



23 August 2022

Extensional exploration program commences west of the Cape Flattery Silica Project

Key highlights

- A 25-hole hand auger exploration program begins within Metallica's tenements and west of the Company's existing Cape Flattery Silica Sand Mineral Resources
- This exploration program will provide data to aid in understanding strategic options and planning
- Approval of the exploration program has been granted by Traditional Land Owners
- This exploration program is planned to be completed by the end of August 2022.

Silica sand developer, Metallica Minerals Limited (ASX: MLM) is pleased to advise an exploration program with 25 hand auger holes planned for up to 5 meters each is scheduled to start today on the 100% owned subsidiary Cape Flattery Silica Pty Ltd tenement. This program will be undertaken west of the Cape Flattery Silica project (ML100284, 100% owned by Metallica) and the program will add to the strategic options and planning for this area.

The location of the 25 auger holes are shown in the figures below. Permission to drill from the Aboriginal Corporations was approved on the basis that all drill hole locations will be on existing dune areas within the EPM. A Traditional Land Owner representative will assist in the work program.

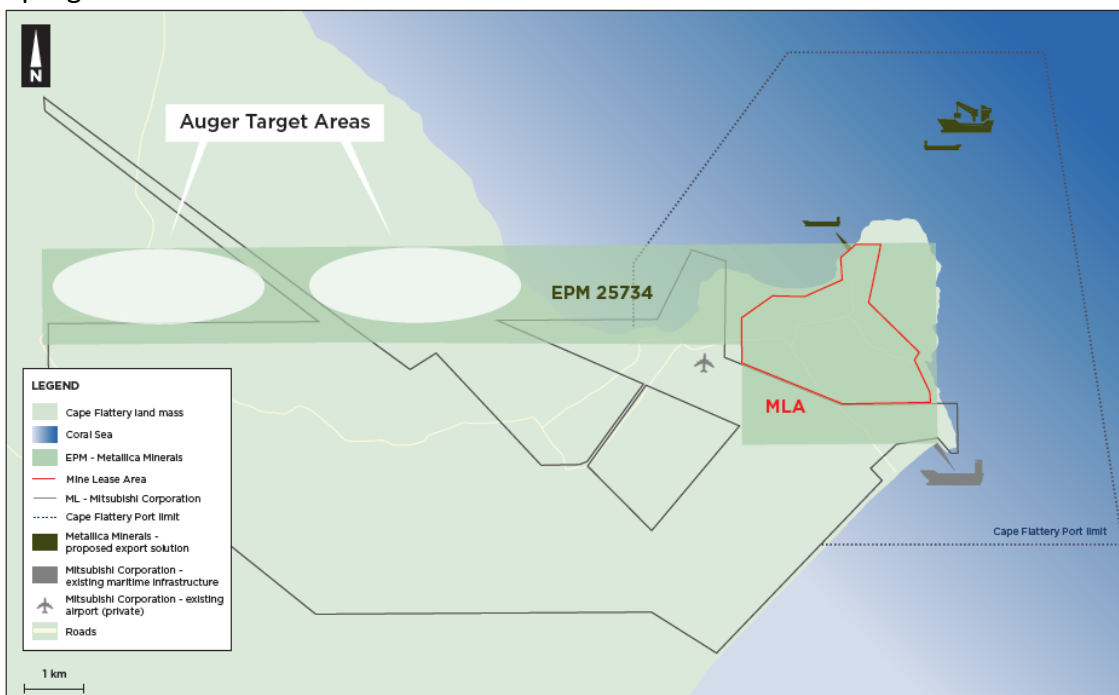


Figure 1: Metallica Minerals' CFS EPM 25734 & MLA location adjacent to the Cape Flattery Port Limit and proximity of MLA area to the planned purpose-built jetty

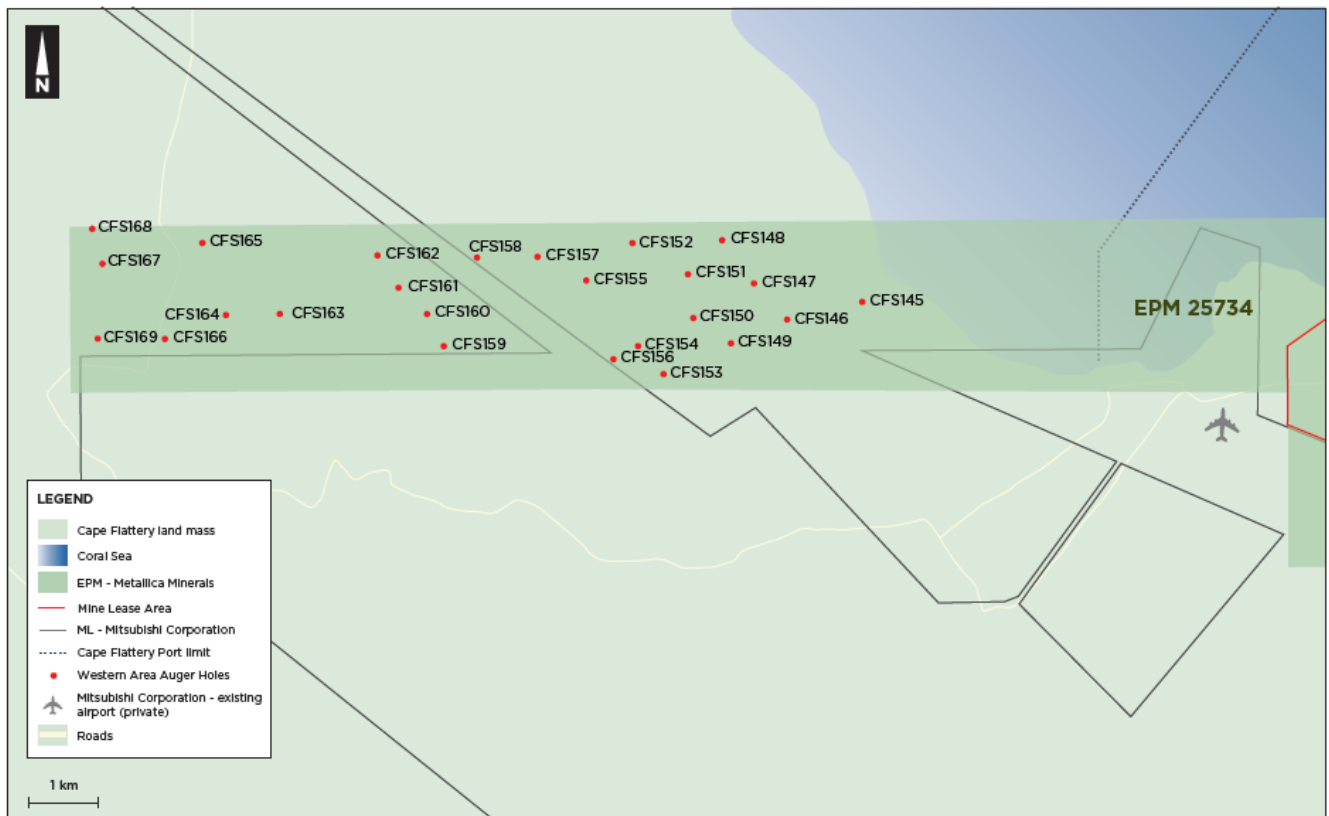


Figure 2: Planned location of 25-hole hand auger program

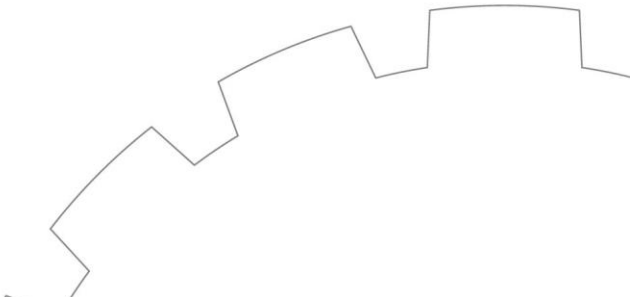
Metallica Minerals Executive Chairman, Theo Psaros said, “We are pleased to commence this hand auger program, which will not impact on the key focus for Metallica, which is the development of the Cape Flattery Silica project MLA to the east of this exploration program. We look forward to updating the market with the results of the auger program once the results are known.”



Photo 1: Traditional Land Owner, Niall Cobus and Geologist Shane Mardon on site hand augering



Photo 2 and 3: General Manager, Nicholas Villa and Traditional Land Owner, Niall Cobus hand augering.



About the Cape Flattery Silica (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. On 24 February 2022 the Company announced CFS had been granted Project of Regional Significance status by Queensland Department of Regional Development, Manufacturing and Water (see ASX Release: 24 February 2022 Cape Flattery granted Project of Regional Significance Status).

On 21 March 2022 the Company released the Pre-feasibility Study (PFS) for the CFS Project (see ASX Release 21 March 2022: "Cape Flattery Silica PFS Confirms Excellent Economics and Maiden Ore Reserve").

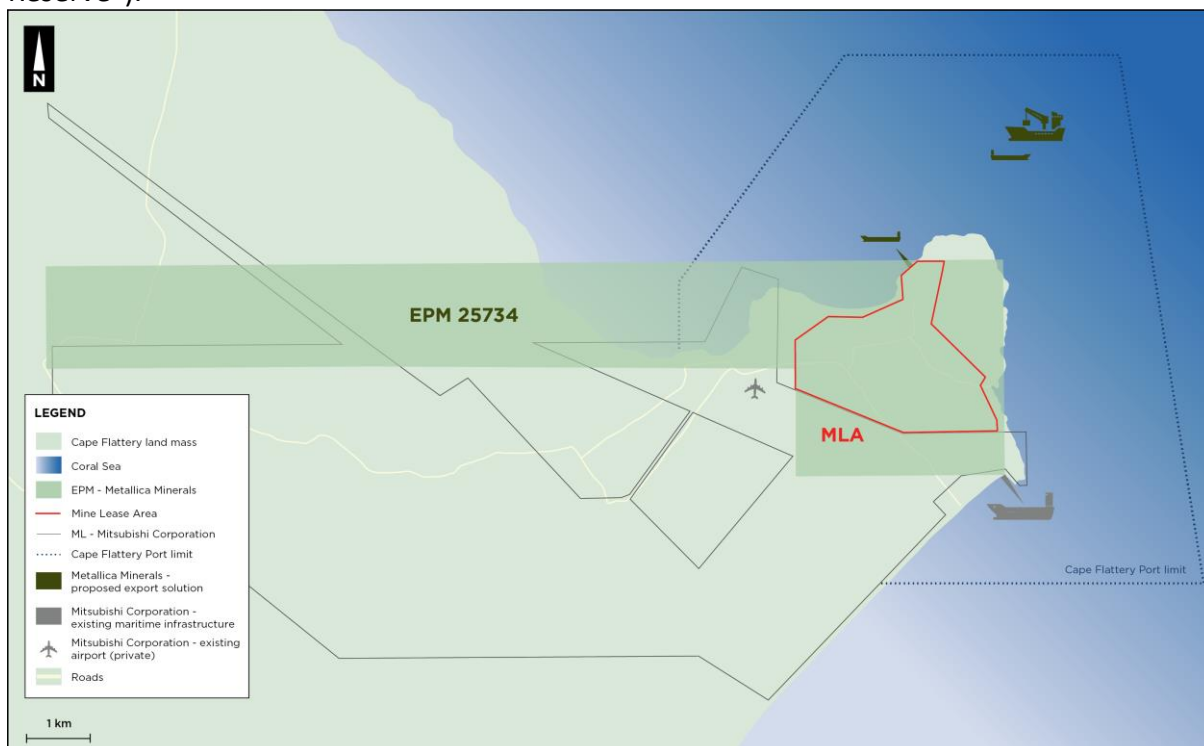


Figure 1: Metallica Minerals' CFS EPM 25734 & MLA location adjacent to the Cape Flattery Port Limit and proximity of MLA area to the planned purpose-built jetty

The key highlights of the PFS Report are as follows:

- Cape Flattery Silica Sand Project's (CFS) Pre-Feasibility Study (PFS) confirms the Project can be a long-life silica sand project producing high-quality silica sand for the booming Asia-Pacific glass manufacturing markets supplying the solar panel industry.
- The PFS returns pre-tax Net Present Value (NPV⁸) of A\$290 million (M), Internal Rate of Return (IRR) of 34.9% and life of Project cash revenue of A\$2,127M. This compares with the Updated Scoping Study (10 November 2021) which had an NPV⁸ of A\$253M.
- The Capital Cost of CFS is estimated to be \$79M (including a 15% contingency of \$10M) with a payback period from commencement of production of 3.9 years. All production is based on the Maiden Ore Reserve (refer table 2 – Ore reserves).

- The Maiden Ore Reserve of 46 million tonnes @ 99.18% SiO₂ (refer to table 2 below) is exploited over a 25-year Project life producing saleable product of 1.35Mt per annum.
- Sensitivity and scenario analysis demonstrate the Project is financially robust and can maintain a positive Net Present Value (NPV) through stress-testing of the various scenarios.
- Both the sand extraction area and the industry standard processing facility will have a small footprint and low environmental impact.
- A purpose-built jetty is planned to be constructed (subject to Development Approval (DA)) to allow barge loading and transhipping operations. This infrastructure, importantly, is located within the Port Limit of Cape Flattery.
- Development of CFS will deliver employment, apprenticeship and training opportunities to the Hope Vale and Cooktown communities, particularly the local indigenous communities.
- CFS will contribute to delivery of the Queensland Government’s commitment to the development of new economy minerals in Far North Queensland.
- The results from the PFS demonstrate a strong financial case and the Company’s Board has approved commencement of a Definitive Feasibility Study (DFS) in Q2 2022.

The Company released an upgrade of the Mineral Resources for the CFS Project (see ASX Release 7 April 2022: “Significant Increase in Measured and Indicated Resources at Cape Flattery Silica Project”)

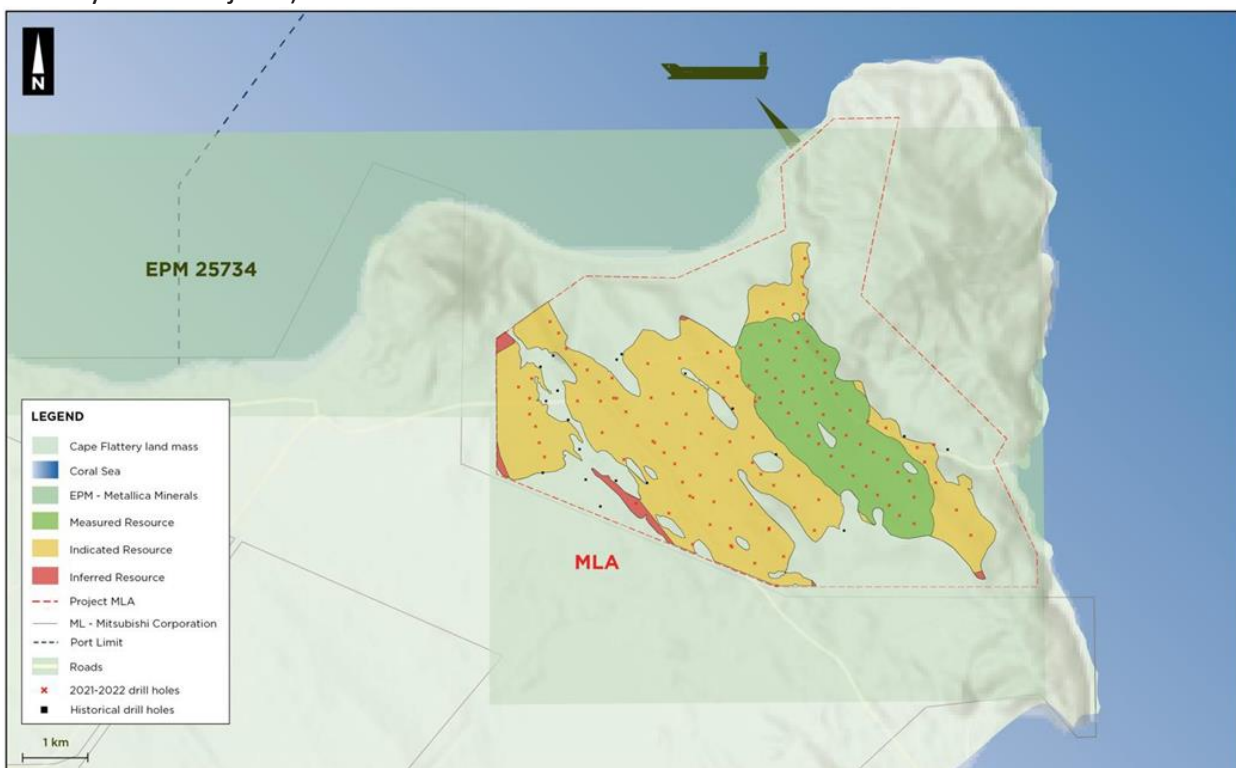


Figure 2: Cape Flattery Silica Project – Distribution of the various Resource categories (see Resource table on page 4 below)

Table 1 –Cape Flattery Silica Project Mineral Resources

Resource Classification	Silica Sand (Mt)	SiO ₂ %	Fe ₂ O ₃ %	Al ₂ O ₃ %	TiO ₂ %	LOI %	Silica Sand (Mm ³)	Density (t/m ³)
Measured	16.7	99.26	0.10	0.08	0.13	0.17	10.4	1.6
Indicated	35.2	99.14	0.13	0.13	0.14	0.19	22.0	1.6
Inferred	0.3	99.06	0.14	0.16	0.12	0.23	0.20	1.6
Total	52.2	99.18	0.12	0.11	0.14	0.18	32.60	1.6

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 potential to produce a premium grade silica product using standard processing techniques.

Table 2 –Cape Flattery Silica Project Reserve

Ore Reserve Category	Silica Sand (Mt)	SiO ₂ %	Fe ₂ O ₃ %	Al ₂ O ₃ %	TiO ₂ %	LOI %	Silica Sand (Mm ³)	Waste Mt
Probable Reserve	46	99.18	0.12	0.11	0.14	0.19	28.76	2.6

This announcement has been approved in accordance with the Company's published continuous disclosure policy and has been approved by the Board.

For further information, please contact:

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Competent Person Statement Cape Flattery Silica Sand Resource

The information in this report that relates to the Cape Flattery Silica Project – Eastern Resource Area is based on information and modelling carried out by Chris Ainslie, Project 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 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 Mutton consent to the disclosure of information in the form and context in which it appears in this report.

The overall resource work for the Cape Flattery Silica 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”.

Cape Flattery Silica Sand Exploration Results

The information in this report that relates to the Exploration Sampling and Exploration Results is based on information compiled by Mr Patrick Smith, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy.

Mr Smith is the owner and sole Director of PSGS Pty Ltd and is contracted to Metallica Minerals as their Exploration Manager. Mr Smith confirms there is no potential for a conflict of interest in acting as the Competent Person. Mr Smith 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. Mr Smith consents to the inclusion of this information in the form and context in which it appears in this release/report.

Reference to Previous Releases

PFS and reserve figures of this announcement have been previously reported to the market in the report dated 21 March 2022. Pursuant to Listing Rule 5.19.2, the Company confirms that all the material assumptions underpinning the production target and forecast financial information derived from the production target in the original market announcement continue to apply and have not materially changed.

Drilling, resource estimates and metallurgical results referred to in this announcement have been previously announced to the market in reports dated; 7 April 2022, 12 August 2021, 15 June 2021, 22 June 2021, and 2 March 2021 and are available to view and download from the Company’s website:

[ASX Announcements — Metallica Minerals Limited](#)

Pursuant to Listing Rule 5.23.2, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. In relation to the referenced estimates of mineral resources and ore reserves, the Company confirms that all material assumptions and technical parameters underpinning the estimates in the referenced market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

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 forward-looking 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 fund 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.