

# ASX ANNOUNCEMENT



30 July 2021

## Quarterly update for the period ending 30 June 2021

QEM Limited (ASX: QEM) (“**QEM**” or “**Company**”) is pleased to provide an update on its activities for the quarter ending 30 June 2021.

QEM Managing Director, Mr Gavin Loyden, said the Company had achieved several key milestones in unlocking the significant value potential at the Julia Creek vanadium and oil shale project in North Queensland during the quarter and post-quarter end.

“I am delighted that we have made substantial progress on the development of our bench-scale pilot plant for the extraction of synthetic oil and vanadium pentoxide from the resource material, and the initial wind and solar power investigations are highly promising,” Mr Loyden said.

“QEM will continue to logically and efficiently reach the end goal of producing the Australian Critical Mineral Vanadium as well as a transport fuel product. Onsite renewable energy is a vital part of the vanadium and oil project’s strategy.”

“Pleasingly, the broader macroeconomic and policy environment is increasingly positive for QEM, with the \$1.5 Billion Copperstring 2.0 high voltage network development adjacent to the Julia Creek project nearing commencement and the Queensland Government continuing to advance its New Economy Minerals Initiative.”

### **Oil & Vanadium Pilot Plant**

On 24 May 2021, QEM announced it had engaged E2C Advisory Pty Ltd to undertake the design and selection of the bench-scale pilot plant to facilitate more advanced test work for the flagship Julia Creek vanadium and oil shale project.

The pilot plant will encompass larger scale testing and generate the bulk product material from the resource at the Julia Creek vanadium and oil shale project required to optimise vanadium recovery, conduct petrology evaluation and gain greater understanding of the Company’s internal hydrogen requirements.

On 16 June 2021, QEM announced that a purchase order for the pilot plant was signed with specialist manufacturer AMAR Equipment.

The final technical drawings for the plant were provided prior to quarter end.

The hazard and operability (HAZOP) study on the bench-scale oil and vanadium pilot plant was completed at the Melbourne headquarters of HRL Technology Group Pty Ltd on 9 July 2021, where the pilot plant will be installed and operated.

QEM remains on target to commence operational activity at the bench-scale pilot plant during 1H FY22.

# ASX ANNOUNCEMENT



Images from HAZOP conducted at HRL in Melbourne

## **Julia Creek Wind Farm Study**

Post-quarter end on 9 July 2021, with subsequent related additional information released on 19 July 2021, QEM announced an update of its assessment into power generation opportunities to underpin the mining operations on site at the Julia Creek vanadium and oil shale project

QEM is also assessing the production and utilisation of green hydrogen at the Julia Creek project. Its purpose would be to upgrade the oil component of the dual commodity resource to produce quality transport fuels.

The commencement of this two-stage study was announced during the quarter on 8 April 2021.

The assessment work completed by DNV Australia ("DNV") referenced in the 9 July 2021 announcement included the modelling of a detailed wind resource map, incorporating the Julia Creek project specifications and relevant constraint parameters.

DNV's work indicated that wind could be considered as a conceptually suitable source of power generation at the project, with DNV recommending further wind studies, including ongoing monitoring on-site wind speeds, to confirm the suitability of this renewable source.

DNV also identified an area supporting a complementary solar farm.

## **Julia Creek Solar Farm Study**

QEM announces the completion of the second stage of the aforementioned power generation assessment. This second stage covers the solar farm component.

The results of the study indicate that a solar farm is also a conceptually suitable source of power generation for the Julia Creek vanadium and oil shale project.

The solar farm studies encompassed solar farm resource mapping and modelling, as well as a preliminary solar photovoltaic (solar PV) system design.

# ASX ANNOUNCEMENT



The preliminary solar farm layout that has been developed incorporates the specific parameters of the Julia Creek site and the preliminary wind farm layout.

DNV has recommended further solar farm and wind farm optimisation studies including on-site stations to monitor long-term wind speed and solar resources to provide enhanced confirmation of the initial positive results and determine the most suitable solution for the Julia Creek Project.

QEM expects to undertake these optimisation studies during 2H FY21, before assessing the suitability of the proposed power generation development.

QEM is pleased with the progress of these early stage studies and the positive indications received to date.

## **Local Power Supply**

QEM notes that Copperstring 2.0 Chairman John O'Brien has stated the development will be shovel ready by October 2021, pending final government approvals.<sup>1</sup>

Copperstring 2.0 is a \$1.5 billion, 1,000km high voltage transmission project, to service Townsville and the North West Minerals Province and will run within 10km of the Julia Creek vanadium and oil shale project, potentially allowing for efficient access, to the electricity grid, either as a consumer and/or an exporter of surplus Julia Creek project power.

## **COVID-19 Impacts**

QEM is pleased to report that it continues to experience no material COVID-19 impacts on its operations.

The Company is maintaining adherence to Government directives to ensure it does its part to mitigate the risk of an outbreak.

## **Related Party Payments**

ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the Quarter totalled \$104k. The Company advises that this relates to non-executive director's fees, executive directors' salaries and a technical consulting fee to Energy Source LLC (an entity associated with Mr Daniel Harris).

## **Other ASX requirements**

ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the Quarter was \$394k. 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.

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<sup>1</sup> <https://www.pv-magazine-australia.com/2021/07/08/custring-ready-to-pull-trigger-on-1-5-billion-transmission-project/>

# ASX ANNOUNCEMENT



## **Tenement Schedule**

In line with obligations under ASX Listing Rule 5.3.3, QEM Limited provides the following information with respect to its Mining Tenement holdings as at 30 June 2021.

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%	-

- **END** -

*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 focussed on the exploration and development of its flagship Julia Creek Project, covering 250km<sup>2</sup> in the Julia Creek area of North Western Queensland.

The Julia Creek vanadium / oil shale project is a unique world class resource with the potential to deliver innovative 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 2,760 Mt @ 0.30% V2O5 is one of the single largest ASX listed vanadium resources and represents a significant opportunity for development.

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 16km 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.

# ASX ANNOUNCEMENT



\*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 announcement ("Resource Upgrade") dated 14 October 2019. 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 2021

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers		
1.2 Payments for		
(a) exploration & evaluation (if expensed)	(394)	(1,013)
(b) development		
(c) production		
(d) staff costs		
(e) administration and corporate costs	(179)	(637)
1.3 Dividends received (see note 3)		
1.4 Interest received	1	8
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives	281	331
1.8 Other (provide details if material)		
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(291)</b>	<b>(1,311)</b>

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

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

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities		
	(b) tenements		
	(c) property, plant and equipment		
	(d) investments		
	(e) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (provide details if material)		
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	-	-
<b>3.</b>	<b>Cash flows from financing activities</b>		
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)		
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	-	-
<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	1,618	2,638
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(291)	(1,311)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
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

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>1,327</b>	<b>1,327</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	119	410
5.2	Call deposits	1,208	1,208
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>1,327</b>	<b>1,618</b>

**6. Payments to related parties of the entity and their associates**

- 6.1 Aggregate amount of payments to related parties and their associates included in item 1
- 6.2 Aggregate amount of payments to related parties and their associates included in item 2

**Current quarter  
\$A'000**

104

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

6.1 includes director's fees and consultancy fees for the quarter.



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

<b>7. Financing facilities</b>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
<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>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 <b>Total financing facilities</b>	-	-
7.5 <b>Unused financing facilities available at quarter end</b>		-
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.		

<b>8. Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (Item 1.9)	(291)
8.2 Capitalised exploration & evaluation (Item 2.1(d))	-
8.3 Total relevant outgoings (Item 8.1 + Item 8.2)	(291)
8.4 Cash and cash equivalents at quarter end (Item 4.6)	1,327
8.5 Unused finance facilities available at quarter end (Item 7.5)	-
8.6 Total available funding (Item 8.4 + Item 8.5)	1,327
8.7 <b>Estimated quarters of funding available (Item 8.6 divided by Item 8.3)</b>	4.56
8.8 If Item 8.7 is less than 2 quarters, please provide answers to the following questions:	
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	
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	
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	

**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 2021**

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.