

ASX ANNOUNCEMENT

Heavy Rare Earths Limited (ASX:HRE)
29 July 2024

**JUNE 2024 QUARTERLY ACTIVITIES REPORT
AND APPENDIX 5B**

- Cowalinya rare earth mineralisation supports potential development of conceptual downstream process flowsheet to mixed rare earth carbonate (MREC) for which 3-tonne bulk sample prepared
- 51.8% TREO MREC sample produced comprising 31.2% magnet rare earths
- Ongoing review of project acquisition opportunities in critical minerals

Heavy Rare Earths Limited (“HRE” or “the Company”) is pleased to announce its June 2024 quarterly activities report for the eighth quarter since listing on the Australian Securities Exchange (ASX).

Cowalinya Rare Earth Project, Western Australia

The Company’s 100 per cent-owned Cowalinya project comprises three granted exploration licences E63/1972, E63/2144 and E63/2145 approximately 110 kilometres north-north-east of Esperance.

The project hosts a sizeable inventory of saprolite-hosted rare earths in Inferred Mineral Resources of **159 million tonnes @ 870 ppm TREO¹** (refer to ASX announcement 3/10/2023) with excellent expansion potential as evidenced by a substantial Exploration Target of **280-1390 million tonnes @ 330-1330 ppm TREO** (refer to ASX announcement 23/10/2023).

Metallurgical Program

During the quarter, HRE reported the results of its program to develop a downstream flowsheet to a mixed rare earth carbonate (MREC). The sale of MREC represents the first entry point by clay-hosted projects like Cowalinya into the rare earth supply chain.

Perth-based Strategic Metallurgy Strategic prepared a 1 kg blend of screened undersize leach feed from 4 of 13 mineralised composites used in the project’s original sizing and acid leaching sighter work in 2022, for the development of a conceptual downstream flowsheet to produce MREC. The sample blend had a TREO grade of 2,595 ppm and was subjected to the simple leach, purification and precipitation regime shown in Figure 1.

Without any optimisation, a high grade (51.8% TREO) MREC was produced containing a high proportion of the valuable magnet rare earths Pr, Nd, Tb and Dy representing 31.2% of the total rare earth content. A detailed analysis of the rare earth content in the leach feed and MREC solids is presented in Table 1. Whilst the total impurity content at 8.4% (mainly iron, copper and sodium) is over specification for a commercial rare earth separation plant (typically below 5%), the Company emphasises that this was a ‘first pass’ concept program to demonstrate that MREC can be produced from the Cowalinya deposit.

¹ Using a 400 ppm TREO-CeO₂ grade cut-off

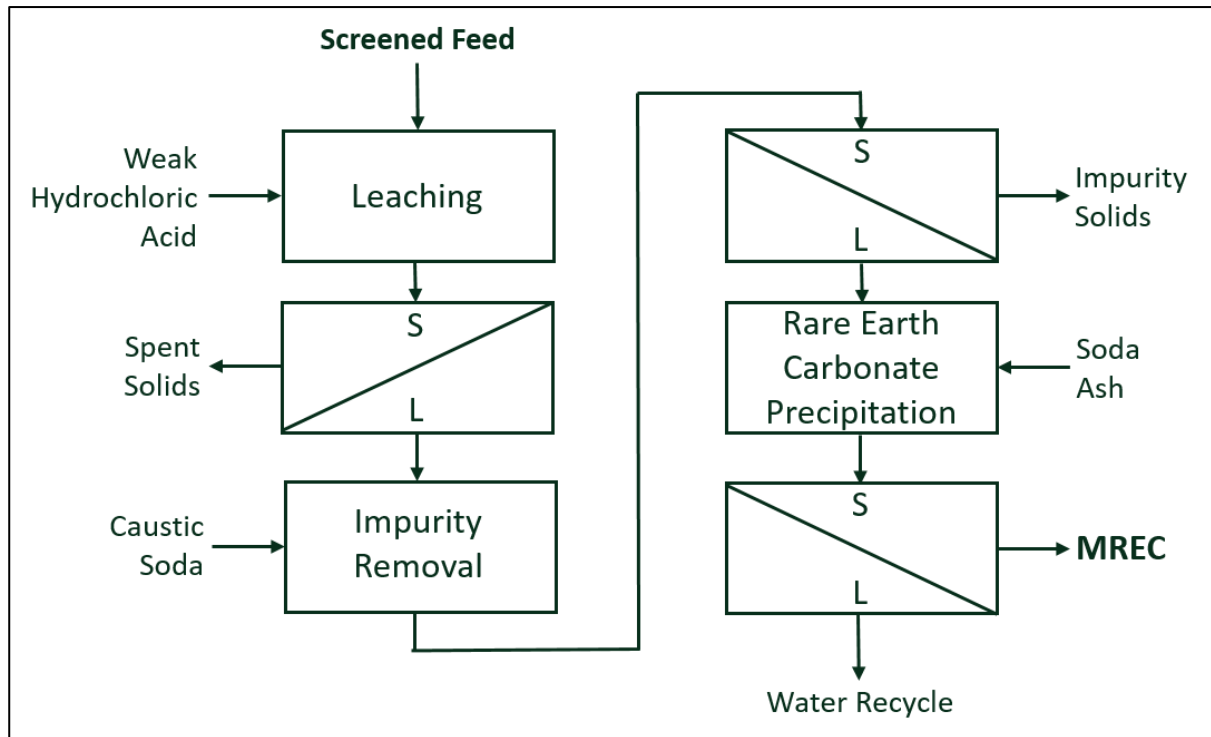


Figure 1: MREC testwork flowsheet.

HRE has collected material from 167 drill holes across the project area for a 3-tonne metallurgical bulk sample (Figures 2 and 3) which includes all metallurgical composites from the Company's recent variability program. The bulk sample is anticipated to grade ~900 ppm TREO (*c.f.*, Cowalinya average resource grade of 870 ppm TREO). It will then be homogenised and screened to produce approximately 1 tonne of undersize leach feed for a larger scale metallurgical program focused on optimising magnet rare earth recovery and reagent use, and producing an MREC product acceptable to downstream commercial separation plants.

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

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

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

TREE (TOTAL RARE EARTH ELEMENTS) = La + Ce + Pr + Nd + Sm + Eu + Gd + Tb + Dy + Ho + Er + Tm + Yb + Lu + Y.

TREO (TOTAL RARE EARTH OXIDES) = La₂O₃ + CeO₂ + Pr₆O₁₁ + Nd₂O₃ + Sm₂O₃ + Eu₂O₃ + Gd₂O₃ + Tb₄O₇ + Dy₂O₃ + Ho₂O₃ + Er₂O₃ + Tm₂O₃ + Yb₂O₃ + Lu₂O₃ + Y₂O₃.

MREO (MAGNET RARE EARTHS) = Pr₆O₁₁ + Nd₂O₃ + Tb₄O₇ + Dy₂O₃.

GRADE in ppm except where indicated.

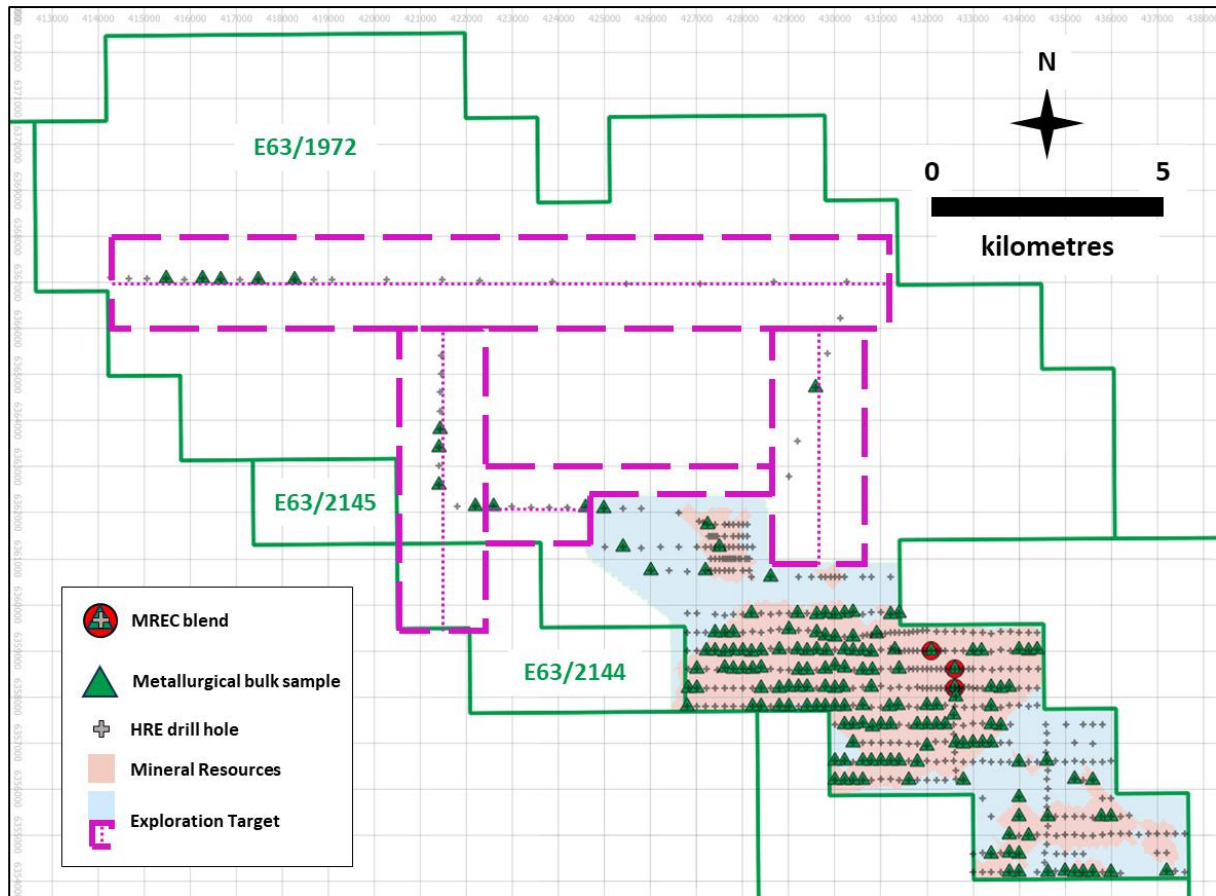


Figure 2: Location of mineralised samples used to produce MREC blend and 3-tonne metallurgical bulk sample, Cowalinya project.



Figure 3: Cowalinya 3-tonne metallurgical bulk sample (11 x 220 litre drums) at HRE's storage facility in Perth.

Perenjori Uranium-Rare Earth Project, Western Australia

The Company's 100 per cent-owned Perenjori project is located 190 kilometres east-south-east of the port city of Geraldton. It comprises two granted exploration licences E70/6397 and E70/6398 and one application E59/2905 which was lodged with the WA Department of Energy, Mines, Industry Regulation and Safety on 4 June 2024. Perenjori (and the Company's Merino project to the north-west) show potential to host ion adsorption-type rare earths in palaeochannels on Archaean granitic basement and "calcrete-type" uranium. Virtually no exploration for these deposit types is evident from historic reports

During the quarter, the Company undertook a limited program of passive seismic at Perenjori to ascertain the location and depth of an inferred major palaeochannel system, and soil sampling to verify previously-reported surface uranium anomalism associated with an 8-kilometre-long airborne radiometric anomaly. Analysis using the Ultrafine™ method returned values of up to 138 ppm U.

These first-pass exploration results provided HRE with sufficient encouragement to apply for an additional exploration licence (E59/2905) immediately adjacent to its granted tenements to cover the eastern extent of the Gingaba Well airborne radiometric anomaly (Figure 4). The Company is planning further soil sampling in 2024 to detect buried uranium mineralisation in parts of the Perenjori palaeochannel lacking an airborne radiometric anomaly, and potentially drill the Gingaba Well area to test for the presence of uranium-vanadium deposits hosted deeper within the palaeochannel similar to Langer Heinrich (Namibia) and Yeelirrie (Western Australia).

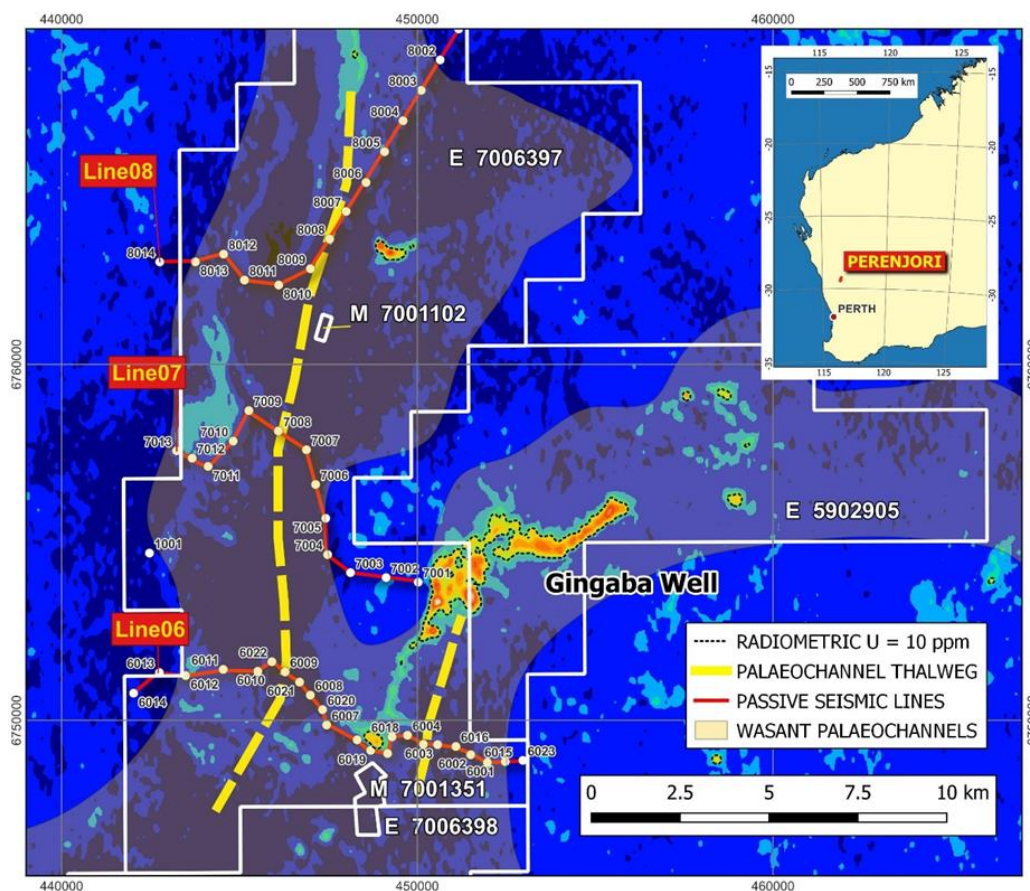


Figure 4: Location of passive seismic lines on airborne radiometric uranium image, Perenjori project.

Additional Information

The table below compares the Company's actual expenditure against the 2-year Use of Funds table contained in the Company's IPO Prospectus dated 5 July 2022:

Use of funds as contained in the Prospectus	2-Year Use of Funds as contained in the Prospectus	Actual amount spent to date
Drilling – exploration & resource upgrade	\$2,340,000	\$1,983,485
Assaying	\$440,000	\$328,574
Metallurgical process development	\$325,000	\$114,106
Project Studies	\$400,000	\$73,683
Duke project exploration	\$100,000	\$154,851
Merino project exploration	-	\$54,265
Perenjori project exploration	-	\$47,595
Payment for Cowalinya vendors – exercise of option	\$300,000	\$300,000
Costs of the Offers	\$640,000	\$649,000
Administration & working capital	\$1,455,000	\$1,702,109
Total	\$6,000,000	\$5,407,668*

* The amount above excludes any research and development tax incentive grants received.

Since listing on ASX in August 2022, the Company has spent a significant amount on executing its exploration strategy. The amount spent to date has been dominated by drilling, assay and metallurgy resulting in a material increase in the Company's Inferred Resources, the establishment of a maiden Exploration Target and the advancement of a process flowsheet for its Cowalinya rare earth project. Over the coming months, expenditure is not anticipated to be as high as previous quarters as the Company further advances its downstream metallurgical program for Cowalinya, executes early-stage surface exploration at its Perenjori uranium-rare earth project and examines project acquisition opportunities in critical minerals to strengthen the Company's asset portfolio.

Appendix 5B related party payments

Amounts included in section 6.1 of the Appendix 5B relate to Director's fees paid for the June 2024 quarter.

Interests in Mining Tenements

Below is a summary of the mining tenements held by the Company at the end of the quarter:

Mining Tenement	Location	Beneficial Percentage held	Interest acquired/farm-in or disposed/farm-out during the quarter
E63/1972 – Cowalinya Project	WA, Australia	100%	-
E63/2144 – Cowalinya Project	WA, Australia	100%	-
E63/2145 – Cowalinya Project	WA, Australia	100%	-
EL33101 – Duke Project	NT, Australia	100%	-
EL33194 – Duke Project	NT, Australia	100%	-
E70/6397 – Perenjori Project	WA, Australia	100%	-
E70/6398 – Perenjori Project	WA, Australia	100%	-
E59/2905 – Perenjori Project	WA, Australia	100%*	-
E59/2795 – Merino Project	WA, Australia	100%	-
E59/2796 – Merino Project	WA, Australia	100%	-
E59/2844 – Merino Project	WA, Australia	100%	100%

* Subject to grant.

-- 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

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

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

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

HEAVY RARE EARTHS LIMITED

ABN

35 648 991 039

Quarter ended ("current quarter")

30 June 2024

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	-	-
(b) development	-	-
(c) production	-	-
(d) staff costs	(25)	(145)
(e) administration and corporate costs	(119)	(638)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	7	35
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	312
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	(137)	(436)

2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	-	-
(d) exploration & evaluation	(129)	(728)
(e) investments	-	-
(f) other non-current assets	-	-

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(129)	(728)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	-	-

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	1,223	2,121
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(137)	(436)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(129)	(728)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	957	957

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	957	1,223
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	957	1,223

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	32
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i>		
<i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	-	-
7.5 Unused financing facilities available at quarter end		-
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		
N/A		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(137)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(129)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(266)
8.4 Cash and cash equivalents at quarter end (item 4.6)	957
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	957
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	3.60
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer: N/A	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer: N/A	
8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer: N/A	
<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 29 July 2024

Authorised by: The Board of Directors

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.