METALLICA MINERALS LIMITED



ABN: 45 076 696 092 ASX Code: MLM

16 September 2021

CAPE FLATTERY SILICA SAND PROJECT UPDATE

Highlights

- Pre-feasibility study underway following appointment of key external consultants
- Formal process of negotiation with key Traditional Landowners planned to begin in Q4 2021
- Silica sand samples currently being assessed by ALS in Brisbane;

Metallica Minerals Limited (**Metallica**, ASX: MLM) is pleased to provide an update on the number of activities that are currently underway on its 100% owned Cape Flattery Silica Sand project and importantly, the start of a Pre-feasibility study (PFS).

Following the completion of an extensive 98-hole drilling program completed in August 2021 (see ASX release 12 August 2021: 98 Hole Drilling Program & Bathymetric Survey Study successfully completed for Cape Flattery Silica Sands Project) and the release of the Scoping Study (see ASX release 18 August 2021: Cape Flattery Silica Sand Project's Scoping Study), a team of external consultants has begun work on the preparation of a PFS.



Figure 1: Cape Flattery Silica sand project location, planned and existing infrastructure within port boundary

Metallica has brought together a very strong team of consulting firms to lead and provide input into each aspect of the PFS. The team members and their respective portfolios are:

Vendor	Portfolio
WAVE International	Lead Manager including assessment of marine engineering and transhipping
	options
Mineral Technologies	Metallurgy and mineral process design
Ausrocks	Geology and mine design
EPIC Environmental	Environmental planning and applications

Metallica Executive Chairman, Theo Psaros, said "we were very pleased with the strong level of interest from many high-quality consultants from various disciplines wanting to be involved in the PFS. We have amassed a team with significant experience. We will also be using a Hong Kong based marketing group who will provide intelligence on the Asian silica sand market and potential customers."

The PFS is expected to be completed in Q1 2022.

Assay testing

With the 98-hole drilling program completed, the assay of all samples by ALS in Brisbane is expected to be completed in October following which Metallica will be able to verify the quantity and quality and release these results accordingly.

Traditional Landowner update

The Department of Resources has issued the Section 29 Notification Native Title Act 1993 (Cth) to the various native title parties including Hopevale Congress Aboriginal Corporation, as agent for the Nguurruumungu Clan and Walmbaar Aboriginal Corporation, as agent for the Dingaal Clan. The effective date for this Notice is 8 September 2021. The formal process of negotiation with the Traditional Landowners for future mining operations is expected to begin in Q4 2021.

This announcement has been approved by the Board.

For further information, please contact:

Mr Theo Psaros Executive Chairman +61 (7) 3249 3000 Mr Scott Waddell CFO & Company Secretary +61 (7) 3249 3000

About the Cape Flattery Silica Sand (CFS) Project

Metallica's 100% owned Cape Flattery Silica Sands (CFS) project is adjacent to the world class Cape Flattery Silica Sand mining and shipping operation owned by Mitsubishi. Exploration drilling to date has now confirmed that the sand dunes within EPM 25734 contain high purity silica sands with an in-situ quality which is understood to be comparable to Mitsubishi's Cape Flattery Silica Mine.

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On 2 March 2021, the Company released an upgraded resource in the CFS Eastern Resource Area estimated and summarised in Table 1, as follows (see ASX Release: 2 March 2021 titled "38 Mt of High Purity Silica Sand Resource at Cape Flattery Silica Sands Project".

Classification	Silica Sand (Mt)	Silica Sand (Mm ³)	Density (t/m³)	SiO2 %	Al ₂ O ₃ %	Fe ₂ O ₃ %	TiO₂ %	LOI %
Indicated Resource	5.4	3.4	1.6	99.1	0.04	0.09	0.13	0.13
Inferred Resource	32.9	20.5	1.6	99.0	0.07	0.12	0.15	0.11
Total	38.3	23.9	1.6	99.0	0.06	0.12	0.15	0.12

¹ Table 1 – EASTERN RESOURCE Area Cape Flattery Silica Project

The Resource has been prepared in accordance with the JORC Code 2012 – A cut-off grade 98.5% has been defined based on the surrounding data. These results show there is good potential to produce a premium grade silica product using standard processing techniques.

On 15 June 2021 the Company announced that it had lodged a Mine Lease Application (MLA) for the project (see map below and ASX release MLA lodged for Cape Flattery Silica).



Figure 5: Cape Flattery Silica Sand project MLA area boundary and EPM

On 22 June 2021 the Company released the first metallurgy test results on samples taken from the December 2020 drilling program. The bulk sample metallurgical testing confirmed high quality silica sand product and demonstrated a low contaminant product with an attractive narrow particle size distribution can be produced at a high yield.

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The test work produced a product with 99.8% SiO₂, 170ppm Fe_2O_3 and 450ppm Al_2O_3 and further work included successful test of process to reduce Fe_2O_3 from 170ppm to 70ppm Fe_2O_3 (see ASX release: Excellent Metallurgical Test Results on Cape Flattery Silica).

Competent Person Statements

The information in this announcement that relates to the Cape Flattery Silica Sand Project - Eastern Resource Area is based on information and modeling undertaken by Mr Chris Ainslie, Geotechnical Engineer, who is a full-time employee of Ausrocks Pty Ltd and a Member of the Australasian Institute of Mining & Metallurgy. The work was supervised by Mr Carl Morandy, Mining Engineer who is Managing Director of Ausrocks Pty Ltd and a Member of the Australasian Institute of Ausrocks Pty Ltd and a Member of the Australasian Institute of Mining & Metallurgy and a Member of the Australasian Institute of Mining & Metallurgy and also by Mr Brice Mutton who is a Senior Associate Geologist for Ausrocks Pty Ltd. Mr Mutton is a Fellow of the Australasian Institute of Mining & Metallurgy and a Fellow of the Australian Institute of Geoscientists. Mr Morandy and Mr Ainslie and Mr Mutton are employed by Ausrocks Pty Ltd who have been engaged by Metallica Minerals Ltd to prepare this independent report, there is no conflict of interest between the parties. Mr Morandy, Mr Ainslie and Mr Mutton consent to the disclosure of information in the form and context in which it appears in this release/report.

The overall resource work for the Cape Flattery Silica Sand Project - Eastern Resource Area is based on the direction and supervision of Mr Mutton who has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

The technical information in this report that relates to process metallurgy is based on information reviewed by Arno Kruger (MAusIMM) and work completed by IHC Mining. Mr Kruger is a metallurgical consultant and an employee of IHC Mining. Mr Kruger has sufficient experience that is relevant to the type of processing under consideration and to the activity being undertaken to qualify as a Competent Person as defined by the JORC Code 2012. Mr Kruger consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Forward-looking statements

Forward-looking statements are based on assumptions regarding Metallica, business strategies, plans and objectives of the Company for future operations and development and the environment in which Metallica may operate.

Forward-looking statements are based on current views, expectations and beliefs as at the date they are expressed and which are subject to various risks and uncertainties. Actual results, performance or achievements of Metallica could be materially different from those expressed in, or implied by, these forwardlooking statements. The forward-looking statements contained in this presentation are not guarantees or assurances of future performance and involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of Metallica, which may cause the actual results, performance or achievements of Metallica to differ materially from those expressed or implied by the forward-looking statements. For example, the factors that are likely to affect the results of Metallica include general economic conditions in Australia and globally; ability for Metallica to funds its activities; exchange rates; production levels or rates; demand for Metallica's products, competition in the markets in which Metallica does and will operate; and the inherent regulatory risks in the businesses of Metallica. Given these uncertainties, readers are cautioned to not place undue reliance on such forward-looking statements.