

**Metallica Minerals Ltd (ASX: MLM)**

*A Resource Development Company*



*Investor Presentation – Explorers Conference Perth*



# Company Highlights



Exploration program  
completed at Cape  
Flattery Silica Sand  
Project <sup>1</sup>



Option study  
finalised for the logistic  
options at  
Urquhart Bauxite <sup>2</sup>



Entered into a binding  
term sheet for sale of  
50% interest in  
Urquhart Point HMS  
tenements and plant <sup>3</sup>



Cash Balance  
\$2.03M as at  
31 December 2019 <sup>4</sup>

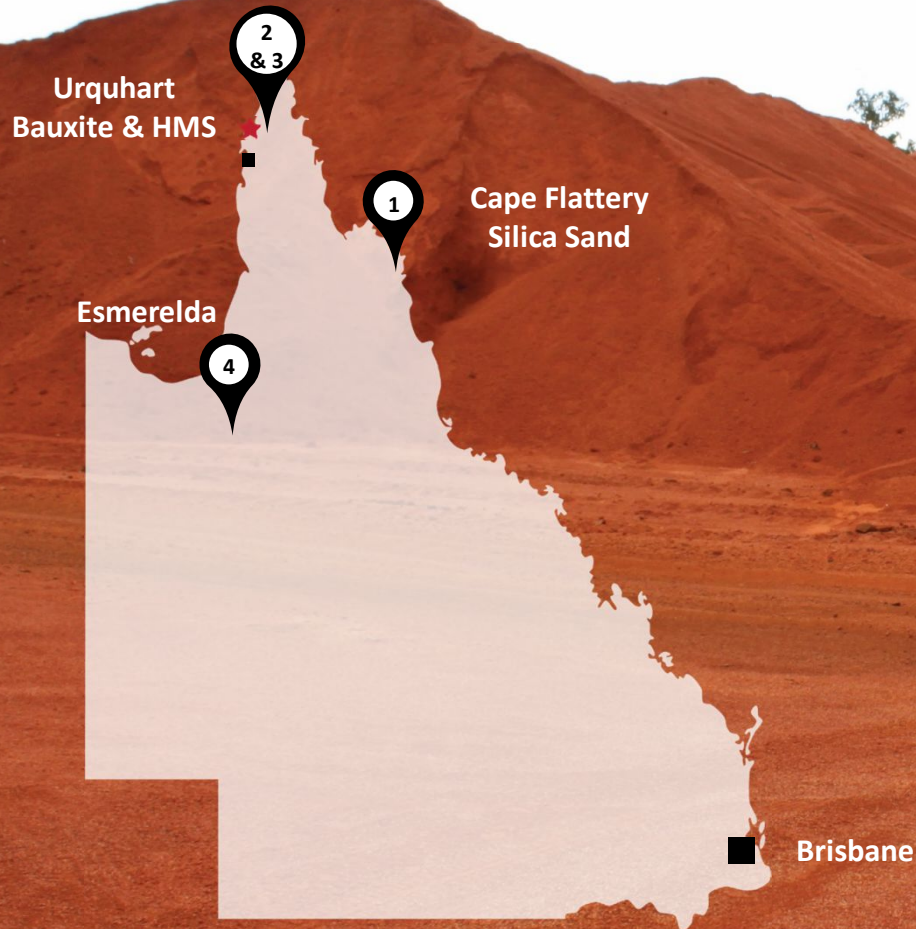


Shares on Issue  
324,047,408  
Options on Issue  
11,000,000



\$4.2M Market Cap  
based on current  
share price of  
1.3c/share

# Project Overview



**1. Cape Flattery Silica Sands Project – 100%**

*CAPE YORK JOINT VENTURE – 50%:*

**2. Urquhart Direct Shipping Bauxite Project**

**3. Urquhart Point HMS Project**

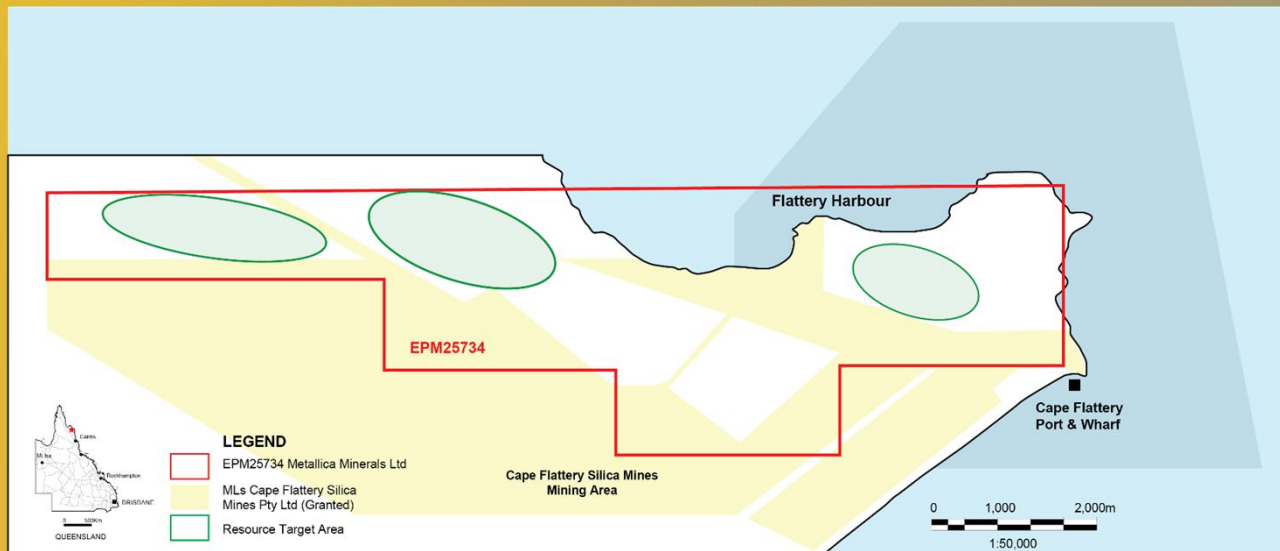
**4. Esmeralda Graphite, Gold Base Metals Project – 100%**

***Metallica is focussed on resource development***

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

# 1. Cape Flattery Silica Sands Project (Qld) – 100%

- Maiden sampling program at Cape Flattery Project completed in March 2018 with sampling identified high purity silica sands with samples of greater than 99% silica sand ( $\text{SiO}_2$ )
- Exploration target<sup>(\*)</sup> of 20-100 million tonnes<sup>1</sup> across three 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



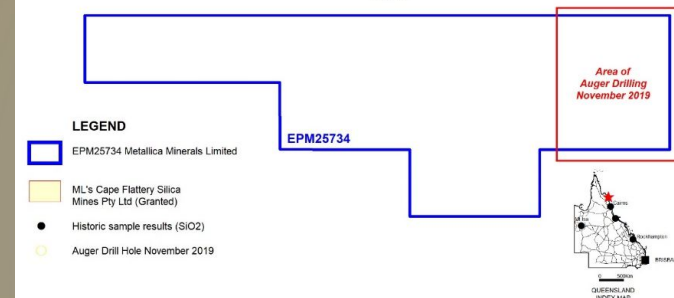


# 1. Cape Flattery Silica Sands Project (Qld) – 100%

- Further sampling program completed in October 2019 confirms presence of high purity silica sands in eight auger holes
- Next steps include
  - Plan further exploration program to establish a maiden silica sand resource
  - Conduct preliminary sized sand recovery test work
  - Progress the concept work currently underway on an infrastructure solution to load ocean-going vessels

Average of Sampling Results per Auger Hole

Hole Number	Average SiO <sub>2</sub> (%)	Average Fe <sub>2</sub> O <sub>3</sub> (%)	Average TiO <sub>2</sub> (%)	Average LOI (%)	Interval Average	Sample Interval	Comment
CF191001	98.21	0.17	0.31	0.67	0m-5.0m	1.0m	Ended in high purity silica sand
CF191002	98.41	0.13	0.25	0.54	0m-5.0m	1.0m	Ended in high purity silica sand
CF191003	98.33	0.29	0.42	0.28	0m-5.0m	1.0m	Ended in high purity silica sand
CF191004	98.67	0.17	0.29	0.22	0m-5.0m	1.0m	Ended in high purity silica sand
CF191005	99.09	0.03	0.06	0.18	0m-5.0m	1.0m	Ended in high purity silica sand
CF191006	98.91	0.07	0.09	0.29	0m-5.0m	1.0m	Ended in high purity silica sand
CF191007	96.12	0.38	0.14	1.25	0m-3.0m	1.0m	Edge of target area
CF191008	98.81	0.13	0.18	0.32	0m-5.0m	1.0m	Ended in high purity silica sand



## 2. Urquhart Bauxite Project – 50% JV

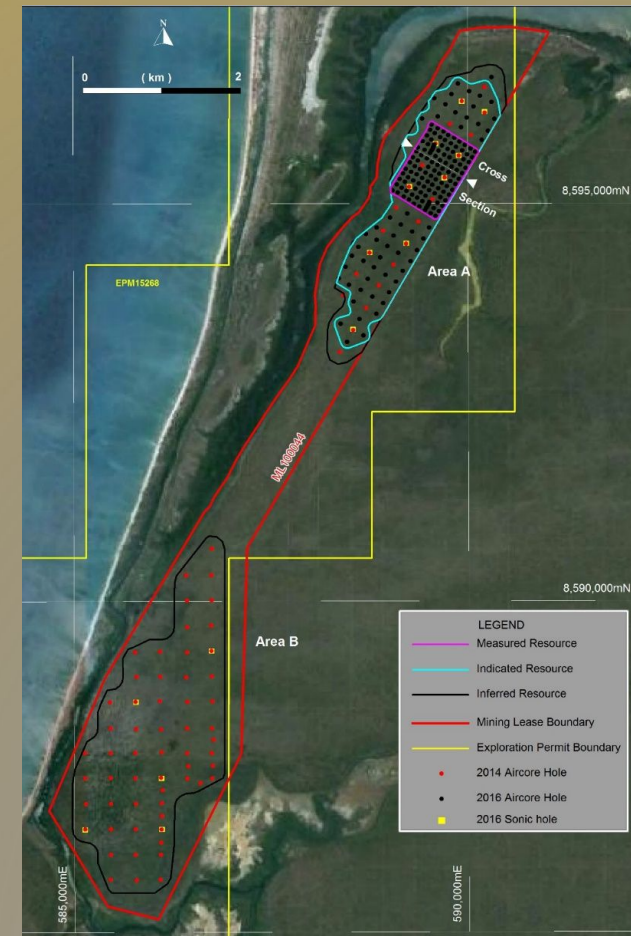
- Options study completed for the transshipping at Urquhart bauxite project
- Updated Pre-Feasibility Study due in Q1 2020 incorporating additional work in finalising the option details
- Mining Lease Granted for mine area<sup>5</sup>
- Chinese demand for bauxite is expected to grow in the coming years
- Possible funding options for the project development include Northern Australia Infrastructure Fund (NAIF), offtake partners, plus traditional debt/equity

Classification	Area	Mt	Al <sub>2</sub> O <sub>3</sub> %	SiO <sub>2</sub> %	AAI%*	RSi %**
Measured	A	3.0	54.4	11.8	43.2	5.0
Indicated	A	3.9	53.3	13.1	40.8	5.2
Inferred	A	0.3	54.2	11.3	42.0	4.7
	B	2.3	49.9	17.4	37.2	6.0
	Subtotal	2.6	50.3	16.8	37.6	5.9
<b>Total</b>		<b>9.5</b>	<b>52.8</b>	<b>13.7</b>	<b>40.7</b>	<b>5.3</b>

\*AAI = Available Alumina @150°C

\*\*RSi = Reactive Silica @ 150°C

6 The information in this table is summarised from the JORC 2012 Mineral Resource in the ASX Release dated 14 November 2016 "Significant Increase in volume and category to mineral resource for Urquhart Bauxite Project"

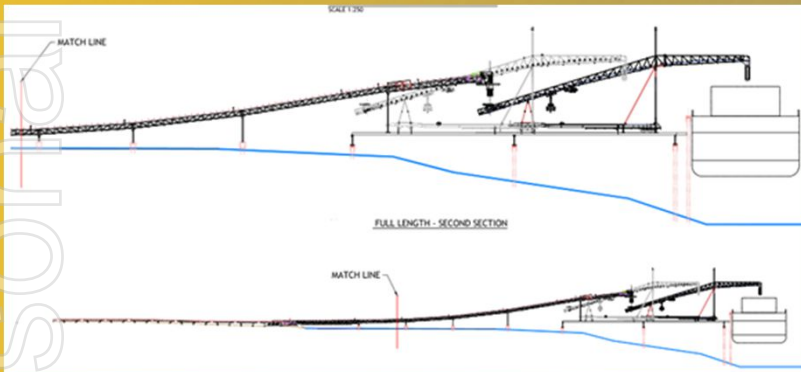




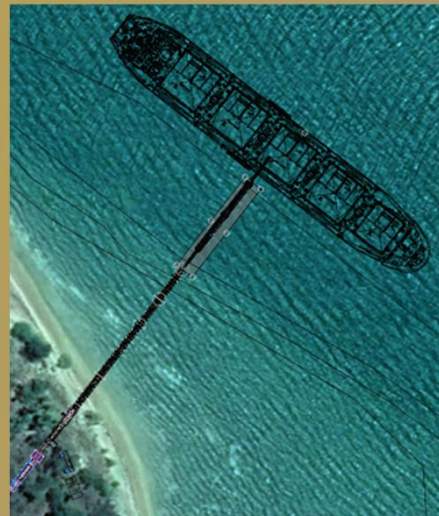
## 2. Urquhart Bauxite Project – 50% JV

### Options Study – 3 potential options identified

1. Shiploader to be constructed adjacent to the HMS ML, with a conveyor crossing over Roberts Creek from the Urquhart Bauxite ML to the HMS ML.
2. Shiploader to be constructed adjacent to the HMS ML. A 17-kilometre haul road would also be constructed from the Urquhart Bauxite resources and tenement through the HMS ML area, leading to the shiploader.
3. Barge-loading facility to be constructed, which requires a 750-metre jetty to be located adjacent to the Urquhart Bauxite ML.



Elevation view of shiploader and structure proposed for Options 1 and 2.





### 3. Urquhart Point Heavy Mineral Sands Project – 50% JV

Binding term sheet signed in December 2019 for sale of Heavy Mineral Sands Tenements and Plant

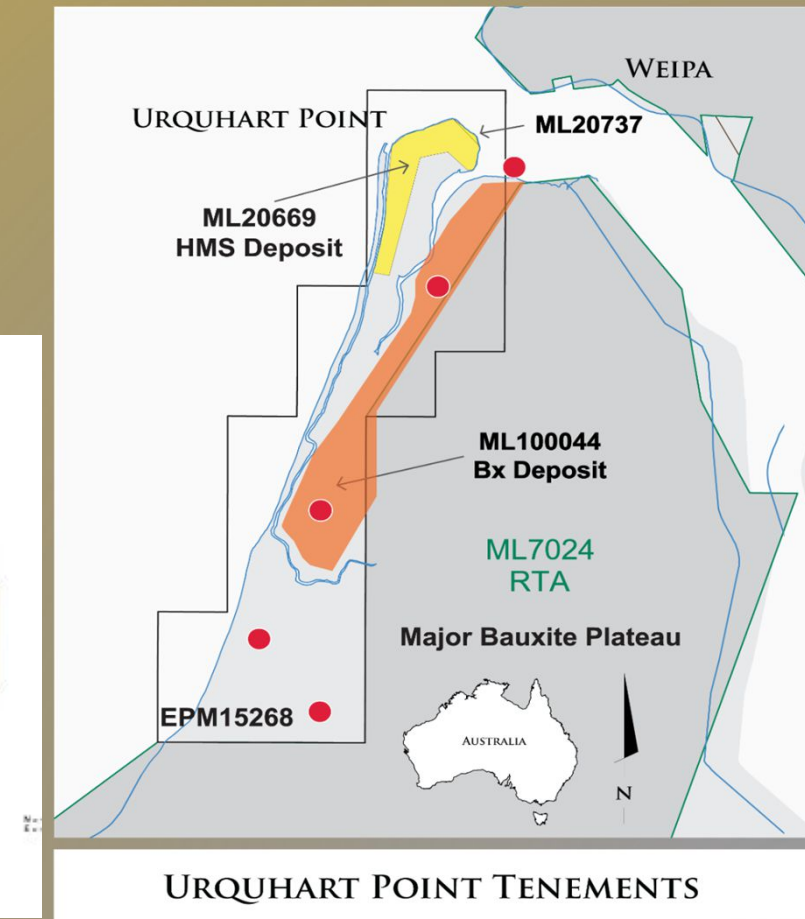
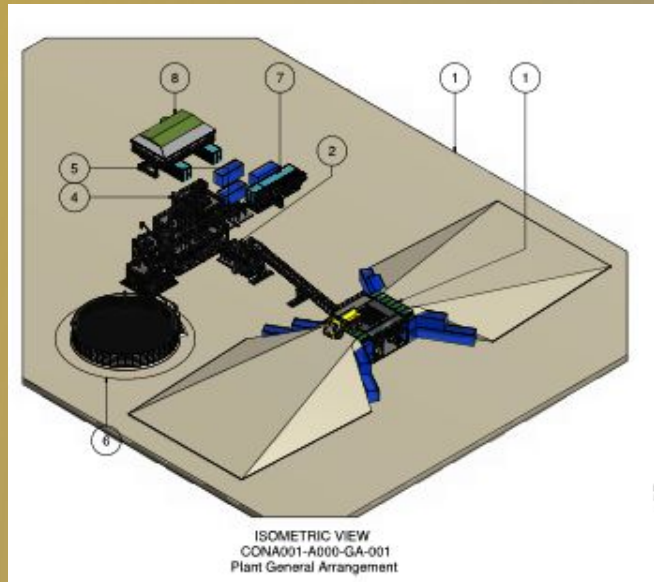
- Key transaction terms for Metallica's 50% are;
  - \$100,000 deposit on signing (received on 23 December 2019)
  - \$221,375 towards various costs and the environmental bond for the HMS tenements payable prior to transfer
  - \$900,000 payable on receipt of indicative approval from the Minister to the transfer of its 50% interest in the HMS tenement
  - \$500,000 no later than 90 days after the date the HMS tenements are transferred to the buyer.
- Conditions Precedent to the transfer of HMS tenements include:
  - Indicative approval of the Minister to transfer the 50% interest in the HMS tenements to the buyer
  - Other regulatory approvals (if required)
  - The sale of the HMS plant will only complete if the HMS tenements are acquired and all payments have been made
  - In addition, the sale will only complete if the Joint Venture Party sells its interests in the tenements and plant to the buyer
  - The buyer is a private entity therefore it is not guaranteed the sale will complete and the full purchase consideration will be received.



### 3. Urquhart Point Heavy Mineral Sands Project – 50% JV



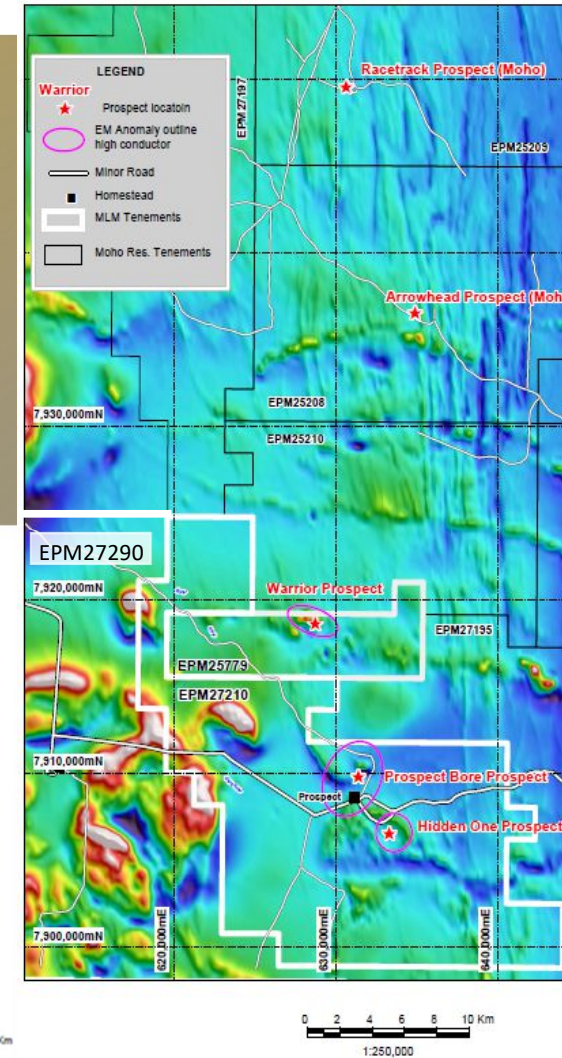
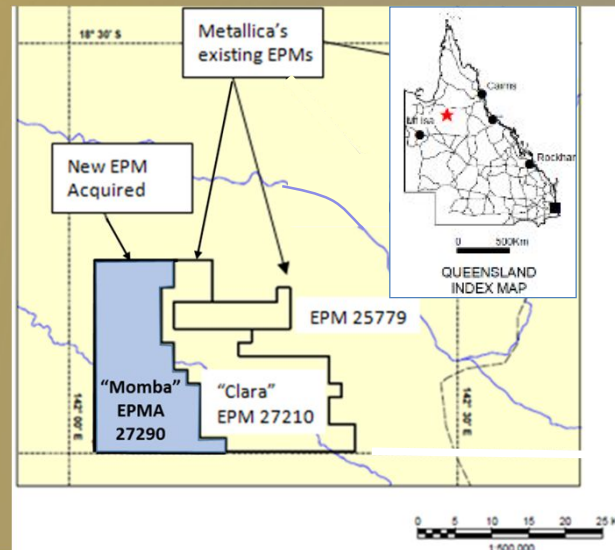
- Mining and Processing is fully permitted
- HMS processing plant designed and acquired, currently in container storage near Brisbane
- Leveraged to a rebound in heavy mineral sand prices
- Heavy mineral sands prices have continued to show steady recovery
- Simple dry mining and gravity separation processing plant



## 4. Esmeralda Project – 100% – Gold Copper and Graphite



- Gold-Copper granite-hosted opportunity 80km south of the Croydon Gold Fields
- Project consists of 3 EPM's
- Planning underway for a drilling program once all EPM's are granted to test identified priority magnetic and gravity geophysical targets





# Moving Forward



- Continue the exploration and development program at Cape Flattery Silica Sands Project
- Finalise the review of development options at Urquhart Bauxite Project
- Complete updated PFS for Urquhart Bauxite Project
- Complete the sale of the Urquhart Point HMS Tenement and Plant
- Continue to identify and evaluate new development opportunities
- Engage with shareholders and other stakeholders



# Footnotes

1. See ASX Release 18 April 2018 "High Purity Silica Sands at Cape Flattery" and ASX Release 17 January 2020 "High Purity Silica Sands confirmed at Cape Flattery Project"
2. See ASX Release 11 October 2019 "Urquhart Bauxite Development Options Update"
3. See ASX Release 20 December 2019 "Sale of HMS Assets interest - \$1.7M consideration receivable"
4. See ASX Release 21 January 2020 "Quarterly Report and Appendix 5B"
5. See ASX Release 3 January 2018 "Mining Lease Granted for Urquhart Bauxite Project"



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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 Urquhart Bauxite (Bx) and Urquhart Point Heavy Mineral Sands (HMS) Projects, 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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**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

### Urquhart Bauxite

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by John Cameron (a geologist of over 25 years experience), and a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy and is a contract consultant to Metallica Minerals Ltd. Mr Cameron has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Cameron consents to the inclusion of this information in the form and context in which it appears in this release/report.

### Cape Flattery Silica Sands

The information in this report that relates to the Exploration Results and 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.