



CRC-P Project Completion and CSIRO Collaboration Update

- **CRC-P project successfully completed with battery grades achieved at increasing scale by Australia's national science agency, CSIRO**
- **Initial samples produced for customer qualification with positive feedback**
- **Additional customer qualification samples (including for the Mitsubishi collaboration¹ and Traxys agency agreement²) in production in the mini-pilot plant developed in the CRC-P project**
- **MRC successful in Critical Minerals Acceleration Initiative (CMAI) grant application**
- **MRC and CSIRO to broaden collaboration in CMAI project to include graphite shaping (spheronisation) and anode coating, as well as larger scale piloting of the successful purification process developed in CRC-P project, to produce high-value coated purified spherical graphite (CPSG)**

Mineral Commodities Ltd (**ASX: MRC** or **the Company**) is pleased to announce the successful completion of the Cooperative Research Centres Projects (**CRC-P**) project³ with Australia's national science agency, CSIRO, and Doral Fused Materials.

CSIRO conducted 534 purification tests in the CRC-P project at increasing scale, including 84 lock cycle tests to simulate industrial processing. Testing was completed on both Munmlinup and Skaland material in various forms including flake graphite concentrate, micronized flake, spherical graphite and spheronisation fines.

The project achieved battery grades (minimum of 99.95% purity) for both Munmlinup and Skaland spherical graphite⁴ with typical recoveries to product of 90%. Generally, Munmlinup material is marginally easier to purify, with a 0.01% higher (absolute) purity in the process.

The CSIRO-developed process avoids the use of environmentally unfriendly HF acid. The process has been developed from first principles independently by CSIRO in sixteen stages of development including optimisation and scale-up, and associated reporting.

MRC is delighted to be able to continue with its partnership with the expert CSIRO team on developing an environmentally sustainable purification process in the CMAI pilot scale project⁵. The collaboration with CSIRO will be broadened in the CMAI project to include optimising the graphite spheronisation (shaping) process and scale-up of carbon coating to produce high-margin CPSG further enhancing Australian capabilities in this area of the

¹ Refer to ASX Announcement entitled "[Strategic Collaboration Agreement with Mitsubishi Chemical Corporation](#)" dated 18 May 2022.

² Refer to ASX Announcement entitled "[MRC and Traxys sign Agency Sales and Marketing Agreement](#)" dated 20 May 2022.

³ Refer to ASX Announcement entitled "[MRC Leads Successful CRC-P Application to Develop Commercial Scale Process for producing High-Purity Graphite \(>99.95%\)](#)" dated 12 August 2019.

⁴ Refer to ASX Announcement entitled "[Active Anode Materials Plant \(AAMP\) Purification Success](#)" dated 13 September 2021.

⁵ Refer to ASX Announcement entitled "[Successful \\$3.94M Critical Minerals Grant Application](#)" dated 19 April 2022.

critical minerals supply chain. CSIRO will also conduct, electrochemical testing on lithium-ion battery electrodes produced from the CPSG.

The CMAI project will allow MRC to supply larger quantities of customer qualification samples to secure offtake agreements MRC and CSIRO are currently in the process of formalising the partnering arrangement as part of the CMAI grant agreement. MRC will also engage Australian METS sector for: piloting of concentrate production, optimised Munghlinup Definitive Feasibility Study (DFS), and delivery of an integrated ore-to-anode materials DFS in the CMAI project for commercial scale production.

Initial samples from the CSIRO mini-pilot plant developed in the CRC-P project have been provided to Mitsubishi with positive feedback. The mini-pilot is currently generating additional samples for customer evaluation to further support the Mitsubishi strategic collaboration agreement and provide samples to Traxys to support offtake agreements.

Other near-term activities include pre-engineering for key equipment for the CMAI pilot plant and further evaluation of the optimisation activities identified in the CRC-P project.

MRC's Managing Director, Mr Jacob Deysel said, *"As discussed, we are delighted with our successful grant application under the Critical Minerals Acceleration Initiative. We are very much looking forward to broadening our collaboration with CSIRO's team of experts to larger scale piloting of graphitic anode materials production using Skaland and Munghlinup concentrates.*

We will also engage the wider Australian METS sector to deliver an updated Munghlinup DFS aligned with qualification demand and modular plant design based on recent testwork, as well as an integrated ore-to-anode materials DFS based on our Munghlinup Graphite project. This will support acceleration of Munghlinup development".

ENDS

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About Mineral Commodities Ltd:

Mineral Commodities Ltd is a global mining and development company with a primary focus on the production of high-grade Mineral Sands and Natural Flake Graphite from operations in South Africa and Norway.

The Company is a leading producer of zircon, rutile, garnet, magnetite, and ilmenite concentrates through its Tormin Mineral Sands Operation, located on the Western Cape of South Africa.

The Company owns and operates the Skaland Graphite Operation in Norway, the world's highest-grade operating flake graphite mine and is the only producer in Europe.

The planned development of the Munglinup Graphite Project, located in Western Australia, builds on the Skaland acquisition and is a further step toward an integrated, downstream value-adding strategy which aims to capitalise on the fast-growing demand for sustainably manufactured lithium-ion batteries.

In April 2022, the Company released its Five-Year Strategic Plan 2022-2026⁶ to delineate and implement its aspiration to become a leading vertically integrated diversified producer of graphitic anode materials and value added mineral products with a commitment to operate with a focus on the Environment, Sustainability and Governance.

Cautionary Statement

This announcement contains 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 various factors may cause actual results or expectations to differ materially from the results expressed or implied in the forward-looking statements.

These forward-looking statements are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are beyond MRC's control. This may cause actual results and developments to differ materially from those expressed or implied. These risks include but are not limited to, economic conditions, stock market fluctuations, commodity demand and price movements, access to infrastructure, timing of approvals, regulatory risks, operational risks, reliance on key personnel, Ore Reserve and Mineral Resource estimates, native title, foreign currency fluctuations, exploration risks, mining development, construction, and commissioning risk.

Forward-looking statements in this announcement apply only at the date of issue and are subject to any continuing obligations under applicable law or regulations, MRC does not undertake to publicly update or revise any of the forward-looking statements in this announcement or to advise of any change in events, conditions, or circumstances on which any such statement is based. Readers are cautioned not to place undue reliance on any forward-looking statements contained in this announcement.

⁶ Refer ASX Announcement entitled '[MRC Unveils Five Year Strategic Plan 2022-2026](#)', dated 29 April 2022.