



Directors:

Chair
Tim Wall

Managing Director
Gavin Loyden

Non-Executive Director
Daniel Harris

Non-Executive Director
Tony Pearson

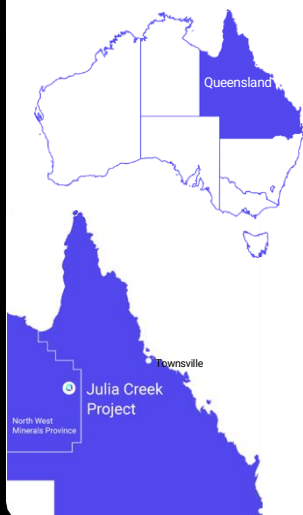
Julia Creek Project:



Vanadium



Oil



QEM Limited:

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ASX Announcement

31 October 2024

Quarterly update for the period ending 30 September 2024

Highlights:

- Scoping Study results have demonstrated that the Project has robust economic outcomes and no significant impediments to prevent it from progressing to a pre-feasibility stage.
- Company lodged application for Coordinated Project Declaration with State Government's Office of the Coordinator General.
- Company lodged a referral with the Commonwealth Department of Climate Change, Energy, the Environment and Water under the Environmental Protection and Biodiversity Conservation Act 1999.

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

QEM Managing Director Gavin Loyden said, "Completion of the Scoping Study represents a significant milestone for the Company and the Julia Creek Project. For the first time, we have detailed initial financial analysis to complement the technical and exploration achievements we've made to date."

"In addition, we proudly continue our collaboration with The University of Queensland's Sustainable Minerals Institute (SMI) and Core Resources in the optimization of our flowsheet in preparation for the Pre-Feasibility Study"

"The successful lodgment of the Initial Advice Statement to the Office of the Coordinator General and the EPBC referral to the Commonwealth Department of Climate Change, Energy, the Environment and Water are important milestones towards achieving Environmental Authority".



Julia Creek Project (JCP)

QEM's flagship Julia Creek Vanadium and Energy 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 Vanadium & Energy Project (JCP) 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.

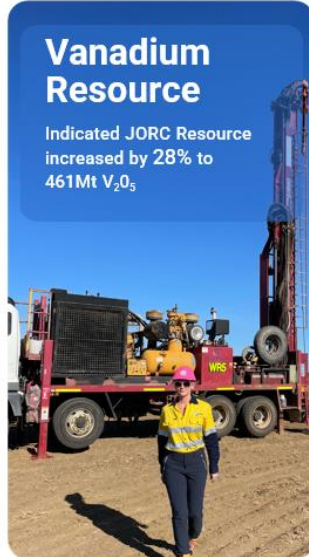


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Resource



Mine Development

Scoping Study Progress

RPM Advisory Services Pty Ltd ("RPM") successfully completed the Scoping Study (hereafter referred to as the "Study") for QEM's Julia Creek Project Vanadium and Energy Project.

The proposed development is an open cut mining operation with on-site processing facilities to produce high-purity vanadium pentoxide and transport fuel products. The Project is significant at regional and national scales, as supported by the Critical Minerals Strategies published by both Queensland and Federal Governments. These strategies target the accelerated development of critical minerals projects to produce the required minerals, such as vanadium, for sustainable supply chains to support the energy transition challenge.

Please refer to ASX Announcement on 27 August 2024 "Julia Creek Project – Scoping Study Completed"



2024 Scoping Study Highlights



Post - Tax
NPV (8%):

AUD **1,106M**

IRR:

16.3%

Payback
Period:

5 Years

Pre - production
CAPEX
(ex-contingency,
owners' costs & EPCM)

AUD **791M**

Life of Mine:

30 Years

ROM:

5.1Mt (dry)

Annual
Production:

**10,571 tonnes V₂O₅
313M litres of fuel**

OPEX:

**V₂O₅ : USD \$5.80/lb
Fuel : AUD \$0.59L**

1 - Refer to ASX announcement dated 27 August 2024 for further information. QEM confirms that it is not aware of any new information or data that materially affects the information included in the relevant announcement and that all material assumptions and technical parameters underpinning the forecast financial information and production target in the relevant announcement continue to apply and have not materially changed.

Mineral Characterisation and Beneficiation work – University of Queensland

During the reporting period, The University of Queensland's (UQ) WH Bryan Mining Geology Research Centre continued characterisation work of the mineralogical and chemical composition of vanadium host phases in the oil shale. Preliminary results from six samples with respect to free oil, kerogen and total organic carbon content showed only minor variability among them. Additional samples were analysed using microscopy to better evaluate the nature of the hydrocarbons (grade and grain/particle size) present in the feed.

Additional 130kg of feed material were prepared as composited and delivered to UQ's Julius Kruttschnitt Mineral Research Centre to test various methods to separate hydrocarbon product (kerogen-rich feed) while providing an oil/carbon free feed (vanadium bearing clays). This work program will utilise a range of advanced mineralogical and chemical beneficiation techniques to constrain the mineralogical characteristics and vanadium host phases in feed 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, Core Resources continued testing 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 Q1 2025.



Upcoming Exploration Campaign

During the reporting quarter, QEM and Measured Group refined the plan for next exploration campaign. The proposed campaign will consist of up to 16 drill holes.

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 groundwater monitoring bores. The campaign is targeted to commence during Q2 2025.

Environmental and Permits

Initial Advice Statement

After several rounds of consultation with the Office of the Coordinator General, an Initial Advice Statement was lodged for the purpose of seeking a Coordinated Project declaration.

QEM considers that the Project is eligible for declaration as a Coordinated Project under the SDPWO Act for the following key reasons:

- Requires local, State and Commonwealth approvals
- Requires a comprehensive environmental impact assessment
- Has significant on-lease and off-lease infrastructure requirements
- Has potential to be of strategic significance to the region, State and Commonwealth including but not limited to social and economic benefits, employment opportunities and capital investment

A declaration is expected between Q4 24 and Q1 25.

EPBC Referral

The Company lodged a referral with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the Environmental Protection and Biodiversity Conservation (EPBC) Act 1999. DCCEEW will determine if the project is a controlled action that would then require approval under the EPBC Act.

Preliminary review of QEM's referral is expected to occur during Q4 2024, public consultation is expected during Q1 2025.

Baseline Water Monitoring

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.



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



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 (GAPSAP). The final report will be available in Q1 2025.

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.



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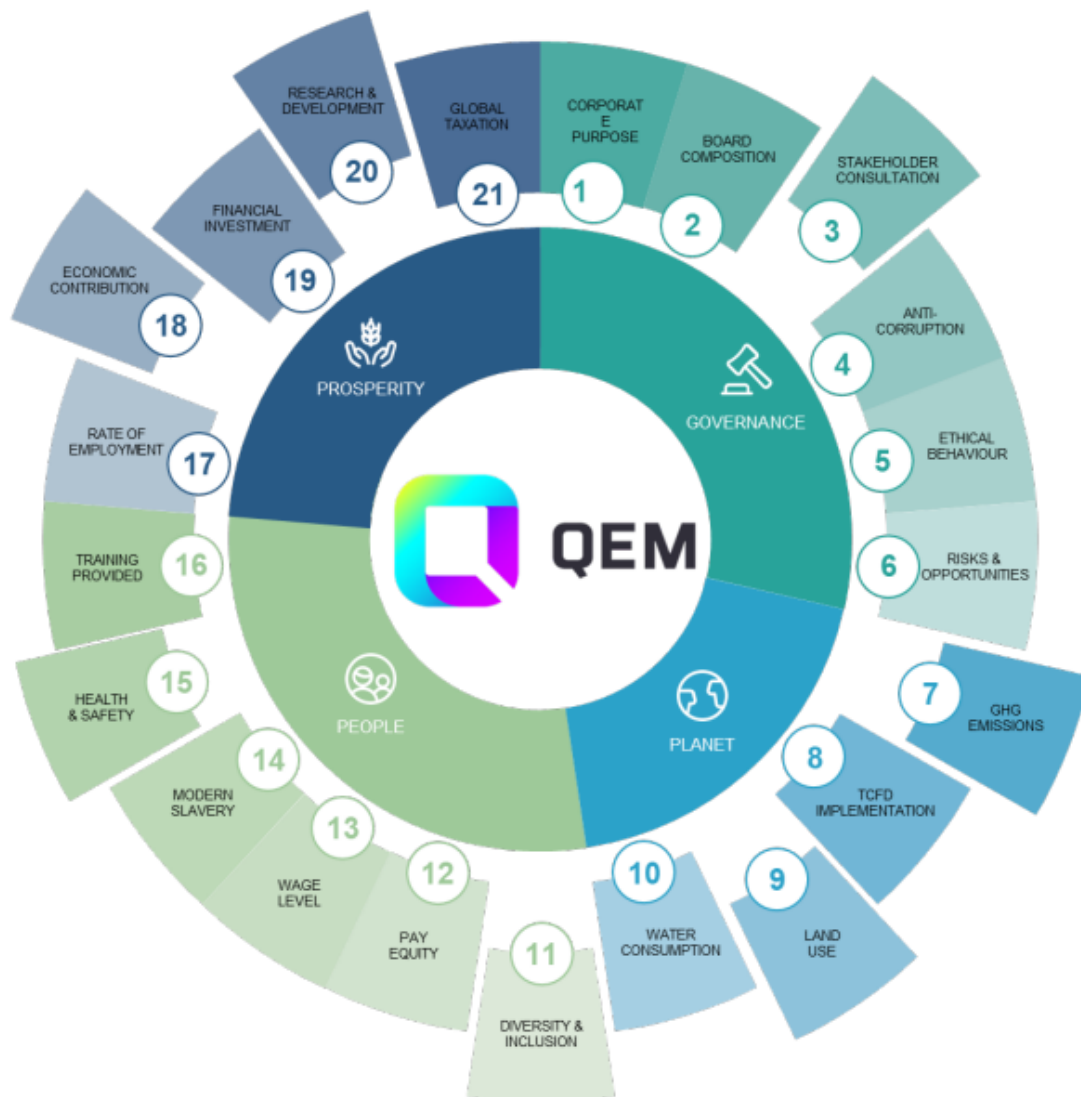
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ESG and Community Relations

This quarter marks the eleventh 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 below of the Company's ESG current focus, which reflects the feedback from the Company's Materiality Assessment conducted in early 2024. These core areas will be continually updated with the input of stakeholder feedback.

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



QEM continues to offset its unavoidable emissions each month 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, via Carbonhalo, engaged to conduct our third-party verified GHG emissions inventory assessment for the past two financial years.

QEM seeks to support the greater communities in which we operate, with a particular focus on youth and women's development, education and sport. QEM proudly sponsored the Sedan Dip Races, Campdraft and Rodeo in the McKinlay Shire during August. QEM Project Coordinator Lian D'Netto visited the town of Julia Creek each month to conduct operational duties such as our regular environmental and water quality monitoring program and attend community events like Sedan Dip, as well represent QEM at the Meeting of the Mines in Cloncurry in September.

Other ASX requirements

ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the Quarter was \$542k. \$195k 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

As at 30 September 2024, the Company had interests in the following tenements (as required by Listing Rule 5.3.3). There were no changes in the Company's interests in tenements during the quarter.

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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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 September 2024

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers		
1.2	Payments for		
	(a) exploration & evaluation	(542)	(542)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(109)	(109)
	(e) administration and corporate costs	(309)	(309)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	4	4
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	(956)	(956)

2.	Cash flows from investing activities		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	(10)	(10)
	(d) exploration & evaluation	-	-
	(e) investments	-	-
	(f) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 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	(10)	(10)

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	1,645	1,645
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(956)	(956)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(10)	(10)
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 (3 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	679	679

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	679	1,645
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)	679	1,645

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	170
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	n/a	
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)	(956)
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)	(956)
8.4 Cash and cash equivalents at quarter end (item 4.6)	679
8.5 Unused finance facilities available at quarter end (item 7.5)	
8.6 Total available funding (item 8.4 + item 8.5)	679
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	0.7
<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: No. During the quarter the Company completed a Scoping Study (announced 27 August 2024). The Company expects upcoming operating costs to decrease somewhat as we progress pre-feasibility study planning/program.	
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, as announced on 25 October 2024 the Company completed a Renounceable Entitlement Offer, raising ~\$2.76 million (before costs).	
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, per above responses.	
<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: 31 October 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.