

# ASX ANNOUNCEMENT



6 April 2022

## Pilot Plant Successfully Delivered

- **QEM receives vanadium and oil shale bench scale pilot plant**
- **Pilot plant testing program set to commence in April for up to six months**
- **QEM swiftly progressing Julia Creek vanadium and oil shale project amid strong market conditions for both commodities**
  - Oil price surpasses 13-year highs, with Australian fuel security a growing issue
  - Vanadium price rising as long-term demand/supply deficit continues

QEM Limited (ASX: QEM) (“**QEM**” or “**Company**”) is pleased to announce that its vanadium and oil shale bench scale pilot plant has been successfully delivered to Australia.

The pilot plant has been designed and developed to validate the Company's proprietary extraction process, ahead of a commercial demonstration plant.

This pilot plant will also provide feedstock for the multi-user vanadium processing facility in Townsville to be funded by the Queensland Government. QEM is a founding member of the Queensland Vanadium Consortium which worked with State Government leading up to its November 2021 announcement of the provision of over \$10m in funding to build a Townsville-based facility.

The QEM bench scale pilot plant was fabricated at AMAR's facility in India. AMAR is a specialist manufacturer of high pressure, high temperature batch and continuous reactors and allied systems, whose client list includes General Electric, Shell, BASF and Bayer, among others.

The plant will be housed at the Melbourne headquarters of HRL Technology Group Pty Ltd (“HRL”) and following official commissioning, the testing program will begin. The expected operational commencement of the pilot plant is in April this year, for a period of up to six months.

HRL completed the hazard and operability (HAZOP) study on the bench-scale oil and vanadium pilot plant in July 2021 at their Melbourne headquarters. The plant was certified and approved by ASME-U on 26 October 2021.

QEM Managing Director Gavin Loyden said the pilot plant would further validate and expand upon QEM's positive extraction test results recorded to date.

“We are methodically ticking off the key milestones in the development of our Julia Creek vanadium and oil shale project, and the delivery of this plant marks another critical step,” Mr Loyden said.

“The development of our vanadium and oil shale project comes amid a period of global macroeconomic and geopolitical volatility, which has emphasised the importance of building Australia's domestic fuel supply and critical minerals production capabilities.”

**ENDS**

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

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\*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.

## 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% V<sub>2</sub>O<sub>5</sub> 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 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 Mount Isa to Townsville.