

06 November 2023

### Stock Data

Ticker	BMN LN
Share Price	1.5p
Market Cap	£23m

### Price Chart



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## Earnings update

Bushveld Minerals is an integrated vanadium business with established South Africa based upstream mining and processing operations, electrolyte production facility in development and an investment in VRFB OEMs. The Company is one of the three operating primary vanadium producers owning two of the world's four operating primary vanadium processing facilities focused on ramping up operations to 5.4ktV in the medium term and potentially 8.0ktV in the long run as well as addressing growing energy storage related demand through downstream business solutions.

- The Company released Q3/23 production update this morning.
- **Group production totalled 1,000mtV (Q2/23: 840mtV) taking 9M output to 2.8ktV (9M/22: 2.7ktV).**
- Cash costs averaged \$26.5/kgV (Q2/23: \$27.4/kgV) with 9M/23 costs coming at \$26.4/kgV (9M/22: \$28.9/kgV).
- Q3/23 sales were 849mtV (Q2/23: 1,068mtV) and 9M sales totalled 2.9kt (9M/22: 2.7ktV).
- **FY23 Group guidance reiterated at 3.7-3.9ktV and \$26.6-26.9/kgV (R481-487/kgV) using ~18.0 ZARUSD exchange rate.**
- **At Vametco**, production amounted to 545mtV (Q2/23: 485mtV) taking 9M output to 1.7ktV (9M/22: 1.9ktV).
- Cash costs pulled back too \$26.5/kgV (Q2/23: \$27.5/kgV) led by stronger production with 9M/23 costs averaging \$25.3/kgV (9M/22: \$24.8/kgV).
- Production averaged ~200mtV per month in July and August as leach plant issues were addressed.
- 10d planned maintenance shutdown recorded in Q3/23 with no further stoppages planned before year end.
- Vametco produced 209mtV in October and are expected to run at 200mtV per month in November and December implying FY23 coming in within guidance.
- **FY23 guidance reiterated at 2.3-2.4ktV and \$25.6-25.9/kgV (R463-469/kgV).**
- **At Vanchem**, production totalled 455mtV (Q2/23: 355mtV) with 9M output at 1.1ktV (9M/22: 0.8ktV).
- Cash costs dropped slightly to \$24.6/kgV (Q2/23: \$27.2kgV) again on better production while 9M/23 costs averaged \$28.3/kgV (9M/22: \$39.1/kg).
- 9d shutdown to repair the refractory in September meant that production dipped in the last month of the quarter to 120mtV vs 160-175mtV in July-August, although, the team expects previously planned 25d maintenance stoppage in Q4/23 will not be required now and to be replaced with a 4d shutdown in November instead.
- Production recovered in October already with 178mtV delivered and output in November and December expected to come in at 150mtV (accounting for 4d maintenance) and 180mtV suggesting that Vanchem operations should comfortably come within guidance if not slightly ahead.
- **FY23 guidance reiterated at 1.4-1.5ktV and \$28.1-28.5/kgV (R509/kgV-516/kgV).**
- BELCO, a vanadium electrolyte production facility, completed plant construction in August with initial samples of electrolyte produced and being distributed to potential battery producers for qualification purposes.

- Tests by potential customers are expected to take a few months.
- Vametco 1MW/4MWh VRFB mini grid supplied by CellCube and that is expected to generate 10% of Vametco power requirements is undergoing site acceptance and grid compliance testing.
- Vanadium prices pulled back during the quarter in line with general economic activity, although, specialty alloy markets and chemicals continued to attract premium.
- US, European and Asian prices are reported at \$36.0/31.5/31.0, respectively (Q2/23: \$40.2/33.5/29.3).

**Conclusion:** Production delivered in line with estimates with marginally better than expected cash costs in Q3/23. FY23 guidance reiterated at 3.7-3.9ktV and \$26.6-26.9/kgV as operations seem to have stabilised at 200mtV and 180mtV per month run rates at Vametco and Vanchem. Focus remains on the \$45m Orion convertible loan restructuring before the 21 December due date followed by SPR investment completion along with a consolidation of the 26% minority stake in Vametco.

(Dec year end)		FY20	FY21	FY22	FY23E	FY24E
USDZAR	R	16.5	14.8	16.4	18.3	18.0
FeV price	US\$/kgV	23.5	32.2	41.4	35.0	40.0
Production	V kt	3.6	3.6	3.8	3.8	4.4
Sales	V kt	3.8	3.3	3.6	4.1	4.4
C1 cash cost	US\$/kgV	18.6	26.1	27.7	26.6	24.8
Revenues	US\$m	90	107	148	145	177
EBITDA	US\$m	-15	-7	22	7	34
PAT	US\$m	-31	-34	-35	-97	5
FCF	US\$m	-28	-32	2	-16	22
EV/EBITDA	x	-	-	10.5	23.2	4.5
PER	x	-	-	-	-	27.5
Net debt/(cash)	US\$m	25	69	76	59	46

Source: SP Angel, Company

Below we provide our valuation breakdown between assets held within the Group as well as sensitivities of our estimates to key assumptions including vanadium prices as well as FX and discount rates.

**NAVPS breakdown**

Valuation	Method	Stage	NPV 100%	Interest	P/NAV	Att US\$m	GBP/shr	
Vametco	DCF10%	Production	229	100%	1.00	229	7.8	
Vanchem	DCF10%	Production	88	50%	1.00	44	1.5	
8ktpaV Upside Potential	DCF10%	PFS/FS	187	Mixed	0.50	70	2.4	
Bushveld Energy BELCO	DCF10%	Development	54	46%	0.75	19	0.6	
<b>Project Value</b>						<b>362</b>	<b>12.4</b>	
<b>Adjustments</b>								
Net Cash/(Debt)						-48	-1.6	
Enerox Interest						8	0.3	
Other (Corporate Overheads 5y Discounted)						-57	-1.9	
<b>Company NAV</b>						<b>265</b>	<b>9.1</b>	

GBPUSD 1.3

Source: SPA

**NAVPS sensitivity to FeV prices, discount rates and USDZAR currency rate**

**NAVPS sensitivity to changes in FeV price / Discount Rate**

	8%	9%	10%	11%	12%
30.0	0.7	0.3	-0.1	-0.4	-0.7
35.0	6.2	5.3	4.5	3.8	3.2
40.0	11.7	10.3	9.1	8.0	7.1
45.0	17.2	15.3	13.6	12.2	11.0
50.0	22.6	20.3	18.2	16.4	14.9

**NAVPS sensitivity to changes in USDZAR / Discount Rate**

	8%	9%	10%	11%	12%
16.0	8.6	7.4	6.5	5.6	4.9
17.0	10.2	9.0	7.8	6.9	6.0
18.0	11.7	10.3	9.1	8.0	7.1
19.0	13.0	11.5	10.2	9.0	8.0
20.0	14.2	12.5	11.1	9.9	8.9

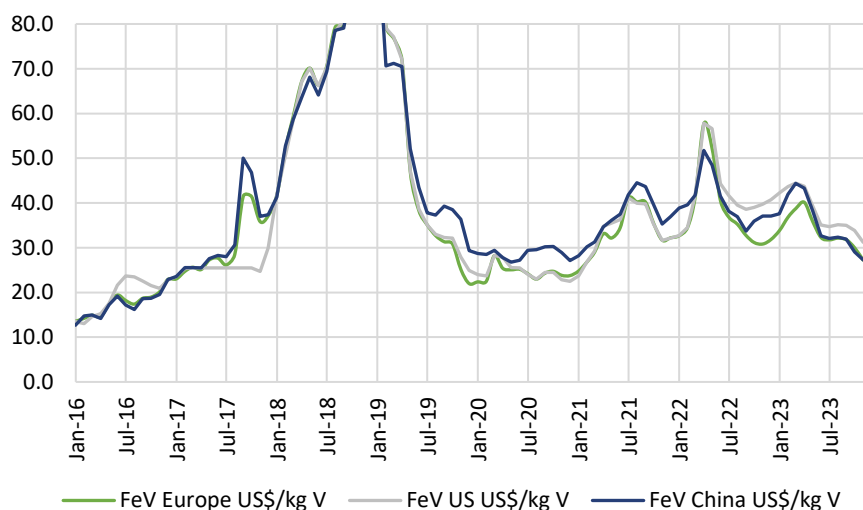
**NAVPS sensitivity to changes in FeV / USDZAR (@10% DR)**

	16.00	17.00	18.00	19.00	20.00
30.0	-3.0	-1.4	-0.1	1.0	2.0
35.0	1.9	3.3	4.5	5.6	6.6
40.0	6.5	7.8	9.1	10.2	11.1
45.0	11.0	12.4	13.6	14.7	15.7
50.0	15.6	17.0	18.2	19.3	20.3

Source: SPA

### Vanadium Prices

Regional FeV prices (US\$/kgV)



Prices peaked at \$144/kgV (China) in 2018 (data left out in the chart)  
 Source: Asian Metals

## Earnings Summary

Projections are ex BELCO related earnings/cashflows from 2024 onwards

US\$m unless stated (YE Dec)

Market data			Operating metrics						
			FY20	FY21	FY22	FY23E	FY24E		
Ticker		BMN LN	USDZAR	16.5	14.8	16.4	18.3	18.0	
Last price	GBp	1.5	FeV price	US\$/kgV	23.5	32.2	41.4	35.0	40.0
Target price	GBp	9.1	Vanadium Production	V kt	3.6	3.6	3.8	3.8	4.4
Rec		BUY	Vanadium Sales	V kt	3.8	3.3	3.6	4.1	4.4
GBPUSD		1.24	C1 cash cost	US\$/kgV	18.6	26.1	27.7	26.6	24.8
Mkt cap	GBPm	22.6	Income Statement						
	USDm	28.0	Revenues	90	107	148	145	177	
EV	GBPm	122.0	<b>EBITDA</b>	<b>-15</b>	<b>-7</b>	<b>22</b>	<b>7</b>	<b>34</b>	
	USDm	151.3	<b>margin</b>	<b>-17%</b>	<b>-7%</b>	<b>15%</b>	<b>5%</b>	<b>19%</b>	
Av # of sh in issue*	mln	1,558	EBIT	-33	-29	-20	-78	19	
Av # traded, 100d	mln	5.7	Net Interest	-5	-14	-14	-13	-9	
Ex Orion and SPR potential dilution			<b>PBT</b>	<b>-38</b>	<b>-39</b>	<b>-37</b>	<b>-94</b>	<b>11</b>	
			<b>Tax</b>	<b>7</b>	<b>5</b>	<b>1</b>	<b>-3</b>	<b>-5</b>	
			<b>PAT</b>	<b>-31</b>	<b>-34</b>	<b>-35</b>	<b>-97</b>	<b>5</b>	
			<b>EPS basic, cents</b>	<b>-2.6</b>	<b>-2.7</b>	<b>-3.1</b>	<b>-5.9</b>	<b>0.1</b>	
			<b>EPS diluted, cents</b>	<b>-2.6</b>	<b>-2.7</b>	<b>-3.1</b>	<b>-5.9</b>	<b>0.1</b>	
			Cash flow						
			<b>CFO</b>	<b>-14</b>	<b>-12</b>	<b>22</b>	<b>-3</b>	<b>34</b>	
			Tax paid	-3	0	-1	-4	-5	
			<b>Net CFO</b>	<b>-17</b>	<b>-12</b>	<b>21</b>	<b>-7</b>	<b>29</b>	
			Capex (incl Exploration)	-11	-20	-19	-9	-7	
			Other	-3	2	-1	24	-	
			<b>CFI</b>	<b>-13</b>	<b>-17</b>	<b>-20</b>	<b>15</b>	<b>-6</b>	
			Dividends paid	-	-	-	-	-	
			Issue of shares	-	-	-	13	-	
			Borrowings net change	50	-4	0	1	-7	
			Interest paid	-3	-3	-6	-6	-8	
			<b>CFF</b>	<b>47</b>	<b>-7</b>	<b>-5</b>	<b>7</b>	<b>-15</b>	
			Net cash flow	17	-36	-4	15	7	
			<b>Cash cf</b>	<b>51</b>	<b>15</b>	<b>11</b>	<b>25</b>	<b>32</b>	
			Balance Sheet						
			Cash & cash equivalents	73	15	14	27	34	
			Receivables/prepayments	11	18	9	11	11	
			Inventories	34	42	55	47	47	
			<b>Current assets</b>	<b>121</b>	<b>78</b>	<b>78</b>	<b>85</b>	<b>93</b>	
			Exploration & PPE	227	212	181	90	82	
			Investments	3	10	6	4	4	
			<b>Non-current assets</b>	<b>229</b>	<b>223</b>	<b>189</b>	<b>96</b>	<b>89</b>	
			<b>Total assets</b>	<b>351</b>	<b>301</b>	<b>268</b>	<b>182</b>	<b>182</b>	
			Payables, provisions	22	33	46	37	37	
			Borrowings ST (incl leases)	14	11	48	7	9	
			<b>Current liabilities</b>	<b>43</b>	<b>48</b>	<b>99</b>	<b>48</b>	<b>49</b>	
			Borrowings LT (incl leases)	84	74	42	79	72	
			<b>Non-current liabilities</b>	<b>117</b>	<b>101</b>	<b>63</b>	<b>99</b>	<b>92</b>	
			<b>Total liabilities</b>	<b>160</b>	<b>149</b>	<b>162</b>	<b>146</b>	<b>141</b>	
			<b>Net assets</b>	<b>191</b>	<b>152</b>	<b>106</b>	<b>35</b>	<b>41</b>	
			Key financial metrics						
			Net debt/(cash)	25	69	76	59	46	
			Av # of sh (diluted)	1,165	1,202	1,271	1,527	2,247	
			EV/EBITDA	-	-	10.5	23.2	4.5	
			PER	-	-	-	-	27.5	
			FCF (NCFO-Capex)	-27.9	-32.5	2.5	-15.6	21.6	
			FCF yield	-	-	2%	-	77%	
			DY	0.0%	0.0%	0.0%	0.0%	0.0%	
			ROA	-	-	-	-	0.0	
			Interest coverage	-	-	-	-	2.2	
			<b>Net Debt/EBITDA</b>	<b>-</b>	<b>-</b>	<b>3.4</b>	<b>9.0</b>	<b>1.4</b>	

Source: Company, SPA

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