ASX ANNOUNCEMENT
Heavy Rare Earths Limited (ASX: HRE)
13 May 2024

SUCCESSFUL PRODUCTION OF 51.8% TREO MIXED RARE EARTH CARBONATE FROM COWALINYA

- **Cowalinya rare earth mineralisation supports development of conceptual downstream process flowsheet to mixed rare earth carbonate (MREC)**
- **MREC sample grading 51.8% TREO produced**
- **Potential commercial value of MREC enhanced by very high magnet rare earth composition of 31.2%**
- **Collection of 3 tonnes of mineralisation from Cowalinya in progress for upscaled process optimisation program**

Heavy Rare Earths Limited (**"HRE"** or **"the Company"**) is pleased to report success in producing a mixed rare earth carbonate (MREC) sample from rare earth mineralisation at its 100 per cent-owned Cowalinya project near Esperance in Western Australia.

HRE Executive Director, Richard Brescianini, said, "We are pleased with the outcome of our initial attempt at designing and testing a downstream flowsheet to treat saprolite-hosted mineralisation from Cowalinya.

"The 51.8% TREO mixed rare earth carbonate result exceeded my expectation, and the high proportion of magnet rare earths of more than 31% attests to its potential for premium commercial value. Nonetheless we still have work to do to reduce impurities to levels that are necessary to demonstrate product marketability.

"Taken together with the positive metallurgical variability testwork results reported in March, we are sufficiently encouraged by today's result to upscale our downstream program to produce an increased volume of mixed rare earth carbonate for market assessment. Collection of feed material for this program is underway."

In previous phases of the metallurgical program, simple screening of 13 (mainly 5-metre) mineralised composites from 10 drill holes by Perth-based Strategic Metallurgy ("Strategic") demonstrated a 2x rare earth upgrade to -25µm undersize representing 37.2% of the bulk saprolite feed mass *(refer to ASX announcement 13 December 2022)*. Subsequent acid leaching of the undersize by Strategic extracted an average of 82.9% of the magnet rare earths, consuming 18.1 kg of 32% hydrochloric acid per tonne of undersize feed for preferred material types *(refer to ASX announcement 12 July 2023)*.

These results allowed HRE to develop whole rock geochemical algorithms to select an additional 63 (mainly 6-metre) mineralised composites from 55 drill holes across the entire project area for an expanded program of sizing and diagnostic leach testing. This program delivered results consistent with earlier phases of the program and demonstrated relatively modest metallurgical variability across the Cowalinya resource with preferred material types,

characterised by high leachability (>75%) of the payable magnet rare earths Pr, Nd, Tb and Dy and low consumption (<40 kilograms per tonne of undersize feed) of 32% hydrochloric acid, potentially occupying a sizeable extent of the currently defined resource *(refer to ASX announcement 12 March 2024)*.

Separately, Strategic prepared a 1 kg blend of screened undersize leach feed from 4 of the 13 mineralised composites used in the original sizing and acid leaching sighter work, for the development of a conceptual downstream flowsheet to produce MREC. The sample blend had a TREO grade of 2,595 ppm and was subjected to a simple leach, purification and precipitation regime as shown in Figure 1.

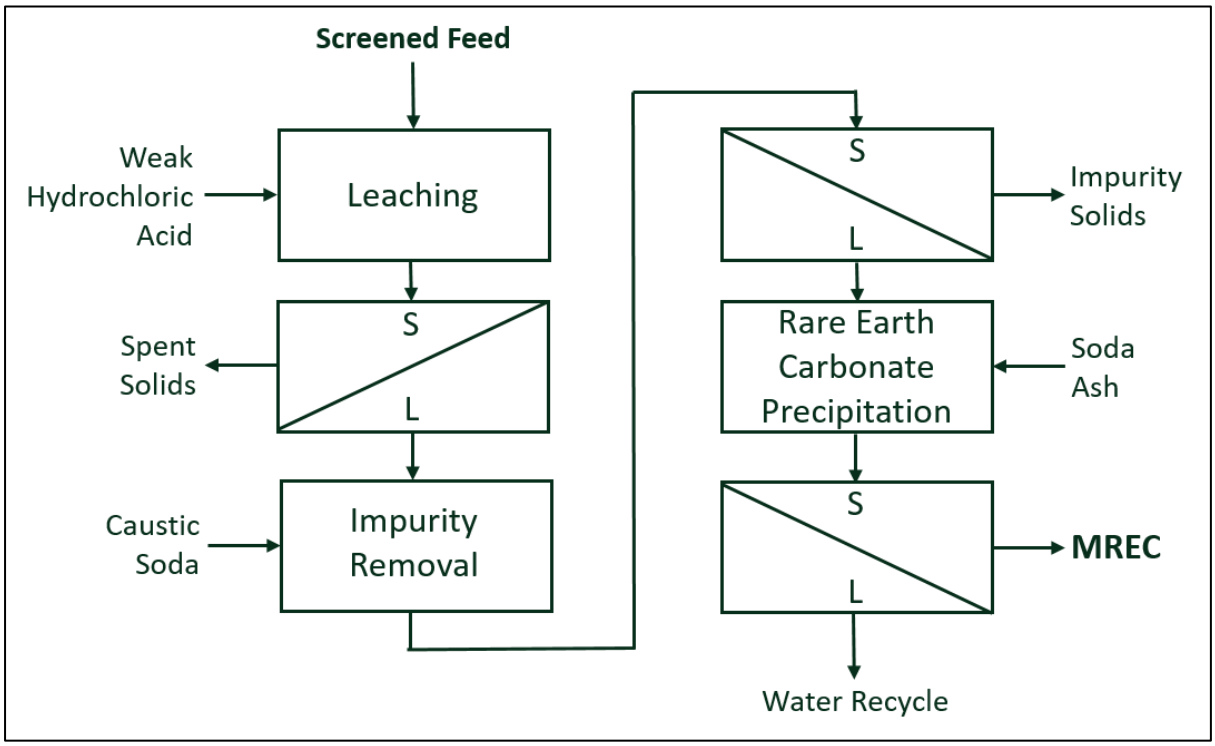

Figure 1: MREC testwork flowsheet.

Without any optimisation, a high grade (51.8% TREO) MREC was produced containing a high proportion of the valuable magnet rare earths Pr, Nd, Tb and Dy representing 31.2% of the total rare earth content. A detailed analysis of the rare earth content in the leach feed and MREC solids is presented in Table 1.

Whilst the total impurity content at 8.4% (mainly iron, copper and sodium) is over specification for a commercial rare earth separation plant (typically below 5%), the Company emphasises that this was a 'first pass' concept program to demonstrate that MREC can be produced from the Cowalinya deposit.

HRE is currently collecting material from 167 existing drill holes across the project area for a 3-tonne mineralised blend which includes all metallurgical composites from the recent variability program *(refer to ASX announcement 12 March 2024)*. The blend is anticipated to grade ~900 ppm TREO (*c.f.,* Cowalinya average resource grade of 870 ppm TREO at a 400 ppm TREO-CeO_2 cut-off). It will then be screened to produce approximately 1 tonne of undersize leach feed for a larger scale metallurgical program focusing on optimising magnet

rare earth recovery and reagent use, and producing an MREC product acceptable to downstream commercial separation plants.

Subject to the success of this larger scale program, HRE will engage with organizations in the downstream rare earth supply chain to establish MREC product marketability and to investigate collaboration opportunities in the ongoing development of the Cowalinya project.

Table 1: Mixed rare earth carbonate (MREC) assay.

	GRADE (ppm)	
	UNDERSIZE LEACH FEED	MIXED RARE EARTH CARBONATE
La	384	91,590
Ce	436	106,000
Pr	110	24,580
Nd	451	101,400
Sm	86	18,810
Eu	16	3,409
Gd	90	15,850
Tb	13	1,989
Dy	70	10,100
Ho	15	1,863
Er	39	4,361
Tm	5.7	500
Yb	34	2,539
Lu	4.9	344
Y	410	50,280
TREE	2,164	433,616
TREO	2,595	518,383
TREO (%)	0.26%	51.8%
MREO	754	161,902
MREO (%)	0.08%	16.2%
MREO/TREO (%)	29.1%	31.2%

TREE (TOTAL RARE EARTH ELEMENTS) = La + Ce + Pr + Nd + Sm + Eu + Gd + Tb + Dy + Ho + Er + Tm + Yb + Lu + Y.
TREO (TOTAL RARE EARTH OXIDES = La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3.
MREO (MAGNET RARE EARTHS) = Pr_6O_{11} + Nd_2O_3 + Tb_4O_7 + Dy_2O_3.
GRADE in ppm except where indicated.

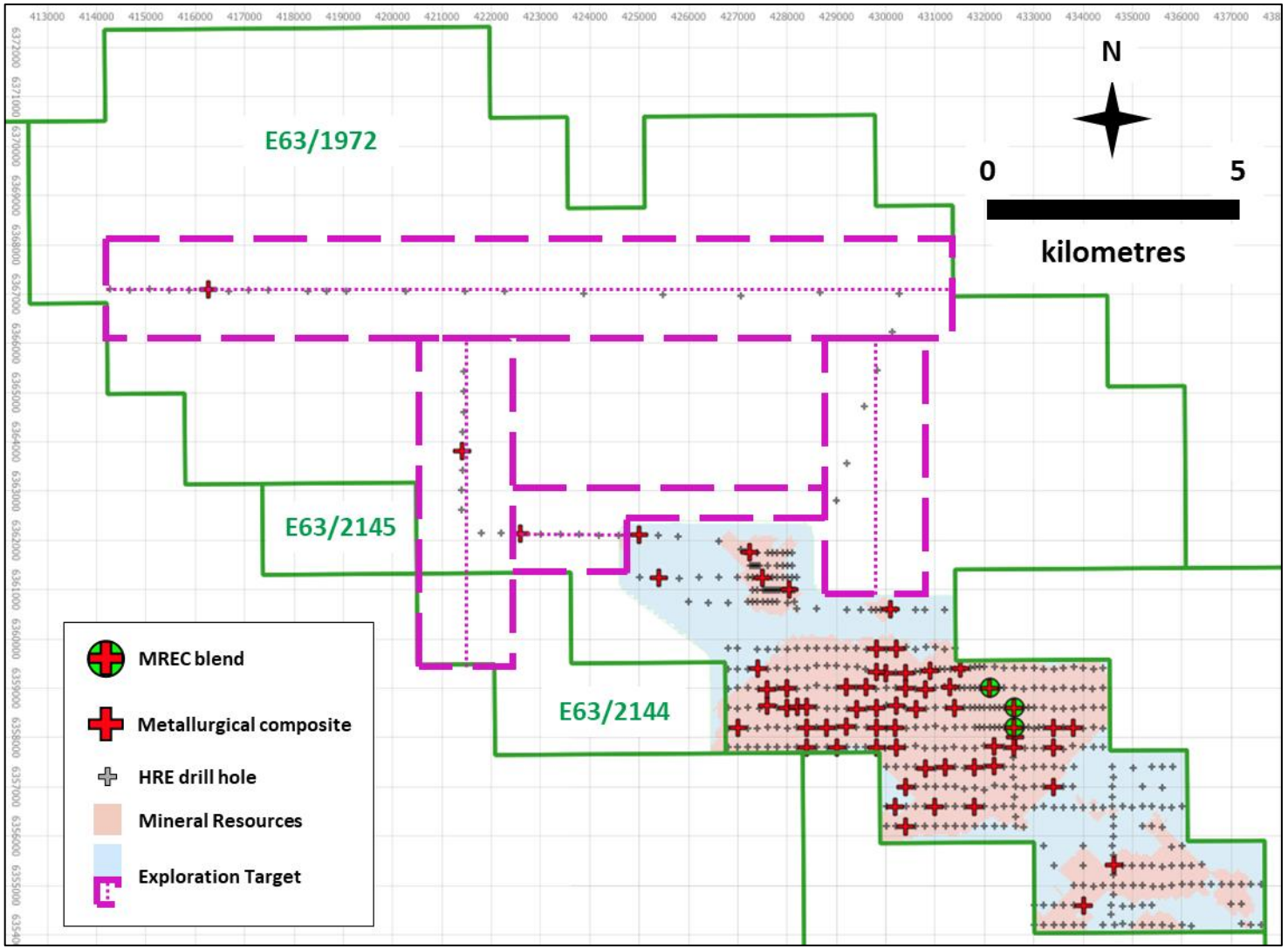

Figure 2: Location of saprolite composites used to produce MREC sample.

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This announcement has been approved by the Board of HRE.

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About Heavy Rare Earths Limited
Heavy Rare Earths Limited (ASX:HRE) is an Australian rare earth exploration and development company. HRE's key exploration project is Cowalinya, near Esperance in Western Australia. This is a clay-hosted rare earth project with a JORC Inferred Resource of 159 Mt @ 870 ppm TREO and a desirable rare earth composition where 28% are the valuable magnet rare earths and 23% the strategic heavy rare earths.

Competent Persons Statement
The Exploration Results contained in this announcement were compiled by Mr. Richard Brescianini. Mr. Brescianini is a Member of the Australian Institute of Geoscientists (MAIG). He is a director and full-time employee of Heavy Rare Earths Limited. Mr. Brescianini has more than 35 years' experience in mineral exploration and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 JORC Code.

The information in this announcement that relates to metallurgical results is based on information compiled by Heavy Rare Earths Limited and reviewed by Mr. Gavin Beer of Met-Chem Consulting Pty. Ltd. who is a Member and Chartered Professional of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr. Beer has sufficient experience that is relevant to the metallurgical testwork which was undertaken to qualify as a Competent Person as defined in the 2012 JORC Code. Mr. Beer consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

The Mineral Resources and Exploration Target contained in this announcement were compiled by Mr. Robin Rankin. Mr Rankin is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM) and accredited as a Chartered Professional by the AusIMM in the Geology discipline. He is the Principal Consulting Geologist and operator of independent geological consultancy GeoRes. Mr Rankin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 JORC Code.

Table 2: Saprolite composites used in metallurgical testwork.

COMPOSITE	HOLE NO.	FROM (m)	TO (m)	INTERVAL (m)	TREO (ppm)	TREO-CeO_2 (ppm)	MAGNET REOs/TREO	PROPORTION OF BLEND
SM01	AC4	24	29	5	1045	724	29.2%	31%
SM02	AC16	12	17	5	750	473	24.6%	8%
SM03	AC16	24	29	5	1383	1131	30.2%	46%
SM04	AC28	14	19	5	1280	1158	32.2%	15%

Table 3: Cowalinya air core holes for which metallurgical results are reported.

HOLE NO.	NORTHING (m)	EASTING (m)	EVEVATION (m)	DIP (°)	TOTAL DEPTH (m)
AC4	6358200	432600	261.3	-90	36
AC16	6358600	432600	260.9	-90	32
AC28	6359000	432100	265.2	-90	39

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this Section apply to all succeeding Sections)

Criteria	JORC Code Explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g., cut channels, random chips, or specific specialized industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	A total of 550 vertical air core holes have been drilled by Heavy Rare Earths (HRE) on the Cowalinya project to date: 109 holes in 2021 (AC1-AC109) and 441 holes in 2022 (AC110-AC547). Maximum hole depth is 59 metres. All holes have been tested for supergene rare earth element (REE) mineralisation hosted by saprolitic clays. Drilling in 2021 overlapped extensively with areas previously air core drilled by two companies exploring for gold (AngloGold Ashanti Ltd and Great Southern Gold Pty Ltd). One-metre samples are collected from a cyclone into plastic bags. In the 2021 drilling program, 100 holes were 4 metre composite-sampled with shorter composites at end of hole, and 9 holes were sampled on a 1 metre basis. All holes drilled in 2022 were 2 metre composite-sampled with 1 metre samples at end of hole. All mineralised intervals from drilling in 2021 were re-composited to 2 metres. Overlying transported sediments are not routinely sampled as they do not contain anomalous amounts of REEs.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	For air core drilling, regular air and manual cleaning of cyclone is being undertaken. Certified standards and duplicate samples are submitted with drill samples.
	Aspects of the determination of mineralisation that are Material to the Public Report.	Air core drilling is used to obtain 1m samples which are collected in plastic bags. Samples ranging from 1m to 2m composites are taken for analysis. Sample size is 2-3 kilograms in weight. At LabWest Minerals Analysis (LabWest) in Perth, Western Australia, samples are dried, crushed, split and pulverized with a 0.1-gram sub-sample set aside for assay.

Criteria	JORC Code Explanation	Commentary
Drilling techniques	*Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	The drill type is air core, a form of reverse circulation (RC) drilling using slim rods and a 3.5-inch blade bit. The samples recovered are typically rock chips and powder, similar to RC drilling.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Air core recovery is visually assessed by comparing drill chip volumes in sample bags for individual metres. Estimates of sample recovery are recorded on drill logs. Routine checks for correct sample depths are undertaken. Air core sample recoveries are visually checked for recovery, moisture and contamination and are considered to be acceptable within industry standards. The cyclone is routinely cleaned ensuring no material build up.
	Measures taken to maximize sample recovery and ensure representative nature of the samples.	Due to the generally good drilling conditions through dry saprolite the site geologist believes the samples are reasonably representative. Poor sample recovery is regularly recorded in the first couple of metres of a hole and often when hard bedrock is intersected – usually less than a full metre is recovered. Wet samples with moderate recoveries are encountered most often in the transported sand/silcrete layer lying immediately above saprolite.
	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 bias has been identified to date. Future studies will be undertaken.
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.*	Chip/clay samples are geologically logged in enough detail to discern lithological units. Logging is appropriate for this style of drilling and current stage of the project.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Logging is qualitative in nature.
	The total length and percentage of the relevant intersections logged.	All air core holes are completely geologically logged.

Criteria	JORC Code Explanation	Commentary
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Not applicable.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	One-metre samples are collected from a cyclone into plastic bags. Two-metre composites and single metre samples are collected by spearing each plastic bag with a scoop down the side of the bag and dragging it back up the side of the bag so as not to lose any sample – this achieves a representative sample from top to bottom through the entire bag. The vast majority of samples are dry sampled.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sampling technique is appropriate for the sample types and stage of the project.
	Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.	QAQC procedures involve the use of certified standards every 20th sample.
	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 field duplicate is taken every 20th sample.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample size of 2-3 kilograms is considered appropriate to the grain size and style of mineralisation being investigated.

Criteria	JORC Code Explanation	Commentary
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	Analyses of drilling composites and metallurgically-generated solids samples are done at LabWest using their AF-02S scheme: lithium meta/tetraborate fusion with ICP-MS/OES finish. This technique is considered to be a 'total' digest. A suite of 15 REEs – lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), samarium (Sm), europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), lutetium (Lu), and yttrium (Y) – plus aluminium (Al), calcium (Ca), iron (Fe), magnesium (Mg), phosphorus (P), scandium (Sc), thorium (Th) and uranium (U) are measured. Analyses of metallurgically-generated liquor samples are done at LabWest using their SOL-03 scheme: direct spray and solution dilution with ICP-MS/OES finish. A suite of 67 elements, including the 15 REEs, Al, Ca, Fe, Mg, P, Sc, Th and U, are measured. Analysis of mixed rare earth carbonate (MREC) is done at LabWest using their IND-04 scheme, where the sample is digested in aqua-regia under high pressure and temperature in microwave apparatus, with the determination of analytes by ICP-MS. A suite of 67 elements, including the 15 REEs, Al, Ca, Fe, Mg, P, Sc, Th and U, are measured.
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Not applicable.
	Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	OREAS standards and/or blanks are inserted every 20th sample. Field duplicates are taken every 20th sample. LabWest uses OREAS standards, blanks and sample repeats. Acceptable levels of accuracy have been achieved.

Criteria	JORC Code Explanation	Commentary
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant intersections have yet to be verified by an independent geological consultant. They have been verified by alternative company geological personnel.
	The use of twinned holes.	No twinned holes have been drilled on the project to date.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All data have been entered into Excel spreadsheets.
	Discuss any adjustment to assay data.	No data has been adjusted.
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Hole collars are surveyed using a hand-held Garmin eTrex 22x GPS with ±3 metre accuracy. Northings, eastings and elevations are recorded using the hand-held GPS.
	Specification of the grid system used.	GDA94 z51.
	Quality and adequacy of topographic control.	The Cowalinya project is located in relatively flat terrain. Topographic control is provided by Landgate's Digital Elevation Model over the region which has an expected horizontal accuracy of 10 metres and vertical accuracy of 2 metres (both 95% confidence interval).
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	In the Cowalinya Resource Area: mainly 400 metres x 200 metres. Confined areas of the Mineral Resources have been drilled at 400 metres x 100 metres, 150 metres x 100 metres and 150 metres x 50 metres. In the area of the Cowalinya project supporting the majority of the Exploration Target: 400-1600 metres.
	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.	Data spacing is considered sufficient for this style of mineralisation to establish Inferred Mineral Resources. The mineralisation occurs as extensive, generally flat lying supergene blankets hosted in saprolitic clays.

Criteria	JORC Code Explanation	Commentary
	Whether sample compositing has been applied.	All holes have been assayed by 2 metre composite samples, compiled from 1 metre drilled samples. Additionally, a 1 metre end-of-hole sample is submitted for a 63 multi-element assay. A total of 7,340 samples (including standards, blanks and field duplicates) have been submitted for assay.
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.*	Sampling is likely to be unbiased as vertical holes are intersecting flat lying mineralisation.
	If the relationship between the drilling orientation and the orientation of key mineralized structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	It is unlikely to be biased.
Sample security	*The measures taken to ensure sample security.*	Experienced field assistants have undertaken the sampling and delivery of samples to the freight company in Esperance, which provides a direct delivery service to LabWest in Perth.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	No audits or reviews have been commissioned to date.

Section 2 Reporting of Exploration Results

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

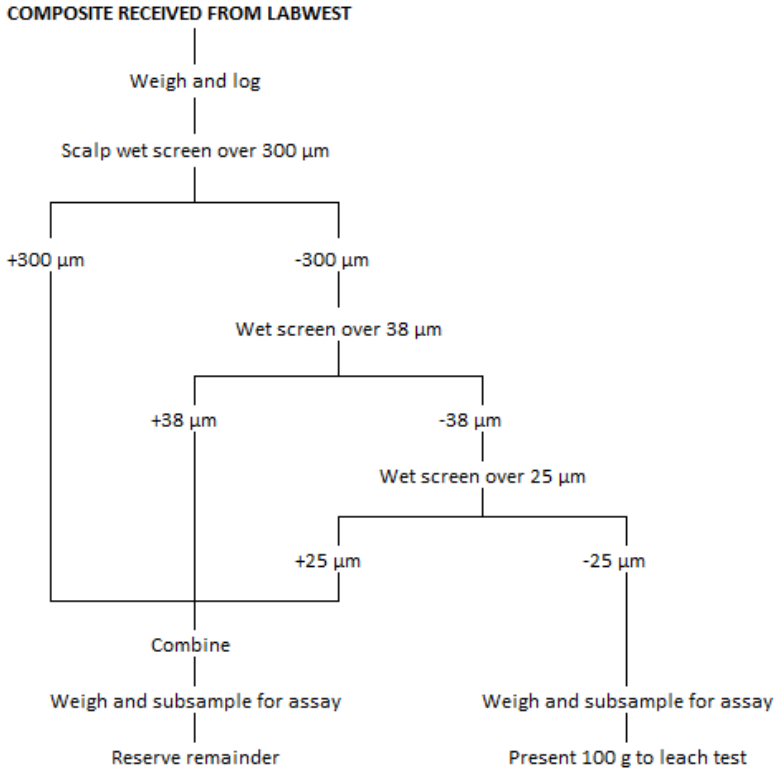
Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	Heavy Rare Earths Limited's (HRE's) Cowalinya project, located 55 kilometres east-north-east of Salmon Gums in Western Australia, comprises exploration licences E63/1972, E63/2144 and E63/2145. Collectively they occupy 87 graticular blocks, equivalent to an area of 252 km^2. The project is wholly situated on unallocated crown land. The registered holder of all the tenements is HRE. Full native title rights have been granted over E63/1972, E63/2145 and the northern part of E63/2144, and on adjacent lands to the north, to the Ngadju people. Full native title rights have been granted over the southern part of E63/2144, and on adjacent lands to the south, to the Esperance Nyungar people. Cultural heritage surveys are undertaken in close consultation with the relevant native title group in advance of substantial disturbance exploration works.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	All tenements are in good standing. There are no impediments to operating on the tenements other than requirements of the Department of Energy, Mines, Industry Regulation and Safety (DMIRS) and the relevant Cultural Heritage Protection Agreement.

Criteria	JORC Code Explanation	Commentary
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	AngloGold Ashanti Ltd (AngloGold) and Great Southern Gold Pty Ltd (GSG) previously worked in the Cowalinya project area exploring for gold mineralisation. Surface geochemical sampling and aircore drilling was undertaken by both companies but no significant gold mineralisation was discovered. Both companies assayed bottom of hole samples for a suite of multi-elements including REEs. Anomalous bedrock REE values were recorded in numerous holes from their drilling. GSG also assayed for La and Ce for the entire length of a number of holes. AngloGold flew an airborne magnetic/radiometric survey to assist with mapping of buried bedrock lithologies. Buxton Resources and Toro Energy also previously worked in the Cowalinya project area exploring for gold and nickel mineralisation, and uranium mineralisation, respectively. Both companies flew time-domain electromagnetic surveys to aid in their exploration targeting.
Geology	*Deposit type, geological setting and style of mineralisation.*	The deposit type being investigated is low grade saprolite clay-hosted supergene rare earth mineralisation. This style of supergene rare earth mineralisation is developed over bedrock granitic rock types (granites and granitic gneisses) which contain anomalous levels of REEs. Although low grade, low mining and processing costs can make this type of deposit profitable to exploit.
Drillhole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* - *easting and northing of the drillhole collar* - *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* - *dip and azimuth of the hole* - *down hole length and interception depth* - *hole length.*	All relevant data for drilling from which a mixed rare earth carbonate (MREC) sample has been produced is shown in Table 3.

Criteria	JORC Code Explanation	Commentary
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.*	All REE assays have been converted to oxide (REO) values using the following industry standard element-to-stoichiometric oxide conversion factors: La_2O_3 = La x 1.1728 CeO_2 = Ce x 1.2284 Pr_6O_{11} = Pr x 1.2082 Nd_2O_3 = Nd x 1.1664 Sm_2O_3 = Sm x 1.1596 Eu_2O_3 = Eu x 1.1579 Gd_2O_3 = Gd x 1.1526 Tb_4O_7 = Tb x 1.1762 Dy_2O_3 = Dy x 1.1477 Ho_2O_3 = Ho x 1.1455 Er_2O_3 = Er x 1.1435 Tm_2O_3 = Tm x 1.1421 Yb_2O_3 = Yb x 1.1387 Lu_2O_3 = Lu x 1.1371 Y_2O_3 = Y x 1.2699. These oxide values are summed to produce a total rare earth oxide (TREO) grade for each assay sample. Minimum grade cut-off used is 300 ppm TREO. Maximum internal dilution is 2 metres @ <300 ppm TREO. No high cut-off has been applied. Length weighted averages have been applied to intersections.
	Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Intervals reporting >1000 ppm TREO are reported separately.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values have been used.

Criteria	JORC Code Explanation	Commentary
Relationship between mineralisation widths and intercept lengths	*If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known').*	To date the targeted mineralisation appears to occur in flat lying sheets and drill holes have all been drilled at 90° vertically. The down hole length of intercept is effectively a true thickness of mineralisation.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	Refer to Figure 2 for plan view showing the locations of drillhole collars and metallurgical composites.
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.*	Head assays for the metallurgical composites from which an MREC sample was produced is presented in Table 2.

Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	U and Th values are reported as they are considered to be deleterious elements in rare earth processing. The highest values recorded for these elements on the project to date are 81 ppm ThO_2 and 96 ppm U_3O_8. The length-weighted average values are 11 ppm and 3.5 ppm, respectively. Particle size analysis on 13 mineralised saprolite composites shows that, on average: - 78.5% of REEs are confined to the fines (-25µm) fraction - the fines fraction comprises 37.2% of the bulk saprolite feed mass - the REE grade of the fines fraction is 116% higher than the bulk saprolite feed grade. Diagnostic leach testwork in hydrochloric acid (HCl) solution (1-2% residual HCl) at 10% solids and 50°C on the fines fraction achieves the following results: - 82.9% (average) magnet REE (MREE) extraction into solution - 18.1 kg/t (average) of HCl (32%) consumed for material types characterized by >75% MREE extraction and <40 kg of HCl per tonne of fines feed. For the diagnostic leach variability program, 63 metallurgical composites were prepared as follows: - Sample compositing was undertaken in the field from one-metre drill samples resulting in 4-4.5 kg sample composites - At LabWest composites were dried, crushed to -2 mm and rotary split to produce a 500 g sample for head assay (AF-02S) and a 1 kg sample for wet screening and subsequent acid leaching by Strategic Metallurgy (Strategic). The following flowchart documents the general procedure adopted by Strategic:



Diagnostic leach variability testwork on the fines fraction of 76 mineralised composites in hydrochloric acid (HCl) solution (1-2% residual HCl) at 10% solids and 50°C on the fines fraction achieves the following results:

- 77.8% (average) REE extraction into solution
- 24.8 kg/t (average) of HCl (32%) consumed

for material types characterized by >75% MREE extraction and <40 kg of HCl per tonne of fines feed.

A composite comprising -25µm fractions from holes AC4, AC16 and

Criteria	JORC Code Explanation	Commentary
		AC28 was feed for impurity removal and MREC precipitation. The composite was leached at 10% solids and 50°C achieving 80.1% REE extraction into solution. Post solid and liquid separation, the dissolved impurities were removed by a two-stage precipitation via the addition of sodium hydroxide (NaOH) solution, initially to pH 3.5 in stage 1, followed by pH 4.5 in stage 2. After filtration of the impurities, the dissolved rare earths were precipitated by addition of sodium carbonate (Na_2CO_3) to pH 7.0, forming the MREC.
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).*	Planning for a metallurgical program to produce greater volumes of MREC is underway.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Exploration Target areas are shown in Figure 2.