HEAVY RARE EARTHS LIMITED

ASX ANNOUNCEMENT
Heavy Rare Earths Limited (ASX: HRE)
3 October 2023

FIVE-FOLD INCREASE IN MINERAL RESOURCES TO 159 Mt @ 870 ppm TOTAL RARE EARTH OXIDES AT COWALINYA PROJECT IN WESTERN AUSTRALIA

- JORC (2012 Edition) Inferred Mineral Resources for the Cowalinya rare earth project now estimated to be **159 million tonnes @ 870 ppm TREO** at a cut-off grade of 400 ppm TREO-CeO_2
- This result represents **an increase of**:
  - **468% in resource tonnes**
  - **39% in grade**
  - **690% in contained rare earths**

  on the project's maiden 2022 Mineral Resources of 28 million tonnes @ 625 ppm TREO at the lower cut-off grade of 300 ppm TREO-CeO_2
- Total contained rare earths of **138,290 tonnes** (on a TREO basis)
- Significantly, the valuable magnet rare earth component of Cowalinya has **increased from 25% to 28%**
- Resource upgrade achieved by grid drilling 14,438 metres in 509 holes on **19% of HRE's total land position**
- Resource excludes **multiple rare earths-rich drill intercepts up to 14 kilometres from the resource**
- **Maiden Exploration Target for Cowalinya in advanced preparation**
- **Downstream metallurgical flowsheet development in progress** to produce Mixed Rare Earth Carbonate (MREC) product samples for customer engagement

Heavy Rare Earths Limited (**"HRE"** or **"the Company"**) is pleased to report a very substantial growth in Mineral Resources at its 100 per cent-owned Cowalinya rare earth project in the Norseman-Esperance region of Western Australia.

Table 1: Estimate of Mineral Resources for Cowalinya Rare Earth Project.

JORC RESOURCE CLASS	TONNES (Mt)	TREO (ppm)	MAGNET REOs (ppm)	MAGNET REOs/TREO	Sc_2O_3 (ppm)
Inferred	**159**	**870**	**242**	**28%**	**32**

TREO = $La_2O_3+CeO_2+Pr_6O_{11}+Nd_2O_3+Sm_2O_3+Eu_2O_3+Gd_2O_3+Tb_4O_7+Dy_2O_3+Ho_2O_3+Er_2O_3+Tm_2O_3+Yb_2O_3+Lu_2O_3+Y_2O_3$
Magnet REOs = $Pr_6O_{11}+Nd_2O_3+Tb_4O_7+Dy_2O_3$
Reported above a cut-off grade of 400 ppm TREO-CeO_2

HRE Executive Director, Richard Brescianini, said, *"Today we have delivered the first key milestone for our Cowalinya rare earth project, just 13 months since Heavy Rare Earths listed on the ASX.*

"Mineral Resources for Cowalinya now stand at 159 million tonnes, and pleasingly we have seen a 39% grade increase to 870 parts per million of rare earth oxides. This has been achieved on just 19% of our total land position. We have also intersected thick rare earth-rich horizons in drilling up to 14 kilometres from our resource zone[1] *and very much look forward to presenting the project's maiden Exploration Target in the near future.*

"I also note a material increase in the valuable magnet rare earth component of the resource to 28%. This is best in class amongst clay-hosted resources in Australia.

"Today's exceptional result sets a solid foundation in demonstrating the potential for a long-life rare earth development project at Cowalinya."

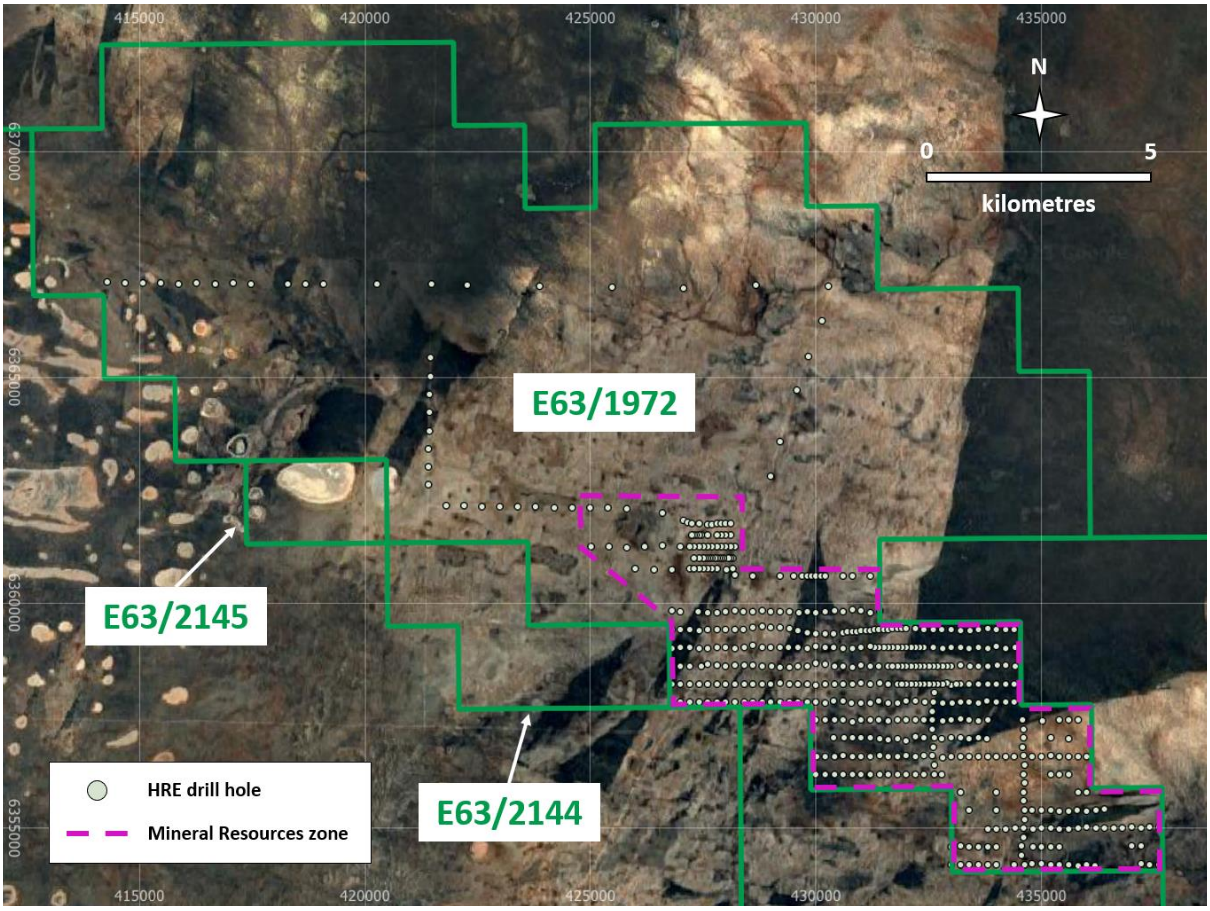

Figure 1: HRE's Cowalinya project tenements showing drill hole locations and Mineral Resources zone.
Background image: Google Earth.

[1] Refer to ASX announcement 1 May 2023: *New high-grade assays at Cowalinya show potential to add 14 kilometres of mineralised strike.*

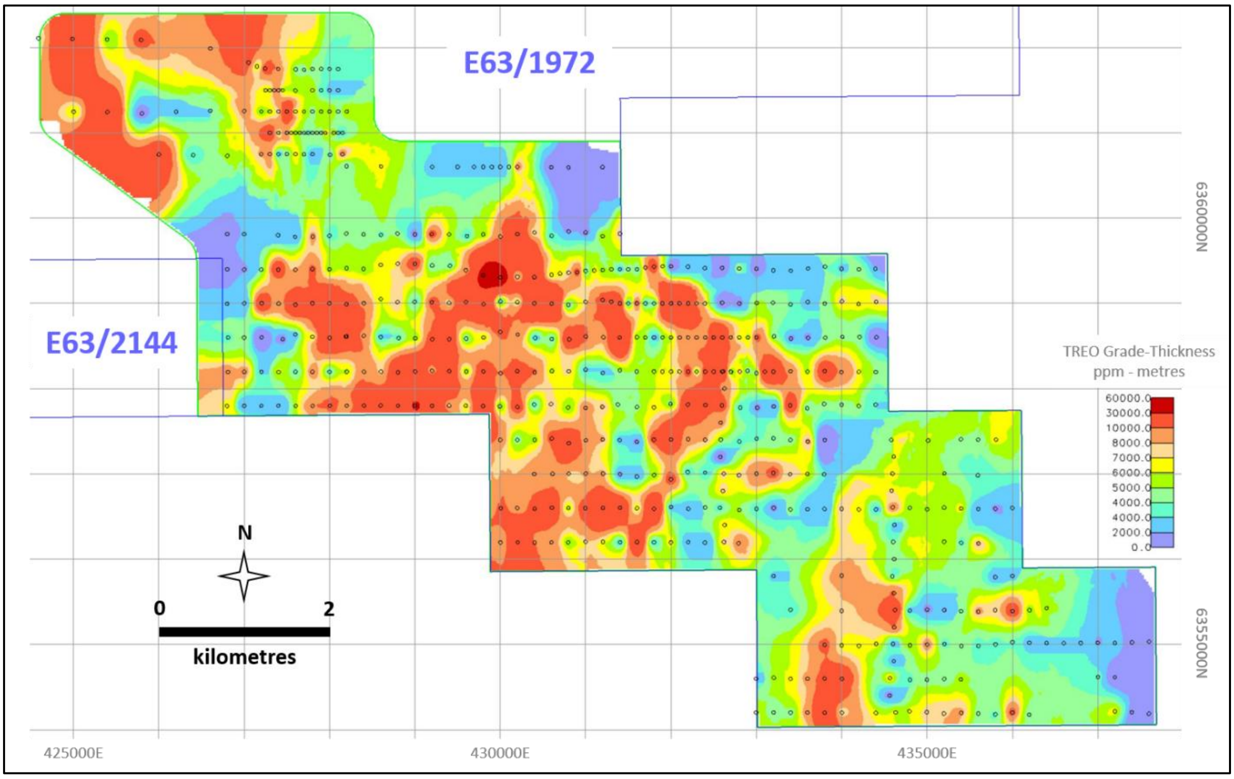

Figure 2: Cowalinya Mineral Resources zone showing TREO grade-thickness of saprolite-hosted rare earth mineralisation in ppm-metres.

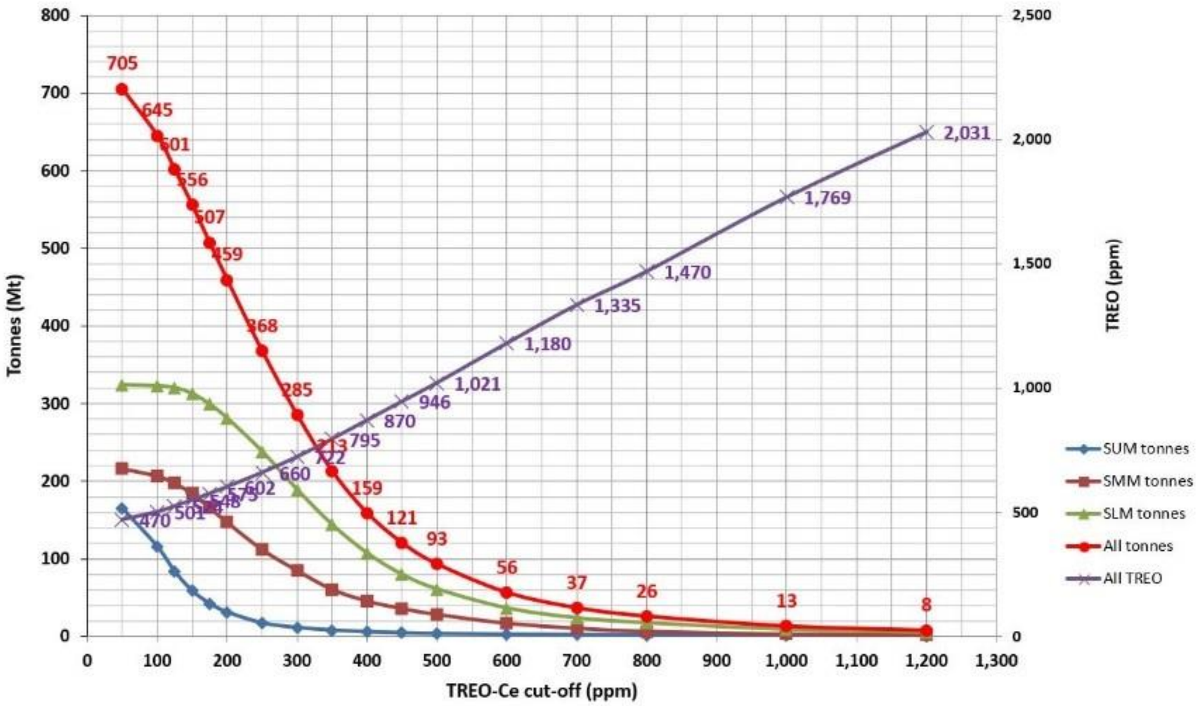

Figure 3: Cowalinya grade/tonnage curve.

Table 2: Cowalinya grade/tonnage figures.

LAYER	JORC RESOURCE CLASS	CUT-OFF TREO-CeO_2 (ppm)	TONNES (Mt)	TREO (ppm)
All	Inferred	100	645	501
All	Inferred	200	459	602
All	Inferred	300	285	722
All	**Inferred**	**400**	**159**	**870**
All	Inferred	500	93	1021
All	Inferred	600	56	1180
All	Inferred	700	37	1335
All	Inferred	800	26	1470
All	Inferred	1000	13	1769
All	Inferred	1200	8	2031

TREO = $La_2O_3+CeO_2+Pr_6O_{11}+Nd_2O_3+Sm_2O_3+Eu_2O_3+Gd_2O_3+Tb_4O_7+Dy_2O_3+Ho_2O_3+Er_2O_3+Tm_2O_3+Yb_2O_3+Lu_2O_3+Y_2O_3$

The following information is reproduced from a report entitled *Cowalinya –2023 JORC REO Resources Summary*, dated 30 September 2023. The report's author is Mr Robin Rankin (MAusIMM), Principal Consulting Geologist at GeoRes. Mr Rankin is referred to as "the Consultant" in the below and is the Competent Person (CP) for these Mineral Resources.

Introduction: HRE's Cowalinya Rare Earth Element (REE) Project (the Project) is mineral exploration for REEs in shallow (±50 m deep) REE-enriched weathered saprolitic regolith developed above granitic rock in southern Western Australia (WA). Resources for REE deposits are reported for their commercial product Rare Earth Oxide (REO) equivalents (hence REO Resources). The Project is operated within WA mineral exploration adjacent tenements E63/1972, E63/2144 and E63/2145 (Figure 1). This 2023 Resource estimate includes new data from a large 441-hole air core (AC) drilling program completed since HRE's 2022 announcement of maiden REO Resources estimated from its initial 109-hole AC drilling in 2021.

Background: HRE has operated the Cowalinya Project since 2021 when it undertook a drilling program. Resources estimated from that drilling data (by Mr John Tyrrell of JMCT Consulting) were published in a June 2022 Independent Geologist's Report (IGR) on HRE's exploration projects by Mr Robin Rankin for GeoRes. HRE undertook a further large drilling program in 2022 in a greatly expanded area. Assaying in 2022 included finer compositing (from 4 to 2 metres) and re-assaying of the 2021 samples. GeoRes was re-engaged in early 2023 to re-estimate Cowalinya Resources from new drilling data. Mr Rankin (as the CP) visited the Project site in late July 2023, a due diligence visit which confirmed all assumptions underpinning the estimation work.

Cowalinya tenements: HRE owns 100% of the Cowalinya Project tenement E63/1972 (granted in 2020 for 5 years). This 80-block tenement is large enough (232 km^2) to easily host an "Ion-Adsorption Clay" (IAC) REE deposit of mineable size and has enough time before expiry (January 2025) to allow it to be fully explored. HRE purchased two additional immediately adjacent (on the SW boundary of E63/1972) smaller tenements E63/2144 and E63/2145 in December 2022. HRE's tenements are surrounded by other active tenements also apparently being explored for REEs in the saprolitic regolith.

Project: The Cowalinya REE Project concerns near-surface mineral exploration for lateritic REEs in south central WA within tenements E63/1972, E63/2144 and E63/2145. The partially-explored Project targets shallow secondary lateritic REE-enrichment deposits in supergene in-situ saprolitic clays weathered from immediately underlying granitic rocks – termed IAC REE deposits.

Geography: Regionally Cowalinya is located in the far south of WA ~70 km south-east (SE) of Norseman and ~110 km north-north-east (NNE) of the port of Esperance (Figure 4). Locally the Project is situated on vacant Crown Land characterised as thick native bush land with very low relief (rising very gently to the NE – Figure 5). Low-lying areas are occasionally wet salt flats, often adjacent to ancient sand dune fields. Access is on unsealed roads off the N/S oriented sealed Coolgardie / Esperance Highway, the principal road from the village of Salmon Gums on the highway ~50 km due west of the Project. Local bush tracks are sandy but easily navigable.

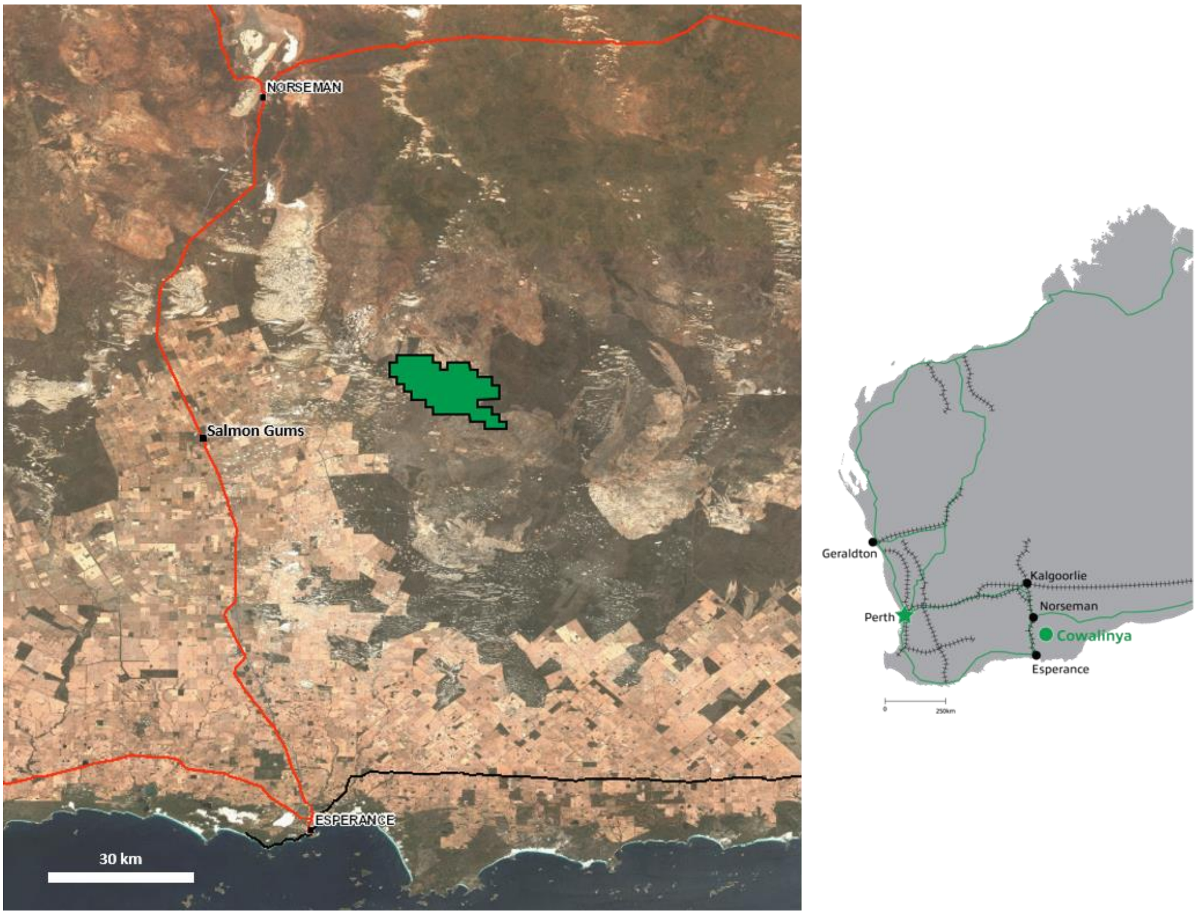

Figure 4: Location of HRE's Cowalinya tenement holdings on unallocated crown land near Salmon Gums in the Esperance region of Western Australia.
Background image: Landgate aerial imagery.

Figure 5: Cleared drill line at Cowalinya looking east, showing typical low relief vegetated landscape.

Regional geology: Regionally the Project is located on the south-eastern margin of the very old Eastern Goldfields Super-terrane (EGS) of the Yilgarn Craton and within the SW-trending younger Albany–Fraser Orogen (AFO). The Yilgarn Craton is the major western part of the WA Craton occupying most of Western Australia. Yilgarn Craton rocks are granites and greenstones; AFO Orogen rocks are variably igneous and high-grade metamorphic (the Orogen is essentially meta-granitic). The Cowalinya Project lies within the AFO. To the east of the AFO rocks are younger sediments of the Eucla Basin. AFO rocks along or close to the margin with the Yilgarn Craton were extensively re-worked as it was a collisional suture zone between two cratons.

AFO rocks are characterised by high-grade gneisses and granitic rocks (orthogneiss, paragneiss, migmatite and granitoid) but also contain large sheets of meta-gabbro, remnants of mafic dykes, and widespread low to medium-grade metasedimentary rocks. The AFO is split into two NE-trending components – the Foreland component (in the NW and probably a re-worked edge portion of the Yilgarn Craton) and the Basement component (in the SE). The crystalline Basement is split into 3 fault-bounded zones – the Biranup Zone (in the NW and hosting Cowalinya), the Fraser Zone and Nornalup Zone (in the SE). These NE-trending components represent SE-dipping thrust sheets ascribed to NW low-angle thrusting (continent collision).

Biranup (underlying the Project) is a 60 km wide SW/NE belt containing rocks which are strongly deformed. Those rocks are meta-granitic and granulite-facies gneissic-dominant, locally with mafic amphibolite lenses, and may include remnants of Archean rocks. The zone is isoclinally folded and tectonically interleaved by thrusting with layered mafic intrusions of the Fraser Zone, and may also have formed by modification of the Yilgarn Craton.

Local geology: Locally bedrock outcrops are rare (and are mostly granitic) and the weathered bedrock is covered by a thin veneer of predominantly Quaternary aeolian sand cover. Local development of deeper Tertiary palaeo-channels is common, containing sand, silt and clayey sediments, with overlying carbonaceous clays and lignite in deeper channels. Quaternary and Tertiary sediments are generally less than 10 m thick, but extend to over 60 m (maybe ~100 m) in palaeo-channels. Local geology within the tenement is relatively poorly known with limited fine scale mapping available. GSWA 1:250,000 scale mapping indicates the great proportion of the tenement area surface as eolian deposits (Qqs), created by wind action. At surface this colluvium/alluvium material is partly unconsolidated or loose. Very limited solid outcrops through the sand are ferruginous and siliceous cemented residual and reworked rocks (Ttf). These would either represent concretions of the eolian deposits or residual highly weathered caps of the granitic basement just below. A very small outcrop of granite is mapped on the northern boundary of the Project. It is likely that detailed mapping within the tenement could reveal more outcrop. Past drilling on the tenement showed bedrock to consist mainly of medium to coarse grained granitic gneisses, including monzonites and tonalites, along with subordinate amphibolites after dolerite.

Deposit type: HRE's Cowalinya Project targets shallow secondary lateritic REE-enrichment in supergene in-situ saprolitic clays weathered from immediately underlying basement granites and granitic gneisses (the primary source of the REEs). This style of REE mineralisation is termed an "Ion-Adsorption Clay" (IAC) REE deposit. These are similar to extensive southern Chinese deposits which are dominant REE producers. Chinese IAC REE deposits are often enriched in the more valuable "heavy" REEs (HREEs). IAC REE deposits exist in shallow soft weathered material they are therefore inexpensive to mine, allowing for extraction of relatively low grades. REE extraction from those ores is typically though inexpensive and effective acid-leaching. These economics mean IAC REE deposits typically have low grade cut-offs (~300 ppm TREO quoted for Chinese deposits).

IAC REE deposits require stable (in order that they not be eroded after formation) sub-tropical (with enough regular rainfall to create sustained lateritisation) conditions to form above granitic source rocks – conditions which appear well suited to Cowalinya's ancient low-relief topography above granitic rocks. Weathering in a periodically wet sub-tropical environment compresses and concentrates the granite profile at surface (by dissolution and mechanical weathering). Percolating groundwaters eventually deplete pre-existing REEs in the upper part of the weathered profile and secondarily concentrates them in clays in the lower parts.

IAC REE-enriched deposits generally form a thin (~5-10 m) laterally extensive sub-horizontal REE-enriched layer. In comparison to hard rock REE deposits regolith-hosted IAC REE deposits are predominantly low-grade, typically containing 0.05-0.30 wt.% extractable Rare Earth Oxide (REO).

Historical exploration: Other explorers in the immediate area since 2009 were looking for gold, base metals or uranium. Luckily a few assayed partially for REEs thus supporting the project. That exploration was within the eastern parts of the tenement area (AngloGold Ashanti Australia Ltd (AngloGold); Great Southern Gold Pty Ltd (Great Southern); and Buxton Resources); nearby to the south (eMetals Limited); further to the SE (Salazar Gold Pty Ltd (Salazar) and Mt Ridley Mines Limited); and to the west (Salmon Gums Minerals Pty Ltd). Most exploration comprised initial surface soil/calcrete sampling (<2 m deep) followed by shallow (<60 m deep) AC drilling of the weathered zone, both mostly on E/W oriented lines. Salazar's metallurgical test-work proved that local REEs could be successfully acidleached. The area possesses reasonable airborne geophysical coverage with magnetics and electromagnetics (EM) being of principal interest.

Within the SE part of the tenement E63/1972 Great Southern's AC drilling roughly defined the Night Watch REE prospect and AngloGold defined the Double Tank REE prospect ~2 km to the NW (these prospects roughly became the areas for HRE's 2021 drilling and Resources). Although initially targeted from their shallow surface calcrete sampling it is very likely that the surface REE samples were not linked to REE samples from the B Zone of the weathered saprolite above the fresh granite bedrock.

HRE's previous 2021 exploration: HRE completed a comprehensive 109-hole AC drilling program (for 3,089 m) in 2021 with depth in the vertical holes averaging ~29 m. HRE's drilling built on the two previously delineated prospects, calling them Areas 1 (Night Watch) and 2 (Double Tank). The Areas were separated from each other in a roughly NW/SE orientation (Area 1 to the SE and Area 2 to the NW) and existed within a 6*4 km enclosing area although each prospect was much smaller and they were not adjacent. Subsequent Resource estimate work referred to Area 1 as the "South Area" or "Cowalinya South", and Area 2 as the "North Area" or "Cowalinya North".

AC drilling employed on the Project was considered highly applicable because of its efficient sample recovery in the loose and/or soft material found in the Project area. Sampling was well performed, was continuous down-hole, with the 1 m individual primary samples variously composited to 4 m for assaying. 827 samples (2,481 m) were assayed for REEs, 60% being 4 m composites. Samples were assayed for all REEs using a 4-acid digestion process. The drill-hole spacing (~100*250/400 m) appeared suitable for first-pass exploration as correlation of mineralisation and geological layers was clearly possible between multiple adjacent drill-holes in the E/W drill sections.

HRE's previous resource estimate: Rare earth Resources were independently estimated in February 2022 from HRE's 2021 drilling data. Estimation was performed by Mr John Tyrrell (the CP) of JMCT Consulting. Block grades were estimated using Ordinary Kriging for each individual REE within geologically layered upper and lower saprolite models. Sample scan distances were interpreted from variographic range interpretations for the different saprolite layers and were very long (~450-865 m) and generally omni-directional. Input sample lengths were composited to 4 m and all REEs were top-cut to a degree. Total Inferred Mineral Resources of 28 Mt @ 625 ppm TREO were reported above a 300 ppm TREO-CeO_2 (Total REO minus Cerium oxide) grade cut-off using a default dry density of 1.63 t/m^3. The South Area contained 75% of the Resources, and the lower saprolite contained a slightly greater proportion than the upper saprolite.

HRE's new 2022 exploration: HRE completed a second very extensive vertical 441-hole (for 12,569 m) AC drilling program in late 2022 (Figures 6 and 7). The program covered the whole SE protrusion of the tenement and surrounded the previous drilling areas. Drilling was predominantly at 200 m spacing along E/W lines spaced 400 m apart. Holes were sampled in continuous 1 m intervals and composited to 2 m for assaying. All samples from the previous 2021 drilling were re-composited to the same 2 m and re-assayed. Assaying by LabWest Minerals Analysis in Perth used Lithium Metaborate Fusion / ICP-MS.

Figure 6: Drilling of hole AC198 Cowalinya project on 12/10/2022.
Location: 6358205N 429402E. Total depth 46 metres.

Figure 7: Drill hole AC313 Cowalinya project.
Location: 6358603N 431600E. Total depth 26 metres. Drilled on 18/11/2022.

Sampling & assaying QA/QC: HRE's sampling and assaying QA/QC in 2022 was assessed independently by Dr Andy Wilde of Wilde Geoscience and reported in June 2023. Assay QC involved submitting sample standards (Certified Reference Materials (CRMs)), blanks and duplicates every 20th sample. The Consultant considers that Wilde's overall assessment of Project sample QA/QC was very positive. Wilde concluded that HRE's QC measures (CRMs/blanks/duplicates) represented effective quality control; that there was close agreement between certified and analysed values for field CRMs for the REEs (<2 STD); approximately 80 % of field duplicate pairs returned analytical values for REE within 20%; REE analyses of the 127 pulps (plus 12 QC samples) sent to Intertek for umpire analysis were generally within 5% of LabWest's analysis (with a few outliers); and no evidence of sample contamination or errors in sample labelling was detected.

Data: Input data for the 2023 Resource re-estimation by GeoRes comprised HRE's combined 2021 and 2022 drill hole location and assay data, geological logging data, density data and surface topography data. All data was in MGA94 (Zone 51) coordinates.

2023 Resource estimation process: Steps in the resource estimation including modelling surface topography as a DTM surface; databasing all drill hole data (and converting REE values to oxides (REO)); geologically interpreting and modelling the base of weathering (top of fresh bedrock) surface; geologically interpreting the REE mineralisation intercepts as a series of three stacked layers; modelling the layers with DTM surfaces constrained within a "Resource area" containing the dense drilling; geostatistically analysing layer assays to determine grade continuity directions and distances; creating block models within the layers; estimating block grades using an un-folding model to guide search directions sub-parallel to layering; and reporting TREO Resources.

Geological interpretation: Close inspection of the drill logs and assays enabled the interpretation of a layered stratigraphic model comprising transported sediments at surface (soil, alluvium and laterite), a thick underlying regolith layer of in-situ weathered granite (an upper and a lower saprolite and basal saprock), and a basal fresh rock (BR) interface. Bedrock would not form any part of the resource.

REE-mineralised layer interpretation & modelling: Mineralisation interpretation was aimed at defining REE-mineralised zone(s) within the weathered saprolite layer overlying the fresh granite bedrock – in order to separate mineralisation from low grade waste. It was expected that contiguous REE-mineralised zones in each drill hole would correlate with similar ones in adjacent drill holes – forming a layer (REE mineralisation occurred above a natural cut-off at ~300 ppm TREO). This proved the case and 3 principal mineralised layers were interpreted in the weathered saprolite material (upper, middle and lower saprolite mineralisation (SUM, SMM and SLM respectively, orange green and blue in the below 10* vertically exaggerated E/W cross-section – Figure 8) in all drill holes. A fourth saprolite mineralised layer (S1M) existed sporadically above the SUM and another (TM) in the transported material at surface – neither of which were modelled due to insufficient support.

REE-mineralised layers were modelled by interpolating upper and lower bounding surfaces from the interpreted drill hole layer intercepts. Surfaces were modelled over the whole drilling area as 25 * 25 m mesh DTMs using a growth technique. The 25 m mesh size was ~25% of the closest drill hole spacing.

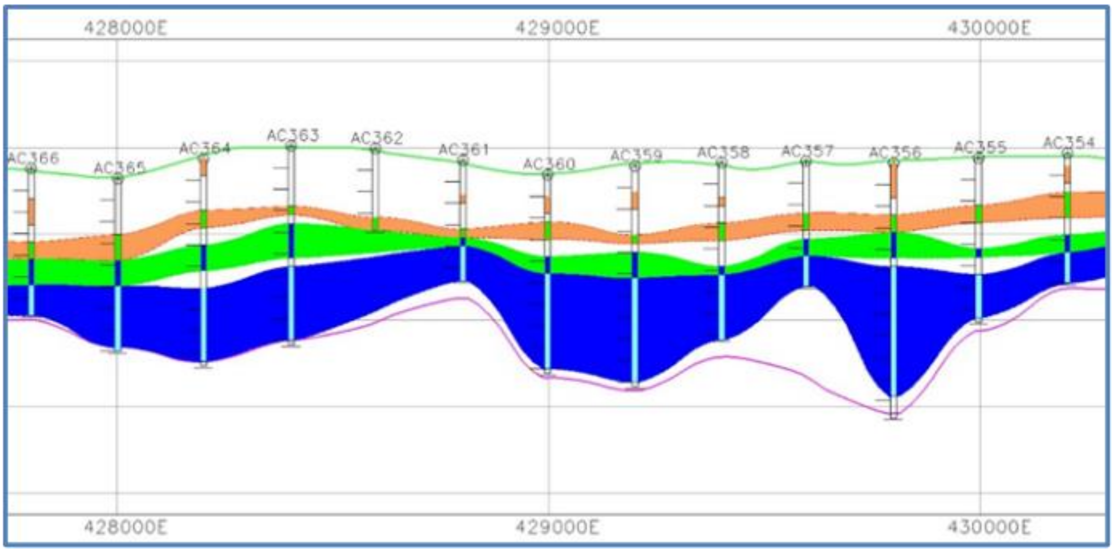

Figure 8: Portion of line 6357800N (holes AC354-AC366) showing principal mineralised layers in weathered saprolite: SUM (orange), SMM (green), SLM (blue) and bedrock surface (purple).

Subsequently layer models were constrained within a Resource area containing only the densely drill holes (outside dimensions 13.1 * 8.5 km, actual area 48.7 km^2). Average thicknesses of the modelled layers within that area were 3.8 m for SUM layer, 4.7 m for SMM layer, and 6.1 m for SLM layer (average total thickness was 14.6 m). SLM thickness is contoured within the Resource area in the plan view below (Figure 9).

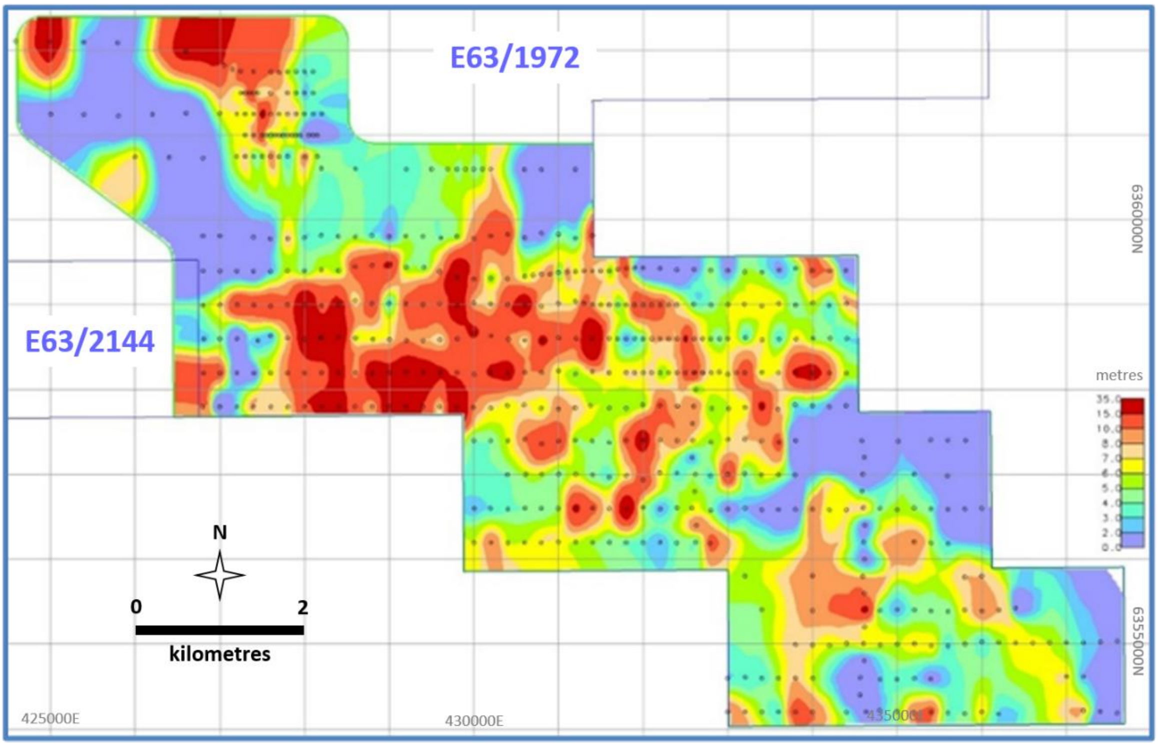

Figure 9: Thickness of lower saprolite layer mineralisation SLM in metres.

The maximum vertical range of the 3 layers was 63 m. Overburden thickness between the upper layer SUM and surface averaged 12.7 m with a range between 0 and 24.6 m.

Relatively thin (up to ~5 m) interburden existed between layers in places, in other areas the layers abutted. The base of layer SLM lay on the fresh bedrock interface in places and in others it was well above. Layer lateral extent was curtailed to the area of dense drilling by a boundary drawn ~300 m outside the boundary drill holes in the NW and by the tenement boundaries in the SE.

Average vertical composite TREO grades increased downwards with the uppermost layer SUM averaging 235 ppm, the central layer SMM 465 ppm and the lowest layer SML 522 ppm. Maximum grades were similar in each layer and averaged ~4,500 ppm. Thickness-weighted average TREO grade is contoured for all layers in the plan view below (Figure 10) and approximately half of the area would contain grades >400 ppm (yellow to red).

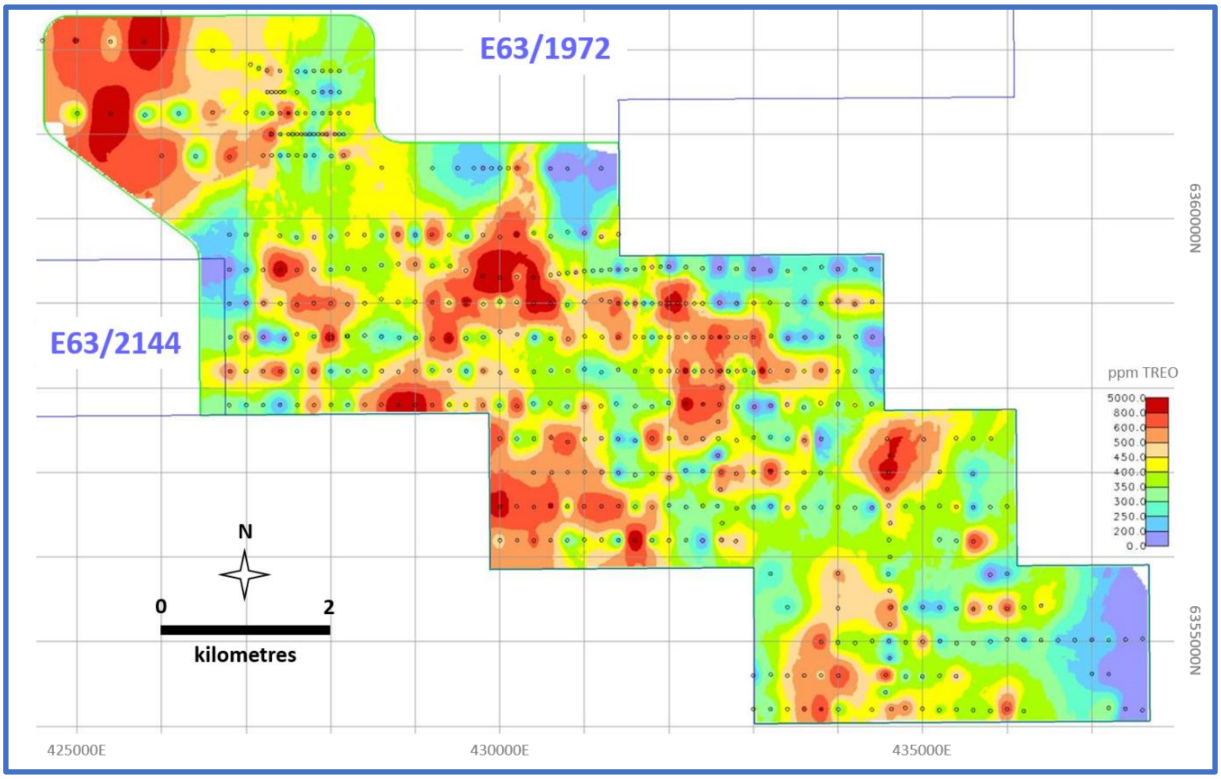

Figure 10: Thickness-weighted average TREO grade in ppm.

Statistical analysis: Simple drill hole sample statistics and histogram plots were studied by layer for the REO assay totals to provide insight into value distributions and limits to use in subsequent geostatistical analysis. All elements were log normally distributed. Differences between statistics from the 2021 and the 2022 drilling were studied briefly – with very little difference in the SMM layer but with values in the SLM layer lower in the 2022 drilling.

Geostatistical analysis: Variography was performed individually and by layer for CeO_2, the LREOs and the HREOs. Overall, for both TLREO and THREO in layers SMM and SLM the ranges (distance of longest continuity) were at least ~400 to 550 m – considered fairly long and thus a good result by the Consultant. Ranges of the single oxide CeO_2 were similar in the SMM layer – probably indicating that all of the REOs may have similar ranges. These ranges could be taken as isotropic. Longest ranges for TLREO and THREO were ~750-830 m in the SMM layer – considered very long and similarly a good result. Clear anisotropy was evident in layer SMM with the longer ranges oriented ~E/W. In this the TLREO and THREO anisotropy direction differed slightly by ~30° with TLREO being slightly north of east (075°) and THREO slightly south of east (105°). Variography was considered good in layer SMM – as was expected given its clear sub-horizontal layering with minimal thickness variability. However, variography was surprisingly poor in lower layer SLM, partly caused by many holes stopping short of basement.

The shortest ~400-550 m continuity distance in both principal REO-mineralised layers would cover at least 3 consecutive holes at the current 200 m E/W drill hole spacing and 2 holes at the current 400 m N/S spacing. In other words, the spacing between the great proportion of existing drill holes was well within the shortest range distance and thus they were supportive of each other. And the nearly double ~800 m range in the ~E/W direction in layer SMM further reinforced long continuity and the adequacy of current E/W drill hole spacing.

Un-folding block modelling: An un-folding block model was created within the layers, and all drill hole samples were domained by layer (domains 2,3 and 4 for layers SUM, SMM and SLM respectively). Un-folding block models aim to trend horizontal data search directions (in variography and block grade estimation) parallel to layering. As the mineralised layers were sub-horizontal the block model was built without any axis rotations (0°). X and Y block origin and extents were adapted to the dense drilling project 48.7 km^2 Resource area and the Z extent to the 63 m vertical range of the layers. X and Y block size was set at 50 * 100 m – roughly 25% of the drill hole spacing. Z block size would be variable as blocks followed the layers but aimed to be 0.5 m.

Grade block modelling: Grades for each element were estimated individually using an Inverse Distance squared (ID2) algorithm with vertical distances weighted by a factor of 2 and lateral XY searches trended along the layers by using the un-folding block model control.

Normal block model: A normal orthogonal-shaped block model was built from the un-folding block model and loaded with the individually estimated grades. X and Y blocks sizes were regularised at 50 m and the Z block sized was fixed at 1 m. Totals for the various common divisions of REOs (total (TREO), light (TLREO), heavy (THREO) and magnet (MREO)) were created from the individually estimated block grades. Colour-coded TREO blocks are displayed in the (10* vertically exaggerated) E/W cross-section below (Figure 11), which illustrates the grade continuity following layering.

Dry density: HRE's raw dry density determinations (326) were processed by compositing them by mineralised layer in each drill hole and then averaged. This produced average values of 1.49 t/m^3 for the SUM and SMM layers and 1.52 t/m^3 for the SLM layer. These densities were lower than the 1.63 t/m^3 used in the 2022 Resource estimate but very close to typical densities being currently used in similar REE deposits elsewhere.

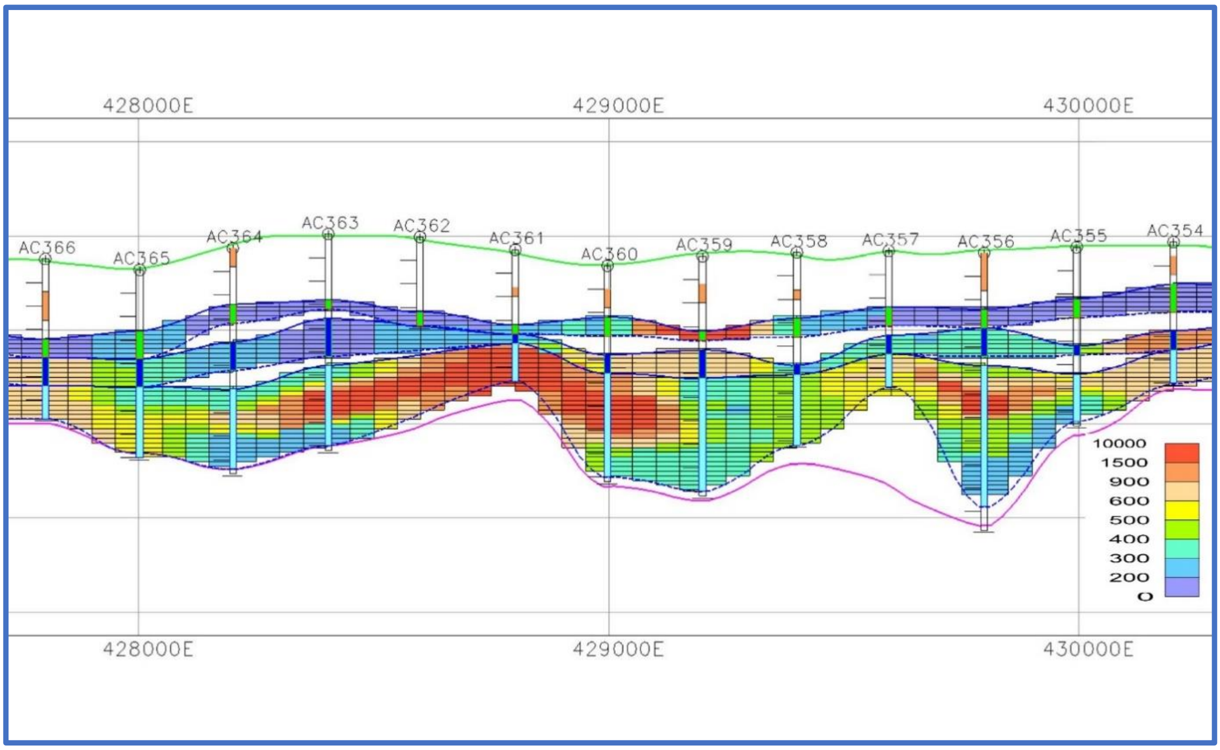

Figure 11: Cross section illustrating TREO grade continuity following layering.
Cross section extent corresponds to Figure 8.

Mining & extraction assumptions: Fundamental assumptions behind the Resources, Resource estimation and JORC classifications, are centred on the Consultant's expectations of IAC REE Resource mining economics. Positive REE economics are based firstly on 'cheap' shallow open-cut mining – allowed by shallow mineralisation (top of predominant mineralisation lies ~15 m below surface); weathered composition (partly-clayey and structurally weak material) allowing 'relatively inexpensive' free-dig mining; and layered deposition allowing mechanised broad-scale excavation with equipment such as scrapers or continuous miners. Positive REE economics secondarily rest on the nature of IAC mineralisation allowing relatively in-expensive and efficient extraction by leaching in pads (proven elsewhere in similar deposits). Dilution would be expected to be minimised by the mining and extraction methods.

Resource JORC classification: The Consultant considered that all of these 2023 Cowalinya Mineral Resources should be classified as Inferred according to JORC (2012 Edition) principles. The Consultant agreed with Tyrrell's Inferred classification for the 2022 Resources. He found that the large surrounding areas newly drilled contained very similar data, geology, REE grade concentrations and distributions. The new data was effectively identical in setting to the old data and simply represented extensions of the same deposit.

After studying the distribution of average sample distances (D) used in computing individual block grades the Consultant considered that only those blocks with D < 450 m (shaded orange and red in Figure 12 below the below plan view of blocks in lower layer SLM) should be classified as Inferred. That distance was approximately equal to the shortest continuity range defined by the geostatistical analysis and visually produced large contiguous concentrations of Inferred blocks.

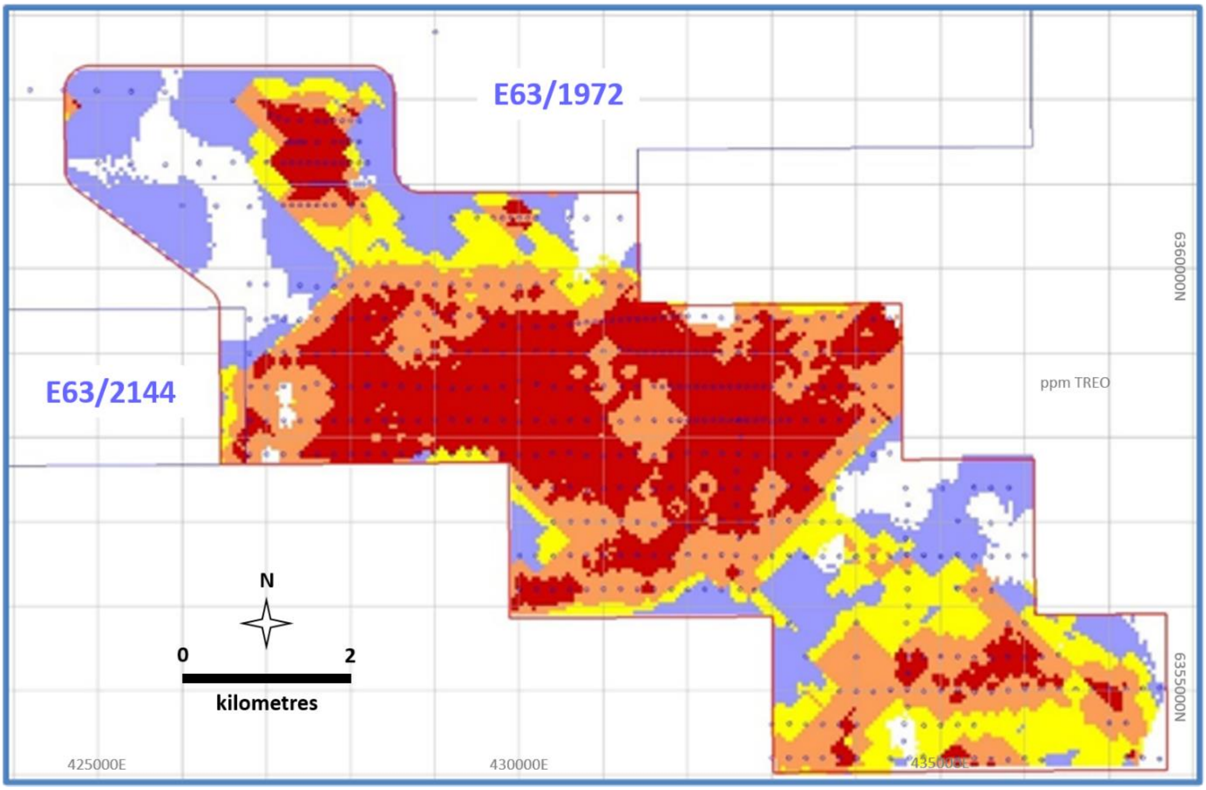

Figure 12: Grade blocks (orange and red) used to classify Interred Resources for lower saprolite layer (SLM).

REO Mineral Resources: REO Mineral Resources were reported by using a 400 ppm cut-off based on (TREO-CeO_2). The JORC (2012 Edition) global in-situ REO Mineral Resources classified as Inferred were 159 Mt @ 870 ppm total REO. The lower SLM layer contained the bulk (67%) of the tonnage and the upper SUM layer had the highest average grade (1,060 ppm). The light/heavy REO proportion was 73/27, and magnet REOs constituted 28% of the TREOs. Resources are tabulated below as a summary of REO totals (with footnotes) (Table 3) and then for the average grades of individual REOs and commonly associated Scandium oxide (Sc_2O_3), and for the potentially deleterious radioactive elements Thorium (Th) and Uranium (U) (Table 4).

Cerium oxide (used in the cut-off calculation) represented 27% of the TREOs. Other oxides with major proportions of the REOs were Lanthanum oxide (17%), Neodymium oxide (20%) and Yttrium oxide (16%). Average grades of potentially deleterious elements Thorium (Th) and Uranium (U) were considered very low (15 and 5 ppm respectively).

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Table 3: Estimate of Mineral Resources for Cowalinya Rare Earth Project.

Cowalinya Rare Earth Oxide (REO) Mineral Resources 30/9/2023

REOs in weathered saprolitic regolith. Cut-off on (TREO - CeO2) value. Block compute distance <450 m.

Layer (domain)		JORC Resource class	Density (t/m^3)	Cut-off[0] TREO[1]-CeO_2 (ppm)	Tonnes (Mt)		$TREO-CeO_2$ TREOMCE[0] Total (ppm)	Total REO TREO[1] Total (ppm)	Light REO LREO[2] Total (ppm)	Heavy REO HREO[3] Total (ppm)	Magnet REO MREO[4] Total (ppm)
SUM	(2)	Inferred	1.49	400.0	5.9	4%	685.8	1,060.4	930.1	130.2	318.7
SMM	(3)	Inferred	1.49	400.0	45.9	29%	624.1	860.9	647.4	213.6	243.4
SLM	(4)	Inferred	1.52	400.0	107.2	67%	632.2	863.9	609.6	254.3	236.5
All		**Inferred**	**~1.51**	**400.0**	**158.9**		**631.8**	**870.3**	**632.4**	**237.9**	**241.5**
							Proportion of TREO:		**72.7%**	**27.3%**	**27.8%**

[0] Total REO minus Cerium oxide (TREOMCE) = TREO[1] - CeO_2. Combination commonly used grade cut-off in clay-hosted REE deposits.
[1] Total REO (TREO) = REOs + Yttrium oxide = ((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 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3) + Y_2O_3)
[2] Total light REO (LREO) = (La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3).
[3] Total heavy REO (HREO) = Heavy REOs + Yttrium oxide ((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)
[4] Total magnet REO (MREO) = (Pr_6O_{11} + Nd_2O_3 + Tb_4O_7 + Dy_2O_3)

Table 4: Estimate of Mineral Resources for Cowalinya Rare Earth Project showing individual REOs and potentially deleterious elements.

Cowalinya Rare Earth Oxide (REO) Mineral Resources

REOs in weathered saprolitic regolith. Cut-off on (TREO - CeO2) value. Block compute distance <450 m.

Layer (domain)	JORC Resource class	Cut-off[0] $TREO^1$-CeO_2 (ppm)	Total REO TREO[1] Total (ppm)	Individual "Light" REOs La_2O_3 (ppm)	CeO_2 (ppm)	Pr_6O_{11} (ppm)	Nd_2O_3 (ppm)	Sm_2O_3 (ppm)	Individual "Heavy" REOs Eu_2O_3 (ppm)	Gd_2O_3 (ppm)	Tb_4O_7 (ppm)	Dy_2O_3 (ppm)	Ho_2O_3 (ppm)	Er_2O_3 (ppm)	Tm_2O_3 (ppm)	Yb_2O_3 (ppm)	Lu_2O_3 (ppm)	Y_2O_3 (ppm)	Potentially deleterious[5] Th (ppm)	U (ppm)	Assoc. REO Sc_2O_2 (ppm)
SUM (2)	Inferred	400.0	1,060.4	211.0	374.6	59.8	242.9	41.8	9.3	25.3	3.1	12.9	2.2	5.3	0.8	4.5	0.7	66.3	14.5	4.4	21
SMM (3)	Inferred	400.0	860.9	158.9	236.9	45.2	172.6	33.8	7.1	28.5	4.0	21.6	4.2	11.1	1.6	9.8	1.4	124.3	18.9	5.9	30
SLM (4)	Inferred	400.0	863.9	136.6	231.7	41.8	165.6	34.0	7.5	31.0	4.5	24.6	4.9	13.4	1.9	11.7	1.7	153.1	13.8	5.4	33
All	**Inferred**	**400.0**	**870.3**	**145.8**	**238.5**	**43.4**	**170.5**	**34.2**	**7.5**	**30.1**	**4.3**	**23.3**	**4.6**	**12.4**	**1.8**	**10.9**	**1.6**	**141.6**	**15.3**	**5.5**	**32**
Proportion of TREO:				**16.7%**	**27.4%**	**5.0%**	**19.6%**	**3.9%**	**0.9%**	**3.5%**	**0.5%**	**2.7%**	**0.5%**	**1.4%**	**0.2%**	**1.2%**	**0.2%**	**16.3%**			

[0] *Total REO minus Cerium oxide = TREO[1] - CeO_2. Combination commonly used grade cut-off in clay-hosted REE deposits.*

[1] *Total REO (TREO) = REOs + Yttrium oxide = ((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 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3) + Y_2O_3)*

[5] *Th and U are typically associated with rare earth deposits and may be deleterious in processing due to their radioactivity.*

Grade/tonnage: The grade/tonnage curve for the Resources (Figure 13) illustrates a high proportion of total tonnage coming from the lowest layer SLM (green) and a linear tonnage relationship with cut-off to ~400 ppm TREO-CeO_2 above which cut-off a small tonnage high grade tail exists. The grade curve (purple) for all layers has an almost straight line correlation to grade cut-off above ~200 ppm TREO-CeO_2 cut-off. Individual layer curves show the upper SUM layer to have continuously higher grades than the lower layers (SMM and SLM) above a ~200 ppm TREO-CeO_2 cut-off.

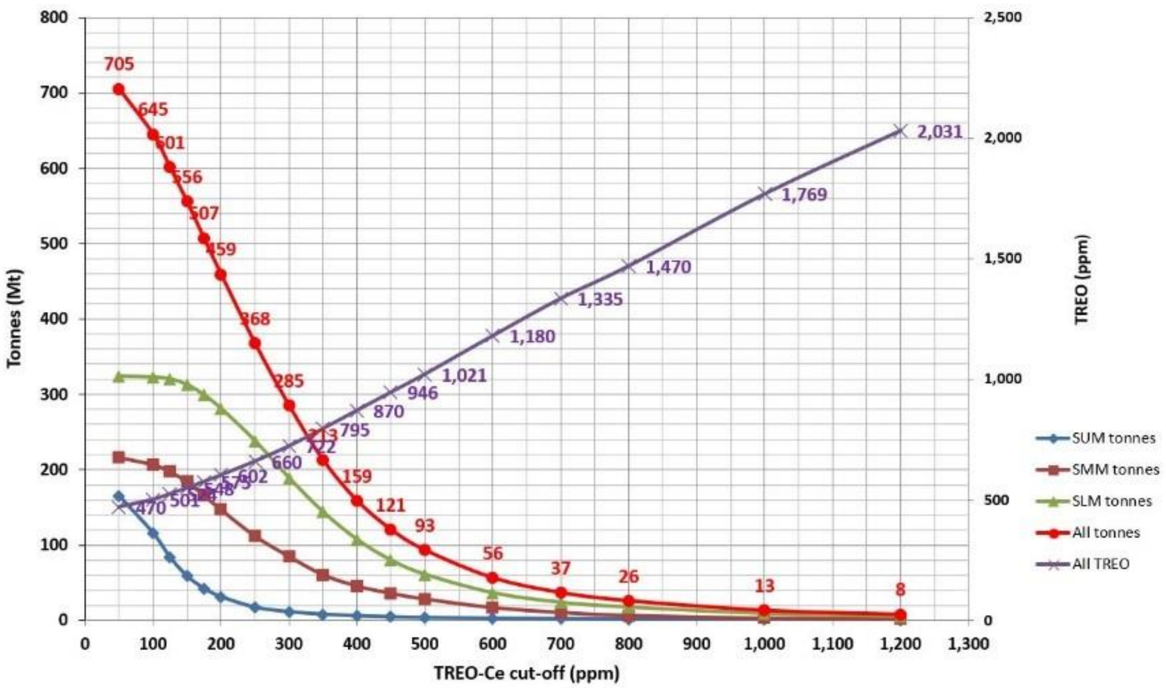

Figure 13: Cowalinya Grade/Tonnage curve.

Reconciliation with previous Resources: The Consultant considered that this 159 Mt Resource could not be realistically reconciled with the previous 28 Mt Resource because for tonnage the 2023 Resource area was vastly larger than in 2022 and for grade there would be no geological reason to expect grades to be similar in the different areas. This Resource was also reported at higher (TREO-CeO_2) cut-off (400 ppm against the previous 300 ppm).

Risks to the Resources: The Consultant considers the greatest Resource risk (considered low) was to the quantum of the reported Resource tonnage being lower than it otherwise might be if many of the short drill holes had stopped well short of basement through hitting intermediate hard thin (mainly silcrete) layers. Possibly the next greatest risk would be the use of AC drilling not penetrating sufficiently into basal saprock, a zone frequently well-mineralised in other deposits.

Consultant's comments on Resources: The Consultant has considerable confidence in the accuracy of the Resource estimate. And the Consultant notes that the Resources remain effectively open in all directions. A very considerable area of HRE's primary tenement E63/1972 remains to be explored to the NW of the Mineral Resources zone (with very positive indications coming from the 4 isolated wild-cat lines drilled in 2022) as well as in E63/2144 to the immediate W of existing drilling where historical drilling intersected thick saprolitic clay intervals (see Figure 1).

The Consultant also firmly believes that the majority of the current Inferred Resources would be readily upgraded to the Indicated class by further in-fill drilling to reduce average drill spacing to ~300 m; by verification that basement had not been reached in the areas of current short holes; by a degree of geological verification of continuity between holes (as could be achieved by representative limited costeaning or close-spaced diamond drilling); by metallurgical confirmation of economic REO extractability; and by geotechnical testing confirming free-dig extraction.

-- Ends --

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

Resource estimation & Mineral Resources

Statement: The information in this report, that relates to Exploration Results and Mineral Resources, is based on REE exploration information and data that was compiled and supplied by Heavy Rare Earths Limited (HRE) (see secondary Competent Person Statement below) which was reviewed and used for resource estimation by Mr Robin Rankin, a Competent Person who is a Member (#110551) of the Australasian Institute of Mining and Metallurgy (MAusIMM) and accredited since 2000 as a Chartered Professional by the AusIMM in the Geology discipline. Mr Rankin provided this information to HRE as paid consulting work in his capacity as Principal Consulting Geologist and operator of independent geological consultancy GeoRes. He and GeoRes are professionally and financially independent in the general sense and specifically of HRE and of the HRE's Cowalinya Project. This consulting was provided on a paid basis, governed by a scope of work and a fee and expenses schedule, and the results and conclusions reported were not contingent on payments. Mr Rankin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Mr Rankin consents to the inclusion in HRE's announcement of the matters based on this information in the form and context in which it appears. Mr Rankin's Competent Persons Statement is given on the basis that HRE takes responsibility to a Competent Persons level for the collection and integrity of source input data supplied by HRE.

Source data: All source data (whether supplied by HRE or derived elsewhere) was originally taken at face value by the Mr Rankin. Mr Rankin performed validation of the data to the extent considered possible and to his satisfaction. He believes that validation to at least be to the level required for JORC Resource estimation and reporting. Mr Rankin could not validate 'historical data' to the same degree as recent data.

Exploration Results

Statement: The REE exploration information in this report that relates to Exploration Results, Exploration Data, Sampling Techniques or Geochemical Assay Methodology is based on information compiled by Mr Richard Brescianini who is a Member of the Australian Institute of Geoscientists. Mr Brescianini is an Executive Director, shareholder and full-time employee of Heavy Rare Earths Limited (HRE). Mr Brescianini has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (the JORC Code). Mr Brescianini consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Company information: Some information in this announcement was extracted from reports lodged as ASX announcements by HRE and is available on HRE's website https://hreltd.com.au/investors/asx-announcements/. HRE confirms that it is not aware of any new information that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. HRE confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

Table 5: List of Cowalinya air core holes used in estimating Mineral Resources.

HOLE NO.	NORTHING (m)	EASTING (m)	EVEVATION (m)	DIP (°)	TOTAL DEPTH (m)	DATE DRILLED
AC1	6358200	433200	263.9	-90	39	15/07/2021
AC2	6358200	433100	263.4	-90	34	15/07/2021
AC3	6358200	432700	261.0	-90	33	15/07/2021
AC4	6358200	432600	261.3	-90	36	15/07/2021
AC5	6358200	432500	262.7	-90	36	15/07/2021
AC6	6358200	432400	263.1	-90	32	15/07/2021
AC7	6358200	432300	263.7	-90	32	15/07/2021
AC8	6358200	432200	264.0	-90	29	15/07/2021
AC9	6358200	432100	263.3	-90	30	16/07/2021
AC10	6358200	432000	262.6	-90	27	16/07/2021
AC11	6358200	431900	261.9	-90	19	16/07/2021
AC12	6358600	433000	265.4	-90	29	16/07/2021
AC13	6358600	432900	264.2	-90	21	16/07/2021
AC14	6358600	432800	262.9	-90	25	16/07/2021
AC15	6358600	432700	260.9	-90	28	16/07/2021
AC16	6358600	432600	260.9	-90	32	16/07/2021
AC17	6358600	432500	261.5	-90	39	16/07/2021
AC18	6358600	432400	262.1	-90	26	17/07/2021
AC19	6358600	432300	261.9	-90	17	17/07/2021
AC20	6358600	432200	261.6	-90	18	17/07/2021
AC21	6358600	432100	262.5	-90	28	17/07/2021
AC22	6358600	432000	262.5	-90	24	17/07/2021
AC23	6358600	431900	262.9	-90	12	17/07/2021
AC24	6358600	431800	263.6	-90	22	17/07/2021
AC25	6358600	431700	263.9	-90	22	17/07/2021
AC26	6359000	432300	265.7	-90	33	17/07/2021
AC27	6359000	432200	265.9	-90	39	18/07/2021
AC28	6359000	432100	265.2	-90	39	18/07/2021
AC29	6359000	432000	265.1	-90	39	18/07/2021
AC30	6359000	431900	265.0	-90	39	18/07/2021
AC31	6359000	431800	264.6	-90	32	18/07/2021
AC32	6359000	431700	264.3	-90	35	18/07/2021

AC33	6359000	431600	264.0	-90	31	18/07/2021
AC34	6359000	431500	264.9	-90	30	18/07/2021
AC35	6359000	431400	262.6	-90	33	19/07/2021
AC36	6359020	431300	259.0	-90	31	19/07/2021
AC37	6359040	431200	256.9	-90	21	19/07/2021
AC38	6359335	430600	259.9	-90	22	19/07/2021
AC39	6359350	430700	260.4	-90	15	19/07/2021
AC40	6359360	430800	260.3	-90	16	19/07/2021
AC41	6359365	430900	260.0	-90	30	19/07/2021
AC42	6359380	431000	260.4	-90	22	19/07/2021
AC43	6359385	431100	260.8	-90	32	19/07/2021
AC44	6359392	431200	260.9	-90	26	20/07/2021
AC45	6359400	431300	260.9	-90	21	20/07/2021
AC46	6359400	431400	261.5	-90	32	20/07/2021
AC47	6359400	431500	261.0	-90	28	20/07/2021
AC48	6359400	431600	260.2	-90	23	20/07/2021
AC49	6359420	431700	261.5	-90	15	20/07/2021
AC50	6359430	431800	261.8	-90	35	20/07/2021
AC51	6359435	431900	262.9	-90	26	20/07/2021
AC52	6359435	432000	264.1	-90	20	21/07/2021
AC53	6360600	429692	266.1	-90	28	21/07/2021
AC54	6360600	429800	266.6	-90	19	21/07/2021
AC55	6360600	429900	267.0	-90	27	21/07/2021
AC56	6360600	430000	267.3	-90	24	21/07/2021
AC57	6360600	430100	267.7	-90	21	21/07/2021
AC58	6360600	430200	267.4	-90	30	21/07/2021
AC59	6360600	429500	265.7	-90	21	22/07/2021
AC60	6360750	428150	263.5	-90	27	22/07/2021
AC61	6360750	427800	259.2	-90	21	22/07/2021
AC62	6360750	427700	258.9	-90	20	22/07/2021
AC63	6360750	427600	259.5	-90	34	22/07/2021
AC64	6360750	427500	260.7	-90	27	22/07/2021
AC65	6360750	427400	262.0	-90	30	22/07/2021
AC66	6360750	427300	261.9	-90	35	22/07/2021
AC67	6361000	428150	262.2	-90	21	23/07/2021

AC68	6361000	428100	261.6	-90	21	23/07/2021
AC69	6361000	428050	261.4	-90	22	23/07/2021
AC70	6361000	427950	261.2	-90	28	25/07/2021
AC71	6361000	427900	261.5	-90	35	25/07/2021
AC72	6361000	427850	261.8	-90	35	25/07/2021
AC73	6361000	427800	262.2	-90	29	25/07/2021
AC74	6361000	427750	262.4	-90	32	25/07/2021
AC75	6361000	427700	262.1	-90	36	25/07/2021
AC76	6361000	427650	261.5	-90	30	25/07/2021
AC77	6361000	427600	261.1	-90	34	25/07/2021
AC78	6361000	427550	260.7	-90	35	25/07/2021
AC79	6361000	427500	260.3	-90	39	26/07/2021
AC80	6361000	427400	261.4	-90	33	26/07/2021
AC81	6361000	427300	262.3	-90	36	26/07/2021
AC82	6361250	428200	261.4	-90	22	26/07/2021
AC83	6361250	428100	260.1	-90	20	26/07/2021
AC84	6361250	428000	259.9	-90	24	26/07/2021
AC85	6361250	427900	259.9	-90	31	26/07/2021
AC86	6361250	427800	260.9	-90	21	26/07/2021
AC87	6361250	427700	262.0	-90	30	26/07/2021
AC88	6361250	427600	261.7	-90	36	26/07/2021
AC89	6361250	427500	261.8	-90	44	27/07/2021
AC90	6361250	427400	261.8	-90	36	27/07/2021
AC91	6361250	427300	260.3	-90	32	27/07/2021
AC92	6361250	427200	257.4	-90	27	27/07/2021
AC93	6361500	428100	262.5	-90	19	27/07/2021
AC94	6361500	428000	262.4	-90	24	27/07/2021
AC95	6361500	427900	262.6	-90	30	27/07/2021
AC96	6361500	427800	261.6	-90	31	27/07/2021
AC97	6361500	427450	257.5	-90	31	27/07/2021
AC98	6361500	427400	257.6	-90	37	27/07/2021
AC99	6361500	427350	257.2	-90	39	28/07/2021
AC100	6361500	427300	256.8	-90	27	28/07/2021
AC101	6361500	427250	256.6	-90	25	28/07/2021
AC102	6361825	427050	259.6	-90	39	28/07/2021

AC103	6361780	427150	259.0	-90	35	28/07/2021
AC104	6361755	427245	259.1	-90	39	28/07/2021
AC105	6361740	427700	259.7	-90	30	28/07/2021
AC106	6361750	427800	261.0	-90	23	28/07/2021
AC107	6361750	427900	261.0	-90	19	28/07/2021
AC108	6361750	428000	260.0	-90	20	28/07/2021
AC109	6361750	428100	261.0	-90	13	28/07/2021
AC110	6358001	432626	262.6	-90	29	12/09/2022
AC111	6357803	432597	262.8	-90	31	13/09/2022
AC112	6357601	432581	263.4	-90	30	13/09/2022
AC113	6357402	432583	261.5	-90	15	13/09/2022
AC114	6357199	432578	259.7	-90	23	14/09/2022
AC115	6357003	432618	260.8	-90	30	14/09/2022
AC116	6356800	432607	262.1	-90	22	14/09/2022
AC117	6356603	432572	258.0	-90	28	15/09/2022
AC118	6356401	432628	259.9	-90	37	15/09/2022
AC119	6356202	432620	258.4	-90	26	15/09/2022
AC120	6357399	434581	277.7	-90	9	15/09/2022
AC121	6357204	434609	274.7	-90	13	15/09/2022
AC122	6357004	434595	271.9	-90	22	15/09/2022
AC123	6356803	434584	269.5	-90	19	16/09/2022
AC124	6356608	434598	267.4	-90	31	16/09/2022
AC125	6356403	434617	266.9	-90	21	16/09/2022
AC126	6356203	434604	267.3	-90	7	16/09/2022
AC127	6356002	434615	264.8	-90	19	16/09/2022
AC128	6355799	434592	263.3	-90	18	16/09/2022
AC129	6355602	434612	262.6	-90	34	16/09/2022
AC130	6355405	434624	261.9	-90	45	17/09/2022
AC131	6355202	434614	261.0	-90	28	17/09/2022
AC132	6355007	434602	257.9	-90	33	17/09/2022
AC133	6354805	434610	257.4	-90	21	17/09/2022
AC134	6354605	434565	256.0	-90	19	17/09/2022
AC135	6354400	434559	254.7	-90	18	17/09/2022
AC136	6354202	434630	255.9	-90	22	18/09/2022
AC137	6354996	433799	256.4	-90	30	18/09/2022

AC138	6354989	433999	256.1	-90	18	18/09/2022
AC139	6354984	434201	257.6	-90	33	18/09/2022
AC140	6355006	434403	258.9	-90	22	18/09/2022
AC141	6354991	434800	257.5	-90	21	19/09/2022
AC142	6354999	435001	259.9	-90	26	19/09/2022
AC143	6355005	435204	261.9	-90	34	19/09/2022
AC144	6354982	435402	262.3	-90	29	19/09/2022
AC145	6354983	435601	262.2	-90	25	21/09/2022
AC146	6355001	435801	263.4	-90	23	21/09/2022
AC147	6355027	435999	264.3	-90	26	22/09/2022
AC148	6355019	436198	263.9	-90	23	22/09/2022
AC149	6355018	436400	264.1	-90	26	22/09/2022
AC150	6355015	436602	264.0	-90	20	22/09/2022
AC151	6355017	436800	264.2	-90	28	22/09/2022
AC152	6355020	437000	264.7	-90	18	22/09/2022
AC153	6355019	437200	264.9	-90	25	22/09/2022
AC154	6355024	437400	262.6	-90	15	23/09/2022
AC155	6355033	437600	264.2	-90	20	23/09/2022
AC156	6356600	435999	270.0	-90	17	23/09/2022
AC157	6356591	435801	269.9	-90	15	23/09/2022
AC158	6356587	435599	268.8	-90	17	23/09/2022
AC159	6356594	435399	268.5	-90	15	23/09/2022
AC160	6356605	435199	268.6	-90	24	23/09/2022
AC161	6356585	435000	270.5	-90	12	23/09/2022
AC162	6356602	434798	267.7	-90	22	24/09/2022
AC163	6356583	434400	266.9	-90	26	24/09/2022
AC164	6356583	434200	265.9	-90	46	24/09/2022
AC165	6356590	433999	264.4	-90	38	24/09/2022
AC166	6356590	433798	264.1	-90	19	24/09/2022
AC167	6356586	433598	263.5	-90	21	24/09/2022
AC168	6356583	433399	263.0	-90	25	24/09/2022
AC169	6356601	433203	262.8	-90	29	25/09/2022
AC170	6356590	433000	261.3	-90	22	25/09/2022
AC171	6356577	432801	259.5	-90	22	25/09/2022
AC172	6356606	432400	260.8	-90	20	25/09/2022

AC173	6356591	432203	257.9	-90	19	25/09/2022
AC174	6356612	432000	259.4	-90	24	26/09/2022
AC175	6356590	431801	258.7	-90	45	26/09/2022
AC176	6358196	434400	269.0	-90	33	26/09/2022
AC177	6358198	434200	268.7	-90	22	26/09/2022
AC178	6358194	433996	267.9	-90	52	26/09/2022
AC179	6358206	433800	267.6	-90	45	26/09/2022
AC180	6358199	433599	266.9	-90	27	27/09/2022
AC181	6358204	433399	265.5	-90	27	27/09/2022
AC182	6358182	433000	263.3	-90	28	27/09/2022 & 22/11/2022
AC183	6358210	432896	262.6	-90	31	22/11/2022
AC184	6358201	432805	261.6	-90	26	27/09/2022 & 22/11/2022
AC185	6358197	432702	261.0	-90	30	1/10/2022
AC186	6358201	431800	261.9	-90	19	28/09/2022
AC187	6358200	431599	260.7	-90	17	28/09/2022
AC188	6358215	431401	260.4	-90	16	28/09/2022
AC189	6358185	431201	261.0	-90	27	29/09/2022
AC190	6358224	431000	260.7	-90	30	29/09/2022
AC191	6358203	430802	259.6	-90	31	29/09/2022
AC192	6358206	430603	259.2	-90	33	29/09/2022
AC193	6358191	430401	257.4	-90	43	30/09/2022
AC194	6358205	430198	257.7	-90	50	30/09/2022
AC195	6358182	430003	256.9	-90	31	1/10/2022
AC196	6358202	429801	257.2	-90	38	1/10/2022
AC197	6358200	429601	257.2	-90	39	1/10/2022
AC198	6358205	429402	259.2	-90	46	12/10/2022
AC199	6358210	429200	257.5	-90	48	12/10/2022
AC200	6358201	429002	254.4	-90	44	13/10/2022
AC201	6358191	428802	256.7	-90	47	12/10/2022
AC202	6359814	426801	263.1	-90	25	13/10/2022
AC203	6359812	426999	262.2	-90	13	13/10/2022
AC204	6359783	427804	260.3	-90	34	14/10/2022
AC205	6359803	428602	262.4	-90	25	14/10/2022

AC206	6359817	431402	263.7	-90	35	15/10/2022
AC207	6359788	431199	264.3	-90	21	19/10/2022
AC208	6359833	431000	264.2	-90	24	19/10/2022
AC209	6359844	430801	264.6	-90	20	19/10/2022
AC210	6359793	430601	263.7	-90	18	19/10/2022
AC211	6359832	430400	264.7	-90	38	19/10/2022
AC212	6359813	430201	263.3	-90	37	20/10/2022
AC213	6359785	430000	261.5	-90	39	20/10/2022
AC214	6359810	429799	262.4	-90	28	20/10/2022
AC215	6359788	429610	268.1	-90	36	20/10/2022
AC216	6359809	429400	267.4	-90	22	21/10/2022
AC217	6359808	429000	261.9	-90	23	21/10/2022
AC218	6358581	427450	255.3	-90	32	21/10/2022
AC219	6358636	427598	255.4	-90	42	21/10/2022
AC220	6358608	427798	254.7	-90	41	21/10/2022
AC221	6358596	428000	254.4	-90	47	22/10/2022 & 15/11/2022
AC222	6358612	428200	256.3	-90	39	22/10/2022
AC222A	6358611	428191	256.3	-90	46	22/11/2022
AC223	6359308	430398	258.1	-90	29	22/10/2022
AC224	6359312	430200	257.4	-90	22	23/10/2022
AC225	6359305	430000	259.4	-90	36	9/11/2022
AC226	6359329	429799	260.1	-90	55	9/11/2022
AC227	6359389	429597	261.5	-90	34	9/11/2022
AC228	6359445	429202	264.6	-90	28	23/10/2022
AC229	6359466	428798	260.3	-90	20	24/10/2022
AC230	6359403	428398	259.7	-90	23	24/10/2022
AC231	6359400	428000	256.9	-90	26	24/10/2022
AC232	6359395	427600	258.0	-90	28	10/11/2022
AC233	6359397	427199	261.8	-90	19	24/10/2022
AC234	6359799	427397	256.7	-90	15	25/10/2022
AC235	6359819	428196	260.4	-90	27	25/10/2022
AC236	6359430	432198	266.5	-90	13	25/10/2022
AC237	6359416	432598	266.0	-90	23	25/10/2022
AC238	6359387	433200	267.7	-90	23	28/10/2022

AC239	6359406	433998	270.5	-90	37	28/10/2022
AC240	6359000	432397	264.8	-90	15	26/10/2022
AC241	6358999	432801	265.0	-90	27	28/10/2022
AC242	6358988	433399	264.6	-90	12	26/10/2022
AC243	6358997	433801	268.2	-90	26	26/10/2022
AC244	6358993	434197	268.4	-90	28	26/10/2022
AC245	6359019	434404	270.6	-90	28	26/10/2022
AC246	6359023	434001	268.0	-90	26	26/10/2022
AC247	6359406	434394	274.1	-90	22	27/10/2022
AC248	6359399	434202	271.5	-90	35	27/10/2022
AC249	6359430	433804	269.5	-90	25	27/10/2022
AC250	6359409	433604	268.3	-90	20	27/10/2022
AC251	6359383	433404	268.5	-90	14	27/10/2022
AC252	6359406	433001	267.9	-90	25	27/10/2022
AC253	6359409	432797	266.0	-90	25	27/10/2022
AC254	6359413	432396	267.6	-90	18	28/10/2022
AC255	6359007	432598	265.4	-90	30	28/10/2022
AC256	6359005	433003	264.8	-90	26	28/10/2022
AC257	6359008	433195	264.8	-90	29	28/10/2022
AC258	6359017	433601	265.6	-90	24	29/10/2022
AC259	6359779	427596	259.1	-90	25	29/10/2022
AC260	6359793	427999	259.4	-90	27	29/10/2022
AC261	6359810	428398	260.1	-90	22	8/11/2022
AC262	6359818	428796	262.8	-90	24	9/11/2022
AC263	6359812	429196	263.2	-90	28	9/11/2022
AC264	6359441	429410	262.6	-90	27	9/11/2022
AC265	6359463	429000	264.2	-90	41	10/11/2022
AC266	6359452	428598	260.8	-90	33	10/11/2022
AC267	6359414	428200	255.1	-90	27	10/11/2022
AC268	6359402	427798	259.9	-90	37	10/11/2022
AC269	6359394	427399	259.6	-90	23	11/11/2022
AC270	6359397	426999	262.6	-90	30	22/11/2022
AC271	6359399	426800	262.5	-90	18	22/11/2022
AC272	6359019	430998	257.9	-90	13	11/11/2022
AC273	6358983	430799	262.0	-90	29	11/11/2022

AC274	6358997	430601	260.1	-90	41	12/11/2022
AC275	6359002	430399	259.7	-90	38	12/11/2022
AC276	6359015	430199	260.1	-90	25	12/11/2022
AC277	6359023	430000	259.1	-90	34	12/11/2022
AC278	6358992	429804	258.8	-90	50	12/11/2022
AC279	6359017	429598	258.6	-90	40	13/11/2022
AC280	6359006	429399	257.9	-90	39	13/11/2022
AC281	6359014	429198	259.5	-90	34	13/11/2022
AC282	6359018	428996	263.7	-90	28	13/11/2022
AC283	6359016	428796	260.6	-90	32	13/11/2022
AC284	6359052	428599	257.2	-90	17	14/11/2022
AC285	6359002	428400	257.5	-90	38	14/11/2022
AC286	6358990	428198	254.6	-90	28	14/11/2022
AC287	6359001	427997	254.2	-90	44	14/11/2022
AC288	6359002	427798	258.8	-90	33	14/11/2022
AC289	6358985	427599	256.3	-90	36	14/11/2022
AC290	6358996	426798	258.9	-90	26	22/11/2022
AC291	6359002	427000	259.6	-90	36	22/11/2022
AC292	6359002	427204	255.8	-90	41	21/11/2022
AC293	6358998	427403	255.0	-90	39	21/11/2022
AC294	6358600	426811	255.7	-90	32	21/11/2022
AC295	6358598	426999	255.8	-90	31	21/11/2022
AC296	6358601	427202	255.7	-90	22	21/11/2022
AC297	6358620	428400	259.3	-90	46	14/11/2022
AC298	6358606	428598	261.5	-90	31	15/11/2022
AC299	6358593	428809	260.8	-90	33	15/11/2022
AC300	6358591	429005	257.4	-90	28	15/11/2022
AC301	6358580	429204	255.5	-90	33	15/11/2022
AC302	6358580	429402	255.5	-90	33	15/11/2022
AC303	6358587	429600	256.8	-90	28	15/11/2022
AC304	6358599	429803	256.1	-90	52	16/11/2022
AC305	6358666	430000	255.1	-90	40	16/11/2022
AC306	6358634	430204	259.1	-90	30	16/11/2022
AC307	6358595	430409	257.0	-90	41	16/11/2022
AC308	6358582	430602	256.0	-90	29	17/11/2022

AC309	6358579	430808	259.5	-90	42	17/11/2022
AC310	6358611	431001	259.8	-90	21	17/11/2022
AC311	6358602	431208	260.9	-90	31	17/11/2022
AC312	6358599	431399	262.9	-90	55	17/11/2022
AC313	6358603	431600	264.2	-90	26	18/11/2022
AC314	6358614	433207	266.6	-90	24	18/11/2022
AC315	6358588	433406	266.3	-90	28	18/11/2022
AC316	6358596	433607	266.3	-90	24	18/11/2022
AC317	6358598	433807	268.5	-90	27	19/11/2022
AC318	6358608	434008	269.2	-90	31	19/11/2022
AC319	6358606	434209	271.5	-90	21	19/11/2022
AC320	6358602	434406	270.8	-90	25	19/11/2022
AC321	6358196	426808	255.2	-90	42	21/11/2022
AC322	6358197	427000	254.6	-90	42	20/11/2022
AC323	6358197	427201	255.6	-90	21	20/11/2022
AC324	6358196	427402	255.4	-90	26	20/11/2022
AC325	6358198	427601	255.7	-90	45	20/11/2022
AC326	6358198	427799	254.4	-90	49	20/11/2022
AC327	6358197	427999	254.2	-90	54	20/11/2022
AC328	6358198	428201	258.4	-90	37	20/11/2022
AC329	6358198	428402	258.1	-90	44	20/11/2022
AC330	6358200	428602	258.3	-90	23	19/11/2022
AC331	6357402	435807	277.3	-90	24	11/11/2022
AC332	6357407	435396	274.7	-90	10	11/11/2022
AC333	6357391	435012	278.7	-90	8	11/11/2022
AC334	6357811	434397	272.7	-90	20	8/11/2022
AC335	6357797	434199	270.8	-90	20	8/11/2022
AC336	6357811	433998	268.4	-90	27	8/11/2022
AC337	6357821	433795	266.7	-90	24	8/11/2022
AC338	6357771	433595	266.1	-90	32	9/11/2022
AC339	6357804	433396	263.8	-90	45	9/11/2022
AC340	6357790	433203	262.9	-90	44	9/11/2022
AC341	6357776	433011	261.3	-90	31	9/11/2022
AC342	6357777	432812	261.0	-90	26	9/11/2022
AC343	6357809	432402	264.4	-90	35	9/11/2022

AC344	6357813	432197	263.3	-90	35	9/11/2022
AC345	6357823	431994	259.4	-90	29	10/11/2022
AC346	6357779	431800	258.5	-90	27	10/11/2022
AC347	6357784	431600	259.9	-90	26	10/11/2022
AC348	6357813	431378	255.7	-90	27	10/11/2022
AC349	6357786	431196	257.7	-90	29	11/11/2022
AC350	6357773	430997	259.2	-90	28	11/11/2022
AC351	6357779	430794	260.6	-90	27	11/11/2022
AC352	6357820	430594	260.1	-90	29	11/11/2022
AC353	6357814	430396	257.0	-90	22	11/11/2022
AC354	6357786	430201	258.7	-90	30	11/11/2022
AC355	6357792	429995	257.6	-90	38	11/11/2022
AC356	6357797	429798	256.4	-90	59	11/11/2022
AC357	6357800	429595	256.8	-90	27	20/11/2022
AC358	6357801	429400	256.5	-90	41	20/11/2022
AC359	6357798	429199	255.7	-90	51	20/11/2022
AC360	6357800	428997	253.7	-90	46	20/11/2022
AC361	6357799	428801	257.1	-90	27	20/11/2022
AC362	6357803	428598	259.8	-90	19	20/11/2022
AC363	6357801	428403	260.4	-90	46	20/11/2022
AC364	6357800	428200	257.4	-90	48	21/11/2022
AC365	6357800	428002	252.8	-90	40	21/11/2022
AC366	6357798	427801	255.1	-90	34	21/11/2022
AC367	6357798	427604	252.9	-90	17	21/11/2022
AC368	6357800	427399	254.8	-90	33	21/11/2022
AC369	6357799	427200	255.3	-90	17	21/11/2022
AC370	6357798	427000	253.2	-90	21	21/11/2022
AC371	6357797	426798	256.7	-90	55	21/11/2022
AC372	6356984	435594	271.8	-90	26	13/11/2022
AC373	6357396	433801	266.2	-90	7	11/11/2022
AC374	6357380	433602	265.1	-90	42	11/11/2022
AC375	6357398	433400	263.4	-90	32	12/11/2022
AC376	6357418	433200	262.6	-90	26	12/11/2022
AC377	6357413	433001	262.1	-90	20	12/11/2022
AC378	6357380	432801	260.4	-90	25	12/11/2022

AC379	6357399	432401	262.5	-90	32	12/11/2022
AC380	6357408	432200	263.1	-90	25	12/11/2022
AC381	6357403	432000	263.1	-90	46	12/11/2022
AC382	6357401	431799	262.0	-90	30	12/11/2022
AC383	6357377	431599	261.1	-90	21	12/11/2022
AC384	6357396	431399	261.0	-90	24	12/11/2022
AC385	6357404	431200	256.1	-90	27	13/11/2022
AC386	6357394	431003	255.0	-90	39	13/11/2022
AC387	6357360	430803	258.7	-90	46	13/11/2022
AC388	6357415	430602	258.0	-90	30	13/11/2022
AC389	6357399	430403	257.1	-90	31	13/11/2022
AC390	6357399	430200	256.6	-90	32	13/11/2022
AC391	6357399	429999	257.2	-90	37	13/11/2022
AC392	6357007	435203	271.4	-90	14	14/11/2022
AC393	6356996	433794	265.7	-90	15	14/11/2022
AC394	6357000	433596	265.1	-90	10	14/11/2022
AC395	6356997	433395	263.7	-90	33	14/11/2022
AC396	6357012	433198	261.5	-90	25	14/11/2022
AC397	6357003	433000	262.5	-90	41	14/11/2022
AC398	6356985	432796	263.6	-90	29	14/11/2022
AC399	6357016	432398	259.8	-90	25	14/11/2022
AC400	6357022	432196	261.5	-90	27	14/11/2022
AC401	6356937	431999	263.1	-90	33	15/11/2022
AC402	6356987	431801	261.5	-90	27	15/11/2022
AC403	6356969	431600	258.7	-90	21	15/11/2022
AC404	6356997	431402	259.6	-90	20	15/11/2022
AC405	6357003	431204	259.1	-90	27	15/11/2022
AC406	6357005	431001	259.7	-90	21	15/11/2022
AC407	6357003	430802	258.8	-90	16	15/11/2022
AC408	6357001	430611	257.4	-90	14	15/11/2022
AC409	6356998	430398	257.1	-90	26	15/11/2022
AC410	6356598	431602	259.9	-90	30	17/11/2022
AC411	6356603	431401	258.4	-90	36	17/11/2022
AC412	6356601	431203	258.1	-90	41	17/11/2022
AC413	6356600	430996	257.1	-90	28	17/11/2022

AC414	6356601	430797	254.2	-90	29	17/11/2022
AC415	6356604	430605	252.5	-90	28	17/11/2022
AC416	6356593	430401	251.5	-90	14	17/11/2022
AC417	6356600	430199	255.6	-90	30	17/11/2022
AC418	6356597	430006	256.2	-90	27	17/11/2022
AC419	6356188	432792	259.7	-90	38	19/11/2022
AC420	6356194	432397	258.5	-90	27	17/11/2022
AC421	6356200	432201	259.4	-90	28	17/11/2022
AC422	6356197	431999	259.2	-90	15	18/11/2022
AC423	6356199	431801	259.2	-90	24	18/11/2022
AC424	6356201	431602	256.6	-90	26	18/11/2022
AC425	6356199	431402	254.2	-90	22	18/11/2022
AC426	6356204	431202	248.6	-90	7	18/11/2022
AC427	6356204	430999	254.0	-90	9	18/11/2022
AC428	6356197	430796	258.0	-90	25	18/11/2022
AC429	6356198	430599	256.9	-90	32	18/11/2022
AC430	6356194	430401	256.7	-90	30	18/11/2022
AC431	6356199	430204	255.4	-90	37	18/11/2022
AC432	6356197	430001	253.3	-90	30	18/11/2022
AC433	6354597	434002	254.1	-90	33	19/11/2022
AC434	6354600	433799	250.2	-90	31	19/11/2022
AC435	6354599	433599	256.5	-90	20	19/11/2022
AC436	6354597	433399	256.3	-90	25	19/11/2022
AC437	6354609	433205	255.9	-90	25	19/11/2022
AC438	6354598	432997	255.2	-90	25	19/11/2022
AC439	6354200	434001	256.9	-90	33	19/11/2022
AC440	6354200	433800	254.6	-90	40	19/11/2022
AC441	6354202	433597	255.0	-90	23	19/11/2022
AC442	6354201	433401	255.5	-90	14	19/11/2022
AC443	6354202	433200	255.7	-90	16	19/11/2022
AC444	6354201	432997	256.8	-90	34	20/11/2022
AC445	6362090	425792	258.4	-90	21	22/11/2022
AC446	6362103	424987	260.2	-90	46	22/11/2022
AC486	6361248	425001	262.3	-90	33	24/11/2022
AC487	6361245	425397	262.7	-90	29	24/11/2022

AC488	6361227	425801	259.3	-90	14	23/11/2022
AC489	6361247	426202	258.0	-90	17	23/11/2022
AC490	6361259	426601	261.8	-90	17	23/11/2022
AC491	6361255	427000	256.4	-90	29	23/11/2022
AC492	6362095	425393	262.6	-90	26	4/12/2022
AC493	6361991	426602	258.3	-90	43	4/12/2022
AC494	6360746	426000	263.7	-90	35	5/12/2022
AC495	6360740	426402	260.3	-90	23	4/12/2022
AC496	6360730	426802	253.3	-90	13	4/12/2022
AC497	6360749	427199	261.2	-90	30	4/12/2022
AC498	6361750	427398	260.7	-90	20	23/11/2022
AC499	6361745	427603	259.2	-90	19	23/11/2022
AC500	6361496	427600	258.8	-90	20	23/11/2022
AC501	6360742	428004	264.1	-90	37	25/11/2022
AC502	6360605	428603	255.0	-90	24	29/11/2022
AC503	6360600	429202	264.2	-90	22	2/12/2022
AC504	6360596	430598	269.3	-90	22	2/12/2022
AC505	6355803	433200	260.2	-90	24	2/12/2022
AC506	6355807	433999	260.5	-90	33	5/12/2022
AC507	6360595	430798	269.8	-90	14	2/12/2022
AC508	6360599	431198	272.3	-90	13	2/12/2022
AC509	6356205	435200	266.1	-90	51	25/11/2022
AC510	6356192	435399	266.7	-90	23	25/11/2022
AC511	6356184	435601	266.4	-90	28	25/11/2022
AC512	6355790	435800	265.4	-90	30	26/11/2022
AC513	6355802	436000	266.0	-90	29	26/11/2022
AC514	6355397	434797	262.6	-90	26	26/11/2022
AC515	6355408	435000	263.3	-90	26	26/11/2022
AC516	6355403	435201	263.5	-90	28	26/11/2022
AC517	6355391	435399	263.5	-90	27	26/11/2022
AC518	6355384	435600	263.6	-90	28	27/11/2022
AC519	6355404	435797	266.5	-90	35	27/11/2022
AC520	6355391	436001	268.9	-90	40	27/11/2022
AC521	6355402	436200	268.5	-90	45	27/11/2022
AC522	6355425	436400	269.0	-90	26	27/11/2022

AC523	6354595	435201	260.4	-90	19	28/11/2022
AC524	6354617	437002	258.4	-90	28	28/11/2022
AC525	6354615	437200	260.6	-90	21	28/11/2022
AC526	6354196	435400	255.2	-90	32	28/11/2022
AC527	6354189	435600	258.9	-90	29	28/11/2022
AC528	6354215	437200	259.1	-90	33	28/11/2022
AC529	6354204	437398	259.8	-90	22	29/11/2022
AC530	6354189	437599	260.5	-90	15	29/11/2022
AC533	6354586	434800	258.1	-90	21	6/12/2022
AC534	6354587	434998	258.1	-90	21	6/12/2022
AC535	6354590	435394	260.3	-90	26	6/12/2022
AC536	6354197	434401	256.5	-90	22	7/12/2022
AC537	6354216	434794	256.5	-90	18	6/12/2022
AC538	6354206	434996	256.7	-90	30	6/12/2022
AC539	6354189	435197	254.4	-90	35	6/12/2022
AC540	6354201	435998	258.8	-90	31	6/12/2022
AC541	6354176	436195	260.3	-90	25	7/12/2022
AC542	6355406	433400	260.1	-90	29	5/12/2022
AC543	6355395	433999	259.8	-90	32	5/12/2022
AC544	6358203	432610	261.2	-90	40	5/12/2022
AC545	6354180	435800	258.9	-90	22	6/12/2022
AC546	6360610	428199	263.3	-90	26	5/12/2022
AC547	6357402	435598	274.1	-90	16	11/11/2022

Table 6: Mineralised saprolite intervals in Cowalinya Mineral Resources that exceed a TREO grade-thickness of 10,000 ppm-metres.
400 ppm TREO-CeO2 cut-off grade.

HOLE NO.	FROM (m)	TO (m)	INTERVAL (m)	TREO (ppm)	MAGNET REOs/TREO
AC1	20	38	18	630	26.8%
AC2	14	33	19	1184	27.9%
AC4	18	35	17	828	24.2%
AC5	18	36	18	648	28.2%
AC6	18	32	14	759	23.6%
AC8	16	28	12	1025	22.1%
AC12	16	26	10	1068	22.9%
AC16	12	31	19	980	27.1%
AC17	20	38	18	845	23.8%
AC27	20	38	18	739	26.1%
AC28	12	39	27	1112	32.1%
AC29	20	39	19	1659	26.7%
AC36	14	30	16	653	23.9%
AC41	14	29	15	719	25.4%
AC50	14	34	20	581	23.2%
AC81	24	34	10	1555	30.1%
AC89	26	43	17	1075	25.4%
AC179	14	36	22	665	24.8%
AC196	19	37	18	631	23.2%
AC200	20	26	6	1862	25.8%
AC201	22	40	18	710	22.2%
AC212	22	36	14	1033	29.0%
AC221	17	27	10	2087	25.1%
AC223	11	28	17	1069	26.3%
AC225	16	35	19	3190	32.5%
AC226	12	54	42	790	25.4%
AC263	18	28	10	1026	28.0%
AC265	26	40	14	796	20.1%
AC269	10	24	14	1135	25.3%
AC274	14	40	26	1133	25.7%
AC275	19	37	18	1344	22.2%
AC279	29	39	10	1580	27.4%
AC287	14	43	29	701	25.3%
AC289	11	35	24	747	28.0%
AC302	18	30	12	1207	23.8%
AC309	25	41	16	814	21.8%
AC312	18	54	36	656	23.3%
AC339	28	44	16	688	23.9%

AC343	20	32	12	928	28.6%
AC344	22	34	12	1212	18.5%
AC354	19	29	10	1169	26.6%
AC356	28	42	14	1060	24.2%
AC359	16	30	14	1164	31.6%
AC360	19	45	26	1201	22.5%
AC361	20	26	6	1771	23.9%
AC363	30	40	10	1200	19.9%
AC382	15	29	14	799	30.3%
AC387	24	45	21	867	25.1%
AC396	10	24	14	825	19.7%
AC411	15	35	20	755	27.7%
AC412	16	38	22	1018	24.7%
AC415	11	27	16	929	27.3%
AC431	22	36	14	755	17.9%
AC433	6	32	26	702	24.9%
AC440	14	28	14	1278	24.8%
AC446	20	40	20	977	23.6%
AC487	16	28	12	1690	22.7%
AC540	19	30	11	948	22.9%
AC544	17	39	22	868	21.3%

TREO = $La_2O_3+CeO_2+Pr_6O_{11}+Nd_2O_3+Sm_2O_3+Eu_2O_3+Gd_2O_3+Tb_4O_7+Dy_2O_3+Ho_2O_3+Er_2O_3+Tm_2O_3+Yb_2O_3+Lu_2O_3+Y_2O_3$
Magnet REOs = $Pr_6O_{11}+Nd_2O_3+Tb_4O_7+Dy_2O_3$

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.
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 are done at LabWest using their AF-02S technique: 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 scandium (Sc), thorium (Th) and uranium (U), and oxides of aluminium (Al), calcium (Ca), iron (Fe), magnesium (Mg) and phosphorus (P), are measured.

Criteria	JORC Code 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.	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.
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 main, 400 metres x 200 metres. Confined areas of the project have been drilled at 400 metres x 100 metres, 150 metres x 100 metres and 150 metres x 50 metres.

Criteria	JORC Code Explanation	Commentary
	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.
	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.*	Exploration licence E63/1972 is located 55 kilometres east-north-east of Salmon Gums in Western Australia. It consists of 80 graticular blocks comprising an area of 224 km^2. It is situated on unallocated crown land. The registered holder of the tenement is Heavy Rare Earths Limited (HRE). Full native title rights have been granted over the tenement and surrounding lands to the Ngadju people, with whom cultural heritage surveys are undertaken 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.	The tenement is in good standing. There are no impediments to operating on the tenement other than requirements of the DMIRS and the Heritage Protection Agreement, all of which are industry standard.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	AngloGold Ashanti and Great Southern Gold previously worked in the area of E63/1972 exploring for gold mineralisation. Surface geochemical sampling and air core 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. Great Southern Gold also assayed for La and Ce for the entire length of a number of holes. AngloGold Ashanti flew an airborne magnetic/radiometric survey to assist with mapping of buried bedrock lithologies. Buxton Resources and Toro Energy also previously worked in the area of E63/1972 exploring for gold and nickel mineralisation, and uranium mineralisation, respectively. Both companies flew time-domain electromagnetic surveys to aid in their exploration targeting. No significant mineralisation was discovered.

Criteria	JORC Code Explanation	Commentary
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 the drilling is shown in Table 5.

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 >1,000 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 Figures 1, 2, 9, 10 and 12 for plan views showing drillhole collar locations. Refer to Figures 8 and 11 for representative drillhole sections.
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.*	Summary assays for all mineralised intervals above a TREO grade-thickness of 10,000 ppm-metres are presented in Table 6.

Criteria	JORC Code Explanation	Commentary
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 test work in weak hydrochloric acid (HCl) solution (1-2% residual HCl) at 10% solids and 50°C on the fines fraction from 13 mineralised saprolite composites achieves the following results: - 82.9% (average) REE extraction into solution - 18.1 kg/t (average) of HCl (32%) consumed for preferred material types.
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).*	Comprehensive metallurgical (including variability) test work is in progress, and petrological studies are being undertaken to identify REE-bearing mineral species.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Area earmarked for potential north-west extensions to the Cowalinya mineral resource is indicated in Figures 1, 2 and 10.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in Section 1, and where relevant in Section 2, also apply to this Section)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• 2023 HRE data integrity: ○ Topography data was cross-checked against web-based mapping and found to match. ○ Drill hole data was supplied in computerised MS Excel spreadsheet form by HRE. • Spreadsheet data was spot-checked against HRE reporting and found to match. • Collar location data was spot-checked against HRE plotted plans and found to match. • Data validation: ○ The Consultant databased all data into Minex geological software. ○ Topography data: Topography data was plotted and compared against web-based sources. ○ Drill hole data: Gross software error data checking occurred with all drill holes during its databasing. This caught various collar, survey, sample depth and assay value inconsistencies. All data issues were satisfactorily resolved and corrected by reference to logs and through common sense. Drill holes were plotted in plan and cross-section and compared with plots in reports.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Site visits: ○ The Consultant (CP for the Resource estimation and this Report) visited the site in late July 2023 in the company of HRE's Executive Director Mr Richard Brescianini. ○ The visit confirmed all geographical and (limited) geological features and presumptions of the Project area necessary for the Resource estimation. ○ Geographically the Consultant gained impressions of the Project general location, its access from the highway ~50 km to the west, the almost flat topography and its occasional small drainage features. The Consultant traversed much of the southern part of the tenement along the predominantly E/W drill lines. ○ Almost no basement rocks outcrop above the area's almost flat-lying sandy alluvium within the tenement – and the CP did not observe any during the visit. Therefore, all subsurface geology (weathered and fresh) was inspected in cutting from drill holes. Cuttings from approximately half a dozen scattered 2022 drill holes were inspected in green plastic samples bags lying in-situ at hole locations. Those cuttings appeared geologically as expected of weathered saprolite and almost fresh granitic bedrock. Samples still remained at hole locations for the 2022 holes, those at 2021 holes had already been removed 9the holes rehabilitated). ○ The Consultant confirmed the precise location of several of HRE's drill holes, and was

Criteria	JORC Code explanation	Commentary
		shown the exact (2022 holes) and approximate (2021) location of many others.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• Geology and mineralisation 'style' interpretation: o The geological interpretation was that of sub-horizontally layered REE mineralisation continuity within the weathered saprolitic regolith above granite. The mineralisation itself was an IAC REE type lateritic concentration process. • Confidence in the geological interpretation: o The Consultant is very confident in the geological and mineralised layer interpretation, considering it to be a typical IAC REE deposit. • Data nature, assumptions & geological controls: o Interpretation was based on geological logging data of saprolite layers, previous descriptions and interpretations, and on assay data. o The basic assumptions and geological controls were: ▪ The weathered regolith above granite would constitute the same geological IAC REE-mineralisation setting as exists for REE deposits in Southern China. ▪ The presence of distinct contiguous zones of REEs >300 ppm (the Chinese cut-off for such deposits) constituted mineralised zones – which could be correlated between holes and thus represented mineralised layers. ▪ The presence of the REE mineralisation in weathered material, cheap to mine, and shown elsewhere to be cheap and effective to extract, were assumed to assure the deposit's Resource economics. • Alternative interpretations: o The data overwhelmingly supports the current layered geology and mineralisation style interpretation and the Consultant cannot envisage an alternative one. o If the current interpretation was not implemented a simple unconstrained 3D grade modelling method would produce a similar Resource but much less grade-focused and accurate. • Use of geology and grade continuity: o Sub-horizontal geological and grade continuity was inherent in the near constant thickness weathered layer above fresh basement as it closely followed the flat attitude of the surface topography. o The weathering process, due to groundwater movements above the fresh bedrock, would have slowly and continuously reduced the fresh rock to weathered saprolitic clays and by doing so reduced the original volume in a vertical sense – thus introducing sub-horizontal layering. o Geological continuity was tightly controlled by interpreting the regolith layer (to prevent

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>mineralisation interpretation outside it) and then interpreting mineralisation layers within it.
○ Grade estimation was controlled within the plane of the regolith and mineralisation layering by the use of an un-folding block model – which forces continuity in the plane of the layers.
○ Grades in each layer were segregated with a unique a data population domain number.
○ Block grade estimation also employed a strong vertical direction distance weighting factor (2) to minimise vertical continuity and emphasise continuity within the layer.</td></tr>
<tr><td>Dimensions</td><td>• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</td><td>• Deposit dimensions:
○ Dimensions of the full tenement E63/1972 area were large:
• 25.1 km E/W
• 18.5 km N/S
• Area 464.4 km^2
○ However, the dense drilling area in the SE of the tenement formed the Resource area or model area and were smaller. The area was formed by a boundary polygon following the tenement boundary in the SE and by a 300 m projection from edge holes in the NW.
• 13.1 km E/W
• 8.5 km N/S
• Area 48.7 km^2
<table>
<tr><th>Layer</th><th>Domain</th><th>Description</th></tr>
<tr><td>TM</td><td>-</td><td>REE-mineralised layer in alluvium (not modelled)</td></tr>
<tr><td>S1M</td><td>-</td><td>REE-mineralised layer in saprolite (not modelled)</td></tr>
<tr><td>SUM</td><td>2</td><td>Upper REE-mineralised layer in saprolite</td></tr>
<tr><td>SMM</td><td>3</td><td>Middle REE-mineralised layer in saprolite</td></tr>
<tr><td>SLM</td><td>4</td><td>Lower REE-mineralised layer in saprolite</td></tr>
</table>
○ Layers:
○ Resources were containing in 3 REE-mineralised layers – SUM, SMM and SLM downwards. Statistics are tabulated.
<table>
<tr><th>Layer</th><th>Grid</th><th colspan="3">Thickness</th><th>Area</th><th>Volume</th></tr>
<tr><th></th><th></th><th>Max (m)</th><th>Min (m)</th><th>Average (m)</th><th>(km^2)</th><th>(Mm^3)</th></tr>
<tr><td>SUM</td><td>SUMST</td><td>10.01</td><td>0.99</td><td>3.79</td><td>48.2</td><td>182.5</td></tr>
<tr><td>SMM</td><td>SMMST</td><td>12.09</td><td>0.00</td><td>4.73</td><td>48.2</td><td>227.7</td></tr>
<tr><td>SLM</td><td>SUMST</td><td>32.01</td><td>0.00</td><td>6.08</td><td>48.2</td><td>293.6</td></tr>
<tr><td>Total</td><td></td><td></td><td></td><td>14.60</td><td></td><td>703.7</td></tr>
</table>
○ Depths of the layers were:
• Surface to top of upper layer: average 12.7 m (range 0 to 24.6 m).
• Surface to base of lowest layer: ~65 m.</td></tr>
<tr><td>Estimation and modelling techniques</td><td>• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points.</td><td>• ESTIMATION TECHNIQUES
• Mineralised layer surface modelling:
○ Software: Modelling and estimation was done in Minex Genesis software.
○ Method: Geological layer modelling employed computerised gridded DTM surface interpolation. The method's appropriateness stems from its 3D computational capability and rigor. Gridded surfaces allow simple mathematical operations within and between surfaces.</td></tr>
</table>

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr>
<td></td>
<td>
If a computer assisted estimation method was chosen include a description of computer software and parameters used.

The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.
The assumptions made regarding recovery of by-products.
Estimation of deleterious elements or other non-grade variables of economic significance (e.g., sulphur for acid mine drainage characterisation).
In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.
Any assumptions behind modelling of selective mining units.
Any assumptions about correlation between variables.
Description of how the geological interpretation was used to control the resource estimates.
Discussion of basis for using or not using grade cutting or capping.
The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.

</td>
<td>
Bounding layer surfaces were interpolated from the top and bottom down-hole intercepts. Each layer was modelled independently with a hanging wall (structure roof, SR) and foot wall (structure floor, SF) boundary surface.

Algorithm: Surface modelling used a trending growth algorithm to interpolate smooth natural surfaces (as opposed to straight line methods) as a regular fine mesh. Through extrapolation this method honours local inflections away from the reference plane mean orientation. Mesh point interpolations grow out from data points until all mesh points are estimated.
Mesh size: The DTM mesh point dimensions were 25*25 m. This was considered fine enough to produce smooth surfaces honouring layer intercepts well.
Orientation: All layer surfaces were effectively semi-horizontal, hence modelled with respect to an (assumed) horizontal reference plane at 0 RL (below the layers).
Boundary: A boundary was placed around the area of dense drilling to constrain the layer models. The 48.7 km^2 boundary was either 300 m outside edge holes or the tenement boundary in the SE. Dimensions tabulated:
<table>
<tr><th>Parameter</th><th>E</th><th>N</th></tr>
<tr><td>From (m)</td><td>424,600</td><td>6,354,000</td></tr>
<tr><td>To (m)</td><td>437,700</td><td>6,362,500</td></tr>
<tr><td>Extent (km)</td><td>13.1</td><td>8.5</td></tr>
<tr><td>Area (km^2)</td><td colspan="2">48.73</td></tr>
</table>

Stratigraphic model build: After independent interpolation of each layer’s roof and floor the suite of surfaces was ‘built’ into a valid model using processes to correct potential cross-overs between and within lodes. This process resulted in near zero loss.
Surface estimation parameters:

File: Cowalinya_202309_RAW/MASKED.GRD
Bounding surfaces: Layer name + suffix SR and SF.

<table>
<tr><th rowspan="2">Parameter</th><th colspan="2">Direction</th></tr>
<tr><th>X</th><th>Y</th></tr>
<tr><td>Origin (m)</td><td>411,000</td><td>6,352,000</td></tr>
<tr><td>Extent (m)</td><td>28,000</td><td>18,000</td></tr>
<tr><td>Block size (m)</td><td>25</td><td>25</td></tr>
</table>

</td>
</tr>
</table>

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>Parameter (Set MIN)</th><th>Value</th></tr>
<tr><td>Sample down-hole compositing</td><td>Not for bounding layers</td></tr>
<tr><td>Algorith</td><td>Growth</td></tr>
<tr><td>Scan distance (m)</td><td>1,000 m</td></tr>
<tr><td>Data boundary (m)</td><td>0 m</td></tr>
<tr><td>Polygon</td><td>No</td></tr>
<tr><td>Grid expansion (m)</td><td>500 m</td></tr>
<tr><td>Extrapolation</td><td>Yes</td></tr>
<tr><td>Data limits</td><td>No</td></tr>
<tr><td>Polygon limits</td><td>Subsequent</td></tr>
<tr><td>Smoothing radius (m)</td><td>No</td></tr>
</table>

Data population domains:

Samples and blocks (see below) in layers were uniquely identified and segregated by domain number for assay analysis and block grade estimation.
Domains were set in the drill hole database and in the block models.
Domain numbers given above with the layer names (see layer Table above).

Drill hole sample analysis:

Rare Earth Oxides (REOs) were the focus of the Project.
Brief analysis was performed for layers SMM and SLM on the total REOs (TREO), light REOs (TLREO), heavy REOs (THREO).
Brief interpretations showed that for all elements there were only a very small number of highly anomalous values. Given that the TREOs themselves were an addition of 15 individual element the numbers of these “long high tail” values were considered to be small enough that when composited for grade estimation they would not bias the grade estimates upwards.

Geostatistical sample analysis:

Variography was performed for CeO_2, TLREO and THREO in layers SMM and SLM.
Various top cuts were applied by element.
Variography was performed in the sub-horizontal plane.
Data searching was greatly aided by use of the un-folding block model.
Interpretation:

Although the range distance diagrams showed a long-range continuity of up to ~800 m E/W the majority of other directions showed similar shorter ranges of 400-550 m.
Consequently, the Consultant took the data to be essentially isotropic with maximum

</td></tr>
</table>

Criteria	JORC Code explanation	Commentary

- The Consultant's opinion of the 450 m continuity distance was very positive - with the spacing between the great proportion of existing drill holes being well within this distance and thus supportive of each other.

continuity distance conservatively taken to be ~450 m.

- The Consultant's opinion of the 450 m continuity distance was very positive - with the spacing between the great proportion of existing drill holes being well within this distance and thus supportive of each other.

* Grade continuity control 'un-folding' block model:
  - An 'un-folding' 3D block model (COW2_D/Z.GR3) was built within the geological layer surface models to provide domain control within layers and to control grade trending continuity within and along the layers (the 'Z' direction in a Minex 'Z-grid' block model). Dimensions tabulated:

Parameter	Direction		
	X	Y	Z
Origin (m)	424,600	6,354,000	202
(MGA Zone 51)	437,700	6,362,400	265
Extent (m)	13,100	8,400	63
Rotation (°)	0	0	0
Primary block size (m)	50.0	100.0	1.5
Primary block numbers	262	84	42
Sub-block number	1	1	1
Total block number	Potential 924,336		Actual 388,720

  - Rotation: As the layers were essentially in a semi-horizontal plane the Z-grid required no rotating to have its Z axis normal to that plane (see below).
  - Extent: The un-folding block model had exactly the same plan extents as the layers – limited by the boundary mask to ~300 m outside edge holes.
  - Block size: XY block size set at 50 * 100 m to be roughly 25% of the minimum drill hole spacing of 200 * 400 m (some holes 100 * 200 m).
  - Block Z size and number:
    - Set according to layer average vertical thicknesses.
    - Aim to approximate Z block size 0.5 m.
    - Each mineralised layer given unique domain number:
    - Parameters tabulated:

Layer	Domain	Layer thick (m)	Num blocks	Block size (m)
IB	20	15.0	10	1.5
SUM	2	3.8	6	0.6
IB	30	5.0	4	1.3
SMM	3	4.7	8	0.6
IB	40	2.0	2	1.0
SLM	4	6.1	10	0.6
IB	50	1.0	1	1.0
		37.6	41	

* Grade block estimation:

Criteria	JORC Code explanation	Commentary
		○ 3D block grades were estimated into individual grade block models for each element oxide. The block grade models had the same parameters as the un-folding model (see above). ○ Parameters tabulated: ○ Continuity: Data search directions within the layers were controlled by the un-folding block model, and layer data was segregated by domain number. A vertical distance weighting of 2 was used to enhance layering continuity. ○ Compositing: Down-hole drill hole sample compositing was not required as all holes were already exactly 2.0 m long. ○ Algorithm: Inverse distance squared (ID2) done in a single pass. Interpolation of grades in two passes (to overcome issues of very localised highly anomalous grades) was considered but not undertaken because of the limited numbers of high-grade samples in particular. In a 2-pass estimation an initial 1st pass uses all samples whilst a 2nd pass uses only high-grade samples with severely restricted scan distances to over-write blocks close to the high grades. ○ Scan distance: A long scan of 2,000 m was used to ensure grades were estimated in all blocks. In practice the boundary limit around the layers and block model limited actual scans to <300 m. ○ Data limits: ▪ No lower cut or clip was required as the layer intercept interpretation excluded all low grades outside the layers, the vast majority of which were <200 ppm TREO.

Parameter	(Set Z2_2000)		Value	
Sample down-hole compositing			Effectively 2.0 m	
Domain/unfolding control			COW2_D/Z block models	
Algorith			Inverse distance squared	
Data limits min/max			0.00 / -	
Scan distance (m)			2,000 m	
Points	**Min sectors**		1	
	Max/min pts/sector		3 / 1	
Axes	**Rotation (°)**	**X**	0	
		Y	0	
		Z	0	
	Weighting	**X**	1	
		Y	1	
		Z	2	Weaker vertical

Criteria	JORC Code explanation	Commentary
		(see below)

- ▪ No upper cut of clip was applied because of 1) the limited number of anomalous high grades, 2) their short intervals, and 3) the positive desire to allow the few high grades to register higher grades in some blocks.
  - o Estimation stats tabulated:

Element	Input data				Interpolated blocks			
	Pts	Max (ppm)	Min (ppm)	Av (ppm)	Pts/Blocks	Max (ppm)	Min (ppm)	Av (µ) (ppm)
La	5,312	1,430.80	0.50	61.85	233,232	1,053.95	6.18	84.17
Ce	"	2,248.00	1.00	107.87	"	1,231.95	8.31	156.86
Pr	"	624.64	0.12	15.40	"	427.01	0.80	21.20
Nd	"	2,297.80	0.20	56.85	"	1,567.13	2.11	77.67
Sm	"	514.90	0.00	10.65	"	351.24	0.28	14.20
Eu	5,312	67.51	0.02	2.43	"	47.74	0.16	3.26
Gd	"	316.97	0.07	8.89	"	237.90	0.25	11.65
Tb	"	48.93	0.01	1.26	"	36.20	0.05	1.63
Dy	"	244.46	0.06	6.84	"	185.99	0.23	8.55
Ho	"	43.30	0.01	1.33	"	31.82	0.04	1.64
Er	"	122.35	0.05	3.65	"	83.21	0.11	4.42
Tm	"	37.92	0.01	0.53	"	17.30	0.01	0.65
Yb	"	100.10	0.10	3.31	"	77.66	0.13	3.95
Lu	"	15.12	0.00	0.49	"	10.46	0.02	0.58
Y	"	1,777.90	0.50	40.54	"	931.56	1.27	50.33
TREO sum	5,314	7,222.30	0.00	321.78	233,232	5,328.11	27.25	440.65
Sc	"	118.00	0.00	23.76	"	89.75	1.98	26.83
Th	4,887	80.60	0.60	11.29	"	62.47	1.19	13.12
U	"	56.84	0.20	3.56	"	30.66	0.43	4.00

- Grade reporting block model:
  - o A normal "orthogonal-shaped" block model (COW2_M6.G3*, simply called a block model or a block database) was built from the un-folding block model. Parameters tabulated:

Parameter	Direction		
	X	Y	Z
Origin (m)	424,600	6,354,000	202
(MGA Zone 55)	437,700	6,362,400	265
Extent (m)	13,100	8,400	63
Rotation (°)	0	0	0
Primary block size (m)	50.0	50.0	1.0
Primary block numbers	262	168	63
Sub-block number	1	1	1
Total block number	Potential 2,773,008		Actual 282,133

  - o Block sizes were based on the un-folding block model but reduced in Y to 50 m and assigned a fixed 1 m vertically (so 50 * 50 * 1 m. Other parameters were the same as the un-folding block model.
  - o Block grades were loaded from the individual grade block models (see above).

Criteria	JORC Code explanation	Commentary

- Other variables, such as grade totals and JORC classification variables, were computed using SQL macros.

Total variable	Code	Calculation
Light REOs	TLREO	$La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3$
Heavy REOs (including Y)	THREO	$(Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3) + Y_2O_3$
All REOs (including Y)	TREO	TLREO + THREO
All REOs less cerium oxide (grade cut-off variable)	TREOMCE	TREO - CeO_2
Permanent magnet REOs	MREO	$Pr_6O_{11} + Nd_2O_3 + Tb_4O_7 + Dy_2O_3$

- Grade block manipulation:
  - Element totals were computed using SQL macros. Computations tabulated:
- Check estimates:
  - Previous 2022 TREO Resource of 28 Mt @ 625 ppm TREO estimated and reported by Mr John Tyrrell of JMCT Consulting.
  - The Consultant considers the comparison of this 2023 Resource to the 2022 Resource to be impractical. Reasons:
    - Vastly different sized surface areas (2022 10 times smaller area).
    - Different (TREO-CeO_2) cut-off grades (2022 used 300 ppm, 2023 used 400 ppm).
    - Slightly higher density used in 2022 (2022 1.63 t/m^3, 2023 average 1.51 t/m^3).
- By-product recovery & deleterious elements:
  - Potential by-products: Elements other than REEs were effectively not considered in this resource estimate, hence by-products were not considered.
  - Deleterious elements:
    - Thorium and Uranium are known radioactive components of typical REE deposits.
    - These have been estimated here – and exist in low concentrations.
    - No other deleterious elements have been considered or are known of.
- Block size – sample size relationship:
  - Situation:
    - Block sizes: Major block sizes were moderate at 50*50*1 m.
    - Sample spacing:
      - Down-hole sampling was typically 2.0 m (occasionally 1.0 m).
      - Drill N/S section spacing was typically 400 m, sporadically 200 m.
      - Hole E/W spacing on section was 200 m, sporadically 100 m.
    - Data search distances: Maximum ~400 m.
  - Distance relationships:
    - Plan block sizes were considered well-proportioned to drill hole spacing (25% in X

Criteria	JORC Code explanation	Commentary
		and Y). ▪ Vertical block sizes were considered very well-proportioned to down-hole sampling intervals (50% in Z). • Model – SMU relationship: o No specific focus on selective mining units (SMU) occurred. o However, the primary 50*50*1 m block size would be similar in size to an SMU – given that the Consultant considers mining to be open-cut and excavation to be by mechanical scrapers taking thin (considerably <1 m) slices. • Correlation between variables: o No work on variable correlation was done. o However, it was clear that the REEs were typically closely corelated. o Simple statistical analysis and the variographic analysis showed groups of REOs to possess very similar characteristics. • Geological interpretation control of estimate: o Previously described in detail. o In summary – the block grade estimates were fundamentally controlled by the geological interpretation of strong layered mineralization in the weathered saprolitic regolith. The regolith and mineralised layers were specifically modelled and grades in them confined by domain control. Use of ‘un-folding’ Z-grid modelling emphasised layer continuity. • Grade cutting/capping use: o No grade cutting of clipping was used. o Justification for this was ▪ Layer interpretations had effectively already clipped out low grades (below 300 ppm TREO). ▪ Highly anomalous grades were relatively uncommon and where they existed the Consultant considered that they should be incorporated to realistically allow the known high grade shutes to be represented. The fact that REEs consist of 15 individual elements, each individually estimated here before being combined into totals meant that high values in any one of the elements had limited impact overall. o The Consultant considers that individual anomalously high grades could potentially be clipped in future estimation, after consideration hole-by-hole, if they were found to be completely isolated. • Estimate validation: o Block geology validation: ▪ Volume report: Initial check to compare volumes reported within geological layer

Criteria	JORC Code explanation	Commentary
		model surfaces with volumes reported from the blocks built from them. Expect almost exact match. Checks all considered acceptable. ▪ Plots: Visual cross-sectional plot comparison of block boundaries with geological model surface intersections. Particular focus on validity of the blocks in each layer (possibly corrupt if the raw surfaces overlapped). Also check of block domain assignments. Comparisons considered good. o Block grade estimate validation: ▪ Estimate stats: initial basic check to compare overall (not on a lode/domain basis) stats given during the block estimation – input drill sample stats with output estimated grade stats. Expect reasonable but not exact match. Particular focus on closeness of the maximums and the raw averages. Results considered acceptable. ▪ Plots: Methodical visual cross-sectional plot comparison of colour-coded block grades with annotated drill hole samples. Comparisons considered acceptable. • Estimate reconciliation: o Described above under “Check estimates”. o Estimate reconciliation: Not considered possible as the previous 2022 estimate was not comparable in area (was 10 times smaller). o The Consultant’s overall view here was that the past 2022 Resource estimate was completely valid in itself but only represented a very small proportion of this Resource.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Density: Tonnage was calculated using dry density. • 326 drill sample density measurements were made in 34 drill holes by HRE. • Moisture determination method: o Moisture content (%) was determined from the weight difference of wet and dry samples dried in a kiln. o Moisture content was determined by the Project’s laboratory LabWest in Perth.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Resource grade cut-off: • A lower cut-off of 400 ppm total Rare Earth Oxides minus Cerium oxide (TREO-CeO_2) was used in reporting Resources. • Basis: o The TREO-CeO_2 combination is commonly used to discount the large proportions of low value Cerium often found in REE deposits. o Initially the cut-off value was justified as being roughly in line with the slightly lower 300 ppm cut-off commonly used with similar REE Resource reporting. o The Consultant considers a 300 ppm cut-off value to be at the bottom end of possible cut-

Criteria	JORC Code explanation	Commentary
		offs and that a higher value of 400 ppm was more prudent. ○ The 400 ppm cut-off also corresponded to the bottom end of direct tonnage correlation in the grade/tonnage curve. ○ A 400 ppm cut-off covered considerably less area (tonnage was 45% less than with the 300 ppm cut-off) with only relatively small proportions at lower grades – marking contiguous potential mining areas where mineralisation close to cut-off were minimized.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Mining factors & assumptions: ○ The Consultant assumed future extraction by open-cut of free-dig weathered material (using scrapers or continuous miners) and heap leaching. ○ Dilution from non or less-mineralised material above and below the REE-mineralised layers could be effectively minimized by the excavators (which allow fine vertical control). And internal dilution within the mineralised material would effectively be simply taken into account by extraction rates from the bulk heap leach pads. ○ Bench-scale metallurgical testing from comparable (and nearby) deposits have shown high recoveries using acid-leaching. ○ These styles and methods of mining and extraction lead to the presumption of low costs and hence favorable economics for the Project.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Metallurgical assumptions: ○ Recent bench-scale metallurgical testing from comparable deposits have shown high recoveries using acid-leaching. ○ The Consultant previously reported (2022 IGR, Section 8, pp 82-83) on REE metallurgical test-work performed by for Salazar Gold Pty Ltd (Salazar) by Amdel in 2011 to 2013 on their Esperance Splinter Project117 some 55 km ESE of Cowalinya. ▪ Salazar sampled a lateritic zone (REE-enriched clay saprolitic material above granites) reportedly similar to that at Cowalinya. ▪ REE leaching recoveries to solution were considered to be very good and comparable to Chinese deposits. ▪ Recoveries of 75-80% TREE were achieved using 10% HCl at 30°C after 2 days. Higher recoveries were achieved at higher temperatures. ▪ Consumption of HCl leachate was reportedly low. ○ The Consultant understands that HRE is currently progressing metallurgical studies – but does not know results.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
See notes by HRE in “Other substantive exploration data” in Section 2 of JORC Table 1 above (taken from ASX releases 13/12/2022 and 12/7/2023).
</td></tr>
<tr><td>Environmental factors or assumptions</td><td>
Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.
</td><td>

Environmental factors/assumptions:
The Consultant is generally unaware of any potentially negative impacts of the Project environmentally.
The Consultant considers the relatively remote location would minimize potential negative environmental impacts locally.
The Consultant considers the almost flat topography would minimize or completely negate potential surface run-off impacts.
However, the Consultant is aware of the typical potential for deleterious radioactive thorium and uranium to potentially contaminate the Resource – but notes that the values estimated here were very low.

</td></tr>
<tr><td>Bulk density</td><td>

Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.
The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.
Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.

</td><td>

Bulk density:

Densities were determined.
Sample wet densities were calculated by HRE from wet weights divided by the volume of 1.0 m long samples.
Sample moisture contents were determined by HRE’s assay laboratory – LabWest in Perth.
Dry densities were then calculated by HRE by factoring the wet densities by the moisture contents.
The number of individual density determination (326) made by HRE was considered to be high and more than adequate.
Densities were determined in 34 drill holes (with multiple values within each hole) scattered evenly across the whole drilling area.
Densities were averaged in each hole by saprolite layer (upper and lower) and then holes were averaged.
The Consultant apportioned HRE’s dry densities into the REE-mineralised layers. Densities

<table>
<tr><th>Layer</th><th>Domain #</th><th>Density (t/m^3)</th></tr>
<tr><td>SUM</td><td>2</td><td>1.49</td></tr>
<tr><td>SMM</td><td>3</td><td>1.49</td></tr>
<tr><td>SLM</td><td>4</td><td>1.52</td></tr>
</table>
</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
		tabulated: ○ Densities increased very slightly with depth in each mineralised layer. • Density accounting for rock variability: ○ HRE's dry density determinations were consistently made but could not fully account for rock variability due to the nature of the AC drilling delivering largely crushed sample to surface. • Assumptions behind density estimates: ○ Density determination relied heavily on sample recovery being 100%. ○ They also relied on drill hole shape being perfectly cylindrical (with no "blow outs"). ○ Density was assumed to be constant for individual layers and used the averages calculated for each layer. ○ Block densities were not estimated individually but used defaults applied to each layer. ○ The default densities were compared with several other very similar IAC REE deposits and found to be mid-range and therefore believable.
JORC Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e., relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• JORC classification: See Section 13.1 in the Report. ○ Previous classification: 2022 Resources were classified as Inferred (according to JORC (2012 Edition) by the CP Mr John Tyrrell. ○ Current classification: The Consultant considered here that these Resources should all be classified as Inferred, according to JORC (2012 Edition), where individual blocks had been estimated from samples of average distance <450 m. ○ Methodology: ▪ During TREO grade estimation of each block the average distance of samples and the number of samples were stored (variables D and P). ▪ A classification variable (CAT) was computed in each block by applying CP determined criteria (see below) to the distance and number variables. The criteria set a number in each block for Resource class (3 – Measured, 2 – Indicated, 1 – Inferred). ○ Classification criteria: ▪ The primary classification criterium was distance (as the numbers of points were generally near maximum anyway because of good sample density). ▪ Classification utilised visualisation of the distances and points to help form criteria.

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>
▪ The Consultant considered the distance interface at 450 m would best discriminate Inferred blocks from un-classified blocks. The Inferred areas were relatively contiguous.
▪ The 450 m distance was within the 400-550 m minimum range shown by the variography and very well within the longer 800 m range.
▪ Classification criteria:
<table>
<tr><th>JORC Mineral Resource class</th><th>Sample Av distance REO_D (m)</th><th>Points REO_P (#)</th></tr>
<tr><td>Measured</td><td>-</td><td>-</td></tr>
<tr><td>Indicated</td><td>-</td><td>-</td></tr>
<tr><td>Inferred</td><td>≤450</td><td>≥1</td></tr>
</table>
• Accounting for relevant factors:
○ The CP considers that appropriate account has been taken of all relevant factors.
○ This was particularly formed through high confidence in the input data and in the geological interpretations and the mineralisation interpretation and continuity (despite the AC drilling's scattered presumed failure to consistently drill deep enough to reach fresh bedrock).
• CP's view of classification:
○ The CP has a very positive opinion of the deposit in scale and grade.
○ He also has a very positive opinion of the average and reasonably uniform drill hole spacing (200 * 400 m) over much of the area – which was well within and supported by the variographic ranges determined.
○ The CP considers data analysis results, drill hole spacing, and Resource estimation methods used fully support the classifications given.
○ The Consultant believes that the majority of the current Inferred Resources would be very readily upgraded to at least the Indicated class by continued exploration (involving in-fill drilling reducing the N/S spacing to 300 m) and by geological verification of layering (though methods such as costeaning or close-spaced diamond core drilling).
</td></tr>
<tr><td>Audits or reviews</td><td>• The results of any audits or reviews of Mineral Resource estimates.</td><td>• Audits:
○ The Consultant is unaware of any audits of the previous Resource estimate.</td></tr>
<tr><td>Discussion of relative accuracy/ confidence</td><td>• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within</td><td>• Accuracy & confidence in the estimate:
○ Statement: The Consultant is confident in the accuracy of the estimate.
○ Reasons include:
▪ The careful geological mineralised intercept interpretation and layer surface modelling are considered the most appropriate to the style of mineralisation.
▪ The clear continuity of grades between virtually all of the drill holes gives the CP confidence in the interpretation.
▪ Parts of these interpretations and estimates may be considered as at least second-</td></tr>
</table>

Criteria	JORC Code explanation	Commentary
	stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	generation studies (following on from Tyrrell's earlier estimate in 2022). ▪ Results of the geostatistical analysis were considered good with ranges considerably longer than drill hole data spacings. • Risks to the Resources: ○ The Consultant considers potential risks to be minimal. ○ However, the greatest risk (albeit low) to the quantum of the reported Resources to be probable under-estimation of tonnages due to trimming at the model base (bedrock interface modelled too high) cause by the "short" holes not having actually reached fresh bedrock (and thereby missing mineralisation remaining below them). ○ A similar risk to under-estimation of grade stems from the probable under-sampling of basal saprock, a potential source of high REE grades. ○ Other very low or minimal risks potentially lie with the lack of grade cutting during the grade estimation and geological mis-interpretation. • Global or local estimate: This is a global estimate. • Comparisons with production data: No production data was available as no mining has yet taken place.