

Non-Independent Research

A MiFID II compliant note

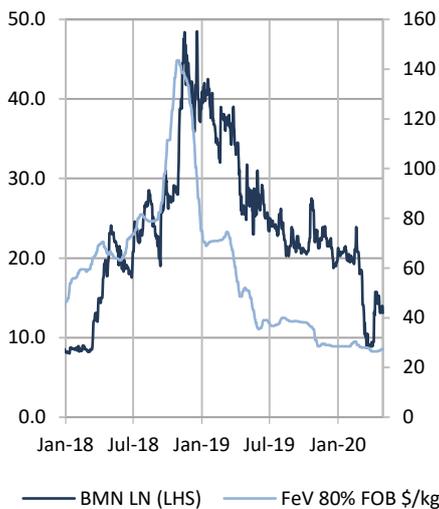
\*SP Angel acts as Nomad & Broker to Bushveld Minerals.

04 May 2020

#### Stock Data

Ticker	BMN LN
Share Price:	12.45
Market Cap:	£144m

#### Price Chart



### Strong vanadium sales and weaker rand offset much impact of South African lockdown in Q1

Bushveld Minerals, is an integrated vanadium mining, processing and technology businesses.

The South African group owns 74% of Vametco and 100% of the Vanchem. 26% of Vametco is held by a Black Economic Empowerment group.

Bushveld Energy (84%) is developing vanadium redox batteries for grid use in SA.

- Bushveld Minerals report strong sales of ferro-vanadium in the first quarter from their Vametco subsidiary
- **Vametco Production:** Nitrovan production was slightly higher at 652mtV in Q1 from 649mtV yoy and 880mtV in Q4 2019.
- This was due to the impact of the sudden COVID-19 lockdown which lasted 35 days in South Africa and heavy rain.
- Bushveld had previously stated that production volumes were to be skewed to the second half of this year.
- **Sales:** 898mtV of ferrovanadium was sold in Q1 2020 vs 508mtV yoy and 673t in Q4 2019 supported by 246mtV of unsold Nitrovan produced last year.
- There is an 8-12 week lag in the pricing of vanadium sales indicating to us that this material may have been sold at around \$24.5mtV in the first weeks of this year.
- **Valuation:** We are revising our valuation to 54p/s based on our revised expectation for ferro-vanadium prices. See table below for key assumptions.
- We have adjusted our production to account for the Coronavirus lockdown in Q1 and Q2 though some of this may be made up in H2 with maintenance brought forward.
- We have reduced our vanadium sales and production forecast for 2020 to 3,668mtV vs 4,114mtV previously published on 30 January.

**Conclusion:** Bushveld appears to be weathering the Coronavirus Lockdown in South Africa remarkably well through the processing of stockpiles and use of social distancing and anti-viral hygiene while also providing ongoing community support and employment.

(Dec year end)		2018	2019E	2020E	2021E	2022E	2023E
FeV price	US\$/kg	81	59	29	40	40	40
Vanadium Production	mtV	2,560	2,833	3,668	5,432	6,168	7,645
Vanadium Sales	mtV	2,573	2,392	3,668	5,432	6,168	7,645
Sales*	US\$m	192.1	134.3	102.8	206.8	234.8	291.0
Cash Op costs	US\$m	-65.3	-59.7	-66.9	-89.7	-98.2	-115.5
Unit Cash Op costs*	US\$/kg	25.5	21.1	18.2	16.5	15.9	15.1
Operating profit	US\$m	95.2	47.0	8.2	85.3	102.4	137.3
Pre-tax profit	US\$m	86.6	48.5	5.8	81.0	100.7	135.9
Tax	US\$m	-37.6	-11.4	1.6	-18.2	-23.1	-31.7
Post-tax profit	US\$m	49.0	37.1	7.4	62.8	77.5	104.2
EPS	US\$/c/s	2.90	2.37	0.60	4.58	5.78	8.01
PE	x	5.7	6.5	25.7	3.3	2.7	1.9
EV/EBITDA	x	1.3	2.6	8.6	1.4	1.2	0.9
EBITDA	US\$m	101.2	50.9	15.4	95.5	114.3	149.3
Free Cash Flow (100%)	US\$m	32.2	-13.1	-38.9	20.7	53.6	100.0

Source: SP Angel, Company. +Vametco & Vanchem figures combined.

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SP Angel forecasts: Figures based on 100% of Vametco and Vanchem. Bushveld hold an effective 74% of Vametco.

\*Vanadium sales see a 8 -12 week lag when product is delivered to final customer. This applies for all the sales

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## Bushveld Cont...

### Vametco

- **Costs:** unit production costs at Vametco were 8% lower yoy at US\$18.9/mtV in Q1.
- The weaker rand and lower fuel prices will benefit costs further this year.
- Note, Q4 production costs fell to US\$14.6/kgV from US\$15.2/kgV post audit review, excluding depreciation, royalties and selling, general & administrative expenses.

### Vanchem

- **Vanchem:** produced some 219mtV despite 10 days of power rationing and the coronavirus lockdown.
- This looks like a relatively good result with Vanchem selling 182mtV in the first three months of the year.
- Vanchem already accounts for 31% of Bushveld's attributable vanadium production.
- Vanchem has now restarted following 35 days of lockdown.
- **Production:** 219mtV in Q1 2020 of vanadium contained in chemicals 19mtV, flake 130.5mtV and ferro-vanadium 69.4mtV.
- **We expect Vanchem to produce 936mtV of vanadium products this year.**
- **Sales:** 182mtV of vanadium sold in Q1 of which 75.1mtV was as flake, 9.7mtV as chemicals, and 97.6mtV as Ferro-vanadium.
- Costs at Vanchem were similar to Vametco at US\$18.5/kgV despite expectations for higher costs which feels like a good result for a recent acquisition.
- Costs are higher due to inventory build as production ramps up under the new ownership of Bushveld Minerals.
- **Capex (Vanchem):** The team have completed a scoping study on the Vanchem refurbishment and prioritised ~R85m (\$4.5m) as critical capital spend for 2020.
- This expenditure is mainly in H2 giving management time to adjust expenditure if the group needs to conserve cash beyond expectations.
- Vametco and Vanchem are now ramping up production back to normal levels

### Mokopane mine

- **Mokopane mine:** DFS timing under review as this is non-critical and does not impact on Vanchem's feedstock for a year.
- Bushveld can direct magnetite concentrates to Vametco from Vanchem if production from the Mokopane mine is delayed.
- While this option is not optimal it has almost no capital cost and simply adds transport costs, though it may serve to limit future expansion at Vametco in future years if Mokopane is significantly delayed.
- **FOREX:** South African rand weakened to ZAR19/USD from around ZAR15/USD helping the sector
- **Energy:** Oil prices have fallen to around \$20/bbl reducing the cost of fuel in the opencast mine
- **Coal prices** should have also fallen reducing the cost of coal for heat and reduction in the kiln.
- **Group Capex:** All non-essential capital expenditure has been deferred.
- The team have also reduced capital spending and brought forward maintenance schedules to take advantage of the lockdown.
- **Debt:** Bushveld drew down the full R375m (\$22m) bank debt facilities giving the company greater firepower and flexibility. Bushveld could conceivably use this to gain some commercial advantage through the crisis.
- **Cash:** Bushveld report healthy cash and cash equivalent at \$34m at end-December and \$34.4m at the end of March.
- Our own analysis indicates the company could withstand a full lockdown through most of the year.
- Continued production: fortunately, management have managed to keep processing stockpiled material through the lockdown with revised lockdown regulations allowing

Bushveld to ramp up production back to more normal levels in accordance with government guidelines.

- **Forex:** The further collapse of the SA rand means that Bushveld's US dollar receipts go further in terms of local services and debt repayment
- **Force majeure:** Bushveld has not had to declare force majeure and continued to meet orders through stocks
- **CSR:** Bushveld has continued to pay employees and serve local communities including hospitals, care homes, police stations with sanitisers and water to help the community prepare for the coronavirus.
- Management will update the market on revised capital expenditure plans in the main results report.
- **Guidance:** The South African lockdown ran from 27 March to 30 April with Bushveld now allowed to resume full production subject to guidelines.
- Mining operations were allowed to re-open and operate at a reduced capacity of 50% from 16 April
- Bushveld is reviewing its guidance and will update the market when there is greater certainty.
- **Maintenance:** "No further maintenance shutdowns are expected for the remainder of 2020." This is great news and should enable the group to make up for much of its lost production in the Lockdown.
- The kiln off-gas project has been placed on hold due to Coronavirus restrictions with discussions ongoing with the relevant authorities from an environmental compliance perspective.

#### **Bushveld Energy**

- **Bushveld Energy** received approvals for equity and debt from the IDC, 'Industrial Development Corporation' of South Africa for the construction of Electrolyte plant (Equity split: 55% Bushveld, 45% IDC).
- The JV with the IDC has elected to spend R68m to end 2022 on the electrolyte plant, its working capital and ramp-up support
- EPC contractor selected

#### **VIP – Vanadium Redox Flow Battery Investment Program**

- Bushveld now holds 8.71% in Invinity, formed from the merger of Avalon and redT energy (RedT LN).
- Invinity also secured >£10m in new equity to support its business
- Bushveld also completed due diligence to acquire a 24.9% stake in Enerox as part of an investment consortium, watch this space.
- Bushveld reminds us that the outlook for *energy storage 'remains strong, with cumulative installations of grid-connected battery energy storage predicted to reach 64.3 GW / 179 GWh in 2025.'* Though delays of several months are likely for our projects in South Africa.

#### **Lemur**

- Lemur coal mine-power project DFC started with completion due by end of Q3 for the Imaloto coal mine design in Madagascar.
- SEIA studies are ongoing and due for submission in Q2. The EPC and power line contract negotiations with Sinohydro and others are ongoing. Discussions for project finance are also targeting financial close in 12 months.

#### **Vanadium Prices**

- Ferro-vanadium Prices: Chinese production of secondary vanadium have been hit by the impact of the Coronavirys.
- This has supported prices in China and in Europe as Chinese exports reduced with China probably now consuming all its domestic production.
- Prices in China remain at around \$27.5-29/kgV with Europe catching up at \$25.5-26.65/kgV on figures from FastmarketsMB.
- In the US, Ferro-vanadium prices rose to end-February to ~\$30/kgV before pulling back to ~\$23.5 whereas European prices have remained remarkably steady probably due to the lack of Chinese sales into the region.

**Price outlook:** We expect to see firm recovery in ferro-vanadium prices on new demand for construction steel.

- Many major economies will use major construction projects and accelerated building programs to restart economic growth as Lockdowns are eased.
- We are cautiously pulling our forecasts for ferro-vanadium to \$29/mtV from \$40/mtV for this year as we still expect ferro-vanadium prices to rise significantly from here. We have also reduced our longer term Ferro-vanadium price to \$40/mtV from \$45.mtV.

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Buy - Expected return >15%

Hold - Expected return range -15% to +15%

Sell - Expected return < 15%