

23 March 2021

LAKE GILES FEASIBILITY STUDY UPDATE: Macarthur bolsters owners' team with world-class technical appointments

Macarthur Minerals Limited (TSX-V: MMS) (ASX: MIO) (OTCQB: MMSDF) (the "Company" or "Macarthur") is pleased to announce that it has appointed two leading experts to its owners' team, to enhance the delivery of the Feasibility Study for its high-grade magnetite Lake Giles Iron Project in Western Australia.

Highlights of Appointments

- **Mineral Processing Engineer - Dr Richard Peck:** Highly regarded Mineral Processing Engineer, Dr Richard Peck appointed to provide technical minerals processing support for Macarthur's owners' team.
- **Mining Engineer – Mr Bernard Holtshousen:** Globally recognized and experienced Mining Engineer and corporate executive, Mr Bernard Holtshousen appointed to provide technical and practical support to optimise the Company's mining and development approach at Lake Giles.
- Appointments will provide enhanced rigour to the study process and to ensure that the Feasibility Study is delivered within expected timeframes.

- **Mineral Processing Engineer - Dr Richard Peck:** Dr Peck is a senior mineral processing engineer with over 30 year's international consulting experience in the operation, design and commissioning of mineral processing plants (including processing plants for magnetite iron ore). Dr Peck has extensive senior management experience in large mining consultancies and has worked on a variety of mining operations around the globe. He has worked as a technical consultant for major international mining companies with groups such as Fluor Daniel, ProMet Engineers, and his own consultancy R & D Peck Consultancy PL. Dr Peck's experience in advising on magnetite processing plant designs includes the proposed Zanaga Project in the Congo, Onesteel's magnetite processing plant in Whyalla in South Australia, the detailed design for the 8 million tonne per annum Karara magnetite plant in Western Australia, and aspects of the Roy Hill Project (also in Western Australia). Dr Peck is a highly versatile mineral processing engineer, who will bring significant in-house technical expertise to the Company. Dr Peck holds a Bachelor of Science in Mineral Processing from Leeds University (UK) 1977, and a PhD also from Leeds University (awarded in 1981). He has been extensively published in a range of international mining publications over the last 40 years and is a member of the Australasian Institute of Mining and Metallurgy.

the green iron ore company

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- **Mining Engineer – Mr Bernard Holtshousen:** Mr Holtshousen is a highly experienced professional mining engineer with an enviable international career history. He has served on the board of directors of many public listed and unlisted mining companies as a Director, Managing Director and Chairman in companies based in Australia, South Africa, USA, Venezuela, Botswana, Namibia and Chile. Mr Holtshousen has previously held the position of General Manager for Macarthur's Lake Giles Iron Project and therefore brings a wealth of historical knowledge of the Lake Giles Iron Project that will be invaluable for the Company over this next phase of its intention to transition to production. He has also held senior positions at Board level and in management at Sigma Minerals Limited, Equatorial Mining Limited, MIM Holdings Limited, Gencor Limited (where he was Senior Manager Strategy during a period which culminated in the acquisition of Billiton and finally BHP) and at Rand London Corporation Limited (where he was Executive Chairman for 3 years and Managing Director for 10 years, during which period that company acquired, built and managed 13 operating mines). Mr Holtshousen holds a Bachelor of Science, Engineering (Mining) from the University of Witwatersrand in the Republic of South Africa, a Master of Science (Management) from Stanford University in California (USA) and a Management Diploma from Utah State University (USA). He is a Fellow of the South African Institute of Mining and Metallurgy and a Member of the Australasian Institute of Mining and Metallurgy.

Commenting on the new appointments, Andrew Bruton, Chief Executive Officer of Macarthur Minerals stated:

“Dr Peck and Mr Holtshousen are highly experienced in their respective fields of minerals processing and mine engineering. They bring enviable experience on a global scale to Macarthur, and the appointments are another smart step to ensure that Macarthur’s owners’ team is appropriately supported with the disciplines necessary to deliver a robust study that is capable of withstanding the rigour of technical and financial due diligence as we move through project financing.

The most important factor in assembling the Macarthur owners’ team is to ensure that it includes experienced professionals who have overseen successful mining and magnetite processing operations.

The deliberate decision to combine the expertise of Dr Peck and Mr Holtshousen is aimed at ensuring that the Macarthur owners’ team can facilitate responsible strategies and improve the efficiency of operations in the magnetite mining and processing at Lake Giles so that Management can aim to deliver the best economic value for the Company’s assets for the benefit of its shareholders.

Macarthur will continue to build a world class project delivery team that is required to successfully bring the Lake Giles Iron Project out of the ground. We welcome Richard and Bernard to the Macarthur team.”

On behalf of the Board of Directors, Mr Cameron McCall, Chairman

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Company profile

Macarthur is an iron ore development, gold and lithium exploration company that is focused on bringing to production its Western Australia iron ore projects. The Lake Giles Iron Project mineral resources include the Ularring hematite resource (approved for development) comprising Indicated resources of 54.5 million tonnes at 47.2% Fe and Inferred resources of 26 million tonnes at 45.4% Fe; and the Lake Giles magnetite resource of 53.9 million tonnes (Measured), 218.7 million tonnes (Indicated) and 997 million tonnes (Inferred). Macarthur has prominent (~721 square kilometer tenement area) gold, lithium and copper exploration interests in Pilbara region of Western Australia. In addition, Macarthur has lithium brine Claims in the emerging Railroad Valley region in Nevada, USA.

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Certain of the statements made and information contained in this press release may constitute forward-looking information and forward-looking statements (collectively, "forward-looking statements") within the meaning of applicable securities laws. All statements herein, other than statements of historical fact, that address activities, events or developments that the Company believes, expects or anticipates will or may occur in the future, including but not limited to statements regarding expected completion of the Feasibility Study; conversion of Mineral Resources to Mineral Reserves or the eventual mining of the Project, are forward-looking statements. The forward-looking statements in this press release reflect the current expectations, assumptions or beliefs of the Company based upon information currently available to the Company. Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and no assurance can be given that these expectations will prove to be correct as actual results or developments may differ materially from those projected in the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include but are not limited to: unforeseen technology changes that results in a reduction in iron or magnetite demand or substitution by other metals or materials; the discovery of new large low cost deposits of iron magnetite; the general level of global economic activity; failure to complete the FS; inability to demonstrate economic viability of Mineral Resources; and failure to obtain mining approvals. Readers are cautioned not to place undue reliance on forward-looking statements due to the inherent uncertainty thereof. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. The forward-looking statements contained in this press release are made as of the date of this press release and except as may otherwise be required pursuant to applicable laws, the Company does not assume any obligation to update or revise these forward-looking statements, whether as a result of new information, future events or otherwise.