

## ANNOUNCEMENT

3 JUNE 2024

### INTERIM PHASE 2 METALLURGICAL RESULTS GREEN LIGHT THE SYBELLA RARE EARTH OXIDE DISCOVERY

The Board of Red Metal is pleased to announce interim results of the second phase of leach and comminution studies testing mineralisation from the Sybella rare earth oxide (REO) discovery. The Company is seeking the most economically effective way to process these ores which have unique metallurgical properties.

#### KEY RESULTS AND IMPLICATIONS:

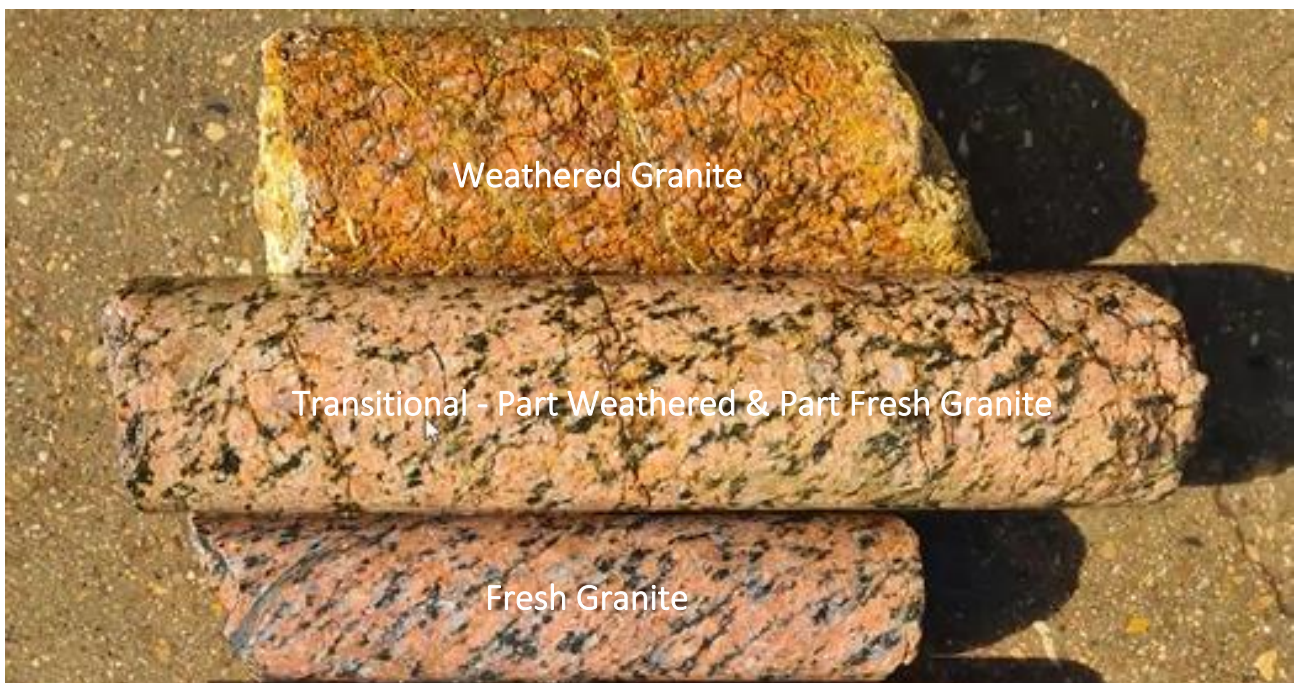
- Leach and comminution results have added to our confidence that a **low-cost, low-capital, heap leach processing** option may prove feasible and outlined key leach parameters for more detailed investigation.
- Results confirm strong REO extractions can be achieved using low levels of ambient temperature sulphuric acid on coarse fractions of **both weathered and fresh granite** over increased residence times.
- Test work show coarser heap leach crush sizes (**-10mm to -15mm**) can provide high REO recoveries (high revenue) with less contaminant liberation and less acid consumption (lower processing costs).
- Acid consumption rates have been optimised to **much lower levels** than previously indicated.
- **Lowering the acid strength and increasing the residence time** have vastly improved the reduction of iron and aluminium contaminants and significantly reduced the acid consumption rate.
- A **breakthrough pH 3 leach** result achieved on **-15mm fresh granite** run over 56 days has opened up vast tonnage potential below the weathered zone to possible REO extraction.
- Comparative economic analyses reveal good options for leaching the **weathered granite at either pH 1.3-2 or, potentially at a pH >3** with increased residence times. In contrast, **fresh granite** performs best with weaker acid leaching at **pH >3**, which in effect “turns off” the deleterious iron extraction.
- 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. This competent clay-poor rock is ideal for stacking and should offer scope for tall cost-efficient heaps.
- Preparations are underway for follow-on column leach test work using very weak acids (**pH 2 to pH 3.5**) over extended residence times (**>120 days**) with the aim of further improving REO recoveries, reducing acid consumption and lowering contaminants in the resulting Pregnant Leach Solutions.
- Broad spaced step out **drilling continues** apace and is now about 50% complete.

**Managing Director Rob Rutherford said:**

*“Interim results from the second phase of leach test work and comminution studies have confirmed Red Metal’s initial hypothesis that the Sybella granite-hosted REO mineralisation can be coarsely crushed and leached under weak acid conditions in a manner suitable for low-cost, low-capital heap leach processing.*

*Impurity removal trials are progressing with early indications showing residual contaminants from the Pregnant Leach Solution may be successfully removed, potentially resulting in a premium mix rare earth carbonate (MREC) product. Results from these tests are expected shortly.*

*The Company has reasonable expectation that our ongoing studies will confirm a process route that optimises REO recovery (increases revenue) but reduces the acid consumption rate and ensures that impurities in the final product can be satisfactorily minimised (lowering processing costs). It is also now working rapidly towards outlining ore resources.”*



[Figure 1] Sybella Project: weathered, transitional and fresh REO-enriched granite (top). Note the coarse grain-size, weak biotite deformation fabric and increased fracture density with increased weathering. Step-out drilling in progress (bottom).



## PHASE 2 METALLURGY UPDATE

The recent studies have achieved strong REO extractions using low levels of ambient temperature sulphuric acid on coarse fractions of both weathered and fresh granite over increased residence times. These results have added to our confidence that a low-cost, low-capital, heap leach processing option may prove feasible. They have also outlined key leach parameters for more detailed investigation.

The leach results to date combined with the comminution studies support the concept of REO extraction using low-cost bulk open-pit mining, simple coarse gyratory, jaw and/or cone crushing and heap leach processing using low levels of sulphuric acid.

A summary of the Phase 2 intermittent bottle roll tests (IBRT) and comminution studies are presented below.

### Phase 2 Intermittent Bottle Roll Leach Testing

The Phase 2 IBRT follows on from the Phase 1 IBRT on non-pulverised RC chip samples from the Boundary Fence East area (Figure 9) that demonstrated high rare earth extractions (averaging 78% neodymium, 79% praseodymium, 48% terbium and 44% dysprosium) can be achieved using ambient temperature sulphuric acid at pH 1 (refer Red Metal ASX announcements dated 1 February 2024 and 18 March 2024).

This second phase of work evaluates the leach responses of the REO-enriched granite for a range of size fractions, under varying acid strengths, and over extended residence times using the IBRT and column leach methods (Figure 2). It aims to provide some certainty that the REO mineralisation has the potential to be commercially extracted allowing any future resources to be compliant with JORC classification and reporting standards. Results will also provide better optimised leach data for process design and early-stage mining studies.

IBRT are used to simulate the leaching mechanism inherent in heap leaching and are a first-step before applying the more expensive column leach tests (Figure 2). The bottle rolls are agitated (turned on rollers) 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.

test work involves stacking about 20 kg of coarse rock (per metre of column) in a tube to simulate a stacked heap when leaching (Figure 2). This technique allows parameters such as lift height, acid irrigation rate and residence times to be better estimated. Geotechnical test work is also planned to determine maximum heap height achievable.



[Figure 2] Sybella Project: Intermittent bottle roll leach tests or IBRT (left), example of column leach tests (right)

The IBRT in Phase 2 utilised representative diamond drill core from SBDD002 (Boundary Fence East , Figure 9, Appendix 1) for the partly weathered and fresh rock where core recovery was good (15-60 metres). While non-pulverised RC chips from the nearby percussion hole SBRC016 were sampled for weathered rock (0-15 metres) where drill core recovery in SBDD002 was very low.

Variability IBRT tests were performed on -10mm crushed core and non-pulverised RC chips composited every 5 metres down hole. The IBRT on the 5 metre composite samples were run with sulphuric acid liquor maintained at 7.5 g/L (approx. pH 1.3), 5 g/L (approx. pH 1.7) and 2.5 g/L (pH 2) over the duration of the bottle rolls (Tables 1 and 2). In parallel, one sample of the -15mm crushed core was leached using a very weak acid at pH 3.0 for 56 days.

Results from key IBRT on the weathered and fresh granite are discussed below and summarised in Tables 1 and 2, and Figures 3 to 6.

A simple financial model using standardised cost assumptions was used to compare and contrast the value of each IBRT allowing the impacts of REO extraction (revenue) versus acid consumption, and iron and aluminium impurity levels (processing costs) to be actively monitored (Comparative Analysis, Tables 1 and 2). This aided selection of the most economically suitable processing parameters to proceed to column testing.

### **Weathered vs Fresh Granite**

Test work shows different heap leach strategies for weathered and fresh granite can achieve similar strong outcomes.

Comparative economic analyses reveal good options for leaching the weathered granite at either pH 1.3 to 2 or, potentially at a pH >3 with increased residence times (Figures 3 and 4).

In contrast, the fresh granite performs best with weaker acid strength (pH >3), which in effect “turns off” the deleterious iron extraction (Figures 5 and 6).

### *Weathered Granite*

Very strong REO extractions were achieved on the coarse chips of **weathered granite**, from 0-20 metres, at the higher acid strengths (pH 1.3 to pH 2, Table 1 and Table 2). Using 7.5 g/L sulphuric acid (pH 1.3) over 16-21 day residence times attained:

- Neodymium extractions averaging 83% (maximum 92%),
- Praseodymium extractions averaging 84% (maximum 92%)
- Terbium extractions averaging 58% (maximum 80%)
- Dysprosium extractions averaging 51% (maximum 80%)
- A sulphuric acid consumption rate averaging 20 kg/t
- Aluminium impurity extractions averaging 4.8%
- Iron impurity extractions averaging 13.3%

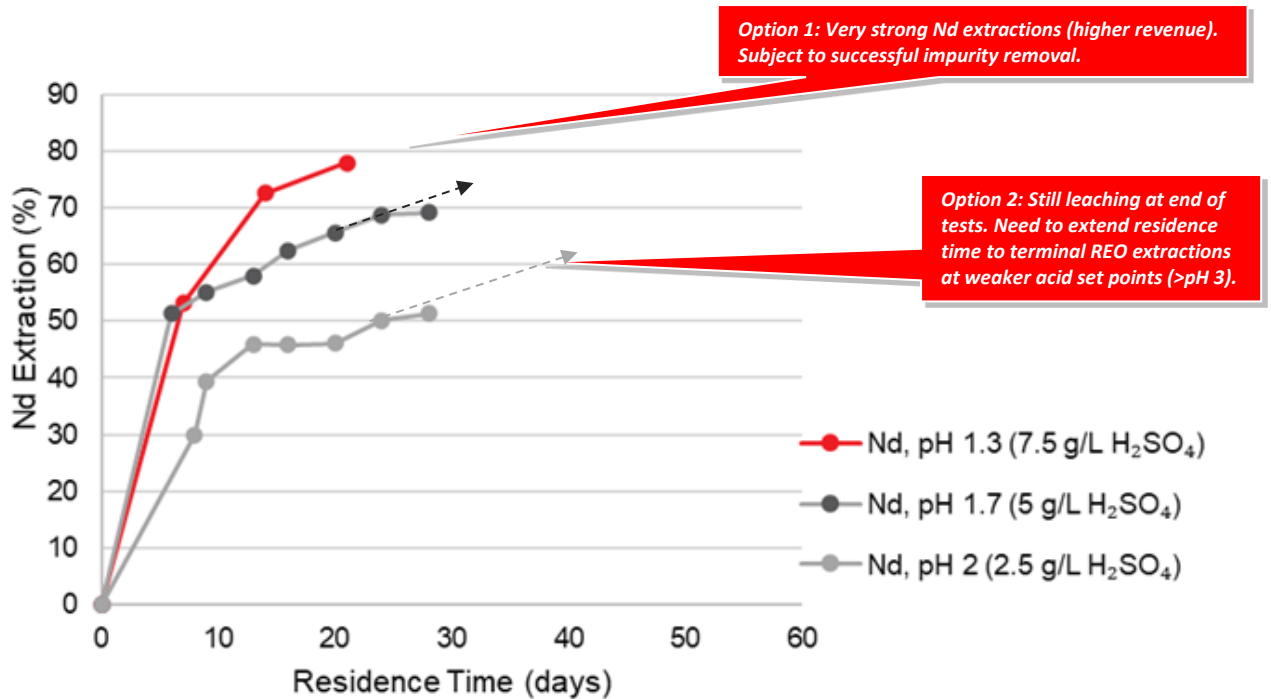
The strong neodymium and praseodymium and elevated dysprosium and terbium extractions combined with the reduced iron impurities make lower pH leaching of the weathered granite an attractive processing option.

Importantly, neodymium kinetic extraction curves for the weathered granite (Figure 3) show that leaching at weaker acid set points of 5 g/L sulphuric acid (pH 1.7) and 2.5 g/L sulphuric acid (pH 2) was still ongoing at the 28-day residence time. The acid consumption rate and percentage of impurities in the resulting Pregnant Leach Solution also decline as the acid strength decreases (Figure 4, Table 1 and 2).

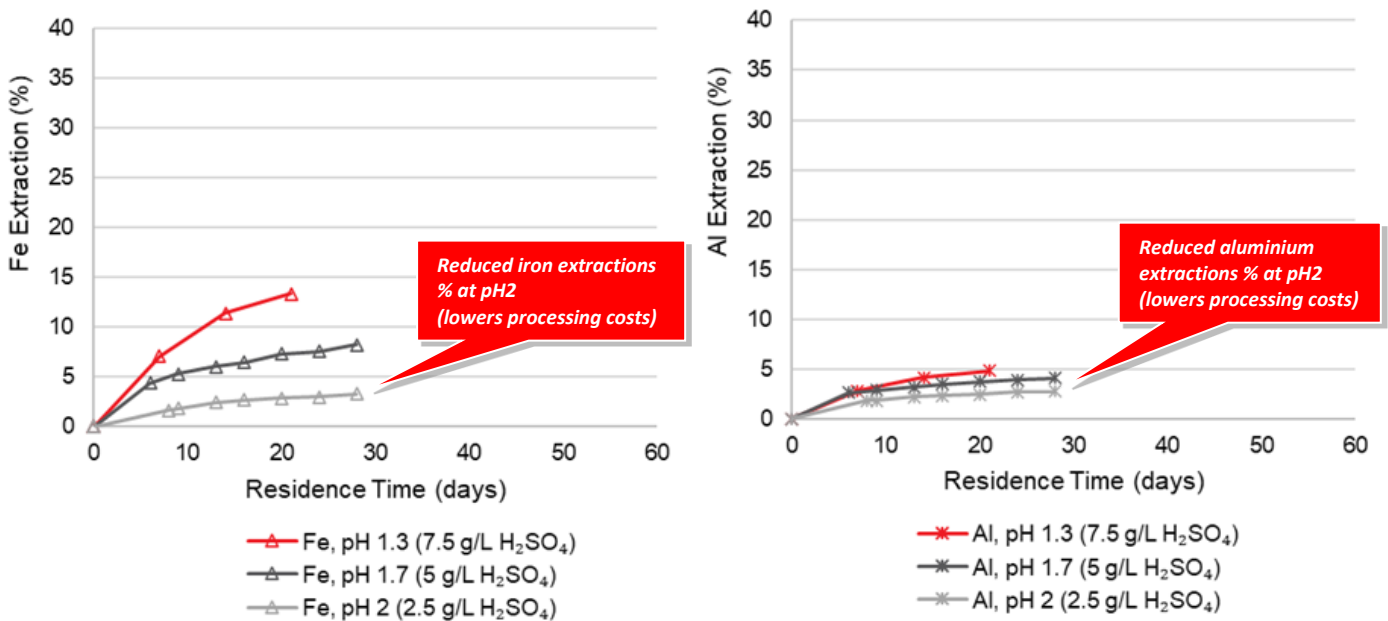
These results indicate longer residence times (>>28 days) should be trialled at weaker acid set points (pH 2, pH 3 and pH 3.5) to achieve terminal REO extractions.

At higher acid strengths (pH 1.3 to pH 2) the weathered granite has proved more economic than fresh granite due to higher dysprosium and terbium extractions and much lower iron impurity in the Pregnant Leach Solution (Table 2).

To assess these options further, impurity removal trials on the Phase 2 liquors are progressing, and column leach tests run through to terminal REO extractions at pH 2 to pH 3.5 are planned.

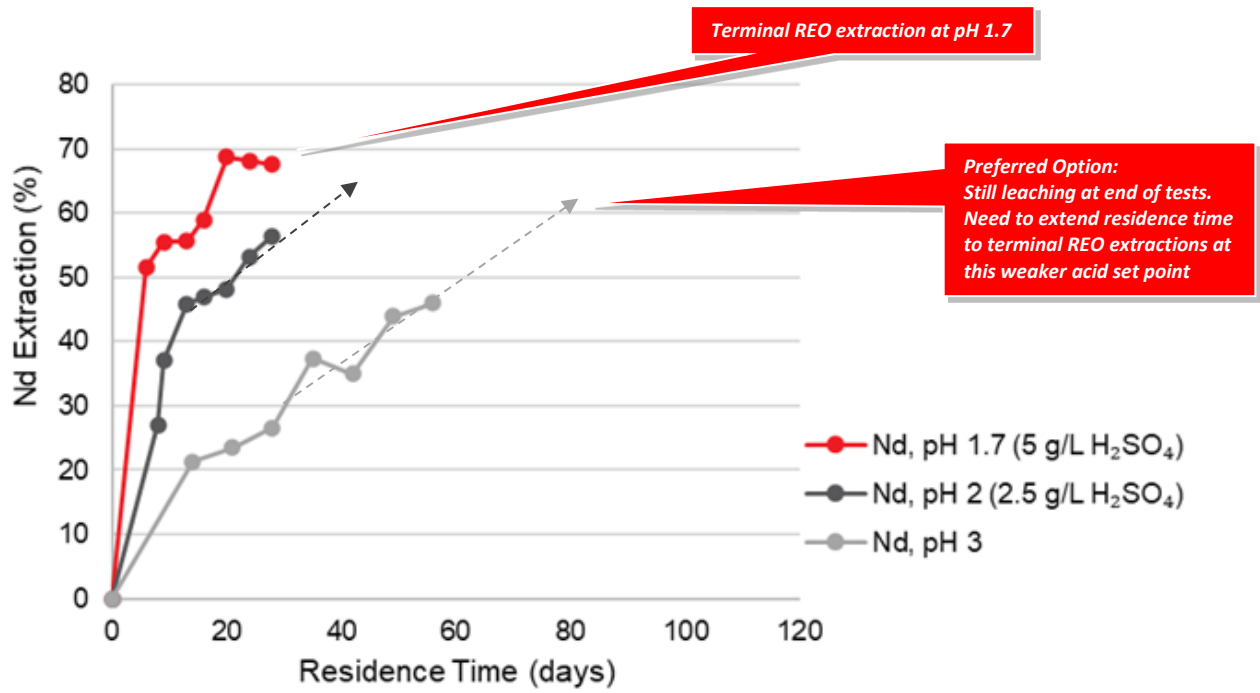


[Figure 3] Weathered granite 28-day kinetic leach extraction curves for neodymium at varying pH set points. Graph highlights very high REO extraction at pH 1.3 and opportunity to achieve good REO extractions by increasing the residence times under weaker acid (higher pH) conditions to terminal REO extraction.

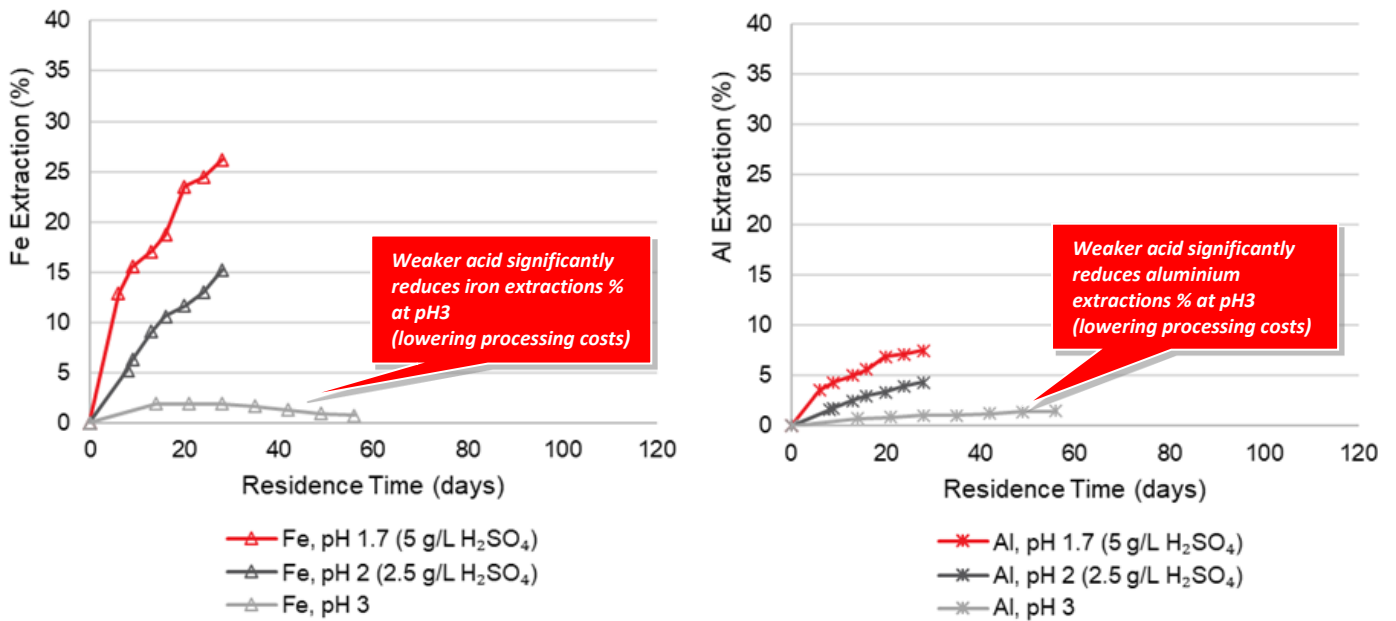


[Figure 4] Weathered granite 28-day kinetic leach extraction curves for the iron and aluminium impurities.





[Figure 5] Fresh granite 28-day and 56 day kinetic leach extraction curves for neodymium at varying pH set points



[Figure 6] Fresh granite 28-day and 56 day kinetic leach extraction curves for the iron and aluminium impurities.

[Table 1] Sybella Phase 2 metallurgical test work, summary of IBRT results - leach pH and variability testing. Financial comparative analyses shown thematically in green shades on right side of the table - darker green is high priority while paler green to white are reduced priority.

Sample Type	Depth (m)		Particle Size P <sub>80</sub> mm	Residence Time Days	H <sub>2</sub> SO <sub>4</sub> g/L	pH (Average)	Head Grade (ppm)						Extraction (%) Discharge Mass Basis						Acid Cons. kg/t H <sub>2</sub> SO <sub>4</sub>	Impurity Extraction (%)		Comparative Analysis
	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		Al	Fe	
RC Chip	0	5	2.2	21	7.5	1.3	1,782	398	81	282	4.9	29	92	91	92	92	80	75	20	5	12	High Priority
	5	10	2.0	21	7.5	1.3	1,843	395	80	281	5.3	30	82	82	84	84	65	57	21	6	14	
-10mm DD	10	15	<i>Excluded due to significant sample loss during drilling</i>																			
	15	20	7.1	16	7.5	1.5	1,701	363	75	257	4.7	27	64	67	75	73	28	20	20	4	13	High Priority
	20	25	7.2	16	7.5	1.5	1,740	367	78	257	4.9	28	58	57	63	61	30	24	22	5	19	Medium Priority
	25	30	7.7	16	7.5	1.5	1,765	380	77	268	5.3	29	49	49	51	51	30	23	24	5	21	Low Priority
	30	60	7.8	16	7.5	1.4	1,820	389	81	272	5.2	30	57	58	58	61	39	31	23	5	22	Low Priority
RC Chip	0	5	2.2	28	5	1.6	1,782	398	81	282	4.9	29	64	63	65	64	50	42	12	3	5	High Priority
	5	10	2.0	28	5	1.6	1,843	395	80	281	5.3	30	71	70	72	72	58	52	18	4	8	High Priority
	10	15	1.8	28	5	1.8	1,846	400	83	283	5.1	29	72	74	77	77	49	38	26	5	9	High Priority
-10mm DD	15	20	7.1	28	5	1.7	1,701	363	75	257	4.7	27	63	65	72	68	30	22	19	4	11	High Priority
	20	25	7.2	28	5	1.7	1,740	367	78	257	4.9	28	59	60	64	62	37	29	29	6	21	Medium Priority
	25	30	7.7	28	5	1.6	1,765	380	77	268	5.3	29	56	56	59	59	35	25	31	7	25	Low Priority
	30	60	7.8	28	5	1.7	1,820	389	81	272	5.2	30	58	59	61	62	41	31	32	8	26	Low Priority
RC Chip	0	5	2.2	28	2.5	2.0	1,782	398	81	282	4.9	29	43	43	44	44	36	31	7	2	2	High Priority
	5	10	2.0	28	2.5	2.1	1,843	395	80	281	5.3	30	55	52	52	53	45	39	12	3	3	High Priority
	10	15	1.8	28	2.5	2.1	1,846	400	83	283	5.1	29	62	63	65	66	42	34	14	3	3	High Priority
-10mm DD	15	20	7.1	28	2.5	2.0	1,701	363	75	257	4.7	27	55	56	60	59	27	20	10	3	5	High Priority
	20	25	7.2	28	2.5	2.0	1,740	367	78	257	4.9	28	50	51	53	53	31	24	15	4	11	Medium Priority
	25	30	7.7	28	2.5	2.0	1,765	380	77	268	5.3	29	44	45	46	47	26	20	17	5	15	Low Priority
	30	60	7.8	28	2.5	2.0	1,820	389	81	272	5.2	30	48	50	51	53	34	25	20	4	15	Low Priority
-15 mm DD	0	60	14.9	56	0	3.0	1,617	340	71	238	4.6	27	41	44	42	42	26	20	6	1	1	High Priority

[Table 2] Sybella phase 2 metallurgical test work based on lithology, summary of IBRT results - leach pH and variability testing. Financial comparative analyses shown thematically in green shades on right side of the table - darker green is high priority while paler green to white are reduced priority.

Lithology	Depth (m)		Particle Size P <sub>80</sub> mm	Residence Time Days	H <sub>2</sub> SO <sub>4</sub> g/L	pH (Average)	Head Grade (ppm)						Extraction (%) Discharge Mass Basis						Acid Cons. kg/t H <sub>2</sub> SO <sub>4</sub>	Impurity Extraction (%)		Comparative Analysis
	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		Al	Fe	
Weathered	0	20	1.8 - 7.1	16 - 21	7.5	1.3	1,785	384	79	271	5.0	29	79	80	84	83	58	51	20	5	13	High Priority
	0	20	1.8 - 7.1	28	5.0	1.7	1,785	384	79	271	5.0	29	68	68	72	71	47	39	18	4	8	High Priority
	0	20	1.8 - 7.1	28	2.5	2.1	1,793	389	80	276	5.0	29	54	53	55	55	38	31	11	3	3	High Priority
Fresh	20	60	7.6	16	7.5	1.5	1,775	379	78	266	5.1	29	55	55	57	58	33	26	23	5	21	High Priority
	20	60	7.6	28	5.0	1.7	1,775	379	78	266	5.1	29	58	59	61	61	38	28	31	7	24	High Priority
	20	60	7.6	28	2.5	2.0	1,775	379	78	266	5.1	29	47	48	50	51	30	23	18	4	14	Low Priority
	0	60	14.9	56	0.0	3.0	1,617	340	71	238	4.6	27	41	44	42	42	26	20	6	1	1	High Priority



## COMMINUTION STUDY

SMC Test work by global experts JKTech on diamond cores of weathered granite (0-20 metres) and fresh granite (20-60 metres) from Sybella drill hole SBDD002 show -10mm crushed rock can be prepared with low energy consumption using simple coarse gyratory, jaw and/or cone crushing.

The SMC Test (Steve Morrell Comminution) is a laboratory comminution test which provides a range of information on the breakage characteristics of rock samples for use in the mining/minerals processing industry. The SMC Test® is the most widely-used comminution test in the world for AG & SAG Mills, HPGRs and Crushers. It is used to design comminution plants, optimise circuit performance, forecast throughput, reduce CO2 emissions and cut energy costs.

Importantly, the Sybella SMC comminution data (Table 3), when compared with several hundred ore tests in JKTech’s global database, show the coarsely crushed Sybella granite ore is classified as “Very Soft” when weathered and “Soft” when fresh (Figure 7).

Data indicates that both the weathered and fresh Sybella granite should be amenable to conventional comminution circuits and will have a relatively low energy requirement for crushing, which should translate into very competitive capital costs and operating costs for both mining and crushing. This coarsely crushed, competent clay-poor rock is ideal for stacking and should offer scope for tall cost-efficient heaps.

[Table 3] Sybella summary of JKTech SMC comminution results for diamond core hole SBDD002.

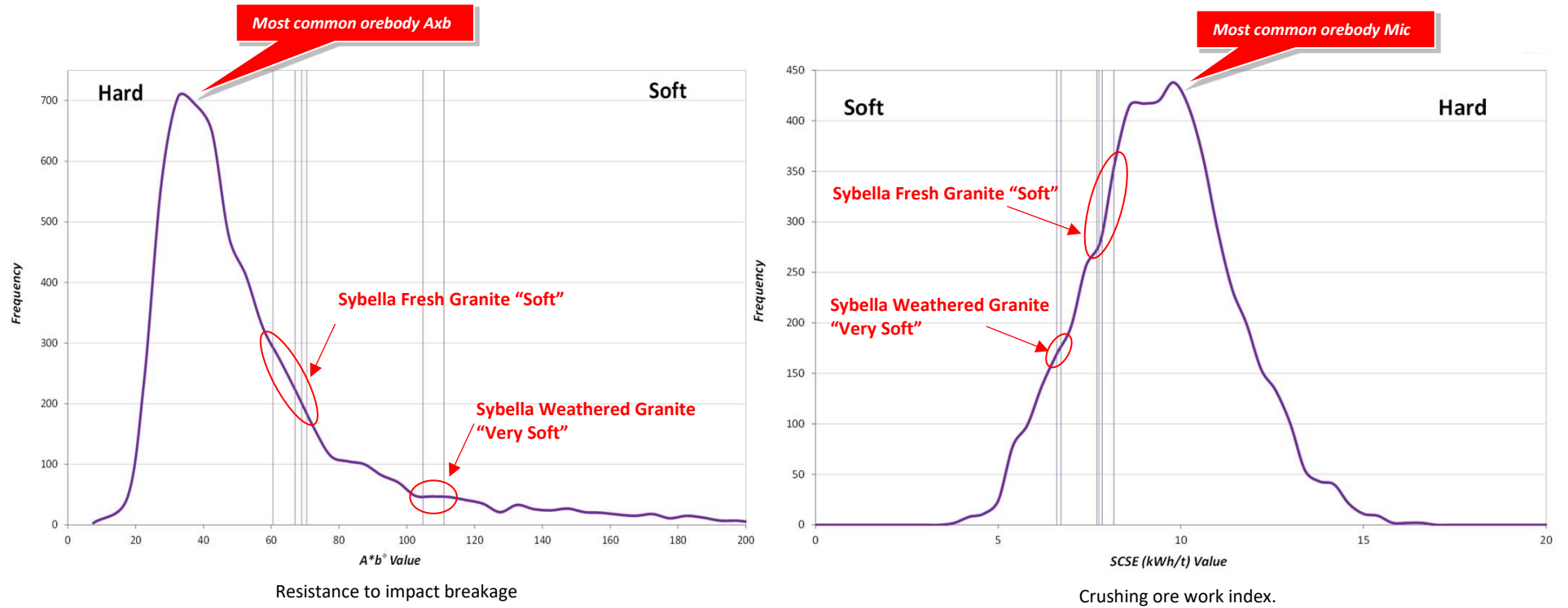
Sample	Rock Type	SG	Mic kWh/t	Axb		JKTech Classification
				Value	% <sup>1</sup>	
SBDD002 0m-10m	Weathered Granite	2.59	2.7	111	91%	Very Soft
SBDD002 10m-20m	Weathered Granite	2.64	2.9	105	90%	Very Soft
SBDD002 20m-30m	Fresh Granite	2.60	4.3	70	78%	Soft
SBDD002 30m-40m	Fresh Granite	2.57	4.4	69	77%	Soft
SBDD002 40m-50m	Fresh Granite	2.59	4.5	67	76%	Soft
SBDD002 50m-60m	Fresh Granite	2.60	5.0	60	70%	Soft

1 - % of samples in SMC database harder than the sample tested

SG - Specific Gravity

Mic - crushing ore work index, (energy consumption per tonne factor).

Axb - measure of resistance to impact breakage



[Figure 7] Sybella Project: Histogram presentation of JKTech’s global SMC deposits database highlighting the Sybella ore types as “Very Soft” when weathered and “Soft” when Fresh.

## OUR DISCOVERY – ON GOING WORK PROGRAMS

In August 2023, Red Metal announced the exciting new Sybella rare earth oxide (REO) discovery just 20 kilometres southwest of Mount Isa in Northwest Queensland (Figure 8) which we believe is a new REO deposit style for Australia and potentially a “world first”. The target is a partially weathered and fresh REO-enriched granite over 12 kilometres long and 3 kilometres wide offering vast tonnage potential.

The initial RC drilling program discovered large widths of granite-hosted REO mineralisation starting at surface (Figure 10 and Red Metal ASX announcement dated 21 August 2023).



[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.

Phase 1 bottle roll leach tests on non-pulverised, RC chip samples of the granite demonstrated that strong REO extractions with potentially manageable levels of impurities can be achieved at ambient temperature with low levels of sulphuric acid consumption. This work points to the opportunity for simple, low-cost REO processing potentially involving heap leach methods (Red Metal ASX announcements dated 1 February 2024 and 18 March 2024).

Encouraged by the early metallurgical work, step-out drilling over an 8 kilometre by 3 kilometre portion of the granite was initiated in early May (Figure 9, refer Red Metal ASX announcements dated 13 May 2024) with more than 70 holes completed to date.

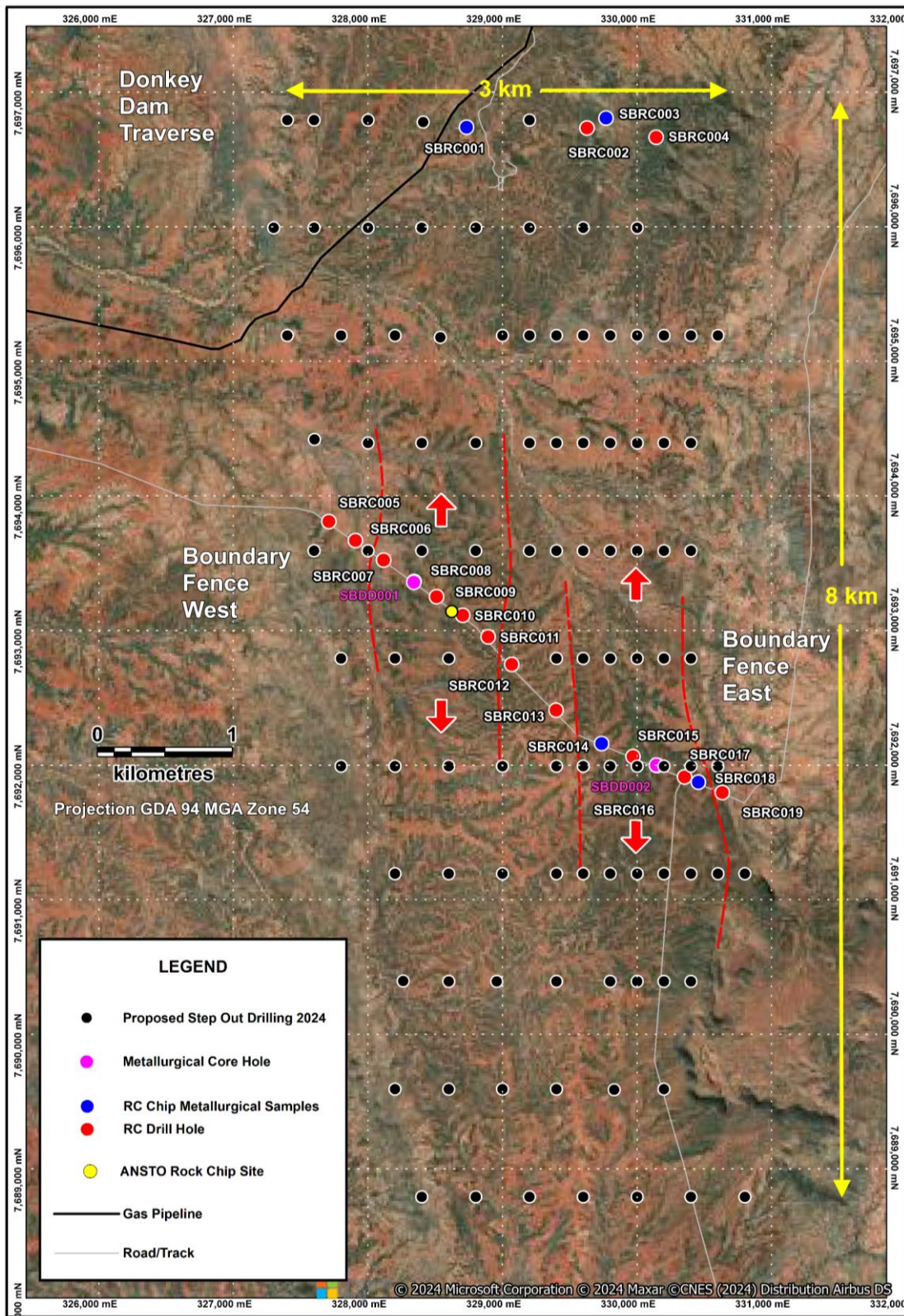
The current Phase 2 leach test work and comminution studies are evaluating the leach responses for a range of size fractions under varying acid strengths and over extended residence times with the purpose of providing more optimised data for an early-stage mining study.

Preparations are underway for follow-on column leach test work using very weak acids (**pH 2 to pH 3.5**) over extended residence times (**>120 days**) with the aim of further improving REO recoveries, reducing acid consumption and lowering contaminants in the resulting Pregnant Leach Solutions.

Impurity removal trials and mixed rare earth carbonate (MREC) precipitation test work on the Pregnant Leach Solutions obtained from the Phase 2 tests are ongoing (Figure 11) with results anticipated within the next

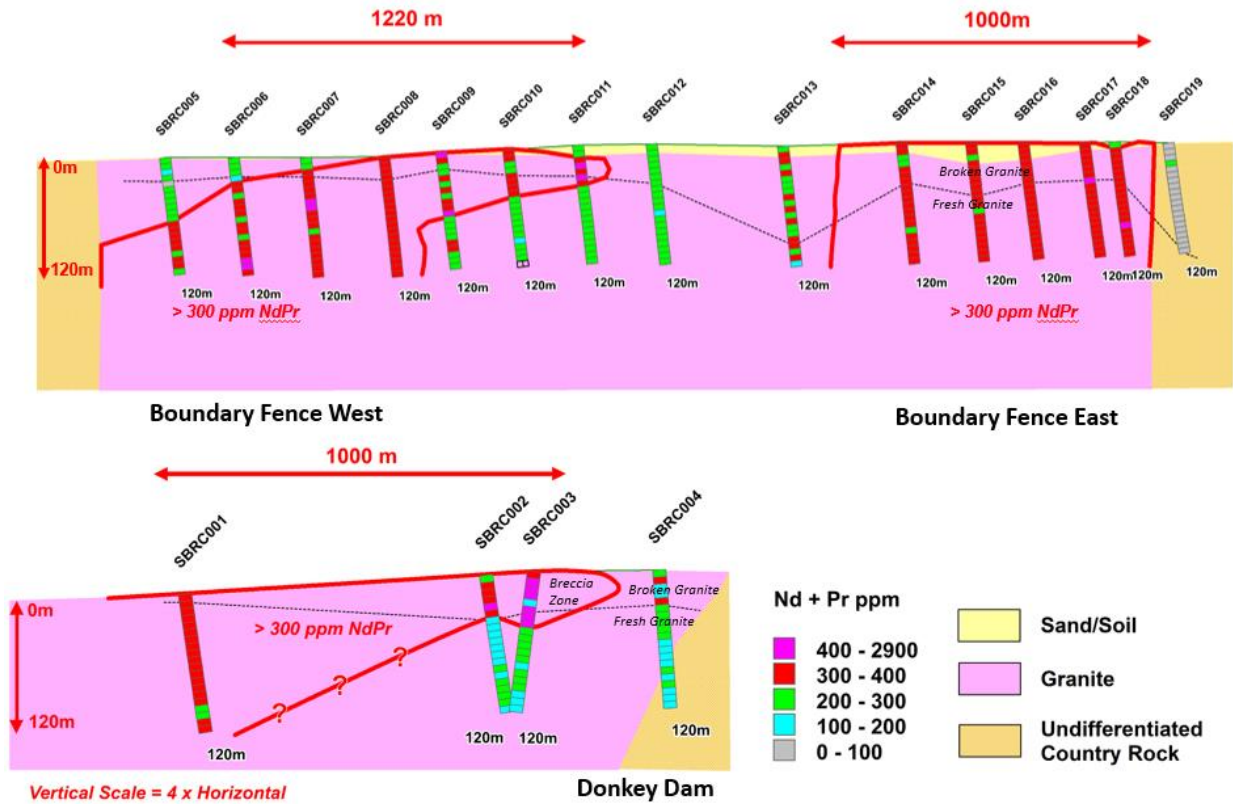


month. Early indications are showing residual contaminants from the Pregnant Leach Solution may be successfully removed, potentially resulting in a premium MREC product.



[Figure 9] 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: the blue RC percussion holes were composite sampled for Phase 1 metallurgical test work, pink circles show the approximate location of metallurgical core holes for the Phase 2 metallurgical test work currently in progress.





[Figure 10] Sybella Project: Drill sections showing variation in *NdPr oxide assay* values at depth and between holes in the granite.



[Figure 11] Sybella Project: impurity removal trials in progress.

## HEAP LEACH EXAMPLES

Heap leaching is a commercially proven and mature processing technology involving heaping of coarsely crushed ore and leaching of the soluble ore mineral with weak acid irrigation. It is a very low cost and low capital extraction process allowing large tonnages of very low-grade ore to be cost effectively mined and processed.

Heap leaching is predominantly used to process low-grade gold and copper ore bodies with over 200 heap leaches currently in operation globally. Copper heap leaches typically utilise sulphuric acid at pH 1 to pH 2 which is comparable to that trialled on Sybella.

Two of the world’s largest copper oxide heap leaches are Freeport-McMoRan’s Morenci heap leach and BHP’s Escondida copper oxide heap leach. Publicly available process conditions for these two projects are provided in Table 4 below, which can be compared with the test conditions applied on the Sybella granite-hosted REO mineralisation types.

[Table 4] Published heap leach processing parameters for the giant Morenci and Escondida heap leach soluble copper operations for comparison with processing parameters trialled on the Sybella REO mineralisation types.

Parameter	Freeport-McMoRan Morenci Crushed Heap Leach		BHP Escondida Oxide Heap Leach	
	Value	Ref.	Value	Ref.
Throughput (mtpa)	26	1	20	4
Head grade (wt% Cu)	0.36	2	0.55	5
Cu Recovery (%)	82	2	62	5
Crush Size (P <sub>80</sub> mm)	40	3	19	5
Heap Residence Time (days)	-		150	5
Leach pH	-		1.3	6

1 - Freeport-McMoRan. *North America Morenci*. [https://www.fcx.com/operations/north-america#morenci\\_link](https://www.fcx.com/operations/north-america#morenci_link)

2 - Freeport-McMoRan. (2024). *Technical Report Summary of Mineral Reserves and Mineral Resources for Morenci Mine*. <https://www.fcx.com/sites/fcx/files/documents/operations/TRS-morenci.pdf>

3 - Drescher, W.H. (2001). *Phelps Dodge Morenci Has Converted All Copper Production to Mine-for-Leach*. <https://www.copper.org/publications/newsletters/innovations/2001/08/phelpsdodge.html>

4 - Ausenco. *Escondida Copper Mine: Oxide leach expansion project*. <https://ausenco.com/projects/escondida-copper-mine-oxide-leach-expansion-project/>

5 - BHP. (2022). Title: *Technical Report Summary – Minera Escondida Limitada SEC S-K 229.1300 Technical Report Summary*. <https://minedocs.com/23/Escondida-TR-6302022.pdf>

6 - Galleguillos Pérez, P. (2011). *Biodiversity and stress response to extremophilic prokaryotes isolated from the Escondida Copper Mine, Chile*. <https://research.bangor.ac.uk/portal/files/20575516/null>

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 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.

**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	<p><i>The Core Group, a Queensland-based hydrometallurgical specialist, were supplied with a series of pulverised RC assay pulp samples and as-received, non-pulverised, RC chip samples (Phase 1 and Phase 2) and diamond core (Phase 2) from the 2023 program and tasked with assessing the leach response with variations in temperature, acid type and pH, residence time and grind size for the fresh and oxidised granite</i></p> <p><i>Wide spaced, reverse circulation percussion (RC) holes were drilled to test the extent of shallow rare earth mineralisation in granite to about 100m below surface and provide samples for proof-of-concept leach test work designed to seek an effective process for REO extraction (refer Red Metal ASX announcement dated 21 August 2023). A total of 19 wide spaced RC holes were drilled to assess REO grade and mineralogical variation across the granite, and discovered shallow, large widths of granite-hosted REO mineralisation at relatively high grades, with three broad areas of interest identified - Boundary Fence East, Boundary Fence West, and Donkey Dam (Figures 9 and 10).</i></p> <p><i>The Phase 2 leach test work, follows on from the Phase 1 proof of concept research on non-pulverised, RC chip samples from the Boundary Fence East area that demonstrated high rare earth extractions (averaging 78% neodymium, 79% praseodymium, 48% terbium and 44% dysprosium) can be achieved using pH 1 intermittent bottle roll tests (IBRT) at ambient temperature (refer Red Metal ASX announcement dated 1 February 2024 and 18 March 2024).</i></p> <p><i>HQ and PQ diamond core holes were drilled from surface through the weathered granite into fresh granite at two separate locations to acquire core for Phase 2 leach tests and comminution studies. One hole was completed at Boundary Fence West (SBDD001) adjacent to percussion hole SBRC008. Three separate, twinned holes were completed at Boundary Fence East (SBDD002, SBDD003, SBDD004) adjacent to percussion hole SBRC016. Refer Figure 9, Appendix 2.</i></p> <p><i>The drill depths and mass recoveries are visually represented below.</i></p> <table border="1"> <caption>Drill Depths and Mass Recoveries</caption> <thead> <tr> <th>Hole ID</th> <th>Depth (m)</th> <th>Sample Type</th> <th>Mass (kg)</th> </tr> </thead> <tbody> <tr> <td>SBDD001</td> <td>0 - 15</td> <td>BoW</td> <td>8</td> </tr> <tr> <td>SBDD001</td> <td>15 - 58.90</td> <td>HQ</td> <td>330</td> </tr> <tr> <td>SBDD002</td> <td>0 - 11.1</td> <td>PQ</td> <td>42</td> </tr> <tr> <td>SBDD002</td> <td>11.1 - 60.60</td> <td>HQ</td> <td>330</td> </tr> <tr> <td>SBDD003</td> <td>0 - 17.10</td> <td>PQ</td> <td>77</td> </tr> <tr> <td>SBDD004</td> <td>0 - 23.10</td> <td>PQ</td> <td>33</td> </tr> </tbody> </table>	Hole ID	Depth (m)	Sample Type	Mass (kg)	SBDD001	0 - 15	BoW	8	SBDD001	15 - 58.90	HQ	330	SBDD002	0 - 11.1	PQ	42	SBDD002	11.1 - 60.60	HQ	330	SBDD003	0 - 17.10	PQ	77	SBDD004	0 - 23.10	PQ	33
Hole ID	Depth (m)	Sample Type	Mass (kg)																											
SBDD001	0 - 15	BoW	8																											
SBDD001	15 - 58.90	HQ	330																											
SBDD002	0 - 11.1	PQ	42																											
SBDD002	11.1 - 60.60	HQ	330																											
SBDD003	0 - 17.10	PQ	77																											
SBDD004	0 - 23.10	PQ	33																											
		<p><i>The IBRT in Phase 2 utilised representative diamond drill core from SBDD002 (Boundary Fence East, Figure 9, Appendix 1) for the partly weathered and fresh rock where core recovery was good (15-60 metres). While non-pulverised RC chips from the nearby percussion hole SBRC016 were sampled for weathered rock (0-15 metres) where drill core recovery in SBDD002 was very low, and not representative due to a loss of REO-enriched fines into the drill sump.</i></p> <p><i>Sample loss as a result of drill-bit flushing appears to have resulted in a grade bias due to loss of fines, evident when comparing the SBDD002-004 head grade with the previous RC drill grades from SBRC016. The fines contain significantly elevated REO grades in Sybella granite, typically twice as high in the -2.36 mm fraction compared to the coarser fractions.</i></p>																												



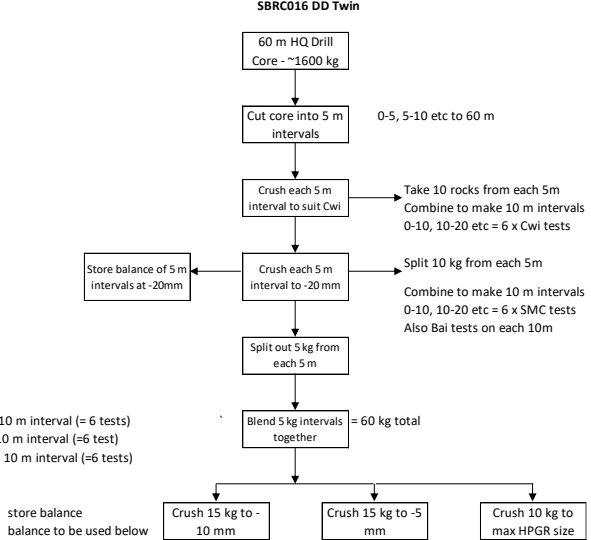
Criteria	JORC 2012 Explanation	Commentary
		<p>As a result, it was elected to use RC chip samples for the weathered zone (0-15 m) for IBRT testing as opposed to diamond drill core. This combination of core and RC percussion methods of drilling is considered to be of an acceptable quality for validating the leach properties the REO mineralisation within the granite and reporting of exploration results.</p>
	<p>Include reference to measures taken to ensure representativity samples and the appropriate calibration of any measurement tools or systems used.</p>	<p>To ensure representativity during Phase 2 IBRT, as received, non-pulverised, RC chip samples and pulverised core were collected every metre and composited over five metres for IBRT.</p> <p>As-received drill core trays for Boundary Fence East diamond drill core holes SBDD002 to SBDD004 were prepared by JKTech. Twinned holes SBDD002, SBDD003 and SBDD004 were blended to collect sufficient sample mass. The blended core sample of SBDD002-004 is referred to as SBDD002 in the leach results. Comminution test work was carried out on six 10 m intervals (Table 3 in this announcement).</p> <p>After some initial trials on -15mm crushed core composited from 0-60 metres, variability IBRT tests were performed on -10mm crushed core and non-pulverised RC chips composited every 5 metres down hole.</p> <p>At Boundary Fence East, composite sampling during Phase 1 IBRT was continuous down the length of 3 nearby holes SBRC014, SBRC016, SBRC018 to assess spatial variability and representativity down-hole and between holes over this better performing area.</p>
	<p>Aspects of the determination of mineralisation that are Material to the Public Report.</p>	<p>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.</p>
<p><b>Drilling Technique</b></p>	<p>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.).</p>	<p>The percussion drilling, completed during Phase 1, used a track mounted, conventional RC rig with a face sampling bit collecting samples from surface to end of hole. A conventional wire line diamond core rig was used to collect core from surface to the end of hole</p> <p>The RC and diamond core holes were surveyed using an Axis Champ north seeking gyro.</p>
<p><b>Drill Sample Recovery</b></p>	<p>Method of recording and assessing core and chip sample recoveries and results assessed.</p>	<p>Sample recoveries were visually estimated and recorded for each metre of percussion and core drilling.</p> <p>RC chip recovery overall was very good with most intervals logged as 100% recovery with local areas reduced to 60%.</p> <p>Core recovery was very poor (less than 30-50%) throughout most of the weathered granite interval from 0-15m improving as the granite became less weathered. Core recovery in the weakly weathered granite and fresh granite was very good (generally &gt;90%).</p>
	<p>Measures taken to maximise sample recovery and ensure representative nature of the samples.</p>	<p>Depths are checked against depths marked on the sample bags and core blocks, and rod counts are routinely performed by the drillers.</p> <p>Triple tube core barrels and larger diameter PQ core was applied to improve the core recovery through the weathered granite zone, but with no significant improvement.</p>
	<p>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.</p>	<p>For RC chip assays no sample recovery bias is observed due to homogenous distribution of the REO mineralisation in the granite, however size fraction assays show more rare earths in the finer-grained material.</p> <p>Sample loss as a result of drill-bit flushing appears to have resulted in a grade bias due to loss of fines when comparing the SBDD002-004 head grade with the previous RC drill grades from SBRC016. The fines contain significantly elevated REO grades, typically twice as high in the -2.36 mm fraction compared with the coarser fractions.</p> <p>As a consequence, Phase 2 IBRT relied up non-pulverised RC chip samples in the weathered granite from 0-15 metre depth.</p>

Criteria	JORC 2012 Explanation	Commentary
<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>Qualitative codes and descriptions were used to record geological data such as lithology, weathering and hardness prior to sampling.</i>
	Whether logging is qualitative or quantitative in nature.	
	Core photography	<i>Chip trays and core are photographed.</i>
	The total length and percentage of the relevant intersections logged.	<i>The total lengths of all holes have been geologically logged.</i>
<b>Sub-sampling techniques and sample preparation</b>	If core, whether cut or sawn and whether quarter, half or all core taken.	<i>Whole core was crushed by JKTech for comminution studies and compositing for leach test work</i>
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	<i>IBRT work utilised 5 metres composite samples derived from cyclone split, non-pulverised RC chip samples collected for each metre, or crushed core composited over 5 metre.</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>
	Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.	<i>For RC chip samples, head assay grade results from the 5 metre IBRT composite samples were checked against the average of five 1 metre assays on RC pulps over the same interval, and consistently showed very good representativity.</i>  <i>For 5m core composite samples, head assay grades were compared against assays over similar intervals in the nearby RC percussion holes and showed very good correlation between holes.</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>Five IBRT repeat tests from the Phase 1 test program were completed by an independent laboratory (ANSTO) for added due diligence. Refer Red Metal ASX: RDM announcement dated 18 March 2024.</i>  <i>No duplicate or repeat composite sampling for IBRT work from Phase 2 work has 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.	<i>All solid samples (including head and leach tail) were analysed using the following assay methods:</i>  <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>  <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>  <i>All liquid samples were analysed using the following assay methods: Base metals and rare earth elements via OES-ICP analysis at Core Group's internal laboratory, including 15 REE (not including Lu). Sulphuric acid concentration using sodium hydroxide titration.</i>  <i>Final filtrate samples from IBRT were also analysed using the below method (in addition to the above methods): ALS method ME-MS02 – MS-ICP analysis for Pr, Nd, Tb, Dy, which supersede Core's internal OES-ICP results where applicable.</i>

Criteria	JORC 2012 Explanation	Commentary																																																			
	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>Result reviewed by the Company's Exploration Manager, Database Manager and the Managing Director, and metallurgical specialists at Core Group.</i></p> <p><i>The original Phase1 report was reviewed ANSTO. Five IRBT repeat tests from the Phase 1 test program were completed by an independent laboratory (ANSTO) for added due diligence - refer Red Metal ASX: RDM announcement dated 18 March 2024.</i></p> <p><i>Additional independent repeat tests on the Phase 2 leach test work are planned</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.</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>																																																			
	Discuss any adjustment to assay data.	<p><i>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.</i></p> <table border="1" data-bbox="995 1249 1228 1624"> <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>2</sub>O<sub>3</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><i>Rare earth abbreviations typically used in industry reporting and throughout this report were in accordance with IUPAC guidelines, and were as follows:</i></p> <p><i>REE - Rare Earth Elements, value presented as elemental assay.</i></p> <p><i>REO - Rare Earth Oxides, value presented as oxide assay.</i></p> <p><i>TREE - La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu plus Y and Sc.</i></p> <p><i>MREE - Pr, Nd, Tb, Dy.</i></p> <p><i>LREE - La, Ce, Pr, Nd and Sm.</i></p> <p><i>HREE - Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu plus Y.</i></p> <p><i>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></i></p> <p><i>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></i></p> <p><i>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></i></p> <p><i>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></i></p> <p><i>NdPr -is the sum of the oxide values for neodymium and praseodymium.</i></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>2</sub> O <sub>3</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>
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>2</sub> O <sub>3</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>																																																			

Criteria	JORC 2012 Explanation	Commentary
		<p>There are three commonly applied approaches to calculating extraction for leaching:</p> <p><u>Tail over Head</u>, which is calculated as <math>1 - \text{tail grade/head grade}</math>. Where notable mass loss occurs in leaching, as is common for acid leaching, the tail grade is increased due to the mass loss and would result in an underestimated extraction. In this case, the tail grade is corrected via accounting for the solids mass loss, or via a "tie-in" with a non-soluble element such as Pb.</p> <p><u>Mass Basis</u>, which is calculated as <math>\text{element mass in liquor} / (\text{element mass in liquor} + \text{element mass in solids})</math> 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> <p><u>Liquor out over solids in</u>, which is calculated as <math>\text{element mass in liquor} / \text{element mass in solids in}</math>. This method is the most prone to error, as it includes sampling error on the head assay, error in the liquor assay and error in the liquor SG assay. Small errors in the liquor assay can result in large percentage differences in extraction when the extraction extent is high (&gt;70%) due to the nature of the calculation.</p> <p>For the Phase 2 test program, the mass basis extraction method, has been used throughout the test work program for rare earth elements. The mass basis extraction method has also been used throughout the test work program for impurity elements (Al and Fe). The discharge mass basis method was preferable to the tail over head method due to the larger sample variability inherent for 10mm and 15mm samples, which can result in erroneous extraction via the tail over head method.</p>
<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.	The collar positions were surveyed by handheld GPS using GDA94, Zone54 datum. GPS locations are accurate to about 3m.
	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.	<p>A total of 19 RC and 4 diamond core holes were drilled across the granite to assess REO grade and mineralogical variation and depth extent.</p> <p>HQ and PQ diamond core holes were drilled from surface through the weathered granite into fresh granite at two separate locations to acquire core for Phase 2 leach tests and comminution studies. One hole was completed at Boundary Fence West (SBDD001) adjacent to percussion hole SBRC008. Three separate, twinned holes were completed at Boundary Fence East (SBDD002, SBDD003, SBDD004) adjacent to percussion hole SBRC016 and composited together to get sufficient sample for the Phase 2 leach test work. This composite of core holes SBDD002-004 is referred to as SBDD002 when reporting IBRT results (Refer Figure 9, Appendix 2).</p> <p>During Phase 1 A total of 36 coarse composite RC chip samples for IBRT work were collected across the granite to assess spatial variations in leach responses. At Boundary Fence East sampling was continuous down the length of 3 nearby holes SBRC014, SBRC016, SBRC018 to assess variability down-hole and between holes over this better performing area (total 20 samples). Spatial variability across the granite is limited to 16 selected IBRT composite samples at Boundary Fence East, Donkey Dam West and the Donkey Dam Breccia.</p> <p>The IBRT in Phase 2 utilise representative diamond drill core from Boundary Fence East (SBDD002) for the partly weathered and fresh rock where core recovery was good (15-60 metres). Non-pulverised RC chips (SBRC016) were sampled for weathered rock (0-15 metres) where drill core recovery was very low and not representative due to a loss of REO-enriched fines into the drill sump.</p> <p>For Phase 2, a total of 21 IBRT at range of pH set points and residence times have been performed on samples composited at regular 5 metre intervals down-hole from 0-60 metres (Table 1, this announcement). In addition, a single IBRT leach</p>



Criteria	JORC 2012 Explanation	Commentary
		<p>at pH 3 over 56 days was performed on a sample of -15mm crushed core composited from 0-60m (Table 1, this announcement).</p>
	<p>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.</p>	<p>The RC 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.</p> <p>The Phase 2 IBRT sample spacing was limited to one drill hole position and sufficient for proof-of-concept leach test work on both the fresh and weathered granite lithologies. More test work is needed to determine the lateral spatial variability across the granite</p> <p>Phase 1, pH 1, leach results from closer spaced samples on the Boundary Fence East traverse show good continuity down hole and between SBRC014, SBRC016, SBRC018 which are regularly spaced over about 800 metres (refer Red Metal ASX announcement dated 1 February 2024 and 18 March 2024).</p>
	<p>Whether sample compositing has been applied.</p>	<p>IBRT work for Phase 1 and Phase 2 utilised 5 metres composite samples derived from cyclone split samples collected for each metre. The RC chip samples were received in calico bags, with each calico bag containing a 1 m interval with 1.5-2 kg of sample. The calico bags had been collated into interval composites, typically 5 m but occasionally 3 or 6 m, and contained within a large green plastic bag. The 1 m intervals in each composite were inventoried, blended together using a rotary splitter and representatively subdivided into suitable aliquots for test work, with a head sample split for sizing and assay. The rotary split head samples were sized using a RO-TAP sieve shaker at 2.36, 1.70 and 1.18 mm to generate a P80 for each sample. The head sample was then pulverised and assayed.</p> <p>As-received drill core trays for Boundary Fence East (SBDD002-004) were prepared by JKTech. The flowsheet for sample preparation at JKtech can be viewed below, which included blending of SBDD002 with SBDD003 and SBDD004 given they were twinned holes adjacent to RC percussion hole SBRC016 to collect sufficient sample mass. The blend of SBDD002-004 is referred to as SBDD002 for IBRT reporting. Comminution test work was carried out on 10 m intervals (six intervals in total).</p>  <pre> graph TD     A[60 m HQ Drill Core - ~1600 kg] --&gt; B[Cut core into 5 m intervals]     B --&gt; C[Crush each 5 m interval to suit Cwi]     C --&gt; D[Crush each 5 m interval to -20mm]     D --&gt; E[Split out 5 kg from each 5 m]     E --&gt; F[Blend 5 kg intervals together = 60 kg total]     F --&gt; G[Crush 15 kg to -10 mm]     F --&gt; H[Crush 15 kg to -5 mm]     F --&gt; I[Crush 10 kg to max HPGR size]          B -.-&gt; B1[0-5, 5-10 etc to 60 m]     C -.-&gt; C1[Take 10 rocks from each 5m Combine to make 10 m intervals 0-10, 10-20 etc = 6 x Cwi tests]     D -.-&gt; D1[Split 10 kg from each 5m Combine to make 10 m intervals 0-10, 10-20 etc = 6 x SMC tests Also Bai tests on each 10m]     E -.-&gt; E1[Store balance of 5 m intervals at -20mm]     F -.-&gt; F1[Cwi on each 10 m interval (= 6 tests) Bai on each 10 m interval (=6 test) SMC on each 10 m interval (=6 tests)]     G -.-&gt; G1[store balance balance to be used below]     </pre>
<p><b>Orientation of data in relation to geological structure</b></p>	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p>	<p>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.</p>
	<p>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this</p>	<p>Insufficient data to determine bias at this point.</p>

Criteria	JORC 2012 Explanation	Commentary
	should be assessed and reported if material.	
<b>Sample security</b>	The measures taken to ensure sample security.	<p><i>RC 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 metres composite samples were transported directly to ALS Mt Isa for preparation and analysis.</i></p> <p><i>Core holes were logged and transported directly to JKTech for compositing and comminution studies.</i></p>
<b>Audits or reviews</b>	The results of any audits or reviews of sampling techniques and data.	<p><i>Core Groups Phase 1 final report was externally reviewed by REO metallurgical specialists. Five IRBT repeat tests from the Phase 1 test program were completed by an independent laboratory (ANSTO) for added due diligence. Refer Red Metal ASX: RDM announcement dated 18 March 2024.</i></p> <p><i>Core Groups Phase 2 interim report was reviewed by Red Metal's experienced Managing Director, Board members and Exploration Manager.</i></p>

### 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>No previous drilling by other parties has been 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:	<p><i>Refer to Figures 9 and Appendix 2 for diamond drill hole collar information and Red Metal ASX: RDM announcement dated 21 August 2023 for RC drill hole collar coordinates and JORC tables.</i></p> <p><i>A summary of key results from the Phase 2 IBRT are presented in Tables 1 and Table 2.</i></p>
<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>

Criteria	JORC 2012 Explanation	Commentary
<b>Relationship between mineralisation widths and intercept lengths</b>	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').	<i>At this stage of exploration insufficient data exists to confidently estimate true widths.</i>
<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 Figure 9, Table 1, Table 2, and Appendix 2 in this announcement, and Red Metal ASX: RDM announcement dated 21 August 2023 for RC 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 and Table 2</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.	<p><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></p> <p><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></p>
<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).	<p><i>Column leach tests are planned, trialling higher pH set points of 2, 3 and 3.5 on weathered AC sample, and coarsely crushed diamond core from both Boundary Fence West (SBDD001) and Boundary Fence East (SBDD002).</i></p> <p><i>Impurity removal and mixed rare earth carbonate (MREC) precipitation test work on leach liquors generated from IBRT discussed in this report are underway.</i></p> <p><i>Step-out drilling over an 8 kilometre by 3 kilometre portion of the granite was initiated in early May with more than 70 holes completed to date (refer Red Metal ASX: RDM announcement dated 13 May 2024).</i></p> <p><i>Follow-on work 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></p>

## Appendix 2: Sybella Project Diamond Core Collar Information.

HOLE_ID	Easting	Northing	RL	Dip	Azim_True	Depth
SBDD001	328340	7693365	416	-90	0	58.9
SBDD002	330145	7692005	428	-90	0	60.6
SBDD003	330144	7692006	428	-90	0	17.1
SBDD004	330143	7692007	428	-90	0	15.6

Note: 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.