



ASX: MRC

12 August 2019

MRC LEADS SUCCESSFUL CRC-P GRANT APPLICATION TO DEVELOP COMMERCIAL-SCALE PROCESS FOR PRODUCING HIGH PURITY GRAPHITE (>99.95%)

- **MRC to collaborate with Doral Fused Materials (“DFM”) and CSIRO to establish a pathway to commercial production of high-purity graphite in Australia.**
- **The successful CRC-P application submitted by MRC as the Lead Applicant is to develop and demonstrate an industrially-implementable hydrometallurgical purification process for MRC’s Munglinup graphite concentrate.**
- **The scope of the project will seek to build upon techniques previously developed by CSIRO to establish the first Australian-based graphite purification process.**
- **Subsequently, a larger scale demonstration plant will most likely be developed at DFM’s Fused Alumina plant at Kwinana in Western Australia.**
- **The total budget for the CRC Project forecasted at \$2.61M, of which the Commonwealth Government CRC-P program will fund 31%.**

Mineral Commodities Ltd (ASX: MRC) (“the Company” or “MRC”) is delighted to announce that its application with collaboration partners, Doral Fused Materials and Australia’s national science agency CSIRO (together the “collaboration partners”) for matched cash funding under the Cooperative Research Centres Projects (“CRC-P”) Grants program, has been successful.

The successful CRC-P application submitted by MRC as the Lead Applicant is to develop and demonstrate an industrially-implementable hydrometallurgical purification process for graphite concentrate. The target purity will be at least 99%, more desirably 99.5% and even more desirably exceed 99.95% (battery grade).

Current techniques for producing high purity graphite are based on using environmentally harmful fluoride based reagents, with high costs for processing and compliance. This has limited the viability of graphite purification in Australia. The project objective is to develop a new environmentally sustainable and economic process for the production of high purity graphite in Australia.

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The partners will work together from initial R&D laboratory work, through to lab-based pilot scale testing and finally a feasibility study for demonstration plant. This new approach will be much more targeted in comparison to existing techniques in how it separates impurities from the graphite and does not rely on fluoride based reagents. It also has the benefit of being a more environmentally friendly process than current methods.

CSIRO is recognised as a global expert in graphite processing outside of China. Using specialised lab facilities, CSIRO scientists will develop a detailed understanding of how Munglinup graphite impurities behave in the presence of different reagents and conditions, leveraging existing CSIRO knowledge. Based on these results, the collaboration partners will develop a more comprehensive process flowsheet for purification of MRC's Munglinup concentrate and assess its ability to upgrade other graphite concentrates.

CSIRO's involvement includes the initial testwork, flowsheet development and the construction and operation of a mini-pilot plant to validate the proposed flowsheet before the collaboration partnership delivers a design and cost estimate for a commercial-scale plant.

If successful, a larger scale demonstration plant could be developed at DFM's Fused Alumina plant at Kwinana in Western Australia.

DFM personnel have extensive hydrometallurgical and advanced materials manufacturing experience in Australia. DFM is a fully owned subsidiary of Iwatani Corporation, a Japanese company with net global sales of US\$6.1B, which includes a battery materials division.

MRC will use the results of the pilot/demonstration testing to develop a DFS level design and cost estimates for a commercial plant. The purified graphite produced from the testing will be provided to MRC for distribution to potential global customers.

The total budget for the CRC Project is forecasted at \$2.61M, of which the Commonwealth Government grant funding will provide 31% with the remaining cost attributed to MRC, DFM and CSIRO in-kind.

The project is expected to commence this quarter subject to the execution of a grant agreement with the Department of Industry, Innovation and Science acting on behalf of the Commonwealth.

On announcing the successful application, the Minister for Industry, Science and Technology, the Hon Karen Andrews MP stated, " *The CRC Program has a long history of developing real-world solutions to improve the competitiveness, productivity and sustainability of Australian industries. The short-term collaborative research projects supported through this round (of the CRC-P) will lead to tangible outcomes and improve the competitiveness, productivity and sustainability of Australian industries.*"

Mr Mark Caruso, Executive Chairman of Mineral Commodities Ltd, said, " *The Company and its partners are thrilled to learn of our successful CRC-P application, and we, of course, are very privileged to be part of such an important government initiative.*"

MRC has assembled a world-class suite of high-grade graphite projects in the tier 1 jurisdictions of Western Australia and Norway.

The Munglinup Graphite Project is an important part of the company's global graphite initiative and business strategy. The workflow from the CRC-P collaboration will advance our ambition of developing an integrated mine, concentrator and downstream processing facility for Munglinup to build a robust graphite business.

I must commend the outstanding work of our Technical Services Manager, Dr Surinder Ghag. We understand that the recent CRC-P round was highly competitive, and to be successful in the first round is a major achievement. It's a great testament to the quality of his work, the project and our collaboration partners. We understand that in general, across the CRC program, only around the top 20% of projects are funded, with a much higher rate of rejection for first-time claimants."

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About Mineral Commodities Ltd:

Mineral Commodities Ltd (ASX: MRC) is a global exploration and mining company with a primary focus on the development of high-grade mineral deposits within the industrial minerals, base metals, bulk commodities and precious metals sectors.

The Company is a leading producer of zircon, rutile, garnet and ilmenite concentrates through its Mineral Sands Operation at Tormin, located on the west coast of South Africa. The planned development of the Munglinup Graphite Project, located near Esperance in Western Australia, is consistent with the Company's strategy to capitalise on the fast-growing sustainable renewable energy storage and electric vehicle revolution as well as downstream vertically integrated value-adding.

The Company has also secured the first-mover advantage in Iran, considered the most prospective and underdeveloped mineral resource country in the world, and has entered into agreements and applied for tenements over several prospective areas in Western Australia targeting vanadium, lithium, channel iron ore and gold/copper.

Cautionary Statement

This report may contain forward-looking statements. Any forward-looking statements reflect management's current beliefs based on information currently available to management and are based on what management believes to be reasonable assumptions. It should be noted that several factors could cause actual results or expectations to differ materially from the results expressed or implied in the forward-looking statements.

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