

28 Feb 2019

Share Price	\$0.027
Valuation	\$0.110
Price Target (12 month)	\$0.056

Brief Business Description:

An advanced stage mineral exploration and development company focussed on the Montepuez Graphite Project in Mozambique. BAT aims to produce flake graphite for use as anode material in lithium-ion batteries.

Hartleys Brief Investment Conclusion

Low cost, East African graphite developer with proven management. Four binding offtake deals have been signed.

Chairman & Executives

Jeff Dowling (Non-exec Chairman)
David Flanagan (Managing Director)

Major Shareholders

Farjoy Pty Ltd	16.1%
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Company Address

10 Ord Street
West Perth, WA, 6005

Issued Capital 1113.7m

- fully diluted 1432.6m

Market Cap A\$30.1m

- fully diluted A\$38.7m

Cash (31 Dec 18) A\$7.1m

Debt (31 Dec 18) A\$0.0m

EV A\$23.0m

EV/Resource A\$1.8/t

EV/Reserve A\$3.8/t

	Prelim. (A\$m)	CY19e	CY20e	CY21e
Prod. 96% Flake (Mt)	0.000	0.015	0.038	
Op Cash Flw	-4.95	5.23	21.43	
Norm NPAT	-9.4	-4.8	6.1	
CF/Share (cps)	-0.25	0.11	0.60	
EPS (cps)	-0.50	-0.18	0.23	
P/E	-5.4	-15.2	11.9	

	Mt	TGC (%)	Cont. Graph. (Mt)
Resources	152.5	8.5	13.0
Reserves	61.9	9.8	6.1

BATTERY MINERALS LTD (BAT)

Positive signs of recharging the Battery

Earlier this month, we visited Battery Minerals Limited's (BAT) Montepuez Graphite Project in Mozambique. BAT is developing the multi-stage project in a busy part of East Africa, which has seen SYR.asx recently commence graphite production 60km away. Montepuez has a number of key attributes we look for in a graphite project; high grade (12% TGC), low cost (initial C1 of US\$361/t), offtake; and is currently progressing down the funding pathway having stalled somewhat mid-last year. BAT has appointed Origin Capital as advisers and is seemingly progressing well with funding solutions, and we look forward to further announcements in due course (est. April/May 2019).

At site, a 100-person camp has been completed to very high standards. The processing plant site has been cleared and built up, with the crusher in place. The tailings storage facility (TSF) has been completed and with the onset of the rainy season, is starting to accumulate water.

The Port of Pemba, where BAT plans to export its concentrate, was well setup and already exports graphite from a privately held German producer (~9ktpa). The port is running at ~5% of its 3.5Mtpa capacity and has current approvals for 100ktpa of graphite concentrate. BAT aims to ship 50ktpa during its Phase 1. SYR.asx ships through the Port of Nacala, 250km further to the south.

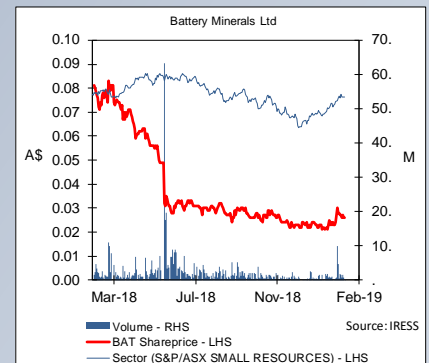
BAT has done an outstanding job with its community engagement. Among others pieces of infrastructure, it has built a school in the nearby village, which has the ability to educate 700 children. The locals are extremely poor but BAT has put the mechanisms in place to train them and currently has numerous employed on site in various security and camp maintenance roles. There are no expat workers based on site.

Is a funding deal on the horizon?

All approvals are in place and BAT could potentially commence building the plant and mining ore upon completion of a financing deal, which on our numbers could be in the region of A\$100M and may comprise a 50:50 debt:equity split. While the US\$40M (~A\$55M) pre-production capital number still stands, one can envisage a large portion of working capital (as well as an A\$8M VAT payment and financing costs) required to sustain BAT through a ramp-up, which could be in excess of 18 months given the challenges faced by the likes of SYR.asx and BSM.asx in fine tuning the plant to produce the required flake distribution, and to support the Company through a period of lower graphite sales prices on account of potential off-spec baskets and qualification shipments.

Weathering the storm, move to Speculative Buy

BAT has an experienced senior management team who has stuck with the Company through its 2018 funding challenges, which demonstrates its belief in the project. It appears to be progressing financing and investors may speculate it successfully negotiates a favourable funding outcome. We therefore move to a Speculative Buy recommendation (from Neutral) for BAT and look forward to an update from the Company as to funding Montepuez. Our valuation, assuming development, is 11cps (up from 10.2cps) and our 12-month price target is 5.6cps (up from 3.6cps). If the Company can deliver a funding solution, it will be cause for a re-rate of BAT; however, the stock is not without its risks in our view.



Paul Howard

Resources Analyst

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Hartleys has assisted in the completion of capital raisings in the past 12 months for Battery Minerals Limited ("Battery") for which it has earned fees. Hartleys has a beneficial interest in escrowed options in Battery. The analyst visited site at the expense of Battery, with all associated costs covered by Battery.

SUMMARY MODEL

Battery Minerals Ltd BAT		Share Price \$0.027							28 February 2019 Speculative Buy	
Key Market Information										
Share Price		\$0.027								
Market Capitalisation - ordinary		A\$30m								
Net Cash (Debt)		\$7.1m								
Market Capitalisation - fully diluted		A\$39m								
EV		A\$23m								
Issued Capital		1113.7m								
Options		318.9								
Issued Capital (diluted for options)		1432.6m								
Issued Capital (diluted inc. options and new capital)		4682.3m								
Valuation		\$0.110								
12month price target		\$0.056								
P&L	Unit	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 22	31 Dec 23			
Net Revenue	A\$m	0.0	0.0	19.4	48.4	72.1	161.0			
Total Costs	A\$m	-4.9	-5.0	-14.2	-26.6	-36.4	-74.9			
EBITDA	A\$m	-4.9	-5.0	5.3	21.8	35.6	86.1			
- margin		-	-	27%	45%	49%	53%			
Depreciation/Amort	A\$m	-2.4	-4.7	-7.9	-10.4	-16.8	-26.6			
EBIT	A\$m	-7.3	-9.6	-2.7	11.4	18.8	59.5			
Net Interest	A\$m	0.1	0.2	-2.1	-3.2	-5.4	-6.9			
Pre-Tax Profit	A\$m	-7.1	-9.4	-4.8	8.2	13.4	52.6			
Tax Expense	A\$m	0.0	0.0	0.0	-2.0	-3.4	-13.2			
Normalised NPAT	A\$m	-7.1	-9.4	-4.8	6.1	10.1	39.5			
Abnormal Items	A\$m	0.0	0.0	0.0	0.0	0.0	0.0			
Reported Profit	A\$m	-7.1	-9.4	-4.8	6.1	10.1	39.5			
Minority	A\$m	0.0	0.0	0.0	0.0	0.0	0.0			
Profit Attrib	A\$m	-7.1	-9.4	-4.8	6.1	10.1	39.5			
Balance Sheet	Unit	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 22	31 Dec 23			
Cash	A\$m	7.9	18.6	46.6	23.8	74.1	77.1			
Other Current Assets	A\$m	0.0	0.0	2.4	6.0	8.9	19.8			
Total Current Assets	A\$m	7.9	18.6	49.0	29.7	83.0	96.9			
Property, Plant & Equip.	A\$m	12.9	39.3	66.3	64.0	199.8	194.3			
Exploration	A\$m	12.2	13.2	14.2	15.2	16.2	17.2			
Investments/other	A\$m	0.0	0.0	0.0	0.0	0.0	0.0			
Tot Non-Curr. Assets	A\$m	25.1	52.4	80.5	79.1	216.0	211.4			
Total Assets	A\$m	33.0	71.1	129.5	108.9	299.0	308.4			
Short Term Borrowings	A\$m	-	-	-	-	-	-			
Other	A\$m	1.3	1.3	3.7	6.9	9.4	19.3			
Total Curr. Liabilities	A\$m	1.3	1.3	3.7	6.9	9.4	19.3			
Long Term Borrowings	A\$m	-	-	52.5	22.5	100.0	60.0			
Other	A\$m	-	-	-	-	-	-			
Total Non-Curr. Liabil.	A\$m	-	-	52.5	22.5	100.0	60.0			
Total Liabilities	A\$m	1.3	1.3	56.2	29.4	109.4	79.3			
Net Assets	A\$m	31.7	69.8	73.4	79.5	189.6	229.1			
Net Debt	A\$m	-7.9	-18.6	5.9	-1.3	25.9	-17.1			
Cashflow	Unit	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 22	31 Dec 23			
Operating Cashflow	A\$m	-4.5	-5.0	5.2	21.4	35.2	85.1			
Income Tax Paid	A\$m	0.0	0.0	0.0	-2.0	-3.4	-13.2			
Interest & Other	A\$m	0.1	0.2	-2.1	-3.2	-5.4	-6.9			
Operating Activities	A\$m	-4.4	-4.8	3.1	16.2	26.5	65.0			
Property, Plant & Equip.	A\$m	-14.7	-31.0	-35.0	-8.0	-152.6	-21.1			
Exploration and Devel.	A\$m	-1.8	-1.0	-1.0	-1.0	-1.0	-1.0			
Other	A\$m	0.0	0.0	8.4	0.0	0.0	0.0			
Investment Activities	A\$m	-16.4	-32.0	-27.6	-9.0	-153.6	-22.1			
Borrowings	A\$m	0.0	0.0	52.5	-30.0	77.5	-40.0			
Equity or "tbc capital"	A\$m	21.0	47.5	0.0	0.0	100.0	0.0			
Dividends Paid	A\$m	0.0	0.0	0.0	0.0	0.0	0.0			
Financing Activities	A\$m	21.0	47.5	52.5	-30.0	177.5	-40.0			
Net Cashflow	A\$m	0.1	10.7	28.0	-22.8	50.4	3.0			
Shares	Unit	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 22	31 Dec 23			
Ordinary Shares - End	m	1109.0	2700.2	2700.2	2700.2	4358.8	4359.0			
Ordinary Shares - Wted	m	934.0	1904.6	2700.2	2700.2	3529.5	4358.9			
Diluted Shares - Wted	m	934.3	1904.9	2700.5	2700.5	3529.8	4359.0			
Ratio Analysis	Unit	31 Dec 18	31 Dec 19	31 Dec 20	31 Dec 21	31 Dec 22	31 Dec 23			
Cashflow Per Share	A\$ cp	-0.5	-0.2	0.1	0.6	0.8	1.5			
Cashflow Multiple	x	-5.7	-10.8	23.6	4.5	3.6	1.8			
Earnings Per Share	A\$ cp	-0.8	-0.5	-0.2	0.2	0.3	0.9			
Price to Earnings Ratio	x	-3.5	-5.4	-15.2	11.9	9.5	3.0			
Dividends Per Share	AUD	-	-	-	-	-	-			
Dividend Yield	%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
Net Debt / Net Debt + Equit.	%	-33%	-36%	7%	-2%	12%	-8%			
Interest Cover	X	62.5	48.9	na	3.5	3.5	8.7			
Return on Equity	%	na	na	na	8%	5%	17%			
Directors										
Company Information										
10 Ord Street										
West Perth, WA, 6005										
Australia										
Ph +61 8 9148 1000										
www.batteryminerals.com										
Top Shareholders										
m sh. %										
Farjoy Pty Ltd 179.1 16.1%										
Reserves & Resources										
Mt TGC (%) Cont. Graphite (Mt)										
TOTAL MONTEPEZ RESERVE (4% TGC) 42.2 9.3 3.9										
TOTAL BALAMA RESERVE (4% TGC) 19.7 11.1 2.2										
TOTAL MONTEPEZ RESOURCE (2.5% TGC) - Elephant & Buffalo 119.5 8.1 9.7										
TOTAL BALAMA RESOURCE (6% TGC) - Lennox & Byron 33.0 10.2 3.4										
TOTAL RESOURCE 152.5 8.5 13.0										
Measured 10.8 8.7 0.9										
Indicated 72.8 9.4 6.9										
Inferred 68.9 7.6 5.2										
Montepuez Production Summary										
Unit 31 Dec 18 31 Dec 19 31 Dec 20 31 Dec 21 31 Dec 22 31 Dec 23										
Processed Mill Throughput Mt - - 0.15 0.38 0.55 0.80										
Mined TGC Grade % - - 12.0% 12.0% 12.0% 12.0%										
Produced 96% TGC Flake (Total) Mt - - 0.015 0.038 0.055 0.080										
Mine Life yr - - 50 49 48 47										
Capex ASM -14.7 -30.0 -33.0 -6.0 -52.6 -19.1										
Balama Production Summary										
Unit 31 Dec 18 31 Dec 19 31 Dec 20 31 Dec 21 31 Dec 22 31 Dec 23										
Processed Mill Throughput Mt - - - - - 0.4										
Mined TGC Grade % - - - - - 12.5%										
Produced 96% TGC Flake (Total) Mt - - - - - 0.042										
Mine Life yr - - - - - 26										
Capex ASM 0.0 -1.0 -2.0 -2.0 -100.0 -2.0										
Mine Costs										
Unit 31 Dec 18 31 Dec 19 31 Dec 20 31 Dec 21 31 Dec 22 31 Dec 23										
Cost per milled tonne A\$/t - - 48.3 48.3 48.3 52.6										
Total Cash Costs (Mine) A\$/t - - 546.6 546.8 548.4 559.1										
C1: Operating Cash Cost = (a) A\$/t - - 482.9 482.9 482.9 494.4										
US\$/t - - 352.5 367.0 367.0 376.1										
(a) + Royalty = (b) A\$/t - - 546.6 546.8 548.4 559.1										
C2: (a) + depreciation & amortisation = (c) A\$/t - - 1,011.0 759.4 788.7 712.0										
(a) + actual cash for development = (d) A\$/t - - 2,322.9 722.9 3,276.2 675.0										
C3: (c) + Royalty A\$/t - - 1,074.7 823.3 854.3 776.7										
(d) + Royalty A\$/t - - 2,386.6 786.8 3,341.7 739.7										
Total cash costs as per P&L A\$/t - - 945.3 710.3 662.7 611.7										
All in Sustaining Costs (AISC) A\$/t - - 1,345.3 1,030.3 910.5 465.5										
US\$/t 982.1 783.0 692.0 354.1										
Price Assumptions										
Unit 31 Dec 18 31 Dec 19 31 Dec 20 31 Dec 21 31 Dec 22 31 Dec 23										
AUD/USD US\$/A\$ 0.73 0.72 0.73 0.76 0.76 0.76										
Montepuez Graphite 96% TGC Flake US\$/t - 807 905 981 996 978										
Balama Graphite 96% TGC Flake US\$/t - 912 997 1054 1062 1043										
Offtake										
Unit 31 Dec 18 31 Dec 19 31 Dec 20 31 Dec 21 31 Dec 22 31 Dec 23										
Flake graphite Mt - - 0.035 0.041 0.041 - -										
Sensitivity Analysis										
Valuation FY21 NPAT										
Base Case 0.11 6.1										
Spot Prices 0.07 (-34.1%) 0.8 (-86.5%)										
Spot USD/AUD 0.71, Basket Flake \$802t										
AUD/USD +/-10% 0.10 / 0.12 (-8.1% / 9.9%) 4.3 / 8.4 (-30.4% / 37.2%)										
Graphite Price +/-10% 0.13 / 0.09 (14.3% / -14.7%) 9.6 / 2.7 (55.9% / -55.9%)										
Production +/-10% 0.12 / 0.10 (9.3% / -9.7%) 8.3 / 4.0 (34.3% / -34.3%)										
Operating Costs +/-10% 0.10 / 0.12 (-4.9% / 4.6%) 4.8 / 7.5 (-21.5% / 21.5%)										
Unpaid Capital										
Year Expires No. (m) \$m Avg price % ord										
31-Dec-19 0.0 0.0 0.000 0%										
31-Dec-20 2.5 0.2 0.092 0%										
31-Dec-21 59.5 9.1 0.153 5%										
31-Dec-22 21.5 3.0 0.141 2%										
31-Dec-23 235.4 20.4 0.087 21%										
TOTAL 318.9 32.8 0.103 29%										
Valuation										
\$m \$/shr										
100% Montepuez (pre-tax NAV at disc. rate of 12%) 272.6 0.06										
100% Balama (pre-tax NAV at disc. rate of 12%) 290.1 0.06										
Other Assets/Exploration 75.0 0.02										
Forwards 0.0 0.00										
Corporate Overheads -53.2 -0.01										
Net Cash (Debt) 7.1 0.00										
Tax (NPV future liability) -99.6 -0.02										
Options & Other Equity 23.6 0.01										
TOTAL 515.7 0.110										
Analyst: Paul Howard										
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tbc capital could be equity or debt. Our valuation is risk-adjusted for how this may be obtained.										
Sources: IRESS, Company Information, Hartleys Research										
Last Updated: 28/02/2019										

MONTEPUEZ SITE VISIT

Fig. 1: [Click below to view our Site Visit video](#)



Source: Hartleys' Research

The Balama feasibility is underpinned by a maiden reserve of 19.7Mt @ 11.1% TGC for 2.2Mt

BALAMA FEASIBILITY STUDY

In December 2018, BAT released the feasibility study (FS) for its Balama Central Graphite Project in Mozambique. Balama is BAT's secondary development project in Mozambique behind its flagship Montepuez. The newly released feasibility is comparable to the March 2018 scoping study (SS) and underpins a maiden reserve of 19.7Mt @ 11.1% TGC for 2.2Mt. Capex has increased to US\$70M (up from US\$50M in the SS) but opex (C1) has fallen to US\$363/t for the first 8 years (was US\$372/t for the 10-year LOM in the SS). Overall C1 in the FS is US\$425/t over the 27-year LOM. The FS sees throughput increase to 58ktpa, from ~55ktpa in the SS. Flake size distribution has been updated with weighting shifting towards the fines and it has now given weather and fresh flake distribution details. BAT expects to receive US\$1,106/t FOB for weathered flake and US\$1,275/t FOB for fresh flake in 2022. The SS used US\$1,221/t. Overall, the FS is an improvement on the SS but we expect lower graphite prices in the initial years and model these accordingly.

The Balama FS sees throughput of 58ktpa over 27 years

MONTEPUEZ RESERVE UPDATE

Also in December 2018, BAT increased the Montepuez reserve by ~10%. The reserve now stands at 42.2Mt @ 9.3% TGC for 3.9Mt of contained graphite. Importantly, the grade increased from 8.8% to 9.3% and BAT expects to mine at an average of 11% TGC grade (VES was at 12%) over the 50+ year LOM. Average grade will be 12% TGC for the first 18 years and C1 during mining of the weathered material (first 10 years) is expected to be US\$360.90/t, increasing as more primary ore is mined later in the mine life. As seen in the VES, BAT is targeting a production rate of 50ktpa for Stage 1, increasing to 100ktpa for Stage 2 with preproduction capital estimated to be US\$40M (outstanding) and US\$50M respectively.

The new Montepuez reserve allows for 18 years of 12% TGC processing, reducing to 11% thereafter.

GRAPHITE PEERS & MARKET OUTLOOK

There is evidence to suggest that China is currently a net exporter of fine flake graphite and in order to break into the Chinese market, producers, such as SYR.asx, are required to sell at a discount to entice offtake (qualification shipments). Only then will it demonstrate its superior product and secure longer-term deals.

China is currently a net exporter of fine flake graphite and in order to break into the Chinese market, producers are required to sell at a discount to entice offtake

In the DecQ 2018 Report, SYR.asx notes that pricing for its first year of production is being impacted by a mixed spec of flake distribution (currently 80% fines (<180µm) and trying to achieve 70% fines through 2019). It has also experienced issues with grades and price discounts on account of the above-mentioned qualification shipment process. It is having to compete with Chinese domestic producers and its price must be competitive with the ex-VAT domestic fines price on a transport parity basis. It will continue to sell at a discount until quality, reliability and performance differentials can be established, showing the quality of East African product, which may shift the market balance. We note the SYR expects MarQ CY19 graphite prices to be US\$500-600/t for a 96%+ TGC, 80% (flake distribution) fines product.

The sentiment has been echoed by Madagascar producer, BSM.asx, who is yet to produce a basket which is representative of its flake size distribution as per pre-mining testwork. BSM is aiming to receive US\$900/t for its product in CY2019, which is comparable to SYR as BSM has a greater amount of premium jumbo and large flake in its basket makeup.

VALUATION

We have updated our valuation as per the recent Montepuez Reserve and Balama FS announcements

Our sum of parts valuation for BAT is based on discounted cashflows for the Montepuez Graphite Project and the Balama Central Graphite Project. We model cashflows for the projects with discount rates appropriate for the stage of development. We model Montepuez in line with Company guidance, presentations, Value Engineering Study (VES) and the recent reserve update. We now assume it will be funded 50% through equity with significant dilution and 50% through a debt provider. Given the delays in funding, our model now assumes operations (Stage 1) commence in the SepQ CY20 with 30ktpa concentrate produced, ramping up to 50ktpa over 18 months. We note challenges experienced by recent ASX producers in ramping up newly commissioned African mines, both in terms of achieving recoveries and also on-spec flake distributions. We model Montepuez ramping up to and completing Stage 2 (100ktpa) by early CY24. We model Stage 1 remaining pre-production capital at A\$60M and A\$15M of working capital during Stage 1 ramp up phase. We model Stage 2 expansion capital at A\$65M and assume this is funded through a mix of debt and equity, as Balama funding is required at the same time. Funding through cashflow is not achievable in our view. We assume 18 years mining 12% TGC material at Montepuez and 11% TGC for the next 12 years with processing of stockpiles for the remaining life of mine .

We model Balama Central in line with the December 2018 feasibility study (FS), with an added contingency for capital. We model commencement of production in early CY23, ramping up to ~58ktpa production by early CY24 and a 27-year mine life as per the FS.

We ascribe a nominal A\$75M for exploration upside across BAT's portfolio and note that its ground holding to heavily underexplored and little vanadium exploration has ensued.

Fig. 2: Hartleys Sum of Parts Valuation for BAT

Valuation	\$m	\$/shr
100% Montepuez (pre-tax NAV at disc. rate of 12%)	272.6	0.06
100% Balama (pre-tax NAV at disc. rate of 12%)	290.1	0.06
Other Assets/Exploration	75.0	0.02
Forwards	0.0	0.00
Corporate Overheads	-53.2	-0.01
Net Cash (Debt)	7.1	0.00
Tax (NPV future liability)	-99.6	-0.02
Options & Other Equity	23.6	0.01
TOTAL	515.7	0.110

Our valuation for BAT
is 11cps

Source: Hartleys' estimates

PRICE TARGET

Our 12-month price target is now 5.6cps (up from 3.6cps) and is made up of a blend of possible scenarios. At present we give the project a 60% chance of being funded. We model a number of scenarios including base case, and spot commodity and fx prices, as well as scenarios where either Montepuez Stage 1 only eventuates, or where Stage 1 and 2 eventuates but no Balama.

Fig. 3: Price Target

Price Target Methodology	Weighting	Spot	12 mth out
NPV base case, assuming significant equity dilution	20%	\$0.11	\$0.13
NPV at spot commodity and fx prices	5%	\$0.07	\$0.08
Montepuez Stage 1 only (no stage 2 or Balama)	15%	\$0.06	\$0.07
Montepuez Stage 1 & 2 only (no Balama)	10%	\$0.06	\$0.07
Base case debt funding fails, funded 100% through equity	10%	\$0.05	\$0.06
Net cash/failure to complete funding	40%	\$0.01	\$0.01
Risk weighted composite		\$0.05	
12 Months Price Target		\$0.056	
Shareprice - Last		\$0.027	
12 mth total return (% to 12mth target + dividend)		108%	

Our 12-month price
target for BAT is
5.6cps

Source: Hartleys' estimates

Fig. 4: Key assumptions and risks for valuation

Assumption	Risk of not realising assumption	Downside risk to valuation if assumption is incorrect	Comment
Graphite price appreciation	Med	High	Our valuation is most sensitive to commodity price assumptions.
Further offtake agreements past 2022 to accommodate Balama	Med	Extreme	Without further offtake past year 3 offtake, the projects may struggle
Economic mine life of 50 years at Montepuez, 27 years at Balama	Low	Med (although also could be upside)	We believe our mine life assumptions are realistic based on current resources & studies. Mine life could be increased should further high-grade resources be discovered.
Debt funding	High	Extreme	Debt funding remains challenging and lacking.
Equity funding	High	Extreme	We await update on potential debt funding, which affects equity funding. We currently assume 50:50 debt :equity
First production following successful ramp-up	High	Moderate	We assume first full-scale Montepuez Stage 1 production in early-CY22

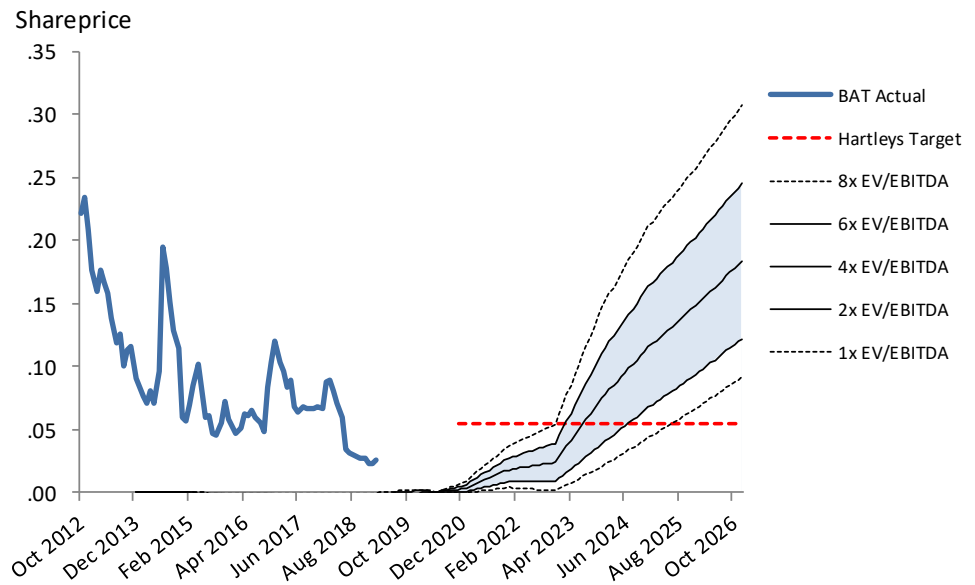
Conclusion

Given the funding challenges and lack of transparency in graphite pricing, we view BAT as high risk. Funding, graphite pricing and no long-term offtake agreements are the biggest threats to our valuation, in our view.

Source: Hartleys Research

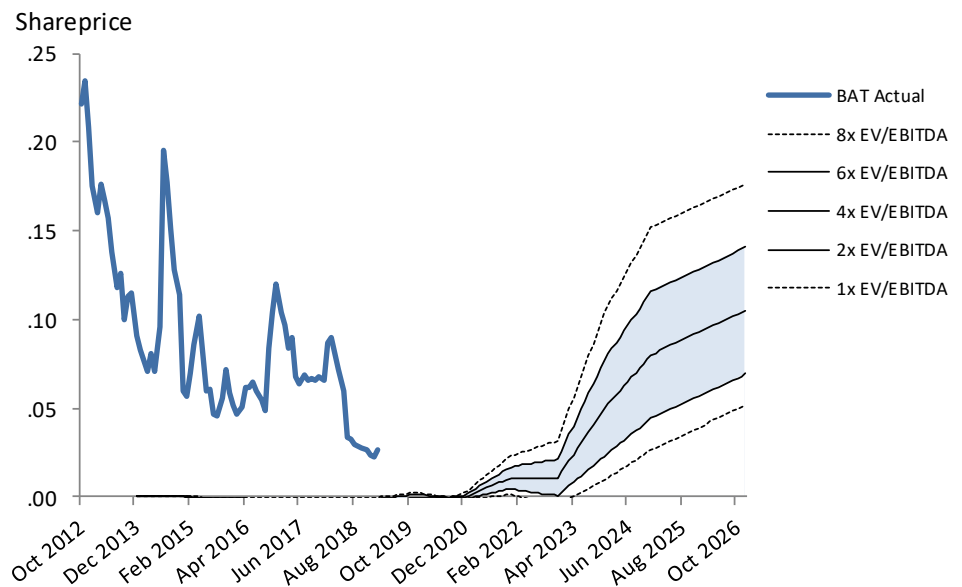
EV/EBITDA BANDS

Fig. 5: Using Hartleys base case commodity forecasts



Source: Hartleys' Estimates, IRESS

Fig. 6: Using spot commodity prices



Source: Hartleys' Estimates, IRESS

HARTLEYS CORPORATE DIRECTORY

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Hartleys Recommendation Categories

Buy	Share price appreciation anticipated.
Accumulate	Share price appreciation anticipated but the risk/reward is not as attractive as a "Buy". Alternatively, for the share price to rise it may be contingent on the outcome of an uncertain or distant event. Analyst will often indicate a price level at which it may become a "Buy".
Neutral	Take no action. Upside & downside risk/reward is evenly balanced.
Reduce / Take profits	It is anticipated to be unlikely that there will be gains over the investment time horizon but there is a possibility of some price weakness over that period.
Sell	Significant price depreciation anticipated.
No Rating	No recommendation.
Speculative Buy	Share price could be volatile. While it is anticipated that, on a risk/reward basis, an investment is attractive, there is at least one identifiable risk that has a meaningful possibility of occurring, which, if it did occur, could lead to significant share price reduction. Consequently, the investment is considered high risk.

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