



19 April 2021

Revised Announcement: Investor Presentation

This announcement replaces the announcement of the same name released on 11 March 2021 and the announcement titled "Presentation – Australian Energy and Minerals conference" released on 18 March 2021.

The following material changes have been made to this announcement:

1. On Slide 2, removed "First shipment of Silica Sand planned for 2023" and replaced with "Demand for Silica Sands expected to grow significantly".
2. On Page 2, removing "Cash Balance \$2.4m as at 31 December 2020, No Debt" and replaced with "Cash Balance \$1.9m as at 31 March 2021, No Debt".
3. Removed Slide 4: "Metallica Minerals (MLM) – focussed on becoming a mining company", which referred to the Board strategy for MLM to export silica before 2025 and other matters.
4. On Slide 5, removed the comment on the Exploration Target and footnote.
5. On Slide 9, added the word "Conceptual" to the heading and removed the reference to "Design and Construction" and "Potential First Production" from the Gantt chart.
6. Removed Slide 11: "Silica Sand demand – growing stronger and stronger".

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Metallica Minerals Ltd (ASX: MLM)

A Silica Sand Development Company



Investor Presentation - April 2021

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Footnotes

1. See ASX Release 3 March 2021 "Revised 38 Mt of High Purity Silica Sand Resource"
2. See ASX Release 9 February 2021 "Cape Flattery assay results confirm high purity silica sands"



Competent Person Statement

Cape Flattery Silica Sands

The information in this announcement that relates to the Cape Flattery Silica Project-Eastern Exploration Target and this Resource Estimation was based on results and data collected and compiled by Mr Neil Mackenzie-Forbes, who is a Member of the Institute of Geoscientists and is a Consulting Geologist employed by Sebrof Projects Pty Ltd and engaged by Metallica Resources Pty Ltd. Mr Mackenzie-Forbes has more than 20 years mining and exploration experience in Australia with major mining and junior exploration companies. Mr Neil Mackenzie-Forbes consents to the inclusion of this information in the form and context in which it appears in this release/report.

The information in this announcement that relates to the Cape Flattery Silica 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 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 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".

Silica Sand is in demand – Globally



WORLD POLITICS

A sand shortage? The world is running out of a crucial — but under-appreciated — commodity

PUBLISHED FRI, MAR 5 2021 1:14 AM EST
UPDATED FRI, MAR 5 2021 10:20 AM EST

Sam Meredith
@SMEREDITH19

SHARE



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.

FINANCIAL REVIEW

Why sand shortage is a big problem

The Lex Column

Aug 9, 2020 – 8.11pm



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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- IMARC estimates the global silica sand market could grow from US\$8 billion in 2019 to US\$20 billion in 2024*.
- 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, Foundry use, Hydraulic Fracturing, Filtration and Abrasives and other uses.
- * <https://www.imarcgroup.com/silica-sand-manufacturing-plant>

Company Highlights



100% owned Cape
Flattery Project is
adjacent to the world's
largest Silica Sand Mine



Demand for
Silica Sands
Expected to grow
significantly



38Mt High Purity Silica
Sands Resource¹



Cape Flattery Project is
within the current Port
boundary



Cash Balance
\$1.9m as at
31 March 2021
No Debt



Shares on Issue
324,377,408

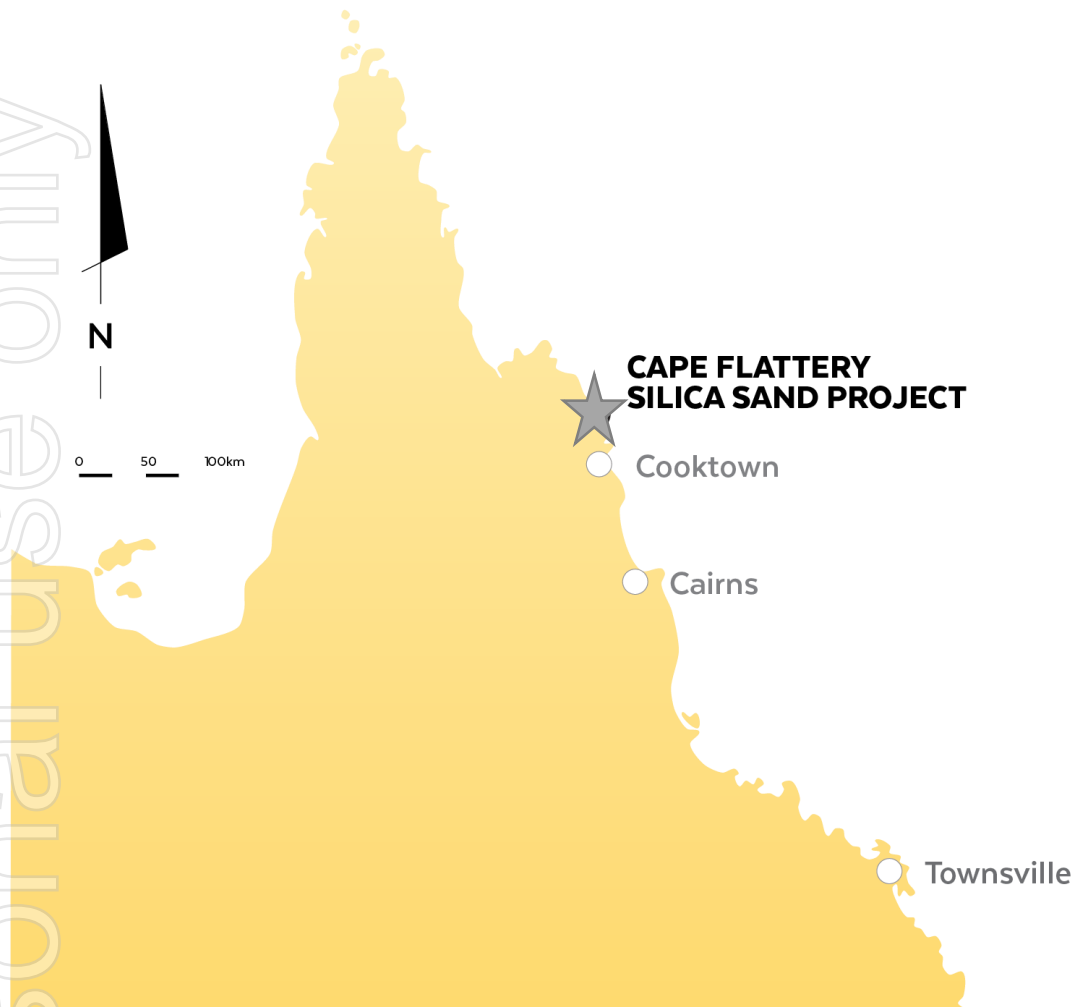
Project Overview



Cape Flattery Silica Sands Project (100% owned)

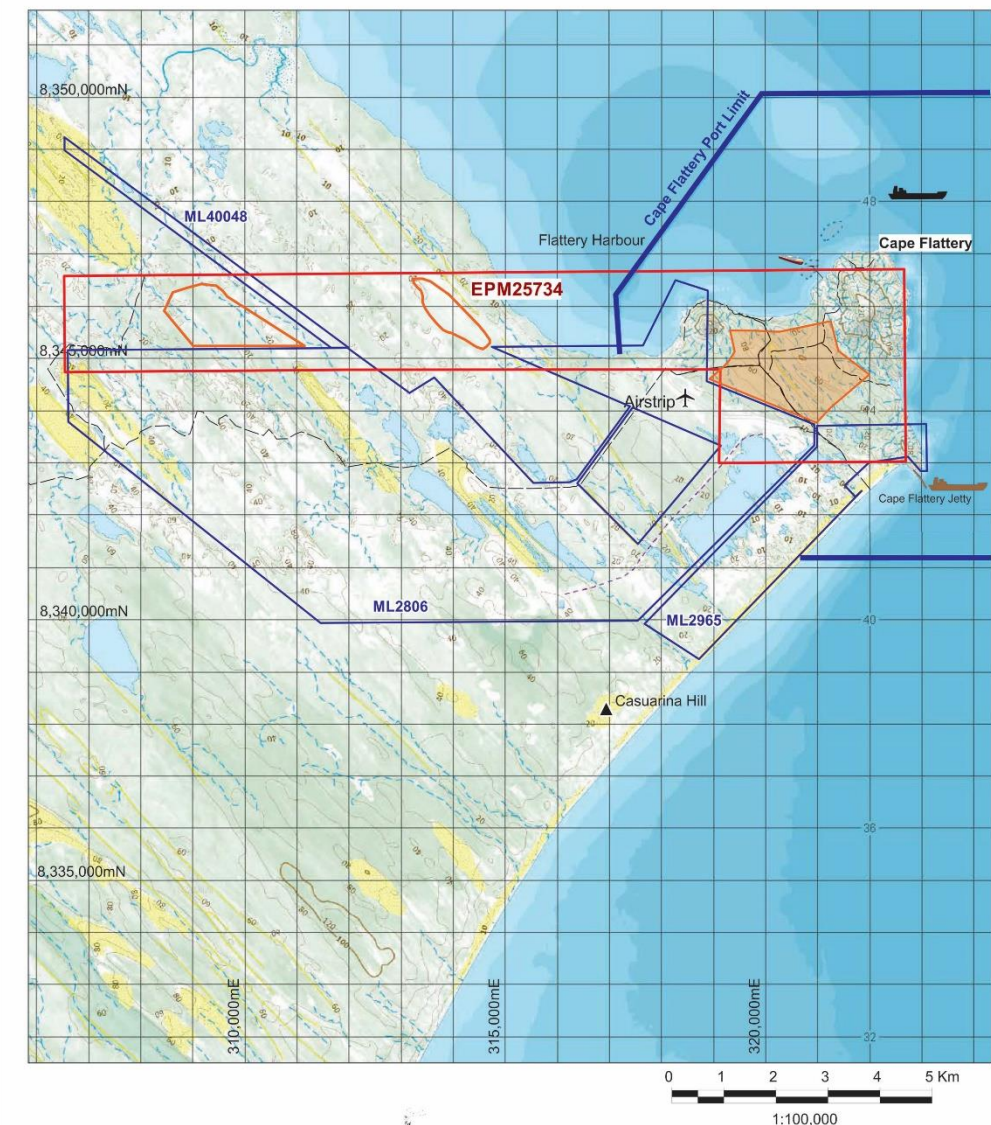
Metallica is focused on becoming a Silica Sand producer.

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

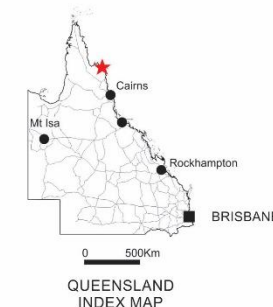


Cape Flattery Silica Sands Project

- Located adjacent to Mitsubishi's Cape Flattery mine, the world's single largest silica sand mine that has been producing since 1967
- Project is located within the Cape Flattery Port area
- Assay results confirm high purity silica sands – greater than 99% silica sand (SiO_2)₂



- LEGEND**
- EPM Granted (Cape Flattery Silica Mines Pty Ltd)
 - ML's Mitsubishi Silica Mine (Granted)
 - Exploration Areas
 - Target #1



Cape Flattery Silica Mines Pty Ltd

EPM25734

Cape Flattery

**Tenement Location
and Exploration Area**

COMPILED BY	S. Hagen	OCT 20	FIG. MGASH (Zone 55)	FIGURE
DRAFTED BY	A. Davies	OCT 20	DWG No:	
REVISED				

Cape Flattery Silica Sands Project - JORC Resource¹



- High purity silica sand resource increased to 38.3Mt @ 99.0% SiO₂
- 22 Drill hole program completed in December 2020
- Resource has scope for significant expansion with additional drilling
- In-situ SiO₂ averages 99% at an 98.5% cut-off grade

Cape Flattery Silica Sand Classification	Silica Sand (mt)	Silica Sand (Mm ³)	Density (t/m ³)	SiO ₂ %	Al ₂ O ₃ %	Fe ₂ O ₃ %	TiO ₂ %	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



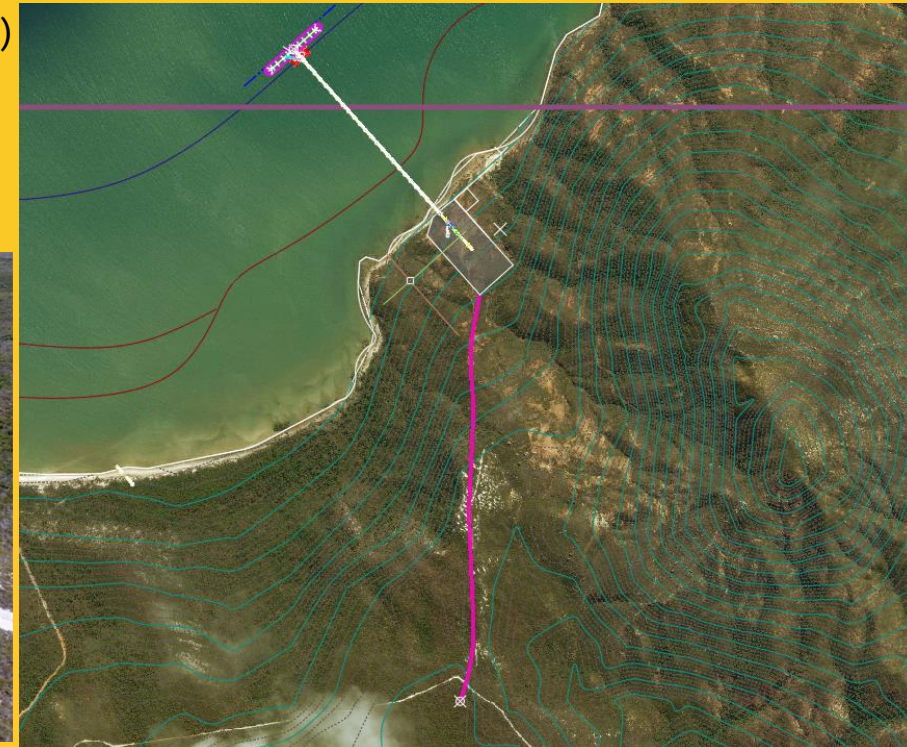
CFS Project – Eastern Resource Area – Surface Dune Boundary (green line)

"For further details, see ASX Release on 2 March 2021 titled "38 Mt of High Purity Silica Sand Resource at Cape Flattery Silica Sands Project"."

Cape Flattery Silica Sands Project - Planned Infrastructure



- A key advantage is the project being located in the designated Cape Flattery Port Area
- Queensland Government legislation does not allow for new ports being built outside the designated port areas
- Potential to truck our product less than 1km to our own jetty or a third party jetty for barging operations provides significant commercial advantages
- Close to deep water suitable for barge loading
- Ports North has identified swing basin areas for ships (up to Panamax size vessels)
- Support from Traditional Land Owners is expected for this location



Cape Flattery headland – potential jetty and barge loading area

Cape Flattery Silica Sands Project - next six months

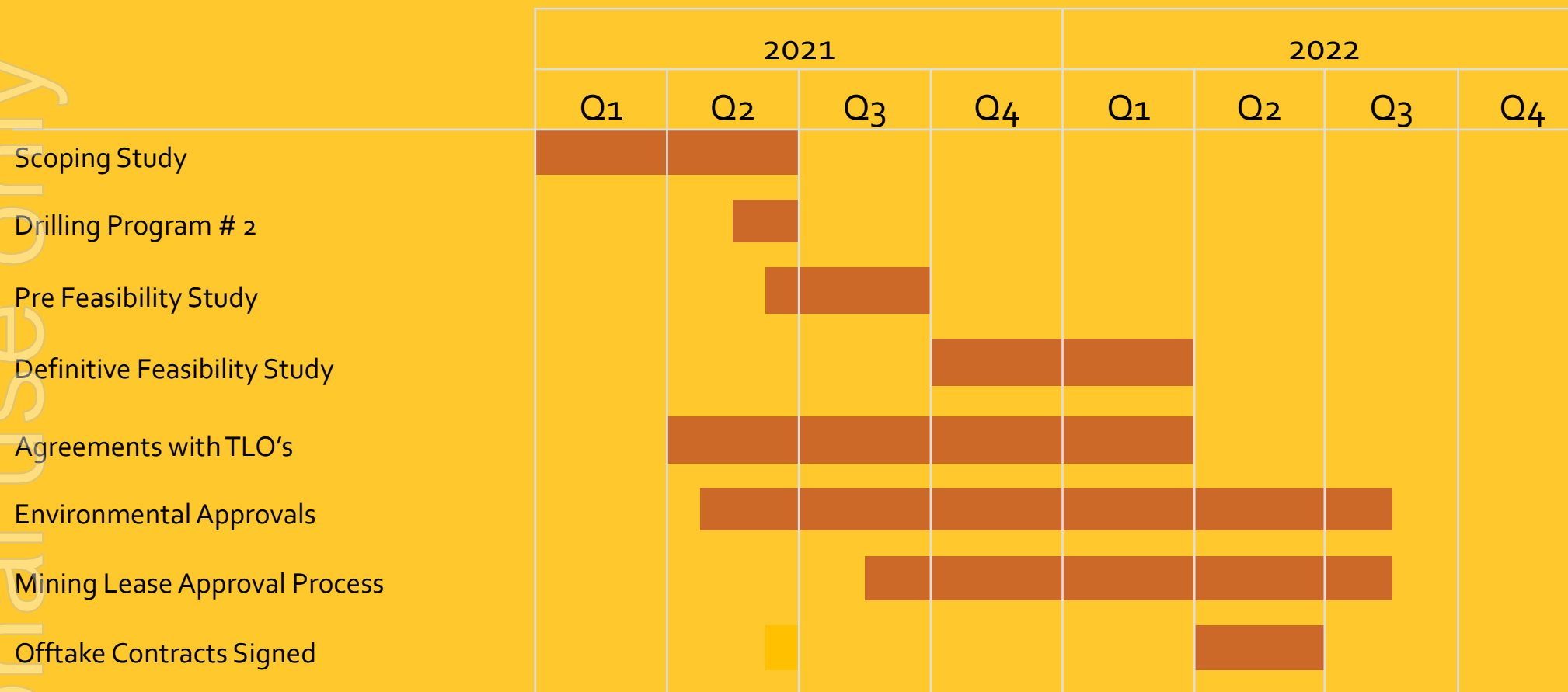


- Metallurgical testwork underway to produce premium product
- Continue Environmental studies
- Water monitoring bores installed
- Scoping Study results to be announced
- Follow up drilling program to further define the resources
- Continued community engagement

- Mining Lease Application to be submitted
- Cultural Heritage Agreements to be progressed
- Appointment of Marketing Consultant (completed)
- Preliminary discussions with Off-Take Partners
- Further investigation of infrastructure options
- Pre-Feasibility Study underway



Cape Flattery Silica Sands Project - Conceptual Development Timeframe*



* Timing expectations are based on current best estimates and are subject to change depending upon exploration and metallurgical success, government and third party approvals, market conditions and funding availability

* Based on granting of Environmental Authority (EA), with no Environmental Impact Statement (EIS) required

Silica Sand peer comparisons



Company Name	ASX Code	Market Cap**	Shares on Issue	JORC Resource
Metallica Minerals	MLM	\$10M	324M	38.3Mt @ 99% silica oxide. (5.4Mt Indicated and 32.9 Mt Inferred)
Diatreme Resources <small>Refer to DRX Presentation dated 11 November 2020, Appendix 2A 12 November 2020, Galalar Silica Resource expands 30% to 61.9Mt 17 March 2021</small>	DRX	\$54M	2,572M	61.9Mt @ 98.5% silica oxide Measured 35.5mt/Indicated 20.6mt/Inferred 5.8mt
VRX Silica <small>Refer to VRX Presentation dated 25 August 2020 and Appendix 2A on 2 February 2021</small>	VRX	\$141M	504M	1,056 Mt @ 99.6% to 99.9% silica oxide Inferred & Indicated incl 261mt Probable Ore Reserve
Perpetual Resources <small>Refer to PEC presentation August 2020 and Appendix 2A 18 January 2021</small>	PEC	\$41M	450m	111.3Mt @ 98.6% silica oxide

- ** Based on share prices at 17/04/2021

Our project is located in the world class Cape Flattery Dune field

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