provided to HSC as 3D points. Drill hole collars were projected onto a digital terrain model generated by Red Metal from the AGSO data because hole collars were only surveyed by hand-held GPS.
		Variogram mapping favoured a search ellipsoid oriented with a dip and dip direction of 12 degree towards 260 degree, consistent with the general strike direction of the foliation and the granite/amphibolite geological contacts and their approximate westerly dip direction.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	There is limited scope for alternative geological interpretations, which are considered unlikely to significantly impact the current MRE. An alternative model with a flat-dipping search ellipsoid produced very similar results to the 12 degrees towards 260 degrees model assumed for this calculation
	The use of geology in guiding and controlling Mineral Resource estimation.	Geology was used to guide and control the MRE by constraining its western and eastern boundaries with the geological contact between the granite and amphibolite/meta-sediment sequences. Search and variogram parameters (12 degrees towards 260 degree) reflects the general strike orientation of the foliation and the granite/amphibolite geological contact and their approximate westerly dip direction.
	The factors affecting continuity both of grade and geology.	The strong continuity of both grade and geology are controlled by the primary magmatic distribution of the disseminated rare earth minerals within the granite and to a lesser extent by the overprinting foliation imposed on the granite.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	The approximate average dimensions of the current Sybella MRE at 300ppm NdPr (Nd2O3+Pr6O11) cut-off grade are:  • 8.4 km N-S,  • 2.5 km E-W,  • From surface to 100m depth.  Mineralisation generally occurs within two zones along the eastern and western contacts of the granite, separated by a lower grade central zone.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, maximum distance of extrapolation from data points.	All elements were estimated by ordinary kriging (OK). This is considered appropriate because the coefficients of variation (CV = standard deviation/mean) are consistently low for the rare earth oxides (REOs), and the grades are reasonably well structured spatially. Variography produced acceptable models of spatial continuity.  Samples were composited to nominal 6.0m intervals for estimation, with
		a minimum length of 2.99m.  A three-pass search strategy was used for the estimates:  1. 300x800x24m radii, 12-32 samples, minimum of 4 octants informed  2. 600x1600x48m radii, 8-32 samples, minimum of 4 octants informed  3. 1200x3200x96m search, 8-32 samples, minimum of 4 octants informed



Criteria	JORC 2012 Explanation	Deposit Specific Information
		The search ellipsoid was oriented with a dip and dip direction of 12 degrees towards 260 degrees, reflecting the general strike orientation of the foliation and the granite/amphibolite geological contact and their approximate westerly dip direction.
		Extrapolation was minimised by enforcing a minimum of 4 octants, which ensures that at least two holes are required to estimate a block. The maximum extrapolation distance is around 400m. Estimates have been limited to nominal hole depth, derived from the base of a flat dipping model.
	The availability of check estimates, previous	Dry bulk density has been assigned to the model using available measurements. A value of 2.60 t/m3 was applied to fresh and partially weathered rock, while a value of 2.40 t/tm3 was used for strongly weathered granite.  This MRE is the first for this deposit and there has been no previous mining.
	estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Therefore, there are no check estimates, previous estimates or mine production records for comparison.
	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding the recovery of by-products.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	Some potentially deleterious oxide have also been independently estimated, namely lime (CaO) and magnesia (MgO).
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Model blocks have dimensions of 100 x 200 x 6 metres in Easting, Northing and elevation (X, Y & Z) respectively. The X and Y dimensions are around half the nominal drill hole spacing, while the Z dimension is the nominal sample length.
	Any assumptions behind modelling of selective mining units.	The block size is effectively the selective mining unit (SMU).
	Any assumptions about correlation between variables.	The rare earth elements (REEs), including yttrium and scandium, generally show strong positive correlation, with the exception of europium. Therefore, the variogram model for neodymium was applied to most of the other REEs, apart from cerium, europium, yttrium and scandium, which had their own individual variogram models. nThe variogram model for neodymium was compared to the experimental variograms for most of the other REEs to ensure that it was a reasonable proxy.
	Description of how the geological interpretation was used to control the resource estimates.	Geology was used to guide and control the MRE by constraining its western and eastern boundaries with the geological contact between the granite and amphibolite/meta-sediment sequences. Search and variogram parameters (12 degrees towards 260 degree) reflects the general strike orientation of the foliation and the granite/amphibolite geological contact and their approximate westerly dip direction.
	Discussion of basis for using or not using grade cutting or capping.	No grade cutting was applied because there are no obviously extreme values. One interval of anomalously high-grade breccia was excluded from the MRE.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	The new model was validated in a number of ways – visual comparison of block and drill hole grades, statistical analysis and examination of gradetonnage data.  All the validation checks suggest that the grade estimates are reasonable when compared to the composite grades.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry weight basis.



Criteria	JORC 2012 Explanation	Deposit Specific Information
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The nominal cut-off grades ranging from 200ppm to 360ppm NdPr (Nd2O3+Pr6O11) are based on available metallurgical test-work (refer to Red Metal ASX announcements dated 1 February 2024, 18 March 2024, 3 June 2024, 8 July 2024), which suggests that mineralisation at about this threshold may have the potential to be economically extractable.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and. internal (or, if applicable, external) mining dilution. It may not always be possible to make assumptions regarding mining methods and parameters when estimating Mineral Resources. Where no assumptions have been made, this should be reported.	It is assumed that the MRE would be extracted by conventional open-pit mining; the strongly weathered granite may be rippable and not require drilling and blasting.  The OK estimation method implicitly incorporates internal mining dilution at the scale of the assumed SMU. No specific assumptions were made about external mining dilution in the MRE.
Metallurgical factors or assumptions	be reported.  The basis for assumptions or predictions regarding metallurgical amenability. It may not always be possible to make assumptions regarding metallurgical treatment processes and parameters when reporting Mineral Resources. Where no assumptions have been made, this should be reported.	Metallurgical test-work to date (refer to Red Metal ASX announcements dated 1 February 2024, 18 March 2024, 3 June 2024, 8 July 2024) has shown that:  Bulk of REO's occur as soluble the fluoro-carbonate minerals bastnasite and synchysite hosted in a REO-enriched granite (a low-acid consuming rock);  Strong REO extraction with low levels of impurities (Al and Fe) can be extracted from coarse fractions of both weathered and fresh granite using low levels of sulphuric acid at ambient (air) temperature;  Leach liquors contain low average impurity extractions of aluminium and iron and low average deleterious element extractions of 20 g/t thorium and 1 g/t uranium;  Comminution test work show the coarsely crushed granite is classified as "Very Soft" when weathered and "Soft" when fresh which should translate into very competitive capital and operating costs for both mining and crushing product;  Although pending further test work, strong REO extractions with manageable impurity levels are achievable on weathered granite using sulphuric acid leach at pH 1-2 and fresh granite using pH 2.5-3 (optimisation work is ongoing);  A premium grade Mixed Rare Earth Carbonate (MREC) can be produced from the low pH, high impurity, leach liquor.  Results to date support heap leach processing
factors or assumptions	waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	place on site in purpose built and licensed facilities.  All waste rock and process residue disposal will be done in a responsible manner and in accordance with any mining license conditions.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	Specific gravity (SG) was determined by JK Tech SMC for 6 samples of diamond core from hole SBDD002 as part of comminution tests. The average SG of these samples, which include both fresh and partially weathered granite, is 2.60 t/m3, with a range of 2.57 – 2.64 t/m3. SG calculation for the SMC is that of OA-GRA08. 30 particles of the size fraction -16mm+13.2mm were weighted in air and weighed suspended in water. SG = weight in air/(weight in air - weight in water)  Due to a lack of diamond core recovery from surface to about 11 metres, SG may over-estimate dry bulk density for the nearer surface Weathered Granite which remains to be accurately measured.  Red Metal suggested using a lower value of 2.40 t/m3 for the Weathered Granite category in the MRE.



Criteria	JORC 2012 Explanation	Deposit Specific Information
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	The entire MRE is classified an Inferred Mineral Resource because of the wide hole spacing and the reasonable grade continuity demonstrated by variography.
	Whether appropriate account has been taken of all relevant factors (i.e., relative confidence in tonnage/grade estimations, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	This scheme is considered to take appropriate account of all relevant factors, including the relative confidence in tonnage and grade estimates, confidence in the continuity of geology and oxide values, and the quality, quantity and distribution of the data.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The classification appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	This MRE has been prepared by third party resource experts H&S Consultants and been informally reviewed by Red Metal and other HSC personnel; no material issues were identified as a result of these reviews.
Discussion of relative accuracy/	Where appropriate a statement of the relative accuracy and confidence level in the	The relative accuracy and confidence level in the Mineral Resource estimates are considered to be in line with the generally accepted
confidence	Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	accuracy and confidence of the nominated JORC 2012 Mineral Resource categories. This has been determined on a qualitative, rather than quantitative, basis, and is based on the estimator's experience with a number of similar granite-hosted types of deposits. The main factors that affect the relative accuracy and confidence of the estimate is drill hole spacing and the strong geological continuity of the evenly dispersed, disseminated rare earth mineralisation.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The estimates are local, in the sense that they are localised to model blocks of a size considered appropriate for local grade estimation. As the entire MRE is classified as Inferred, none of the tonnage is relevant to technical and economic analysis. However, the MRE could be used for a Scoping Study.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No production data is available because there has been no previous mining of this deposit.