ASX ANNOUNCEMENT
Heavy Rare Earths Limited (ASX:HRE)
30 August 2022

WORK UNDERWAY ON COWALINYA RARE EARTH PROJECT

- **Commenced a program of analytical and metallurgical test work**
- **Re-assaying samples after fusion methods demonstrated an average increase of 12.2% in total rare earth grade**
- **Reporting of re-assay results expected to begin in late-September 2022**
- **Commencing metallurgical work to validate previous results and build on these with a comprehensive metallurgical program**

Heavy Rare Earths Limited (**"HRE"** or **"the Company"**) has today commenced a program of analytical and metallurgical test work on samples from its Cowalinya clay-hosted rare earth deposit in the Norseman-Esperance region of Western Australia.

Cowalinya was discovered by HRE in 2021 on its 100%-owned Exploration Licence E63/1972. The deposit currently contains 28 million tonnes at 625ppm TREO (total rare earth oxides) in Inferred Resources[1] and remains open in all lateral directions.

Analytical (Re-Assay) Program

Mineral Resources were estimated at Cowalinya in December 2021 using 859 assay samples from 109 air core holes drilled in July 2021. These assays were done by 4-Acid Digest/ICP-MS.

HRE subsequently selected 61 one metre samples from two holes (AC16 and 28) for assay using Lithium Borate Fusion/ICP-MS. This was done to compare the effectiveness of this methodology to report all rare earths ('total digest') versus rare earths contained in acid-soluble mineral species only ('near total digest'), and provided a useful check of the primary 4-Acid Digest/ICP-MS assays.

Forty (40) of the 61 samples submitted for assay by Lithium Borate Fusion /ICP-MS contained >300ppm TREO-CeO2, the cut-off grade for the Cowalinya resource. **Re-assay of these 40 samples delivered an average increase in total rare earths of 12.2%.** This result led to the Competent Person ("CP") for Mineral Resources recommending that HRE use Lithium Borate Fusion/ICP-MS for future programs at Cowalinya.[2]

HRE has adopted the CP's recommendation and, in anticipation of a revised resource base arising from an expanded drilling footprint at Cowalinya, earlier this week delivered 729 two-metre composites from 102 of the 109 air core holes drilled at Cowalinya in 2021 to LabWest Minerals Analysis ("LabWest") in Perth for assay by Lithium Borate Fusion/ICP-MS. The first

[1] Page 84 of Appendix 7 (Cowalinya Resource Report) of the Independent Geologist's Report contained in HRE's IPO Prospectus.
[2] Page 34 of Appendix 7 (Cowalinya Resource Report) of the Independent Geologist's Report contained in HRE's IPO Prospectus.

batch of assays from this program is expected to be reported by LabWest in late-September 2022.

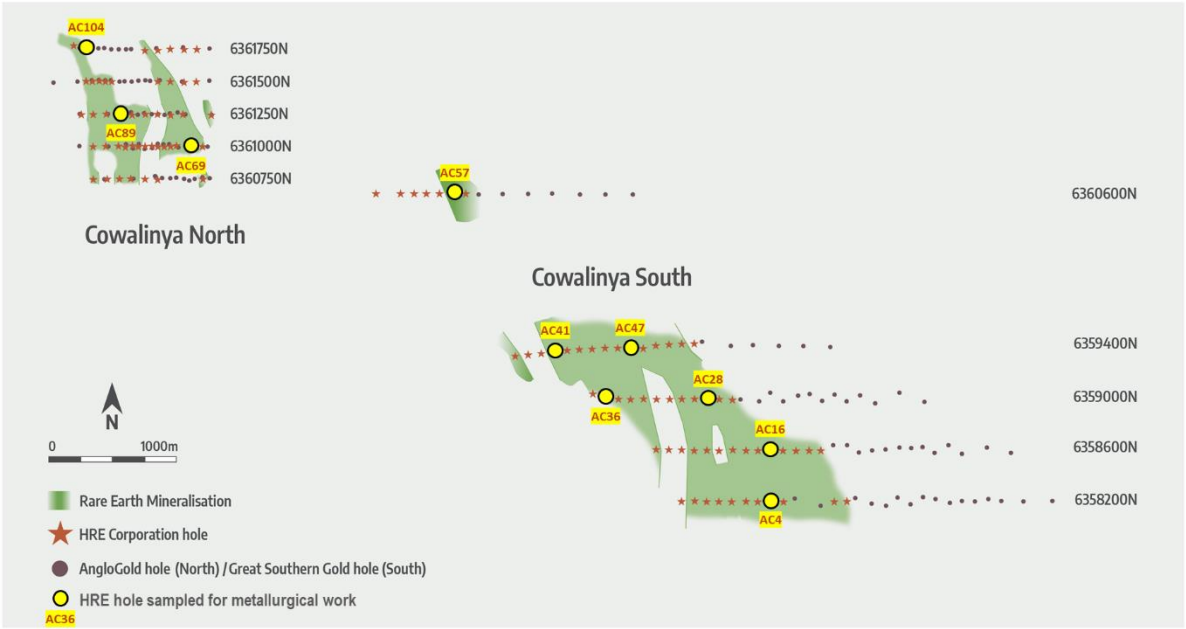
Metallurgical Program

In 2021 HRE completed leach tests on 40 mineralised saprolite drill samples from three holes (AC16, 28 and 41) at Cowalinya which involved the use of hydrochloric acid (HCl) at different concentrations (2-20% w/w) and at a range of temperatures (20-50°C). The resonance time for each test was 24 hours. This work demonstrated that for Cowalinya material substantial proportions of rare earths could be brought into solution, averaging approximately 91% of total rare earths (or 88% of the valuable magnet rare earths praseodymium, neodymium, terbium and dysprosium) at 30°C and 5% w/w HCl.[3]

To build on these encouraging results, HRE has engaged Perth-based Strategic Metallurgy ("Strategic") to both validate these sighter tests and design and undertake a comprehensive metallurgical program, initially involving particle size analysis as the basis for gangue rejection. This will be followed by a series of batch tests to examine the influence on leaching performance of parameters such as resonance time, temperature, acid type and concentration, and slurry density. Observation as to reagent consumption, metal recovery and solution composition, including impurity deportment, will be considered to establish a suitable leach regime.

HRE has delivered 13 samples to Strategic from ten drill holes (AC4, 16, 28, 36, 41, 47, 57, 69, 89 and 104) across the Cowalinya deposit as the basis for first-pass metallurgical work. Each sample is a five-metre composite of mineralised upper or lower saprolite horizon for which final head assays are in the process of being determined by LabWest (likely approximate range 320-1450ppm TREO).

Key outcomes of the metallurgical program will be communicated to the market in the weeks and months ahead as material results come to hand.



Cowalinya drill holes sampled for metallurgical work

[3] Page 99 of the Independent Geologist's Report contained in HRE's IPO Prospectus.

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This announcement has been approved by the Board of HRE.

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About Heavy Rare Earths Limited
Heavy Rare Earths Limited (ASX:HRE) is an Australian rare earth exploration and development company. HRE's key exploration project is Cowalinya, near Norseman in Western Australia. This is a clay-hosted rare earth project with a JORC Inferred Resource of 28Mt @ 625ppm TREO and a desirable rare earth composition where 25% are the valuable magnet rare earths and 23% the strategic heavy rare earths.

Competent Persons Statement
The Exploration Results and Mineral Resources contained in this announcement have been extracted from the Independent Geologist's Report included in the Company's Initial Public Offering (IPO) Prospectus, a copy of which was lodged with ASIC on 5 July 2022. The Company confirms that it is not aware of any new information or data that materially affects the Exploration Results or Mineral Resources as contained in the Company's IPO Prospectus. All material assumptions and technical parameters underpinning the Mineral Resources in the Company's IPO Prospectus continue to apply and have not materially changed.