



Directors:

Chair
Tim Wall

Managing Director
Gavin Loyden

Non-Executive Director
Daniel Harris

Non-Executive Director
Tony Pearson

Non-Executive Director
David Fitch

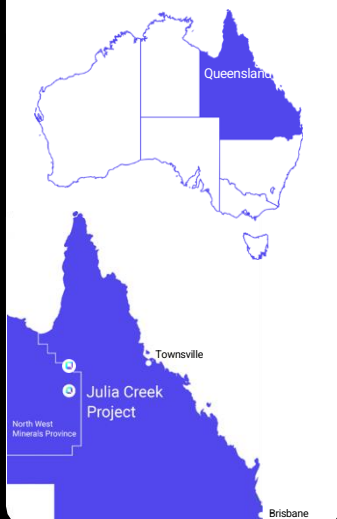
Julia Creek Project:



Vanadium



Oil



QEM Limited:

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ASX Announcement

30 July 2024

Quarterly update for the period ending 30 June 2024

Highlights:

- 2024 Scoping Study nearing completion
- New work program begins with The University of Queensland Sustainable Minerals Institute (SMI)
- Grant application submitted for QEM's Vanadium Recovery Project (Spent Catalyst) through the Queensland Government's Collaborative Development Program
- Tenth consecutive Environmental, Social and Governance (ESG) Report released.

QEM Limited (ASX: QEM) ("**QEM**" or "**Company**") is pleased to provide an update on its activities for the quarter ending 30 June 2024 for its 100% owned Julia Creek Vanadium and Oil Shale Project (JCP) in Julia Creek, Northwest Queensland.

QEM Managing Director Gavin Loyden said, "During this quarter we worked closely with RPM Global and have made significant progress toward the delivery of our Scoping Study. The study is in its final stages of development and is on target for delivery during the next quarter".

"In addition, we proudly continue our collaboration with The University of Queensland's Sustainable Minerals Institute (SMI). The SMI has been pivotal in assisting the company with its process development, identifying improved beneficiation techniques for the flagship Julia Creek Project (JCP).

This next stage of the collaboration, is a continuation of the excellent work already undertaken by the SMI and we look forward to the results over the coming months."



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Julia Creek Project (JCP)

QEM's flagship Julia Creek Project (JCP) is one of the world's single largest vanadium and oil shale deposits. This globally significant **JORC (2012) Mineral Resource of 2,870 Mt @ 0.31% V2O5** represents a significant opportunity for development. The resource is comprised of **461Mt @ 0.28% V2O5 in the Indicated** category and **2,406Mt @ 0.31% V2O5 in the Inferred** category, with the added benefit of a contingent (SPE-PRMS 2018) in-situ oil resource of **6.3 million barrels (MMbbl's) of Oil equivalent in the 1C category, 94 MMbbl's in the 2C category, and 654 MMbbl's in the 3C category**, contained within the same ore body.

Fig 1: Julia Creek Project Location



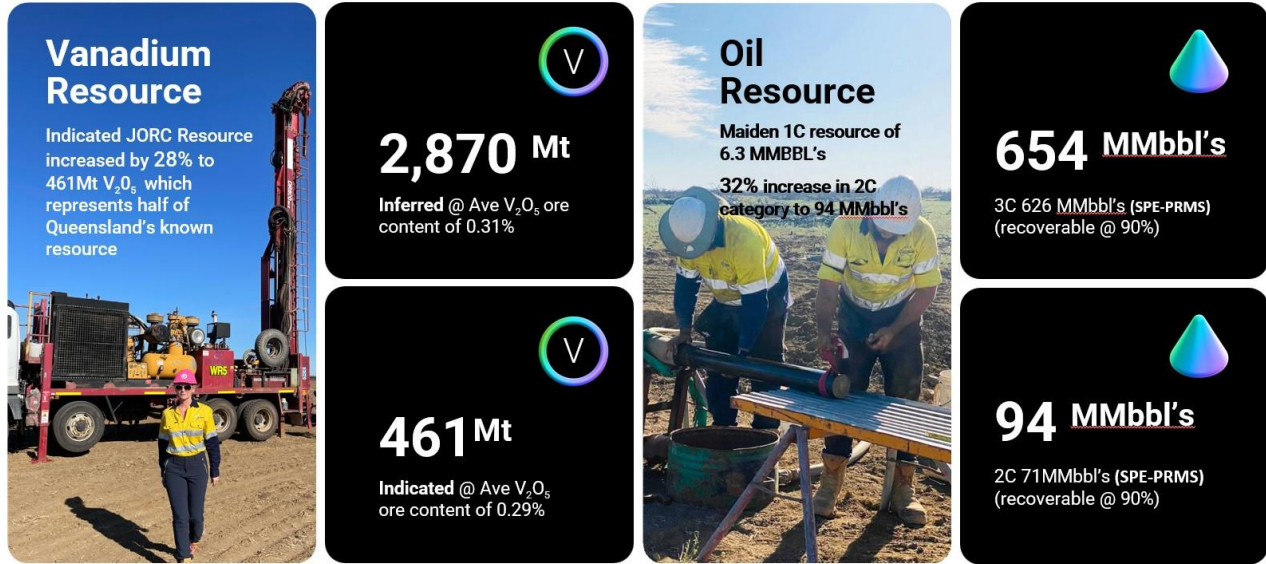
The Julia Creek Project is located approximately 16 km south-east of Julia Creek township in north-west Queensland, within the Tier 1 mining jurisdiction of the North West Minerals Province, regarded as one of the world's richest mining regions.

Julia Creek is a regional town situated 655 km by road to the west of Townsville and 255 km east of the mining town of Mt Isa and lies close to main infrastructure facilities, including the \$5 billion-dollar Copperstring 2032 powerline project currently being developed by Powerlink, which lies immediately adjacent to the JCP.

The project is well intersected by the main infrastructure corridor of the Flinders Highway and the Great Northern Railway line in the northern section of the tenement, which connects Mt Isa to the international Port of Townsville.



Resources



Mine Development

Scoping Study Progress

In the June quarter, further advancements were made toward the completion of the JCP Scoping Study which remains on track for delivery in the next quarter, Q3 2024. RPM Global have completed process flowsheets and mass balance. QEM has reviewed the financial model that supports the Scoping Study's economic results and drafting of the Scoping Study report commenced post-quarter.

Material Characterisation – University of Queensland

In June 2024, QEM entered into an agreement with The University of Queensland (UQ) to characterise the mineralogical and chemical composition of vanadium host phases in the oil shale.

This work program will utilise a range of advanced mineralogical and chemical analytical techniques to constrain the mineralogical characteristics and vanadium host phases in feed materials for QEM's vanadium extraction processes. The aim is to quantify through mass-balance approaches, the deportment of vanadium between hydrocarbon phases and residual mineralogical phases. Understanding the mineralogical host of vanadium in the feed material (e.g., clay-hosted) along with material characteristics of the associated gangue phases (e.g., calcite/limestone) will contribute to improved knowledge of the feed characteristics and process response during further test work.

Previous characterisation work was undertaken on a post hydrogenation material which identified opportunities in terms of particle size and primary texture preservation. This current work program will utilise as-received drill core samples for detailed material characterisation. Techniques used in this new scope of works include Multiple Gas Chromatograph (GC) systems with Electron Capture Detector (ECD) for assessing volatile-hosted vanadium content in hydrocarbon phases, automated microscopy (MLA) and high-resolution energy dispersive spectroscopy (EDS) and x-ray fluorescence mapping (XFM) to determine the relative intensity of vanadium across mineral phases mapped by MLA.



Fully quantitative analysis of the vanadium content of target minerals identified from EDS mineral mapping will be conducted using EMPA and LA-ICPMS analysis where required. NaOH leaching and ICP-AES analysis of residual material and leachate will also be undertaken to determine the final vanadium content of residual materials

This work program is expected to take 4 months, completion is expected in Q1 2025.

Vanadium Beneficiation Test work – Core Resources

During the reporting quarter, QEM engaged Core Resources to conduct a series of vanadium beneficiation and flotation studies targeted at calcite removal from the upper coquina (CQLA and CQLB) ore material.

Core Resources is a Brisbane based laboratory and is a leader in the provision of integrated metallurgical and process engineering services to the mining and resources industry. This work package will be a key input into the Pre-Feasibility Study and is estimated to take 2-3 months. The report is expected in Q4 2024.

Upcoming Exploration Campaign

During the reporting quarter, QEM and Measured Group commenced planning the next exploration campaign. The proposed campaign will consist of upwards of 18 drill holes and 9km of seismic survey tracks.

The drilling campaign will target a further expansion of the company's indicated resource by narrowing the spacing of drill locations on the eastern side of the tenement along with additional infill drilling around the proposed main pit in the west.

While primarily focused on resource exploration and definition, the drilling locations and samples will also be used for waste characterisation and the installation of environmental water boreholes. The campaign is targeted to commence during Q2 2025.

Environmental

Water Monitoring – ATC Williams

During the reporting quarter, QEM conducted one round of environmental surface water and ground water surveys. In 2022 QEM commissioned ATC Williams to conduct a 12-month baseline surface water and ground water study. The purpose of this work is to provide an assessment of baseline groundwater and surface water conditions to support preparation of an Environmental Impact Statement (EIS). In accordance with the Environmental Protection Act 1994, this EIS is a requisite to obtain Environmental Authority.

At the completion of the 12-month baseline campaign, QEM continued to work with ATC Williams on a quarterly basis. The second quarterly event of 2024 was conducted during the reporting period in June 2024.



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Waste Characterisation

RGS Consultants Pty Ltd (RGS) was commissioned by QEM Limited in 2023 to complete a soil quality, geochemical, and physical characterisation assessment of mine waste materials for the Julia Creek vanadium and oil shale project.

The RGS Phase 1 scope of work was to geochemically and physically characterise samples collected in the Q3 2023 drilling program. Test pit sampling for further soil characterisation (on large bulk samples) and process waste characterisation are likely to be required for the Progressive Rehabilitation and Closure Plan (PRCP) to meet Queensland regulatory requirements for the QEM vanadium and oil shale project.

Throughout the reporting quarter, RGS continued the 12-month Geochemical and Physical Sampling and Analysis Plan. An updated interim report is expected to be available with the updated results in Q3 2024.

Grants

The Collaborative Development Program

During the reporting period, QEM applied for funding through the Queensland Government's Collaborative Development Program (CDP). The CDP was announced as part of the Queensland Government's Critical Minerals Strategy and builds on the Queensland Resources Industry Development Plan. The CDP is administered by the Geological Survey of Queensland (GSQ) within the Department of Resources and offers a total of \$5 million in funding for the recovery or reprocessing of mine waste for the extraction of critical minerals in Queensland.

QEM's grant application aims to partially fund the next stage of test work on the company's Vanadium Recovery Project (Spent Catalyst). This package of work will be conducted in conjunction with the University of Queensland (UQ) School of Chemical Engineering and will focus on flowsheet optimisation and the development of a small-scale pilot testing program.

ESG and Community Relations

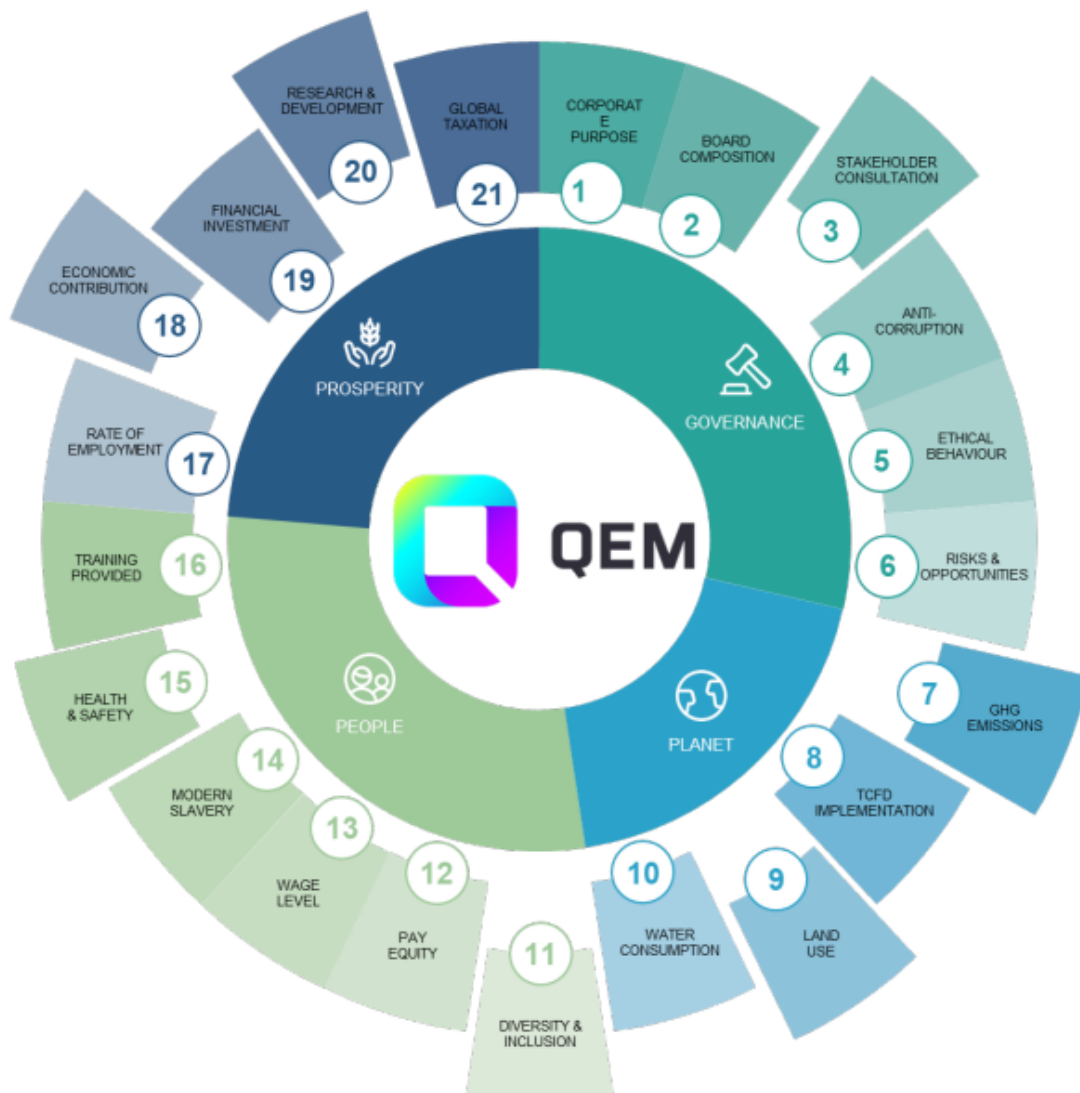
This quarter marks the tenth consecutive quarter that QEM is monitoring and disclosing the Company's ESG progress and initiatives via Socialsuite's ESG Go platform.

QEM's ESG reporting is based on the 21-core metrics set by the World Economic Forum (WEF), as part of WEF's standardised and globally recognised Stakeholder Capitalism Metrics ESG framework. ESG highlights for this quarter follow, including the graphic summary overpage of the Company's ESG current focus. These core areas will be continually updated with the input of stakeholder feedback.

Post quarter, QEM released its 2023 Annual ESG report (see ASX announcement dated July 19, 2024)

QEM's ESG highlights include a 12-month ESG metric status comparison and QEM's full ESG Disclosure and Materiality Reports, each reviewed on completeness by Socialsuite.

QEM utilises the WEF Stakeholder Capitalism Metrics ESG Framework (below).





In Q1 2023, QEM engaged Carbonhalo to conduct our inaugural third-party verified GHG emissions inventory assessment for FY 2022 (12 months ending 30 June 2022). This initial assessment recorded total GHG emissions of 146.80 tonnes of CO₂ equivalent (tCO₂e). A follow-up assessment for FY 2023 showed our business activity had returned a reduction in emissions to 116.15 tCO₂e.

QEM uses these assessments as one of the tools to track progress towards a low-carbon footprint and achieving our sustainability objectives. To further our commitment, QEM has also offset its unavoidable emissions through verified carbon credits from projects focused on renewable energy, technology-based emissions reduction, habitat regeneration, and waste capture. These offsets are sourced from Australian ACCUs. In Q1 2023, QEM engaged Carbonhalo to conduct our inaugural third-party verified GHG emissions inventory assessment for FY 2022 (12 months ending 30 June 2022). This initial assessment recorded total GHG emissions of 146.80 tonnes of CO₂ equivalent (tCO₂e). A follow-up assessment for FY 2023 showed our business activity had returned a reduction in emissions to 116.15 tCO₂e. QEM uses these assessments as one of the tools to track progress towards a low-carbon footprint and achieving our sustainability objectives. To further our commitment, QEM has also offset its unavoidable emissions through verified carbon credits from projects focused on renewable energy, technology-based emissions reduction, habitat regeneration, and waste capture. These offsets are sourced from Australian ACCUs and International VERRA/UNFCC projects.

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Period Comparison (Period 5 vs 9)

Progress
 In progress
 Gap
 Completed
 Not applicable

Governance		Period 5 (Apr to Jun 2023)		Period 9 (Apr to Jun 2024)	
Code	Description	Status	Progress (A1-A5)	Status	Progress (A1-A5)
GOVERNING PURPOSE					
GO-01-C1	Setting purpose	VERIFIED	C C C C C	REPORTED	C C C C C
QUALITY OF GOVERNING BODY					
GO-02-C1	Governance body composition	VERIFIED	C C C C P	VERIFIED	C P C C C
STAKEHOLDER ENGAGEMENT					
GO-03-C1	Material issues impacting stakeholders	VERIFIED	P C C C C	REPORTED	C C C P C
ETHICAL BEHAVIOUR					
GO-04-C1	Anti-corruption practices	VERIFIED	C C C	VERIFIED	C C C
GO-04-C2	Mechanisms to protect ethical behaviour	VERIFIED	C C	VERIFIED	C C
RISK AND OPPORTUNITY OVERSIGHT					
GO-05-C1	Integrating risk and opportunity into business process	VERIFIED	C C C C C	VERIFIED	C C P C C
Planet					
CLIMATE CHANGE					
PL-01-C1	GHG emissions	VERIFIED	C P P	VERIFIED	C C C
PL-01-C2	TCFD implementation	VERIFIED	P P P	VERIFIED	P P P
NATURE LOSS					
PL-02-C1	Land use and key biodiversity areas	VERIFIED	N C N N N	REPORTED	N C N N N
FRESHWATER AVAILABILITY					
PL-03-C1	Water consumption	VERIFIED	P P P P P	REPORTED	C P P P P
People					
DIGNITY AND EQUALITY					
PE-01-C1	Diversity and inclusion	VERIFIED	C P C C C	VERIFIED	P C C C C
PE-01-C2	Pay equality	VERIFIED	P P P P P	VERIFIED	C C P P P
PE-01-C3	Wage level	VERIFIED	P C	VERIFIED	C C
PE-01-C4	Child, forced or compulsory labour	VERIFIED	P	VERIFIED	P
HEALTH AND WELL-BEING					
PE-02-C1	Health and safety	VERIFIED	C P	VERIFIED	C P
SKILLS FOR THE FUTURE					
PE-03-C1	Training provided	VERIFIED	C P	REPORTED	P C
Prosperity					
EMPLOYMENT AND WEALTH GENERATION					
PR-01-C1	Rate of employment	VERIFIED	P P	REPORTED	C C
PR-01-C2	Economic contribution	VERIFIED	C C	REPORTED	C C
PR-01-C3	Financial investment contribution	VERIFIED	N C	VERIFIED	P N
INNOVATION OF BETTER PRODUCTS AND SERVICES					
PR-02-C1	Total R&D expenses	VERIFIED	C	REPORTED	C
COMMUNITY AND SOCIAL VITALITY					
PR-03-C1	Total tax paid	VERIFIED	C	VERIFIED	C

*N.B. Metric Status "Verified" is reviewed on completeness by SocialSuite, not a third-party auditor
 ESG Report Data Disclaimer
 QEM Limited - Period Comparison - Published on 17 Jul 2024

Other ASX requirements

ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the Quarter was \$617k. \$152k was paid during the quarter to related parties, as reported in clause 6 of the ASX Appendix 5B (Cash Flow Report). This comprises directors' fees.

Full details of activities during the Quarter are set out above.

ASX Listing Rule 5.3.2, there were no mining production and development activities during the Quarter.

Tenement Schedule

Project	Country	Tenement	Status	% Held	Change During Quarter
Julia Creek	Australia	EPM25662	Granted	100%	-
Julia Creek	Australia	EPM25681	Granted	100%	-
Julia Creek	Australia	EPM26429	Granted	100%	-
Julia Creek	Australia	EPM27057	Granted	100%	-

All tenements remain in good standing.

ENDS

This announcement was authorised for release on the ASX by the Board of QEM Limited.

For further information, please contact:

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ASX Announcement

30 July 2024

ABOUT QEM

QEM Limited (ASX: QEM) is a publicly listed company which is focused on the exploration and development of its flagship Julia Creek Project, covering 250km² in the Julia Creek area of North Western Queensland.

The Julia Creek Project is a unique world class resource with the potential to utilise and deliver innovative and sustainable energy solutions, through the production of energy fuels and vanadium pentoxide. QEM strives to become a leading producer of liquid fuels and in response to a global vanadium deficit, also aims to become a global supplier of high-quality vanadium pentoxide, to both the nascent energy storage sector and the Australian steel industry.

This globally significant JORC (2012) Mineral Resource of 2,870 Mt @ 0.31% V₂O₅ is one of the single largest ASX listed vanadium resources and represents a significant opportunity for development. The resource is comprised of 461Mt @ 0.28% V₂O₅ in the Indicated category and 2,406Mt @ 0.31% V₂O₅ in the Inferred category, with the added benefit of a contingent (SPE-PRMS 2018) in-situ oil resource of 6.3 MMbbls of Oil equivalent in the 1C category, 94MMbbls in the 2C category, and 654MMbbls in the 3C category, contained within the same ore body.

The tenements form part of the vast Toolebuc Formation, which is recognised as one of the largest deposits of vanadium and oil shale in the world and located less than 6km east of the township of Julia Creek. In close proximity to all major infrastructure and services, the project is intersected by the main infrastructure corridor of the Flinders Highway and Great Northern Railway, connecting Mt Isa to Townsville.

**The information in this announcement that relates to the mineral resource and contingent resource estimates for the Company's Julia Creek Project was first reported by the Company in its IPO prospectus dated 20 August 2018 and supplementary prospectus dated 12 September 2018 (together, the "Prospectus") and the subsequent resource upgrade announcements ("Resource Upgrade") dated 14 October 2019, 7 April 2022 and 5 March 2024. The Company confirms that it is not aware of any new information or data that materially affects the information included in the Prospectus and Resource Upgrade, and in the case of estimates of Mineral Resources and Contingent Resources, that all material assumptions and technical parameters underpinning the estimates in the Prospectus and Resource Upgrade continue to apply and have not materially changed.*

Appendix 5B

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

Name of entity

QEM Limited

ABN

13 167 966 770

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	(617)	(2,717)
	(b) development		
	(c) production		
	(d) staff costs		
	(e) administration and corporate costs	(399)	(1,579)
1.3	Dividends received (see note 3)		
1.4	Interest received	5	15
1.5	Interest and other costs of finance paid	(9)	(9)
1.6	Income taxes paid		
1.7	Government grants and tax incentives	241	241
1.8	Payments for Green Hydrogen Project		
1.9	Net cash from / (used in) operating activities	(779)	(4,049)

2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities		
	(b) tenements		
	(c) property, plant and equipment	(1)	(36)
	(d) exploration & evaluation		
	(e) investments		
	(f) other non-current assets		

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	-	3,000
	(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	(1)	2,964

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	765
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	-	(5)
3.5	Proceeds from borrowings	-	750
3.6	Repayment of borrowings	(750)	(750)
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other – share application funds (not issued)		
3.10	Net cash from / (used in) financing activities	(750)	760

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	3,175	1,970
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(779)	(4,049)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(1)	2,964
4.4	Net cash from / (used in) financing activities (item 3.10 above)	(750)	760

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	1,645	1,645

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	1,645	3,175
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)	1,645	3,175

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	152
6.2	Aggregate amount of payments to related parties and their associates included in item 2	
<i>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.</i>		

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.		

8.	Estimated cash available for future operating activities	\$A'000
8.1	Net cash from / (used in) operating activities (item 1.9)	(779)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(779)
8.4	Cash and cash equivalents at quarter end (item 4.6)	1,645
8.5	Unused finance facilities available at quarter end (item 7.5)	
8.6	Total available funding (item 8.4 + item 8.5)	1,645
8.7	Estimated quarters of funding available (item 8.6 divided by item 8.3)	2.1
	<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: 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: 30 July 2024

Authorised by: By the Board
(Name of body or officer authorising release – see note 4)

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.