

# ASX ANNOUNCEMENT



17 July 2019

## Successful preliminary Stage 2 test results for oil extraction and recovery

- QEM has received successful results using Petroteq Energy Inc's technology, from Stage 2 test work carried out on the previous drill core sample.
- The test work undertaken by independent lab PRI Asphalt Technologies Inc, provided strong results, with total oil recovery up to 65% of the contained oil, from Julia Creek Project samples.
- With further optimisation by Petroteq, QEM is confident that recovery can be further increased.
- The residual material of approximately 20% of original mass (after oil recovery) was separated as a result of the Petroteq process, and this residual material contains the metals.
- The V<sub>2</sub>O<sub>5</sub> is contained in the residual material only, as verified by PRI's laboratory analysis.
- These results warrant a bulk sample test in order to produce sufficient oil and V<sub>2</sub>O<sub>5</sub> required to carry out API (petrology analysis) testing of the oil, and V<sub>2</sub>O<sub>5</sub> extraction.
- The bulk sample testing will provide a result that is a better representation for the beneficiation of the V<sub>2</sub>O<sub>5</sub>.

QEM Limited (ASX:QEM) ("**QEM**" or "**the Company**") is pleased to announce it has received successful preliminary stage 2 results using Petroteq Energy Inc's ("**Petroteq**") technology from test work carried out on the previous drill core sample. As per the announcement dated 20 December 2018, a sample of QEM's oil shale was vacuum sealed and dispatched to the USA for test work which was overseen by Petroteq.

The testwork was undertaken by independent laboratory PRI Asphalt Technologies Inc ("**PRI**"), using Petroteq's proprietary solvent blend to determine the percentage of oil that could be recovered from QEM's activated oil shale. This test work followed on from the Stage 1 oil extraction testing announced 20 December 2018.

The results from testwork demonstrate that Petroteq's proprietary technology was able to recover up to 65% of the contained oil from Julia Creek project samples.

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It was noted by PRI, that from the Petroteq's process, an average 20% of residual material from the original mass (after oil recovery), contained metals including Vanadium. The PRI results also show that the Vanadium is contained only in this material.

## Next Steps

Further optimisation testing on the remaining sample is expected to commence in the coming weeks. QEM is confident that based on Petroteq's previous work, a recovery of oil approaching 90% yield is achievable on QEM's oil shale. The Company also notes that further bulk testing will be required to demonstrate that such yield is achievable across the entirety of the Company's flagship Julia Creek Project.

From further optimisation testing of the remaining material, PRI are confident that there will be sufficient volumes of oil recovered which is required to conduct API testing (Petrology Analysis). QEM will also have the separated residual material tested for metals content, which will be followed by extraction process evaluation for the  $V_2O_5$ .

Bulk sample testing will then be carried out to show a result that is a better representation in order to increase the commercial confidence of the project.

**QEM Managing Director David Fitch commented:** "We are pleased to announce these very positive advancements in understanding the viability of recovering oil from our flagship Julia Creek project. These results give us great confidence in moving towards a commercially viable project.

Further results from bulk sampling will provide us with an opportunity to develop the most commercially suited process for oil recovery and vanadium extraction, with test work to be carried out over the coming months. We look forward to receiving and announcing the results of this continued work as we advance our vanadium and oil shale project."

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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, cover 496km<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) Inferred Resource of 1,700 Mt @ 0.34% V<sub>2</sub>O<sub>5</sub> is the second largest ASX listed vanadium resource and represents a significant opportunity for development.

The tenements form part of the vast Toolebec 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.

## ABOUT PETROTEQ

Petroteq Energy Inc. is a Canadian-registered holding company, publicly trading on the TSX Venture Exchange (Symbol: PQE) and the OTC trading platform (Symbol: PQEFF). Its offices are located in Toronto, Ontario, Canada, and Los Angeles, California; its initial plant location is in Vernal, Utah.

Petroteq is focused on value creation through the development and implementation of proprietary technologies for the environmentally safe extraction of heavy oils from oil sands, oil shale deposits and shallow oil deposits.

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