

Large Flake
Graphite
Production

and developing Expandable Graphite Production & Technologies



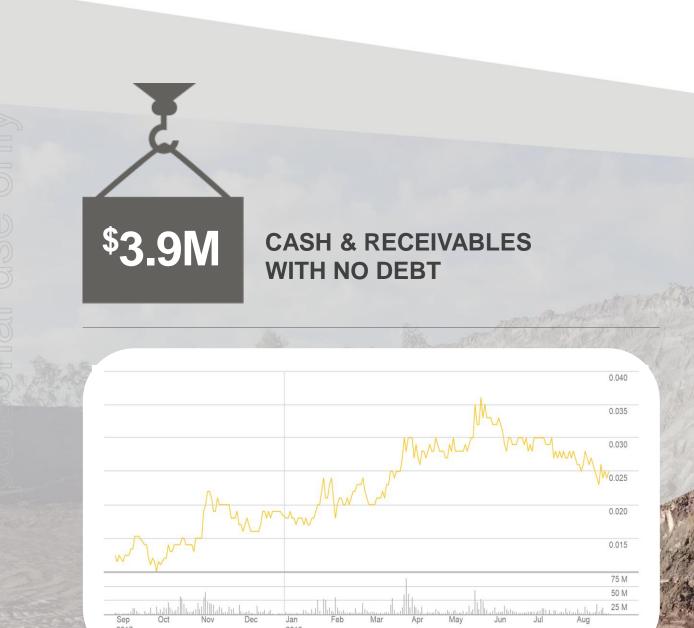
# Company Overview





# 100% OWNS AND OPERATES THE DEBT FREE GRAPHMADA GRAPHITE MINE IN MADAGASCAR

- Production capacity of 6,000 tonnes per annum (tpa), at ≥94% Fixed Carbon (FC).
- 382kt of contained natural flake graphite (JORC<sup>1,2</sup>).
- 40 year mining permits & 20 year landholder agreements.
- Established infrastructure with straightforward logistics.
- Expanding production to >20,000 tpa by 2020.
- Developing Expandable Graphite production & technologies.



All figures above are as 27 August 2018 and exclude performance rights and unlisted options.

# Capital Market Summary

- Share Price (ASX:BSM) of 2.5c
- Shares Outstanding 2,458m
- Listed Options 476m exercisable at 2.5c by December 2018
- Executives & Directors hold ~8% and Top 20 hold ~46%





# Bass Metals Ltd.

## **Board of Directors**



#### **RICK ANTHON** Non-Executive Chairman

Mr. Anthon is a practicing lawyer with over 30 years' experience in both corporate and commercial law. With extensive experience in the resource sector, as a director of a number of resource companies and as legal adviser, Mr. Anthon is currently General Counsel and Joint Company Secretary at Orocobre Ltd, Australia's premier Lithium producer.



#### **PETER WRIGHT** Executive Director

Mr. Wright has 20 years experience advising on capital markets, investor relations, acquisitions and divestments, particularly in lithium, and industrial minerals & metals markets. Mr. Wright is also currently Executive Director of Bizzell Capital Partners, a Brisbane based corporate advisory and funds management firm.



#### **JEFFREY MARVIN** Non-Executive Director

Mr. Marvin has 20 years global experience in mineral resource project origination, financing and development. Prior to joining Bass, Mr. Marvin was a founding executive director of an Australian energy technology company and has experience working across a range of projects including gold, coal, mineral sands and coal seam gas.



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## Management



#### **TIM MCMANUS** Chief Executive Officer

Mr. McManus has 25 years as a mining professional with significant experience at senior management level across all facets of project assessment, development and operations. Previous roles include CEO of ASX listed Elementos Ltd, Chief Geologist for Xstrata, and Partner – Barclays Natural Resource Investments: Metallurgical Coal Management Team.



#### **DAVID ROUND** Chief Financial Officer

With over 25 years experience, Mr. Round is a qualified accountant with extensive resource sector experience at senior management level. As Chief Financial Officer and Company Secretary to a number of resource companies, he has been integral to the commercial success of a number of companies both in Australia and internationally.



### MAMISON RANDRIANANATENAINA General Manager (Corporate)

As General Manager (Corporate) for Bass Metals, Mr. Randriananatenaina is responsible for government & community relations and all legal matters. Trained in Economics, and currently completing a Degree in Law, he has extensive experience in administration, logistics and management in the Madagascan mining sector.



Graphmada Large Flake Graphite Mine

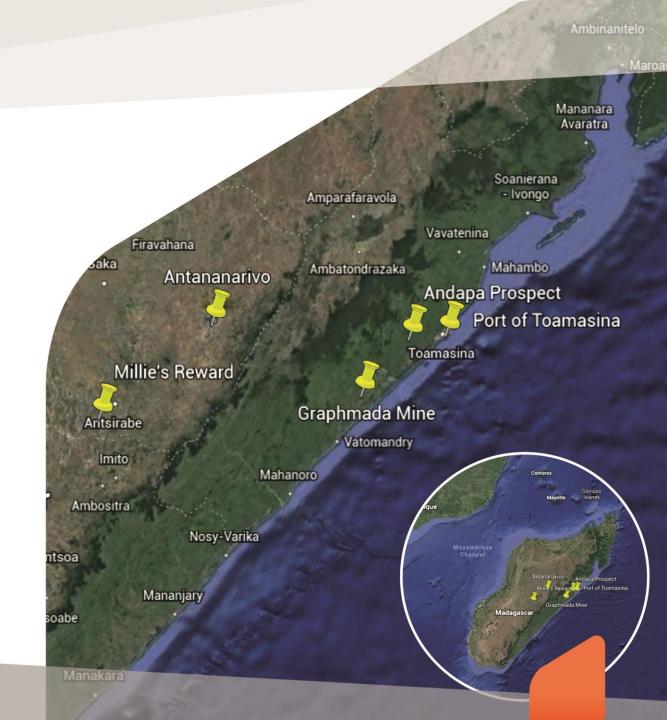


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# Madagascar

The 100% owned and debt free Graphmada Graphite Mine is located in eastern Madagascar, a democratic island country in the Indian Ocean, which is governed under a French legal system, with a low Corporate Tax rate of 20% and a low 2% Mining Royalty.

The country has produced benchmark quality graphite for over 100 years due to the high proportion of high purity, large flake graphite in soft, easily mineable, saprolitic ore.





# Mineral Resources & Prospects

- 382kt of contained graphite estimated in accordance with JORC.
- Primary Deposit (Mahefedok) 3.5 Mt @ 4.2%TGC.<sup>1</sup>
- Secondary Deposit (Loharano) 5.7 Mt @ 4.1%TGC.<sup>2</sup>
- Mahela & Ambatofafana deposits.
- Andapa discovery.<sup>3</sup>





# Stage 1 Complete

- Production recommissioned in May 2018.
- Completed commissioning without any material unbudgeted capital expenditure.
- 500,000 hours worked with no Lost Time Injury.
- Process Plant production ramping up with 1,230t last Quarter.
- Drying and packaging production ramping up with 1,095t last Quarter.





# Mining

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- Easily mineable saprolite-hosted graphite mineralization.
- New mining fleet and equipment.
- Fully tooled and skilled maintenance workshop.
- Low operating costs ~\$US5 per tonne of ore delivered.





# **Processing & Drying**

- Nameplate production of 6,000 tonnes per annum of graphite concentrate supply for the global market.
- Consistently operating above design (exceeding nameplate production).
- 45% of production is ≥ 180 micron concentrate and growing.
- Consistently producing a final concentrate grade ≥ 94% Fixed Carbon.







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# Sales & Logistics

- Excellent logistics to reach established graphite concentrate markets, with the Mine adjacent to the main National Highway and only 110 km to the country's main export port at Tamatave.
- The port is currently being upgraded via a US\$640m investment from the Madagascan and Japanese Governments.
- Sales to Europe (Offtake Agreement), India and the USA.





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Graphite
Concentrate
Quality



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Refractory and Crucible Applications

Graphmada can consistently supply high quality concentrates for refractory and crucible applications due to the exceptional qualities of its concentrates:

- Exceptional flake size distribution.
- A high resistance against oxidation.
- ✓ A low LOI at 420°C
- No carbonates such as calcite and dolomite, along with no other fluxes.
- ✓ A very low Sulphur (SO3) content, at 0.02 wt.%.
- Exhibiting favorable flake ash melting temperatures.









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# **Expandable Applications**

Expandability tests across all flake sizes delivered excellent results, with the maximum expansion volume of 510 cm3/g achieved with extremely large flakes > 400 microns<sup>3.</sup>

Size Fraction (micron)	800°C (cm3/g)	1000°C (cm3/g)
> 400	500	510
300 – 500	420	430
180 – 300	380	390
106 – 180	270	310
75 – 106	-	200
< 75	-	85









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# **Battery Anode Applications**

Highly suitable for lithium-ion battery applications with a very high purity of 99.99 wt.% carbon achieved.

All analyzed parameters including bulk density, tap density and surface area (BET) are similar to typical spherical graphite products in the market.

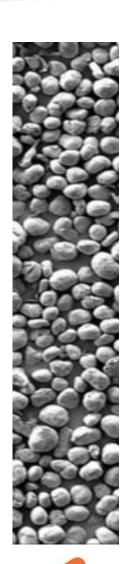
Graphmada concentrates are saleable across major market segments and supports Bass' strategy to build an international industrial minerals business of significance.

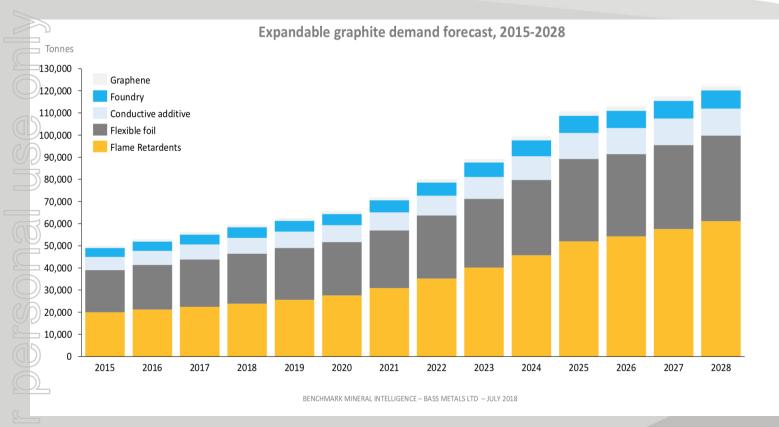
Parameter	Result	Desired
Tap Density	0.94 g/cm3	>0.9 g/cm3
D50	14.7 micron	10 - 25 micron
Ratio D90/D10	2.6	2.6 - 2.8
BET	6.7 m2/g	3 - 8 m2/g
Yield Test	47 wt.%	>30wt%
Silicon dioxide SiO2	27 ppm	<45 ppm
Aluminium oxide Al2O3	11 ppm	<15 ppm
Iron oxide Fe2O3	24 ppm	<35 ppm
Titanium dioxide TiO2	<10 ppm	<10 ppm
Potassium oxide K2O	<10 ppm	<10 ppm
Sodium oxide Na2O	<10 ppm	<10 ppm
Magnesium oxide MgO	<10 ppm	<10 ppm
Calcium oxide CaO	<10 ppm	<10 ppm
Phosphorous oxide P2O5	<10 ppm	<10 ppm
Barium oxide BaO	<10 ppm	<10 ppm
Lead oxide PbO	<10 ppm	<10 ppm
Zirconium oxide ZrO2	<10 ppm	<10 ppm
Manganese oxide MnO	<10 ppm	<10 ppm
Sulfur oxide SO3	<0.01 wt.%	<0.01 wt.%
Loss on ignition LOI	99.99 wt.%	>99.96% wt.%
Ash content	0.01 wt.%	<0.04 wt. %

Graphmada spherical graphite test results

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## Stage 3: Expandables

A low capital intensity, high margin downstream development, utilising existing workforce and infrastructure with consumables available in country.





# Community Development Program



- Focused on Delivery.
- Government certified Medical Clinic.
- 1,900 Landholder Titles issued.
- Water wells installed providing sustainable drinking water.
- Refurbishment of the Mahatsara School.
- Bridges, roads and many more initiatives.



# Appendix

Disclaimer

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- Cautionary Statements
- Important Information
- Footnotes



# Disclaimer & Cautionary Statements

#### DISCLAIMER

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The document may contain forward-looking information and prospective financial material, which is predictive in nature and may be affected by inaccurate assumptions or by known or unknown risks and uncertainties, and may differ materially from results ultimately achieved. All references to future production, production targets and resource targets and infrastructure access are subject to the completion of all necessary feasibility studies, permitting, construction, financing arrangements and infrastructure-related agreements. Where such a reference is made, it should be read subject to this paragraph and in conjunction with further information about the Mineral Resources and

Exploration Results, as well as the Competent Persons' statements. All persons should consider seeking appropriate professional advice in reviewing the document and all other information with respect to the Company and evaluating the business, financial performance and operations of the Company. Neither the provision of the document nor any information contained in the document or subsequently communicated to any person in connection with the document is, or should be taken as, constituting the giving of investment advice to any person.

#### FORWARD LOOKING STATEMENTS

This document may contain certain forward-looking statements. Such statements are only predictions, based on certain assumptions and involve known and unknown risks, uncertainties and other factors, many of which are beyond the Company's control. Actual events or results may differ materially from the events or results expected or implied in any forward-looking statement. The inclusion of such statements should not be regarded as a representation, warranty or prediction with respect to the accuracy of the underlying assumptions or that any forward looking statements will be or are likely to be fulfilled. The Company undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date of this document (subject to securities exchange disclosure requirements). The information in this document does not take into account the objectives, financial situation or particular needs of any person. Nothing contained in this document constitutes investment, legal, tax or other advice.

#### COMPETENT PERSON STATEMENT

The information in this report that relates to Mineral Resources is based on information compiled by Tim McManus, a Competent Person who is a member of the Australasian Institute of Mining and Metallurgy and a full-time employee of the Company.

Tim McManus has sufficient experience that is relevant to the style of mineralization and type of deposit 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.

Tim McManus consents to the inclusion of the information in this report in the form and context in which it appears.

#### SUBSEQUENT PUBLIC REPORTING

The information for the JORC Mineral Resource Summary is extracted from the ASX Announcement "Strategic investment in producing graphite asset" released 2 September 2015, which is available to view on www.asx.com.au. Bass Metals Ltd. confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and all material assumptions and technical parameters underpinning the estimates in the relevant 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.





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## **Footnotes**

- 1. Reported in accordance with the 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code 2012') at a >3% cut-off and first released to the ASX on 21/06/17 "Maiden Mineral Resource for Mahefedok Deposit".
- 2. Reported in accordance with the 2004 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code 2004) at a >2% cut-off and first disclosed by Stratmin Global Resource PLC under the JORC Code 2004. Bass Metals notes that the estimates have not been updated to JORC Code 2012 on the basis that the information has not materially changed since it was last reported. Reference should be made to the Company's announcement of 2/09/15, for further detail.
- 3. See ASX Announcement 'Outstanding assay results confirmed for Andapa discovery' released on the 2/03/17.
- 4. See ASX Announcement 'Tests confirm Industry Leading Expandability for Graphmada' released on the 24/05/17.
- 5. See ASX Announcement 'Exceptional lithium assay results up to 7%' released on the 29/5/17.



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