

BCP Equities

21 September 2016

ASX Code	BSM
Shares on issue (M)	1,193.2
Share price	\$0.015
Market Cap (M)	\$17.9
Est. Cash & Receivables at 30 Sept 2016 (M)	\$7.1
Debt (M)	\$0.0
Enterprise Value (M)	\$10.8



12 month high	\$0.025
12 month low	\$0.005
Daily turnover (M)	6.627
Recommendation	Speculative Buy
Valuation	\$0.039

Directors & Management

Rick Anthon.....	Non-Executive Chairman
Jeffrey Marvin	Non-Executive Director
Peter Wright	Non-Executive Director
Tim McManus.....	Chief Executive Officer
David Round.....	CFO & Company Secretary

BCP Equities Pty Ltd

ABN 49 145 857 512

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Bass Metals Limited – turn up the bass

INVESTMENT SUMMARY

There is something exciting about Bass Metals Ltd (BSM) as it is now fully funded to complete the acquisition of the Graphmada Graphite Mine, in eastern Madagascar, and optimise current operations to an increased interim baseline production target of 6ktpa coarse flake graphite concentrates. This will place BSM in the unique position of being the only graphite producer listed on the ASX. The company intends to then move to expand production and explore the associated tenement package that has considerable potential to support significantly larger operations.

The project has had over \$16M invested in it to date which has been used to establish the tenement portfolio, a graphite concentrate processing facility and associated infrastructure. Production issues due to a lack of grinding capacity installed and low plant availability owing to equipment breakdowns prompted the vendor, AIM listed StratMin Global Resources plc, to seek a partner to improve operations which BSM has successfully developed into an acquisition.

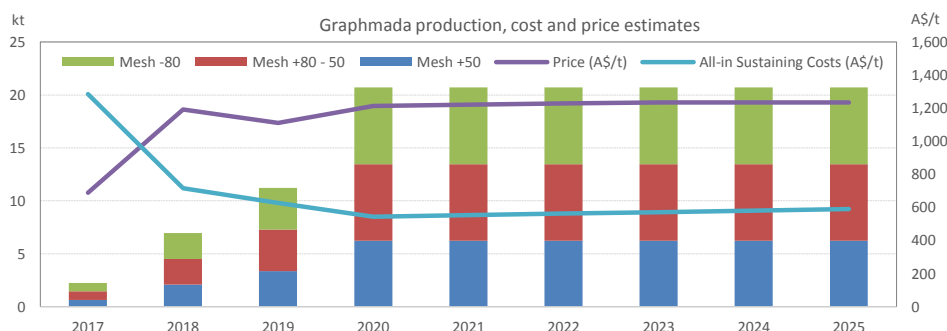
A major positive is that the project has an off-take agreement in place, which is already establishing the Graphmada graphite concentrates with its customers. This, with the low capital required to expand production, the low production costs and exploration upside combine to make a compelling investment thesis for BSM. As a result, we are initiating coverage with a Speculative Buy recommendation and a price target of \$0.039/share.

VALUATION

We have conducted a sum-of-parts valuation of BSM using a discounted cash flow to value the Graphmada graphite Project based on the operating and capital cost estimates from current operations optimisation and expansion estimates provided by the company. These estimates are based on the recently completed due diligence work and feasibility studies completed by the vendor.

We are modelling that operating costs on an All-in Sustaining Costs basis will be approximately \$550/t once production has been elevated to 18ktpa and the average price received from the three flake concentrate products (+50 Mesh, +80 – 50 Mesh and -80 Mesh) will be approximately \$1,200/t.

In addition to the capital expenditure, operating cash margins and corporate expenses discounted at 10% over the life of operations, the recent entitlement issue and estimated cash and receivables balance for the end of the September Quarter, the Company is not carrying debt, to generate an estimated Net Asset Value (NAV) for the Company of \$70.1M or a price target of \$0.039/share.



INVESTMENT THESIS

Bass Metals Ltd (BSM) has announced that it has taken control of the Graphmada Graphite Mine, in eastern Madagascar. BSM completed its due diligence and believes that it can optimise the current operations and that the tenement package has considerable exploration potential to support materially larger operations.

The project has had over \$16M invested to date which has been used to build a large tenement portfolio, graphite concentrate processing facility, infrastructure and logistical support for the project. It was initially estimated that production could be increased to 500 tonnes per month (6ktpa) by shifting to 24 hour per day, 6 days per week, production rosters. However, production issues due to a lack of grinding capacity and low plant availability owing to equipment breakdowns has resulted in an additional \$2M of capital required to get the plant to this operating level. This prompted the vendor, AIM listed Stratmin Global Resources plc (StratMin), to seek a partner to improve operations which BSM has successfully developed into an acquisition.

In addition to improving the current plant, exploration and a Feasibility Study on the adjacent Mahefadok deposit indicates there is significant scope to expand production at a very moderate capital outlay using modular plant. This will allow BSM to expand production in line with the cash flows generated and the conversion of the current exploration target as well as the definition of additional resources on the current tenement package.

There is an existing off-take agreement in place which is establishing the Graphmada graphite concentrates in an opaque market. This is a major positive in our opinion and, together with the low capital required to significantly expand production, the low production costs and exploration upside, make a compelling investment thesis for BSM.

VALUATION

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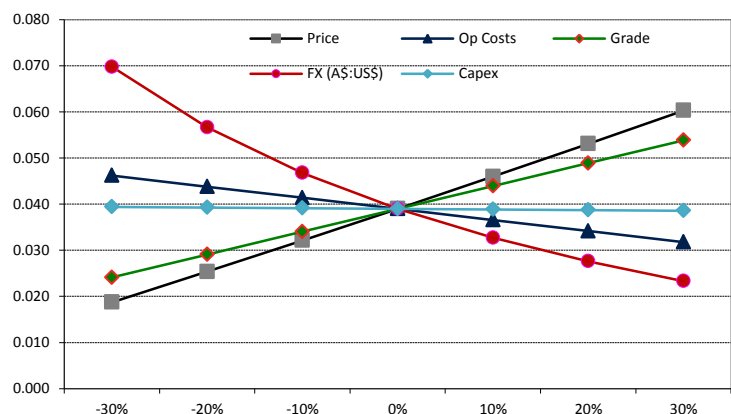
We are modelling capital expenditure of \$3M to optimise the current operations optimisation and \$7M to build the 12ktpa plant on the adjacent Mahefadok deposit, both of these estimates are materially above the current feasibility estimates of US\$1.5M and US\$4.5M respectively. We estimate that costs on an All-in Sustaining Costs basis will be approximately \$550/t once production has been elevated to 18ktpa and the average price received from the three flake concentrate products (+50 Mesh, +80 – 50 Mesh and -80 Mesh) will be approximately \$1,200/t. In addition to the capital expenditure, operating cash margins and corporate expenses discounted at 10% over the life of operations, the funds and shares on issue from the recent entitlement and the most recently reported cash balance is included, the Company is not carrying debt at this stage, to generate and estimated Net Asset Value (NAV) for the Company of \$70.1M.

The recent entitlement issue provides the company with sufficient capital to complete the purchase and optimise the plant. Depending on flake graphite prices and the successful optimisation of the plant there is a high probability that the Company will not need to issue capital again to fund subsequent expansion projects. This implies a price target of \$0.039/share after an estimated 1.6B shares on issue assuming the 288M options remain in the money and exercised and the milestone payments are made to StratMin.

SENSITIVITIES

Our BSM valuation is not only sensitivity to the flake graphite concentrate and foreign exchange estimates but also the feed grade and operating cost estimates. This gives the company a certain amount of control over the viability and future profitability of the project. It is also encouraging that the plant has been processing ore of materially higher grade than the current resource estimate.

Not included in the sensitivity analysis but will be material value drivers are the variables dependant on exploration success such as mine life and future increases to processing capacity adding to potential upside to the share valuation.



Project Overview

The Graphmada Graphite Mine is situated in eastern Madagascar, a region and country that has been a recognised producer and exporter of graphite since 1907. The Project is approximately 100km, by sealed highway, from the export port of Tamatave. The Project consists of two exploitation permits which will be 100% owned by the Company and one pending permit that requires renewal approval by the Bureau du Cadastre Minier de Madagascar (BCMM). The exploitation permits grant the exclusive right to explore and exploit graphitic resources over a permitted area of approximately 19km² and are valid for 40 years.



The Graphmada Mine hosts four known deposits. Current mining is from the Loharano deposit, with the Mahefedok deposit undergoing trial mining. The Mahela and Ambatofafana deposits are still to be reasonably appraised. The graphite is hosted in both weathered regolith and underlying graphitic gneiss, with the grade of graphitic carbon generally increasing with depth. All mining to date has been very shallow, with the mining horizon from 1.5 metres below surface to a depth of 6-8 metres. However, the graphite bearing regolith is known to go to depths of >30 metres, to the underlying hard rock mineralisation. All mineralisation is open along a strike length of ~1.5km and to depth.

Mining to date is low strip ratio and low cost due to the soft nature of the weathered material. The ore is treated using a simple flotation process resulting in the graphite concentrate. This concentrate is dried and screened into various flake sizes, then bagged in one tonne bulk bags and loaded into containers for shipment from the nearby port of Tamatave to the US, Europe and Indian customers. This is through the off-take agreements and customer relationships currently in place.

The mine has an experienced workforce with established facilities and infrastructure. This includes an onsite doctor, pharmacy, housing, offices, communications and a state-of-the-art analytical laboratory. Graphmada has general site offices, amenities and services able to support mining and processing operations. All roads are well established and are maintained to ensure year round access.

Operations

Mining

Mining at Loharano was initially limited to the areas adjoining the plant location. After stripping waste of approximately 1.5 metres, 6 to 8 metres of free dig graphite ore is available to be mined and processed. The soft nature of the weathered material means there is low impact on the mining fleet and operations do not require large-scale capital intensive machinery.

All graphite mined to date and within the current mine plan is within the graphite bearing regolith, allowing for low strip ratio, low cost extraction. In the Project area, graphite is hosted within both the bedrock gneisses and also the weathered regolith, and is termed 'Hard Rock' and 'Regolith-Hosted' natural flake graphite occurrences respectively. Importantly, the graphitic carbon concentrations increase with depth.



Processing

The current processing facilities were built in multiple stages and split across two locations, one for beneficiation and the second for drying, screening and packaging. Production has been restricted due to a lack of grinding capacity installed and low plant availability owing to equipment breakdowns.

A plant upgrade and improvement program was initiated in late 2015 to increase annual production to 6ktpa and produce consistent product quality of >94% GC. This program has commenced and the capital expenditure to implement the program is budgeted to cost \$2M but we are using \$3M in our modelling. The improvements identified to date include:

- Improve ore feed preparation to reduce loss (~10%).
- Refurbishment of the Trommel (Scrubber) to improve liberation prior to flotation.
- Replacement of secondary mills with better liberation size control.
- Improve the flow design of the flotation circuit and install level control systems and higher quality air injection capability.
- Replace slurry pumps.
- Replace dewatering centrifuges for more efficient drying.
- Source an alternative drying system to replace the installed double drum rotary dryer.
- Replace the screening system to improve capacity.
- Install a blending system to improve the consistency and quality of the bagged product.
- Replace diesel generators and improve power supply infrastructure.



Marketing & Off-take

The project had an off-take agreement to primarily provide >94% GC flake graphite. However, with the processing issues experienced, a strategic partnership with Tirupati was initiated to help sales and marketing of products below 94% GC. Tirupati Carbons and Chemicals is a private Indian company with a 20 year track record of graphite project development, concentrate production and graphite related product sales. Tirupati also provided operational input into the processing improvements to consistently achieve a >94% GC concentrate product. The partnership has been successful to date with key outcomes achieved including:

- The sale of Jumbo and Large Flake concentrate at 85 - 90% purity at a premium to those realised previously.
- The sale of unscreened product (to counter limitations of screening facilities).
- The sale of Fines of lower purity to maximize revenue.
- Achieving product placement with benchmark users in different applications.

Once the processing improvements have been implemented the Company aims to provide continuity and consistency of sales and build on the established Graphmada brand with the following flake size distribution expected:

1. Jumbo Flake (+50 mesh) – 30%
2. Large Flake (+80-50 mesh) – 35%
3. Medium Flake (-80 mesh) – 35%

Resource

The vendor of the asset, StratMin, reported an initial JORC compliant Mineral Resource for a small part of the Loharano deposit based on regional geological maps and some confirmatory trenching, sampling and assays.

The Mineral Resource at Loharano is summarised in the table below:

Resources	Mt	grade (%)	TGC (kt)
Indicated	0.4	5.2%	20.6
Inferred	5.2	4.0%	210.1
Total	5.6	4.1%	230.7

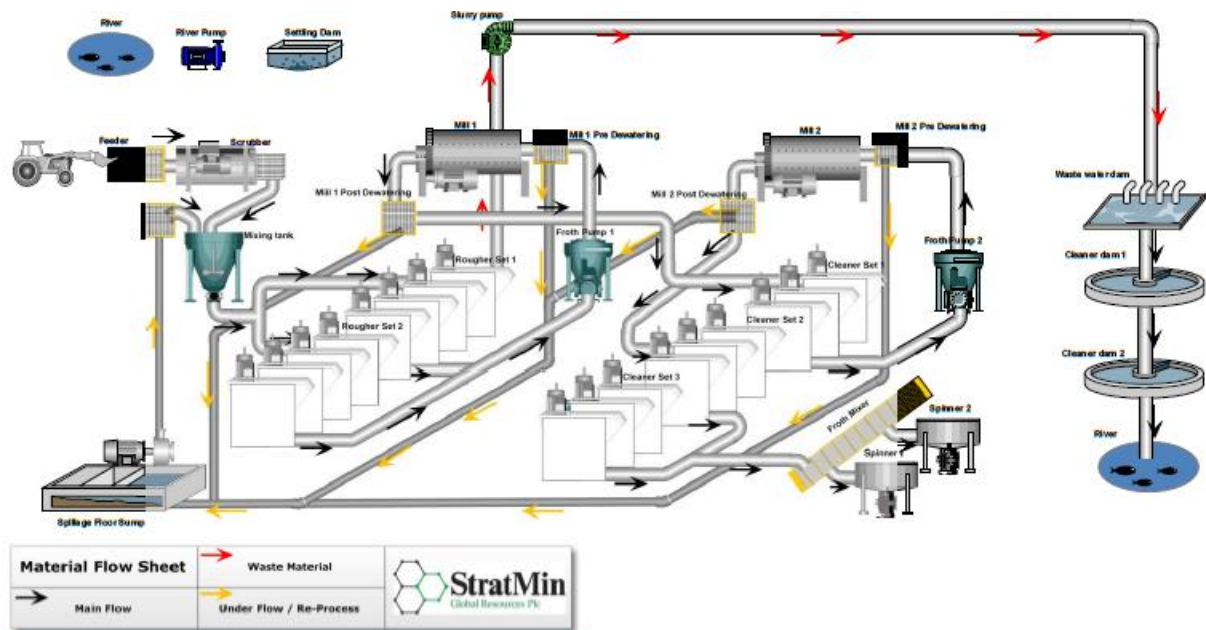
Expansion and development

Resource and reserve expansion

Historic work has been limited to a small portion of the known mineralisation within the Loharano area and while there is evidence that there are additional resources to be defined in the immediate vicinity of the Loharano mining operations, an exploration program has been designed for the larger Mahefadok tenement area. The objective of this exploration program is to identify and estimate JORC compliant resources and reserves that will support expanded production of +18ktpa for a number of years.

Processing expansion plans

It is planned that a second processing facility with a capacity of 12ktpa will be constructed alongside the current facilities. This will bring the total nameplate capacity from the Loharano and Mahefadok deposits to 18ktpa. The 12ktpa plant is modular in design, configurable to adapt to varying resource parameters, automated, in-line, ore-to-finished product plant able to produce product purity >96%. This implies that if significant resources are defined production could be expanded in a capital efficient way to meet growing demand.



The transaction

BSM completed its due diligence, including numerous site visits, that confirmed Graphmada as an operating large flake graphite mine, with significant potential for low capital expansion and low cost production. Shareholder approval has been received by both companies and BSM has taken control of the Project. The terms of the deal are:

- Tranche 1: Payment of \$1.5M to StratMin, issue to StratMin \$750,000 worth of BSM shares at \$0.01/share; and grant to StratMin of a net smelter royalty (NSR) of 2.5% with the NSR payments not to exceed \$5M.
- Tranche 2: Issue to StratMin a further \$3M worth of BSM shares upon achieving production output of 1,250 tonnes of graphite concentrate over three consecutive months, on or before 31 December 2017. Issue price based on the BSM VWAP in the 20 trading days immediately prior to the achievement of the production target.
- Tranche 3: Issue to StratMin a further \$5M worth of BSM shares upon achieving production output of 2,500 tonnes of graphite concentrate over three consecutive months, on or before 31 December 2018. Issue price based on the BSM VWAP in the 20 trading days immediately prior to the achievement of the production target.

THE GRAPHITE MARKET

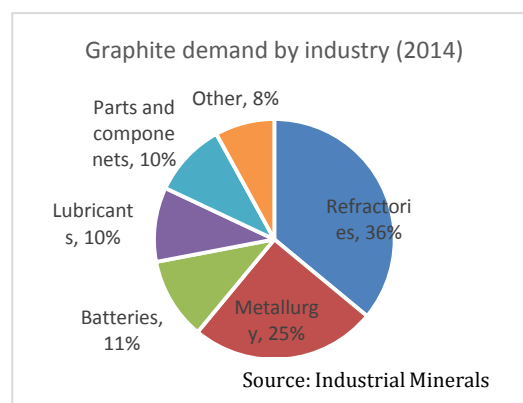
Supply

The graphite market is estimated to be approximately 2Mtpa, which is split approximately 50:50 between synthetic graphite and natural graphite. The natural graphite market is generally broken into flake (55%), amorphous (44%) and vein (1%) and China dominates the supply of both Amorphous and Flake graphite ($\approx 70\%$) with Brazil being the next biggest supplier ($\approx 15\%$), while Sri Lanka dominates the supply of Vein graphite. There have been some mine closures reported in China and the proportion of idle capacity has increased. This is mainly amorphous grade graphite, the area we expect to be most price sensitive in the future as Chinese mines reportedly lack significant large and jumbo flake production capacity.

The graphite market has not changed much in the last decade and graphite plants have historically tended to be small scale, mainly around 5-10ktpa. However, the supply side of the market is going to go through some major adjustment with Syrah Resources (SYR) Balama project due to begin production in 2017 supplying over 300ktpa of graphite when at full capacity.

Demand

The expected increase in supply from Balama and other companies developing natural graphite deposits around the world are going to have a major impact on how we view natural graphite demand as it will make a number of structural shifts in the demand profile. The demand for natural flake graphite continues to be driven by its use in the steel sector, which has eased recently. However, graphite has a wide variety of uses and its unique combination of physical and chemical properties generally excludes the possibility of substitution by other materials. And just as a structural shift in the supply of natural graphite is occurring a structural shift in demand is also developing with the potential of the lithium-ion battery (for EV and Battery Storage) and applications involving expandable graphite are beginning to develop.



The market

The graphite market is an opaque market with sales contracts directly negotiated between buyers and sellers with no secondary markets for these contracts. The contract defines the volume and specifications of products designed specifically for its intended end use. Carbon content and flake size are the material parameters with flake size and distribution, iron, silicon and ash content also impacting the price, which is essentially based on the suitability to a specific use or stage of processing. Physical prices will also vary according to geographic region and will take into account the quantity purchased, application, quality assurance, exact grade, credit terms, and other parameters.

Mr Rick Anthon - Non-Executive Chairman

Mr Anthon is a practicing lawyer with thirty years' experience in corporate and commercial law. Rick has particular expertise in the mining exploration, mineral development, resources and energy sectors.

Mr Jeffrey Marvin – Non-Executive Director

Mr Marvin has over twenty years working with corporate management and investors to bring international minerals companies to the public markets. Jeffrey specialises in early stage mineral company investment, corporate management and business restructuring. In addition to his involvement with StratMin, Jeffrey is currently involved in minerals projects in Sub-Saharan Africa and Western Europe where he focuses on coal, manganese, copper, chrome and precious metals.

Mr Peter Wright - Non-Executive Director

Mr Wright has 20 years' experience in financial markets focusing on the resources sector. He is currently an Executive Director of Bizzell Capital Partners Pty Ltd, a Brisbane based corporate advisory and funds management firm. He has been actively involved in advising companies on capital market strategies, asset development, acquisitions and divestments, industrial metal off-take agreements and investor relations.

Mr Tim McManus – Chief Executive Officer

Mr McManus has over 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 Managing Director of Scorpion Energy.

Mr David Round– Chief Financial Officer and Company Secretary

Mr Round is an experienced accountant with many years' experience as an advisor to the resource sector. Amongst his roles, Mr Round was previously CFO and Company Secretary to Ironbark Zinc Ltd and Wolf Minerals Ltd, and acted in the same role in the relisting of Albidon Ltd and development of this company.

Bass Metals Limited (BSM)

 Current Price = **\$0.013**

 Price Target = **\$0.039**

Profit & Loss (A\$m)	2015A	2016F	2017F	2018F	2019F	Valuation	A\$m	A\$/sh		
Sales Revenue	0.0	0.0	1.5	8.7	12.9	Loharano	25.1	0.014		
Other Income	0.2	0.0	0.2	0.3	0.1	Mahefadok	33.8	0.019		
Operating Costs	0.0	0.0	1.0	3.2	5.4	Unpaid capital	9.6	0.005		
Exploration Exp.	0.0	0.0	0.0	0.0	0.0	Corporate	(5.4)	(0.003)		
Corporate/Admin	0.9	0.5	1.0	1.0	1.1	Forwards	0.0	0.000		
EBITDA	(0.7)	(0.5)	(0.3)	4.7	6.6	Cash	7.1	0.004		
D & A	0.0	0.0	0.0	0.3	0.4	Debt	0.0	0.000		
EBIT	(0.7)	(0.5)	(0.3)	4.4	6.2	NAV (@ 10% discount rate)	70.1			
Interest	0.0	0.0	0.0	0.0	0.0	Price Target		0.039		
Operating Profit	(0.7)	(0.5)	(0.3)	4.4	6.2	Target Price Sensitivity	-10%	0%	+10%	Change
Tax expense	(0.1)	0.0	0.0	1.0	1.9	FX (A\$:US\$)	0.047	0.039	0.033	-16%
FX Adjustment	0.0	0.0	0.0	0.0	0.0	Price	0.032	0.039	0.046	18%
Abnormals	0.0	0.0	0.0	0.0	0.0	Grade	0.034	0.039	0.044	13%
NPAT	(0.5)	(0.5)	(0.3)	3.4	4.3	Operating costs	0.041	0.039	0.037	-6%
Normalised NPAT	(0.5)	(0.5)	(0.3)	3.4	4.3					
Cash Flow (A\$m)	2015A	2016F	2017F	2018F	2019F	Commodity Assumptions	2016F	2017F	2018F	2019F
Adjusted Net Profit	(0.5)	(0.5)	(0.3)	3.4	4.3	A\$:US\$	0.75	0.74	0.74	0.73
Interest, Tax & Exploration	0.0	(0.2)	(0.8)	(0.8)	(0.8)	Mesh +50 (US\$/t)	1,250	1,250	1,250	1,250
- Interest/Tax/Expl Inc	(0.1)	0.2	0.8	1.8	2.7	Mesh +80 - 50 (US\$/t)	850	850	850	850
+ Depn/Amort	0.0	0.0	0.0	0.3	0.4	Mesh -80 (US\$/t)	600	600	600	600
+/- Other	(0.2)	0.3	0.0	0.0	0.0	Production Summary	2016F	2017F	2018F	2019F
Operating Cashflow	(0.5)	(0.6)	(1.9)	1.0	1.2	Production (kt)				
- Capex	0.0	0.0	3.1	0.2	7.6	Mesh +50	0.0	0.6	2.2	3.5
- Working Capital Increase	0.0	0.0	0.0	0.0	0.0	Mesh +80 - 50	0.0	0.8	2.5	4.0
Free Cashflow	(0.5)	(0.6)	(5.0)	0.8	(6.4)	Mesh -80	0.0	0.8	2.6	4.0
- Dividends	0.0	0.0	0.0	0.0	0.0	Total	0.0	2.2	7.3	11.6
+ Equity raised	0.3	1.3	8.5	0.0	0.0	Summary				
+ Debt drawdown (repaid)	0.0	0.0	0.0	0.0	0.0	Cash Costs (A\$/t)		450	445	463
Net Change in Cash	(0.4)	(0.1)	4.3	2.6	(3.7)	All-in Sustaining Costs (A\$/t)		1,302	723	643
Cash at End Period	0.1	0.1	4.3	7.0	3.2	Price (A\$/t)		688	1,192	1,113
Net Cash/(LT Debt)	0.1	0.1	4.3	7.0	3.2	Reserves & Resources				
Balance Sheet (A\$m)	2015A	2016F	2017F	2018F	2019F	Resources	Mt	grade (%)	TGC (kt)	
Cash	0.1	0.1	4.3	7.0	3.2	Indicated	0.4	5.2%	20.6	
Total Assets	4.2	9.3	17.4	20.8	25.1	Inferred	5.2	4.0%	210.1	
Total Debt	0.0	0.0	0.0	0.0	0.0	Total	5.6	4.1%	230.7	
Total Liabilities	0.8	5.1	5.1	5.1	5.0	Directors				
Shareholders Funds	3.4	4.2	12.3	15.8	20.1	Name				Position
Ratios						Rick Anton				Non-Executive Chairman
PE Ratio (x)	-11.9	-20.8	-61.2	6.3	5.0	Jeffery Marvin				Non-Executive Director
PEG Ratio (x)	0.0	-0.4	-1.9	0.0	0.0	Peter Wright				Non-Executive Director
Net Debt/Equity (%)	na	na	na	na	na					
Interest Cover (x)	na	na	na	na	na					
Return on Equity (%)	na	na	na	21.7	21.6					
Return on Assets (%)	-25.5	-8.0	-2.5	17.9	18.9					
Return on Capital (%)	-16.4	-11.0	-2.6	26.8	29.8					
Dividend Yield (%)	0.3	0.9	0.9	1.0	0.8					
Price to Book (x)	0.3	1.4	1.3	1.0	0.8					

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Disclosure of interest

BCP Group employs Mr Peter Wright, a non-executive director of BSM, on a full time basis. BCP Group advise that at the date of this report, both BCP Group and the analyst hold interests in Bass Metals Limited. BCP Group advises that it may earn brokerage, commission, fees or other benefits and advantages, direct or indirect, in connection with the making of a recommendation or dealing by a client in BSM's securities. Some or all of BCP Group's Authorised Representatives of BCP Groups may be partly or wholly remunerated by way of commission.

BCP Group has been engaged by BSM to produce this research report and is being paid a fee for its preparation. BCP was the joint lead manager and underwriter to the capital raising undertaken recently by BSM and received capital raising and underwriting fees in this regard. In the future, BCP Group may provide capital raising services or advisory services to BSM on commercial terms.

Analyst certification and disclosure of interest

The analyst certifies that the views expressed in this research accurately reflect their personal views about the subject securities. The analyst holds an interest in this company.

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