

29 April 2022

QUARTERLY REPORT FOR THE PERIOD ENDING 31 MARCH 2022

HIGHLIGHTS

- **Fourth Tranche of Phase 4 drilling results received with all 75 holes intersecting rare earth element (REE) mineralised clay above the Mineral Resource Estimate (MRE) cut-off grade**
 - **Fifth Tranche of Phase 4 drilling results received with all 110 holes intersecting rare earth element (REE) mineralised clay above the MRE cut-off grade**
 - **Sixth and final Tranche of Phase 4 drilling results received with all 66 holes intersecting rare earth element (REE) mineralised clay above the MRE cut-off grade**
 - **Completed due diligence and post end of Q1, received UK Government approval and completed acquisition of 100% of Seren Technologies Limited,**
 - **Post end of Q1, completed Capital Raise of \$30 million at an issue price of \$0.074 per Share to global institutional investors**
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Ionic Rare Earths Limited (ASX: IXR) (IonicRE or the Company) is pleased to provide its Quarterly Report for the period ending **31 March 2022**, including exploration activities at its 51% owned Makuutu Rare Earths Project (Makuutu) in Uganda.

Makuutu is one of the world's largest scale ionic adsorption clay (IAC) hosted Rare Earth Element (REE) deposits, located 120 km east of Kampala in Uganda. The Makuutu Mineral Resource Estimate (MRE) (ASX: 3 March 2021) was announced at 315 Million tonnes at 650 ppm Total Rare Earth Oxide (TREO) with a cut-off grade of 200 parts per million (ppm) TREO minus Cerium Oxide (TREO-CeO₂). A revised MRE is in preparation to incorporate the outstanding results from the Phase 4 drilling program completed in 2021, of which the remaining three (3) tranches were reported in the quarter.

Phase 4 Drilling Results

Tranche Four

On 6 January 2022, IonicRE reported results for Tranche Four (4) of the 8,220 metre Phase 4 drill program completed in October 2021 at the Makuutu Rare Earths Project (“Makuutu” or “the Project”) in Uganda.

Drill assay results were received for a further 75 drill holes making up the Tranche 4 submission. The results were for holes drilled within the existing inferred and indicated Mineral Resource Estimate (MRE) at the Makuutu Central Zone, resource areas G and H, and to evaluate Exploration Target C, that was excluded from the 2021 MRE due to limited drill hole density. Figure 1 provides an illustration of the drill hole assay results reported in Tranche 4.

All 75 holes reported delivered clay and saprolite mineralisation intersections above the cut-off grade of 200 ppm Total Rare Earth Oxide less CeO₂ (TREO-CeO₂), consistent with the initial drilling phases (2019 and H1 2020) and the current MRE.

Notable thick, high-grade and near surface intervals reported from the Tranche 4 assay results included:

- RRMDD539 8.9 metres at 1,476 ppm TREO from 4.3 metres
- RRMDD477 13.5 metres at 1,432 ppm TREO from 3.5 metres
- RRMDD518 16.5 metres at 1,424 ppm TREO from 5.4 metres
- RRMDD514 8.7 metres at 1,336 ppm TREO from 12.3 metres
- RRMDD533 9.6 metres at 1,296 ppm TREO from 3.1 metres
- RRMDD520 28.5 metres at 1,250 ppm TREO from 2.9 metres
- RRMDD523 16.4 metres at 1,229 ppm TREO from 4.1 metres
- RRMDD521 18.6 metres at 1,200 ppm TREO from 4.7 metres
- RRMDD534 13.8 metres at 1,185 ppm TREO from 3.0 metres
- RRMDD517 15.1 metres at 1,175 ppm TREO from 5.4 metres
- RRMDD535 15.2 metres at 1,171 ppm TREO from 4.3 metres
- RRMDD513 16.3 metres at 1,126 ppm TREO from 2.9 metres
- RRMDD532 15.3 metres at 1,105 ppm TREO from 4.2 metres
- RRMDD488 22.1 metres at 1,080 ppm TREO from 4.9 metres
- RRMDD467 20.1 metres at 1,077 ppm TREO from 5.8 metres
- RRMDD546 10.3 metres at 1,076 ppm TREO from 3.9 metres

The Phase 4 drill program at Makuutu has produced strong results. The infill drill holes across the Makuutu Central Zone confirmed near surface, thick REE bearing clays, and continues to validate the Makuutu deposit. Thickness of mineralised clay and minimal cover is crucial to minimising the operating cost, and Makuutu continued to deliver with results from this batch reporting approximately 25% of the intercepts within the Makuutu Central Zone exceeding 20m thick, and over 85% greater than 10 metres thick.

The extension holes in Areas G and H we expect will deliver new resource potential at Makuutu, and additionally, the results from area C were again very pleasing in providing greater confidence across

this area to convert the considerable existing exploration target of 14 to 27 million tonnes to a resource in the next update.

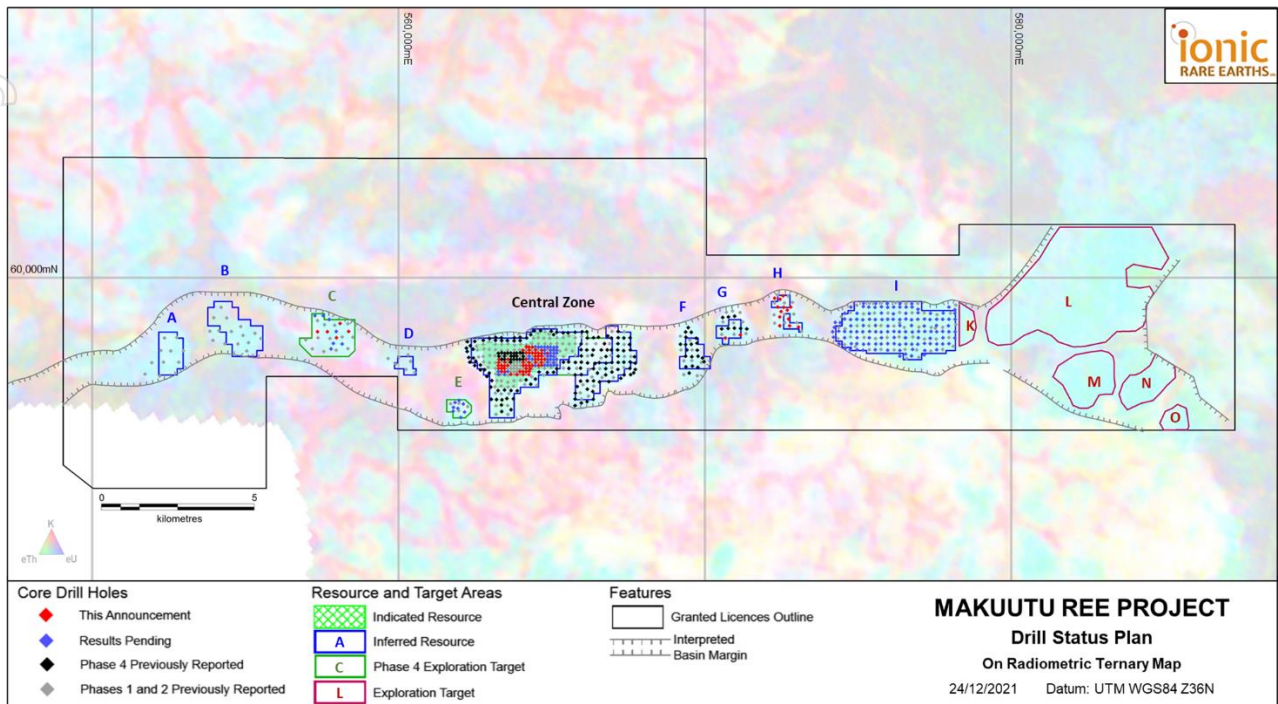


Figure 1: Phase 4 Drill Program status plan showing Tranche 4 reported drill holes covering the Makuutu Rare Earths Project across the Makuutu Central area plus Areas G and H.

Tranche Five

On 7 February 2022, IonicRE reported results of assays for Tranche Five (5) of the Phase 4 drill program. Drill assay results were received for a further 110 drill holes making up the Tranche 5 submission. The results were for holes drilled within the existing inferred and indicated Mineral Resource Estimate (MRE) at the Makuutu Central Zone, resource area I, and to evaluate Exploration Target C and E, that were excluded from the 2021 MRE due to limited drill hole density. Figure 2 provides an illustration of the drill hole assay results reported in Tranche 5.

All 110 holes reported delivered clay and saprolite mineralisation intersections above the cut-off grade of 200 ppm Total Rare Earth Oxide less CeO₂ (TREO-CeO₂) and demonstrated mineralisation consistent with both the initial drilling phases (2019 and H1 2020) and the current MRE.

Notable thick, high-grade and near surface intervals reported from the Tranche 5 assay results included:

- RRMDD567 7.4 metres at 1,829 ppm TREO from 3.2 metres
- RRMDD585 11.4 metres at 1,567 ppm TREO from 3.3 metres
- RRMDD549 10.7 metres at 1,489 ppm TREO from 3.0 metres
- RRMDD573 12.0 metres at 1,449 ppm TREO from 3.0 metres
- RRMDD510 13.1 metres at 1,374 ppm TREO from 4.7 metres
- RRMDD560 12.6 metres at 1,189 ppm TREO from 3.1 metres
- RRMDD562 11.0 metres at 1,070 ppm TREO from 4.1 metres

- RRMDD550 11.1 metres at 1,067 ppm TREO from 3.7 metres
- RRMDD576 21.6 metres at 871 ppm TREO from 1.9 metres
- RRMDD569 20.2 metres at 855 ppm TREO from 4.5 metres
- RRMDD559 18.0 metres at 769 ppm TREO from 8.3 metres
- RRMDD501 27.3 metres at 704 ppm TREO from 10.4 metres

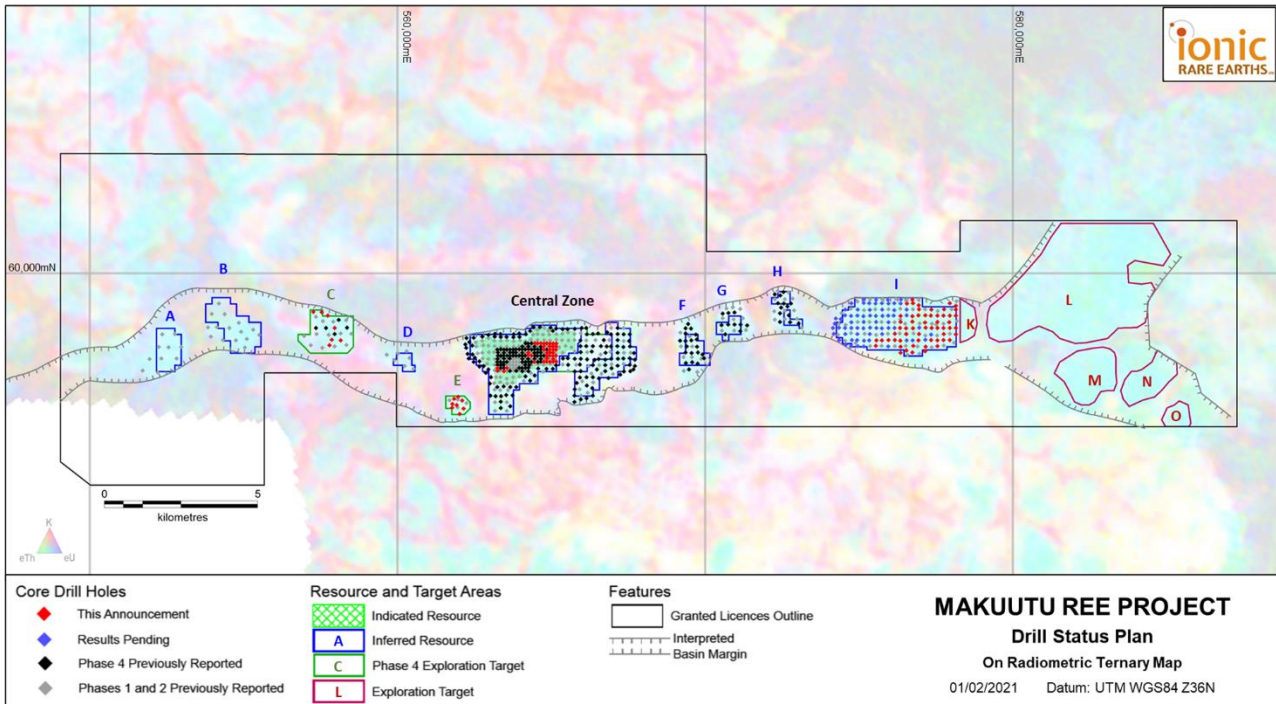


Figure 2: Phase 4 Drill Program status plan showing Tranche 5 reported drill holes covering the Makuutu Rare Earths Project across the Makuutu Central area plus Areas C, E and I.

Tranche Six

On 22 March 2022, IonicRE reported assays for Tranche Six (6) of the Phase 4 drill program. Drill assay results were received for the final 66 drill holes of the program making up the Tranche 6 submission. The results were for holes drilled within the existing inferred Mineral Resource Estimate (MRE) at the large resource area I, located within RL00234. Figure 3 provides an illustration of the drill hole assay results reported in Tranche 6.

All 66 holes reported delivered clay and saprolite mineralisation intersections above the cut-off grade of 200 ppm Total Rare Earth Oxide less CeO_2 (TREO- CeO_2) and demonstrated mineralisation consistent with both the initial drilling phases (2019 and H1 2020) and the current MRE.

The results reported confirmed all 432 drill holes returned clay and saprolite mineralisation intersections above the cut-off grade, an extraordinary outcome providing a clear reflection of the significant scale and continuity of the mineralised system at Makuutu.

Post reporting of the Tranche 6 assays, the update to the MRE commenced with an expectation for a significant upgrade in confidence and potential magnitude, with the MRE update advancing Makuutu another step closer to our goal of submitting a mining licence application later in 2022.

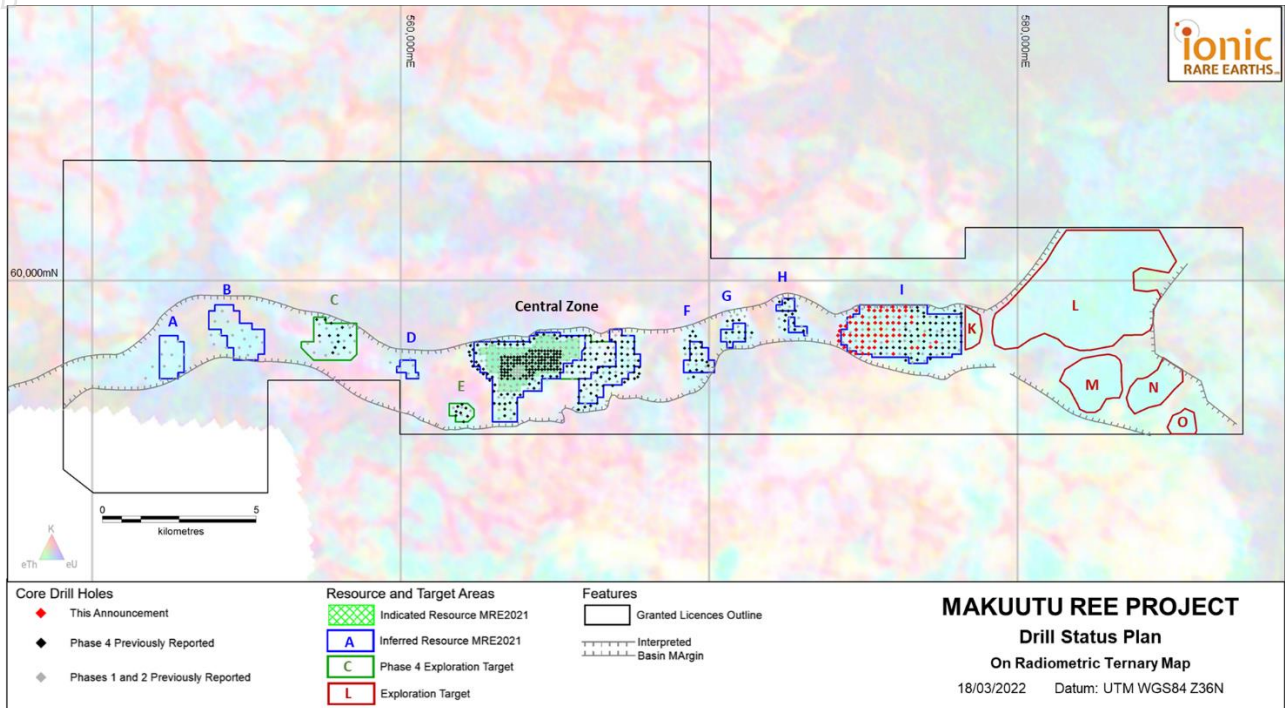


Figure 3: Phase 4 Drill Program status plan showing reported drill holes covering the Makuutu Rare Earths Project across the Area I.

Acquisition of Seren Technologies Complete

IonicRE successfully completed due diligence on the acquisition of 100% of Seren Technologies Limited (SerenTech). As announced on 8 December 2021, IonicRE entered into a binding term sheet for the acquisition of SerenTech, a UK private company with unique and leading-edge rare earth separation and refining technology.

Following the comprehensive due diligence, a Share Purchase agreement (SPA) has been executed with completion occurring post end of the quarter after receiving regulatory approval from the UK Investment Security Unit (ISU).

SerenTech is commercialising technology using ionic liquids for separation and refining of rare earth elements (REE), which includes the full cohort of the proposed basket from Makuutu, consisting of the lanthanides series, Lanthanum (La), to Lutetium (Lu), plus Scandium (Sc) and Yttrium (Y).

The acquisition of SerenTech, which will be based in Belfast, UK, greatly complements IonicRE's strategy of becoming a vertically integrated participant in the formation of new magnet and heavy rare earth supply chains emerging across Europe and North America.

Capital Raising

After the end of the quarter (11 April 2022), IonicRE completed a capital raise of \$30 million (before costs) through the issue of 405,405,406 fully paid ordinary shares (Shares) at an issue price of \$0.074 per Share, representing a 10.0% discount to the volume weighted average price (VWAP) over the 10 trading days preceding the announcement of the Placement, and a 12.7% premium to the 30-day VWAP up to that date.

The Placement was significantly oversubscribed and strongly supported by both key existing shareholders and new global institutional investors from Europe, North America, Asia and Australia. Canaccord Genuity (Australia) Limited acted as Global Bookrunner and Lead Manager to the Placement. Sprott Capital Partners LP acted as Co-Manager to the Placement.

The strong response reflected the potential of the Company as a unique magnet and heavy rare earth development opportunity with the potential to become an end to end vertically integrated rare earth and magnet supply chain.

The proceeds from the Placement will be used to develop the Makuutu Rare Earths Project and to take Seren Technology forward.

The Company intends to use the net proceeds from the Placement as follows:

- Makuutu Feasibility Studies
- Makuutu Financial Investment Decision
- Makuutu Demonstration Plant
- Rare Earth Refinery Feasibility Studies
- Seren Technology Operating
- Seren Technology Demonstration Plant
- Expenses of the issue
- Working Capital

Next Steps

Over Q2 2022, the Company aims to complete an update to the MRE, which is expected to provide a material increase in confidence and scale.

Progress will continue on the Makuutu Feasibility Study and Refinery Scoping Study which are aiming for completion Q3 2022.

With the acquisition of SerenTech now completed, the Company is advancing the integration activity, along with preparing for a new pilot plant run plus engineering studies to update estimates of capital and operating costs for the magnet recycling facility.

Mineral Concessions Held

IonicRE is pleased to advise the following information, pursuant to ASX Listing Rule 5.3.3, for the quarter ended 31 March 2022 and to the date of this announcement.

1. No mineral exploration tenements were acquired or disposed of during the period;
2. Mineral exploration tenements held are set out below:

Common concession name	Location	Nature of Interest	Interest at beginning of Quarter	Interest at end of Quarter
RL 1693	Uganda	Owned	51%	51%*
RL00007	Uganda	Owned	51%	51%*
RL00234	Uganda	Owned	51%	51%*
EL00147	Uganda	Owned	51%	51%*
EL00148	Uganda	Owned	51%	51%*
EL00257	Uganda	Owned	51%	51%*

* IonicRE may earn up to a 60% interest

3. No farm-in or farm-out agreements were entered into during the period.

Corporate

During the quarter, the company expended approximately \$2,189,000 on the exploration and study activities reported above.

Payments to related parties of the entity and their associates totaled \$228,000 and consisted of \$32,000 Director fees, \$7,400 in superannuation related to Director fees and \$188,600 Executive Service fees.

With the Company's increased focus on Europe and North America, the collaborative MOU with Aluminium Corporation of China subsidiary, China Rare Metals and Rare Earth (Jiangsu) Co., Ltd ("CHINALCO") as announced on 7 April 2021 was allowed to lapse without extension.

End Notes

The information contained in this announcement related to the Company's past exploration results is extracted from, or was set out in, the following ASX announcements which are referred to in this Quarterly Activities Report:

- Announcement dated 6 January 2022; 'Thickest intervals to date at Makuutu, Tranche 4 assays excel'
- Announcement dated 7 February 2022; Tranche 5 infill drill results deliver 100% success rate'
- Announcement dated 7 March 2022; 'Seren Technologies Acquisition Update'
- Announcement dated 22 March 2022; '100% success rate for phase 4 Tranche 6 infill drill results'
- Announcement dated 11 April 2022; 'IonicRE Completed \$30M Placement'
- Announcement dated 22 April 2022; 'IonicRE Completes Acquisition of Seren Technologies'

***** ENDS *****

Authorised for release by the Board of IonicRE.

For enquiries, contact: Tim Harrison

Managing Director
+61 8 9481 2555

Competent Person Statements

Information in this report that relates to previously reported Exploration Targets and Exploration Results has been cross-referenced in this report to the date that it was originally reported to ASX. Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcements.

The information in this report that relates to Mineral Resources for the Makuutu Rare Earths deposit was first released to the ASX on 3 March 2021 and is available to view on www.asx.com.au. Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.

The information in this report that relates to Scoping Study results and production targets was first released to the ASX on 29 April 2021 and is available to view on www.asx.com.au. Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.

Forward Looking Statements

This announcement has been prepared by Ionic Rare Earths Limited and may include forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Ionic Rare Earths Limited. Actual values, results or events may be materially different to those expressed or implied in this document. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this document speak only at the date of issue of this document. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Ionic Rare Earths Limited does not undertake any obligation to update or revise any information or any of the forward-looking statements in this document or any changes in events, conditions or circumstances on which any such forward looking statement is based.

Appendix 5B

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

Name of entity

IONIC RARE EARTHS LIMITED

ABN

84 083 646 477

Quarter ended ("current quarter")

31 March 2022

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 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	(324)	(928)
(e) administration and corporate costs	(664)	(1,367)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	-	1
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	(988)	(2,294)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	(540)	(540)
(c) property, plant and equipment	-	(78)
(d) exploration & evaluation capitalised	(2,189)	(5,979)
(e) investments	-	(212)
(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 (9 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	(2,729)	(6,809)
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	90	1,665
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 – reclassify loan to Associate	-	-
3.10	Net cash from / (used in) financing activities	90	1,665
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	7,244	11,055
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(988)	(2,294)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(2,729)	(6,809)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	90	1,665
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	3,617	3,617

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

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	3,584	7,211
5.2 Call deposits	33	33
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)	3,617	7,244

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	228
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.

7. Financing facilities <i>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.</i>	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 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.		

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

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(988)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(2,189)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(3,177)
8.4 Cash and cash equivalents at quarter end (item 4.6)	3,617
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	3,617
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	1.1
<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: Yes	
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: Yes, A\$30 million (before expenses) raised subsequent to quarter end and advised to ASX on 11 April 2022	
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: Yes, refer to 8.8.2 above	
<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

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

Date: 29 April 2022

Authorised by: Brett Dickson – Company Secretary
(Name of body or officer authorising release – see note 4)

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.
- 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*

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

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.