

Activities Report for the Quarter Ended 31 December 2022

31 January 2023

Mount Ridley Mines Ltd (ASX: MRD) (or "the Company") is pleased to provide the following report for the Quarter ended 31 December 2022.

EXPLORATION ACTIVITY HIGHLIGHTS: Mount Ridley Rare Earth Project

Aircore Drilling

- 101 aircore holes for 4,251m drilled at the Mount Ridley Project, testing new areas for Rare Earth Element (REE1) enrichment. 2,816 samples from this programme are being assayed by ALS Limited, with results expected during the March 2023 quarter.
- Key intersections from the earlier 2022 program include;
 - o 23m at 3,688ppm TREO from 6m in MRAC1053 at Tyrrell's Prospect,
 - o 15m at 2,120ppm TREO from 15m in MRAC1234 at the Mia Prospect,
 - o 47m at 1,521ppm TREO from 33m in MRAC0955 at the Butch Prospect,
 - o 12m at 2,178ppm TREO from 45m in MRAC1325 at the Fabienne Prospect,
 - o 9m at 2,447ppm TREO from 54m in MRAC1026 at the Winston Prospect and
 - 12m at 1,180ppm TREO from 36m from MRAC1003 at the Jules Prospect.
- Traverse drilling along previously cleared lines up to 40km in length largely completed. Multiple, wide zones of significant (>500ppm) total Rare Earth Element Oxide mineralisation define at least 9 prospects which are now the subject of primary target extension drilling, commencing in February 2023.
- MicroXRF analysis of, and mineralogy for, end-of-hole samples, advancing. This technology is being used to map geological domains and identify trace amounts of primary mineralisation.

Metallurgy

- 20 PQ diamond drill core holes completed for 961.5m, providing metallurgical samples.
- Core is currently being cut and sampled ahead of photographing, SWIR and pXRF analysis and compositing for metallurgical testing. Conventional analysis will follow.
- Units of metallurgical test work will be conducted by IMO, ALS, Nagrom and Simulus.
- Initial tests will focus on mineral beneficiation followed by ammonium sulphate and acid leaching.

Corporate

- Funding of approximately \$6.0 million received after underwritten options exercised in November 2022.
- At the date of this report the Company has net cash reserves and liquid assets of \$5.45 million.





¹ REE: 14 rare earth elements plus yttrium were analysed: cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), samarium (Sm), terbium (Tb), thulium (Tm), ytterbium (Yb). Yttrium (Y) is usually included with REE.



CORPORATE

Summary of Exploration Expenditure

Listing Rule 5.3.1

In accordance with Listing Rule 5.3.1, the Company advises the cash outflows on its mining exploration activities reported in 1.2(a) of its Appendix 5B for the December 2022 quarter are as follows:

Mount Ridley Project \$1,242,263

Weld Range Project \$8,301

TOTAL \$1,250,564

Listing Rule 5.3.5

The Company advises that the payments in Section 6.1 of the Appendix 5B for the quarter relate to Director Fees.

Annual General Meeting

On 30 November 2022, the Company advised that all resolutions put at the Annual General Meeting held at RM Capital, Level 1, 1205 Hay Street, West Perth WA 6005, were passed.

Securities Issued

During the quarter, the Company issued 1,556,113,238 fully paid ordinary shares on exercise of MRDOB listed options exercisable at \$0.0030.

The Company acknowledges the Esperance Nyungar People, custodians of the Project area.

Authorised for release by the Board

Mr Peter ChristieJohnathon BusingChairmanCompany Secretary

Ph: +61 8 6165 8858 Ph: +61 8 6165 8858



MOUNT RIDLEY MINES LIMITED (ASX: MRD, "Mt Ridley" or "the Company") is pleased to provide an Activities Report for work undertaken during the December 2022 Quarter. Most exploration activities targeted clay-hosted REE mineralisation at the Company's Mount Ridley Project. Some sighter work was initiated to test magnetite mineralisation from the Weld Range Iron Project.

THE MOUNT RIDLEY REE PROJECT

The 100% owned Mount Ridley REE Project is located approximately 50km north-east of the Port of Esperance Western Australia, with an area covering approximately 3,400km² (Figure 1).

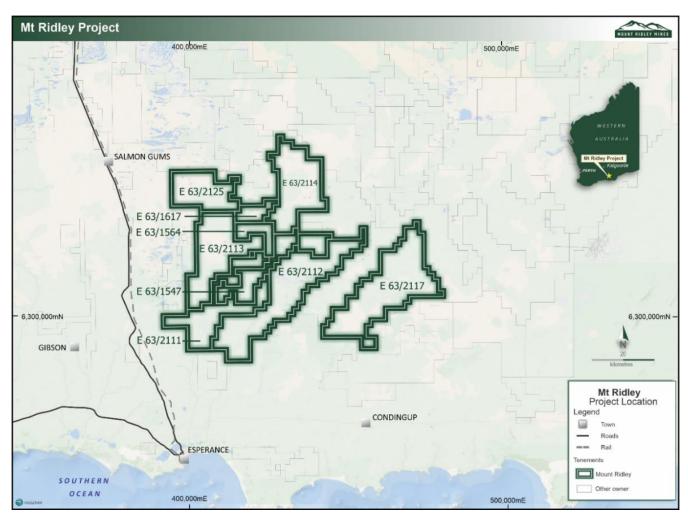


Figure 1: The Mount Ridley Project, with an area of approximately 3,400km², is located on predominantly Crown Land approximately 50km north-east of the deep-water Port of Esperance, WA. The Project is also close to the Esperance-Kalgoorlie infrastructure corridor and Esperance Airport.



AIRCORE DRILLING ADVANCING. REE MINERALISATION AREA AT LEAST 1,200KM²

One hundred and one (101) aircore holes for 4,251m were drilled at the Mount Ridley Project in late 2022, which largely completed the programme of Stage 2 - Regional Drilling to identify areas of Rare Earth Element enrichment across the wider project area. From these drill holes, a further 2,816 samples were submitted to ALS Limited for analysis. Results are expected during the March 2023 quarter.

Results received during the Quarter were for drill holes MRAC0950-MRAC0977, MRAC1011-MRAC1055, MRAC1230-MRAC1270 and MRAC1308-MRAC1355, drilled earlier in 2022.

The recent analyses have resulted in the identification of new prospects, namely Mia, Butch, Fabienne, Vincent and Jules. Each Prospect represents multiple thick intervals of REE mineralisation grading above 500ppm TREO, and with grade-thickness intervals at more than 10,000m.ppm (thickness (m) * grade (ppm TREO²)) intersected at each. Intersections contain on average approximately 26% rare earth elements used in high intensity magnets (MagREO³).

Significant drilling intersections include:

Tyrrell's - Marcellus

o MRAC1053:	23*m at 3,688ppm TREO from 6m including 959ppm MagREO
o MRCA1068:	11*m at 1,115ppm TREO from 24m including 212ppm MagREO

Mia

o MRAC1233:	18m at 1,046ppm TREO from 19m including 341ppm MagREO
o MRAC1234:	15*m at 2,120ppm TREO from 15m including 388ppm MagREO
o MRAC1235:	24m at 982ppm TREO from 24m including 269ppm MagREO
o MRAC1236:	15*m at 950ppm TREO from 21m including 248ppm MagREO

Keith's - Vincent

o MRAC1026:	9*m at 2,447ppm TREO from 54m including 913ppm MagREO
o MRAC1101:	12*m at 1,433ppm TREO from 39m including 451ppm MagREO
o MRAC0957:	9*m at 1,154ppm TREO from 42m including 376ppm MagREO

Butch

o MRAC0954:	16m at 1,282ppm TREO from 42m including 324ppm MagREO
o MRAC0955:	47m at 1,521ppm TREO from 33m including 369ppm MagREO
o MRAC0956:	20*m at 1,948ppm TREO from 42m including 362ppm MagREO
o MRAC1012:	16*m at 1,935ppm TREO from 39m including 417ppm MagREO
o MRAC1017:	6*m at 2,690ppm TREO from 36m including 835ppm MagREO

Fabienne

rom 30m including 316ppm MagREO
from 45m including 486ppm MagREO
from 75m including 246ppm MagREO
Ofrom 45m including 608ppm MagREO
REO from 63m including 409ppm MagREO
EO from 60m including 306ppm MagREO

² TREO means the sum of the 14 REE+Y, each converted to its respective stoichiometric oxide equivalent.

³ Magnet REO or MagREO means magnet rare earth oxides; the sum of Dy₂O₃, Nd₂O₃, Pr₆O₁₁ and Tb₄O₇



All drilling has been along existing bush tracks, and within vacant crown land. The Company has adopted a policy to avoid the adjoining cultivated farmland.

OUTLOOK FOR THE MOUNT RIDLEY REE PROJECT

Aircore drilling to advance areas of known REE mineralisation towards mineral resource status.

Stage 3 – Primary Target Expansion Drilling: The Company has received POW⁴ approvals for aircore drilling at Mia, Butch, Tyrrell's Keith's, Marcellus', Fabienne, Winston's, Jules' and Vincent's Prospects. Drilling will commence at the priority Mia Prospect with holes drilled initially on a 2,000m by 400m grid pattern.

The Company has also received POW approvals to progressively infill the Mia Prospect to a 400m by 400m grid as results warrant, a process that will also be undertaken at all targets. Further infill drilling will take place as required to enable JORC compliant Resource estimates to be completed.

Extractive Metallurgy will commence concurrently.

The Company has retained Independent Metallurgical Operations' ("IMO"), a Perth-based metallurgical consultancy and laboratory, to oversee REE extraction test work as the first step towards the development of a process flowsheet.

In late 2022, the Company completed 20 PQ diamond drill core holes providing 961.5m of material for extractive metallurgical test work.

Currently the core is being cut, photographed and non-destructively analysed using infra-red and x-ray techniques. A subset of the core will be analysed conventionally to provide baseline head grades.

Subsequent studies will include;

- Beneficiation,
- Clay mineralogy and identification of the REE-host minerals,
- Salt and acid leach testing under a range of conditions,
- Specific gravity measurements, and
- Other novel leach trials.

Project geology – targeting most fertile geological units

Seven hundred and fifty three (753) bottom-of-hole samples of near-fresh basement rocks have been analysed by Portable Spectral Services, using a Bruker M4 Tornado microXRF. The scan gives multielement geochemical data which is used for mineral and rock identification using a proprietary mineral library.

Resulting mineralogical information is to be used to develop a geological framework for a project-wide basement map, which can then be integrated with other datasets including aeromagnetic, gravity and electromagnetics already held by the Company.

The data is also likely to provide mineralogical and geochemical vectors that can be used for further base metal targeting.

⁴ POW means Programme of Works, an environmental approval process regulated by Department of Mines Industry Regulation and Safety (DMIRS)



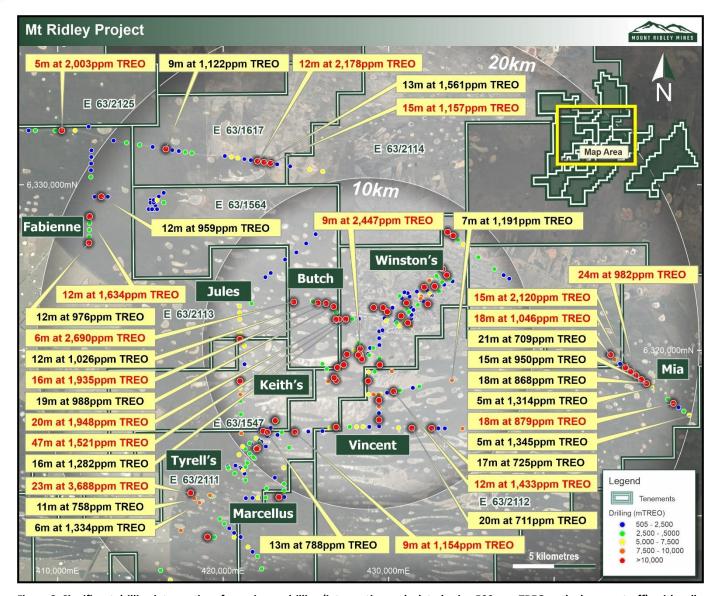


Figure 2: Significant drilling intersections from aircore drilling (intersections calculated using 500ppm TREO as the lower cut-off), with collar locations coloured by m.TREO⁵ and showing Prospect locations. The field of view is approximately 40km by 35km.

⁵ m.TREO means metres of intersection width (m) multiplied by TREO.



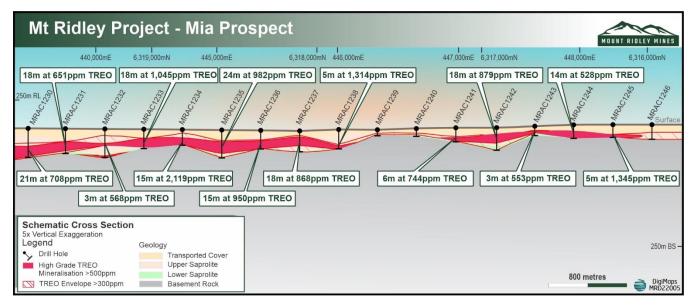


Figure 3: Cross section through the Mia Prospect.

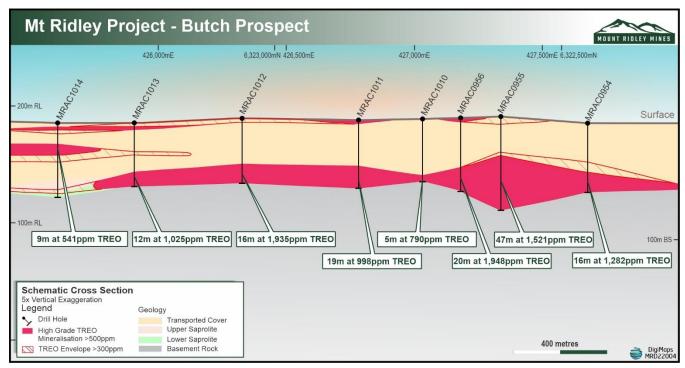


Figure 4: Cross section through the Butch Prospect.







Photograph 1: Aircore drilling at the Mount Ridley Project.

Photograph 2: 24 hours a day diamond core drilling yields PQ core for metallurgical test work.

Completed Work Summary

- Samples from over 3,500m of drilling by Mt Ridley Mines from 2017-2018 were analysed for REE in late 2021.
- During 2022, a total of 409 aircore holes for 18,927m were drilled along cleared tracks identifying priority prospects at Mia, Tyrrell's Keith's, Marcellus', Winston's, Jules' and Vincent's.
- 880 drill pulps have been analysed using a short wave infra-red ("SWIR") instrument to help map clay mineral
 distribution as a component of an ongoing Research and Development project studying the REE
 mineralisation genesis.
- 753 samples of near fresh rock stubs from the bottom of aircore holes drilled in 2014 and 2022 were scanned using a Bruker M4 Tornado micro-XRF analyser. Compilation and interpretation is continuing. This study forms a component of the Research and Development project.



Project Geology

Archaean to Meso-Proterozoic Basement

- Geological Survey of Western Australia mapping⁶ shows that Mount Ridley Project basement rocks are neo-Proterozoic aged Birranup Zone metamorphosed granites and mafics, including Recherche Supersuite mafics.
- Basement rocks protrude through younger sediments, forming northeast trending ridges and inselbergs.
- Intrusive mafics within the Recherche Supersuite are prospective for nickel sulphide mineralisation.
- REE mineralisation is found in both mafic and granitic saprolite.

Eocene

- Eocene-aged sediments fill the onshore Bremmer Basin, infilling depressions in the Proterozoic-aged basement.
- The Eocene sediments comprise siltstone, sandstone, spongolite, limestone and lignite.

Recent

• The current land surface is dominated by deposits of sand and gypsum dunes around numerous ephemeral lakes.

^{6 (}DMIRS) Department of Mines, Industry Regulation and Safety 1:250,000 Interpreted Bedrock Geology (2020)



Competent Person

The information in this report that relates to exploration strategy and results is based on information supplied to and compiled by Mr David Crook. Mr Crook is a Consulting Geologist retained by Mount Ridley Mines Limited. Mr Crook is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists and has sufficient experience which is relevant to the exploration processes undertaken to qualify as a Competent Person as defined in the 2012 Editions of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

With respect to JORC Table 1 included in MRD announcements to ASX dated:

- 2 August 2021. "REE Potential Unveiled at Mount Ridley."
- 13 September 2021. "REE Targets Extended."
- 21 October 2021. "Encouraging Rare Earth Extraction Results."
- 2 August 2022. "Excellent Drilling Results Expand Rare Earth Mineralisation Footprint at the Mt Ridley Project."
- 6 October 2022. "Highest grades to date returned from Mt Ridley Rare Earth Project Mineralised footprint extended to more than 1,200km²."

Mount Ridley confirms that it is not aware of any new information or data that materially affects the information included in these announcements and that all material assumptions and technical parameters underpinning the exploration results continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Caution Regarding Forward Looking Information

This announcement may contain forward-looking statements that may involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions, and estimates should change or to reflect other future developments.



ABOUT MOUNT RIDLEY MINES LIMITED

Mount Ridley is a company targeting demand driven metals in Western Australia.

Its namesake Mount Ridley Project, located within a Fraser Range sub-basin, was initially acquired for its nickel and copper sulphides potential, and is now recognised as being prospective for clay hosted REE deposits.

The Company also holds approximately 18% of the Weld Range in the mid-west of Western Australia. Areas of the tenements are prospective for iron and gold.

BOARD

Peter Christie Non-Executive Chairman

Simon Mitchell Non-Executive Director

Guy Le Page Non-Executive Director

Johnathon Busing Company Secretary

Registered Office

Ground Floor 168 Stirling Highway Nedlands WA 6009

Telephone: +61 8 6165 8858

Principal Place of Business

Ground Floor 168 Stirling Highway Nedlands WA 6009

Forward Shareholder Enquiries to Advanced Share Registry

PO Box 1156

Nedlands WA 6906

Telephone: +61 8 9389 8033

Issued Share Capital

As at the date of this report, the total fully paid ordinary shares on issue were 7,784,882,867.



TENEMENT INFORMATION (ASX Listing Rule 5.3.3)

The table below shows the interests in tenements held by Mount Ridley Mines Limited and is provided in accordance with ASX Listing Rule 5.3.3.

Location	Project Name	Tenement #	Ownership	Titleholder	Note
Western Australia	Mt Ridley	E 63/1547	100%	Mount Ridley Mines Limited	
Western Australia	Mt Ridley	E 63/1564	100%	Mount Ridley Mines Limited	
Western Australia	Mt Ridley	E 63/1617	100%	Mount Ridley Mines Limited	
Western Australia	Mt Ridley	E 63/1719	100%	Mount Ridley Mines Limited	
Western Australia	Mt Ridley	E 63/2111	100%	Mount Ridley Mines Limited	
Western Australia	Mt Ridley	E 63/2112	100%	Mount Ridley Mines Limited	
Western Australia	Mt Ridley	E 63/2113	100%	Mount Ridley Mines Limited	
Western Australia	Mt Ridley	E 63/2114	100%	Mount Ridley Mines Limited	
Western Australia	Mt Ridley	E 63/2117	100%	Mount Ridley Mines Limited	1
Western Australia	Mt Ridley	E 63/2125	100%	Mount Ridley Mines Limited	
Western Australia	Weld Range West	E20/842*	100%	Zeedam Enterprises Pty Ltd	2
Western Australia	Weld Range West	E20/873*	100%	Zeedam Enterprises Pty Ltd	2
Western Australia	Weld Range West	E20/946*	100%	Zeedam Enterprises Pty Ltd	2

- 1. Odette Geoscience Pty Ltd has a 15% free-carried interest in E63/2117.
- 2. Mount Ridley Mines Limited beneficial owner.

Appendix 5B

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

Name of entity

MOUNT RIDLEY MINES LIMITED		
ABN Quarter ended ("current quarter")		
93 092 304 964	31 December 2022	

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers		
1.2	Payments for		
	(a) exploration & evaluation	(1,251)	(1,966)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(51)	(82)
	(e) administration and corporate costs	(262)	(454)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	-	-
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (GST & Other Refunds)	82	215
1.9	Net cash from / (used in) operating activities	(1,482)	(2,287)

2.	Cash flows from investing activities			
2.1	1 Payments to acquire or for:			
	(a)	entities	-	-
	(b)	tenements	-	-
	(c)	property, plant and equipment	(111)	(235)
	(d)	exploration & evaluation	-	-
	(e)	investments	24	24
	(f)	other non-current assets	-	-

ASX Listing Rules Appendix 5B (17/07/20)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 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	(11)	(18)
2.6	Net cash from / (used in) investing activities	(98)	(229)

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	5,519	5,783
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(327)	(327)
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	5,192	5,456

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	1,592	2,264
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,482)	(2,287)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(98)	(229)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	5,192	5,456

ASX Listing Rules Appendix 5B (17/07/20) + See chapter 19 of the ASX Listing Rules for defined terms.

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	5,204	5,204

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	5,204	1,592
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)	5,204	1,592

Payments to related parties of the entity and their associates	Current quarter \$A'000
Aggregate amount of payments to related parties and their associates included in item 1	51
Aggregate amount of payments to related parties and their associates included in item 2	-
	Aggregate amount of payments to related parties and their associates included in item 1 Aggregate amount of payments to related parties and their

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.

7.	Financing facilities Note: the term "facility' includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000	
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	7.6 Include in the box below a description of each facility above, including the lender, rate, maturity date and whether it is secured or unsecured. If any additional finance facilities have been entered into or are proposed to be entered into after quarter expectation include a note providing details of those facilities as well.			

8.	Estim	nated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)		(1,482)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))		-
8.3	Total r	elevant outgoings (item 8.1 + item 8.2)	(1,482)
8.4	Cash and cash equivalents at quarter end (item 4.6)		5,204
8.5	Unused finance facilities available at quarter end (item 7.5)		-
8.6	Total a	available funding (item 8.4 + item 8.5)	5,204
8.7(Estimated quarters of funding available (item 8.6 divided by item 8.3)		3.51
		the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8 ise, a figure for the estimated quarters of funding available must be included in	
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?		
	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?		
	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?

N/A

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.

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: 31 January 2023

Authorised by: Johnathon Busing

Notes

- 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.