

Metallica Minerals Ltd (ASX: MLM)

A resource development company – our focus is Silica Sand

Annual General Meeting – 18 November 2020



Company Highlights



Cash Balance
\$2.7m as at
30 September 2020¹



Shares on Issue
324,047,408



\$7.0m Market Cap
based on share price
of 2.2c/share



Board & management
team restructured²



Further exploration
planned at Cape
Flattery Silica Sand
Project



Positive relationship
building with TLOs at
Cape Flattery Silica Sand
project



Sale of HMS project &
plant completed⁴



Sale of 100% owned
subsidiary that held
50% share in Weipa
bauxite project⁵

Projects Overview

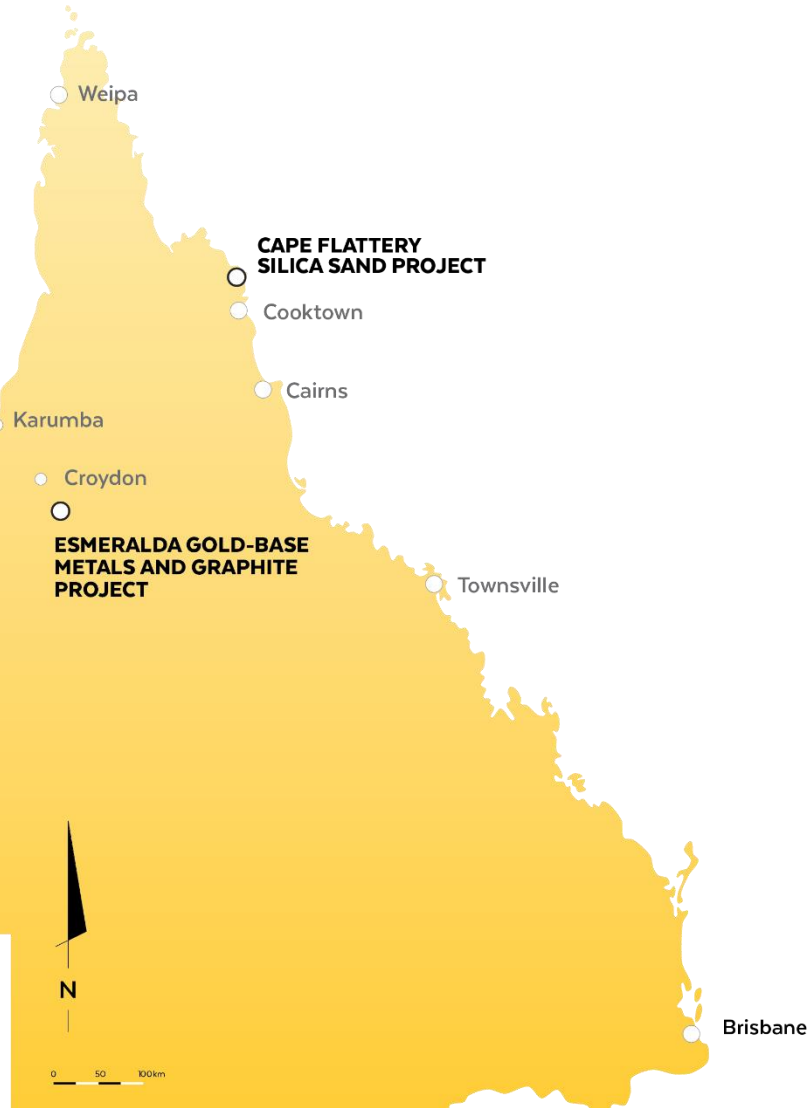


Cape Flattery Silica Sands Project (100% owned)

Esmeralda Gold and Base Metals Project (100% owned)

Metallica is focused on resource development.

The Company remains committed to advancing its existing project portfolio toward development and continuing to identify and pursue opportunities.



Metallica Minerals – focused on becoming a mining company

The Board has formulated a strategy to deliver these outcomes on or before 2025:

- MLM is exporting silica sand to the market from Cape Flattery
- A second operation is delivering product to the market
- A pipeline of other projects and the infrastructure to identify these projects is well established

What needs to be achieved before June 2021 to work towards delivery of the strategy:

1. Silica Sands – resource defined, key agreements for mining progressing with TLOs, Environmental studies underway, Mining Lease application lodged, offtake partners identified
2. Additional Project – identified and acquired/drilling underway
3. HR – key appointments made



Cape Flattery Silica Sands Project (100%)



- Exploration target* of 20-100Mt³ across 3 identified areas
- Located adjacent to Mitsubishi's Cape Flattery mine, the world's single largest source of silica sand that has been producing since 1967
- Further exploration to begin in November 2020
- Maiden resource can be achieved based on augur work
- Maiden sampling programs completed March 2018 and October 2019
- Sampling identified high purity silica sands – greater than 99% silica sand (SiO₂)



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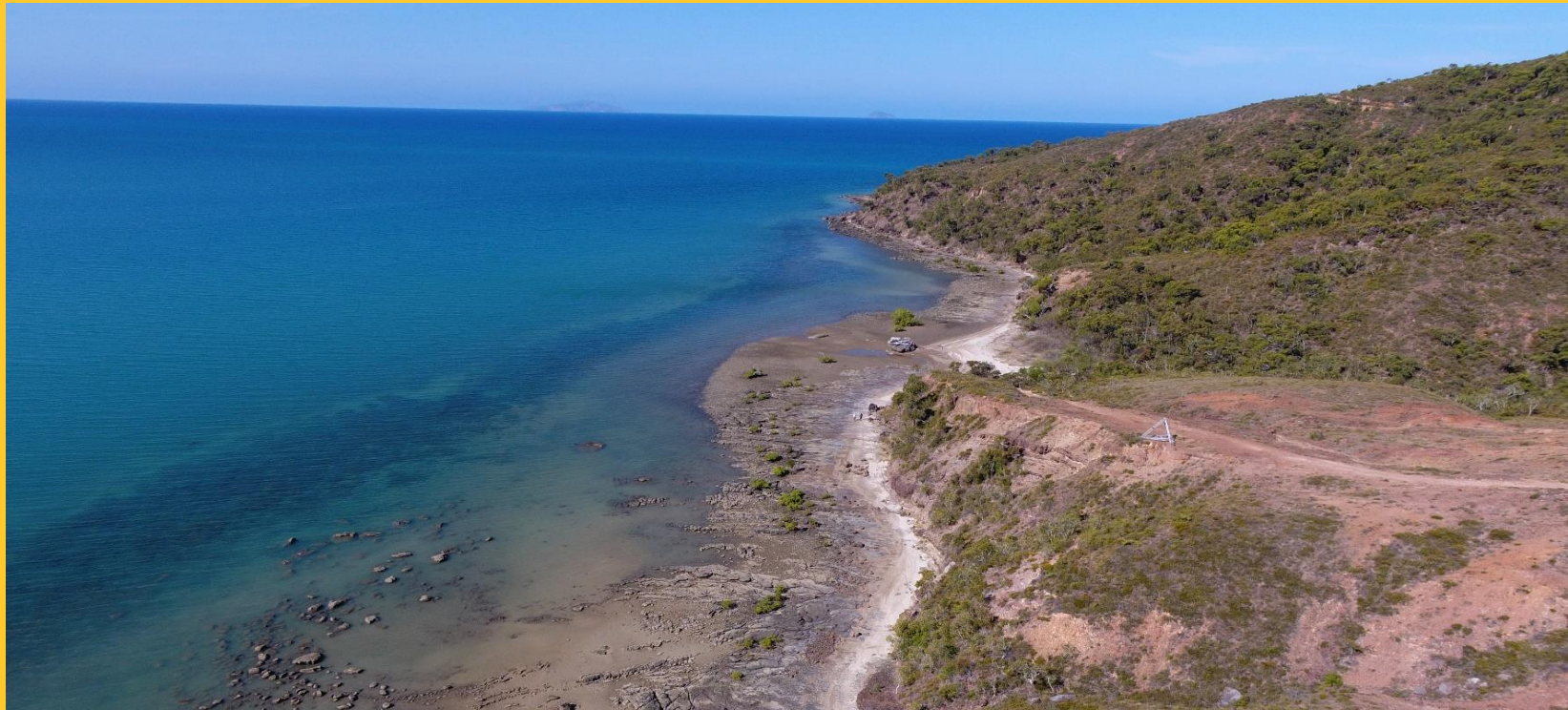
* The potential quality and grade of the Cape Flattery Silica Sand deposits are conceptual in nature. There is insufficient information at this time to devise a mineral resource and there is no certainty that further exploration will result in the determination of a mineral resource in these areas.

Cape Flattery Silica Sands Project (100%)



- **Next steps:**

- Resource to be defined
- Environmental studies and Mining lease application processes to begin
- Further investigation of infrastructure options
- TLO agreements to be executed



*Cape Flattery headland –
potential jetty and barge
loading area*

Silica Sand is in demand – Globally



FINANCIAL REVIEW

Why sand shortage is a big problem

The Lex Column

Aug 9, 2020 – 8.11pm

Bloomberg

Glass Shortage Threatens Solar Panels Needed for Climate Fix

Bloomberg News · 6 days ago



(Bloomberg) -- The world's biggest solar power company says a shortage of glass is raising costs and delaying production of new panels, throwing a wrench into China's plans to accelerate its shift to clean power.

Green

Glass Shortage Threatens Solar Panels Needed for Climate Fix

Bloomberg News

5 November 2020, 14:46 GMT+10 Updated on 6 November 2020, 12:00 GMT+10

- ▶ PV glass output seen 20%-30% short of demand next year
- ▶ Price have risen 71% since July, hurting solar power economics

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Australia can now join the silica sands race thanks to a global supply crisis

Mining

June 7, 2019 | Angela East

Up until now Australia hasn't been a contender in the silica sands industry, but the tightening supply crunch has made an opening for potential players.

While silica sand is the most abundant mineral on the planet, it is still a finite resource. It's also – apparently – the most used commodity after air and water.

Most supply is used to make concrete for construction, but it is also used to make glass for buildings, solar panels and electronics like mobile phones and TVs, as well as to make car parts.



Silica Sand demand – growing stronger and stronger

- According to industry research firm IMARC Group, high-purity silica sands are becoming more sought after, with the global market growing at a compound annual growth rate (CAGR) of around 6% between 2010 and 2017. In 2017, a total of 188 Mt of silica sand was produced globally and in 2019 the size of the market was US\$8 Billion*.
- **IMARC also estimated the global silica sand market could grow from US\$8 billion to US\$20 billion in 2024*.**
- Demand will be driven by the construction market, rising automotive production and sales, mounting per capita income, and technological advancements. Besides this, emerging trends such as increasing usage of hybrid guide plate, solar control glazing for automotive and building glasses, lightweight glazing glass, and advanced nanotechnology in flat glass are also contributing towards the growth of the glass industry, consequently, boosting the demand for silica sand*.
- **Post COVID many countries will embark on infrastructure projects to stimulate their economies. This will also increase the demand for silica sand.**
- Primary Uses of Silica Sands; Manufacturing glass (36%), Foundry use (33%), Hydraulic Fracturing (16%), Filtration (7%) and Abrasives and other uses (8%).



* <https://www.imarcgroup.com/silica-sand-manufacturing-plant>

Silica Sand peer comparisons

as at 17 November 2020



Company Name	ASX Code	Market Cap	Shares on Issue	JORC Resource
Metallica Minerals	MLM	\$7M	324M	Target > 20mt-100mt*
Diatreme Resources <small>Refer to DRX Presentation dated 11 November 2020</small>	DRX	\$42M	2,319M	47.5Mt @ 99% silica oxide Measured 31mt/Indicated 6mt/Inferred 10.5mt
VRX Silica <small>Refer to VRX Presentation dated 25 August 2020</small>	VRX	\$91M	445M	1,056 Mt @ 99.6% to 99.9% silica oxide Inferred & Indicated inc 261mt Probable Ore Reserve
Perpetual Resources <small>Refer to PEC presentation August 2020</small>	PEC	\$20M	399m	111.3Mt @ 98.6% silica oxide

Planned drilling will be designed to deliver a resource that is compliant with JORC and will position Metallica favourably compared to peer companies

Metallica Minerals – the search for an additional project

Criteria:

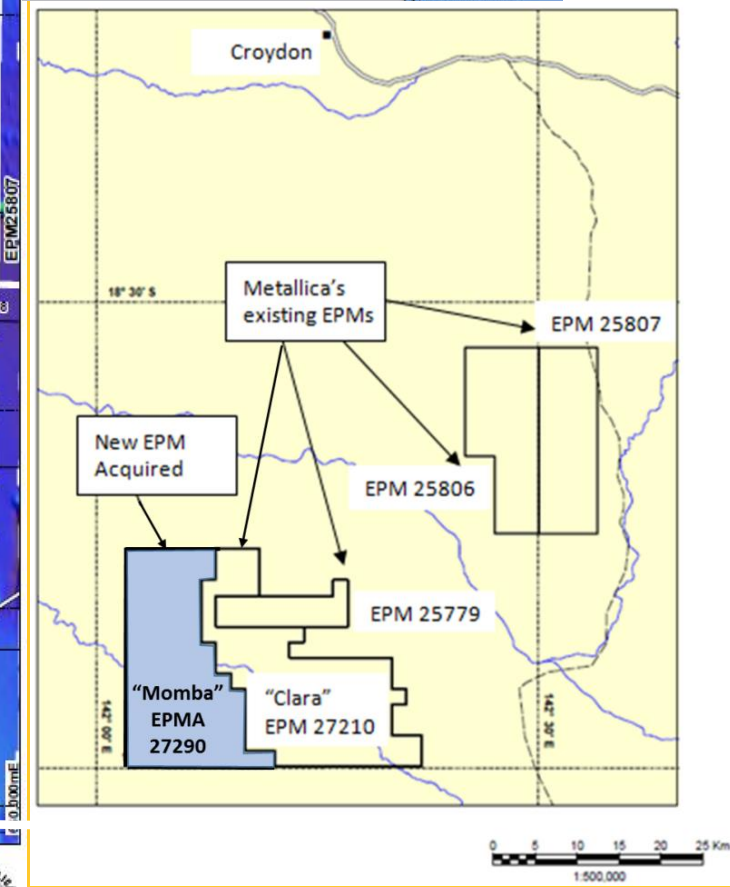
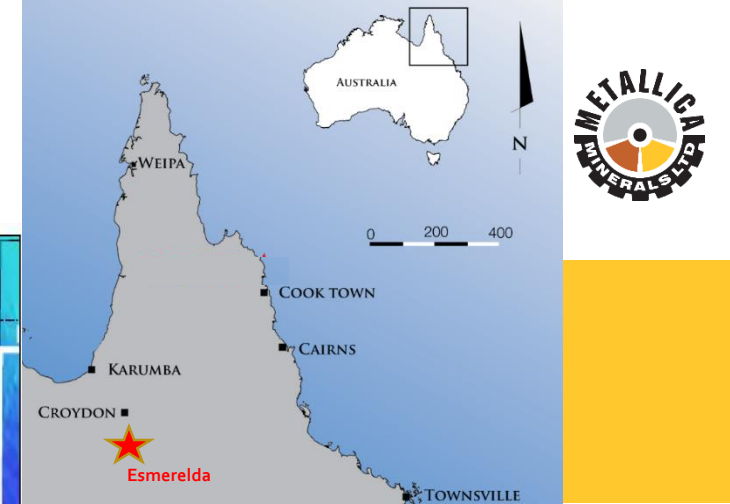
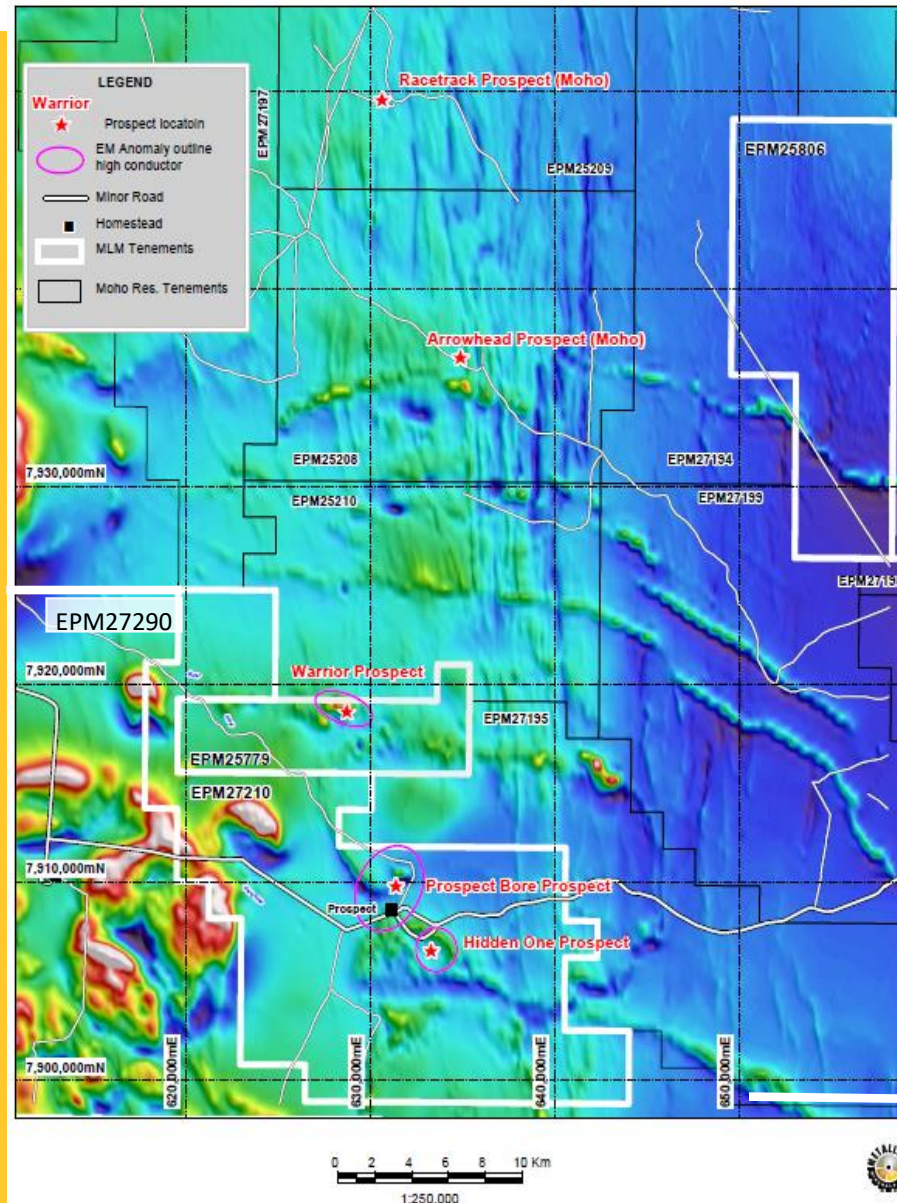
1. Production – within a three to four year period;
2. If production not achievable in that timeframe the commodity must be one that can attract capital
3. The commodity must have a sound business case
4. Our preference is gold or gold/copper
5. A number of projects are currently being considered but are at a very early stage

Importantly, MLM will not close a deal that is not economically sound



Esmeralda Project – 100% Gold and Base Metals

- Gold-Copper granite-hosted opportunity 80km south of the Croydon Gold Fields
- Project consists of 3 EPMs
- Planning underway for an Inverse Polarisation (IP) program which may assist in identifying drill targets.



Looking forward



- Continue the exploration and development program at Cape Flattery Silica Sands Project
- Continue to identify and evaluate additional project investment opportunities
- Deliver on the 2021 milestones that launch the delivery of our 2025 strategic goals



Footnotes



1. See ASX Release 30 October 2020 "Quarterly Report for period ending 30 September 2020"
2. See ASX Release 21 May 2020 "Metallica changes its executive roles and HMS update"
3. See ASX Release 18 April 2018 "High Purity Silica Sands at Cape Flattery" and 17 January 2020 "High purity Silica Sands confirmed at Cape Flattery Project"
4. See ASX Release 5 August 2020 "\$300,000 received from sale of MLM interest in HMS Plant and Tenements"
5. See ASX Release 3 November 2020 "Metallica sells shares in Weipa Bauxite project for cash and royalties"

Disclaimer & Competent Person Statement



Statements & material contained in this presentation, particularly those regarding possible or assumed future performance, production levels or rates, metal prices, metal markets, resources or potential growth of Metallica Minerals Ltd, industry growth or other trend projections are, or may be, Forward Looking Statements. Such statements relate to future events & expectations as such, involve known & unknown risks & uncertainties.

The Esmeralda Graphite and the Cape Flattery Silica Sands Projects are at the exploration, advanced evaluation & feasibility stage & although reasonable care has been taken to ensure that the facts stated in this presentation are accurate & or that the opinions expressed are fair & reasonable, no reliance can be placed for any purpose whatsoever on the information contained in this document or on its completeness.

Actual results & developments of projects and market development may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors.

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This material is used for a company summary presentation only, for more detailed information the reviewer should seek company information as provided in Metallica's ASX releases, Annual & Quarterly Reports.

Forward-looking statements are based on assumptions regarding Metallica Minerals Limited ("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.

Competent Person Statement

Cape Flattery Silica Sands

The information in this report that relates to the Exploration Results and Exploration Targets was undertaken by Mr Neil Mackenzie-Forbes, who is a Member of the Australian Institute of Geoscientist and is a Consulting Geologist employed by Sebrof Projects Pty Ltd. Mr Neil Mackenzie-Forbes has in excess of 20 years mining and exploration experience in Australia with major mining and junior exploration companies. Mr Mackenzie-Forbes 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 Neil Mackenzie-Forbes consents to the inclusion of this information in the form and context in which it appears in this release/report.

Exploration Target

The potential quality and grade of the Cape Flattery Silica Sand deposits are conceptual in nature. There is insufficient information at this time to define a mineral resource and there is no certainty that further exploration will result in the determination of a mineral resource in these areas.