



H1 2020 INTERIM RESULTS

BUSHVELD MINERALS



Disclaimer



These presentation slides, or any part of them and any related video or oral presentation, any question and answer session and any written or oral material discussed or distributed during the presentation (the "Presentation Materials") has been prepared solely for your information by Bushveld Minerals Limited (the "Company") and do not constitute an offer or invitation to purchase or subscribe for any securities of the Company and should not be relied on in connection with a decision to purchase or subscribe for any such securities. The Presentation Materials do not constitute a recommendation regarding any decision to sell or purchase securities in the Company. In accessing the Presentation Materials, you agree to be bound by the following terms and conditions.

The Presentation Materials do not constitute advice relating to legal, accounting, taxation or investment matters. The Presentation Materials do not constitute a recommendation regarding any potential securities offering. The information contained in the Presentation Materials does not purport to contain all information that may be required to evaluate the Company, its financial position and/or any investment decision.

Whilst all reasonable care has been taken to ensure that the facts stated in these Presentation Materials are accurate and that the forecasts, opinions and expectations contained in these Presentation Materials are honestly held and based on reasonable grounds, no undertaking, representation, warranty or other assurance, express or implied, is made or given by or on behalf of the Company or any of its directors, officers, partners, employees, agents, advisers or affiliates (collectively, "Representatives"), or any other person, as to the accuracy, completeness or fairness of the information or opinions contained in these Presentation Materials. In addition, in issuing these Presentation Materials, neither the Company nor any Representative undertakes any obligation to update or to correct any inaccuracies which may become apparent in these Presentation Materials.

Accordingly, no responsibility or liability is accepted by the Company or its Representatives for any loss howsoever arising, directly or indirectly, from the use of such information or opinions or for any errors, omissions, misstatements, negligence or otherwise for any other communication, written or otherwise (except that nothing in this paragraph will exclude liability of the Company for any undertaking, representation, warranty or other assurance made fraudulently) or as to the suitability of any particular investment for any particular investors or for any loss howsoever arising, directly from any use of such information or opinions or otherwise arising in connection therewith. In addition, no duty of care or otherwise is owed by the Company nor any Representatives for any loss, cost or damage suffered or incurred as a result of the reliance on such information or opinions or otherwise arising in connection with the Presentation Materials. To the fullest extent permissible by law, each of the Company, and the Representatives disclaim any and all liability, whether arising in tort, contract or otherwise, which they might otherwise have in respect of these Presentation Materials.

The Presentation Materials have not been approved by the Financial Conduct Authority as a prospectus under the Prospectus Rules (made under Part VI of the Financial Services and Markets Act 2000 ("FSMA")) or by London Stock Exchange plc ("LSE"), nor is it intended that they will be so approved. These Presentation Materials do not constitute or form part of any prospectus, admission document, invitation or offer for sale or solicitation or any offer to buy or subscribe for any securities nor will they or any part of them form the basis of, or be relied on in connection with, or act as any inducement to enter into, any contract or commitment. No reliance may be placed for any purpose on the information or opinions contained in the Presentation Materials or on their completeness, accuracy or fairness.

The Presentation Materials are directed at authorised persons or exempt persons within the meaning of FSMA or any order made thereunder or to those persons falling within the following articles of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended) (the "Financial Promotion Order"): Investment Professionals (as defined in Article 19(5)), members and creditors of certain bodies corporate (as defined in Article 43 (2)) and High Net Worth Companies (as defined in Article 49(2)). Persons who do not fall within any of these definitions should not rely on the Presentation Materials nor take any action upon them.

These Presentation Materials are exempt from the general restriction in section 21 of FSMA relating to the communication of invitations or inducements to engage in investment activity on the grounds that they are made only to certain categories of persons, under the Financial Promotion Order as set out above

The Presentation Materials contain forward-looking statements, which are based on current expectations and projections of future events and that involve risks and uncertainties. All statements other than statements of historical facts contained in this document, including statements regarding the Company's future financial position, business strategy and plans, business model and approach and objectives of management for future operations, are forward-looking statements. Without limitation, the forward-looking statements in this document include any statements preceded by, followed by or including words such as "anticipate", "believe", "could", "estimate", "expect", "future", "intend", "may", "opportunity", "plan", "potential", "project", "seek", "will", "target", "aim", "can have", "likely", "should", "would" and other words and terms of similar meaning or the negative

Disclaimer



The Company's actual results could differ materially from those anticipated in the forward looking statements as a result of many factors. The forward looking statements in these Presentation Materials are based on the beliefs and assumptions of the Company's directors and information only as of the date of this document and are not guarantees of future performance, and the forward looking events discussed in this document might not occur. No representation or warranty is made that any forward-looking statement will come to pass or as to the reasonableness thereof and no reliance should be placed on any forward looking statements. The Directors undertake no obligation to publicly update any forward looking statements, whether as a result of new information, future earnings, or otherwise. The past performance of the Company is not a reliable indication of the future performance of the Company. No statement in the Presentation Materials is intended to be nor may it be construed as a profit forecast or a profit estimate. Results can be positively or negatively affected by market conditions beyond the control of the Company or any other person.

The Presentation Materials should not be distributed, published, reproduced or otherwise made available in whole or in part by recipients to any other person and, in particular, should not be distributed to persons with an address in the Republic of Ireland, Australia, United States of America, Canada or Japan or in any other country outside the United Kingdom where such distribution may lead to a breach of any legal or regulatory requirement. No document in relation to the Company's securities has been, or will be, lodged with, or registered by, The Australian Securities and Investments Commission, and no registration statement has been, or will be, filed with the Japanese Ministry of Finance in relation to the Company's securities. Accordingly, subject to certain exceptions, the Company's securities may not, directly or indirectly, be offered or sold within Australia, Japan, the United States of America, Canada or the Republic of Ireland or offered or sold to a resident of Australia, Japan, United States of America, Canada or the Republic of Ireland.

The Presentation Materials do not constitute or form a part of any offer or an invitation or solicitation or advertisement to purchase and/or subscribe for securities in South Africa, including an "offer to the public" as defined in the South African Companies Act, 2008. Information made available in the Presentation Materials should not be considered as "advice" as defined in the South African Financial Advisory and Intermediary Services Act, 2002 ("FAIS Act") and should not be construed as an express or implied recommendation, guide or proposal that any particular transaction in respect of any securities or in relation to the business or future investments of the Company is appropriate to the particular investment objectives, financial situations or needs of a prospective investor, and nothing in the Presentation Materials should be construed as constituting the canvassing for, or marketing or advertising of, financial services in South Africa. The Company is not a financial services providers licensed as such under the FAIS Act.

Neither the Presentation Materials nor any copy of them may be taken or released or distributed or published, directly or indirectly, in the United States of America (the "United States"). The material set out in the Presentation Materials is for information purposes only and is not intended, and shall not be construed, as an offer for securities for sale in the United States or any other jurisdiction. The Company's securities (the "Securities") have not been, and will not be, registered under the United States Securities Act of 1933, as amended (the "US Securities Act") or with any securities regulatory authority of any state or other jurisdiction of the United States and may not be offered or sold within the United States or to, or for the account or benefit of, any US Person as that term is defined in Regulation under the US Securities Act except pursuant to an exemption from or in a transaction not subject to the registration requirements of the applicable securities legislation. The Company has not been registered and will not register under the United States Investment Company Act of 1940, as amended.

In addition, certain information contained in the Presentation Materials may have been obtained from published and non-published sources prepared by other parties, which in certain cases have not been updated to the date hereof. While such information is believed to be reliable for the purpose used in the Presentation Materials, the Company and its Representatives do not assume any responsibility for the accuracy or completeness of such information and such information has not been independently verified by the Company and its Representatives. Furthermore, external or other factors may have impacted the Presentation Materials, since their preparation. The Presentation Materials have not been independently verified.

The technical information contained within this presentation has been reviewed and approved by Professor Richard Viljoen. Professor Richard Viljoen has more than 30 years' experience in the mining industry, including 15 years as chief consulting geologist for Gold Fields of South Africa. Notable past experience includes the development of significant mines including Northam Platinum and the Leeudorn and Tarkwa gold mines, identifying and developing a significant platinum deposit in the Bushveld Complex for Akanani Resources as well as acting as consultant for exploration and mining companies in Canada, Mexico, Venezuela, India and China in the fields of base metals, gold and platinum. Professor Richard Viljoen has extensive experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined under the JORC Code (2012). Professor Richard Viljoen consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

Presentation of data unless specified otherwise: variance analysis relates to the relative performance of Bushveld Minerals and/or its operations during the 2019 financial year results.



A low cost, vertically integrated primary vanadium producer

MINING



- Large, high-grade, primary vanadium assets and resource base ~550 Mt grading 1.6% – 2.0% V₂O₅ in magnetite
- 3 deposits, well serviced with logistics infrastructure

PROCESSING



- Low cost, flexible and scalable primary vanadium processing facilities
- Owns 2 of the world's 4 operating primary vanadium production processing facilities
- Aiming to be the leading primary vanadium producer with production

An energy storage solutions provider, exclusively focused on vanadium based energy storage systems

ELECTROLYTE



- Developing electrolyte manufacturing with 200MWh capacity
- Leverages own primary processing capacity and knowledge for low cost production
- Create a business model for electrolyte supply

MANUFACTURING



- Investment into OEMs¹ of VRFBs² via the VIP³
- Support of local VRFB assembly in South Africa

DEPLOYMENT



- MW scale energy storage project development including core solar PV and long duration mini-grid IPP⁴ offering
- Direct sales into large mandates/tenders in Africa

Through its vertical integration business strategy, Bushveld Minerals can deliver across the upstream and downstream vanadium value chain

1. OEMs: Original equipment manufacturers, 2. VRFBs: Vanadium redox flow batteries, 3. VIP: VRFB Investment platform 4. IPP: Independent power producer

Bushveld Vanadium overview

1. Vametco

- Mine and processing facility
- 185.5 Mt Resource, 47.4 Mt reserve grade of 2% V_2O_5 in magnetite
- Life of Mine of >30 years (ore reserves)
- 2019 production of 2,833mtV and production cash cost (C1) of US\$18.10/kgV
- 2020e production of 2,700 mtV – 2,850 mtV and cash cost of US\$17.50/kgV – US\$17.90/kg.
- Current products: Nitrovan™, Modified Vanadium Oxide (“MVO”) and Ammonium Metavanadate (“AMV”) and Ferrovandium (“FeV”)

2. Brits

- Outcropping, strike extension of the Vametco mine
- 66.8 Mt JORC resource of 1.6% V_2O_5 in magnetite
- Provides the potential for additional ore feed for Vametco and Vanchem

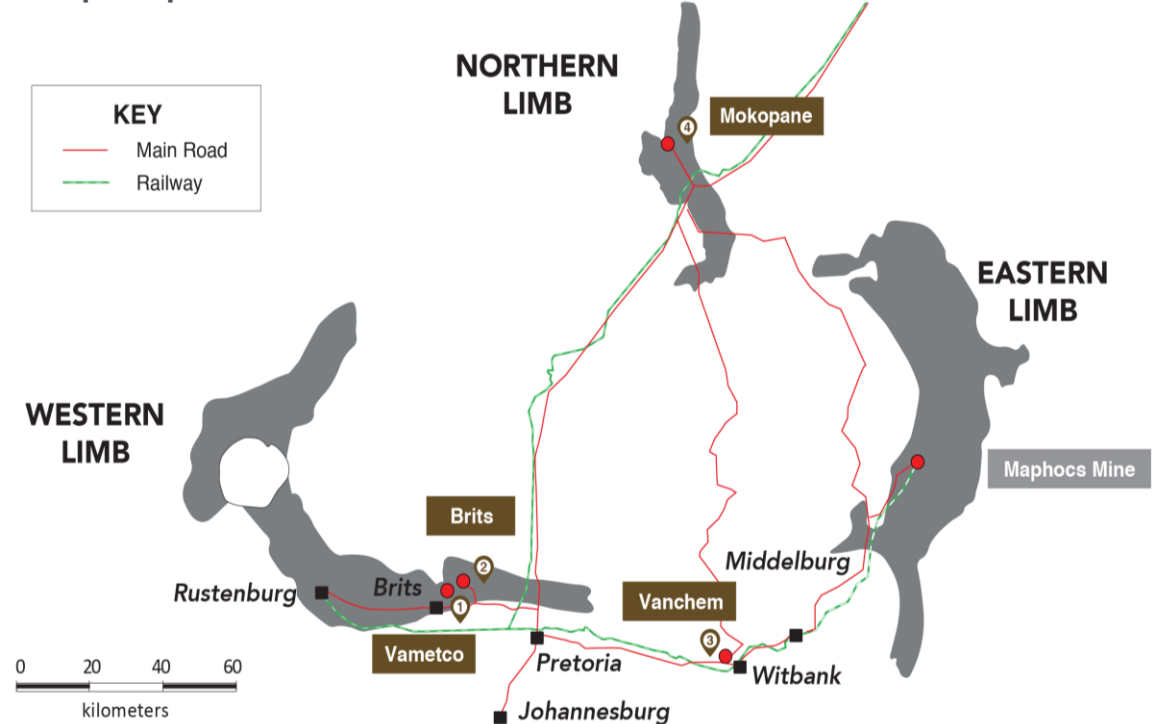
3. Vanchem

- Low cost primary processing facility
- 2020e production of 960 mtV – 1,100 mtV and cash cost of cash cost guidance US\$18.40/kgV and US\$19.0/kgV
- Current products: Vanadium Pentoxide (“ V_2O_5 ”), FeV, Chemicals
- Future products: Vanadium Trioxide (“ V_2O_3 ”)

4. Mokopane

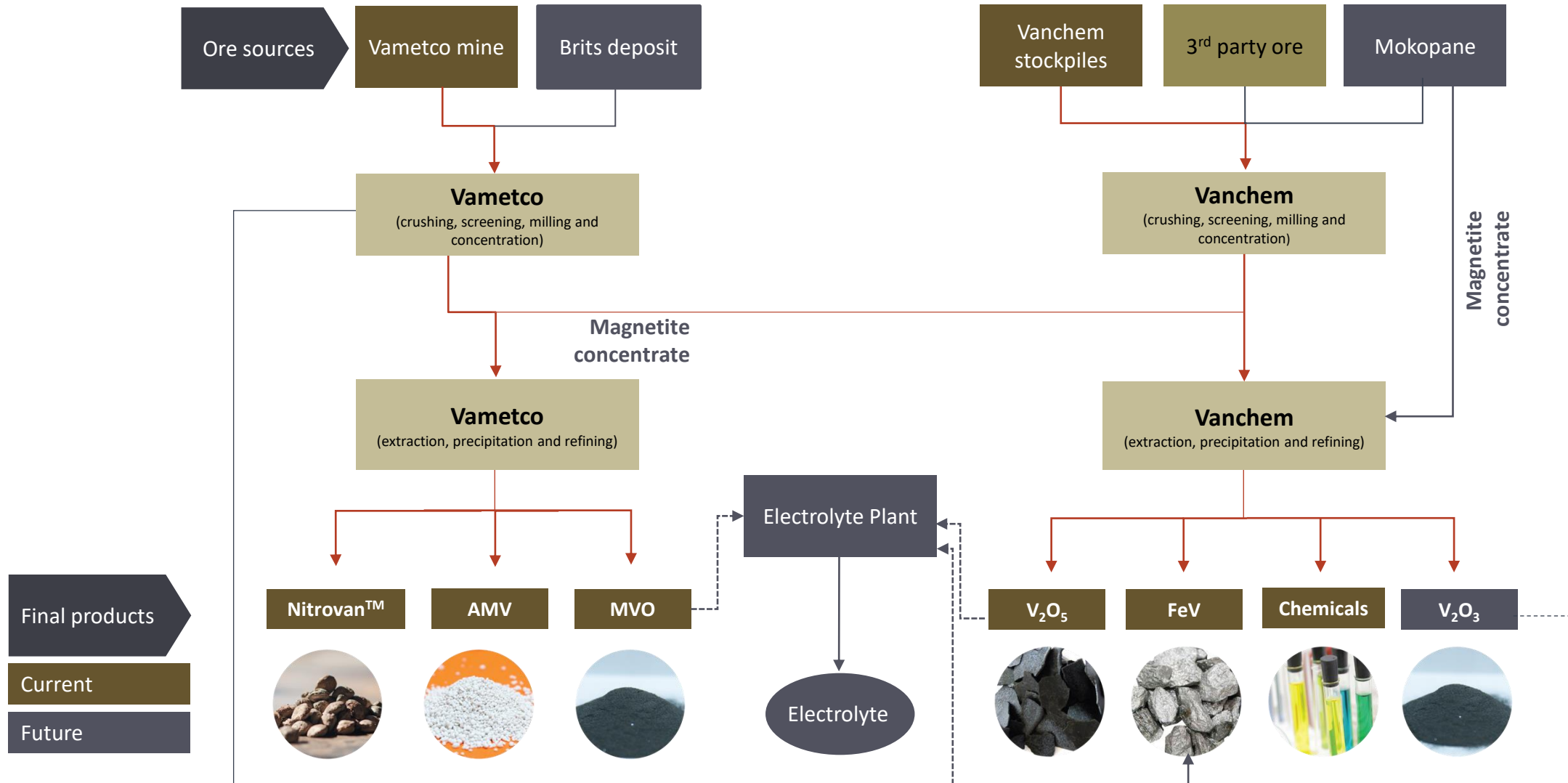
- 298 Mt JORC resource, with vanadium in-magnetite grades of 1.75% V_2O_5
- 30 year Mining Right executed in January 2020
- Mokopane to become a primary source of feedstock for Vanchem and supply dry magnetic separated ore

Map of operations



- Assets are located in South Africa, host to the largest high-grade primary vanadium deposits in the world
- Vametco, Brits and Mokopane comprise a total JORC-compliant resource base of at least 550 Mt (100 % basis), including 76 Mt (100 % basis) of JORC-compliant reserves, with some of the highest primary grades in the world

Bushveld Minerals' flexible and integrated asset base



Bushveld Energy's business model

Electrolyte

Developing the production and sales of the highest value component of VRFBs

- Developing a 200 MWh vanadium electrolyte production facility to supply to local and international VRFB projects, together with the IDC¹
 - Approved construction. Bushveld Minerals commitment of ZAR68 million through to 2022. The IDC also approved the investment for its share of equity and all the debt funding for the project
- Implementing vanadium electrolyte rental contracts
- Creating a financial structure to own vanadium and rent electrolyte

Deployment

Megawatt scale energy storage project development, with direct sales into a large scale mandates

- Preparing for the 2,000 MW energy storage allocation in South Africa's 2019 Integrated Resource Plan, and other African projects within the World Bank's 17.5 GWh energy storage roll-out programme
- Developing a commercial 1 MW mini-grid at the Vametco mine, including 2.5 MW of solar PV and a 1 MW / 4 MWh VRFB as a funded independent power producer

Manufacturing

Investment into global VRFB manufacturers and local assembly of VRFBs

- Established a VRFB Investment Platform for investment into VRFB companies with attractive upside potential
 - A US\$5 million strategic interest in Invinity, the AIM-listed entity created by the merger of redT² and Avalon³
 - Acquisition, as part of a consortium, of Enerox⁴, the Austrian VRFBs original equipment manufacturer



1. IDC: Industrial Development Corporation, 2. redT: redT energy plc, 3. Avalon: Avalon Battery Corporation, 4. Enerox: Enerox GmbH

H1 2020 Operational and Financial Highlights

- Group vanadium production **1,649mtV ↑ 18%**
 - **Production losses of ~ 380 mtV** directly related to the Covid-19 nationwide lockdown
 - Group sales of **1,765 mtV, ↑ 58%**
 - Sales to China: **18%** vs 3% in H1 2019
 - Realised sales price of **US\$24.20/kgV ↓ 65%**
 - Revenue of **US\$43.1 million ↓ 45%**
 - Lost Revenue due to Covid-19 of **US\$9.2 million, and costs of US\$0.4 million**
 - EBITDA **loss of (US\$1 million) ↓ 102%**
 - Operating loss of **(US\$9.9 million) ↓ 126%**
 - Cash and cash equivalents: **US\$24.6 million**
- Zero fatalities
 - Vametco recorded TIFR¹ of **18.80 ↓ 11%** .Vanchem TIFR of 0.009
 - 36 Covid-19 cases as at 30 August 2020 **100% recovery rate**
 - **No Covid-19 related stoppages** since May 2020
- Bushveld Energy
- Incorporation of BELCO²
 - Financial close for BELCO² and IDC³ funding approval
 - Funding approval from ELIDZ⁴ and DTIC⁵ to construct the building for the facility
 - Started EPC⁶ of the plant
 - Acquired 8.71% shareholding in Invinity⁷
 - Signed surface sublease agreement and PPA⁸ for Vametco mini-grid and obtained debt financing term-sheet

2020 Outlook and Guidance

- **US\$30 million** Production Financing Agreement with Orion and under a separate agreement a convertible loan notes of up to **US\$35 million**
 - Duferco⁹: early repayment of US\$11.5 million of their US\$23 million convertible loan notes
 - Production guidance: **3,660 mtV** and **3,950 mtV**
- Bushveld Energy
- Advance BELCO² plant construction and execute additional electrolyte rental agreement(s)
 - Investigate the business case for South African-based VRFB assembly
 - Sign a debt financing term sheet and EPC⁶ agreement for the Vametco's mini-grid

1.TIFR: Total Injury Frequency Rate, 2. BELCO: Bushveld Electrolyte Company, 3. IDC: Industrial Development Corporation, 4. ELIDZ: East London Industrial Development Zone
5.DTIC: Trade and Industry and Competition , 6.EPC: Engineering, Procurement and Construction, 7. Invinity: Invinity Energy Systems plc, 8. PPA: Power purchase agreement,
9. Duferco: Duferco Participations Holding S.A.



H1 2020 Interim Results

Bushveld Minerals Health and Safety

H1 2020 INTERIM RESULTS – Fortune Mojapelo

H1 2020 Health and safety performance

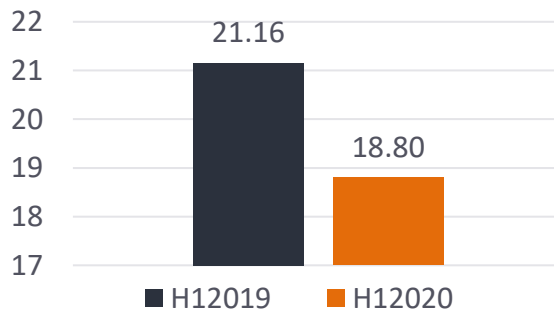
Health and safety remains a top priority

- Vametco: TIFR¹ **18.80**, an **11% ↓** (H1 2019:21.16) and Vanchem: TIFR 0.009
- Vametco and Vanchem recorded **zero** fatalities
- 36 Covid-19 positive cases with **100% recovery rate** as at 30 August 2020

Stakeholder and Community

- Continued engagement and collaboration with employees, government and communities
- Supported local communities by supplying water and sanitisers to local hospitals, police stations and care homes

Vametco's Total Injury Frequency Rate



11%
Improvement in
Total Injury
Frequency Rate

Prioritising the well-being of our employees and host communities

Covid-19 Statistics as at 30 August 2020

	South Africa ²	Bushveld Minerals
Confirmed cases	627,041	36
Recoveries	540,923	36
Deaths	14,149	0
Conducted test rate	6.28%	12.5%
Cases/tests conducted	17.0%	41.9%
Cases/population	1.1%	5.2%
Recoveries /confirmed cases	86.3%	100%
Deaths /confirmed cases	2.3%	0%

1. TIFR: Total Injury Frequency Rate

2. Statistics South Africa, <http://www.statssa.gov.za/publications/P0302/P03022019.pdf>



H1 2020 Interim Results

Production Financing Agreement and Convertible loan notes

H1 2020 INTERIM RESULTS – Fortune Mojapelo

Production financing agreement

Terms	
Issuer	Bushveld Vametco Alloys (Pty) Ltd (“Vametco”)
Size	<ul style="list-style-type: none"> US\$30 million with Orion Mine Finance
Maturity	<ul style="list-style-type: none"> Amortises over the life of mine and will be serviced through quarterly repayment amounts (comprising repayment of principal and payment of interest)
Payments	<ul style="list-style-type: none"> The quarterly repayment amount will be determined as the sum of the below 2 constituents: <ul style="list-style-type: none"> Gross revenue rate of 1.175% for years 2020 and 2021 and 1.45% from 2022 onwards, multiplied by Vametco’s gross revenue for the quarter <ul style="list-style-type: none"> From the beginning of the 2022 calendar year and throughout the remaining life of the loan, where the average quarterly vanadium realised equals or exceeds US\$47/kgV the gross revenue rate shall be 1.175%, subject to a gross revenue amount floor Unit rate of US\$ 0.443/kgV multiplied by Vametco’s aggregate vanadium sales units for the quarter <ul style="list-style-type: none"> The unit rate will be adjusted for inflation at each anniversary of the execution date the loan agreement Once Vametco reaches life of mine vanadium sales of approximately 132,020 mtV during the term of the facility, the gross revenue rate and unit rate will reduce by 75%
Repayment	<ul style="list-style-type: none"> On each of the first 3 loan anniversaries, the Vametco has the option to repay up to 50% of both constituent loan parts. If Vametco utilises the loan repayment option, the gross revenue rate and the unit rate will reduce accordingly
Use of Proceeds	<ul style="list-style-type: none"> Vametco’s phase 3 expansion project Debt repayment

Vametco Phase 3 expansion project fully funded

Convertible loan note instrument (“Instrument”) to raise up to US\$35 million

Terms	
Issuer	Bushveld Minerals
Size	<ul style="list-style-type: none"> Up to US\$35 million. Orion has conditionally agreed to subscribe for a minimum of US\$10 million and up to US\$20 million The Company will seek other subscribers for the balance on the same terms
Maturity	<ul style="list-style-type: none"> 3 Years from drawdown date
Coupon	<ul style="list-style-type: none"> 10% Capitalised
Drawdown	<ul style="list-style-type: none"> Bushveld will first draw down on Orion’s maximum commitment of US\$20 million prior to drawing down on the US\$15 million from other investors
Conversion features	<ul style="list-style-type: none"> Between drawdown and the Instrument’s maturity date, Noteholders may, convert an amount of the outstanding debt, including capitalised and accrued interest <ul style="list-style-type: none"> First six months: Up to 1/3 of the outstanding amount Second six months: Up to 2/3 of the outstanding amount From the anniversary of drawdown until the maturity date: the outstanding amount under the Instrument may be converted Bushveld also has the option to convert all, but not some, of the amount outstanding under the Instrument if its volume weighted average share price is more than 200% of the conversion price over a continuous 15 business days period
Convertible price	<ul style="list-style-type: none"> The lesser of (i) 130% of the 15 business days volume weighted average closing price leading to the date on which the Drawdown Notice is served and (ii) 25p
Use of Proceeds	<ul style="list-style-type: none"> Towards the first phase of Vanchem’s critical refurbishment programme Debt repayment



H1 2020 Interim Results

Bushveld Minerals Operational Results

H1 2020 INTERIM RESULTS – Fortune Mojapelo

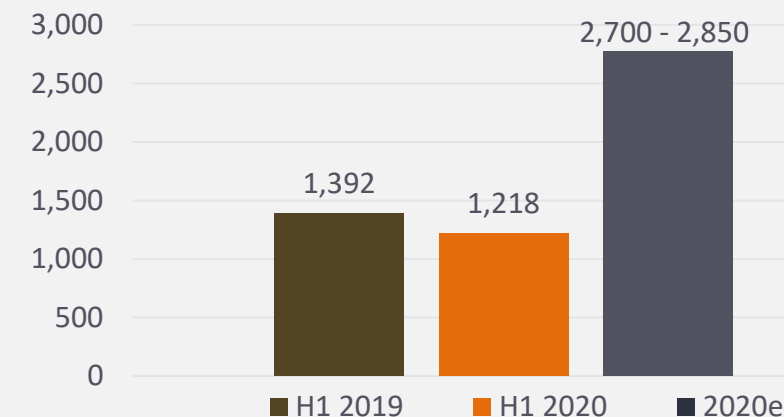
Vametco's H1 2020 operational performance

Vametco

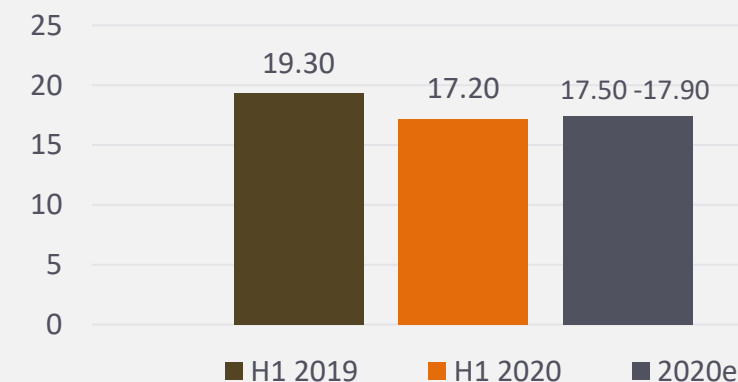
- H1 2020 Production of **1,218 mtV**, 13% ↓ relative to H1 2019, (H1 2019: 1,392mtV)
 - Lost production of **300 mtV** due to the Covid-19 nationwide lockdown
- Production cash cost (C1) of **US\$17.20/kgV**, 11 % ↓ H1 2019 (H1 2019: US\$19.3/kgV), supported by a weaker ZAR:USD exchange rate
- Total cash cost of US\$23.90/kgV
- 2020 guidance dependent on no further Covid-19 related stoppages
 - Production guidance: **2,700 mtV and 2,850 mtV** (previously between 3,000 mtV and 3,200 mtV)
 - Production cash cost guidance (C1) guidance: **ZAR295/kgV and ZAR300/kgV (US\$17.50/kgV and US\$17.90/kgV)**
- Kiln-Off Gas commissioned at the end of September 2020
 - Will enable Vametco to comply with environmental regulations and increase kiln feed throughput
 - 2020 total capital expenditure of US\$2.3 million

Operational performance affected by the Covid-19 nationwide lockdown

Production (mtV)



Production cash cost (C1) (US\$/kgV)



Vanchem's H1 2020 operational performance

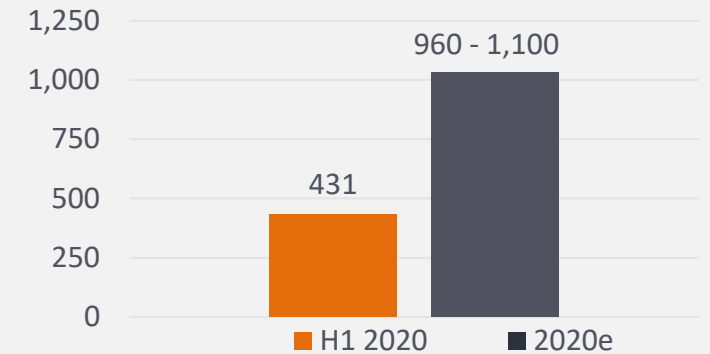
Vanchem

- H1 2020 production of **431 mtV**, lost production of **80 mtV** due to the Covid-19 nationwide lockdown
- Production cash cost (C1) of **US\$16.40/kgV**
- Total cash cost of US\$22.50/kgV
- 2020 guidance maintained, dependent on no further Covid-19 related stoppages
 - 2020e production guidance of **960 - 1,100 mtV**
 - 2020e production cash cost guidance **ZAR310/kgV and ZAR320/kgV (US\$18.40/kgV and US\$19.00/kgV)**

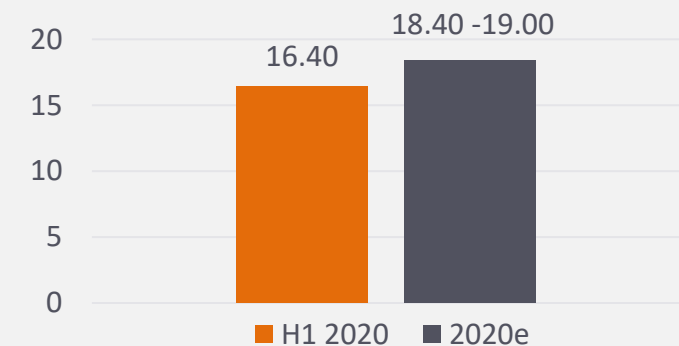
Solid operational performance despite the Covid-19 nationwide lockdown



Production (mtV)



Production cash cost (C1) (US\$/kgV)



Bushveld Energy

Electrolyte / chemicals

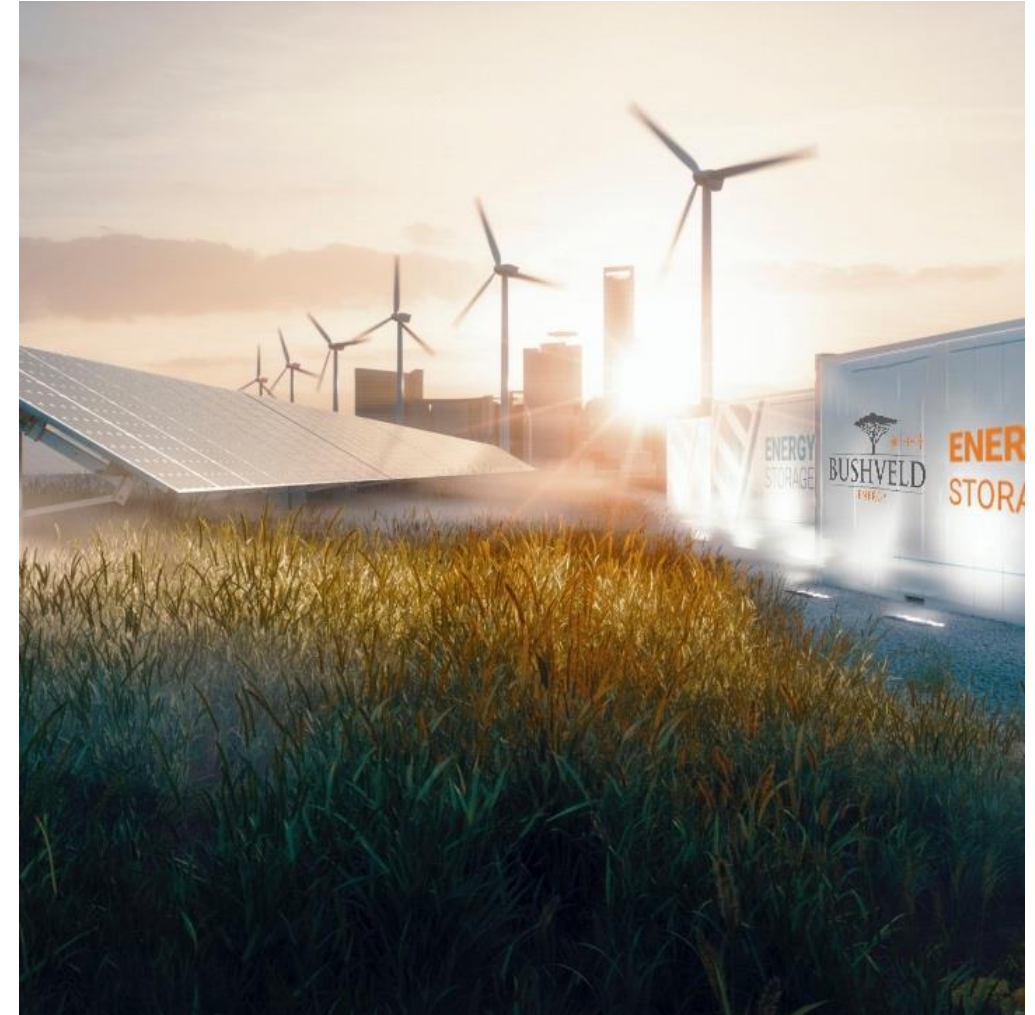
- Incorporated BELCO¹ as the production company for vanadium electrolyte, with initial capacity of 200 MWh, and started the engineering phase of the EPC²
- Achieved financial close for BELCO¹, with a shareholding structure of 55% for Bushveld and 45% for the IDC³, which is also providing debt funding for the project
- Obtained approval from the ELIDZ⁴ and the DTIC⁵ for the land and building for BELCO¹
- Signed a partnership agreement with Invinity⁶ to deploy vanadium electrolyte rentals
- Post period, formed VERL⁷ with Invinity⁶ and signed a rental agreement for 5MWh with Pivot Power, an EDF-owned developer in the UK

Investment

- Acquired an 8.71% shareholding in Invinity⁶ in line with its strategy of partnering with VRFB companies
- Post period, completed the acquisition of Enerox⁸ as part of an investment consortium, by forming EHL⁹

Deployment

- Advanced the Vametco mini-grid project of 3.5MW of solar PV and 4MWh of VRFB energy storage by signing the surface sublease agreement and the PPA¹⁰ for the project and received a debt term sheet



1. BELCO: Bushveld Electrolyte Company 2. EPC: Engineering, procurement and construction, 3. IDC: Industrial Development Corporation, 4. ELIDZ: East London Industrial Development Zone, 5. DTIC: Department of Trade and Industry and Competition, 6. Invinity: Invinity Energy Systems plc, 7. VERL: Vanadium Electrolyte Rental Limited, 8. Enerox: Enerox GmbH, 9. EHL: Enerox Holdings Limited 10. PPA: Power purchase agreement



H1 2020 Interim Results

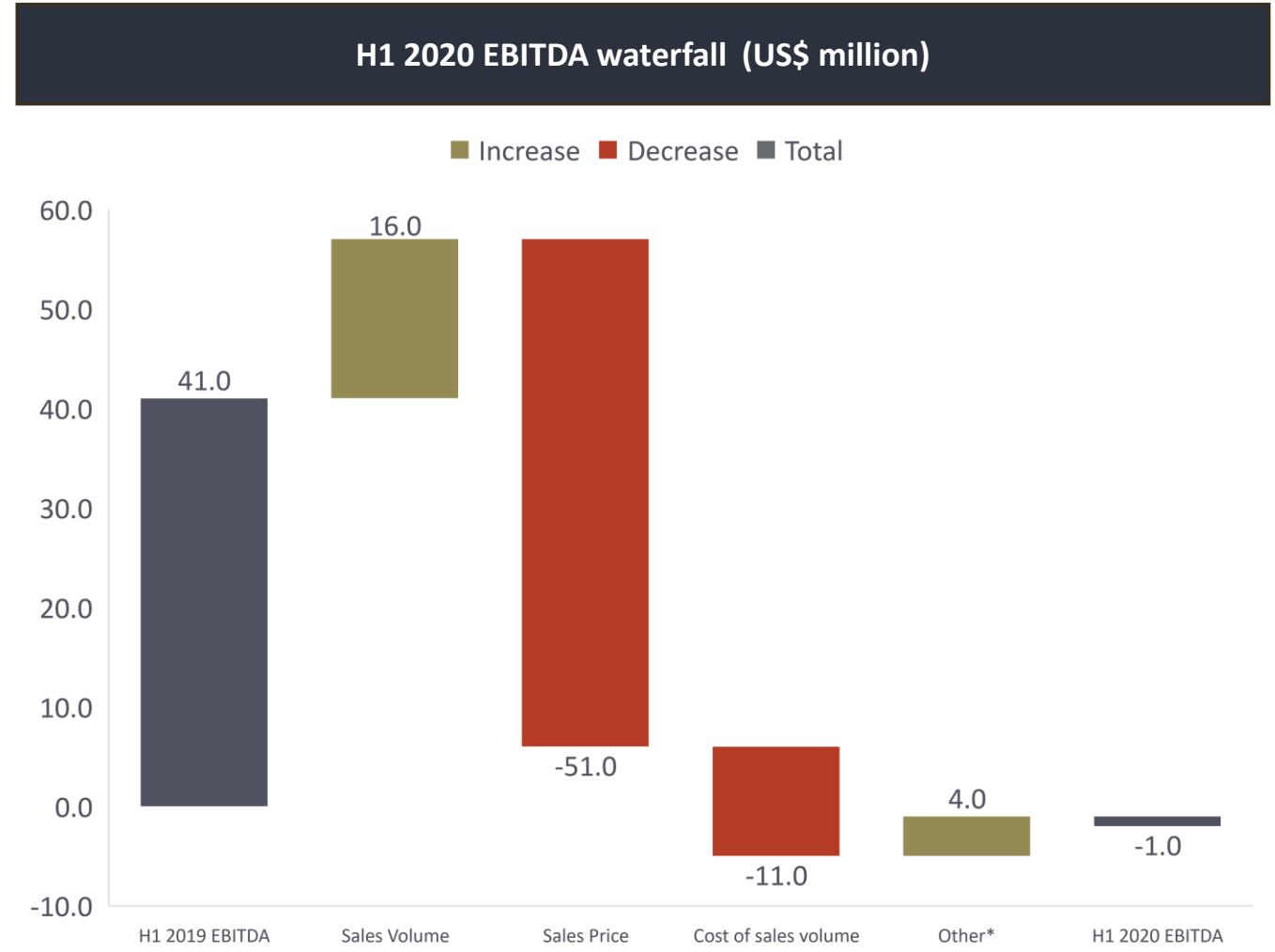
Bushveld Minerals Financial Results

H1 2020 INTERIM RESULTS – Tanya Chikanza

H1 2020 Income statement

US\$ million	H1 2020	H1 2019	% change
Revenue	43.1	78.0	-45
Cost of sales	(39.0)	(22.9)	70
EBITDA	(1.0)	41.0	-102
Depreciation	(8.9)	(3.5)	154
Operating (Loss) / profit	(9.9)	37.5	-126
(Loss) / Profit Before Tax	(10.7)	44.7	-124
Basic (Loss) /Earning per share (US cents)	(0.92)	1.92	-148
Realised price (US\$/kgV)	24.20	70.0	-65
London Metal Bulletin FeV price (US\$/kgV)	25.70	56.30	-54

*Other comprises of operating costs and selling and distribution



H1 2020 Balance sheet

Balance Sheet items

- Property plant and equipment of US\$154.6 million which includes the Vanchem assets, acquired in November 2019
 - Reduction of US\$30.7 million, relative to 31 December 2019, as a result ZAR to USD exchange rate devaluing by ~20% relative to 31 December 2019 rate
- The non-current liabilities include the Nedbank debt facilities of ZAR375 (~US\$21.9 million) and the Duferco convertible loan notes of US\$23.7 million
 - ZAR125 million revolving credit facility drawn in March 2020 to enhance liquidity
- Cash and cash equivalent as at 30 June 2020 was US\$24.6 million, relative to US\$34.0 million as at 31 December 2019
- In discussions with Nedbank Limited on the refinancing of outstanding term loan and revolving credit facility
- Duferco¹ has accepted an early repayment of US\$11.5 million of their US\$23 million convertible loan notes
 - US\$6.5 million will be repaid through the issue of shares, US\$5 million plus interest of US\$1.15 million will be settled as a cash payment

The debt repayment and refining allows the Group to reduce its gearing levels and have a stronger balance sheet

US\$ million	30 June 2020	31 December 2019
Property plant and equipment	154.6	185.3
Intangible assets	56.6	59.4
Investment properties	2.4	2.9
Cash and cash equivalent	24.6	34.0
Other assets (Financial Assets and inventories)	61.6	53.2
Total assets	299.8	334.8
Borrowing (Nedbank & Convertible Loan Notes)	46.5	41.8
Other liabilities (Environmental rehabilitation, trade and other payables)	44.7	51.9
Total liability	91.2	93.7
Total equity	208.6	241.1

1. Duferco: Duferco Participations Holding S.A.

H1 2020 Cashflow statement

Capital expenditure

- Net cash outflow from operating activities of (US\$2.7 million), due to the low-price environment
- Net cash used in investing activities of (US\$5.0 million), a reduction of US\$6.4 million relative to H1 2019
 - In line with the Group's cash preservation measures announced in the Q1 2020 operational update
- Net cash from financing activities inflows of US\$7.1 million
 - Includes drawdown of the Nedbank Limited revolving credit facility of ZAR125 million (~US\$7.5million) as well as funding from IDC¹ of US\$0.5 million and DBSA² of US\$0.2 million, offset by lease and finance costs
- 2020 Group capital expenditure guidance of ZAR135 million (~US\$8 million)

To manage near-term liquidity we continue to adhere to cash preservation measures

Cashflow

The table summarises the main components of the cash flow during the period

	H1 2020 US\$ million	H1 2019 US\$ million
(Loss) /Profit before taxation	(10.7)	44.7
Depreciation and amortisation	8.9	3.5
Finance costs	1.4	1.4
Changes in working capital and provisions	(2.1)	4.8
Taxes paid	0.4	(11.1)
Net cash (used in) / from operating activities	(2.7)	34.7
Net cash used in investing activities	(5.0)	(11.4)
Net cash from financing activities	7.1	(1.8)
Cash (outflow) /inflow	(0.6)	21.5
Cash at the beginning of the year	34.0	42.0
Foreign exchange movements	(8.8)	2.6
Total cash at the end of the period	24.6	66.1

1. IDC: Industrial Development Corporation
2. DBSA: Development Bank of Southern Africa



H1 2020 Interim Results

Vanadium Market

H1 2020 INTERIM RESULTS – Fortune Mojapelo

H1 2020 Market dynamics

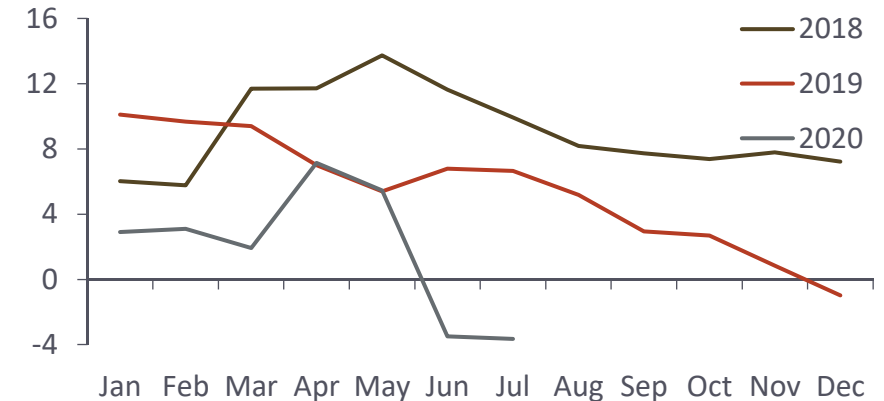
H1 2020 trends

- At the start of 2020, we saw prices at ~US\$30/kgV, which retracted due to the Covid-19 pandemic
- Global GDP was 4% lower than H1 2019, due to Covid-19 pandemic and lockdowns¹
 - Global steel production fell by 6% to 873 Mt (H1 2019: 928 Mt)²
 - Global vanadium production fell by 4% to 51.4 mtV (H1: 2019: 53.3 mtV)¹
- Implementation of fiscal stimulus programmes in China and European Union**
 - China announced infrastructure spending plans of ~US\$500 billion, that would result in more steel and rebar production and increase domestic vanadium consumption
 - Steel production 499 Mt, 1.4% higher than H1 2019 (H1:2019 492Mt)² as a result of the fiscal levers introduced in March 2020 to stimulate and fast-track an economic recovery. **China was a net vanadium importer in June and July 2020**
 - The European Commission announced €1.8 trillion (approximately US\$2.1 trillion) green infrastructure, investment package expected to include significant infrastructure spend
- Acceleration in the energy transition** to a low-carbon energy future, increasing future demand for renewable energy generation and energy storage. Significant events in the VRFB industry include:
 - Increased deployment of VRFBs (51 MWh VRFB awarded to Sumitomo in Japan and 400MWh VRFB project announced by Shanghai Electric in China, requiring 300 mtV and 2,200 mtV, respectively)
 - 3GWh VRFB manufacturing facility announced in Saudi Arabia
 - Large, multinational power companies, such as EDF and Enel, started deploying VRFB technology

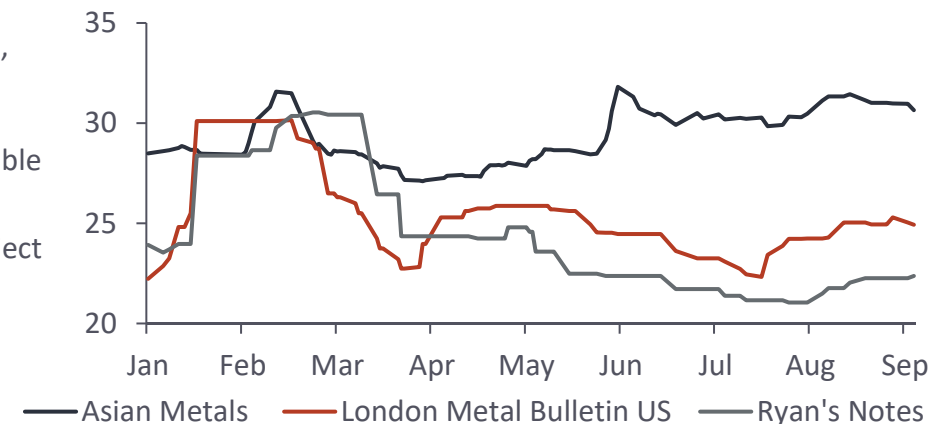
1. Bank of Montreal

2. World steel Association

Total Chinese V Net Exports (V_2O_5 /VCN/FeV)¹



Year to Date Vanadium Prices (US\$/kgV)



Demand outlook: vanadium is expected to form part of stimulus plans

Vanadium Outlook

Near-term

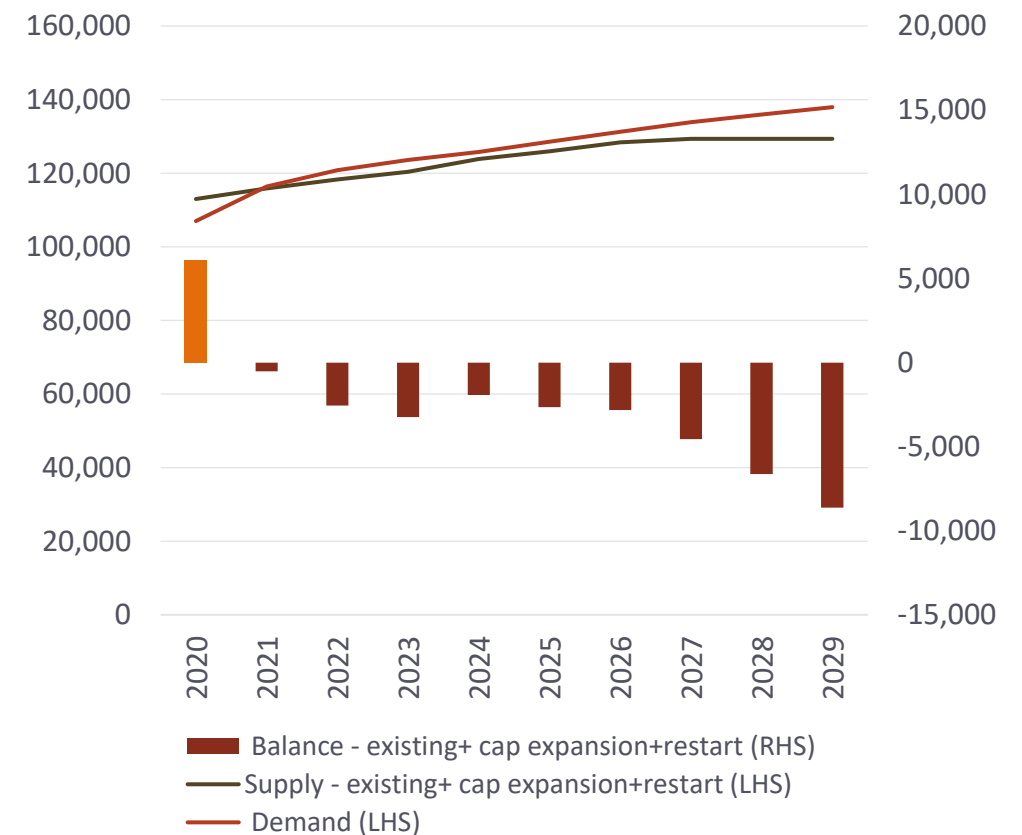
- **China** - Robust demand is expected for the rest of year supported by infrastructure investments.
 - Steel mills are operating close to full capacity (80-90%) utilization rate
 - Strong domestic consumption forecasted for the rest of the year; export demand expected to remain soft
 - Prices in China may soften due to more non-Chinese producers redirecting excess production in order to benefit from the greater spot liquidity and higher prices
- Demand from the **United States and Europe** is expected to remain constrained for the rest of the year due to the economic slowdown

Medium to long term

- Vanadium demand in the steel market expected grow at a CAGR ~2.7% through to 2029¹
- Supply forecasts based on existing production, announced capacity expansions and project restarts show a deficit ~8,600 mtV by 2029¹
- Increased deployment of VRFBS and demand, is likely to rise as governments accelerate the energy transition to a low-carbon energy future
- Vanadium demand from VRFBS is expected grow at a CAGR ~ 6% through to 2027²

We remain positive on the vanadium fundamentals in the medium and long-term

Vanadium market balance¹





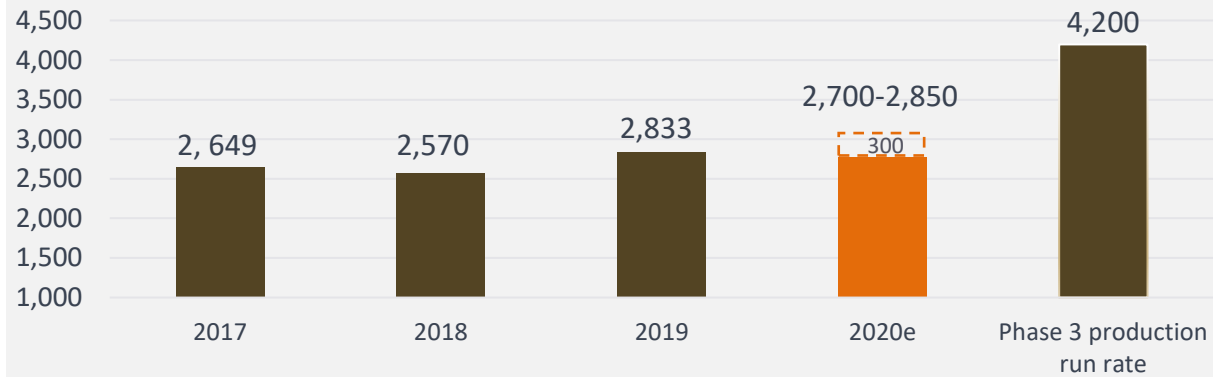
H1 2020 Interim Results

Near-term Growth Plans

H1 2020 INTERIM RESULTS – Fortune Mojapelo

Vametco's path to 4,200 mtV per annum

Production ramp-up profile (mtVp.a.)



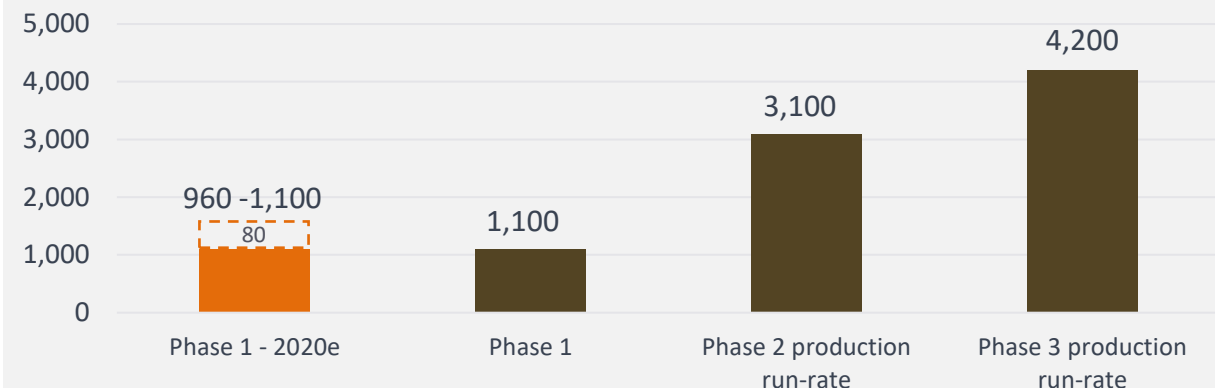
- The preliminary capital expenditure for Phase 3 is estimated at ~ZAR430 million (~US\$26 million)
- The capital expenditure and production profile are subject to a definitive feasibility study
- US\$30 million PFA proceeds to contribute towards Phase 3

Expansion programme to achieve a production levels of 4,200 mtVp.a.

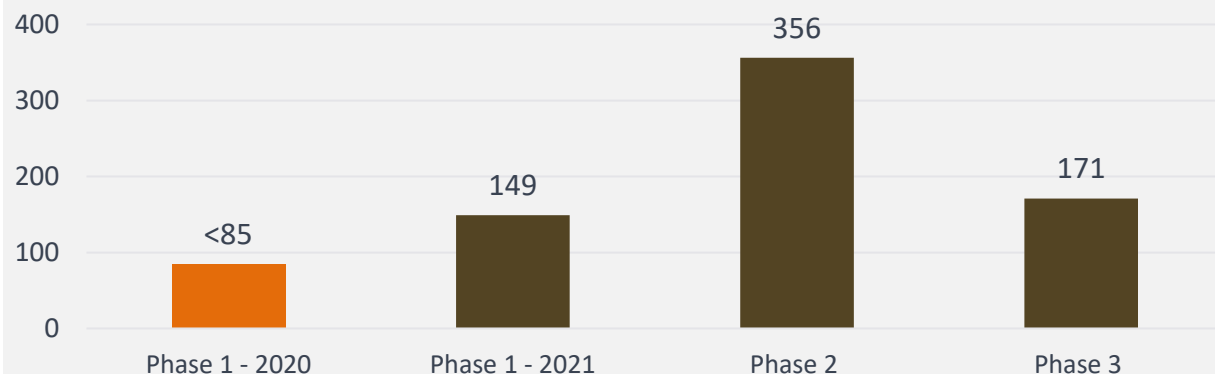


Vanchem's refurbishment programme to achieve >4,200 mtV per annum

Production ramp-up profile (mtVp.a.)



Capital expenditure profile (ZAR million)



- The total capital expenditure for the refurbishment programme estimated at ~ZAR750 million (~US\$45 million) to be conducted in 3 phases
- **Phase 1:** critical refurbishment including: extending the calcine dump facility, replacement of heavy moving equipment, upgrade of the electrical reticulation system and construction of a storm water treatment facility
- Progress to date:
 - Construction and site supervision contracts for the Waste Disposal Facility extension project were finalised and site work commenced in Q3 2020
 - Expected to be completed during H1 2021
 - This part of the 2020 capital expenditure to be reallocated to 2021
 - No impact on expected 2021 production
- **Phase 2:** includes the refurbishment of **Kiln-1** and the construction of a new ammonium metavanadate plant
- **Phase 3:** includes the refurbishment of: **Kiln-2**, the vanadium trioxide plant, the vanadium pentoxide plant and other associated infrastructure
- The proceeds of the convertible loan notes will contribute towards Phase 1

Refurbishment programme to enable production levels of >4,200 mtVp.a.

Bushveld Energy's priorities

Bushveld Energy

▪ Electrolyte

- Advance the engineering, procurement and construction of the vanadium electrolyte plant, with an initial 200 MWh capacity
- Implement additional, larger electrolyte rental contracts, including the implementation of the Partnership Agreement with Invinity¹ on electrolyte rental
- Grow the vanadium demand and Bushveld Minerals' supply into the energy storage sector

▪ Manufacturing

- Continue to support growing VRFB companies, including investments in battery companies, such as Enerox², with other partners
- Investigate the business case for South African-based VRFB assembly

▪ Deployments

- Demonstrate a business case for VRFB deployments, including delivery of the Vametco mini-grid as a funded independent power producer
- Develop partial self-supply of electricity at all Bushveld operations



Positioned to be a leader in the VRFB supply chain

1. Invinity: Invinity Energy Systems plc

2. Enerox: Enerox GmbH

Investment proposition

Vanadium is **a compelling commodity anchored to steel** with attractive fundamentals with burgeoning demand from **energy storage**

Owens **2 of the world's 4 operating primary vanadium processing facilities**

Large, high grade opencast deposits, with a resource base of **~550 Mt**, grading of **1.6 - 2.0 % V₂O₅ in-magnetite**, which are among the highest in the world

Organic growth opportunities to increase **production to more than 8,400 mtVp.a.**

Diversified revenue stream from the **steel, chemicals** and **energy storage markets** through production of Nitrovan, ferrovanadium, vanadium oxides and vanadium chemicals

One of the **leading players in Vanadium Redox Flow Batteries value chain**, through its subsidiary, Bushveld Energy

Actively promotes the **principles of the circular economy**, developing the technical and commercial parameters to ensure that vanadium contained in VRFBs is re-used

Vertical integration strategy will provide **a natural hedge against the vanadium price volatility**, and will ensure the Group is in a solid position throughout the commodity cycle

Committed to deliver **attractive returns to shareholders**

A **disciplined capital allocation strategy** to manage the Group's growth initiatives



H1 2020 Interim Results

Appendix

H1 2020 INTERIM RESULTS

Bushveld Minerals' share ownership and performance

BMN Share Price (25 September 2020) **11.63p (14.81c)**

Basic Ordinary Shares **1,153,642,682**

Market Capitalisation **£134 million**

Market Capitalisation **US\$171 million**

Bushveld Minerals Top Shareholders	# shares	% ownership
1 Hargreaves Lansdown Asset Mgt	211,952,643	18.37
2 Interactive Investor	131,445,731	11.39
3 Halifax Share Dealing	120,209,573	10.42
4 Orange Trust	70,722,657	6.13
5 Acacia Resources Limited	66,440,421	5.76

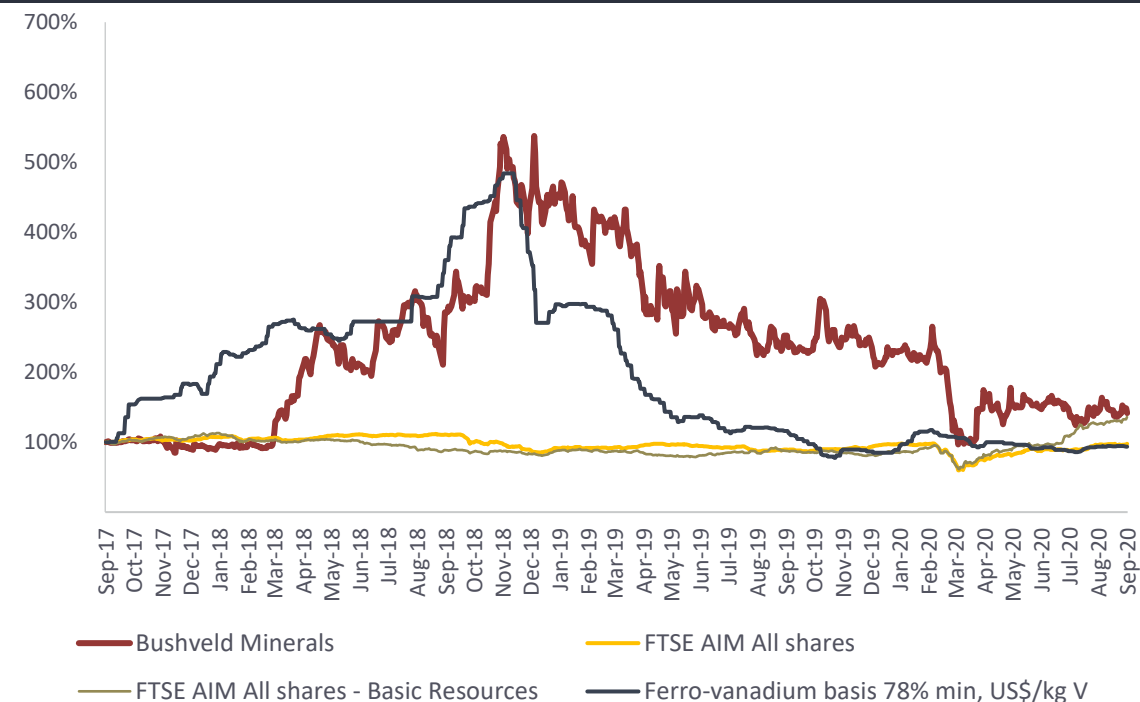
Bushveld Minerals Top Institutional Shareholders	# shares	% ownership
1 Invesco Perpetual Asset Mgt	29,511,892	2.56
2 Oppenheimer Funds	8,000,000	0.69
3 Canaccord Genuity Wealth Mgt	3,845,950	0.33
4 Raymond James Investment Services	3,709,304	0.32
5 FIL Investment International	1,968,646	0.17

Bushveld Minerals Ownership	# shares	% ownership
1 Bushveld Minerals Ltd Director & Related Holding(s)	31,731,667	2.75

Source: Bloomberg - 25 September 2020, Orient Capital as at 28 August 2020

Share Price Performance (Indexed)

AIM: BMN



Bushveld Minerals Coverage

PEEL HUNT

Overweight

BMO Bank of Montreal

Overweight

SPANGEL

Overweight

H1 2020 operational performance

Vametco (on a 100% basis)

Description	Unit	CY20 Guidance (revised)	H1 2020	H1 2019	H1 2020 Remarks
Vanadium produced	(mtV)	2,700 - 2,850	1,218	1,392	<ul style="list-style-type: none"> Estimated production losses of ~300 mtV, directly related to Covid-19 nationwide lockdown
Vanadium sold	(mtV)	-	1,777	1,115	<ul style="list-style-type: none"> 1,777 mtV includes intercompany sales of 281 mtV, of which 251 have been converted into sales to final customers during Q3 2020
Production cash cost (C1)	US\$/kgV	17.50 - 17.90 (ZAR295-300)	17.20	19.30	<ul style="list-style-type: none"> Excludes depreciation, royalties and selling, general & administrative expenses and cost associated with Covid-19
Total cash cost	US\$/kgV	23.90			<ul style="list-style-type: none"> Excludes depreciation, movements in finished goods inventories and sales commissions

Vanchem

Description	Unit	CY20 Guidance	H1 2020	H1 2020 Remarks
Vanadium produced	(mtV)	960 - 1,100	431	<ul style="list-style-type: none"> 2020 Guidance maintained, although volumes are weighted towards the lower end Estimated production losses of ~80 mtV, directly related to Covid-19 nationwide lockdown Achieved a record production in May and June 2020
Vanadium sold	(mtV)	-	269	-
Weighted average production cash cost (C1)	US\$/kgV	ZAR310-320 (18.40 - 19.00)	16.40	<ul style="list-style-type: none"> Expects to meet higher end of production cash cost (C1) guidance Excludes depreciation and selling, general & administrative expenses and cost associated with Covid-19
Total cash cost	US\$/kgV	22.50		<ul style="list-style-type: none"> Excludes depreciation, movements in finished goods inventories and sales commissions

Guidance

Vametco	2020e	Medium term	
Production (100% basis)	2,700 mtV – 2,850 mtV	4,200 mtV	<ul style="list-style-type: none"> 2020 Previous guidance of between 3,000 – 3,200 mtV Lost production of 300mtV due to Covid-19 nationwide lockdown
Production cash cost	ZAR295/kgV - ZAR300/kgV (US\$17.50/kgV - US\$17.90/kgV)	-	<ul style="list-style-type: none"> 2020 guidance representing a 1% to 3% reduction relative to 2019 Excludes depreciation, royalties and selling, general & administrative expenses
Growth capital expenditure	ZAR4 million (~US\$240,000)	ZAR430 million (~US\$26 million)	<ul style="list-style-type: none"> Phase 3 expansion project PFS ZAR4 million <ul style="list-style-type: none"> Majority of the cost is Rand-denominated Phase 3 of the multi phase expansion project estimate of ZAR430 million <ul style="list-style-type: none"> Majority of the cost is Rand-denominated
Vanchem	2020e	Medium term	
Production	960 mtV -1,100 mtV	>4,200 mtV	<ul style="list-style-type: none"> 2020 Guidance maintained, although volumes are weighted towards the lower end
Production cash cost	ZAR310/kgV and ZAR320/kgV (US\$18.40/kgV and US\$19.00/kgV)	-	<ul style="list-style-type: none"> Excludes depreciation, royalties and selling, general & administrative expenses Costs are weighted toward the higher end
Growth capital expenditure	-	ZAR750 million (~US\$45 million)	<ul style="list-style-type: none"> Total capital expenditure required to achieve a production rate of 4,200 mtVp.a. <ul style="list-style-type: none"> Majority of the cost is Rand-denominated
Mokopane	2020e	Short-term	
Growth capital expenditure	-	ZAR370 million (~US\$22 million)	<ul style="list-style-type: none"> Mine development to become a primary source of feedstock for Vanchem <ul style="list-style-type: none"> Majority of the cost is Rand-denominated
Bushveld Energy	2020e	Short -term	
Vanadium electrolyte plant - Growth capital expenditure	-	~ZAR 68million (~US\$4 million)	<ul style="list-style-type: none"> Bushveld investment commitment through to 2022, which includes capital expenditure, working capital and ramp-up support

Bushveld Minerals’ 2020 targets

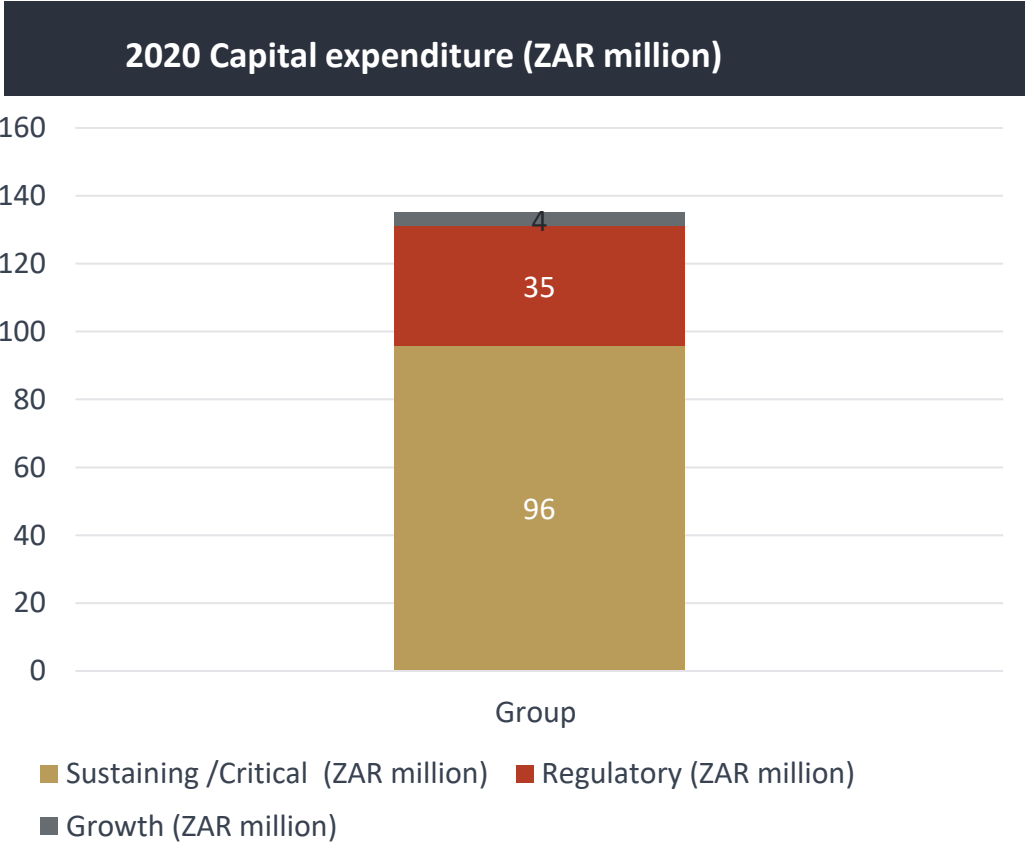


Increase Group production to between 3,660 mtV – 3,950 mtV, an increase of 25% to 35% vs H12019, while sustainably reducing costs

Maintain a strong balance sheet throughout the commodity cycle and volatile market conditions by:

- Prioritise critical, sustaining and regulatory capital
- Building and preserving cash reserves
- Ongoing review of all capital projects to identify possible additional savings

Continue to monitor global macroeconomic developments and adjust our capital expenditure accordingly



Bushveld Minerals' diverse product offering

Nitrovan



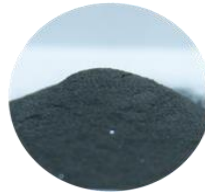
Nitrovan is a vanadium-nitrogen alloy used in steel making to produce high-strength, low alloy steel. It is a more efficient strengthening mechanism than FeV

AMV



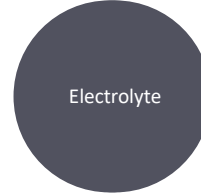
Ammonium Metavanadate is an intermediary product in the production of V_2O_3 or V_2O_5 and has applications in chemical industries

MVO



Modified vanadium Oxide is produced at Vametco as a feedstock for Nitrovan production or other industrial applications. combination of V_2O_3 and V_2O_5

Electrolyte



Electrolyte, which is a form of chemicals and the most important component of a VRFB

V_2O_5



V_2O_5 powder and flake is produced as feedstock into Ferrovandium production or chemical applications

FeV



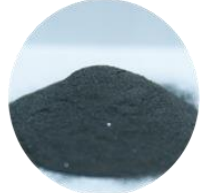
Ferrovandium is a steel additive to produce high strength, low alloy steels

Chemicals



Vanadium chemicals are used in manufacturing industrial chemicals and is a catalyst in industrial processes. Electrolytes are used in VRFBs

V_2O_3



V_2O_3 is used as a feedstock for ferrovandium manufacture or as an input into chemical processes

Applications



Steel

Vanadium is used as a strengthening agent in manufacturing high-strength steel



Alloys

Vanadium is used as an alloying agent in the aerospace industry



Chemicals

Vanadium chemicals are used in manufacturing industrial chemicals and is a catalyst in industrial processes. Electrolytes are used in VRFBs

Employees, governance, communities and environment



Employees

- Committed to providing a safe environment for our employees
 - Zero fatalities recorded at Vametco and Vanchem
 - Vametco's Total Injury Frequency Rate of 18.80 (H1 2019: 21.16). Vanchem TIRF record of 0.009 as at 30 June 2020
- 36 Covid-19 positive cases with a 100% recovery rate as at 30 August 2020



Governance

- Risk management and internal control
- Social Media Policy
- Share Dealing Policy
- Anti-Corruption and Bribery Policy
- Whistle blowing policy to ensure staff can raise concerns about malpractice or impropriety without fear of reprisals



Communities

- Stakeholder Engagement Strategy
- Community Stakeholders Grievance Management and Resolution
- Community Health and Safety Management
- Socio-economic investments (Recruitment of local communities and Sourcing of local businesses)
- Social and Labour Plan and BBBEE implementation
- Security Management



Environment

- Environmental management programme
- Rehabilitation guarantee in place to minimise and mitigate the environmental effects of mining
- Pollution control and water catchment dams
- Tailings dam monitoring and management programme
- Zero waste to Landfill. Reducing waste, reusing where possible, recycling waste and ultimately sending zero waste to landfill is integral to our social license to operate
- Compliance with environmental authorisations, licenses and permits